

Economic growth, disparity, and determinants of female labor force participation

A research agenda

Reena Kumari

*Institute of Business Management, GLA University, Mathura, India and
Department of Economics, ICRIER, New Delhi, India*

Abstract

Purpose – The purpose of this paper is to examine the themes of relationship between female labor force participation (FLFP) and economic growth, gender disparity in work participation; and to identify the factors which determine females to participate in labor market. The paper uses a framework incorporating a U-shaped relationship between FLFP and economic growth, gender wise wage disparity and economic, social, cultural and other factors which affects FLFP.

Design/methodology/approach – Thematically, the selected literature falls into three main categories: the relationship between FLFP and economic growth; disparity in work participation in terms of male and female wages; and drivers or determinants of FLFP which have been described using international documents and experiences of the different countries. The review closes by identifying gaps in the existing research base and by suggesting areas for inquiry that have been untouched and warrant further research.

Findings – The key findings emerging from this examination of literature show that the FLFP rate exhibits a U-shaped during the process of economic development. Also, there are evidences of gender pay disparity across the sectors which have been justified by documenting a large number of existing literatures. Demographic factors (including fertility, migration, marriages and child care), economic factors (including unemployment, per capita income, non-farm job and infrastructure) and other explanatory variables which include the regulatory context encompassing family and childcare policies, tax regimes, and presence of subsidized health-care for workers determine the FLFP.

Practical implications – This paper suggests that in order to bring equality in gender pay gap, there is a requirement of replacing the traditional value system. There is need to provide an environment in which women are encouraged and supported in their efforts, in which women have equitable access to resources and opportunities.

Social implications – This paper addresses the impact of education, culture and child care subsidies on female labor participation. They positively impact FLFP and such a link has not been sufficiently addressed in prior literature.

Originality/value – In contrast to previous studies which document a broad-based picture of female work participation, this type of research deals with the link between economic growth and female labor participation, gender wage disparity and determinants of it which has been largely unexplored so far.

Keywords Determinants, Economic growth, Female labor force participation, Gender wage disparity

Paper type Literature review

1. Introduction

There is research evidence that the participation of women in the labor force has increased dramatically over the past three decades (Raynor, 2007; Gilbert *et al.*, 2010) and it has been observed that development goals cannot be achieved without participation of females in labor force. Also, it has been evident that understanding gender and cultural differences is critical to business success (Parboteeah *et al.*, 2008; Stedham and Yamamura, 2004). The topic of female labor participation is also important because women's participation in labor market varies across the countries, reflecting differences in economic development, social norms, fertility rates, and access to childcare and other supportive services (Verick, 2014). Over the last two decades, the global female labor force participation (FLFP) rate has remained fairly stable, declining slightly for the total female working age



population (15+) from 52.2 percent in 1992 to 51.4 percent in 2012 (based on ILO estimates, www.ilo.org/kilm). Though 370.5 million women have joined the labor market in the past 20 years, women still account for just 39.8 percent of the global labor force. Further, the participation of women varies across the countries and emerging market economies over time. The gender gaps in labor force participation are highest in the Middle East and North African and South Asian regions, where men's participation rates exceed women's rates by over 50 percentage points (Sanghi *et al.*, 2015). In a developing country like India, male participation is higher than female and FLFP has been declining at an alarming rate. As per the report published by National Sample Survey Organization, female labor participation fell from a high point above 40 percent in the early-to-mid 1990s to 29.4 percent in 2004-2005, and 22.5 percent in 2011-2012. Turkey has experienced declines as well, with female participation rates dropping from 36.1 percent in 1989 to 23.3 percent in 2005. Other countries in the Middle East and North Africa have similarly low rates of participation but have not experienced such strong growth in recent years. While in developed countries, female labor participation has increased very drastically, for example, in the Netherlands as it more than doubled, from 31 percent in 1975 to 69 percent in 2006.

Therefore, rising disparities between male and female and different rates of female work participation between developed and developing countries force us to examine the relationship between economic growth and female participation, gender pay gap and the various factors that influence FLFP across the countries. Female work participation is the percentage of working age women who are either working or looking for work. The foremost factor is a woman's decision to participate (or not) in the labor force. This will have a direct effect on the supply of labor. The neoclassical theory of the allocation of time describes labor supply decisions (to participate or not to participate in the work force) of individuals. Based on this theory, individuals are assumed to value their time according to his/her preferences that maximize utility, and then he/she decides whether to participate in the labor market (Roopnarine and Ramratan, 2012). The individual compares the value of his/her time in the labor market with the value of time spent on non-market (household) activities. If the value of time spent on market activities exceeds the value of non-market activities, all other things remaining constant, the individual would decide to participate in the labor market (Güven-Lisaniler and Bhatti, 2005).

The topic of FLFP has been examined from a range of angles, especially in the mainstream labor economics and management literature. To analyze the work participation of females is important because females have now not only found their place in work places, but are also often displaying model roles of good governance. Prior research has amply documented women's participation in formal associations to be somewhat more restricted than that of men (Hausknecht, 1962; Babchuk and Booth, 1969; Cutler, 1976; Edwards *et al.*, 1981). Otherwise, to quote an example, Indian women have been given representation in the Panchayati Raj system as a sign of political empowerment as well as social development (Billiava and Nayak, 2016). There are many elected women representatives at the village council level who also play an impressive role in policy making. At the central and state levels too women are progressively making a difference. Apart from their role in politics they are a significant entrepreneurial force whose contributions to local, national and global economies are far reaching (Adriana and Manolescu, 2006). In addition, they produce and consume, manage businesses and households, earn income, hire labor, borrow and save, and provide a range of services for businesses and workers. They represent an increasing proportion of the world's waged labor force and their activity rates are rising. In Africa, Asia and Latin America, they are over one third of the officially enumerated workforce. Although there are variations across countries, social norms strongly influence men's and women's work and working environments. Some tasks and jobs are considered more appropriate for

men or women and overt or covert screening filters out applicants who defy these norms. These gender norms frequently underpin sex-segmented labor markets and activities. Highly sex-segmented labor markets typically confine women workers to low-wage, low-productivity employment and can limit the responsiveness of labor markets to new demands for higher skilled workers. FLFP has remained lower than male participation, women account for most unpaid work, and when women are employed in paid work, they are overrepresented in the informal sector and among the poor (Elborgh-Woytek *et al.*, 2013). The informal sector includes jobs such as domestic servant, small trader, artisan, or field laborer on a family farm. Most of these jobs are unskilled and low paying and fail to provide benefits to the female workers. Also, sluggish or unresponsive labor markets can impede adjustment, distort human capital investment and inhibit a firm's ability to switch into new activities and compete in a dynamic and globalizing market. Although most women work and contribute to the economy in one form or another, much of their work is not documented or accounted for in official statistics.

Going with the issues, the purpose of this review is to present a rich depiction of the current knowledge base and to identify predominant themes in the existing literature. The thematic categories of this review are derived inductively and codes are generated with close reference to the terms and phrases used in the literature. To conduct the literature review, various keywords were identified. Several electronic databases available at the university's library such as Google Scholar, Springer, Proquest, SAGE, Emerald, Inderscience, EBSCO Host, Science Direct and Blackwell Synergy were used to search for supporting materials and resources. Thematically, the selected studies fall into three main categories: the relationship between FLFP and economic growth, disparity in work participation in terms of male-female wages, and drivers or determinants of FLFP which have been described using international documents and experiences of the different countries. Thus, this paper addresses the role of education, culture and subsidies in female labor participation. Such a link has not been sufficiently addressed in prior literature.

2. FLFP and economic growth

This section focuses on documents that address the relationship between economic growth and women's economic activity; and how nature of growth matter in attracting more women to the labor force. However, outlining these present trends and flows in women participation is a tricky task as there is no international time series data collection on FLFP at the moment. Therefore, researchers rely on few existing data sources, mainly, publicly available national census data from different countries, field experiences and case studies. We expect that increase in economic growth would lead to higher FLFP. So, we are hypothesizing in regards to the FLFP declines that initially occur with economic development, and then plateau before rising again giving it a U-shaped curve.

A number of articles focus on the relationship between economic growth and FLFP rate which exhibits a U-shaped during the process of economic development. Their findings demonstrated how the relationship between long-term development and women's share of the labor force is U-shaped (Tam, 2011; Cagatay and Ozler, 1995; Goldin, 1994). According to Psacharopoulos and Tzannatos (1989) during the early stages of industrialization, countries experience a decline in the subsistence sector, a primary employer of women. This decline is usually faster than the expansion of the industrial sector. Both factors are generally associated with an increase in urbanization that further restricts opportunities for unpaid female women work. At the same time, incomes are rising and the pressure on female to work becomes weaker. On the other hand, development is also associated with higher educational enrollments that delay women's entry to the labor market and later in the process of economic development, a number of factors work toward greater female

participation. Likewise, Tansel (2002) reported that the FLFP rate exhibits a U-shape during the process of economic development. Her findings confirmed the U-shaped impact of economic development; and unemployment had a considerable discouraging effect on FLFP while the impact of education was strongly positive. Also, a recent study by Sanghi *et al.* (2015) reported that when an economy transforms from an agricultural economy to an industrial economy, a decline in participation of female labor force is observed. Also, with an increase in family income and improvement in the education level of females, more and more females start entering the labor force, especially into non-manual or service-oriented jobs. Hosgor and Smiths (2008) similarly documented the U-shaped hypothesis in the case of the Turkish economy predicting that with increasing modernization female employment first decreases and then increases. The explanation of his study showed, however, that the effects of modernization are overshadowed by the strong influence of patriarchal ideology which tends to confine Turkish women to the private domain. Other studies argue that there is a positive behavioral response to FLFP, which further increases labor supply per capita and income per capita (Bloom *et al.*, 2009) (Table I).

Numerous studies, using cross-sectional pooled data, have affirmed the existence of the U-shaped phenomenon in their work. These studies examined the impact of FLFP changes on economic growth and that it indicates the potential for a country to grow more rapidly (Verick, 2014; Tsani *et al.*, 2013; Gaddis and Klasen, 2011; Luci, 2009), while long-term studies found no significant relationship (Lahoti and Swaminathan, 2013; Mammen and Paxson, 2000). Quite a few studies used cross-sectional data across countries to test this relationship (Goldin, 1994). Similarly, by employing pooled data cross-sectionally, Fatima and Sultana (2009) attributed the existence of U-shaped relationship with female education attainment, sectoral employment share, unemployment rate, wages and marital status. The results affirm that a high rate of economic development is encouraging the female participation in the labor force by increasing the work opportunities for females. Tansel (2002) studied this relationship within provinces in Turkey across three time periods, and the results also support the U-shaped hypothesis. Therefore, we formulated the following hypothesis:

H1. FLFP rate exhibits a U-shape during the process of economic development.

3. Disparities in labor force participation

This section reviews research that documented wage disparity in male and female workers. Evidences shows that there are countries where over 60 percent of adult women are gainfully employed (e.g. Kazakhstan, Cambodia, Ghana), but there are also countries (e.g. Algeria, Egypt, Iran) where less than 20 percent of women are engaged in paid labor (Hosgor and Smiths, 2008; ILO, 2006; UN, 2007). Also, there is mounting evidence that female participation in the labor market is lower than their male counterpart. Abe (2011) analyzed regional differences in women's participation in the labor market in Japan and concluded that it was highest in the northern coastal region of Japan and this high rate of participation is caused by the fact that married women with children participate as regular full-time employees.

Gender wage differentials have primarily been analyzed within the human capital model (Blau and Kahn, 2000). Also, Oaxaca and Blinder, whereby differences in wages are explained by differences in observed (explained) or unobserved (unexplained) characteristics of human capital variables such as level of experience, tenure, education, effort, discrimination and age, amongst others. Kingdon and Unni (2010) stressed that women do suffer high levels of wage discrimination in the Indian urban labor market, but that education contributes little to this discrimination: the wage-disadvantage effect of women's lower years of education than men is entirely offset by the wage-advantage effect

Authors	Focus	Sub-theme
Fatima and Sultana (2009)	The purpose of this paper is to explore the existence of U-shaped relationship between female work participation and economic growth in and factors determine this U-shaped relationship. The results confirm that high rate of economic development is encouraging the female participation in the labor force by increasing the work opportunities for females. Also, the females are taking full advantage of these increased opportunities by increasing their level of education attainment	Female work participation, economic growth, work opportunities, education attainment
Mammen and Paxson (2000)	The study examines how the role of females in the labor force varies with the level of economic development, and whether the relationships between work status and development that are observed in the cross-country data are consistent with patterns within countries. The results show that females fare poorly relative to males in many developing countries: girls receive less education, female mortality is higher than male mortality in many countries, and women often have only tenuous control over land and other productive assets. Thus, it is perhaps no surprise that broad welfare indicators, such as mortality rates and education levels, indicate that women's well-being improves on average with development, both in absolute terms and relative to men	Work status, development, girls education, female mortality, well-being
Tansel, (2002)	This paper provides time series evidence on FLFP rates in Turkey and considers its cross-provincial determinants. The results affirm that unemployment had a considerable discouraging effect on female labor force participation while the impact of education was strongly positive. The hidden unemployment computations indicate that urban female unemployment rate is underestimated and the discouraged-worker effect for women is substantial	Unemployment, education, discouraged-worker
Lahoti and Swaminathan (2013)	Using cross-sectional data and dynamic panel model this study identifies the relationship between economic growth and women's economic activity and how the nature of growth matter in attracting more women to the labor force. This finding does not shows a significant relationship between level of economic development and women's participation rates in the labor force. The results suggest that growth by itself is not sufficient to increase women's activity, but the dynamics of growth matter	dynamic panel model, economic growth, women's economic activity, labor force
Psacharopoulos and Tzannatos (1989)	This article examines female labor supply with statistical evidence from 136 countries in the early 1980s. The study found that, during the transformation from an agrarian subsistence economy, the participation of women in the labor force initially decreases and picks up later after a critical level of development has been achieved. The result confirmed that education is seen as a potential booster of the officially recorded female labor supply in developing countries	female labor supply, agrarian subsistence economy, education
Tsani <i>et al.</i> (2013)	This study examines the impact of FLFP changes on the economic growth of the South Mediterranean countries. The econometric estimations on female FLFP confirm the U-shaped function and the presence of region-specific barriers. The results also show that changes in FLFP as a result of income development; and lowering of region-specific barriers to FLFP	FLFP, economic growth, region-specific barrier, income development

Table I.
Female work participation and economic growth

of women's higher returns to education than men's. Given the traditional division of labor by gender in the family, women tend to accumulate less labor market experience than men. Further, because women anticipate shorter and more discontinuous work lives, they have lower incentives to invest in market oriented formal education and on the job training resulting in smaller human capital investments that will lower their earnings relative to those of men. The longer hours that women spend on housework may also decrease the effort they put into their market jobs compared to men, controlling for hours worked, and hence also reduce their productivity and wages.

Glinskaya and Mroz categorize the gender wage gap into two themes: first, through Smith's (1776) theory of equalizing differences also known as the compensatory difference and second, by showing that females are discriminated and earn less than males, despite possessing the same abilities and performing similar tasks. Gender wage discrimination is also explained by the fact that the output value of women is less compared to their male counterparts. Further, it is argued that females, in general, earn less than males, because they often possess less experience due to career interruptions arising from family responsibilities. Women tend to be motivated toward family needs which reduce the effort that they exert in their job compared to men who are much more motivated toward economic needs such as higher wages and better career prospects. Similarly, Bertrand *et al.* argue that mothers tend to slow down within few years following their first child birth, resulting in lower tenure. Hence, women returning to their employer get lower chances of promotion, thus leading to lower wages.

A large number of studies show that the relative wages of male and female are varied across sectors. The mean gender wage gap is considerably smaller in public sector jobs, while the distribution of relative wages varies intensely across other sectors. A recent study by Tandrayen-Ragoobur and Pydayya (2016) analyzed the magnitude of the gender wage disparity in the public and private sectors in Mauritius across both mean differentials and overall wage distribution. The results reveal that the disparity is more pronounced in the private sector. Gender wage differential is analyzed through several aspects such as human capital characteristics, demographic factors and work-related characteristics. Furthermore, Oaxaca and Blinder analyze gender wage disparity through the human capital model, whereby differences in wages are explained by differences in observed (explained) or unobserved (unexplained) characteristics of human capital variables such as level of experience, tenure, education, effort, discrimination and age, amongst others. Along the same line, Glinskaya and Mroz's categorizing that was mentioned above is following the same lines. It was found that emphasizing distinct gender roles for men and women, that males are fit for specific jobs which females are not equipped to assume and vice versa, will eventually impact female labor participation.

Several studies report significant and persistent gender wage differentials demonstrate that the magnitude of the gender wage gap is generally not constant across the entire wage distribution. A number of articles focus on the presence of "glass ceilings" which reveals a larger gender wage gap among workers earning relatively high wages, whilst the existence of "sticky floors" suggests the opposite (Tandrayen-Ragoobur and Pydayya, 2016). Several studies have explained why women get paid less than men in different countries across time. For example, Polacheck and Siebert classified gender wage discrimination into demand-side and supply-side. Demand-side discrimination occurs at the firm level, that is, the employer discriminates among its workforce. Employers may view single women as "potential mothers" and are reluctant to give pay raises and promotions because of future work interruptions and the cost associated with these. Supply-side discrimination is pre-labor market discrimination, for example, discrimination in education and treatment of boys and girls differently at home. Most of these studies have attempted to explain whether gender wage disparities arise either in the distribution

of personal characteristics or discriminatory remuneration of identical characteristics. Therefore, we formulated the following hypothesis:

- H2. There exists wide disparity in labor force participation in terms of wage, gender and sector-wise.

4. Determinants of female labor work participation

The final section provides insights into research that explores the cause of female work participation in the labor market. In particular, the participation of women in the labor force appears to depend much more on the social environment than it is the case for men. There are claims that the earning capacity being closely linked to agricultural yield in agrarian economies, the productivity stagnation in agriculture sector is compounding the misery, pushing people into the labor market in search of any form of employment. Earlier research has attempted to explain factors affecting FLFP, for example, demographic factors which include fertility, mortality, marriages and divorce rates. A study by Chevalier and Viitanen (2010) tested Granger causality between labor force participation of women and presence of young children and found that women could be constrained in their participation by the lack of childcare facilities. Likewise, Connelley and Kimmel (2010) used two econometric models to study the differences in the effect of child care costs on employment status and how differences in the mode of child care used controls for the employment status. The study demonstrates for both married and single women that full-time employment is more elastic with respect to changes in the price of child care than part-time employment and employment elasticity is larger for single than married mothers. Roopnarine and Ramratan (2012) found that level of schooling age, household headship, and being single have positive influence on female labor participation in Trinidad and Tobago.

A recent study by Kim reported that FLFP does not seem to have significantly diminished transition probability to first birth. It, however, appears to affect the second childbirth decision in a negative direction, although the impacts are not as great as have been widely exposed. Shin and Moon (2006) found that the presence of a new born baby is not particularly important to the choice of occupation, but significantly discourages FLFP, especially among teachers. Connelley (1992) advocated that the lower rate of work participation of mothers of preschoolers is entirely the result of the higher child care costs faced by these women. Analyzing the relationship between marital status and FLFP in Korea, Lee *et al.* pointed out that marriage remains a major obstacle to young Korean women's employment. Their findings show that an average married woman is much less likely (by 40-60 percent) to participate in the labor force than a single woman in urban Korea. Zhand (1993) illuminated that women's labor force participation may stimulate or harm, depending upon the changes due to the participation, in the time distribution between the wife and the husband, the family preference, the education efficiency of the young generation, the creativity, and knowledge utilization efficiency of the male and the female population. There is a significant body of research that estimates the effect of health on female work participation. For instance, a recent study by Hartani *et al.* (2015) investigated the relationship between FLFP and female total fertility rate for ASEAN-6 countries and found that increasing fertility rate results in low female work participation. Likewise, Cai (2010) found that the positive and significant effect of health on labor force participation increase for both males and females. Other research studies have identified that the main determinants of FLFP increase increased to be improvements in women's educational levels, declining fertility, and women's postponement of marriage, as well as increased employment opportunities, especially in the tertiary sector (Lee and Chao, 2005; Cerrutti, 2000). Mishra and Smyth (2010) found an inverse relationship between the FLFP rate and total fertility rate because of the strain of performing the roles of both employee and mother.

Some of the earlier studies show that economic factors, such as national incomes, wages, part-time opportunities, demand for female labor, economic uncertainties, economic development and labor experiences, have also been found to be relevant which determined FLFP. One stream of literature notes that actual employment rates of women (as well as an economic motivation of female employment as a contribution to household income) are primarily determined by changing economic circumstances and policies as well as the actual economic situation of women and their family (Haller and Hoellinger, 1994). Although, Weiss *et al.* (1978) pointed out that level of industrialization and the degree of state corporateness positively influence the participation of women. (Table II).

A number of articles focused on other explanatory variables which include the regulatory context encompassing family and childcare policies, tax regimes, and presence of subsidized health-care for workers and non-workers (Sundstorm and Stafford, 1992; Jaumotte, 2003). Social factors have also been found to explain FLFP. They include sex role attitudes, access to social capital such as friend networks, and cultural dimensions. Many studies support that cultural factors determine FLFP. They indicate that males are more aggressive and competitive and less gentle, tender minded and concerned with home and family than females (Hofstede, 1980, 2001; House *et al.*, 2004). A large number of studies on female work participation have investigated the extent to which education contributes to women's observed lower labor force participation and earnings. A study by Srivastava and Srivastava (2010) illustrated negative influence of education on woman participation in work, but for women who are in the workforce, education is the most important determinant of better quality non-agricultural work. Vlasblom and Schippers (2004) pointed out that increases in the participation rates cannot be explained by changes in either educational level or in the number and timing of children, but it is mainly changes in behavior that drive the increase in participation rates over the last decades. Likewise, Ince (2010) found that increasing the education of women can be considered to being related to decreasing fertility and mortality rates while has a positive effect on female employment.

Human capital theory regards participation in education as an investment in human capital because of the expected returns later in life (Ince, 2010). Schultz (2002) emphasized the reasons why governments should invest more to educate girls. Specifically, increased female schooling is believed to be associated with decline in population growth rate due to a declined fertility rate, growth in per capita income due to increased income earning opportunities for women, increase in women empowerment due to increased control over economic resources, increase in child quality/welfare due to increased bargaining power for women in the household, and increase in available public resources for development due to increased tax base (Aromolaran, 2008). Jaumotte (2003) found that female education, the general labor market conditions, and cultural attitudes remain major determinants of female participation.

One major issue described in empirical research is the role of public policy in terms of tax treatment, child care subsidies, and paid maternity and parental leave. The research falling into this category has dedicated substantial attention to the potential employment impact of subsidies (Berger and Black, 1992; Blau and Hagy, 1998; Gelbach, 2002; Herbst, 2008; Tekin, 2005; Herbst and Tekin, 2011). Likewise, a study by Sundstorm and Stafford (1992) examined that FLFP stimulates both fertility and women's paid work by reducing the costs of having children while requiring parents to be employed in order to be eligible for collecting full benefits. Likewise, Jaumotte (2004) reported that child benefits reduce female participation due to an income effect and their lump-sum character. Schultz (1990) advocated that cultural variation in interpreting what is productive work compounded by differences in statistical definition of who is in the labor force are responsible for much ambiguity in measurements of women's productive roles that straddle home and market economic

Authors	Focus	Sub-theme
Klasen and Pieters (2012)	The study identifies the drivers of female labor force participation in urban India between 1987 and 2004. The findings show that at lower levels of education, female labor force participation is driven by necessity rather than economic opportunities. Participation of poorly educated women is mainly determined by economic push factors and social status effects. Only at the highest education levels do we see evidence of pull factors drawing women into the labor force at attractive employment and pay conditions	Education, economic opportunities, social status, employment
Ince (2010)	This study examines how the determinants of adult female literacy rate, the ratio of graduated women from primary, secondary, tertiary and higher education which are excepted as the indicators of education, GDP per capita growth rate, fertility rate and female unemployment rate affect female labor force in Turkey. The results document show a significant relationship between female labor force and human development goal such as school enrollment and literacy rates, total fertility rate	Adult female literacy, education, GDP per capita, fertility rate and female unemployment rate
Sudarshan and Bhattacharya	The article explores the nature of female labor force participation and identified the key factors influencing women's decision to work, the type of work they do, the constraints they face, and the perceived benefits and costs of engaging in paid work outside the home. The findings show that women who work value labor force contribution to the household and others said the household could not survive without their income and manage with some difficulty	Decision to work, type of work, constraints, benefits and costs
Sanghi <i>et al.</i> (2015)	This study focuses the effect of education and income on female work participation. The findings reveal that the lack of sufficient non-farm jobs in rural areas has forced women to stay out of the labor market. The wage conditions prevalent in the rural labor market show that female workers have experienced a better hike in wages/salaries; it implies that the gender gap in terms of wages/salaries has started declining. Declining fertility rate and child dependency ratio, poor infrastructure are factors which can facilitate female workers to come out	Education and income effect, non-farm jobs, wage, gender gap, fertility rate, child dependency ratio, infrastructure
Pampel and Tanaka (1986)	This paper reconsiders the cross-national determinants of female labor force participation. The results show curvilinear effects of energy use on female labor force participation: development initially forces women out of the labor force, but at advanced levels increases female participation. Thus, the results affirm the curvilinear effects of economic development as a determinant of female labor force participation and suggest that they be considered with family, social, and demographic explanations of the status of women	Energy use, participation, family, social, demographic, status of women
Currie and Madrian	This paper reveals that poor health reduces the capacity to work and has substantive effects on wages, labor force participation and job choice. The exact magnitudes, however, are sensitive to both the choice of health measures and to identification assumptions. Access to health insurance has important effects on both labor force participation and job choice; the link between health insurance and wages is less clear	Poor health, capacity to work, wages, health insurance labor force participation and job choice

Table II.
Determinants of
female labor force
participation

(continued)

Table II.

Authors	Focus	Sub-theme
Tandrayen-Ragoobur and Pydayya (2016)	<p>This paper aims to analyze the magnitude of the gender wage disparity in the public and private sectors in Mauritius across both mean differentials and overall wage distribution. The results reveal that that gender wage differentials are prevalent in both economic sectors; however, the disparity is more pronounced in the private sector. In addition, the differences in wages are larger at the bottom compared to the top end of the wage distribution, suggesting the presence of sticky floors. Lastly, it was observed that the unexplained wage gap (discrimination) is higher in the private sector than in public sector across the years</p>	Gender wage disparity, public and private sectors, wage differentials

activities. Caldwell (1978), similarly, highlighted that one of the important factor influencing women work participation in Turkey and neighbor countries, is patriarchy, whereas only one third of married women in the country declare themselves to be employed. In these countries, the form of patriarchy is characterized by patrilocal extended households, where all power and decisions are in hands of the senior males (Moghadam, 2004). In these “classical patriarchal system” girls are given in marriage at a young age and then move to the household of their husband’s family, where they are subordinated to all men and senior women (Kandiyoti, 1988). Thus, due to high separation between male (public sphere) and female domain (private sphere), the high fertility and low-educational level of women, their work participation in the formal economy is very low under this system. Many studies highlighted that higher status appears to reduce women’s labor force participation in line with the Sanskritization process, but at the highest education levels the attitudes toward women’s employment are more modern (Chen and Dreze, 1992; Kingdon and Unni, 2001; Klasen and Pieters, 2012). Therefore, we formulated the following hypothesis:

H3. FLFP is more likely to be determined by demographic, economic and socio-cultural factors.

5. Conclusions and policy implications

Conclusion

The paper highlights three contributions of our understanding about the FLFP. First, the paper addresses the relationship between economic growth and FLFP by documenting the numerous studies on that issue. Second, the paper examines gender pay differences which have been a cause for low participation of females in the labor force. Third, the paper studies what determines FLFP and which instruments are to be provided for the promotion of female participation in labor market. This research highlights that increasing the welfare and earnings of women can help alleviate poverty, stimulate economic growth in the short term through higher consumption expenditures, and increase long-term growth through higher savings. The results show that economic growth and female education in terms of enrollment in secondary and tertiary education will have a strong positive effect on female work participation. Therefore, the strategy is to increase the awareness of gender discrimination (Adriana and Manolescu, 2006) and women’s education is the foremost factor as it increases their decision to participate in the labor market, provides them employment opportunities, and hence raises their incomes (Cameron *et al.*, 2001). In some cross-countries case studies, researchers have also found a U-shaped relationship between economic growth and FLFP. This is argued as being reflective of the structural shifts in the economy, changing influence of income and substitution effects, and an increase in education levels of

women in the population (Lahoti and Swaminathan, 2013). A significant gender pay gap has been found which show that women are not well represented in all the sectors of economy and they are less likely than men to work in the private sector and economic activities. From the review of literature is was found that the gap is lower in the public sector which means that, for equal characteristics, the difference in pay is lower than those in the private sector (Tandrayen-Ragoobur and Pydayya, 2016). Further, there is enough evidence to demonstrate that the full inclusion of women in key power positions is economically efficient as well as socially fair: the equal participation of women in decision making substantially broadens the pool of human resources which are the foundation of the economy. There is need to provide an environment in which women are encouraged and supported in their efforts, in which women have equitable access to resources and opportunities, and in which pro-active policies and practices are pursued by governments, businesses and institutions. Similarly, women's labor participation should be further promoted for not only achieving gender equality, but also realizing sustainable economic development (Xiong and Zhang, 2017). Factors behind low female participation are like demographic (fertility, migration, marriage and childcare), economic (employment, income, poor infrastructure) and other policy variables (childcare policy, tax regimes, work-hours, etc).

Policy implications

In order to bring equality in gender pay gap there is a requirement of replacing the traditional value system, which is based on an inequality of sexes where the females play a subordinate role, with a more egalitarian system. Kumari and Pandey also recommended that if there is no absolute equality between the sexes, there is a need to bring about betterment in the quality of life of women. In Bangladesh, since the early 1980s, various programs were initiated by government and non-governmental organizations to improve the conditions of women. For developed countries like Organisation for Economic-Cooperation and Development (OECD), flexible working-time arrangements should be provided which means policies that remove distortions against part-time work will boost female participation. To encourage women to participate in the labor market, a particular emphasis should be given, for example, support to their families with children in terms of parental leaves and childcare subsidies. Avoiding regulations that impede the growth of service sectors, immigration policies which impact on the relative cost of child care, and welfare delivered through "make work pay" schemes can impact positively on female participation. A report on National Policy for Women 2016, submitted by also highlighted that efforts should be made to prepare family friendly policies, which provide for childcare, dependent care and paid leave for women and men both in organized and unorganized sectors to help employees balance work and family roles.

References

- Abe, Y. (2011), "Regional variations in labor force behavior of women in Japan", *Japan and the World Economy*, Vol. 28 No. C, pp. 112-124.
- Adriana, P. and Manolescu, I. (2006), "Gender discrimination in Romania", *Journal of Organizational Change Management*, Vol. 19 No. 6, pp. 766-771.
- Aromolaran, A.B. (2008), "Female schooling and women's labor market participation in Nigeria", in Collier, P., Soludo, C. and Patillo, C. (Eds), *Economic Policy Options for a Prosperous Nigeria*, Palgrave Macmillan, New York, NY, pp. 397-428.
- Babchuk, N. and Booth, A. (1969), "Voluntary association membership: a longitudinal analysis", *American Sociological Review*, Vol. 34 No. 1, pp. 31-45.

- Berger, M.C. and Black, D.A. (1992), "Child care subsidies, quality of care, and labor supply of low-income single mothers", *Review of Economics and Statistics*, Vol. 74 No. 4, pp. 635-642.
- Billiava, N. and Nayak, N.S. (2016), "Empowerment of women representatives in Panchayat Raj institutions: a thematic review", *Journal of Politics & Governance*, Vol. 5 No. 4, pp. 5-18.
- Blau, D.M. and Hagy, A.P. (1998), "The demand for quality in child care", *Journal of Political Economy*, Vol. 106 No. 1, pp. 104-146.
- Blau, F.D. and Kahn, L.M. (2000), "Gender differences in pay", *The Journal of Economic Perspectives*, Vol. 14 No. 4, pp. 75-99.
- Bloom, D.E., Canning, D., Fink, G. and Finlay, J.E. (2009), "Fertility, female labor force participation, and the demographic dividend", *Journal of Economic Growth*, Vol. 14 No. 2, pp. 79-101.
- Cagatay, N. and Ozler, S. (1995), "Feminization of the labor force: the effects of long-term development and structural adjustment", *World Development*, Vol. 23 No. 11, pp. 1883-1894.
- Cai, L. (2010), "Evidence from a panel data simultaneous equation model", *Labor Economics*, Vol. 17 No. 1, pp. 77-90.
- Caldwell, J.C. (1978), "A theory of fertility: from high plateau to destabilization", *Population and Development Review*, Vol. 4 No. 4, pp. 553-577.
- Cameron, L.A., Dowling, J.M. and Worswick, C. (2001), *Education and Labour Market Participation of Women in Asia: Evidence from Five Countries*, University of Chicago, Chicago, IL.
- Cerrutti, M. (2000), "Economic reform, structural adjustment and female labor force participation in Buenos Aires, Argentina", *World Development*, Vol. 28 No. 5, pp. 879-891.
- Chen, M. and Dreze, J. (1992), "Widows and health in rural north India", *Economic and Political Weekly*, Vol. 27 No. 43-44, pp. 24-31.
- Chevalier, A. and Viitanen, T.K. (2010), "The casualty between female labor force participation and the availability of childcare", *Applied Economic Letters*, Vol. 9 No. 14, pp. 915-918.
- Connelley, R. (1992), "The effect of child care costs on married women's labor force participation", *The Review of Economics and Statistics*, Vol. 74 No. 1, pp. 83-90.
- Connelley, R. and Kimmel, J. (2010), "Marital status and full-time/part-time work status in child care choices", *Applied Economics*, Vol. 35 No. 7, pp. 761-777.
- Cutler, S.J. (1976), "Age differences in voluntary association membership", *Social Forces*, Vol. 55 No. 1, pp. 43-58.
- Edwards, P.K., Edwards, J.N. and Watts, A.D. (1981), "Women, work, and social participation", *Journal of Voluntary Action Research*, Vol. 13 No. 1, pp. 7-22.
- Elborgh-Woytek, K., Newiak, M., Kochhar, K., Fabrizio, S., Kpodar, K., Wingender, P., Clements, B. and Schwartz, G. (2013), "Women, work, and the economy: macroeconomic gains from gender equity", IMF Staff Discussion Note, September.
- Fatima, A. and Sultana, H. (2009), "Tracing out the U-shape relationship between female labor force participation rate and economic development for Pakistan", *International Journal of Social Economics*, Vol. 36 Nos 1/2, pp. 182-198.
- Gaddis, I. and Klasen, S. (2011), "A re-assessment of the feminization U-hypothesis", CRC Discussion Paper No. 71, University of Gottingen, Gottingen, Lower Saxony.
- Gelbach, I. (2002), "Public schooling for young children and maternal labor supply", *American Economic Review*, Vol. 92 No. 1, pp. 307-322.
- Gilbert, G.R., Burnett, M.F., Phau, I. and Haar, J. (2010), "Does gender matter? A review of work related gender commonalities", *Gender in Management: An International Journal*, Vol. 25 No. 8, pp. 676-699.
- Goldin, C. (1994), "The U-shaped female labor force function in economic development and economic history", NBER Working Paper No. 4707, Cambridge.
- Güven-Lisaniler, F. and Bhatti, F. (2005), "Determinants of female labor force participation: a study of North Cyprus", *Review of Social, Economic and Business Studies*, Vol. 5 No. 6, pp. 209-226.

- Haller, M. and Hoellinger, F. (1994), "Female employment and the change of gender roles: the conflictual relationship between participation and attitudes in international comparison", *International Sociology*, Vol. 9 No. 1, pp. 87-112.
- Hartani, N.H., Bakar, N.A.A. and Haseeb, M. (2015), "The nexus between female labor force participation and female total fertility rate in selected ASEAN countries: Panel cointegration approach", *Modern Applied Science*, Vol. 9 No. 8, pp. 29-39.
- Hausknecht, M. (1962), *The Joiners: A Sociological Description of Voluntary Association Membership in the United States*, Bedminster Press, New York, NY.
- Herbst, C.M. (2008), "Who are the eligible non-recipients of child care subsidies?", *Children and Youth Services Review*, Vol. 30 No. 9, pp. 1037-1054.
- Herbst, M.H. and Tekin, E. (2011), "Do child care subsidies influence single mother's decision to invest in human capital?", *Economics of Education Review*, Vol. 30 No. 5, pp. 901-912.
- Hofstede, G. (1980), "Motivation, leadership and organization: do American theories apply abroad", *Organizational Dynamics*, Vol. 9, pp. 42-63.
- Hofstede, G. (2001), *Cultures Consequences: Comparing Values, Behaviors, Institutions, and Organizations Across Nations*, 2nd ed., Sage, Thousand Oaks, CA.
- Hosgor, A.G. and Smiths, J. (2008), "Variation in labor market participation of married women in Turkey", *Women's Studies International Forum*, Vol. 31 No. 2, pp. 104-117.
- House, R.J., Hanges, P.J., Javidan, M., Dorfman, P.W. and Gupta, V. (2004), *Culture, Leadership, and Organizations: The GLOBE Study of 62 Societies*, Sage, Thousand Oaks, CA.
- ILO (2006), *LABORSTA, Economic Active Population Estimates and Projections*, 4th ed., International Labor Office, Geneva.
- Ince, M. (2010), "How the education affects female labor force? Empirical evidence from Turkey", *Procedia-Social and Behavioral Sciences*, Vol. 2 No. 2, pp. 634-639.
- Jaumotte, F. (2003), "Female labor force participation: past trends and main determinants in OECD countries", OECD Economics Department Working Papers No. 376, OECD Publishing.
- Jaumotte, F. (2004), "Labor force participation of women: empirical evidence on the role of public policy and other OECD countries", *OECD Economic Studies*, Vol. 9 No. 2, pp. 51-108.
- Kandiyoti, D. (1988), "Bargaining with patriarchy", *Gender and Society*, Vol. 2, pp. 274-289.
- Kingdon, G.G. and Unni, J. (2001), "Education and women's labor market outcomes in India", *Education Economics*, Vol. 9 No. 2, pp. 173-195.
- Kingdon, G.G. and Unni, J. (2010), "Education and women's labor market outcomes in India", *Education Economics*, Vol. 9 No. 2, pp. 173-195.
- Klasen, S. and Pieters, J. (2012), "Push or pull? Drivers of female labor force participation during India's economic boom", discussion paper series, Forschungsinstitut zur Zukunft der Arbeit No. 6395.
- Lahoti, R. and Swaminathan, H. (2013), "Push or pull? Drivers of female labor force participation during India's economic boom", Working Paper No. 414, IIM, Bangalore.
- Lee, K.W. and Chao, K. (2005), "Female labor force participation during economic crises in Argentina and the Republic of Korea", *International Labor Review*, Vol. 144 No. 4, pp. 423-450.
- Luci, A. (2009), "Female labor market participation and economic growth", *International Journal of Innovation and Sustainable Development*, Vol. 4 Nos 2-3, pp. 109-122.
- Mammen, K. and Paxson, C. (2000), "Women's work and economic development", *Journal of Economic Perspectives*, Vol. 14 No. 4, pp. 141-164.
- Mishra, V. and Smyth, R. (2010), "Female labor force participation and total fertility rates in the OECD: new evidence from panel cointegration and Granger causality testing", *Journal of Economics and Business*, Vol. 62 No. 1, pp. 48-64.
- Moghadam, V.M. (2004), "Patriarchy in transition: women and the changing family in the middle east", *Journal of Comparative Family Studies*, Vol. 35 No. 2, pp. 137-162.

- Pampel, F.C. and Tanaka, K. (1986), "Economic development and female labor force participation: a reconsideration", *Social Forces*, Vol. 64 No. 3, pp. 599-619.
- Parboteeah, K.P., Hoegl, M. and Cullen, J.B. (2008), "Manager's gender role attitudes: a country institutional profile approach", *Journal of International Business Studies*, Vol. 39, pp. 795-813.
- Psacharopoulos, G. and Tzannatos, Z. (1989), "Female labor force participation: an international perspective", *The World Bank Research Observer*, Vol. 4 No. 2, pp. 187-201.
- Raynor, J.L. (2007), "Comparative civilian labor force statistics, 10 countries: a visual essay", *Monthly Labor Review*, Vol. 130 No. 12, pp. 32-37.
- Roopnarine, K.A. and Ramratan, D. (2012), "Female labor force participation: the case of Trinidad and Tobago", *World Journal of Entrepreneurship, Management and Sustainable Development*, Vol. 8 Nos 2/3, pp. 183-193.
- Sanghi, S., Srija, A. and Vijay, S.S. (2015), "Decline in rural female labor force participation in India: a relook into the causes", *VIKALPA: The Journal for Decision Makers*, Vol. 40 No. 3, pp. 255-268.
- Schultz, T.P. (1990), "Women's changing participation in the labor force: a world perspective", *Economic Development and Cultural Change*, Vol. 38 No. 3, pp. 458-488.
- Schultz, T.P. (2002), "Why governments should invest more to educate girls", *World Development*, Vol. 30 No. 2, pp. 207-225.
- Shin, J. and Moon, S. (2006), "Fertility, relative wages, and labor market decisions: a case of female teaches", *Economics of Education Review*, Vol. 25 No. 6, pp. 591-604.
- Smith, A. (1776), *The Wealth of Nations*, Modern Library, New York, NY, reprinted 1937.
- Srivastava, N. and Srivastava, R. (2010), "Women, work, and employment outcome in rural India", *Economic and Political Weekly*, Vol. 45 No. 28, pp. 49-63.
- Stedham, Y.E. and Yamamura, J.H. (2004), "Measuring national culture: does gender matter?", *Women in Management Review*, Vol. 19 No. 4, pp. 233-243.
- Sundstorm, M. and Stafford, F.P. (1992), "Female labor force participation, fertility and public policy in Sweden", *European Journal of Population*, Vol. 8 No. 3, pp. 199-2015.
- Tam, H. (2011), "U-shaped female labor participation with economic development: some panel data evidence", *Economic Letters*, Vol. 110 No. 2, pp. 140-142.
- Tandrayen-Ragoobur, V. and Pydayya, R. (2016), "Gender wage differential in private and public sector employment-a distributional analysis for Mauritius", *Gender in Management: An International Journal*, Vol. 31 No. 3, pp. 222-248.
- Tansel, A. (2002), "Economic development and female labor force participation in Turkey: Time-series evidence and cross-province estimates", ERC Working Papers in Economics, 1/5, Middle East Technical University, Turkey, pp. 1-37.
- Tekin, E. (2005), "Child care subsidy receipt, employment, and child care choices of single mothers", *Economic Letters*, Vol. 89 No. 1, pp. 1-6.
- Tsani, S., Paroussos, L., Fragiadakis, C. and Charalambidis, L. (2013), "Female labor force participation and economic growth in the South Mediterranean countries", *Economic Letters*, Vol. 120 No. 2, pp. 323-328.
- UN (2007), "Social indicators", United Nations Statistics Divisions, available at: <http://unstats.un.org/unsd>
- Verick, S. (2014), "Female labour force participation in developing countries", International Labour Organisation, IZA.
- Vlasblom, J.D. and Schippers, J.J. (2004), "Increases in female labor force participation in Europe: similarities and differences", *European Journal of Population*, Vol. 20 No. 40, pp. 375-392.
- Weiss, J.A., Ramirez, F.O. and Tracy, T. (1978), "Female participation in the occupational system: a comparative institutional analysis", *Social Problems*, Vol. 23 No. 5, pp. 593-608.

Xiong, Y. and Zhang, J. (2017), "Influence of land use and transport policies on women's labor participation and life choices", in Zhang, J. (Ed.), *Life-Oriented Behavioral Research for Urban Policy*, Springer, pp. 243-265.

Zhand, W.B. (1993), "A woman's labor participation and economic growth: creativity, knowledge utilization and family preference", *Economic Letters*, Vol. 42 No. 1, pp. 105-110.

Further reading

Government of India (2016), "National policy for women 2016: articulating a vision for empowering women", Ministry of Women and Child Development, New Delhi.

Janet, C. and Brigitte, M.C. (1999), "Health insurance and the labor market", *Handbook of Labor Economics*, Vol. 3, pp. 3309-3416.

Corresponding author

Reena Kumari can be contacted at: reena.kumari@gla.ac.in