

Factors Influencing Female Labor Force Participation in Egypt and Germany: A Comparative Study

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Abstract. This paper aims to identify the major factors influencing female labor force participation (FLFP) in Egypt and Germany. On a narrow scope and given the unclear relationship between educational attainment and Egyptian FLFP, this paper seeks to examine the effect of educational attainment on the Egyptian FLFP while considering other personal and household factors. On a broader scope, the literature on FLFP illustrates that certain personal and household characteristics determine FLFP. However, the question remains, to what extent these determinants differ between Egypt and Germany. This paper attempts to shed light on understanding if and how specific demographic factors affect the Egyptian FLFP in comparison with the German FLFP. Limited dependent variable technique; Probit model is utilized to determine which factors influence FLFP in both countries. The cross sectional analysis is conducted through the use of the 2012 Egyptian Labor Market Panel Survey (ELMPS) in collaboration with Egypt's Central Agency for Public Mobilization and Statistics (CAPMAS) and the 2012 German Socio-Economic Panel (SOEP). Findings indicate that indeed higher educational attainment increases the Egyptian female's predicted probability of participating in the labor market. Additionally, the comparative study showed that number of factors affect FLFP in both countries, some of which has a positive influence as years of schooling and age while others with a negative impact as being a married women, living in urban areas and number of children. On the other hand some other variables impact each country differently as wealth. Additionally, it was evident that years of schooling has a higher marginal impact on Egyptian FLFP yet, age, being married and number of children have a higher marginal effect on German FLFP.

Keywords. Femal labor force participation, German socio-economic panel, Egyptian labor market panel survey, Probit model.

JEL. C40, C80, J10, J20, J40, J60.

Highlights

FLFP has proved to be an essential tool for the enhancement and socio-economics development of a nation as it promotes efficiency and equity. That is why higher FLFPR has been one of longterm goals that countries; developed and developing try hardly to achieve. For such reasons this paper has tried to study how personal and household factors might promote or hinder FLFP. Specifically the paper targeted two main literature gaps. Firstly was the unclear relationship between educational attainment and Egyptian FLFP. Accordingly, the first aim of this paper was to investigate the effect of educational attainment and other personal and household factors on Egyptian FLFP. Concerning the impact of education on the Egyptian females' participation rate, results suggest that if a higher female participation in the labor market is desired then females should either go for general high school and then go for university education or go straight away to vocational high school to enter the labor market directly. This was evident through the analysis of the educational attainment coefficients, which showed that for education to positively impact the Egyptian FLFP, females should get a

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minimum of university degree or vocational high school degree. Further analysis of other personal and household characteristics indicate that a number of factors affect the Egyptian FLFP, some of which have a positive influence which include being single, living in a rural area, having previous work experience, and if the woman's mother is employed. On the other hand, variables such as the woman's father being educated or the woman having some sort of domestic help offered at home have a negative influence on FLFP. Secondly was exploring the effect of personal and household factors on Egyptian FLFP versus German FLFP. Given that it was well observed that participation of women in the labor market varies greatly across countries, it was important to explore if and how certain personal and household factors affect FLFP in a developing versus a developed economy. Therefore, the second aim of this paper was to investigate whether the relationship between personal and household factors and FLFP is notably different in Egypt than Germany or not. Based on the empirical analysis used, it was found that divergent countries affect FLFP; this goes back to the differing social values, norms, religious views, cultural diversity and the economic development of each country. Further empirical analysis showed that number of factors affect FLFP in both 68 countries, some of which has a positive influence as years of schooling and age, while others with a negative impact as being a married women, and number of children. On the other hand some other variables impact each country differently as wealth. In addition, some variables showed an insignificant impact on FLFP of both countries as; relation to household (head or daughter) and household size. Additionally, it was evident that years of schooling has a higher marginal effect on the Egyptian FLFP yet, age, being married and number of children have a higher marginal effect on German FLFP.

Summary

Women make up a little more than half of the world's population, but their contribution to measured economic activity, economic growth and well-being is way below its potential. According to the World Bank (2013) women now represent around 40 percent of the global labor force and more precisely on a country level women constitute around half of any country's human endowment. However, in most countries women labor force participation is much less than that of men. According to the IMF (2013), the average gender participation gap - which is the difference between male and female labor force participation rates - has been falling since 1990. However, it seems that this is due to a worldwide decline in male labor force participation rates rather than an increase in female labor participation rate, thus male-female differences still remain substantial. Female labor force participation (FLFP) is important for the enhancement and socio-economic development of a nation because it promotes efficiency and equity. Generally, high female participation in the labor market implies two things; advancement in the economic and social position, and empowerment of women. This promotes equity and increases utilization of human potential, which can help in building a higher capacity for economic growth and poverty reduction (Mujahid 2014; Fatima and Sultana 2009).

Understanding women's decision to supply labor to the market, as well as the factors that can encourage them to either participate in or opt out from the workforce, is vital for policy makers in order to efficiently help any economy develop and remain healthy. The clear understanding of such factors and their effect on women's propensity to participate plays a very important role in determining prospective growth and development of countries. It might help us come up with new ways to encourage female participation or address those problems that discourage females from participating in the labor market.

The economic analysis of FLFP has drawn considerable attention since the pioneering work of (Mincer 1962) as per the "Work-Leisure Theory" developed in the twentieth century. This was followed by several theories in the field including the "Household Production Theory" by Becker and Mincer and "Human Capital Theory" by Schultz and Becker. All of which tried to figure out on a simple basis, the factors that would affect the decision made by a female on whether to participate or not in the labor market. On the basis of those theories, vast amount of

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international research was conducted to analyze women's decision to be economically productive. Studies conducted in Pakistan and the United States (Goldin 1994; Psacharopoulos and Tzannatos 1989; Sackey 2005; Schultz 1961) showed that women's participation is dependent on a country's level of development. Such a relationship was demonstrated in the U-shaped curve correlating FLFP with the country's GDP.

Becker (1975), Psacharopoulos and Tzannatos (1989), Schultz (1961) and Khadim and Akram (2013) through studies undertaken in Kuwait, Pakistan, Nigeria and Egypt, illustrated that education is one of the main factors influencing women's tendency to participate. Most of those studies concluded that education for women maybe the main policy option available, if greater participation of females in the labor force is required. Furthermore, Psacharopoulos and Tzannatos (1989), Faridi, Chaudhry and Anwar (2009), Khadim and Akram (2013), Schultz (1961) and Agüero and Marks (2008) added that other demographic factors such as; marital status, age, household size, religion, geographical location (urban/rural residency) do impact women's participation decision.

According to the literature review, two main research gaps were found and are the main focus of this paper. First off, as per most of the conducted research, findings suggest that education has a positive effect on FLFP, explained by the rationale that the more educated and skilled individuals are, the greater their income potential because education increases the opportunities for paid employment.

However, Khadim and Akram (2013) found that FLFP decreases in Pakistan if the females' education level surpasses the matriculation level. Likewise Assaad and Krafft (2013) argued based on a study undertaken in Egypt that despite the fact that females educational level has been rising between 2006 and 2012, females labor force participation, especially in urban areas has declined. Both these studies recognize a new, and largely unexpected relationship between females' educational level and Female Labor Force Participation Rate (FLFPR). These findings are intriguing and show that there is a riddle that needs to be solved. With the current and continuing economic transition in Egypt certain determinants of FLFPR might have a different effect on FLFP other than what would naturally be expected. The new relationship pattern might be in fact a challenge to start expecting new relations and patterns between factors influencing FLFP and FLFPR.

Understanding how the expected normal patterns would change would definitely help in addressing certain current economic problems related to the high female unemployment rate and low FLFPR. Accordingly, the first objective is to examine the effect of education on Egyptian FLFP while considering other personal and household factors. Secondly, while previous academic articles demonstrated that certain personal and household factors in fact affect FLFP in Egypt; across the literature it is found that female participation patterns display a great divergence both across countries and over time. FLFP rates increased significantly in developed countries in recent years. In contrast, the female labor force participation rates show either a stagnated or a declining trend in most developing countries particularly in Middle East and North Africa (MENA) region.

Women's participation in the economy has been and still is a major challenge facing the MENA region, especially that women's participation in the labor market is among the lowest throughout the world in these countries. Therefore, the question still remains if the relationship between such factors and FLFP is notably different in Egypt than the countries in the Global North who have been the focus of much of economic research and theories. Hence, the second and the even broader objective of this study is to compare FLFP between a developed country (Germany) and a developing country (Egypt). The major interest here was to find

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out what factors explain women's decision to participate or not participate in Egyptian and German labor markets. Thus, this paper attempts to shed light on understanding if and how specific demographic factors affect the Egyptian FLFP in comparison with the German FLFP. Based on the results of this paper, some policy implications could be drawn targeting higher FLFP. Policy implications targeting the Egyptian FLFP:

1- Based on the Egyptian educational system, a policy implication would be to encourage females who intend to take school up to high school level to opt for the vocational track, seeing that it offers a positive effect on female's labor market participation. Government might consider providing vocational training to females to upgrade their skills and hence enter the labor market much easier. On the other hand, if females choose to join general high school rather than vocational high school, families should then encourage their daughters to join university, as it offers the highest marginal return on female labor force participation.

2- Marriage is deeply rooted in the Egyptian culture and Egyptian married women are usually considered to be fully responsible for household activities and the husband is the one responsible to work away from home for wage. Consequently, policies targeting a lower marriage rate might not really succeed in such a country. However, two strategies might be used to enable and encourage married females to participate in the labor market. On the one hand, adjusting the working conditions to facilitate women's participation in the labor force such as; flexible working hours. Therefore, allowing women to participate in the labor market, while still having time to carryout household responsibilities. On the second hand, non-profit organizations targeting economic integration of women in business and employment as Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) should be motivated to cooperate with national civil society organizations to raise awareness on the nationwide level on the importance of women's integration and empowerment in the Egyptian economy. Also, efforts need to be made towards changing the perception and cultural attitude, which considers women as the sole individual responsible for household work.

3- It is also well known that the Egyptian culture supports high fertility and birth rates and as hypothesized, findings support that the number of children greatly impacts the female's decision to participate or opt out of the labor market. Therefore, low fertility and birth rates might be considered key elements inducing females to participate in the Egyptian labor market. A policy implication in such a case might be; the use of a national awareness campaign targeting family planning to help individuals and couples decide whether to have children and when the appropriate time to do so given their current capabilities and income. This would help families weigh the financial benefits and costs of getting additional children, and considering the opportunity cost (return from participating) of having an additional child and not participating in the labor market. Furthermore, applying birth control policies such as "one-child policy" to decrease fertility rates, while customizing such a policy to fit the Egyptian culture, religion and norms may also allow females to participate in the labor market. Policy implications targeting the German FLFP:

4- It is compulsory by the German law that children get a minimum of nine to ten years of schooling. Results show that an additional year of schooling increases the German female's predicated probability of participating in the labor market. So what about a 12-15 compulsory years of schooling for females especially that higher education in Germany is almost free of cost. Encouraging females to spend more years in schooling might on the long run boost FLFP.

5- The rising life expectancy and declining birth rates in Germany led to the phenomenon known as ageing population. With such a trend, applying birth control

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policies as suggested with Egypt would not be the best solution. Therefore, to tackle the issue of the negative impact of number of children in Germany on FLFP, a policy implication could be to offer affordable childcare facilities and centers to children who are 12 months or older, thus encourage women to participate in the labor market. Moreover, providing women with part-time jobs and flexible working hours would allow them to work and take care of their children. Therefore, perhaps maintain a better balance between work and home.

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