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The Dynamic Relationship between Female Labor Force Participation and Economic Growth: A Panel Data Analysis of Bangladesh

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ABSTRACT

Female labor force participation is recognized as an important factor in economic development in developing countries, especially in Bangladesh where women's participation in economic activities has increased remarkably in the recent decades. The present study investigates the dynamic relationship between women's labor force participation and economic growth in Bangladesh. It deals with the impact of women's employment on national income, productivity and sustainable development. The objective of this study is to investigate whether higher female labor force participation increases economic growth and whether economic growth makes women participate in productive activities. This is a qualitative study based on secondary data collected from the World Bank, the International Labor Organization (ILO) and the Bangladesh Bureau of Statistics (BBS). This paper investigates the impact of female labor force participation on some economic growth indicators in the short and long run by means of panel data approaches and econometric methodologies. The analysis takes into account the most important variables such as GDP, female employment rates, level of education and labor productivity. The results are to show that the higher female labor force participation is good for the economic growth thru the increase of productivity, household income and human capital development. The report also points out the importance of education, skills development and a supportive labor policy for Bangladesh's long-term economic growth.

Keyword: Female Labor Force Participation, Economic Growth, Labor Economics, Bangladesh, Human Capital, Wages and Employment.

Introduction

Women's participation in the labor force has become an important engine for economic development and social change in the developed and developing nations. Bangladesh has seen a big economic growth in the last few decades. This expansion has been accompanied by important changes in the composition of its labor force. Women participate in a variety of economic activities, such as agriculture, industry, education, health and services, which have made tremendous contributions to the national output and household welfare. Hence, the

relationship between women's labor force participation and economic growth has become an important area of research in labor and development economics. Women's participation in the labor force doesn't just increase the supply of labor, but also productivity, innovation and the accumulation of human capital. The economic theories especially the endogenous growth theories suggest that the spending on education and the effective use of human resources can improve the long run economic growth. Women represent an important but often underutilized part of the labor market in this setting. Women's participation can lead to better economic efficiency, poverty reduction and promotion of gender equality. This has raised growing interest among policymakers and scholars about the features that enable women's participation in economic activities. Bangladesh is an interesting case of this link. In the past few decades, the country has made tremendous strides in education, health outcomes and work opportunities for women. The rapid growth of the ready-made garment industry, the emergence of microfinance institutions, and the expansion of service industries have created new employment avenues for women. However, despite these achievements, limitations such as disparity in salaries, limited access to quality education, cultural norms and lack of adequate amenities at the workplace still hamper women's full participation in the labor market. The aim of this study is to explore the interactive effect of female labor force participation and economic growth in Bangladesh. The study will find out whether there is a correlation between increased female employment and better economic development, and whether there is a correlation between economic development and increased female participation. The findings of the study will be relevant for ongoing research in labor economics and will also provide useful inputs to the policymakers to promote inclusive and sustainable development and equitable economic opportunities for all Bangladeshi people. The study also aims to identify long-term policy implications that can contribute to enhancing women's economic empowerment, increasing labor market efficiency, minimizing gender inequities, and contributing to Bangladesh's overall goal of sustainable and equitable national economic development.

Specific Objectives

The specific objective of the study is to analyze the effect of women's participation in the labor market on economic growth in Bangladesh. Besides, the study possesses a few general objectives, which include the followings:

General Objectives

The general objectives of the study include:

1. To study the links between the employment of women, the productivity of labor and national income.
2. To explore the role of education and human capital in female labor force participation.
3. To develop policy recommendations for enhancing female employment and sustainable economic growth in Bangladesh.

Literature Review

The relationship between women's labor force participation and economic growth has been a major focus of labor and development economics. Women's participation in economic activities is good for the welfare of the home, as well as the productivity of the country and long-term development, say the researchers. The association is particularly important in developing countries like Bangladesh where almost half of the population are women. The existing literature shows that the female labor force participation and economic growth are associated with accumulation of human capital, industrialization, technical innovation and institutional development. Land, labor and capital were the main drivers of economic growth

according to traditional economic theories. Modern theories, in particular the theory of endogenous growth, stress the importance of human capital, creativity and knowledge for long-term development. Becker's human capital theory posits that investment in education, training and health will result in better worker productivity and economic performance. Women are an important component of the labor force and their participation in economic activities directly affects productivity and economic growth. One of the first to address this was Boserup (1970), who argued that women's labor is important in economic transition. Urbanization and industrialization change traditional labor patterns, she said, and affect men and women differently. Boserup noted that women are important in agricultural productivity and family economies, particularly in developing countries. Goldin (1995) postulated the U-shaped hypothesis of female labor force participation and it is one of the most influential theories in labor economics. The hypothesis assumes that early stages of economic development are accompanied by a decrease in female labor force participation as industrialization moves production from the household to the factory. But as the economy grows and there is more education, the service sector grows and society gets better, more women join the workforce.

A handful of empirical research has explored the nexus between female labor force participation and economic growth. Klasen and Lamanna (2009) find that gender inequality in education and employment has a significant impact on the economic growth of developing countries. Similarly, Verick (2018) identified demographic trends, economic conditions, labor market institutions and cultural norms as impacting female labor force participation. Women's employment decisions are closely linked to fertility rates, education levels and social expectations.

Education has always been one of the most important determinants of female labor force participation. Psacharopoulos and Tzannatos (1992) showed that the economic returns of investment in female education are large in terms of higher productivity and lower poverty. Educated women are more likely to take up formal employment and earn more money and contribute to national development. Tansel (2002) also found a significant increase in the probability of women's entry to the labor market by education. An important strand of the literature has focused on the relationship between female employment and household welfare. Women's income has positive effects on household expenditure on education, health and nutrition (Schultz, 1990). The entry of women into the paid work force often raised standards of living for families and made families more economically secure.

It is interesting to study the relationship between female labor force and economic growth in Bangladesh. The country has had rapid economic growth and a substantial shift in the composition of the labor market over the last three decades. Of the many factors behind the expansion of women's involvement in economic activities, one of the most important has been the rise of the ready-made garment sector. Millions of women, especially from rural and low-income households, have entered the labor force through employment opportunities created by the garment sector. Mahmud and Tasneem (2014) found that employment in Bangladesh's garment industry increased women's bargaining power within households and improved living conditions. Similarly, Heath and Mobarak (2015) showed that employment opportunities for women encouraged investment in girls' education and delayed early marriage. Microfinance institutions such as Grameen Bank and BRAC have also expanded women's access to credit and entrepreneurial opportunities.

Despite these accomplishments, various impediments persist to limit women's involvement in the Bangladesh labor market. The current disparities in wages between men and women, vocational segregation, discrimination at the workplace, lack of adequate childcare services, and traditional gender roles persist. While some previous studies provide valuable insight, there is still a significant gap of study in the context of Bangladesh. Accordingly, the aim of this study is to contribute to the existing knowledge base by examining the relationship between FLP to economic growth, and to hope to provide evidence that can support inclusive and sustainable development strategies. Furthermore, the status of women's jobs is an issue of great concern. Significant percentages of women work in the informal or low-paid sector, and are neither secured in their job nor covered by social benefits nor provided with opportunities to become better.

A large percentage of women work in the informal sector and/or low-paying jobs, whose security is not guaranteed, they are poorly covered by social benefits or there are no opportunities to improve upward their positions. Another reason for unemployment among women is unequal sharing of unpaid domestic work and early marriage, as well. These factors tend to lower women's work efficiency and restrict them and their women family members from contributing to economic development in the long run. Moreover, urban-rural wage market differences render unequal employment opportunities where women in rural areas access fewer employment opportunities in comparison to their urban counterparts, who may also be subject to greater restrictions on access to education, job training, financial resources and modern technology. Increasing the role of women in productive and respectable work is a necessity not only to sustain the economic growth of Bangladesh but also for its development into a middle-income nation. Access-expansion initiatives in learning, skill building, entrepreneurship, access to digital technology and financial inclusion offer tremendous potential in fostering women's economic outcomes. At the same time, there is a need to remove structural barriers and facilitate gender-equitable opportunity through effective government policies, supportive workplace environments and gender-sensitive employment arrangements. This study aims on obtaining empirical evidence on the dynamic relationship between employment rate of women and economic growth by adopting panel data analysis to help the policy makers, researchers and development practitioners to design policies that will contribute towards achieving gender equality, improve the performance of the labor market, and make economic development inclusive of Bangladesh for a long-term economic future.

Methodology

This study adopts a qualitative research approach to examine the dynamic relationship between female labor force participation and economic growth in Bangladesh. The research is empirical in nature and is based entirely on secondary sources of information. A qualitative methodology has been chosen because it provides an understanding of the economic, social and institutional factors affecting women's participation in the labor market and their role in economic growth.

The data and information for the study has been drawn from different secondary sources like academic journals, research papers, government publications, policy reports, books, magazines and reports published by national and international organizations. To ensure the accuracy and reliability of the information, publications of Bangladesh Bureau of Statistics (BBS), World Bank, International Labor Organization (ILO) and other relevant organizations have been reviewed. The collected data have been analyzed thru descriptive and comparative methods to identify major trends, patterns, and connections between female labor force participation and economic development of Bangladesh. The study's theoretical background

has also incorporated existing theories and empirical evidence in labor and development economics. The study hopes to fully comprehend the role of women in contributing to sustainable economic growth in Bangladesh using a wide range of secondary data.

Discussion

Female Labor Force Participation and Economic Growth in Bangladesh

The link between women's labor force participation and economic growth in Bangladesh is complicated and multi-dimensional. The last few decades have witnessed remarkable economic growth in Bangladesh along with significant changes in female participation in the labor market. The growing participation of women in the labor force has been a source of economic expansion, thru increasing productivity, household income and human capital. At the same time, economic development has created new opportunities for women in different sectors and has thereby strengthened their role in national development. Economic theory acknowledges that labor is a fundamental factor of production and the efficient use of human resources results in sustainable development. Bangladesh has nearly half of its population as women. Thus, for sustaining long-term economic growth, it is imperative that women are involved in economic activities. The growing participation of women in agriculture, manufacturing and service industries has increased the productive capacity of the economy and promoted social development.

The Role of Education and Human Capital

Education is an important factor for increasing female labor force participation and economic growth. Human capital theory holds that investment in education, training and health boosts worker productivity and earnings. In Bangladesh, the increasing levels of female literacy and education have helped women to participate more in the labor market. Women with education are more likely to work in formal sectors, to adopt new technologies and contribute to innovation and productivity growth. Higher education also induces women to delay marriage and to invest more heavily in the education and health of their children. Thus education improves women's economic opportunities and promotes long-term economic growth thru intergenerational benefits. Great progress has been made, but challenges remain in providing equal access to quality education and vocational training. Women in remote rural areas and of poor socio-economic background are often marginalized from productive employment. Hence, there is a need to enhance educational institutions and skill development programs for increasing economic participation of women.

Industrialization and Employment Opportunities

The rapid growth of industries, especially readymade garment industry has changed the scene of employment for women in Bangladesh. The garment sector has been one of the largest employers of female workers since the 1980s, providing millions of women access to paid employment. Thru jobs in this industry, women have been able to gain financial independence and improve household welfare. Positive spillover effects of industrialization also include spurring urbanization, expanding labor market opportunities and promoting economic diversification. Women are moving into service sectors from manufacturing such as education, health care, banking and information technology. These changes suggest that structural transformation is an important factor in explaining female labor force participation. However, many challenges still go along with industrial employment such as wage inequality, poor working conditions and lack of opportunities to career progression. Resolving these issues is central to ensuring that economic growth is equitable for women and supports inclusive development.

Technology, Digitalization, and Women's Economic Participation

Technological innovations and digital transformation has been identified as a significant factor driving female employment participation in Bangladesh. In the era of hyper connectivity in the internet, the mobile revolution, growing digitalization in banking and e-commerce, women in urban and rural areas have increased opportunities in the job market. Female workers are able to work in the community or from home as a result of many of the traditional obstacles to mobility and work accessibility being overcome thanks to digitalization. Consequently, there is a significant increase in women's participation in freelancing, online business ventures, information technology services, online retail stores, and digital marketing companies. With the betterment of the digital economy in Bangladesh, women have also learned new technologies and professional skills. The catalytic role of public and private sector investments in digital technology as a result of various government programs, including Digital Bangladesh, has meant increased access to digital training and employability for women. E-learning portals and virtual courses are another area that has extended the reach of education to women, helping them to compete with a growing technology-dependent employment base. Moreover, mobile banking and digital payment systems have helped financial inclusion by making it much easier to save, much faster to pay and much more convenient for women to access financial services. These are great improvements but there are still many challenges to overcome.” Today almost every corner of the world is equipped with computers and reliable internet connections, but rural and urban areas have been battling with a large digital divide and many women still lack access to online literacy programs. Financial constraints, lower rates of education attainment and cultural barriers also impede women’s full access to the benefits of technology. Women also may face further barriers to pursuing digital jobs because of concerns about cyber security or experiences of online harassment. These challenges need to be tackled together by government, private sector and educational organizations.

Building digital infrastructure, expanding access to affordable internet, digital skills training for women, and strengthening digital skills education can bring about a significant shift in women's participation in the modern economy. Technological entrepreneurship and remote jobs will not only strengthen the economic liberty of women, but will also make a significant contribution to labor productivity, innovation and national economic development. Therefore, digital transformation is an important path to building the participation of women in the labor market and making Bangladesh a knowledge-based and inclusive economy.

Readdressing the challenges of the labor market and structural constraints

Although there have been significant achievements in the education and employment of women in the past few decades, Bangladesh continues to have significant structural barriers which limit the state of women's participation in the labor market. Inequality in employment opportunities, earnings, professional advancement, and productive access still exist. Women appear overrepresented in informal and low skill jobs with inadequate wages, limited job security and low access to social protection measures. A very large number of women workers are engaged in laundry work, farming and making goods in small shops and they often have little chance of developing skills or of promotion. Women’s choices in the labor market are still conditioned by traditional social norms and cultural expectations.

More women were held back by domestic work, childcare, caring for the elderly and other domestic work, reducing time and flexibilities in the job market. Kids getting married early, and having kids even younger, also limits labor force participation rates, particularly in rural areas. In addition, fears of employment risks, travel conditions and gender bias stop many

women from entering or remaining in the career. Such tribulations reduce the efficiency of the labor market, stall economies in utilizing their available labor force.

The Contribution of Microfinance and Female Entrepreneurship

Microfinance is among the best tools available for creating greater economic participation of women in Bangladesh. Microfinance institutions such as Grameen Bank, BRAC, ASA etc., have given women greater access to money, which was denied to them in the mainstream banks. Small loans, savings groups and financial education programs have enabled women to launch small businesses, invest in agricultural production, livestock farming, handicrafts, retail trading and home-based businesses. This increase in women's entrepreneurship has created positive household and country economic impacts. Women's businesses establish employment, provide income diversification, reduce poverty and improve local economies. Economic empowerment also drives women's involvement in decisions within the household; enhances educational and health status for the children; and contributes to gender equality.

Mobile banking, ecommerce platforms and digital financial services has provided an added boost to women's access to markets and financial resources – and many women entrepreneurs has extended their businesses beyond their own local regions. However, female entrepreneurs continue to encounter numerous challenges. Business expansion potential is constrained by limited collateral, restricted access to larger commercial loans, inadequate business management training, access to fewer market information, and widespread ingrained gender biases. Enhancing entrepreneurship development initiatives, expanding the financial inclusion of women, and providing technical support can all significantly contribute to Bangladesh's long-term economic development.

Policy implications and future development prospects

As it was observed that the economic growth and participation of women in the labor market have significant implications on the economic policy making process of Bangladesh. Ensuring greater participation of women in productive employment has been a national priority in this country as it aims to attain upper middle-income status and achieving the Sustainable Development Goals (SDGs). There is a need to have policies which emphasize the quality of working women by investing in education, skill development, digitalization skills, technological innovation and entrepreneurship development. Policies should also include equitable pay for comparable work, better worker rights, anti-discrimination policies, and a better workplace safety record. Expanding inexpensive childcare facilities, maternity benefits, flexible working arrangements, and safe public transportation will help to minimize the barriers that prevent women from entering or remaining in the workforce.

Similarly, public-private partnerships can contribute to more inclusive workplaces and a greater representation of women in leadership and decision-making positions. Maximizing both productive potential of men and women will become more crucial for economic growth in the future in Bangladesh. As industries become more technologically and knowledge-based, women's education, talents, and innovative capacity will become increasingly valuable. More women in the labor market will boost national productivity and higher GDP growth, reduce income inequality, help household welfare, contribute to social inclusion and improve overall economic resilience. Thus, equal economic opportunities for women should be a core element of Bangladesh's long-term development agenda for sustainable, inclusive and equitable development.

Conclusion

The relationship between female labor force participation and economic growth is an area of study in labor and development economics, especially in developing countries like Bangladesh. The present study has examined the dynamic interaction between women's participation in the labor market and the economic performance of the country. The results indicate that female labor force participation has a positive contribution to economic growth thru productivity increase, household income increase, poverty reduction and human capital development. Bangladesh has seen significant economic growth and major shifts in women's employment patterns in the past few decades. The ready-made garment industry is growing, microfinance institutions are proliferating, female education is improving and the development of the service sector is creating new employment opportunities for women. So, women are increasingly engaged in productive activities and contributing to the welfare of family and national economic development. The study additionally emphasizes the role of education and skills development in enhancing female labor force participation. Investment in education, vocational training and healthcare enhances women's productivity and their access to formal employment. In addition, women's participation in the labor force is conducive to social development by improving the living standards of households and investing in the education and welfare of future generations. These developments notwithstanding, there are a number of challenges that prevent women from fully participating in the labor market. Key barriers are the gender pay gap, occupational segregation, discrimination in the workplace, the lack of childcare facilities and traditional social norms. Furthermore, women are still overrepresented in informal sectors which are low wage and job security sectors. Overcoming these constraints is critical to achieve inclusive and sustain economic growth. Finally, the long-term economic development of Bangladesh is highly dependent on the increase in female labor force participation. Policies that increase access to education, improve working conditions, foster female entrepreneurship and reduce gender inequality can enhance women's economic empowerment. Therefore, to achieve the sustainable and inclusive economic growth in Bangladesh, increasing women's participation in the labor market should remain a key priority for the policymakers.

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