Globalization and Labour Force Participation Nexus: A Cross-Country Analysis

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ABSTRACT

This paper analyses the impact of economic globalization on the labour force participation rate of the male and female labour force in both developed and developing countries. For measuring the impact of economic globalization Trade and Foreign direct investment are used as proxies. A sample of 10 developed and 10 developing countries are selected using data from 1990 to 2017. GMM technique is used for estimation purposes. Based on previous literature some critical control variables like Fertility rate, Skill level, Education level, and Per Capita income are used to make our analysis more precise and accurate. Our findings show that FDI has an opposing effect on labour force participation in developed and developing countries i.e. negative in developed and positive for females and insignificant for men in developing countries. The impact of trade tends to be negative in the case of the male labour force in developed countries while positive in the case of the female labour force.

INTRODUCTION

Anyone who looks at the current global political landscape would realize that we are in the midst of a new wave of anti-globalization movements all around the world. The examples that come to mind are the rise of trumpism and BREXIT. Granted that these movements acquire some of their support from xenophobia and anti-immigrant tendencies but it would be unfair to identify the whole group as one hate-filled blob that despises anyone with brown skin or an accent. The reality, just like in most of the cases, is much more complex than it seems at first glance. A large cohort of anti-globalization supporters believes that globalization has affected their labor market outcomes and hence support people like Trump or Nigel Farage on their economic and immigration stands even though they might not agree with their

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commentary on most of the social issues. But is this line of thought rational? Did globalization decrease the labor market choices of people in countries where anti-globalization ideas or rhetoric are in vogue these days? This paper answers or at least attempts to answer this question.

First of all, we need to define Globalization. Nye et al (2000) divided globalization into three groups. Political globalization, social globalization, and economic globalization. Economic globalization looks like the type of globalization that has the most immediate effect on labor markets and employment opportunities and is one of the main reasons for the upsurge of the far-right in Europe and the USA. Hence this paper will concentrate on economic globalization. Economic globalization can be defined as the flow of capital and goods across the border which means that foreign direct investment (FDI), imports, and exports form the backbone of economic globalization. From now onwards whenever the term globalization is used, it should be obvious that it means that economic globalization is being talked about.

Several variables can be used to gauge the health of the labor market e.g. employment level, unemployment level, wage rate, turnover rate, etc. The measure this paper uses is called the labor force participation rate (LFPR) because rather than only counting the people who are currently employed, this measure also counts the people who are currently looking for work hence giving us some idea about the state of the economy as people will look for work only if they believe they will find it. Literature has shown (as will be discussed in the next section) that women and minorities are the hardest hit whenever there is some kind of recession or downturn in the economy. Hence along with looking at the impact on total labor force participation rate, to make our findings richer and show the whole picture, the impact of globalization on male and female labor force participation separately will also be looked into. Needless to say, gender inequality will also be discussed in the literature and as supplementary findings in this paper. This paper also analyzes the impact of globalization on developed and developed countries separately because various studies point to the varying effect globalization can have based on the level of development (Oostendrop, 2009). Many important labor force participation determinants are also pointed out in the literature and some of them are used in the model as control variables to increase the precision of our findings.

A review of many relevant papers on the current topic is presented in the second section. The third section describes the data, model, and methodology that were used in this paper. They are followed by section four which presents the findings and finally conclusion is presented in section five.
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LITERATURE REVIEW

FDI flows have been achieved on a large scale and global scope. Almost all countries and territories around the world have been attracting a certain amount of FDI; however, it only differs in quality and quantity. (Cung & Hua, 2013). The appearance of FDI flows of the home countries invests in the host

countries stemming from the causes such as differences in the marginal productivity of capital, product life cycle, market access, and trade conflict reduction, logistics cost reduction, labor, and technology exploitation, and access to available natural resources. The research results of Cung (2020) show that the benefits received by the home countries when investing in other countries include: First, improving the efficiency of using investment capital. Second, FDI allows the home country's firms to extend the life cycle of products that have been manufactured and consumed in the domestic market. Third, FDI helps the home country's firms to create a plentiful and stable supply of raw materials at low prices. Fourth, through FDI, the home country's investors could achieve several essential purposes, such as expanding economic power and strengthening the influence in the international market by opening up expand product consumption markets, avoiding trade protection barriers of the host countries, reducing product costs, increasing competitiveness with goods and services imported from other countries. Many studies have been conducted on the effects of a more integrated world on the labor markets around the world with almost as many opposing findings as there are papers (Becker, 1971; Black et al, 2002; Oostendrop, 2009). This section will also point out various determinants of Labor force market decisions and hence point out some control variables which we will be uses in the analysis to make our findings more accurate. Apart from looking at labor force participation rate, papers employing employment rates, wage rates as measures to determine labor market decisions are also reviewed. Hence, employing a more holistic approach that encompasses the various indicators of the labor market that are related to the labor force.

As the male, female labor force participation will be discussed in this paper, it would be wise to start with Becker who is widely regarded as the father of economics of discrimination, he states that increased competition will reduce the firm's ability to discriminate as the costs associated with discrimination will rise (Becker 1957). Keeping this in mind, globalization should help reduce discrimination as leads to an increase in competition. Evidence for this was found by Gordon et al (2012) in their paper.

Globalization can have different effects on the labor markets for both genders but also the labor markets of different countries based on the level of development. Oostendrop (2012) in his paper showed that it increased the gender inequality gap in poor countries but decreased it in rich countries. This result makes sense to some extent if we look at it in the light of Boserup's (1970) hypothesis which states that country needs to cross a certain threshold before further development starts reducing gender inequality.

The type of industry the labor works in is also shown to be an important determinant of whether globalization will have any positive impact on them e.g. whether the industry in question is competitive or concentrated, whether they are domestic or exporting firm (Black et al, 2002; Murray, 2013; Zhihongchen et al, 2012). Trade is a vital component of Globalization and has been observed to have a whole range of effects on both the male and female labor force depending on which paper you refer to. For example, Menon et al (2008) in their paper state that according to the theory, increased trade should

decrease gender inequality but their findings showed the opposite results in India's trade liberalization as most of the trade occurred in the concentrated industries which didn't face a lot of competition and what little competition they did face due to increasing trade, they were able to fight it off. Apart from concentrated industries, there can be many other factors that can increase the labor force gap (both wage and employment) in both males and females even in the face of more trade. Darity et al (1985) point' female bargaining power as one of these factors while Saure et al (2014) point to the migration of male labor from male intensive sectors to female intensive sectors as one of the suspects, according them this migration can occur when FIS is more capital intensive, more trade integration in an economy that is more capital intensive will lead to an increase in FIS and decrease MIS. In contrast, Chen et al (2016) state that export expansion in China did lead to more gender equity but it alone cannot be relied on.

Similar literature that discusses the same implications is available for foreign direct investment (FDI). Some paper shows that it can increase labor force participation of both male and female, close the gap while others say it will only increase the gap. Some papers might show different results in the same paper for example Seguino (2000) showed that FDI increased the wage gap in Taiwan while decreasing it in South Korea because in Korea the FDI was going more into the female-dominated industries hence closing the gap while in Taiwan it went mostly into male-dominated industries which increased the gap. So the structure of FDI is another factor that can affect the labor market outcomes of globalization. It should be noted that we don't see why the same can't be true for trade.

A lot of other papers are available that point out variables that can affect the Labor force participation rate of both genders. E.g. education/skill level (Mincer, 1974; Placheck 2003; Becker, 1964). The fertility rate is also an important predictor as it can increase household responsibilities and affect labor markets mostly for women but also men (Broecke et al, 2017; Zabalza et al, 1983). In the same vein, economists like Doeringer et al (1971), Phelps (1972) highlight the role of some other factors i.e. incomplete information, asymmetric information, and search costs that can generate gender discrimination in employment. As these papers point out many factors, we are going to use the relevant ones in our analysis as control variables to make our results more accurate and precise.

RESEARCH METHODOLOGY

Based on the papers reviewed, it is obvious that the model we develop would include some control variables to make our findings as closer to reality as they can be. Indeed, all the determinants of labor force participation could not be added to this model but it is also true that some of these explanatory variables could not be ignored if we want to capture the impact of globalization on LFPR (both gendered and total). Based on this, the model we will be using is the augmentations of the models first used by Seigman (2007) and Mujahid (2013). Mujahid used it for developing countries while Siegman used it for developed nations. This works for us because we will be analyzing both developed and developing

nations and the model has been proved to work for both groups of countries. The model is as follows:

$$LFPR = \alpha_0 + \beta_1 TO + \beta_2 FDI + \beta_3 PCI + \beta_4 TFR + \beta_5 BE + \beta_6 IE + \beta_7 HE$$
$$+ \beta_8 LS + \beta_9 MS + \beta_{10} HS + u_0$$

TO stands for Trade openness and is a measure of the trade as a percentage of GDP for a particular country, FDI stands for foreign direct investment, PCI is per capita income, TFR is total fertility rate, BE is Basic education, IE is intermediate education, HE is higher education, LS stands for Low skill, MS stands for Medium Skill while HS stands for higher skill. LFPR is the Labor force participation rate and will have three different versions i.e. female labor force participation (FLFPR), male labor force participation (MLFPR), and total labor force participation (TLFPR). Hence based on this and the fact that this paper will be using data for two groups i.e. developed and developing countries. A total of six models will be used i.e. FLFPR, MLFPR, and TLFPR for Developed nations and FLFPR, MLFPR, and TLFPR for developing nations.

For this analysis data is taken from the World Band Database for years ranging from 2000 to 2017 for 20 countries, 10 developed and 10 developing countries. The data for skill level is taken from International Labor Organization (ILO) website i.e. ILO stat which specifies specific skill levels to different occupation groups where Low skill is skill level 1, medium skill is skill level 2 and High skill is skill level 3 and 4. The sample of developed countries includes Australia, Germany, Canada, USA, UK, France, Singapore, South Korea, Switzerland, and Japan. The developed countries include Bangladesh, Egypt, Kenya, Nigeria, Pakistan, the Philippines, Sri Lanka, Tajikistan, Ukraine, and Vietnam. Hence this paper will be using panel data.

A linear panel data model is presented as follows.

$$Y_{it} = \propto_i + \beta X_{it} + \mu_{it}$$
i=1, 2, 3…N
t=1, 2, 3…T

Eq. (2) represents a linear panel model in matrix notation, here Y_{it} is a vector of endogenous variables, X_{it} is a vector of all explanatory variables while μ_{it} is the error term.

As this paper deals with panel data, we will be using panel estimation methods for our analysis which includes the Fixed Effect Model (FEM), Random effect Model (REM), and Generalized method of moments (GMM). Hausman Test was used to choose the best estimation technique between REM and FEM, the results showed that FEM was the best method of the two for this data set. For robustness check, GMM was also estimated.

The results showed that the signs of some coefficients did change along with their significance with the change in subsamples but overall the GMM estimators were observed to be more reliable than the FEM

estimators. Hence GMM estimators were interpreted and conclusions and policy recommendations are also based on them. With all this sorted out, the next step would be to move on to the empirical findings and their interpretation.

Empirical Findings (A comparative analysis)

GMM estimators are used as they are shown to be more robust than the FEM estimators. The dependent variables in our models are Labor force participation rate (Male, Female and Total) while the variable that captures the impact of economic globalization are Trade and FDI, all the others are control variables i.e. Fertility rate, Per capita income, education level, and skill level. All the other data is taken from WDI apart from Skill level data which is based on the employment by occupation data classification done by the International Labor Organization (ILO) The table below shows a summary of the models.

Variables	Developed			Developing		
	Male	Female	Total	Male	Female	Total
C	73.901 (23.34)*	37.316 (15.26)*	55.019 (27.18)*	91.452 (18.54)*	40.413 (4.53)*	64.006 (12.02)*
FDI Per	-0.498 (-8.72)*	-0.336 (-8.97)*	-0.421 (-10.71)*	0.032 (0.11)	0.583 (2.08)	0.208 (2.09)*
FR	-0.928 (-0.50)	-6.700 (-4.85)*	3.092 (2.62)*	1.855 (2.12)*	-2.891 (-2.18)*	1.034 (2.13)*
PCI	0.013 (2.09)*	0.000174 (8.63)*	0.000083(5.75)*	-0.003 (-3.02)*	-0.005 (-2.23)*	-0.004 (-3.04)*
TRADE	0.019 (5.37)*	0.009 (2.09)*	0.015 (7.87)*	-0.069 (-2.40)*	0.202 (3.18)*	0.082 (2.54)*
BE	1.66 (2.91)*	0.89 (4.68)*	0.92 (3.29)*	1.65 (2.04)*	0.77 (19.25)*	1.44 (2.12)*
IE	1.97 (3.58)*	1.42 (2.90)*	0.78 (2.52)*	2.78 (1.99)*	1.99 (2.37)*	1.95 (1.97)*
HE	2.98 (3.73)*	2.27 (2.84)*	1.76 (2.10)*	3.19 (3.94)*	3.59 (2.68)*	2.39 (1.98)*
LS	1.15 (2.21)*	2.31 (2.06)*	1.85 (1.96)*	1.66 (4.04)*	2.2 (1.31)	1.05 (1.98)*
MS	1.62 (1.78)	1.83 (1.98)*	1.43 (2.07)*	1.52 (1.87)	1.98 (1.96)*	1.19 (2.9)*
HS	1.59 (2.17)*	0.86 (0.90)	1.82 (0.62)	1.42 (2.32)*	0.99 (3.53)*	0.69 (2.22)*

The estimation results show that the response of labor force participation rate (LFPR) for both genders varies in developed and developing countries. An increase in FDI is shown to decrease labor force participation of both genders, but the decrease for men is more severe than for women, which results in an overall negative impact of FDI on LFPR in developed countries. While on the other hand it is shown to increase labor force participation of females in developing countries while the impact on males is shown to be insignificant. It should be noted that no negative impact can be seen in developing countries.

This opposing effect of FDI in developed and developing countries can be attributed to the change in the structure of FDI in developed and developing countries. For example, if the FDI is going to a country that has more capital and/or technology-intensive industries and/or if technological advancement results in decreased demand for labor. It may decrease the labor force participation of labor as can be seen in the case of developed nations. Another thing to note in the case of the developed nations is that FDI decreases the LFPRM to a greater degree than LFPRF. This can also be attributed to the type of industries where FDI is going to. (Braunstein et al, 2007;Tomohara et al, 2005; Seguino, 2000).

Even though the impact of FDI on LFPRF and LFPRT in developing countries is insignificant, hence hampering our ability for comparative analysis between developed and developing nations to some extent, we can still deduce that the nature of their relationship with FDI is different than in the developed nations.

Another theory for this difference in the relationship was somewhat touched by Oostendrop (2009)when he talks about wage/employment gaps in poor and rich countries. Along the same lines, we can extrapolate that there might be a threshold above and below which economic development seems to have opposing effects on the labor force participation rate.

The results for trade are significant for all variables in our estimations, hence making comparative analysis much easier. We can see that trade has a positive relationship with each variable in both groups of countries except males in developing countries. In developed nations, we can see that Trade increases labor force participation of men to a greater degree than females but the overall impact is still positive. On the other hand, an increase in trade in developing nations seems to decrease the LFPR of Men while increasing the LFPR of women. This phenomenon can be explained to some extent by the increase in demand for cheap unskilled labor in export-oriented industries due to increased competition as a result of trade liberalization, which works more in favor of women than men. (Peters, 2012; Siddique, 2009). This doesn't mean that it will always result in decreased employment; it means that employment/labor force participation of women will increase at a greater rate than men, in our case in developing nations; we see that it decreases the demand for male labor. The overall impact is still positive in both groups of countries in our analysis. And the total labor force participation increase is still greater in developing countries even after taking into account the negative trend of LFPRM.

Our analysis shows that the biggest benefactors of policies about trade liberalization are the women in developing countries because they seem to make the most gains, which will result in decreased gender inequality. It should also be noted that just like FDI, the structure of trade in a country also matters i.e. Research has shown that the impact of trade and also FDI can be insignificant if the industries in question are more concentrated or are more interested in the domestic markets. Other factors like occupational segregation and decreased bargaining power can also increase gender inequality. (Darity et al, 1985; Black et al, 2002).This doesn't mean that our findings are wrong. It means different papers on the topic will have contradicting results because the forces at work in their samples might be different. Hence this should be kept in mind when analysing the impact of Trade liberalization on gender inequality.

CONCLUSION AND RECOMMENDATIONS

This paper analyses the relationship between labour force participation of both genders with economic globalization. For this purpose panel data from ten developed and ten developing countries were used ranging from 2000 to 2017.

The coefficients showed varying and sometimes opposing results when it came to the two different groups and even the two genders. The impact of an increase in foreign direct investment seems to decrease total labor force participation as well as female and male labor force participation in developed countries. The decrease in labor force participation of males seemed to be greater than females in this case. When it came to developing countries, the impact on total labor force participation and female labor force participation seemed to be positive while it is insignificant in the case of men. The impact of trade is positive for both genders as well as total labor force participation in developed nations while it is negative in the case of men in developing nations while positive for both female and total labor force participation.

To summarize foreign direct investment (FDI) seems to have different impacts on labor force participation decisions on men, women, and total in their respective groups. While in Trade, only Men in developed and developing countries seem to have opposing effects in labor force participation rates. In the case of the fertility rate, the effect on men is also different in a way that it is insignificant in developed nations while it is positive in developing countries.

The paper shows that the same variable can have completely different effects on the labor markets in countries with different levels of development. So a one size fits all kind of approach to tackle gender inequality in the labor market won't work. The decision should also take into account the structure of trade and FDI that the country in question is facing because previous literature has shown it to be a significant predictor of Labor Force Participation rates. The unique conditions each country faces and the level of development they enjoy needs to be taken into account before policy decisions are made to tackle gender disparity or to bring about a positive change in the labor market outcomes. It might seem easier to

build a wall or barring all the immigrants from entering the country but it won't get the job done and is just the kind of rhetoric that might, unfortunately, get someone elected or help you leave the biggest single market system in the world, but it won't work as a reliable and sustainable policy.

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