

An Impact of Globalization on Gender Wage Inequality: A case Study of Selected Developing Countries

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Abstract

Globalization may have different impacts on the gender wage gap depending on the specialization and trade pattern as well as the socio-economic situation.

The main purpose of this paper is to examine an impact of globalization on gender wage inequality. Specifically, the hypothesis is that globalization reduces gender wage gap. For this, we have employed a panel technique for 21 selected developing countries during 2000-2007. Based on the obtained results, the hypothesis is verified.

Keywords: Globalization; Gender Wage Inequality; Competitive Pressure; Developing Countries.

JEL Classification: F16, J16, J31.

1- Introduction

Nowadays, more women than before have access to higher education, greater equality in legislative rights and more rewarding opportunities in the labour market. Also, a greater proportion of women than ever before hold high positions in politics, trade unions, business and academia (Glenn, 2009). But the gender inequalities are still alive and women are still under the pressure in many parts of the world.

The discrimination is partly justifiable regarding to human capital is different between men and women. But these differences cannot explain the whole of gender wage gap and in many cases women and men are the same but a man earns more than women (Levine, 2003).

Beside some social affecting factors on the gender wage gap (Schimmel and Pech, 2004), globalization has a narrowing effect on the gap. Based on Becker's theory (1971), costly discrimination could not persist in the face of long-run competition. Hence rising competition from international trade is expected to eliminate any discriminatory pay differentials between men

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and women in the long run. Also, increasing trade will expand job opportunities with an increasing number of women being absorbed in export-oriented industries (Wood, 1991). However, the female share of labour may peak with increasing exports if the demand for the generally lower-skilled female labour first rises and subsequently falls again over time (Joekes, 1995). However, globalization may also worsen the gender wage gap. If firms try to use lower wage workforce with a weaker bargaining power such as female workers, trade competition will create a wider wage gap among groups of workers (Darity, 1989).

The purpose of this paper is to answer to the following questions:

Is there any link between globalization and gender wage inequality? and what are the effects of social conditions especially female participation in labor force and parliament on the gender wage discrimination?

To answer these questions, we've employ and estimated a Panel regression with a sample of 21 developing countries during time period 2000-2007. The rest of paper is organized as follows: Section 2 reviews the empirical studies on the topic. Section 3 introduces methodology. In Section 4, empirical results are presented. Finally, Section 5 is devoted to conclusions. References are given at the last part.

2. Empirical Studies

There are some studies on the gender wage inequality as follows:

Seguino (2000) has empirically investigated the determinants of economics growth for some of semi-industrialized countries during time 1975-1995. Based on this study, GDP growth is positively related to the gender wage inequality.

Oostendorp (2004) has studied some selected countries during timeperiod 1983-1999 and concluded that the occupational gender gap decreases with economic development, trade and foreign investment. Fontana (2004) has applied Social Accounting Matrix (SAM) and Computable General Equilibrium (CGE) model for Bangladesh and Zambia to highlight how differences in resource endowments, labour market characteristics and socio-cultural norms shape the way in which trade expansion affects gender inequalities.

Black (2004) has examined the impact of globalization on gender discrimination in manufacturing industries by comparing the change in the gender wage gap between 1976 and 1993. Based on this research, trade increases wage inequality.

Berik (2004) has explored the effect of international trade on the gender wage discrimination for Taiwan and Korea. This study has indicated that competition from foreign trade is positively associated with wage discrimination against women.

Meyer (2007) has examined the effects of economic globalization on gender wage inequality by employing a panel regression of 55 countries during time period 1975–1998. Based on the results, trade openness has a positive effect on the female share of earned income.

Menon (2008) has examined the impact of trade liberalization on relative wages and employment of women in India. By using OLS and fixed effects methods during time period 1983-2004 at the industry level, the study has shown that trade openness is positively related to larger wage gaps. Ferrant (2009) has developed a new aggregate index of gender inequalities and then indicated a negative relationship between gender inequalities and development.

Neumayer (2010) has analyzed women's rights over the time period 1981-2007 for selected countries at different stages of economic development. Based on the results, the globalization may increase the bargaining power of women through getting in contact with high-standards countries. Yahmed (2012) has examined the effect of trade openness on the gender wage gap. Based on the results, a reduction in trade costs increases wage inequality within-groups and has non-monotonic effects on between-group inequality. Furthermore, trade openness reduces the gender wage gap among unskilled workers but increases the gender wage gap among high-skill workers. Ying Ge et al. (2013) have used an enterprise-population-level dataset to investigate the link between globalization and gender inequality in the Chinese labor market. They have found that foreign and exporting firms employ more female workers than domestic nonexporters. The results highlight the importance of globalization in encouraging female employment and reducing gender discrimination.

3. Methodology

The theoretical underpinning of the impact of globalization on the gender wage gap is based on two mainstream theories, Heckscher-Ohlin-Samuelson (HOS) theory and Becker's theory of discrimination. Both predict a beneficial impact of globalization on gender wage gap.

Based on Heckscher-Ohlin-Samuelson model, countries abundant in unskilled labour tend to specialise in unskilled labour-intensive exports.

Demand for lower-skilled labour will therefore rise. The wages of unskilled labour will thus increase relative to skilled labour. This effect also points to a narrowing of the gender wage gap in developing countries opening to trade since women are often employed in lower-wage, lower-skilled jobs than men.

Furthermore, regarding to factor price equalization(FPE), the real wage in these countries intends to converge as developed countries wages fall and developing countries wages rise(Osterreich, 2007). The description does not give a direct link between the relationship of trade and the gender wage gap. It implies that in developing countries trade may cause the return on unskilled labour to increase and thus women would be better off as they are more concentrated in unskilled labour than their male counterparts are. The other theory to explain the link between globalization and the gap is Becker's Theory of Discrimination. By focusing on employers' personal preferences as a source of discrimination, he argues that some employers have a "taste for discrimination" and a willing to pay to indulge this taste. As Becker, he put it some 54 years ago: "If an individual has a taste for discrimination," he must act as if he were willing to pay something, either directly or in the form of a reduced income, to be associated with some persons instead of others. When actual discrimination occurs, he must, in fact, either pay or forfeit income for this privilege. This simple way of looking at the matter gets at the essence of prejudice and discrimination". Employers with a "taste for discrimination" against women will hire fewer than the profit maximizing number of women, employing more men who are equally skilled yet more highly paid. As a result, non-discriminating employers can drive discriminating employers out of the market because discrimination is costly: employers who discriminate against women sacrifice profits in order to indulge their taste for discrimination. In an increasingly competitive market, the wage gap between men and women with equal skills will narrow and may under certain conditions eventually disappear, as discriminators are forced by market pressure to change their discriminatory practices or are bought out by non-discrimination firms (Becker, 1957). Increased import competition is one mechanism through which this narrowing of the gender wage gap could occur. Firms in non-competitive sectors behave as Cournot oligopolists, choosing quantities of output produced taking the quantities produced by other firms as given. Sectors can be non-competitive for some reasons, including high start up costs and barriers to entry. Rents are

shared with workers through bargaining; in the case of interest to us, rents can be shared disproportionately with men, with both women and men willing to work in the sector because wages for both groups are at or above the competitive wage (Black, 2001). An exogenous increase in trade reduces rents in the industry and hence reduces wages; if male workers were enjoying more rents than female workers, the gap between the two will shrink with the increased competition. In the competitive sector, since wages were already at the competitive level, the gender wage gap will be less affected by the increase in trade. It is clear that any form of product market competition -whether through increased imports or increased domestic competition-plays an important role in this model, suggesting a link between market structure and the ability of an employer to practice discrimination: discriminating employers with market power, presumably earning positive economic profits, will be able to survive longer in the market than those operating in a competitive market with zero economic profits. Therefore, the gender wage gap should be smaller in competitive markets than in concentrated markets, all else equal (Black, 2004). Becker's theory seems to add more weight to the discussion of trade liberalization leading to equitable gains from trade than the H-O-S model (Odongo, 2009).

According to the literature, there are some factors affecting on gender wage gap as follow:

Globalization: we expect a negative relationship between globalization and the occupational gender wage gap(Oostendorp, 2004). First, trade will lead to more competition and therefore less discrimination. Second, increases in trade will drive up the relative demand for female labour at least in developing countries. We've used the percentage of import and export in GDP to measure the trade liberalization. The basic data are obtained from World Development Indicators (WDI, 2008).

Foreign direct investment (FDI): FDI is commonly seen by economists and policy makers as a premier agent, not only of globalization, but also of economic growth and development (Siegmann, 2006). Based on Braunstein (2007), it is looked at as an important influence on the gender wage gap. Specifically, women are more often employed in industries which require hardly any skill, and the effect of FDI on the gap depends on its impact on these industries. Furthermore, the FDI inflow increases while decreasing the cost of production (Neumayer, 2010). Hence,

increasing FDI makes the discrimination less costly. The FDI inflow data are extracted from WDI (2008).

Human development: Depending on the level of education and experience, human capital has different impacts on the relative demand for skilled or unskilled workers. Increasing skill's demand makes some competition pressures and consequently may decrease the cost of the discrimination (Munshi, 2008). To measure the capital, we've used the Human Development Index which is estimated by United Nations (HDR, 2010). **Female participation in labour market:** to keep their competition power, the firms need to innovation and to improve quality of production through employing the skilled labour including female workers without any discrimination. So, in all stages of opening trade, it's expected that female participation in labour market to increase (Reilly, 2005).¹ The data of this variable are obtained from ILO statistics.

Proportion of female in parliament: The social institutions such as parliaments have an important role on the women employment in any country. It seems that there is a negative relationship between the percentage of female legislators and the gender wage gap. Also, if there are more female legislators, this will probably allude to more educated females and lower gender wage gap (Odongo, 2009). Proportion of female in parliament is measured by the percentage of women in each national parliament which is obtained from United Nations.

Civil liberties: This means certain rights given to the people based on the constitution which includes freedom of speech, expression, press, assemble, worship, right to vote, right to equality in public places without any interference or restriction from the government. They are given to treat all the people equally under the law and make them enjoy rights of speech, protection, enjoyment and liberty. These liberties may increase the women's political opportunities and reduce the gender wage gap. Civil Liberties index is published by Freedom House Institute and varies between 1 to 7; 1 and 7 mean most and least freedom respectively.

According to the above mentioned theories, we can use the following model:

$$\frac{w_{itm}}{GDP} - \frac{w_{itf}}{GDP} = \beta_1 + \beta_2 \log(open_{it}) + \beta_3 FDI_{it} + \beta_4 \log(HDI_{it}) + \beta_5 LABOR_{it} + \beta_6 PARL_{it} + \varepsilon_{it} \quad (1)$$

Where, i and t indicate country and year respectively, w_{itm} and w_{itf} show respectively the wage of man and woman and the GDP is GDP per capita.

¹ Many studies have only considered the employment ratio of women and the gender wage gap (Berik et al, 2004; Villarreal, 2007; Oostendoorp, 2009).

We've used the logarithm of openness index ($open_{it}$) and the percentage of FDI inflow in GDP (FDI_{it}) to measure the liberalization. The level of education as a proxy of human capital is measured by Human Development Index (HDI_{it}). We've employed two variables to measure the gender inequality including the percentage of women in labor force ($LABOR_{it}$) and the percentage of women in parliament ($PARL_{it}$). To examine the impact of the gender inequality in societies rights on the gender wage gap, we've added the Civil Liberties Index to the equation. Now we can rewrite the equation (1) with adding a new variable:

$$\frac{w_{itm}}{GDP} - \frac{w_{itf}}{GDP} = \beta_1 + \beta_2 \log(open_{it}) + \beta_3 FDI_{it} + \beta_4 \log(HDI_{it}) + \beta_5 LABOR_{it} + \beta_6 PARL_{it} + cL_{it} + \varepsilon_{it} \quad (2)$$

Table 1 shows the average of variables in selected developing countries.

Table 1: Average of variables in selected developing countries

Variables countries	Wage gap a (current US\$)	Percent of FDI in GDPb	Percent of Openness in GDP b	Percentage of Female in Parliament c	Female participation rate in labour market d	Civil Liberties index e	GDP per capital b (current US\$)	Human Development Index f
Armenia	51.66	5.53	71	4.78	58.18	4.00	1356.30	0.655
Bahrain	-49.43	7.10	158	0.31	33.49	5.13	16325.99	0.785
Belarus	47.18	1.37	132	16.63	53.56	6.00	2462.29	0.699
Bulgaria	35.97	13.70	114	22.76	46.56	2.25	3102.61	0.715
Colombia	43.51	3.37	36	11.55	38.31	3.63	3026.11	0.652
Costa Rica	-15.20	4.36	97	31.58	41.86	1.50	4554.54	0.701
Egypt,	29.44	3.57	52	2.33	23.17	5.50	1288.75	0.581
El Salvador	49.91	2.69	71	11.75	45.20	3.00	2655.88	0.627
Georgia	56.97	8.72	78	8.30	55.81	3.63	1229.00	0.675
Hungary	56.69	12.47	140	9.39	42.03	1.50	8853.12	0.789
Jordan	700.07	10.38	126	3.72	21.99	4.38	2238.07	0.643
Kazakhstan	91.69	8.57	95	10.39	64.82	5.00	3144.36	0.669
Latvia	71.97	4.72	100	19.25	51.02	1.63	6236.96	0.746
Lithuania	100.86	3.96	113	16.11	52.57	1.63	6355.94	0.761
Mexico	65.58	3.08	57	19.50	40.10	2.38	7525.51	0.719
Mongolia	11.06	7.17	131	8.42	66.96	2.25	798.14	0.572
Panama	22.29	6.68	139	13.27	46.74	2.00	4550.07	0.718
Paraguay	61.25	1.04	97	7.03	53.64	3.00	1298.39	0.613
Philippines	-0.89	1.63	100	16.96	49.69	3.00	1119.87	0.612
Sri Lanka	5.50	1.29	77	4.67	35.95	3.63	1117.48	0.628
Ukraine	41.76	4.04	107	6.58	51.66	3.13	1489.02	0.683

Source: a: Labour Statistics Database, www.ilo.org b: World Development Indicators (WDI), databank.worldbank.org c: United Nations Data (UNdata), data.un.org d: Key Indicators of the Labour Market (KILM) www.ilo.org e: Freedom House www.freedomhouse.org f: Human Development Report (HDR) hdr.undp.org

4. Empirical Results

Tables 2 and 3 show the estimation results from the first and second regression respectively. The coefficient of the *LOG (OPEN)* is negative and significant in both regressions. Also, the same result is obtained for *FDI*. Thus we can conclude that the trade and financial openness have a negative and significant effect on the gender wage gap.

The coefficient of HDI as a good proxy for education level and human capital is negative and significant in both tables. This means by increasing HDI, the gender wage discrimination decreases. Coefficient of the *LABOR* is positive and significant in table 1 and negative but insignificant in table 2. Based on the result in table 1, it seems that an increase in women labour may decrease the women wage as expected from labor market and it may consequently weaken the bargaining power of the workers and finally increase the wage gap. This is right especially when women are disproportionally employed in sectors increasingly competing on the basis of “cheap” labor (ostendrop, 2004).

Women’s share of legislators (*PARL*), which is the indicator of the presence of women in decision-making, is consistently negatively associated with the gender wage gap in both of the regressions and they are significant.

Coefficient of the Civil Liberties (*CL*) has an unexpected negative sign but significant. This result means when the Civil Liberties become better, the gender wage gap grows. Thorin (2001) and Blau (2003) have found the same result. Based on Blau (2003), the United States has traditionally been among the countries with the largest gender gaps. Based on this study, relying on a framework that considers only gender-specific factors is inadequate to explain the relatively high gender pay gap in the United States. Thorin (2001) has explained this paradox in another way. Specifically, the culture and customs may become more effective than civil freedom, and maybe there is a relatively strong gender discriminating culture which often takes on even stronger expressions in periods of limited resources.

Table 2: The estimation results from the regression of

$$\frac{w_{itm}}{GDP} - \frac{w_{itf}}{GDP} = \beta_1 + \beta_2 \log(open_{it}) + \beta_3 FDI_{it} + \beta_4 \log(HDI_{it}) + \beta_5 LABOR_{it} + \beta_6 PARL_{it} + \varepsilon_{it}$$

C	Log(open)	FDI	Log(HDI)	LABOR	PARL
0.015821 (0.3378)	-0.00870 (0.0000)	-0.000159 (0.0000)	-0.108254 (0.0000)	0.000330 (0.0830)	-0.000109 (0.0888)
N	168	168	168	168	168
R2	0.938689				
adjR2	0.927895				

Source: Calculations of present study by using Eviews 7

Table 3: The estimation results from the regression of

$$\frac{w_{itm}}{GDP} - \frac{w_{itf}}{GDP} = \beta_1 + \beta_2 \log(open_{it}) + \beta_3 FDI_{it} + \beta_4 \log(HDI_{it}) + \beta_5 LABOR_{it} + \beta_6 PARL_{it} + cL_{it} + \varepsilon_{it}$$

C	Log(open)	FDI	Log(HDI)	LABOR	PARL	CL
0.039152 (0.0260)	-0.007783 (0.0395)	-0.000173 (0.0246)	-0.121257 (0.0000)	-5.2300 (0.8298)	-0.000221 (0.0106)	-0.004161 (0.0000)
N	168	168	168	168	168	168
R2	0.919431					
adjR2	0.904574					

Source: Calculations of present study by using Eviews 7

2. Conclusions

This paper has examined a hypothesis which is “globalization has a positive effect on gender wage gap”. Based on HOS model, the gap may decrease for a country with labour abundance. Also, regarding to Becker’s theory, product market competition will drive out discrimination in the labour market. For testing the hypothesis, we have selected 21 developing countries with a reasonable geographical dispersion and then estimated a panel model during time period 2000-2007. Our obtained results verify the hypothesis. The other results show that HDI and education level can lead to decrease the gender wage gap. Also, the participation of women in legislative institutions has a negative and significant effect on the wage gap. But, the variable LABOR is not shown to have a certain relationship with the gender wage gap. Furthermore, based on other results in this paper, the freedom society’s right can’t help the country to narrow the gender wage gap, so maybe other important social factors like culture, customs and wage structure affect the gender wage gap more than just the social freedom rights.

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