International Journal of Advanced Social Studies
ISSN: 3006-1776 (Print), 3006-1784 (Online)

Research Article

Foreign Direct Inflows and Gender Inequality Nexus: An Analysis from Developing Countries

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Article History
Received: June 12, 2025
Revised: August 18, 2025
Accepted: August 27, 2025
Published: August 30, 2025

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https://doi.org/10.70843/ijass.2025.05214

Abstract

Foreign direct investment is generally regarded as beneficial for a nation's overall growth. There are many positive influences of such investment on both the home and host economies. We have investigated the effect of gender inequality on foreign direct investment inflow in underdeveloped economies by using data from 2000 to 2024. Gender inequality with human capital, trade openness, population growth, and economic growth were taken as explanatory variables. The study results found that gender inequality in employment positively affected the foreign direct investment inflow in the developing economies. Results also showed that human capital, trade openness, and population growth contributed much towards foreign direct investment inflows. The findings suggested that multinationals should provide more jobs and higher wages for women. Moreover, there should be a better working environment for women in these nations. Finally, the Government should provide a more financially and politically stable environment for attracting more foreign direct investment from the host countries.

Keywords: Foreign direct investment, Gender inequality, Human capital, Developing countries.

Introduction

In agenda of these organizations is to require equal health, education, and job opportunities for males and females. Suppose, why do females gain a very low wage rate as compared to male workers? Though labor is working in export sectors in underdeveloped economies. In such a state of affairs, minimum wage law increases the requirement for exports and for earnings; as a result, trade liberalization improves the females' status by boosting their earnings and job chances (Busse & Spielmann 2009). Gender inequalities between male and female workers have severe cost implications. Gender inequality is a worldwide issue for females. The fifth edition of the ILO's quadrennial report series on worldwide approximation of child labor in 2016 point out that total of 152 million kids are in child labor internationally, make up approximately one in ten of everyone children globally, even as 70% of the children in the earth who hardly go to school are girls, at the same time as over 100 million girls are working seeing that child laborers. In line with the most recent comprehensive estimations by the ILO in 2019, 152 million children are in child labor, and 25 million adults are in worldwide supply chains. Girls working as child workers are frequently employed in home labor or in farm work. On the contrary, when girls grow to be women, their access to salaried pay decreases (Canton, 2021).

At present, human capital is certainly considered a vital constituent for every investment level internationally. Every country, whether urbanized or underdeveloped, discovers special reimbursement in its growth records on one occasion its states deal with raising talents of their labor force and add to public along private expenses across the major education levels. The notion of human capital includes the idea that investment levels are made by individuals mostly all the way through education, training, and health, and that these investment

levels boost a person's output (Pantelopoulos, 2024). Insofar as foreign direct investment is concerned, as numerous nations struggle to increase such foreign investment flows from abroad, they are making efforts to increase the human sector of their financial system by focusing on factors other than the traditional ones, like average years of schooling, completion and illiteracy, and gender ratios. Foreign direct investment is considered helpful for a nation's normal growth. There are a lot of positive influences of foreign investments on both the home and host nations. Such flows of foreign investment are considered as lengthy investment projects and therefore are less explosive than portfolio investment flows. For that reason, representatives make efforts to enhance such investments because of numerous positive influences on economies (Alfaro et al., 2004). FDI is well thought-out as a major component (Braunstein, 2006; Brzozowski, 2013). Foreign direct investment is considered a major channel of global know-how transmission and a decisive instrument in order to improve growth factors.

Feenstra and Hanson (1996) argued that worldwide outsourcing increased the requirement for capable employees in poor and rich nations. Very initial production processes showing less earnings, required skill thresholds, particularly at what time such procedures were incorporated within multinational businesses, making manacles. Kucera (2002) used data from 1993 to 1997 and emphasized gender inequality measures. Findings showed that human capital and gender inequality in education have increased foreign direct investment inflow. Busse and Nunnenkamp (2009) focused on how gender inequality in education determined foreign direct investment. Findings indicated that foreign investors favored locations where education-related gender disparities were small. Though the discouraging influences of gender disparity on foreign direct investment were limited to middle-income nations, as compared to those nations having less income and high incomes. Goldberg et al. (2010) noted that increased worldwide funds flow was generally linked with an augmented requirement for trained employees. Eventually, capital goods frequently required extra expert labor, while temporary types of capital, like collection funds. Likewise, Mercan and Sezer (2014) analyzed how education expenditure affected economic growth in Turkey from 1970 and 2012. It was found that education expenditure improved economic growth.

Bogliaccini and Egan (2017) focused on the association of foreign investment and economic income disparity by using error correction models in 60 middle-income countries. It was found that foreign direct investment in services was highly linked with inequality. Bui et al. (2018) investigated the influence of gender inequality on foreign direct investment in emerging nations from 1992 to 2011. GMM results found that gender equality attracted foreign direct investment flows into emerging nations. Diebolt and Hippe (2019) concluded that human capital was a major variable clearing up present regional disparities in innovation and development, which suggested that human capital formation at the regional level was a significant driver of long-lasting development. Lee and Shin (2019) used data from the 2007 Pew Global Attitudes Project to investigate that women did not disfavor foreign direct investment more than men because multinational corporations brought more jobs for women, provided better working environments and higher wages than domestic firms, and spread norms and values that favored gender equality. It also increased globalization. Gupta (2019) has determined how institutional quality affected foreign direct investment inflows in India and China by a panel data analysis. The random effect results revealed that the country's risk rating on corruption and gender parity index affected FDI inflows in both India and China.

Pantelopoulos (2024) investigated the link between the labor force across educational levels and foreign direct investment in OECD countries. Findings highlighted that an educated labor force contributed well to improving foreign direct investment. Though tertiary education seemed to have the greatest effect. Finally, female labor force contribution seemed to be vital in drawing attention for foreign direct investment. Constantinescu et al. (2025) focused on economic, social, and technological determinants of foreign direct investment by using data from 1990 to 2022. The GMM result showed that government expenditures and growth led to an increase in foreign direct investment. However, inflation and unemployment have decreased foreign direct investment inflows.

Considering the significance of gender disparity in foreign investment inflows, we consider the role of gender

disparity in employment along with other factors such as trade openness, unemployment rate, population growth and Government final consumption expenditures on investment inflows in developing nations.

Research objectives

The objectives are given as:

1. To analyze the impact of gender disparity on foreign investment inflows.
2. To highlight the role of trade openness, unemployment rate, population growth, and government consumption expenditures on foreign direct investment in emerging nations.

Research Questions

The questions of the study are given as:

1. What is the effect of gender disparity on foreign direct investment?
2. How does trade openness affect foreign direct investment?
3. What is the influence of the unemployment rate on foreign investment?
4. What is the role of population growth in attracting FDI?
5. How do government final consumption expenditures affect foreign direct investment?

Research Hypothesis

Major hypotheses are given as:

H1: There is a relationship between gender inequality in employment and foreign direct investment.

H2: Foreign direct investment and unemployment are positively related.

H3: Higher trade leads to higher foreign investment.

H4: Population growth leads to an increase the FDI.

Methodology

We have drawn data from 1990 to 2020 and analysed the impact of gender disparity in employment with other variables influencing foreign direct investment inflows in developing countries. Foreign direct investment inflow was used as the dependent variable. However, factors such as female-to-male labour force participation ratio, trade openness, and unemployment rate and population growth were used as explanatory variables. We have used random effect results. The data were drawn from countries such as Bangladesh, India, Indonesia, Iran, Jordan, Malaysia, Pakistan, Philippines, Thailand and China. Data of all important factors were taken from WDI.

The model is presented as:

$$UNRFM = \beta_0 + \beta_1 FMRit + \beta_2 TOPENit + UNEMP\ it + \beta_4 POPGit + \beta_4 GFCEXPit + uit \quad (1)$$

FDI= Foreign direct investment inflow (% of GDP)

FMR= Female to male labour force ratio

TOPEN= Trade openness (exports and imports of goods and services % of GDP)

UNEM= Unemployment rate (total)

POPG= Population growth

GFCEXP= Government final consumption expenditures (% of GDP)

$_{it}$ = time trend

ui_t= error term

Results and Discussion

Here, a summary of the important factors have been given. It is shown that immunization and economic growth with other factors, affect the under-5 mortality rate in selected developing countries.

Table 1. Descriptive statistics of important factors.

Variables	Observations	Mean	Standard deviation	Minimum	Maximum
FDI	350	2.0699	2.4249	-2.7574	99.8
FMR	350	48.8114	23.0406	11.7294	99
TOPEN	350	2.2307	9,9809	-25.0519	145.4573
UNEM	350	5.6634	4.4198	0.249	91.418
POPG	350	1.6712	1.1455	-0.1231	28176.4
GFCEXP	350	73.7942	13.2389	49.4408	107.3485

It is found that FDI is 2.0699 percent in developing countries. However, to female-to-male labor force ratio is 48.8114 percent. Trade openness is 2.2307 percent. Unemployment rate is 5.6634 percent. However, its range varies from 0.249 to 91.418 percent. Data also shows that the unemployment rate is 5.66 percent in these countries. Finally, the Government's final consumption expenditure is 73.7942 percent. The results show the normality of the variables.

Table 2 shows findings from the random effect technique.

Table 2. Random Effect Results, Dependent factor is FDI.

Variables	Coefficients, Standard Errors and Z-values
FMR	0.03581*
	0.0098
	(3.65)
TOPEN	0.1246 *
	0.0212
	(5.87)
UNEM	-0.0077* *
	0.0416
	(0.18)
POPG	0.3109 * *
	0.1243
	(2.50)
FGCEXP	-0.0344* *
	0.0177
	(-1.95)
C	2.1072
	1.5929
	(1.32)

Wald chi2	212.02
Probability	0.000
R2 Within	0.59
R2 Between	0.49
R2 Overall	0.52

** p<0.05, * p<0.1.

The random effect results are highlighted in Table 2. The female-to-male labour force participation ratio is a very important factor in affecting foreign direct investment. Much of developing countries provide opportunities by investing in poor nations. All this increases investment, production, employment, per capita income, and economic growth. Specifically, females are provided more chances for job and they are given more participation. All this increases the foreign direct investment flow in these economies. Findings show that one unit increase in female to male labour force participation ratio has resulted in 0.0358 percent increase in economic growth in these nations. Finding is supported by Bui et al. (2018).Trade openness is also a significant factor affecting foreign direct investment from abroad. More production attracts more investments by local workers from foreign companies. This ultimately increases more employment and earnings of the workers from all sections of the society. In this way, welfare increases. Findings show that one percent increased trade has resulted in increased growth by 0.1246 percent in developing economies.

Unemployment rate is another factor affecting the flow of foreign direct investment from abroad. The result shows that a unit increase in unemployment rate has decreased foreign direct investment inflow from abroad by 0.0077 percent. Population growth also increases foreign direct investment from abroad. Urban population has led to more development in developing economies. People from urban areas are involved in much investment and growth. All this increases foreign direct investment inflow. This results in more foreign direct investment. The result shows that a unit increase in population growth rate has caused more investment by 0.3109 percent. Final consumption expenditures are another factor affecting foreign investment inflow in emerging economies. More expenditure may increase demand for goods and services, and this results in more investment from abroad. The result found that a one percent increase in final consumption expenditures may result in less investment inflow by 0.0345 percent.

Conclusions

This study examines the foreign direct investment and gender disparity in developing countries by using data from 1990 to 2024. We have emphasized on major factors affecting foreign direct investment inflow. We have used FDI inflow as the dependent variable. However, female-to-male labour force participation ratio, trade openness, unemployment rate, and population growth were used as explanatory variables. We have used the random effect technique for this analysis. The result shows that. The study results found that gender inequality in employment has increased foreign direct investment inflow in the developing economies. Results also showed that human capital, trade openness, and population growth contributed positively much towards foreign direct investment inflows. Finally, government final consumption expenditures tended to decrease foreign direct investment. The findings suggested that multinationals should provide more jobs and higher wages for women. Moreover, there should be a better working environment, especially for women in these economies. Finally, the government should provide a more financially and politically stable environment to attract more foreign direct investment from the host countries.

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