

# “ECONOMIC GROWTH, FEMALE LABOR FORCE PARTICIPATION AND INTERACTING ROLE OF EDUCATION IN DEVELOPING-8 COUNTRIES: A SUSTAINABLE DEVELOPMENT POLICY PERSPECTIVE”

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## ABSTRACT:

The objective of the present paper is to determine that how the level of education drives the relationship between economic growth and female labour force participation (FLFP) in developing-8 (D-8) countries (Bangladesh, Egypt, Indonesia, Iran, Malaysia, Nigeria, Pakistan, and Turkey). To achieve this objective, the gross enrolment at primary, secondary, and tertiary levels are incorporated as interaction with economic growth. The empirical estimation carried through the panel ARDL (Pooled Mean Group) for the short and long-run analysis from 1980 -2018. The results revealed that economic growth is positively associated with FLFP. This indicates that economic growth augments prospects for FLFP. On the one hand, it reassures women to obtain anticipated skills engendered by new development on the other hand. Resultantly women choose to switch from the labor market to substitute education at secondary or primary. The tertiary level of education enables women to participate more in the labor market even with the increased demand for skills. This is evident by the findings from the interaction effect of different levels of enrolment. Therefore, having observed economic growth as a crucial factor, and education as a moderator several policy guidelines are formulated to enhance the status of female labor in developing-8 countries. This can be done by adopting the proper policy through the provision of basic skills, on the job training, and subsidized higher education, this would enable the sustainable development of society.

## Keywords:

economic growth, female labor force participation, education, developing-8, interaction term.

Article Received: 18 October 2020, Revised: 3 November 2020, Accepted: 24 December 2020

## INTRODUCTION

Sustainable economic development hinges on the country's available resources and its ability to fully utilize these resources, whether physical or human capital. Sustainable development is, in fact, the process of development which ensure the present needs should not meet at the expense of future generations, in other words, it does not allow the depletion of resources without producing alternates. Sustainable development is an ideology through which a proper policy framework is introduced they y United Nations consisting of 17 major goals or targets which are to be achieved till 2030 and ed as *The Agenda for Sustainable Development, 2030*.

The magnificence of this agenda or strategy is that it is not restricted to a specific country, group, society or individual. It is a worldwide agenda and generalized for the whole world which integrates the economy, society and environment decision-making process. So, we can say it is a holistic approach that which cares for all human rights for present day and for the future generations. There are many social economic and environmental problems the world is facing today are prime focus of SDGs, but if we talk about the human beings most vulnerable are the female today. Gender inequality is a gigantic problem of almost every country on the globe but developing countries are the special case of this problem.

Gender equality itself is the Goal of SDGs and have central position because no other target can be achieved without giving special focus on this issue not only because female share half of the population on the globe, it is also important that female also a part of labor force and can share half of the burden on economy also by indulging themselves into the production process, which is only possible if they are equipped with education skills and modern techniques of the world of information technology.

To make a society peaceful and harmonious it is mandatory to include women in development process, it is the best way of conflict resolution amongst individuals and household level which sheds its impact on a society as whole. According to World Bank (2003), Gender equality and millennium development goal, those development policies and actions have to endure substantial costs who fail to address gender inequality issues and have very less effectiveness.

## LITERATURE REVIEW

Sustainable development, when discussed under the course of economics can be referred as a long term persistent economic growth which can be further enhanced by giving priority to female education equally as male, which is mainly the intention of prospective study. Gender equality in education can increase economic growth through various channels. Gender equality in education leads towards human capital accumulation which in turns increases human capabilities and efficiency that results in higher productivity and economic growth for a longer period of time.

Human capital theory by Schultz (1961) and Becker (1964) stresses the importance of investing in human beings. This theory illustrates the association between human capital and the development of family and society. The “human capital” can be defined as investment in human beings to promote their skills, abilities, knowledge, and character, that can be achieved through spending on education, on-job training, and providing health facilities, etc. That is how the individuals can develop their capacities for

In view of the above-mentioned background, the aim of this study is to determine the interacting role of education on economic growth and female labour force participation (FLFP) in developing-8 (D-8) countries. The D-8 group of 8 developing countries who have Muslim populations predominantly and all are affiliates of the “Organization of Islamic Cooperation” (OIC). These countries have an alliance for economic cooperation within the OIC. The group is comprising of Bangladesh, Egypt, Indonesia, Iran, Malaysia, Nigeria, Pakistan, and Turkey.

The remainder sections of this study appear as follows: the second section contains a brief theoretical and empirical review; the third section discusses the empirical methodologies; the fourth section presents and reviews the empirical results; and the final section offers the conclusions and the policy implications.

better career choice by acquiring appropriate education and skills, so they would be able to produce more income. The crux of the discussion is pivoted in the significance of education and skill as an important driver of labor force participation. The additional explanation communicates the positive relationship between earning(wages) and education and training because education and training enhance the productivity of individuals which offers them an opportunity to participate in work with higher earnings.

Theoretical underpinning of the present paper meets with the previous work of Ali et al. (2015). Modern theory of human capital discusses the cost and benefits of investing in human capital like education and training (Lee et al., 2010). This theory postulates that benefits from investing in the human capital occurs in the long run and also incurs some costs but these benefits are much higher than the costs and leads towards long term economic growth. This is explained by the given figure.

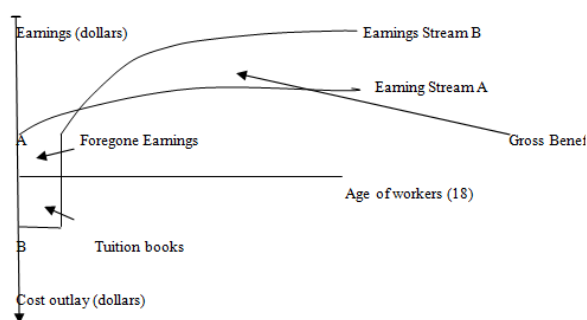


Figure 1  
*Age Earning Profile*

In Figure 1 age of worker is given on x-axis which is set at 18 years. Curve A is the earning of those people who are not involved themselves into the learning process, whereas curve B shows the earnings of educated people. The uneducated person starts working earlier than educated person but their earning remains below the earning of educated person throughout the period. If we look at the earning of educated people that at the initial point they are not earning and point B shows their forgone earning which the time they spent in the getting education, but later they start earning and their earning is much higher than the non-educated persons.

Female education is also a binding force to increase the employment opportunities for female which will allow for their income level to increase up to a sustainable level and lessen their dependency over male counterparts that is a big source of a peaceful society. This have economic implication as sustainable development policy point of view because when female and male both earns, the saving for future generations will increase because female is more inclined towards saving as compared to male. This will lead towards economic growth for the long time.

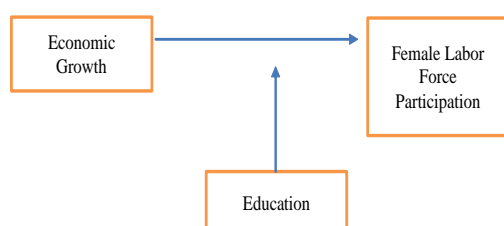


Figure 2  
*Theoretical Framework*

However apart from the strong link between education and female labour force participation, many economists argue that there is a clear link between female labour force participation and economic development. These economists address how enhanced FLFP leads to a substantial increase in economic development. Intellectuals accentuate economic development and modernization as the primary driver behind FLFP growth in western industrialised economies; however, female labour market participation is not as monotonous as developing countries. Women's labour force participation should rather be patterned on a U-shaped

Tanaka et al. (2020) examined the impact of female education attainment on FLFP in Bangladesh. Applying a fuzzy regression discontinuity design where a feasible exogenous variability in school enrolment is generated by a national women's stipend program, researcher found that there are moderate impacts of female education on FLFP. Findings from their study also suggests that education has a positive role in enhancing the women welfare in terms of child health and sanitation. This implies that the effect of women education is more on their health and household activities as compared to the labor market outcomes, and well being in employment.

Osundina (2020) examined the impact of improvement in education on female employment opportunities in Nigeria. The data covered from 1990 -2016 by employing ARDL model. The results from their study reveals that female education is positively associated with female labor force participation in Nigeria. Verick (2018) examines the role of education in increasing the likelihood of women in labor force.

Education attainment is one of the important determinants of labor market outputs in both developed and developing countries. In most of developing countries, women level of educational attainment has increased substantially. This could help in improving their status in the labor market. This implies that women education is directly

related with FLFPR in several emerging economies such as South Africa. However, there is also nonlinear relationship found in other parts of the world such as India. This study also found that in most of the underdeveloped low-income countries, women tend to allocate in subsistence or informal sector, this indicates that women in secondary school usually stay outside labor market. But the most significant finding from their study shows that when women achieve more than secondary education, they tend to join labor market and increase their FLFP.

Andres et al. 2017 examines and evaluates the impact of numerous demographic and socio-economic aspects to the decision on the participation of women in the workforce and the recent decline in India. They utilized different rounds of survey level data and found that FLFP decreased by 19.6 million women from 2004–05 to 2011–12. Roughly 53% of this decline took place in rural India between 15 and 24 years of age. Various factors such as educational attainment, socio-economic status, and household composition have largely contributed to the decline, though impacts in rural areas have been more pronounced. Primarily, the assessment discovers a U-shaped association between the educational attainment level and the FLFPR.

Hassan and Cooray (2013) conducted a study on the effect of male and female education on economic growth. The researcher attempted to study the gender efficacy of education in the context of economic growth. Theoretical explanations for their study are reflective with endogenous growth theories. The researcher used extreme bond analysis for Asia, using unbalanced panel data. The finding discovered that there is a gender gap, that women's education is less effective for economic growth at all levels, but that when they use neoclassical models, their findings are dissimilar, they are consistent with the results that strong growth impacts both male and female enrolment at primary and secondary levels.

Barro(2013) conducted a study on education and economic growth, studying the gender disparities

in education as a key determinant of economic growth. This study differentiated among quantity and quality of education. The researcher used the neo-classical growth framework for empirical testing. The sample size of the associated research comes with 100 countries from the period 1960 to 1995 and a ten-year wise analysis was carried out by the researcher. The outcomes from the based on empirical estimate demonstrate that schooling has a beneficial effect on the growth of adult males at both higher and secondary levels, which shows that educated males are complementary to the implementation of new technologies. Equivalent estimates have also been made for women, but the contrary results indicate that the link between growth and female education is insignificant, which posits that women are not exploited in the labour market of several economies.

The above analysis of existing literature revealed that most of previous studies examined the trends of FLFP rather than levels. In addition, there is lacuna in previous literature on the interactive role of female education and economic growth on FLFPR in D-8 countries. The present paper bridges this gap by incorporating the interaction between economic growth and different levels of education on FLFPR.

## METHODOLOGY

In this paper, to examine the interacting role of education on economic growth and FLFP, we follow the human capital theory Schultz (1961) and Becker (1964) and previous work of Barro (1991), Levine and Renelt (1992), Tansel (2002), Lee et al. (2010) and Ali et al. (2015) as well as studies conducted by (Klasen, 2012; Ostry *et al.* 2018) the present study attempted to measure the following empirical model for developing-8 (Bangladesh, Egypt, Indonesia, Iran, Malaysia, Nigeria, Pakistan, and Turkey) countries.

$$FLFPR = f(LNGDP, ENRP, ENRS, ENRT, UNEMPR, TFR) \quad [3.1]$$

Were

FLFPR = Female Labor Force Participation Rate

LNGDP = Natural Log of GDP

ENRP = Primary Enrolment

ENRS = Secondary Enrolment

ENRT = Tertiary Enrolment

UNEMPR = Unemployment Rate

TFR = Total Fertility Rate

The econometric form of the model is stated in Equation [3.2].

$$\begin{aligned} FLFPR_{it} = & \beta_0 + \beta_1 LNGDP_{it} + \beta_2 ENRP_{it} \\ & + \beta_3 ENRS_{it} + \beta_4 ENRT_{it} \\ & + \beta_5 (ENRP * \ln GDP)_{it} \\ & + \beta_6 (ENRS * \ln GDP)_{it} \\ & + \beta_7 (ENRT * \ln GDP)_{it} \\ & + \beta_8 UNEMPR_{it} + \beta_9 TFR_{it} \\ & + \varepsilon_{it} [3.2] \end{aligned}$$

Where  $i$  is country and  $t$  is timeseries,  $\beta_0 \beta_1 \beta_2 \beta_3 \beta_4 \dots \beta_9$  are coefficients and  $\varepsilon_{it}$  is error term. The moderating role of different levels of education is measured by incorporating the interaction between education and economic growth following Aiken and West (1991) by running auxiliary equation. Where the product of two variables is regressed on the same variable individually, and the estimated value of error are incorporated in the main model. The following are the interaction terms that are incorporated in the model.

$$(ENRP * LNGDP)_{it} = \alpha_0 + \beta_1 LNGDP_{it} + \gamma_2 ENRP_{it} + \varepsilon_{it} [3.3]$$

$$(ENRS * LNGDP)_{it} = \alpha_0 + \beta_1 LNGDP_{it} + \gamma_2 ENRS_{it} + \mu_{it} [3.4]$$

$$(ENRT * LNGDP)_{it} = \alpha_0 + \beta_1 LNGDP_{it} + \gamma_2 ENRT_{it} + v_{it} [3.5]$$

Here  $\varepsilon_{it}$ ,  $\mu_{it}$  and  $v_{it}$  are the white noise error terms, which means that  $\varepsilon_{it} \sim iid(0, \sigma_\varepsilon^2)$ ,  $\mu_{it} \sim iid(0, \sigma_\mu^2)$  and  $v_{it} \sim iid(0, \sigma_v^2)$ .

#### a. Data Source

The annual time series data for panel of D-8 countries (Bangladesh, Egypt, Indonesia, Iran, Malaysia, Nigeria, Pakistan, and Turkey) from 1980 to 2018 sourced through International Labor

Organization, World Development Indicators, and world bank open sources. The detailed description on variables, data source proxy used, and web link is provided in appendix (See Appendix A).

#### b. Panel Unit Root Test

The present study considered Levin et al. (LLC) (2002) and the Im, Pesaran, and Shin (2003) known as IPS and which is used for balanced panel and also famous for heterogeneous panel unit root test due to their statistical power. The IPS test suggests that each of cross sections can be estimated by adopting different estimation along with different specifications in terms of lag length, parametric values, and residual variance. The following model for IPS unit root test is as below:

$$\Delta Y_{i,t} = \rho_i Y_{i,t-1} + \sum_{k=1}^n \phi_{ik} \Delta Y_{i,t-k} + \gamma_i t + \varepsilon_{it} [3.6]$$

The  $T$  is presumed to be same for all cross section under the framed model of IPS (2003). The IPS model implemented by but not limited to the economists include, Sarantis and Stewart (1999); Chou and Suk-Yee Lee (2003) and Hassan and Abdullah (2014). The mean of  $t$ -statistics and  $t$ -statistics for IPS used in panel unit root analysis is given below.

$$\begin{aligned} t_{IPS} = & \frac{\sqrt{N} \left( \bar{t} - \frac{1}{N} \sum_{i=1}^N E[t_{iT} | \rho_i = 0] \right)}{\sqrt{\frac{1}{N} \sum_{i=1}^N var[t_{iT} | \rho_i = 0]}} \\ & \Rightarrow N(0,1) [3.7] \end{aligned}$$

$$\bar{t} - \frac{1}{N} \sum_{i=1}^N t_{\rho_i} [3.8]$$

Hypothesis:  $H_0: \rho_i = 0$  vs  $H_1: \rho_i < 0$  for at least one  $i$  (stationary).

#### c. Panel Coefficient Estimation Technique (Pooled Mean Group)

In Pooled Mean Group (PMG) model, the basic assumption implies the combination of both pooling and averaging the coefficients. Consequently, the parameters of intercept, slope and error correction variance possibly differs across different groups. For simplicity, the PMG



assumes that in the long run coefficients are constrained to be same, however they may vary in the short run, in addition it also reveals the adjustment between short-run and long-run dynamics. The Authors adopted this technique amongst others are Blackburne and Frank (2007) and Siddique et al. (2015). The following model is developed based upon the unrestricted specification for Auto regressive distributed lags (ARDL) where  $i = 1, 2, 3, \dots, N$  for cross sections and  $t = 1, 2, 3, \dots, T$  for time series. Thus, the long run ARDL equations for PMG as follows:

$$\Delta \tilde{Z}_{it} = \theta_i (\tilde{Z}_{i,t-1} - \beta_i Y_{i,t-1}) + \sum_{p=1}^{j-1} \sigma_{ij} \Delta \tilde{Z}_{i,t-p} + \sum_{p=0}^{k-1} \sigma'_{ip} y_{i,t-p} \mu_i + \varepsilon_{it} \quad [3.9]$$

Here  $\beta_i$  is the long run parameters which is assumed to be homogeneous in the long run across groups.  $\theta_i$  is the error correction term. The lag length selection criteria for each cross section

Variable	Mean	Std. Dev.	Min	Max
FLFP	0.325	0.158	0.033	0.674
LNGDP	25.995	0.850	24.078	27.847
ENRP	0.954	0.143	0.492	1.212
ENRS	0.549	0.231	0.137	1.092
ENRT	0.181	0.183	0.018	1.200
UNEMPR	0.074	0.045	0.009	0.280
TFR	3.840	1.527	1.807	6.783

Table 1 *Descriptive Statistics*

### b. Panel Unit Root Test

Table 2 presents the summary of unit results of Levin et al. (LLC) (2002) and Im, Pesaran, and Shin (2003) tests. It can be observed from the null hypothesis of the presence of unit root for all variables at 5% and 10 % cannot be rejected. This shows that there exists a mixed order of integration for variables included in the model. The detailed table of unit root test is attached in Appendix (See Appendix B).

Table 2

*Summary of Unit Root Test*

through employing Akaike information criterion (AIC) (Pesaran and Smith, 1995; Kalai and Zghidi, 2017)

Variable	Order of Integration
FLFPR	I (0)
LNGDP	I (1)
ENRP	I (1)
ENRS	I (1)
ENRT	I (1)
UNEMPR	I (1)
TFR	I (0)

## RESULTS AND DISCUSSION

### a. Descriptive Statistics

Table 1 presents the summary statistics of selected variables for D-8 countries. The descriptive statistics includes the mean, median, standard deviation minimum, and maximum values. The deviation individual values for FLFPR, LNGDP, ENRP, ENRS, UNEMPR and TFR are much different than their corresponding mean values, however, in case of ENRT, the mean and standard deviation are closer to each other for D-8 countries for an underlying time-period.

### c. PMG Long Run Results

Table 3 presents the PMG long run results. The results reveal that coefficient of LNGDP is positive and significant at 1 percent. The coefficient of ENRP is positive and significant at 10 % . The coefficient of ENRS is negative and significant at 5 %, whereas coefficient of ENRT is positive and significant at 1 % . However, the coefficient of interaction terms, (ENRP\* LNGDP) is negative but insignificant, and (ENRS \*LNGDP) is negative ant significant at 1 % . On

the other hand, coefficient of (ENRT\*LNGDP) is positive and significant at 1 %. The coefficient of UNEMPR is negative but remains insignificant, and TFR is negative and significant at 5 %.

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LNGDP	0.048	0.016	2.997	0.003***
ENRP	0.131	0.066	1.973	0.051*
ENRS	-0.159	0.065	-2.451	0.016**
ENRT	0.446	0.144	3.096	0.002***
ENRP*LNGDP	-0.067	0.070	-0.965	0.336
ENRS*LNGDP	-0.332	0.063	-5.255	0.000***
ENRT*LNGDP	0.811	0.076	10.638	0.000***
UNEMPR	-0.146	0.110	-1.328	0.187
TFR	-0.020	0.007	-2.786	0.006**

Table 3 PMG long-run results

The interaction of ENRS and ENRP with LNGDP are negative implying that primary and secondary school enrolment reduces the positive effect of LNGDP on FLFPR, however the interaction of ENRT is positive with LNGDP. The total effect of LNGDP on FLFPR can be presented as  $(0.044 - 0.06\text{ENRP} - 0.332\text{ENRS} + 0.811\text{ENRT})$

The negative coefficient of ENRS implies that secondary school enrolment is crucial in determining the relationship between FLFPR and economic growth. This shows that as economic growth increases women prefer to acquire more education due to increased demand of advanced skills accompanied by newer technologies, resultantly switch themselves from labor market. Similarly, the interaction term (ENRS\*LNGDP) also reveals that people living in low GDP areas prefer to switch from labor market to enhance their skills and education.

On the other hand, enrolment at tertiary level show positive relation with FLFPR when calculated individually, as well as interactive term. This implies that higher education is a significant factor of enhancing FLFPR and it also strengthen the positive effect of economic growth on FLFPR. This shows the increased economic growth induces women to acquire education, that

leads women to enroll in schools by switching from the labor market, and further enhances the negative effect of ENRS on FLFPR and impedes the positive effect of ENRP on FLFPR. However, these effects alters when it comes to the tertiary

enrolment and induces the positive effect of ENRT on FLFPR. This implies that acquisition of skills and knowledge enable women to enter in the labor market minimum at tertiary levels. These results hold true with the theory of human capital.

#### d. PMG Short Run Results

Table 4 presents the short run results of PMG model. The coefficient of error correction term (ECT) is significant, less than 1 and negative meets the criteria of convergence hypothesis. (see Benerjee et al., 1998). Moreover, the speed of convergence is 66 %, it can be observed by value of ECT coefficient. This is considered as fast speed of adjustment. This means that any external shock to the model, can bring back to the long run equilibrium with speed of 66 percent annually.

Table 4  
PMG Short-run results

## CONCLUSION

This paper intended to examine the interactive role of education and economic growth on FLFPR in D-8 countries. The panel data from 1980-2018 utilized for empirical estimation by employing Pooled Mean Group. The findings suggest that economic growth enhances opportunities for FLFPR on the one hand, it encourages women to acquire desired skills generated by new development on the other hand as can be observed by results of interaction terms. Resultantly women prefer to switch from labor market to substitute education only at secondary or primary level. Tertiary level of education enables women to participate more in the labor market even with the increased demand for skills. This implies that at tertiary level, women of developing countries meet the skill requirement generated by economic growth more specifically technological development. Hence it is suggested that government of developing-8 countries should further enhance female education. The proper skill and training programs are required to meet the opportunities created by economic growth so that women of D-8 countries can obtain their full potential. This could help in overall economic growth of country by having productive and efficient female human capital. Status of female can be enhanced in developing countries by adopting the proper policy through provision of basic skills, on job training, and subsidized higher education this would enable the sustainable development of society.

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## Appendix A

Variable	Proxy	Source	Web Link
FLFPR	Labor force participation rate, male (% of male population ages 15+) (national estimate)	ILO, WDI	<a href="https://www.ilo.org/ilostat-files/Documents/description_FLFPR_EN.pdf">https://www.ilo.org/ilostat-files/Documents/description_FLFPR_EN.pdf</a>
GDP	GDP (constant 2010 US\$)	WDI	<a href="https://data.worldbank.org/">https://data.worldbank.org/</a>
ENRP	School enrollment, primary (% gross)	WDI	<a href="https://data.worldbank.org/">https://data.worldbank.org/</a>
ENRS	School enrollment, secondary (% gross)	WDI	<a href="https://data.worldbank.org/">https://data.worldbank.org/</a>
ENRT	School enrollment, tertiary (% gross)	WDI	<a href="https://data.worldbank.org/">https://data.worldbank.org/</a>
UNEMPR	Unemployment, total (% of total labor force) (national estimate)	WDI	<a href="https://data.worldbank.org/">https://data.worldbank.org/</a>
TFR	Fertility rate, total (births per woman)	WDI	<a href="https://data.worldbank.org/">https://data.worldbank.org/</a>

## Appendix B

Variable	LLC						IPS			
	Level			First difference			Level		First difference	
	None	Intercept and trend	Individual intercept	None	Intercept and trend	Individual intercept	Intercept and trend	Individual intercept	Intercept and trend	Individual intercept
FLFPR	0.228 (0.590)	-0.763 (0.222)	-2.601 (0.004)***	-11.034 (0.000)***	-8.169 (0.000)***	-8.455 (0.000)***	-1.332 (0.091)***	-2.727 (0.003)***	-8.715 (0.000)***	-9.495 (0.000)***
LNGDP	12.079 (1.000)	1.653 (0.950)	0.876 (-0.809)	-0.934 (0.175)	-5.396 (0.000)***	-5.948 (0.000)***	0.135 (0.553)	4.648 (1.000)	-7.465 (0.000)***	-7.716 (0.000)***
PE	2.573 (0.995)	0.239 (0.594)	0.304 (0.619)	-10.442 (0.000)***	-5.517 (0.000)***	-6.717 (0.000)***	-1.373 (0.084)*	0.724 (0.765)	-7.697 (0.000)***	-8.964 (0.000)***
SE	4.753 (1.000)	1.849 (0.967)	-1.0717 (0.141)	-7.176 (0.000)***	-4.221 (0.000)***	-5.151 (0.000)***	1.231 (0.890)	1.694 (0.954)	-4.693 (0.000)***	-6.054 (0.000)***
TE	5.877 (1.000)	2.741 (0.996)	5.527 (1.000)	-4.019 (0.000)***	-1.581 (0.056)*	-1.699 (0.044)**	3.520 (0.999)	7.752 (1.000)	-3.122 (0.000)***	-3.610 (0.000)***
UNEMP	-0.594 (0.275)	-0.540 (0.294)	-1.629 (0.051)*	-10.309 (0.000)***	-5.419 (0.000)***	-6.499 (0.000)***	-0.866 (0.193)	-1.693 (0.045)**	-5.788 (0.000)***	-7.434 (0.000)***
TFR	0.198 (0.578)	6.873 (1.000)	-3.636 (0.000)*	2.165 (0.984)	17.496 (1.000)	4.163 (1.000)	9.594 (1.000)	2.165 (0.984)	9.055 (1.000)	5.241 (1.000)