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# Female Labor Force Participation in Pakistan and Some MENA Countries

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## Abstract

The low-labor force participation rate of female in the MENA countries has been recognized and investigated by many researchers. The multidimensional nature of the issue demands a thorough investigation of different aspects of a region to better understand the factors that affect and, or influence the female labor force participation of that region.

This study uses the main determinants found in the previous literature to examine their effects on labor force participation in 4 different countries from different regions but with similar characteristics. For our analysis, we use World Bank Data indicators 2011. We follow the data panel procedure to study the effect of factors, such as literacy rate, education, fertility rate, urbanization, trade openness, and per capita GDP on the rate of female labor participation; while accounting of the endogeneity of fertility and literacy rates. We study the effects of these variables using the pooled model, the fixed, and the random effects models.

The results indicate that the fixed and random effects models outperform the pooled model. Moreover, the fixed effects and random effects models are equally appropriate in this case. The empirical results of the random effects model indicate that literacy and urbanization rates have a positive and significant effects on female labor participation. Variables such as fertility rate and per capita GDP have a negative and significant effects on female labor participation. Finally, female education enrollment and trade openness do not have a significant effect on FLFP in the countries considered in this study.

# Female Labor Force Participation in Pakistan and Some MENA Countries

Abbas Aboohamidi and Benaissa Chidmi

## 1 Introduction

There have been enormous economic, social and cultural changes in the Middle East and North African countries (MENA) in recent decades, and this has created new opportunities and a new role for women in the socioeconomic life. The study of female labor force participation requires knowing many areas that relate to the status of women in a particular region. The multidimensional nature of the issue demands a thorough investigation of different aspects of a region to better understand the factors that affect and, or influence the female labor force participation of that region.

The low-labor force participation rate of female in the MENA countries has been recognized and investigated by many researchers. In this paper, we examine the impact of economic, social, and demographic factors on the female labor force participation in three MENA countries (Egypt, Morocco, and Turkey) and Pakistan. While these countries are widely of Muslim majority, the female labor force participation rate displays some similarities though the economic and social environment is different across these countries. For instance, while one would expect the rate of FLFP in Turkey to be comparable to the one in the Organization for Economic Co-operation and Development (OECD) countries, this rate is only about 28% (World Bank, 2012); compared to an average 62% in the OECD countries and 64% in the European Union-19 (World Bank, 2009).

In addition, despite Turkey's strong economic performance,<sup>1</sup>, the rate of FLFP in

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<sup>1</sup> According to World Bank (2012), Turkey's GDP grew by approximately 9% GDP between 2010 and 2011, while the GDP growth in Egypt, Morocco, and Pakistan during the same period was 1.8%, 4.5%,

Turkey does not translate in significant difference when compared to the other three countries. For instance, the rate of FLFP in Morocco reaches 26% in 2010<sup>2</sup>. Moreover, Turkey has the lowest female labor force participation rate in the world except to eight countries (Fraker and zdemir, 2011). The case of Morocco and Egypt is interesting due to their geographical closeness and their differences in their female labor force participation rate. Morocco along with Tunisia are the only exceptions among MENA countries that do not show very low rate of female labor force participation rate (Karshenas and Moghadam, 2001). Pakistan is included in this study because it is neither a member of OECD countries nor it is of MENA countries, but shares many similarities, and is considered one of the lowest FLFP rate in its region (Ameen, 2012).

Various studies have examined the factors behind the low female labor force participate rate in the MENA countries. Some, for example, use religion as a variable to explain the low female labor force participation in Islamic countries (Fraker and zdemir, 2011); while others use the role of family structure and the cultural factors to explain the low rate of the FLFP in the Islamic countries (Yousef, 1971, 1978; Abu Nasr et al., 1985; Clark et al., 1991 add the new one that you just found and read). Yet others explain it through economic factors such as the effect of trade openness ( Assaad, 2004; Bussmann, 2008; El-Hamidi,2008; Ramjoue, 2010; Hayder and Behrman, 2011).

Assaad (2004) finds that the effects of trade liberalization in Morocco and Egypt are distinct. While in Morocco the trade liberalization helps women contribute more in the labor market, in Egypt, except for the civil service sector, trade openness have more negative effect on the female labor force in the job market. Bussmann (2008), in her analysis, finds no support for the positive effect of trade openness on women welfare in absolute terms. El-Hamidi's finding indicates that trade liberalization in Egypt increased

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and 3.0%, respectively

<sup>2</sup>In 2008, the rate of FLFP in Morocco was 27% (World Bank, 2012); this drop in the rate of FLFP is due to the Moroccan economic conjecture characterized by a slower GDP growth and a sharp decrease in foreign direct investments

wage discrimination in tradable and non-tradable sectors, but the non-tradable was more affected than the tradable sector. On the other hand, Ramjoue (2010) concludes that it is not an easy task to determine the effect of trade openness on women welfare, and that is, because trade liberalization affects different sectors of the economy differently and these effects vary among various countries. Hayder and Behrman (2011) in their study of Pakistani labor force participation rates over 57 years find that trade openness decreased the gender differences in terms of labor force participation rates profoundly due to transition of production process from agriculture to the service and industrial sectors.

With regard to fertility rate Salehi Esfahani and Shajari, (2010), Bloom et al. (2009) finds that there is an inverse relationship between fertility rate and female labor force participation rate. That is as the fertility rate decreases, female labor force participation rate increases. This expected result is also reported by Salehi Esfahani and Shajari (2010) in their study of Female labor force participation rate of the Iranian women.

Education is another factor that was used to explain the variation in the FLFP rate. Hence, Salehi Esfahani and Shajari (2010) find a positive relationship between education and FLFP. Moreover, Chamlou, Muzi and Ahmed (2011) show that higher education (post-secondary/university/post-university) has positive relationship and sizable effect on FLFP in MENA countries, which confirms Klasen's (2002) analysis as well.

As an economic variable, the per capita GDP constitutes one of the variable commonly used in the FLFP studies. In fact, Karshenas and Moghadam (2001) find that in MENA countries, during their transition from a traditional agrarian societies to more modern ones in the recent decades, higher GDP per capita allowed women to stay home and contribute less to the labor market of their societies. The same finding is also reported by Onaran and Baslevent (2010) with respect to Turkey.

Although urbanization is expected to increase the FLFP, Tansel (2002) finds an inverse relationship between the urbanization process and FLFP in Turkey. This result is explained by the fact that agriculture constitutes a major GDP contributor. Women from rural migration background, without university education are faced with low wage job

opportunities that cannot even offset the high cost of childcare (World Bank, 2009), have no better alternative than not working. On the other hand, Uraz et al. (2010) show that low-skilled women migrating from rural to urban areas are responsible for the significant decline of FLFP, where these women make up 74% of the working age population of urban, and 80% of all female population who participate in the labor market in Turkey.

This paper is organized as follows. In the next section, a brief socioeconomic background of each country in the study is provided. Section 3 presents the methodology and describes the data used. In section 4, we present the results and in the last section we conclude.

## 2 Background of the Countries Studied

### 2.1 Egypt

Since the 1970s the Egyptian economy has been in a privileged position of receiving billions of dollars as foreign aid. Nevertheless, the Egyptian economy did not show any sign of improvement. As a result, In the early 1990s, the Egyptian government started the privatization of its economy to comply with a series of International Monetary Fund (IMF) plans to help the Egyptian's economy reduce its external debt, and restructure its economy, which in turn helped Egypt improve its macroeconomic performance.

By late 1990s and mid 2000s, the industrial sector accounted for 25-30% of real GDP, which was an overall of 10% growth annually. The industry's growth came from the increase demand in agricultural-food industry, mostly sugar and beverages; cotton and wool yarn, and materials used in construction. The service sector showed higher growth due to increase in oil prices and natural gas production, which earned a net value of \$5.3 billion in export. The export of non-petroleum material increased from \$2.3 billion to \$ 4.2 billion during the period year of 2001 to 2005. Despite the structural adjustment policies, the Egyptian economy experienced a continuous reduction in GDP from 2001 to 2005. But in 2005, the GDP growth changed its direction and started to increase, mainly

as a result of currency devaluation (El-Hamidi, 2007).

Although the Egyptian economy grew and has performed better than the periods before the 1990s, it has not been able to provide the jobs needed for the labor force that exist in the country. Even with the drop in fertility rate for more than two decades, the labor force growth has been 2.7% each year, and the economy has not been able to keep up with the pace. Though the men unemployment rate averages only 6.9%, the women unemployment rate exceeds 25% in a country where 56% of the population is female. This indicates the negative effects of the downsizing and the privatization policies on women employment, mostly. (El-Hamidi, 2007).

## 2.2 Morocco

Morocco is one of the two MENA countries <sup>3</sup> that do not show very low FLFP rate. Besides, Morocco embarked in its structural adjustment program to restructure its economy at the same time that Egypt took the steps.

The programs have caused a rise in the employment in the private sector and a fall the public service sector. The structural adjustment was intended to improve the tradable goods' production, especially the labor intensive ones in the manufacturing sector like, textile, garments, and industries that discriminate against women in terms of employment. Such policies are said to cut cost by reducing the presence of men and increase the employment of female, so result in feminization of these sectors. The policies worked as were expected in Morocco, but not in Egypt (Assasd, 2004).

## 2.3 Pakistan

Pakistan, like Egypt and Morocco, began its structural adjustment programs approximately at the same time. In Pakistan, like other developing countries the adjustment programs intended to liberalize and deregulate the Pakistani economy. Pakistan's main aim was the adoption of a managed floating exchange rate system, which leads to an ad-

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<sup>3</sup>The other country is Tunisia



justment in the Pakistani national currency that boosted the country's exports (Muleh-Ud din, Ghani, Siddique, 2003).

Although the trade liberalization policies decreased the gender differences in terms of labor force participation rates profoundly, due to transition of production process from agriculture to the service and industrial sectors (Hayder and Behrman, 2011), the gender-specific statistic in Pakistan is very disturbing. Women have very little right of private ownership, and are limited to participate in labor market. They do not have the same opportunities as men to access education and health care, and their employment opportunities are extremely limited compared to their male counterparts (Pervaiz, Chani, Ahmad Jan, Chaudhary, 2011).

## 2.4 Turkey

Turkey implemented same policies to restructure its economy. Besides, the import substitution policies that were implemented before the 1980s had led to an increase in the employment in the industry sectors. Per capita income increased except with a minimal drop in 2001, which can be tied and attributed to the recession in the global market that in turn is a sign of intense integration of the Turkish economy into the global economy, especially after the 1980s. The service industry is the largest sector of men employment and ranks second for women employment after agricultural sector (Tansel, 2002). The economic developments of the 1960s and the 1970s benefited women and helped them to increase their participation in the job market in the 1980s. Turkey enjoyed a high level of female labor force participation rate parallel to the developed countries. This is the case of most OECD countries, and they have been able to sustain the same or higher rate of FLFP whereas Turkey's economy failed to do so (Onis, 2002).

The evolution of the FLFP rate in these countries offers a very interesting case study. In the case of Turkey, the FLFP rate shows a decreasing trend from more than 36% in 1990 to less than 27% in 2008. According to World Bank (2009), the decrease in FLFP in Turkey is the result of an increase in urbanization and a decline in agricultural employ-

ment. The hike in urbanization drove women from high-participation rural environment to low-participation urban environment. In addition, FLFP in agriculture declined from 50.7% in 1988 to 33% in 2006.

Egypt FLFP rate shows similar pattern as the rate declined from 28% in early 1990s to approximately 20% in 2002 before it started to increase again, reaching 25% in 2008. This could be the result of the IMF structural adjustment that took away government support for agriculture, the main employer of women. For Morocco, the FLFP evolution could be decomposed into two periods. The first one, ranging from 1990 to 2000, witnessed an increasing trend in the female labor participation which increased from 27% in 1990 to more than 31% in 1999. The second period is characterized by a sharp decrease in female labor participation from 31% in 1999 to 26% in 2002 and then a regain in the FLFP rate after 2003. Unlike the other three countries, Pakistan is the only country in this study for which the rate of FLFP show a consistent increasing trend.

### 3 Methodology

#### 3.1 The Empirical Framework

We follow the data panel procedure to study the effect of factors, such as literacy rate, education, fertility rate, urbanization, trade openness, and per capita GDP on the rate of female labor participation. The choice of panel data models is dictated by at least two reasons. The first one is that the use of panel data offers a richer information and allows to account for heterogeneity across countries (Greene, 2012). The second one is the lack of data for longer time series. The range of the time series in this type of analysis is very important as the number of explanatory variables can be high, thus affecting the degrees of freedom. Pooling data across different countries allows to increase the degrees of freedom on one hand; and offers a better way of comparing the results than running separate regressions.

Our starting model is the pooled model where we assume that any heterogeneity

across countries has been averaged out

$$FLFP_{it} = \beta_1 + \beta_2 flit_{it} + \beta_3 frate_{it} + \beta_4 fens_{it} + \beta_5 fent_{it} + \beta_6 urban_{it} + \beta_7 Trop_{it} + \beta_9 GDPpc_{it} + \epsilon_{it}, \quad (1)$$

where  $FLP$  is the female labor participation,  $flit$  is the female literacy rate,  $frate$  is the fertility rate,  $fens$  is the female enrollment in secondary education,  $fent$  is the female enrollment in tertiary education,  $urban$  is the percentage of urban population,  $Trop$  represents the trade openness, and  $GDPpc$  is the per capita GDP measured in 2000 US dollars. The subscript  $t$  represents the year,  $t = 1990, \dots, 2008$ ; and the subscript  $i$  represents the country,  $i = \text{Egypt, Morocco, Pakistan, Turkey}$ . In the pooled model, we make the usual assumption that the disturbances  $\epsilon_{it}$  have a conditional zero-mean and constant variance. For the notational simplicity, we let  $x_{it} = (flit_{it}, frate_{it}, fens_{it}, fent_{it}, urban_{it}, Trop_{it}, GDPpc_{it})$  in what follows. Our pooled model becomes then

$$FLFP_{it} = \beta_1 + x_{it}^0 \beta + \epsilon_{it} \quad (2)$$

The second model considered is the fixed effect model where the omitted country effects,  $c_i$ , are included as an intercept shifter. This model allows the country effect to be correlated with the included variables. Thus, we have

$$FLFP_{it} = c_i + x_{it}^0 \beta + \epsilon_{it}, \quad (3)$$

with  $E[c_i | x_i] = \beta_i$ . Equation 3 could also be written as

$$FLFP_{it} = \beta_i + x_{it}^0 \beta + \underbrace{[c_i - \beta_i]}_{\epsilon_{it}^*} = \beta_i + x_{it}^0 \beta + \epsilon_{it}^*. \quad (4)$$

Thus, by including the country fixed effect we remove the correlation between the explanatory variables and the omitted country effects previously captured by the disturbance term. The fixed effect model allows us to capture the differences across countries

in the constant term.

However, if the country effects are uncorrelated with the explanatory variables, then it would be appropriate to use the random effects formulation, which represents our third model

$$FLFP_{it} = x_{it}^0 \beta + (\beta_1 + u_i) + \epsilon_{it}, \quad (5)$$

where  $u_i$  is the random heterogeneity specific to country  $i$ .

In all three models presented above, it has been reported that the variables female literacy rate and fertility rate might be endogenous, hence the parameter estimates might be inconsistent. To solve the issue we use instrumental variable in a two-stage least squares approach. First, we regress separately the variables  $flit$  and  $frate$  on the variables  $femp$ ,  $fens$ ,  $fent$ ,  $rural$ ,  $urban$ ,  $trop$ , and  $GDP\ pc$ . The predicted,  $\hat{flit}$  and  $\hat{frate}$ , values from these regressions, are included, in a second stage, in equation 1. Moreover, we use Breush and Pagan (1980) test to between the two specifications.

## 3.2 Data

For our analysis, we use World Bank Data indicators 2011. The data is unbalanced for different indicators, which in turns limit our ability to use all the data available in different years. As a result, we are forced to reduced our years of observations and choose years that data is available and more balanced. Year of 1990 seemed a good starting point and the ending year of 2008 appeared to be a reasonable year where data is available and sparse missing values were in between and could be interpolated. So, the data covers years 1990-2008 for each country.

The analysis focuses on the effect of explanatory variables on the FLFP rate in the chosen countries and whether the significance of the impact is large or minimal. Table 1 provides summarizes statistics for the data used in this study. The dependent variable is Female labor force participation, which gives the number of women who are active in the labor force as a percentage of the total labor force. This definition is different than

the definition of the international labor organization which also includes those women who are looking for job as well. In what follows, we describe the variables used and our hypothesis regarding the sign of its effect on FLFP.

The literacy rate gives the percentage of females age 15 and above who can, with understanding, read and write a short, simple statement on their everyday life, over the population in that age group. Generally, literacy also encompasses "numeracy", the ability to make simple arithmetic calculations. A priori, we hypothesize that this variable will have a positive effect as women literacy would provide more opportunities for female to access the labor market.

For the fertility rate variable, defined as the total number of births per woman, we expect a negative relationship. In some studies, it controls for population growth, but in most FLFP studies, it shows the extent to which women are engaged with raising children and therefore will have less time to join the labor force or attend school. We expect the fertility rate to reduce the contribution of women to the labor market, but be highly correlated to the female education where education occupy women and prolong their unwed time and hence reduce the fertility rate.

In terms of female education, there are different ways to define education functionally. As an indicator of access to schooling, school enrolment ratios capture recent progress more suitably than school attainment measures (Saith and Harriss-white, 1999). Hence, the functional definition of education is the primary, secondary, and tertiary school enrollment rates of female using gross ratio (defined by the World Bank). We hypothesized that some level of education can help women participate in the labor market. This hypothesis takes into account the family structure and the per capita income in each country where countries with higher per capita GDP with traditional family structure tend to have less FLFP rate relative to countries with lower GDP and similar traditions.

Rural and Urban population growth (annual%): In recent studies of FLFP, urbanization process has been used and considered as a significant factor of low FLFP in some countries like, Turkey, Iran, and Egypt where low-skilled woman are unwilling to work

due to low wage or difficult work conditions, or it is hard to find a job with their limited skills. We expect, based on previous studies that in some countries where most women are employed in the agricultural sector and their education level is low, the urbanization process to have negative effects on FLFP rate and discourage women to participate in the labor market. The lack of skill of these women prevents them from entering the manufacturing and the service sectors. The low wage effect and the high opportunity cost of working outside home have been blamed for the cause in numerous studies, especially in countries with higher per capita GDP and traditional family values like, Turkey.

Trade openness, a most widely used indicator of trade liberalization is trade openness in terms of trade intensity, measures the trade flows in relation to GDP. However, this measure reflects trade volume without capturing trade policy directly (Bussmann, 2008). Hence, we use the widely available trade/GDP ratio, that is, the sum of exports and imports over GDP. We hypothesized that trade openness in general, helps women improve their status in the society by gaining higher level of education and new skills for the job created in different sectors of the economy and by helping states with higher revenue that enables governments to spend more in the welfare programs.

GDP per capita: Studies have shown that women in countries with higher per capita GDP with more conservative cultures tend to work less and afford to stay home, whereas this phenomenon loose its intensity in countries with low per capita GDP.

## 4 Results

Table 2 presents the results of the three models: pooled model, fixed effects model, random effects model. Overall, the random effects model and the fixed effects model outperform the pooled model. In fact the  $R^2$  for the pooled model is 0.4982, compared to the fixed effects model, where the explanatory power is more than 94%. In addition, the root mean square error for the pooled model is more than ten times the one for the two other model. Therefore, pooling the data and ignoring the country effect is not

appropriate in this case.

In terms of panel data models (fixed and random effects), the Hausman specification test fails to reject the null hypothesis that the parameter estimates from the fixed effects model and those from the random effects model are equal. Thus, we are indifferent between using the fixed effects model results or the random effects results. In what follows, we interpret the random effect results.

The results of the random effects model indicate that the literacy rate variable is positive statistically significant, indicating that as the rate of literacy increases, the rate of female labor participation increases. The same positive and significant effect is observed for the urbanization variable. As the rate of urbanization increases in the countries considered, the rate of female labor participation increases as the mass manufacturing (textile, garments, food industries) is exclusively based in big metropolitan cities. Unlike the previous two variables, the trade openness is positive but not significant as we expected.

Furthermore, the fertility rate has, as expected, a negative and statistically significant impact on female labor participation. As the number of births per woman goes down, time becomes available for females to access the labor market and participate in improving the welfare of their households.

Education is another factor that improves women opportunities to access the labor market. The results of this study does not support this tendency as indicated by the negative and relatively not significant effect of the education variables included. Hence, the female secondary education enrollment has a negative and statistically significant effect on the rate of female labor participation. Similarly, the tertiary education enrollment has a negative but not significant effect. This could be explained by the fact that opportunities offered by the labor market for women does not need higher technical skills (textile, for example) and many times households direct their daughter to career where education is not necessary. In the same line, we expect the gross domestic product to improve female conditions in accessing the labor market. However, the results indicate

that as GDP increases the rate of FLFP decreases.

## 5 Conclusions

This study uses the main determinants found in the previous literature to examine their effects on labor force participation in 4 different countries from different regions but with similar characteristics. For our analysis, we use World Bank Data indicators 2011. We follow the data panel procedure to study the effect of factors, such as literacy rate, education, fertility rate, urbanization, trade openness, and per capita GDP on the rate of female labor participation; while accounting of the endogeneity of fertility and literacy rates. We study the effects of these variables using the pooled model, the fixed, and the random effects models.

The results indicate that the fixed and random effects models outperform the pooled model. Moreover, the fixed effects and random effects models are equally appropriate in this case. The empirical results of the random effects model indicate that literacy and urbanization rates have a positive and significant effects on female labor participation. Variables such as fertility rate and per capita GDP have a negative and significant effects on female labor participation. Finally, female education enrollment and trade openness do not have a significant effect on FLFP in the countries considered in this study.

To conclude, we think that this study could be improved in at least two aspects. First, we could allow the parameter to vary across countries instead of assuming constant ones. Though the fixed effects allow for different intercepts, it does not offer richer information in terms how the explanatory variables affect the FLFP rate in each country. Second, the study could be carried on by considering the rate of FLFP in different sectors of the economy (agriculture, industry, and services). This will allow to take into account the specificity of each sector and detect the potential differences that exist across these sectors in their demand for female workforce. These considerations would be the object of future research.



Figure 1: Evolution of the FLFP Rate across the Four Countries, 1990-2008

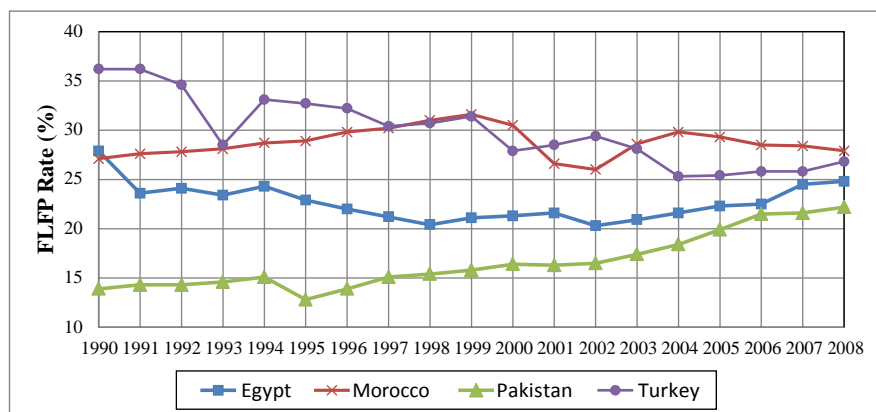


Table 1: Summary Statistics

	Egypt		Morocco		Pakistan		Turkey	
Variable	Mean	St.dev.	Mean	St.dev.	Mean	St.dev.	Mean	St.dev.
FLFP	22.6684	1.8959	28.7579	1.4789	16.6000	2.8427	29.9474	3.5276
Literacy Rate	2.7408	1.6056	34.0714	5.7399	30.4902	5.6201	75.5928	4.4074
Secondary Education	71.3706	8.5684	38.3063	11.6717	21.7401	4.3936	59.3682	15.3625
Tertiary Education	18.5463	6.3915	9.1242	1.1634	2.2900	1.3178	19.6991	7.7718
Fertility Rate	3.4362	0.4479	2.9575	0.5507	4.7074	0.8362	2.5037	0.3129
Urbanization	1.7566	0.2212	2.1808	0.6370	3.0797	0.4132	2.4430	0.4559
Trade Openness	0.4835	0.1294	0.5833	0.0967	0.3303	0.0316	0.3910	0.1028
Per capita	1421.8370	213.6424	1345.0810	187.5422	525.5044	59.1670	4168.2200	613.2935

Table 2: Parameter Estimates for the Three Models

Variable	Pooled Model		Fixed Effects		Random Effects	
	Estimate	t-value	Estimate	t-value	Estimate	t-value
Intercept	-52.0539	-1.6844	43.3219	7.7029	35.3329	5.0140
Egypt fixed Effect	NA	NA	-3.0370	-0.6485	NA	NA
Morocco Fixed Effect	NA	NA	-8.4139	-2.3098	NA	NA
Pakistan Fixed Effect	NA	NA	-20.2018	-5.1359	NA	NA
Literacy Rate	1.4620	4.8667	0.1882	3.5383	0.1869	3.5806
Fertility Rate	16.5889	3.1738	-3.0142	-4.3792	-3.0591	-4.4999
Secondary Education	1.3288	3.6698	-0.0623	-1.8049	-0.0624	-1.8311
Tertiary Education	-0.8981	-0.9948	-0.0963	-0.9088	-0.1077	-1.0342
Urbanization	-3.8716	-0.5667	1.5933	2.3148	1.6218	2.3892
Trade Openness	-33.7005	-1.5586	4.4511	1.5659	4.2182	1.5119
Per capita GDP	-0.0185	-2.6557	0.0048	-3.3636	-0.0046	-3.3116
$R^2$	0.4982		0.9423		0.6728	
Root MSE	16.7138		1.5287		1.5123	
F test for $H_0$ : No Fixed Effects	44.84		Reject $H_0$			
Hausman specification test $H_0$ : $\beta_{FE} = \beta_{RE}$	0.6425		Fail to reject $H_0$			

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