FOREIGN DIRECT INVESTMENT AND UNEMPLOYMENT REDUCTION IN PAKISTAN

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Abstract

This paper aims to explore the impact of Foreign Direct Investment (FDI) on Unemployment in Pakistan among some other explanatory variables namely Corruption, Population size and Inflation. The study covers the time period from 1995 to 2011. Multiple regression analysis is used to examine the effect of selected explanatory variables on unemployment in Pakistan. Results reveal that Foreign Direct Investment plays a significant role in unemployment reduction in Pakistan. Policy recommendations are given in the light of results obtained by this research paper.

Key words: FDI, Corruption, Unemployment, Population size, Inflation

1. Introduction

Foreign Direct Investment (FDI) inflows are well known as very important part in the economic growth of developing countries. FDI also encourages the creation of new jobs, enhances technology transfer and boosts overall economic growth in host countries. The presence of foreign firms creates competition with local firms. Hence, domestic firms are forced to use the existing resources more efficiently and adopt new technologies (Wang and Blomstrom, 1992; De Mello, 1997, 1999).

The inflow of FDI into Pakistan is very small and concentrated only on a few areas, mostly in the power sector. In 1997, Pakistan accounted for 0.2% of world FDI, less than 1% of developing countries and Asian countries FDI and 18% of South Asian countries. In spite of liberalizing its formerly inward-looking FDI regime, tempering or removal of obstacles to foreign investors and according to various incentives, Pakistan's performance in attracting FDI has been lackluster (Khan and Kim, 1999).

On the other hand, the persistence of unemployment of labor force has still been a most important problem in developing countries. The explanation of unemployment as a general equilibrium phenomenon depends on the type of labor under consideration. The Harris and Todaro (HT hereafter) (1970) type of model is one way to explain unemployment in a general equilibrium framework. However, in such a model unemployment is specific to the urban sector and is suitable to explain unemployment of unskilled labor only. But it does not account for unemployment of skilled labor which is a disquieting problem in the developing economies particularly after the global economic slowdown. More than 197 million people globally are without work or 6% of world’s labor force were without jobs in 2012 (ILO). According to present situation, more than 3 million people are unemployed in Pakistan and unemployment ratio is more than 12%.

Pakistan's commitment is to reduce unemployment by stimulating growth in the production sector, creating employment opportunities, improving income resources and harnessing the country's economic competitiveness through economic liberalization, deregulation and transparent privatization (GOP, 2010).

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The study hypothesized that as the Foreign Direct Investment increases, unemployment decreases and it benefits the poor proportionally more than the non-poor. Although, investment is necessary but it is not sufficient to make any significant dent to poverty (Zaman et al., 2010). This concept is to be tested in Pakistan's social context. The above discussion confirms a strong linkage between FDI and unemployment.

This paper is organized as follows: Section 2 describes the literature review on the relationship between FDI and unemployment while methodology is described in section 3. Section 4 takes up the specification of variables. Section 5 discusses the hypothesis used while section 6 describes the empirical results. Conclusion and policy recommendations are presented in section 7.

2 Literature Review

Mucuk et al. (2013) explored the relationship between Foreign Direct Investment and unemployment for seven developing countries namely Argentina, Chile, Colombia, Philippines, Thailand, Turkey and Uruguay for the period of 1981-2009. Panel unit root, Panel Co-integration and Panel causality tests were performed for all above mentioned countries. Results showed that Foreign Direct Investment and unemployment move together in long run. FDI increases unemployment in Turkey and Argentina while reduces it in Thailand. They also suggested that negative effects of FDI on unemployment are due to brownfield investments which are composed of acquisitions and mergers, so policy makers should focus on Greenfield investments to create more job opportunities.

Rizvi and Nishat (2009) investigated the impact of FDI on employment opportunities in Pakistan, India and China. The study covered the time period from 1985-2008. The Im-Pesaran-Shin (IPS) unit root test was applied to check order of integration. Long run relationship is investigated through Pedroni (1999) test of panel Co-integration. At the end Seemingly Unrelated Regression (SUR) method was used to estimate impact of Foreign Direct Investment on employment in the above mentioned countries. Results suggested that FDI does not create a direct impact on employment opportunities in India, China and Pakistan. They also suggested that besides FDI enhancement policies, other measures should be taken to encourage employment growth.

Egger and Winner (2005) showed a clear positive link between corruption and FDI, thus providing evidence of corruption as a stimulus for FDI. They suggested that in the presence of regulations and other such controls, corruption can act as a so-called “helping hand”. Indeed there are some reported examples of firms, at least in part, basing the choice of geographic location of their assets and operations on perceived differences in the inevitability of paying bribes in certain countries.

Shaari et al. (2012) examined the impact of Foreign Direct Investment on unemployment rate and economic growth in Malaysia. The time span of this study was 1980-2010. Ordinary Least Square method was used to analyze data in this study. They investigated that FDI helps to reduce unemployment rate and enhances economic growth (GDP) in Malaysia.

Sarwar and Habib (2013) analyzed the impact of Foreign Direct Investment on employment level in Pakistan during the time period of 1970-2011. The variables used in this study were employment level, FDI, exchange rate and GDP per capita. The study used Johansen test of Co-integration to analyze the long run relationship between the variables. The study revealed that FDI has a positive significant effect on employment level in Pakistan.
Craigwell (2006) conducted a study of the relationship between FDI and employment for 20 English and Dutch speaking Caribbean countries. The time period of study was 1990-2000. The empirical results showed that an increase in Foreign Direct Investment leads to greater employment in these countries.

A study carried out by Karlsson et al. (2009) also examined effect of Foreign Direct Investment on employment in Chinese manufacturing sector. The sample consisted of time series data from the years 1998 to 2004. They found FDI having positive direct effects on employment growth. The results also showed that Foreign Direct Investment has positive indirect effect on employment in private domestic Chinese firms.

Ismail and Latif (2009) studied the interrelationships among Foreign Direct Investment, exports, unemployment and Gross Domestic Product by using VAR technique of variance decomposition and impulse response function for the period of 2001:1 to 2007:4 in Turkey. The study found that Foreign Direct Investment does not have any impact on unemployment rate in Turkey.

Jayaraman and Singh (2007) analyzed the relationship between FDI and employment through a multivariate modeling strategy for Fiji. The study revealed that both GDP and FDI did have positive significant effect on employment in Fiji. Granger causality testing approach investigated the direction of causation among variables and found unidirectional causality running from Foreign Direct Investment to employment in the long run and unidirectional causality running from FDI to GDP in short run.

3. Methodology

The aim of this paper is to check whether there is any impact of FDI on unemployment in Pakistan. We have taken five variables in this study. Unemployment is our dependent variable and FDI, corruption, inflation and population size are independent variables. The present study covers the time series data from 1995 to 2011. The study is limited to 17 years due to unavailability of data on corruption in Pakistan before 1995. Ordinary Least Square technique is used to check the impact of FDI on unemployment level in Pakistan. The following model is constructed for regression analysis

\[ LUNEMP = \alpha + \beta_1 \text{CORR} + \beta_2 \text{FDI} + \beta_3 \text{INF} + \beta_4 \text{LPOPS} + \epsilon \]  

(1)

Table 1: Measurement of variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Proxy Used</th>
<th>Source of Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependent Variable:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployment</td>
<td>Natural log of UNEMP</td>
<td>International Labour Organization (ILO)</td>
</tr>
<tr>
<td>Explanatory Variables:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foreign Direct Investment</td>
<td>FDI</td>
<td>United Nations Conference on Trade and Development (UNCTAD)</td>
</tr>
<tr>
<td>Corruption</td>
<td>CORR</td>
<td>Corruption Perception Index (CPI)</td>
</tr>
<tr>
<td>Population Size</td>
<td>Natural log of POPS</td>
<td>Pakistan Bureau of Statistics</td>
</tr>
<tr>
<td>Inflation</td>
<td>INF</td>
<td>World Development Indicators</td>
</tr>
</tbody>
</table>
4. Specification of Variables

4.1 Unemployment

Unemployment as defined by International Labour Organization (ILO) is number of people over the age of 18 who want and able to find work at a certain wage rate but are not capable to obtain it. Pakistan has been plagued by many problems throughout its existence but one problem that has plagued it insistently is unemployment. Pakistan has an unemployment rate of 15.4% and ranks on 152/199 on the world employment table. We have taken unemployment as our dependent variable in this paper.

4.2 Foreign Direct Investment

The flow of FDI is one of the indicators of economic development. FDI provides the basic facilities to developing countries such as technology, capital, entrepreneur ability and professional skills. These are essential to create more job opportunities, hence unemployment reduction and poverty alleviation (Athukorala, 2003). We are trying to evaluate the impact of FDI on unemployment in Pakistan. The proxy used for foreign direct investment is FDI in million US dollars.

4.3 Corruption

Corruption in Pakistan has always been a serious problem particularly in the government and lower level of police forces. Corruption can be defined as dishonest or fraudulent conduct by those in position of power such as managers or government officials typically involving bribery. Corruption is one factor perpetuating poverty. However we are evaluating the effect of this factor on unemployment in Pakistan. Data on this variable is taken from Corruption Perception Index (CPI). Corruption Perception Index measures the perceived level of corruption in public sector. It ranks countries and territories from 0 (highly corrupt) to 100 (very clean) based on how corrupt a country’s public sector is supposed to be.

4.4 Population Size

There are a number of reasons of unemployment in Pakistan. The main reason is non-stop increasing population. It is therefore intended to examine the effect of this factor on unemployment. We have taken population size as our independent variable. Proxy used for population size is LPOPS in millions of people. We transformed the values into natural logarithmic form to avoid sharpness in time series data.

4.5 Inflation

Inflation can be defined as a sustained increase in general price levels of goods and services in an economy over a time period. Inflation has various effects on an economy and it can be simultaneously positive or negative. Inflation is a sign that an economy is growing while lack of inflation can be an indication that economy is dwindling. We used inflation as GDP deflator as a proxy in this study. Data on this variable is taken from world development indicators.

5. Hypothesis

This research is based on the following hypothesis which will be tested during this research for above mentioned regression model.

1. $H_0$: There is no relationship between corruption and unemployment
   $H_1$: There is direct relationship between corruption and unemployment

2. $H_0$: There is negative relationship between FDI and Unemployment.
3. \( H_1 \): There is a positive relationship between FDI and unemployment

4. \( H_0 \): Population size does not have significant impact on unemployment

\( H_1 \): Population size does have a significant impact on unemployment

6. Empirical Results

Table 2: Descriptive statistics

<table>
<thead>
<tr>
<th>Variables</th>
<th>LUNEMP</th>
<th>FDI</th>
<th>LPOPS</th>
<th>CORR</th>
<th>INF</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>Maximum</td>
<td>15.09</td>
<td>25621</td>
<td>18.97</td>
<td>2.70</td>
<td>20.00</td>
</tr>
<tr>
<td>Minimum</td>
<td>14.39</td>
<td>5408</td>
<td>18.59</td>
<td>1.00</td>
<td>2.00</td>
</tr>
<tr>
<td>Std Deviation</td>
<td>0.23</td>
<td>6304.2</td>
<td>0.12</td>
<td>0.37</td>
<td>4.89</td>
</tr>
<tr>
<td>Mean</td>
<td>14.84</td>
<td>11477.4</td>
<td>18.79</td>
<td>2.29</td>
<td>9.94</td>
</tr>
</tbody>
</table>

Table 2 shows the summary statistics of all the five variables. LUNEMP is dependent variable and FDI, LPOPS, CORR and INF are independent variables.

Table 3: Augmented Dickey Fuller unit root test results

<table>
<thead>
<tr>
<th>Variables</th>
<th>ADF at level</th>
<th>ADF with 1st Difference</th>
<th>Note: McKinnon critical value with intercept at 5% level= -3.08</th>
</tr>
</thead>
<tbody>
<tr>
<td>LUNEMP</td>
<td>-2.07</td>
<td>-3.47</td>
<td>From above table it is obvious that all series are non-stationary at level but became stationary with first difference at 5% level of significance. All series are integrated of order I(1).</td>
</tr>
<tr>
<td>FDI</td>
<td>-1.03</td>
<td>-4.87</td>
<td></td>
</tr>
<tr>
<td>LPOPS</td>
<td>-1.25</td>
<td>-3.28</td>
<td></td>
</tr>
<tr>
<td>CORR</td>
<td>-2.27</td>
<td>-9.05</td>
<td></td>
</tr>
<tr>
<td>INF</td>
<td>-1.84</td>
<td>-5.79</td>
<td></td>
</tr>
</tbody>
</table>

Table 4: OLS results

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>Std Error</th>
<th>t-Statistic</th>
<th>Prob</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-32.47</td>
<td>5.80</td>
<td>-5.60</td>
<td>0.0001</td>
</tr>
<tr>
<td>CORR</td>
<td>0.11</td>
<td>0.06</td>
<td>1.75</td>
<td>0.1053</td>
</tr>
<tr>
<td>FDI</td>
<td>-2.75</td>
<td>6.41</td>
<td>-4.29</td>
<td>0.0010</td>
</tr>
<tr>
<td>INF</td>
<td>-0.02</td>
<td>0.01</td>
<td>-3.12</td>
<td>0.0089</td>
</tr>
<tr>
<td>LPOPS</td>
<td>2.53</td>
<td>0.31</td>
<td>8.08</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

R-Squared 0.89
Adjusted R-Squared 0.85
Durbin-Watson Statistic 2.27

F-Statistic 23.52
Prob (F-Statistic) 0.000
Table 4 gives us the estimated values of Ordinary Least Square. Unemployment is dependent variable while FDI, CORR, INF and LPOPS are independent variables. The estimated value of $R^2$ is 0.89 which means that independent variables in our model predict 89% of the variation in the dependent variable. The value of F-statistic is 23.52 and corresponding probability value is 0.00013 which is less than 5% which shows the significance of our model. The D.W in our case is 2.3 which means that there is no serial correlation lies in our study and residual also found significant.

After putting the values of coefficients in equation 1, we get the following constructed model

$$LUNEMP = -32.47 + 0.11(CORR) - 2.75(FDI) - 0.02(INF) + 2.53(LPOPS)$$

(2)

From equation (2), the coefficient of corruption is positive but not significant. So we accept our first null hypothesis that there is no relationship between corruption and unemployment in Pakistan. The coefficient of FDI was found having significant negative relationship with unemployment hence 2nd null hypothesis is rejected and the alternative is accepted. This means that FDI negatively effects dependent variable unemployment in Pakistan. If FDI increases then Unemployment will decrease. One unit increase in FDI leads to 2.75 units decrease in unemployment.

The value of coefficient of inflation is found negative and significant and the value is -0.02 which leads to accept 3rd null hypothesis and rejection of alternative. For one unit increase in inflation, the estimated decrease in the value of unemployment is almost 2%. Economists believe that there is trade-off between rate of inflation and unemployment rate. This trade-off is known as the Phillips curve and is based on the fact that an unexpected increase in price level reduces the real wages, increasing demand for labor, hence reducing unemployment.

The value of coefficient of our last variable is positive and significant and the value is 2.53, hence 4th null hypothesis is rejected and alternate hypothesis is accepted. A 2.53 unit increase in unemployment is caused by a 1% increase in population size.

7. Conclusion and Policy Recommendations

This study has examined the impact of selected explanatory variables namely Foreign Direct Investment, corruption, population size and inflation on unemployment in Pakistan. Our result showed that FDI is playing significant role in unemployment reduction in Pakistan. Due to inflow of Foreign Direct Investment, more employment opportunities are available, hence resulting in reduction of unemployment in the country. Government should concern about Foreign Direct Investment which could benefit Pakistan’s economy. FDI also creates more domestic jobs and strengthen economic growth. Government should focus on other measures besides FDI to increase employment possibilities and boost economic development.

Pakistan has a 49% literacy rate, this lack of skill and education means people are not able to find jobs and most of the population left doing menial jobs like farming, driving and other manual labor. In order for an economy to be successful and having lower unemployment rate, people should focus on gaining better education and it is also Government’s responsibility to alert them about diversifying their education. Effective measures should be taken to provide skills to the labor force so that they can absorb themselves in foreign modern environment. The higher growth rate of population is a major cause of unemployment in Pakistan. Millions of people in Pakistan are poor and their savings are low. Modern technology and rapid mechanization is also creating unemployment.
Lack of facilities in telecommunication sector, energy short falls and poor infrastructure prevent industrialists to set up new businesses and industries in Pakistan. Other reasons of joblessness in Pakistan are poor law and order situations, bomb blasts, terrorism, political unrest and army’s interference which prevent domestic and foreign investors to invest in Pakistan. Due to this negative social phenomenon, Foreign Direct Investment is sliding down to the bottom. Foreign investors are reluctant to invest in new business ventures due to persistent uncertainty and political unrest and violence in the country.

Government should seriously focus on unemployment reduction in Pakistan. Monetary and fiscal measures should be taken to attract industrialist and particularly Foreign Direct Investments. Vocational and technical training education should be provided to the common people so that unemployed people could get a chance to improve their skills and earn reasonable income. Government should formulate proper economic policies, improve infrastructure facilities, better law and order situation, overcome energy crisis and provide a peaceful environment to overcome severe problem of unemployment and enhance economic growth of Pakistan.

References


