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Neglected Heteroscedasticity on Foreign Direct Investment Outcomes and Employed Labor Force in South Asia

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Abstract

The elemental intend of the study is the clarification on the employment effect of inward Foreign Direct Investment (FDI). The challenges faced by the developing economies, of which South Asia (SA) is not away, in context of the measures to have maximum absorptions of the existing labor force are however easier said than to be done. The study opts four of the big economies of SA for the realization of FDI and employment tie-ups. The data range for 31 year, since start from 1980. It is nevertheless striking to bring into practice the altogether computation of more than one regression equation. To do so, methodology of Seemingly Unrelated Regression (SUR) is used and thereby establishes three salient outcomes: a); FDI is significant in effecting employment, b); FDI effects of employment are moderate, c); FDI tends to have dissimilar direction of effects on the selected countries. At the concluding stage, it is suggested to view sector specific effects of FDI and nevertheless recommended for the righteous channelization of foreign capital for better job enhancement.

Keywords: foreign direct investment, employed labor force, South Asia, gross domestic product, Seemingly Unrelated Regression, Feasible Generalized Least Squares.

1. Introduction

1.1 Background of the Study

Joblessness is one of the critical macroeconomic aspects of world. The situation turns to be more of pity when evident on the developing world economies (Coniglio et al., 2015). Reported by International Labor Organization (ILO, 2016), although unemployment pressures have fallen in some of the developed economies i.e. European Union (EU) and United States (US), however, to new ILO analysis of World Employment and Social Outlook (WESO, 2016), the global crisis of particularly related to labor force absorptions is not likely to come to an end, especially for the emerging economies. Such inflated figures of jobless labor deeply affect the bunch of workable labor force available at plentiful. Nearly, 1.1 million of jobless labor is likely to be in the global tally by 2017 (WESO, 2016). Despite of thorough joblessness, it is seen that people are self-triggered

towards accepting underpaid jobs or instead to be laid-off. It needs to boost decent work opportunities either or else intensify social tensions.

Locating the back stage causes of such intensified issues of labor force, associations are traced at prevalence of unstable economic environment, dysfunctional financial and stock markets, the fall of demand of labor from entrepreneur since heading towards investment shrinks, and above the board, volatile flow of foreign capital are the major contributors to an abrupt situations at labor market. Vulnerable and low paid employment is undeniably high in the emerging as well as developing economies with its point of peak in SA i.e. 74 percent and Sub-Saharan Africa by 70 percent (ILO, 2016).

Employment and participation rate in the sectors of productive absorption is at plunk in SA. Of eight countries comprised into South Asian Association for Regional Cooperation (SAARC), entire economies are reliant on primary sector thus are not able to hold-up-tight the multiple and higher than subsistent level of jobs. For the sake of relying on authentic information and data availability, this study involves four countries of SA i.e. India, Pakistan, Bangladesh, and Sri Lanka. SA adds about 1 to 1.2 million of value addition in labor force every month and is to contribute to 40 percent into the global working age of (15-64) years (World Bank, 2016). To assemble the available work force in the queue of in-job citizens, investment capital is inevitable.

1.2 Foreign Direct Investment, Employment, and Labor Force in South Asia

The ready source of coming over capital needs for gearing up employment opportunities is nevertheless through FDI. To Sahoo (2006), locating for the evolution of FDI policies in India, gradual changes emerged into the government attitude towards of FDI since 1948. The foreign exchange crisis during 1957-58 also led India towards of being more liberal in the case of FDI. By the era of 1970's and of 1980's, more of the liberalized attitudes towards of FDI were followed. Also, by 1990 and onwards, since grounded at globalized front of exchange of investment capital, India today is the most attractive economy for foreign investments in SA.

At Pakistan, the first leap towards of liberalizing FDI was embarked in 1984 that declared for the equal floorboard for the public as well as private sector, thus, favored foreign investments by joint equity and partnership with local businesses. Establishment of privatization commission by early 1990's was the prompt step towards the initialization of private investments (local and foreign) to spread out the business within the path of futuristic plans towards further liberalized and open bordered tie-ups. Tilat (2002) writes that despite of too much of the favors given to the foreign investors, the performance of Pakistan in attracting bulk of such foreign inflows remained muted and indeed dismal, mainly due to the lack of concrete reforms on tax exemptions and other concessions that lead to concrete the fundamentals of attracting foreign investors.

In case of Sri Lanka, since 1948, the FDI penetrations are seen in two phases that is of pre 1977 and of post 1977 period. The former episode was looked by dominant public sector and later phase was of launching of economic reforms with primary aim of favoring private sector-led country future productive horizons, resting at vibrant role of FDI. The policies involved; easing off trade and payments, administrative adjustments, tax reliefs and administrative favors related to FDI. Situations are not that away in Bangladesh where FDI is bucked-up at all the industrial activities except that of arms and ammunitions, mechanized extractions of reserved forests, nuclear energy, currency notes,

forest plantation however, possibly by a joint venture with that of public sector. Favoring of FDI is reliant on foreign private investment act of 1980 that aims at creation of in-discriminatory incentives to foreign investment (Sahoo, 2006).

Ease of capital is a key determinant of employment creation. However, of the four countries of SA, the statistics of total FDI inflows in Table 1 spells out that India is the biggest tycoon in adhering maximum inflow of FDI. Out of total FDI inflows of US$46.90 billion in Fiscal Year (FY) 2015 within the specific countries, India witnessed for US$40.0 billion. In case of the rest, Pakistan came up with US$2.73 billion next to which is Bangladesh with $2.57 billion and Sri Lanka at the lowest rank i.e. of US$1.60 billion (FY, 2015).

At the world, FDI inflows are at volatile trend i.e. to World Bank (2016), net inflows of FDI at percentage world's GDP declined from 5.17 percent to 2.17 percent from 2007 to 2009. Onwards, there are couples of appreciations recorded into the growth of such inflows, i.e. 2.78 percent to 3.02 percent in coming two years span and nevertheless with sharp decline in 2014, reaching at 2.07 percent. In 2015, inflows of FDI remained at 2.72 percent. In this respect, FDI inflows as percentage of GDP situated at 2.10 percent on account of India whereas in Pakistan only 0.40 percent. Bangladesh and Sri Lanka witnessed FDI inflows at 1.70 and 0.80 percent of their respective GDP (World Bank, 2016).

Table 1: Total Receivables of FDI during Fiscal Year 2015 (In Billion US$)

India	**Pakistan**	**Bangladesh**	**Sri Lanka**	Total FDI inflows US$46.90 billion
40.0	2.73	2.57	1.60	
Flow of FDI as percentage of GDP (In percentage)				
India	**Pakistan**	**Bangladesh**	**Sri Lanka**	
2.10	0.40	1.70	0.80	

Source: The World Bank Group (2016)

The countries in SA also account for peaked level of population and due to the reason that being highly populated, are self-lead towards of the challenges at macroeconomic level. The growing trend in total population comes along with the needs of further investment for the restoration of the current rate of labor force participation as well as to keep the unemployment rate at least steady. Of the four countries of SA, as highlighted in Table 2, India is entitled to be the most populous due to the size of the country.

Table 2: Population, Labor Force, and Unemployment during Fiscal Year 2015

Total Population (In Million)			
India	**Pakistan**	**Bangladesh**	**Sri Lanka**
1311.0	188.9	160.9	20.7
The Available Labor Force 15 Year and Above (In Thousand)			
India	**Pakistan**	**Bangladesh**	**Sri Lanka**
496960.16	65361.41	78976.78	8576.33
Labor Force Participation Rate 15 Year And Above (In Percentage)			
India	**Pakistan**	**Bangladesh**	**Sri Lanka**
54.0	55.0	71.0	55.0
Rate Of Unemployment (In Percentage)			
India	**Pakistan**	**Bangladesh**	**Sri Lanka**
3.5	5.9	4.3	4.7

Source: The World Bank (2016); World Ometers (2016); Trading economics (2016)

Population of Pakistan comes at second whereas, of Sri Lanka, it is the lowest, after that of Bangladesh. To the obvious reason, highly populous states are tied-up with the bulky labor force. The scenario of available labor force of particularly 15 years and above for FY (2015) shows that in India it is nearly half of the billion. It is further astonishing to note that in Bangladesh, the available labor force is higher than that of Pakistan though being lesser in total population to Pakistan. It spells out the variations of classifications of population on account of age parenthesis.

The labor force participation rate is formulated to be employed over total labor force. In case of India, Pakistan, and Sri Lanka, it is not widely dissimilar to each other. However, in case of Bangladesh, it is the highest in the category. Rate of unemployment is quite low in India at FY (2015), however, given that unemployment measures are concerned, India witnessed too high unemployment rate during 2009 to 2013. It was averaged above 6 percent. Couple of years back, rate of unemployment in Pakistan also lived at over average 6 percent. Currently it is 5.9 percent (FY, 2015-2016). In case of Sri Lanka it is higher than that of India as well as Bangladesh. Again due to the need of work engagements, Bangladesh though adheres to hefty underemployment and low paid jobs, therefore, assembles herself with lowest rate of unemployment.

While targeted employment growth is to depend on FDI, there must be a compound watch on the size of the total inflows, the direction(s) of such vital investments, and the sector(s) those are the beneficiaries. In most of the cases, the blessing of FDI is viewed in the recipient state at the back of realizing economies of scale, transfer of technologies and the know-how that get evident on the local industries. Being not different from the rest of developing economies, SA is a source of attraction for the foreign businesses for sufficient transfer of credit to make their horizon widened side by side with the transpositions in the sense of entangling macroeconomic improvements within the country of host.

The information disembarked in Table 3 is on the glove of FDI towards the selected countries of SA. For the immense grabber of FDI inflows in SA, India has largest receivables of US$ 9497.0 million of investments funds from Mauritius. However Singapore and Japan are the close competitors in exporting investment funds to India and nevertheless Netherlands. The flow of funds over US$ one billion is from the U.K. The sector-wise allocation, locating for the biggest five, shows that services sector is of maximum scope for the business thereby engages the foreign investment of US$ 4833.0 million. The investment is so much divergent that construction sector which comes at second is at the receivables of one third of the funds compared to the services sector. The drugs and pharmaceutical sector along construction sector account for the foreign investment of about US$ 2.4 billion. Additionally, computer software and hardware together with telecommunication account for compound foreign investment of US$ 790 million.

China is the major business partner to Pakistan. It is therefore seen that heavy investment is pledged worth US$ 255.3 million, during FY (2015). Moreover, U.A.E and USA are also to stand at the floorboard of significant contributories of foreign investment with the total of US$ 425.4 million. Other partners enlisted in top five sources of inflows of FDI to Pakistan are USA, U.K and Hong Kong. It is however satisfactory to view that ever since Pakistan faces severe energy crises current days, majority of the investment funds is thrown into the power sector. Next to which is the oil and gas sector that also make crucial for Pakistan to get hold of targeted GDP and industrial and agriculture sector growth. This sector is also getting investment of US$ 261.6 million. Such heavy investment can be a spark to gear up for getting over the energy shortages within the country. Amongst the category of sectors of consideration for FDI, transport, chemicals and communication (IT and telecom) are the flashy beneficiaries.

Table 3: FDI Inflows; Top Five Source Countries and Domestic Sector-Wise Allocation in Million US$ (Fiscal Year, 2015)

India			
Source Countries		**Domestic Sector-wise Allocation**	
Country	**FDI**	**Sector**	**Total Investment**
Mauritius	9497.0	Services	4833.0
Singapore	2308.0	Construction	1332.0
Japan	2237.0	Drugs and Pharmaceuticals	1123.0
Netherlands	1856.0	Computer Software & Hardware	486.0
U.K	1080.0	Telecommunication	304.0
Pakistan			
Source Countries		**Domestic Sector-wise Allocation**	
Country	**FDI**	**Sector**	**Total Investment**
China	255.3	Power	566.6
U.A.E	216.4	Oil and Gas	261.6
USA	209.0	Communication (IT & Telecom)	195.2
U.K	174.3	Chemicals	64.6
Hong Kong	83.4	Transport	36.8
Bangladesh			
Source Countries		**Domestic Sector-wise Allocation**	
Country	**FDI**	**Sector**	**Total Investment**
U.K	273.6	Banking	389.6
USA	224.6	Textile and Wearing	351.6
Singapore	135.2	Gas and Petroleum	199.5
South Korea	131.4	Telecommunication	197.2
Pakistan	120.8	Food	96.6
Sri Lanka			
Source Countries		**Domestic Sector-wise Allocation**	
Country	**FDI**	**Sector**	**Total Investment**
Netherlands	1851.0	Manufacturing	199.0
U.K	1131.0	Tourism	161.0
Malaysia	841.0	Housing and Property Development	116.0
Switzerland	829.0	Telecommunication	93.0
Mauritius	783.0	Port Development	51.0

Sources: Board of Investment, Government of Pakistan;

Department of Industrial Policy and Promotion, Government of India;

The Central Bank of Bangladesh; Board of Investors, Sri Lanka.

In Bangladesh, U.K and USA are the top countries favoring the export of capital funds. To recall, USA and U.K both are the states that are the contributors of heavy funds, in Pakistan and India, account for about an investment of US$ 498.2 million. Singapore and South Korea are not that away from one another in targeting Bangladesh for their FDI outflows. It is viewed that Pakistan also falls among the likely top five FDI sources to Bangladesh with an investment of over US$ 120 million. The targeted sectors for the investment are mainly banking, textile and wearing, gas and petroleum, telecommunication, and food. With a total investment of US$ 1234.55 million, more than half of the foreign investment is viewed at banking and textile and wearing.

Next to India, Netherlands, U.K and Mauritius are listed in five most favored nations for foreign investment in Sri Lanka. Precisely, Netherlands exhibit for the strong layover of funds that are US$ 1851.0 million. U.K is the second partner at FDI that account for US$ 1131.0 million. Likely to Mauritius, Malaysia and Switzerland be along investment of over US$ 1.6 billion during FY (2015). Most of the attentions are evident towards the manufacturing sector of Sri Lanka where the land of total imported investment funds are of US$ 199.0 million. Tourism is an attractive sector of Sri Lanka, depending on the climate, location for world biggest beaches, Sigiriya the eighth wonder of the world and scenic(s) are the reason for the second highest recipient of FDI whereas, housing and property development and telecommunication account for US$ 209 million and nonetheless, port and development at far most however, be at the selected list of category.

1.3 Significance and Scope of the Study

While noticing for the significant flow of FDI into the SA, it therefore motivates to view the feedback effects of the same on the employed labor force of the recipient countries, given that SA is the region of grouped nations those share a common attribute of rising labor force and limited capital thus come along low power of advocacy towards the proper engagement of economic activities so that results could be ultimately on the triggering of the jobs for the available labor force. The notion that whether FDI is to be considered as to mend-up the breaches of saving and investment; thus encourages to initiate the study to award empirical rationing on the relationship and the direction of effects on the employed labor force of SA. It is none other than to verify for whether current employed labor force in SA is workable at the back of FDI or else, given such gestures shown before foreign firms for the investment of funds and is nevertheless considered as instrument of hope for the entire economy. Whether the effects are apprehend-able or just froth, since availability of jobs to the labor force is the common issue in the region.

The study goes along with the organization of Section 1 on the Introduction, the Section 2 that enlightens the Review of Literature. Section 3 is on the Data Source(s) and Methodological issues. Section 4 and Section 5 are rendered for the Discussion of the Results and Conclusions.

2. Review of Literature

The FDI is successful in its wide-spread myth of effecting the host country's economic growth and nevertheless in positive (Thomas, Li, & Liu, 2008; Farkas, 2012). To Kobrin (2005), the effects are idealized at the transfer of new technologies that enhance the productive capacity of the economy via the employment creation at intermediate state. Therefore, productive and allocative efficiencies are restored that positively contribute to

the macroeconomic aspects (Mehmood & Hassan, 2015). Gaps fill experiences resting on FDI, on account of savings and investment raise the investment level even to be mounted above the existing level of saving, at domestic forefront (Hye et al., 2010; Mehmood & Hassan, 2015; MacDougall, 1960).

The general themes of the empirical researches are classified into two groups. That is; the visualization of FDI and economic growth relationship and of FDI and its effects on the employment. In this regard, Khan and Khan (2011) empirically tested for the evidences on the FDI and economic growth at Pakistan. The study went out with the sector-wise analysis i.e. of primary, secondary and tertiary sector. The results were found to posit positive relationship of the two, likely to (Hye et al., 2010). In the same framework of analysis, however, different results were also evident in past research. For instance, Baharumshah and Thanoon (2006) found within the Error Correction Model (ECM), negative signs of foreign inflows thus representing to displace the domestic investment and saving in short run.

Since GDP effects of FDI are concerned, though assemble positive ties, however, there's practiced different methodologies and sector(s) of interest. Mehmood and Hassan (2015) tested for economic growth effect of FDI on economic growth of Pakistan by using Johansen and Juselius (1990). The study was based on data from 1972 to 2014. Whereby, Hye et al. (2010) worked with Auto Regressive Distributed Lag (ARDL) for analysis of FDI and economic growth of Pakistan for 1975 to 2007. However, Khan and Khan (2011) came up using panel cointegration test for 1981 to 2008, while focused on sectoral analysis on Pakistan, at the back of FDI. Whilst Baharumshah and Thanoon utilized data from 1982 to 2001 and augmented methodology of Dynamic Generalized Least Squares (DGLS) on eight Asian countries to test for FDI effects on economic growth.

Broad spectrum of the effects of FDI on the macroeconomic stature of host country motivates the researchers to also look for employment effects of the same. In this area, Habib and Sarwar (2013) estimated the regression through Johansen and Juselius (1990). The results evident for the two cointegrating equations thus confirmed for the long run relationship between the employment level and FDI in Pakistan. Varying with the data range within 1970 to 2011, positive relationships were found amongst the two. In addition to that, Akcoraoglu and Acikgoz (2011) had a fundamental aim to explore the effects of inflows of FDI on the employment, considering the choice of Turkey for their empirical analyses. The methodology worked-with was of ARDL, akin to Mehmood and Hassan (2015); Hye et al. (2010) and Ali and Nishat (2009). Results incorporated by Akcoraoglu and Acikgoz (2011) proved of significant negative relationship of FDI and the employment for which the probable reason quoted was the inflows of FDI in the form of acquisition and mergers instead of green-field investments. Similarly, Jude and Silaghi (2016) explored for association of FDI and employment at the panel of Central and Eastern European countries. Findings identified that FDI had initial negative effects of labor saving on employment. Whereas, long run vertical integration of the foreign affiliates brought positive spell outs on employment.

Not necessarily the significant relationship of FDI and employment are rationalized in the previous researches. For instance, Onaran (2008a, 2008b); Jenkins (2006) and Massoud (2008) did find insignificant and negative effects of FDI on employment, at Viet Nam and Egypt. The FDI becomes most of the desired commodity to foster economic growth and addresses macroeconomic issues, whilst particular to the developing world

economies (Coniglio et al., 2015). Accordingly allured toward the available footboard to spread the businesses and the tax concessions and partialities of government policies to favor FDI next to wide occurrence of workable force are the source of attraction for the foreign firms. In this respect, Braunstein and Epstein (2002), since realized such salient facts, incorporated empirical panel data research on the provincial level at China. Working with data from 1986 to 1999, the results established that inward FDI had relatively small however positive impact on employment, similarly, located odds on domestic investment as well as on the tax revenue, at the back of inflows of FDI (Braunstein & Epstein, 2002). Whereas, on the dissimilar note, , regardless of the wages offered, Coniglio et al. (2015) found foreign firms as more beneficial towards the call of labor contrary to the domestic firms.

Importantly, it is realized at empirical findings that determinants of FDI within the host country unless are at apprehend able stature, can make less prompt for the fetch of desired macroeconomic benefits (Bengoa & Sanchez-Robles, 2003). Internal macro and socio-economic components are significant for referring alliance with across the border investors (Mehmood & Faridi, 2013; Hassan, Nor' Aznin Abu, & Hussin, 2014, Olney, 2013). The situations like of hyper unemployment, the enticements of early and/or voluntary retirements, bargaining power of labor are the fundamentals of across border FDI brought ups (Nayek & Dev, 2005). The reduction into the employment protection regulation, employment protection(s) legislations have large impacts on inward FDI (Olney, 2013). Nevertheless, the strategies of settlements regarding the official foreign exchange rate at the foreign exchange markets and moreover the trade policies also affect the inflows of FDI (Asiedu, 2001). Whilst considering effects of FDI on employment, Jude and Silaghi (2016) did identify that human capital contribute to positive and outrageous effects of FDI to employment. Similarly, increase/decrease in the prices of investment goods, patterns of specialization across the countries, labor capital substitutions also pose effects of FDI on the employment (Kambayashi & Kiyota, 2015).

3. Methodology

The aspiration of the study is to evaluate the effects of FDI on employed labor force. The countries those are selected from SA are India, Pakistan, Bangladesh, and Sri Lanka. In order to carry forward the empirical testing of the relationship, the secondary data at those four countries is sourced from the World Bank Development Indictors. The data that cater for of time series analysis range from 1980 to 2010.

The general specification of the model is given as:

$$L = f(FDI, GDP, INF) \qquad (1)$$

Where:

Acronym		Description	Measure
L	=	Employed Labor Force	In thousand
FDI	=	Foreign Direct Investment	Net Inflows in million US$
GDP	=	Gross Domestic Product	In million US$
INF	=	Inflation	Consumer Price Index (CPI) %

To add here, the core objective is to find out; how FDI relates to the employed labor force of each of the selected country at SA since known that the common challenge is the adjustment of available workable labor force into job and to trace how much is the collaboration of FDI is evident in this respect, therefore it is to check the direction an itself intensity of impact. To do so, Zellner (1962) presented estimation technique of SUR that allows for jointly regressing at same time the multiple system of equation i.e. multivariate regression analysis, while competent to render different coefficient values. However, the regression models specified for each country are written in separate form as under:

$$L_{t(Bangladesh)} = \beta_0 + \beta_1 FDI_t + \beta_2 GDP_t + \beta_3 IN_t + \varepsilon_t \quad (2)$$

$$L_{t(India)} = \delta_4 + \delta_5 FDI_t + \delta_6 GDP_t + \delta_7 IN_t + \varepsilon_t \quad (3)$$

$$L_{t(SriLanka)} = \phi_8 + \phi_9 FDI_t + \phi_{10} GDP_t + \phi_{11} IN_t + \varepsilon_t \quad (4)$$

$$L_{t(Pakistan)} = \gamma_{12} + \gamma_{13} FDI_t + \gamma_{14} GDP_t + \gamma_{15} IN_t + \varepsilon_t \quad (5)$$

The $\beta_i, \delta_i, \phi_i$ and γ_i are the intercepts and coefficients of the regressors. ε_t are the correlated error terms within the system of equations.

The empirical methodology for initialization of the results is SUR. Where, the regression model consists of i (i = 1,…..,m) number of linear regression equations, as under:

$$\begin{aligned} y_{1t} &= \beta_0 + \beta_1 x_{1j} + ... + \beta_i x_{ij} + \varepsilon_{1t} \\ y_{2t} &= \delta_4 + \delta_5 x_{5j} + ... + \delta_i x_{ij} + \varepsilon_{2t} \\ y_{3t} &= \phi_8 + \phi_9 x_{9j} + ... + \phi_i x_{ij} + \varepsilon_{3t} \\ &\vdots \\ &\vdots \\ y_{it} &= \gamma_{12} + \gamma_{13} x_{13j} + ... + \gamma_i x_{ij} + \varepsilon_{4t} \end{aligned} \quad (6)$$

The Equation [6] consists i regression equation(s). Where, j (j = 1,2,….., k_i) are the independent variables. To Zellner (1962), the number of regressors in either model may vary, given the nature of the model concerned, however, for the accurate estimation of covariance in error terms those are serially correlated, number of observations of variables in each of the model that appear within the system are to be the same.

Nevertheless, while estimating SUR, it is necessary to fulfill the following assumptions:

- Estimation is to be carried for more than that of one regression equation.
- The correlated error terms, however seemingly unrelated, within the regression equations.
- Nevertheless, the regression equations must not form simultaneous system of equation rather have to have no seeming relationship between each other.

For the estimation purpose, the Feasible Generalized Least Squares (FGLS) method is to be followed, due to the establishing of more realistic results. It is so due to the need of the estimation of variance (Ω) covariance matrix.

The Ω variance-covariance method is written as follows:

$$B_j = \frac{1}{T-k_m}\sum_{t=1}^{T} e'_m e_p \quad m,p = 1,2,\ldots..,M \tag{7}$$

$$\widehat{\Omega} = \begin{pmatrix} S_1 I_T & \cdots & S_{m1} I_T \\ \vdots & \ddots & \vdots \\ S_{m1} I_T & \ldots & S_{mm} I_T \end{pmatrix}, \ \widehat{\beta} = (X'\widehat{\Omega}^{-1}X) - 1(X'\widehat{\Omega}^{-1}Y) \tag{8}$$

The errors obtained from the system equations are e_m and e_p. k_m the independent variables and T, the sum of total number of observations. However, $e'_m e_p$ is the product of the estimated error terms within the equations. To that point forward, estimated S_{mp} variance-covariance values are to be calculated by I_T matrix of identity to obtain $\widehat{\Omega}$.

4. Results

The estimation of the models as depicted in Equation [2] to Equation [5] is set forth within the framework of SUR. The applicability of SUR is run by the mean of FGLS. The results are given in Table 4.

Table 4: Estimated Results of Seemingly Unrelated Regression

$L_{t(Bangladesh)} = \beta_0 + \beta_1 FDI_t + \beta_2 GDP_t + \beta_3 IN_t + \varepsilon_t$				
Variable	**Coefficient**	**Standard Error**	***t*-statistic**	**Probability**
Intercept	-26.75	8.18	-3.27	0.00*
FDI	-0.05	0.02	-2.58	0.01*
GDP	0.78	0.17	4.50	0.00*
IN	0.14	0.14	1.02	0.31
$L_{t(India)} = \delta_4 + \delta_5 FDI_t + \delta_6 GDP_t + \delta_7 IN_t + \varepsilon_t$				
Variable	**Coefficient**	**Standard Error**	***t*-statistic**	**Probability**
Intercept	7.49	0.57	13.06	0.00*
FDI	0.02	0.00	6.51	0.00*
GDP	0.08	0.01	6.07	0.00*
IN	-0.02	0.01	-2.15	0.03*
$L_{t(SriLanka)} = \phi_8 + \phi_9 FDI_t + \phi_{10} GDP_t + \phi_{11} IN_t + \varepsilon_t$				
Variable	**Coefficient**	**Standard Error**	***t*-statistic**	**Probability**
Intercept	3.41	0.45	7.53	0.00*
FDI	0.02	0.01	1.68	0.09**
GDP	0.10	0.02	5.43	0.00*
IN	-0.01	0.01	-1.24	0.22
$L_{t(Pakistan)} = \gamma_{12} + \gamma_{13} FDI_t + \gamma_{14} GDP_t + \gamma_{15} IN_t + \varepsilon_t$				
Variable	**Coefficient**	**Standard Error**	***t*-statistic**	**Probability**
Intercept	-0.58	0.64	-0.90	0.37
FDI	-0.02	0.01	-2.38	0.02*
GDP	0.24	0.02	12.54	0.00*
IN	-0.02	0.01	-3.08	0.00*

Note: * and ** are to highlight significant at 5 and 10 percent.

The basic aim of the empirical analysis relies at investigating whether the worthy inflows of foreign capital in the context of FDI result in apprehending the significant influence on the employed labor force of the selected countries in SA. The results enable to write that at the confidence interval of 90 percent and 95 percent, respectively, there is restored significant relationship between the two, similar to Habib and Sarwar (2013), Akcoraoglu and Acikgoz (2011), contrary to Jenkins (2006) and Massoud (2008). However, the results are elaborative in two tones. Firstly, there is found universality at the results on the ground of the intensity of impact of FDI on the employment. That is; on any of the four selected countries at SA, in exclusion of the directions of effect, the employment

effect of FDI is the same. Secondly, the employment spell outs of FDI are mild. Thirdly, it is discovered that coefficient of FDI is held negative on account of Bangladesh and Pakistan, unlike at India and Sri Lanka. Findings thus coincide with the previous researches i.e. Farkas (2012), Habib and Sarwar (2013), Akcoraoglu and Acikgoz (2011), Jude and Silaghi (2016).

It is not possibly for FDI to be treated as indifferent in the line of build-in positive bring out onto the level of employment of the SA. The literature what went before also comes up with the diverse results since framing the employment whereabouts of FDI. For instance, Dufaux (2010) argued that job creation effects of FDI are considerably different and nevertheless depend upon the host country stage of economic development. Therefore, having come along with the jumbled results of FDI inflows, even within the same region in question is not unusual.

On the complementary note, Marx and Engels (2002) and Akcoraoglu and Acikgoz (2011) also acclaimed that given the concentrations are towards the net inflows of FDI, the usage of new machinery and outsourced hi-fi technology result into the loss of jobs for the recipient country. In spite of the fact that FDI inflows are reluctant in exposing and widening the job horizon, it is further to be considered that the outcomes are differentiated into the time horizons. That is, the instant and short lived effects are though negative however, later the labor intensive investments do promote more of the employment opportunities and thus create more jobs than what got destructed at the stage of initialization of the said foreign capital (Dufaux, 2010; Mark & Engles, 2002; Jude & Silaghi, 2016).

Additionally, it is not surprising to mention the little influence of FDI on the employment (Jenkins, 2006). To Ernst (2005), whilst there tends to be the rapid progress in inward FDI, there are viewed little influences on the employment (Braunstein & Epstein, 2002; Jenkins, 2006). Importantly, it is to divulge that the nature and direction of inward FDI is associated with mixed employment outcomes. Therefore, while considering India and Sri Lanka more of the defended jobs are the ornaments of wide adaptability towards the foreign capital, as is the case in India, and apparently, the rate of literacy that is the highest venerates for the entangling of jobs, given the case of Sri Lanka. However, on account of Bangladesh and Pakistan, the results are negative responses of employment due to the reason of less of the foreign investment type of labor force that might be assembled altogether for being into the jobs rather wince backs and trudges towards of net FDI since the demonstrates of 21st century production are more of capital intensive and need adequate know how from the labor force to have the benefits of jobs be transferred. Such attributes of the results are sectioned whilst the consideration is of net FDI inflows.

Glance of other variables, GDP is found positive and significant in entire country case for the employment bring ups. Same findings were put forth in the past by Thomas et al. (2008), Kobrin (2005), Mehmood and Hassan (2015), Khan and Khan (2011), and Hye et al. (2010). However, on account of inflation, mixed results are recorded. Nevertheless, wherever found significant, the results enable to trace out negative relationship to employment. It is thus to prove the states of Phillip curve short run relationship of employment and price rise. Apparently, rising inflation acts to defuse the charm of investment due to the depressed demand and thus cannot enable the producers, for more particular the foreign investors, to bring up the capital as well as the declarations of future

business agreements into the states that encompass with tendency of price rise, therefore makes the job market frothy.

5. Conclusion

The stagnated unemployment is the empathy for especially the developing world economies. Short of capital is the key cause for meek employment lift ups.

5.1 Contribution of the Study

The study was conducted to discover and to contribute in knowing the intensity and direction of effects of foreign capital i.e. the FDI inflows towards the four countries of SA on their respective employment level. The methodology of SUR gave the results that inward FDI (net inflows) were significant in effecting the employment at the four selected economies. However, did differ on accord of directions of effects. In case of Pakistan and Bangladesh, there were found negative effects on the employment whereas, India and Sri Lanka had positive effectuality of FDI on their level of employment. On the common argument, the study revealed that the effect of FDI was modest on either country at SA. The study enlightened that memorization is crucial in case of employment and FDI transmits in the line of sector specific.

5.2 Limitations of the Study

The study limits in further clarifying the effects of other forms of foreign capital and employment creation. Furthermore, the data unavailability also limits the information that otherwise imparted on covering broad time horizon. Nonetheless, apart from other forms of foreign capital, fewer of the control variables such as gross capital formation and the one that highlights human capital index are found missing in the present study that though not significantly affect the scope of the study, given that methodology of SUR broadens the purview of the study however, can be considered as base for further research.

5.3 Future Research Suggestions

The study ascertains the need to frame empirical research to further clarify the effects of inward FDI and employment creation, within the same region or else, at diverse time horizon. Moreover, the need of inculcating other forms of foreign inflows such as worker remittance(s) those are also the prompt fosterer of employment are also required to be estimated for their employment effect.

5.4 Policy Implications

The study urges for the better environment for foreign investors with a give and take of facilitations for their even business ascends and on the other hand, for a governments-concerned to foster the skill and/or education building on the existing labor to retain an assurance of facilitating the labor force for their placement in foreign firms business(s) for their continuous contributions into the process of generating further needs for production, resting at the uninterrupted demand.

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