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FDI REGISTERED PROJECTS AND EMPLOYMENT CREATION IN GHANA'S AGRICULTURE, BUILDING & CONSTRUCTION, MANUFACTURING, AND SERVICE SECTORS

Ram K P, and Seema S.
Faculty of Business and Economics, Mendel University, Brno, Czech Republic

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Keywords: foreign direct investment, employment generation, agriculture sector, building & construction sector, manufacturing sector, service sector, registered investment projects, Ghana's economy.

Abstract

The paper investigates the impact of foreign direct investment (FDI) registered projects on employment generation in Ghana's key sectors of agriculture, building & construction, manufacturing, and service. The study looks at data from the Ghana Investment Promotion Centre for the period 2001 to 2018. The results indicate that while FDI has a positive impact on job creation in the service sector, it lacks significant impact on agriculture and manufacturing sectors at a 5% significance level. The study also found that employment creation through registered investment projects had no effect on the manufacturing industry. Based on the findings, the paper recommends that the government provides incentives to attract more investors in these non-performing sectors.

Introduction:

As foreign direct investment (FDI) flows to the African continent continue to rise, the distribution of FDI registered projects among sectors has fueled expectations of increased economic growth in Ghana. However, the contribution of each sector to total GDP varies. This paper aims to investigate the impact of registered projects through FDI and local investments on key sectors of the Ghanaian economy. The research focuses on assessing the role of FDI in generating jobs in the agriculture, building & construction, manufacturing, and service sectors. The study uses data from the Ghana Investment Promotion Centre for the period 2001 to 2018. Through a series of tests, including multivariate, multicollinearity, unit-root, correlation, and auto-correlation analyses, the study determines the short and long-term relationships between variables. Ordinary least squares (OLS) regression is used to obtain a simple linear regression. Results indicate that FDI had a positive impact on the service sector, but lacked significant impact on agriculture and manufacturing industries at a 5% significance level. Additionally, employment creation through registered investment projects had no significant effect on the manufacturing sector. The paper recommends that the government provide incentives to attract more investors in the non-performing sectors to boost employment generation and facilitate economic growth. This study contributes to the existing literature on the significance of FDI's contribution to an economy, including the various sectors' response to FDI, and the factors that affect inflows.

1.1. Objective

The motivation for this paper is the result of the recent increase in FDI flow to the African continent, from which Ghana is not an exception. The distribution of FDI registered projects among the various sectors has inspired a high level of expectation of economic growth in Ghana. The contribution of each sectoral level is measured as a proportion of total GDP. As numerous studies have shown FDI to play a significant role in many economies, there is a need for us to assess the significance of FDI and local investments in the sectors of the Ghanaian economy. This study has two main goals. The first is to investigate the impact of registered projects through FDI and domestic investments on the agriculture, building & construction, manufacturing, and service sectors. The second is to examine the employment created through investment registered projects and how this is distributed among the selected sectors.

2. Literature Review

The effect of FDI influx into the industrial, construction, and service sectors on economic growth was investigated in a panel of 16 Central, Eastern, and Southern European CESE nations, using data from different periods between 1998 and 2012. The analysis of the decomposition of FDI showed that FDI in the industrial and service sectors has a positive and significant impact on economic growth (Miteski & Stefanova, 2017). Another study considered the impact of FDI in the agriculture, manufacturing, and service sectors on economic growth. This empirical analysis used panel data from 2000 to 2015 from five countries: China, Pakistan, India, Bangladesh, and Sri Lanka. The results revealed that FDI in manufacturing has the greatest potential to increase economic advancement compared to investment in other sectors (Haider & Muhammad, 2016).

Other studies have evaluated the relationship between FDI and growth at the sector level. In one study, the effect was examined using a panel cointegration test followed by a random-effects model. The results showed that at the sector level, growth affects FDI, but FDI does not affect growth (Areej & Shahid, 2017). Another study applied the autoregressive distributed lag (ARDL) method to investigate the relationship between FDI and growth in the mining sector using data from1988 to 2018. The results indicated that in this sector, FDI has a significant positive relationship with a country's GDP in the long run. FDI in mining was revealed to have relatively greater effects compared to FDI in non-mining sectors and domestic investment (Plaxedes & Seetanah, 2020).

Investigating the nature and behavior of total and sectoral FDI inflow in South Asian countries in recent years, another study adopted a holistic approach to studying and analyzing the FDI-growth dynamics. The results showed that the impact of FDI in South Asia is influenced by the sectoral composition of the FDI (Saswata, Nitya, & Bhawna, 2020). Furthermore, the relationship between FDI and income inequality has been analyzed. One study estimated the impact of FDI from a sector perspective and identified 3 major sectors: the primary sector, manufacturing industry, and services. Using panel data for 13 economies from 1980 to 2009, the study found a positive effect of FDI on income inequality in the service and manufacturing sectors (Macarena, 2016).

Using a multiple linear regression model and ordinary least squares (OLS) estimation, the influence of FDI on economic growth has been examined. One study distinguished ten different sectors in the United States. According to its findings, not all forms of FDI appear to be advantageous to host economies. However, certain industries have a favorable impact on economic growth, while others have a negative effect (Donny, 2018). Another study used a sample of 10 CEE for the period 1995–2019 and looked at the system determinants and transmission mechanisms of the sectoral structure of FDI inflows. This study followed on from earlier research, and the empirical component included the construction of a panel model. The results showed that the most effective strategy to attract developmentally-efficient FDI is to change the local economy's structure through explicit industrial and investment policies (Mario, Kusanović, & Jakovac, 2021). Using the Vector Autoregressive (VARs) model, FDI has been shown to have a considerable beneficial impact on economic growth in both the short and long run (Saidatulakmal & Abdillahi, 2021). A study revealed that, in the long run, both the rate of FDI inflows and the rate of foreign tourism have had a favorable impact on the rate of economic growth in Estonia (Amin & Glenn, 2021). Using sectoral data as the primary source of information to determine the direct effect of FDI on GDP, another analysis forecasted that FDI in the industry, tourism, and agriculture sectors has an overall highly favorable and significant impact on GDP over a ten-year period (Ram & Seema, 2018).

2.1. FDI and Employment Generation

The impact of FDI inflows on low- and high-skilled workers' employment and wages in Mexico's manufacturing and service sectors has been investigated. The study used a quarterly panel dataset spanning Mexico's 32 states from 2005 to 2018. According to the findings, increased FDI influx into the manufacturing sector had a favorable influence on low- and high-skilled employment. In the service sector, however, the results are inconclusive throughout the model for both types of employment (Eduardo, Ozuna, & Zamora, 2020).

Another study indicated a general positive correlation between external investment and local employment at the national level, although it identified significant variances between regions and sectors (Riccardo, Ganau, & Storper, 2022). Using Johansen's cointegration approach and Toda and Yamamoto's Granger causality test, other researchers investigated the long-run link between outbound FDI and employment in China. According to the data, outward FDI from China resulted in favorable job development, particularly in the tertiary sector (Huiqun & Lu, 2011).

Another study examined the impact of FDI and economic growth in Turkey on overall employment and female employment. The findings demonstrated that FDI harms overall employment and female employment, whereas economic growth has a beneficial impact on overall employment and female employment (Umit & Alkan, 2016). Using suitable descriptive analysis, a further study analyzed the impact of FDI on job creation in India. The results demonstrated that the impact on job creation in India is obvious, but FDI inflows may not play a key role in the country's growth rate. (Ronismita & Swapnamoyee, 2020). A single equation error correction model was used to examine the impact of FDI on employment in Macedonian industrial sectors. The findings showed that FDI and human costs are statistically significant determinants that positively affect employment in the manufacturing subsectors, implying that, as a result of their interaction, companies with FDI may have higher productivity (Dimitar, 2017). In another study, using panel data from 1994 to 2017, the authors examined the impact of FDI on youth unemployment in the Southern African Development Community (SADC) area. The findings suggested that FDI has a slight impact on lowering youth unemployment in the SADC region (Dadirai et al., 2021). Finally, providing a general overview of the flow of FDI to Ghana by considering the overall number of registered projects and using employment creation to assess their significance, Yeboah and Anning (2020) showed that Ghanaians enjoyed about 85% of the total jobs created between 2013 and 2018.

3. Methodology and Data

This study seeks to investigate the comparative influence of FDI and domestic registered projects and investment on employment generated in the various sectors of the Ghanaian economy. However, to avoid having too wide a focus, we have focused on the agriculture, building & construction, manufacturing, and service sectors. To assess the impact of FDI on an economy, a series of tests must be carried out to ascertain the short and long-run relationships between the variables. These tests include multivariate, multicollinearity, unit-root, correlation, and auto-correlation (among the error terms) analyses. These tests are carried out to obtain a simple linear regression using ordinary least squares (OLS). The study used secondary data from GIPC for the period 2001 to 2018.

First, a summary statistic was carried out of all the variables to obtain the means and standard deviations; these are shown in Table 1. Moreover, Figure 1 shows the time trends of FDI projects in the various sectors. We tested for unit root presence in the variables using the Kwiatkowski-Phillips-Schmidt-Shin (KPSS) test. Under the null hypothesis (H_0), μ_t is constant, and the variance of ε_t is zero. On the other hand, under the alternative hypothesis (H_1), μ_t is a random walk, and the variance of ε_t is positive. The KPSS test thus shows a unit root presence in each of the variables (agriculture sector, building & construction sector, manufacturing sector, and service sector). It is known that time series involve a different approach to the analysis of economic data (Granger, 1981).

Secondly, a multicollinearity test was carried out using variance inflation factors (VIF). The symptoms of multicollinearity in a regression model include an increase in the variance of regression coefficients. The VIF approach ($\beta\hat{}_j$) indicates the relative variance of the j-th coefficient of regression. It holds that VIF ($\beta\hat{}_j$) □ 1. If VIF ($\beta\hat{}_j$) exceeds the limit of 10, it is an indication of severe multicollinearity in the model. The variance of the j-th regression coefficient can be written as in Equation 1.

$$\text{Var}(\hat{\beta}_j) = \frac{\sigma_e^2}{n} = \text{Var}(\hat{\beta}_j) = \frac{\hat{\sigma}_e^2}{\left(1-R_j^2\right)\cdot\sum_{i=1}(x_{j-}\bar{x})2=1(x_{j-}\bar{x})2} = \sum_n \hat{i} \quad (1)$$

The last test is to verify that there is no autocorrelation between predicted variables and the error terms from the regression outputs. Using the Durbin-Watson (DW) autocorrelation test, the hypotheses are H_0: There is no first-order autocorrelation, and H_1: there is first-order autocorrelation. The calculation for this test is shown in Equation 2.

$$\sum d = \frac{\sum_{t=2}^{T}(e_t - e_{t-1})^2}{\sum_t^T e_t^2} \quad (2)$$

The DW test is not capable of testing for a higher order of autocorrelation of the error terms. The rule of DW states that 1.5< d <2.5 is the no autocorrelation range.

Model Equation 3 contains non-significant regressors (Agriculture and Manufacturing sectors). The p-value of the explained sum of squares reduction F-test suggests that non-significant coefficients are zeros and can be removed from the model. The backward elimination method can be applied to remove the non-significant explanatory variables and enhance the performance of the resulting model. It begins with the removal of the non-significant coefficients as indicated by the high p-value. After applying the backward elimination method, we arrived at model Equation 4.

In model Equation 4, the constant is non-significant, and it is affected by pure heteroskedasticity. Pure heteroskedasticity is due to a correct model specification and does not cause a systematic error (bias).

Because the error term does not have a constant variance, it is necessary to find out which regressor is causing the heteroskedasticity. Heteroskedasticity violates classical assumption number five, which makes model 4 less than ideal. After applying the principles and steps for handling pure heteroskedasticity, we obtained model Equation 5 by removing the manufacturing sector from the equation.

$$Total\ FDI\ projects_t = \beta_0 + \beta_1 Agriculture_t + \beta_2 \text{Building and Construction}_t + \beta_3 \text{Manufacturing}_t + \beta_4 \text{Service}_t + \varepsilon_t \quad (3)$$

$$Total\ FDI\ projects_t = \beta_0 + \beta_1 \text{Building and Construction}_t + \beta_2 \text{Manufacturing}_t + \beta_3 \text{Service}_t + \varepsilon_t \quad (4)$$

$$Total\ FDI\ projects_t = \beta_0 + \beta_1 \text{Building and Construction}_t + \beta_2 \text{Service}_t + \varepsilon_t \quad (5)$$

To assess FDI registered projects' impact on the total number of jobs, we considered the number of jobs created in the selected sectors. The total number of jobs for Ghanaians and expatriates in each of the sectors is modeled on the overall employment from FDI. Model Equations 6 and 7 are generated by the logarithm transformation of each of the variables. The estimate of the expected number of jobs to be created from the registered investment projects is thus:

$$ln\ \text{Total FDI employment}_t = \beta_0 + \beta_1\ ln\ \text{Agriculture}_t + \beta_2\ ln\ \text{Building and Construction}_t + \beta_3 ln\ \text{Manufacturing}_t + \beta_4 ln\ \text{Service}_t + \varepsilon_t \quad (6)$$

$$ln\ \text{Total FDI employment}_t = \beta_0 + \beta_1\ ln\ \text{Agriculture}_t + \beta_2\ ln\ \text{Building and Construction}_t + \beta_3 ln\ \text{Service}_t + \varepsilon_t \quad (7)$$

Under the model estimation of the impact of FDI registered projects, the total of FDI projects is the dependent variable, whereas the agriculture, building & construction, manufacturing, and service sectors are the explanatory variables. The total number of FDI registered projects is measured in hundreds, whereas the total FDI employment is measured in thousands. $\beta_1, \beta_2, \beta_3, and\ \beta_4$ are the regression coefficients, while ε_t indicates the error term, and β_0 represents the constant term of the obtained model. All the analyses were carried out using Gretl software. The significance level of p-values is set at 5%. The p-values can be used as an index of the "strength of the evidence" against the null hypothesis (H_0) (Fisher, 1925).

Having chosen the statistic from the data for this study and the probability associated with this statistic, if the probability is smaller than 5%, we reject H_0. According to the literature, the proposed level of p=0.05 means that a "1 in 20 chance is being exceeded by chance", and this is a suitable limit for statistical significance (Fisher, 1935). Fisher explained that it is usual and convenient for experimenters to take 5% as a standard level of significance and to ignore all outcomes which fail to reach this standard (Fisher, 1925). This leads to their elimination from further discussion.

Table 1. Summary statistics.

Variable	Mean	Median	S.D.	Min	Max
Total FDI Projects	252.7	202.0	109	138.0	514.0
Service	76.8	63.5	42.7	37.0	195.0
Manufacturing	53.2	51.0	13.0	39.0	86.0
Building and Construction	22.8	19.0	14.8	8.00	61.0
Agriculture	10.0	10.5	4.63	1.00	16.0

4. Results and Discussion

The summary statistics of the variables in Table 1 show that the service sector had the highest median with 63.5%, followed by the manufacturing sector with 51%, and building & construction with 19%, whereas the agriculture sector had the lowest median with 10.5%. Similarly, the time series plots in Figure 1 show an upward trend of FDI-distributed projects in the service, manufacturing, and building & construction sectors, while the agriculture sector had a downward trend. In addition, Table 2 below shows the results of the multicollinearity test of the regression outputs. The table shows no multicollinearity among the variables.

Model 1 in Table 3 shows a non-significant impact of FDI registered projects on the agriculture and manufacturing sectors. The constant of model 1 is also non-significant. However, the impact on the service and building & construction sectors is significant. The regression output for model 2 is indicated in Table 4; the constant is zero because it is not statistically significant. However, the coefficient of the manufacturing sector became statistically significant after applying backward elimination to the agriculture sector.

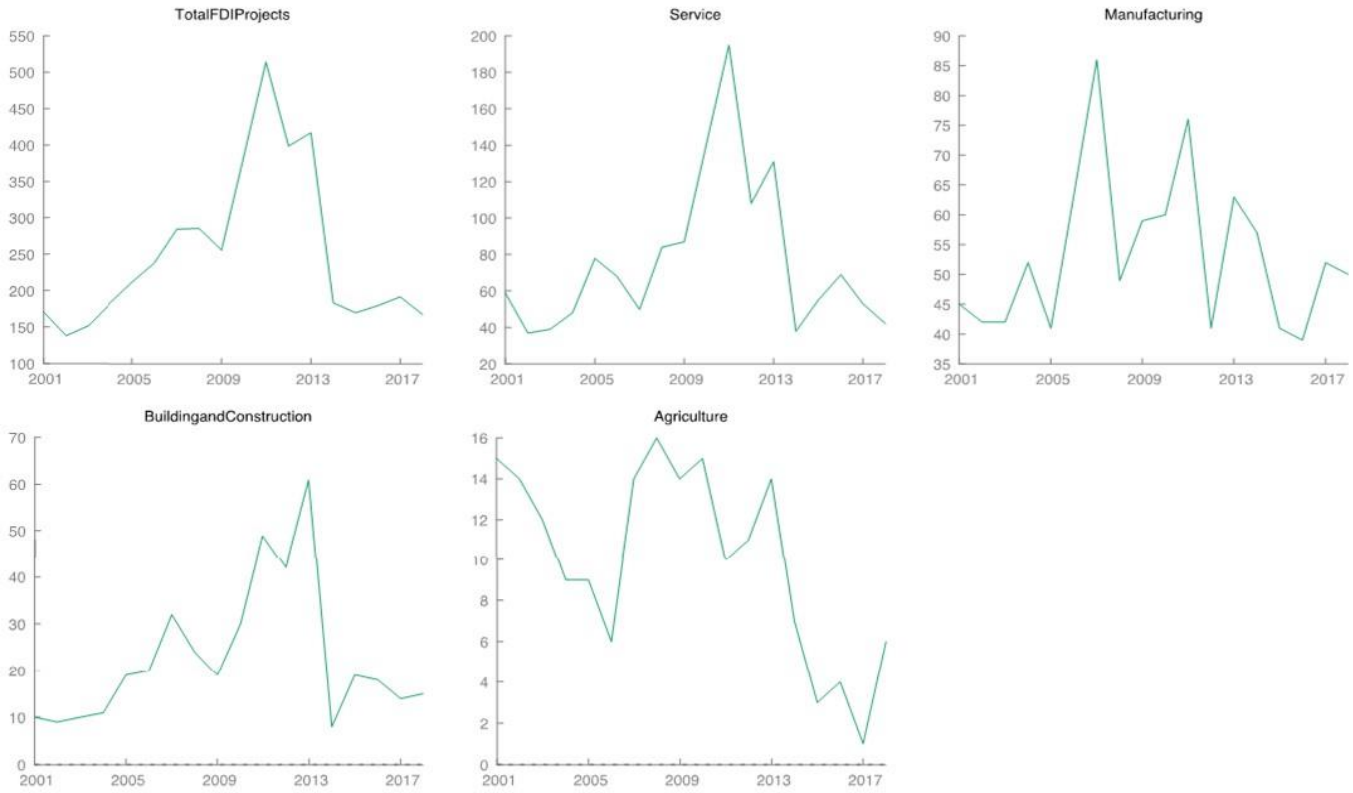

Figure 1. Time series trends per sector.

Table 2. Multicollinearity test.

Variables	Variance inflation factor
Service	2.981
Manufacturing	1.325
Building and Construction	3.259
Agriculture	1.112

Table 3. Model1 estimation.

Variables	Coefficient	Std. Error	t-ratio	p-value
Constant	7.056	27.32	0.2584	0.8002
Service	1.414	0.245	5.780	6.38e-05***
Manufacturing	1.113	0.535	2.083	0.0576*
Building and Construction	2.791	0.736	3.795	0.0022***
Agriculture	1.320	1.378	0.958	0.3553
Model 1 variants.				
Regression Statistics	**Figure**	**Regression Statistics**	**Figure**	
Mean dependent var	251.67	S.D. dependent var	108.62	
Sum squared residuals	8073.49	S.E. of regression	24.920	

R-squared	0.959	Adjusted Rsquared	0.947
F (4, 13)	77.55	P-value(F)	6.15e-09
Log-likelihood	−80.49	Akaike criterion	170.98
Schwarz criterion	175.44	Hannan-Quinn	171.60
rho	−0.480	Durbin-Watson	2.919

Note: Significance codes: '***' 0.001, '*' 0.05.

Table 4. Model 2 estimation.

Variables	**Coefficient**	**Std. Error**	**t-ratio**	**p-value**
Constant	14.50	26.12	0.55	0.5875
Service	1.44	0.243	5.92	3.73e-05***
Manufacturing	1.17	0.529	2.21	0.0439**
Building and Construction	2.82	0.732	3.86	0.0017***

Model 2 variants.

Regression Statistics	**Figure**	**Regression Statistic s**	**Figure**
Mean dependent variance	251.67	S.D. dependent var	108.7
Sum squared residuals	8644.09	S.E. of regression	24.84
R-squared	0.956	Adjusted R-squared	0.947
F (3, 14)	103.69	P-value(F)	8.47e-10
Log-likelihood	−81.11	Akaike criterion	170.21
Schwarz criterion	173.78	Hannan-Quinn	170.70
rho	−0.402	Durbin-Watson	2.78

Note: Significance codes: '***' 0.001, '**' 0.01.

The coefficients of model 1 show a positive response from the various sectors in response to FDI and local registered investment projects. The DW value shows a higher negative serial correlation. The percentage of variation explained in the dependent variable was about 96%. Model 2 in Table 4 shows autocorrelation due to the DW test value.

Model 3 in Table 5 indicates that the total of FDI registered projects has a positive impact on both the service and building & construction sectors. However, the significance level of the service sector is higher than that of the building & construction sector. Also, the constant has become statistically significant (nonzero).

Model 3 shows no serial correlation based on the figure for DW in the output. However, the information criterion has increased compared to models 1 and 2. Figure 2 indicates a normal distribution of the error term from the regression output.

Table 5. Model 3 estimation.

Variables	**Coefficient**	**Std. Error**	**t-ratio**	**p-value**
Constant	65.46	13.86	4.722	0.0003***
Service	1.440	0.272	5.286	9.14e-05***
Building and Construction	3.319	0.783	4.236	0.0007***

Model 3 variants.			
Regression Statistics	**Figure**	**Regression Statistics**	**Figure**
Mean dependent variance	251.67	S.D. dependent var	108.66
Sum squared residual	11671.78	S.E. of regression	27.89
R-squared	0.94	Adjusted R-squared	0.934
F (2, 15)	121.48	P-value(F)	5.42e-10
Log-likelihood	−83.81	Akaike criterion	173.62
Schwarz criterion	176.29	Hannan-Quinn	173.99
rho	−0.159	Durbin-Watson	2.298

Note: Significance codes: '***' 0.001.

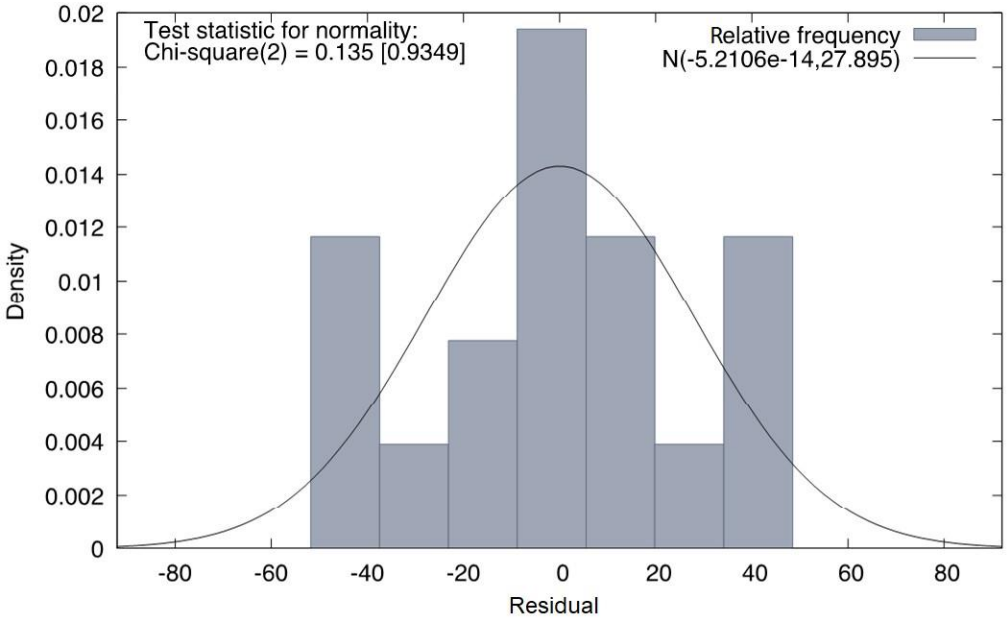

Figure 2. Normality test result from model 3 estimation output.

To assess the impact of FDI and local registered investment projects on employment creation in the sectors, we needed to use the total estimated number of jobs created. The values for the time series were transformed into logs for a correct model specification. Figure 3 shows the log transformation of the time series plots for the agriculture, building & construction, manufacturing, and service sectors.

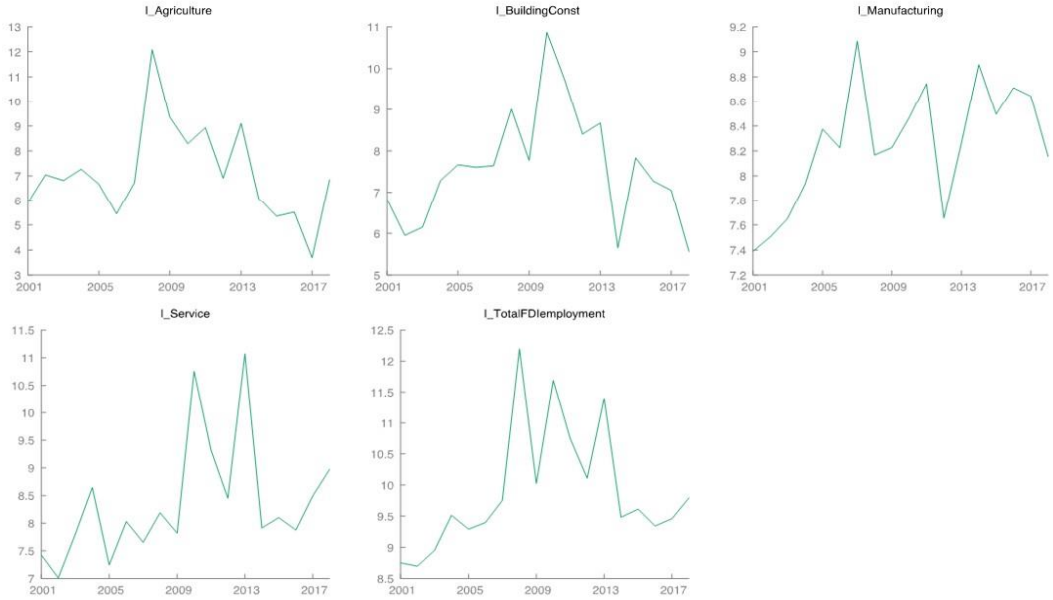

Figure 3. Time series plot (FDI and domestic employment) in the sectors.

The regression output from model 4 in Table 6 on the employment impact of FDI on the sectors shows that the coefficients of the manufacturing and building & construction sectors are non-significant. This means that the nonsignificant p-values of the regressors need to be removed from the model to obtain the final regression model (model 5).

Table 6. Model 4 estimation.

Variables	**Coefficient**	**Std. Error**	**t-ratio**	**p-value**
Constant	0.787	1.556	0.504	0.6221
l_Agriculture	0.278	0.053	5.230	0.0002***
l_Service	0.319	0.098	3.263	0.0062***
l_BuildingConst	0.181	0.086	2.096	0.0562*
l_Manufacturing	0.373	0.186	2.006	0.0661*

Model 4 variants.

Regression Statistics	**Figure**	**Regression ics Statist**	**Figure**
Mean dependent variance	9.901	S.D. dependent var	0.992
Sum squared residual	1.570	S.E. of regression	0.347
R-squared	0.906	Adjusted R-squared	0.877
F (4, 13)	31.39	P-value(F)	1.44e-06
Log-likelihood	−3.589	Akaike criterion	17.179
Schwarz criterion	21.63	Hannan-Quinn	17.793
rho	−0.258	Durbin-Watson	2.483

Note: Significance codes: '***' 0.001 '*' 0.05.

The results of model 5 in Table 7 indicate a significant impact of FDI on employment in the agriculture, building & construction, and service sectors. The constant is statistically significant and nonzero. However, the agriculture and service sectors respond more significantly to FDI than the building & construction sector. Comparing the information criteria in model 4 to model 5, it is clear that model 4 has the lowest information criteria, but a nonsignificant coefficient does not provide any economic meaning to those variables. Model 5 is burdened with firstorder autocorrelation. Regarding model 5, the constant, agriculture, and service sectors were below a 1% significance level, while the building & construction sector was around 2%.

Table 7. Model 5 estimation.

Variables	Coeffici ent	Std. Error	t-ratio	p-value
Constant	3.610	0.731	4.938	0.0002***
l_Agriculture	0.251	0.057	4.425	0.0006***
l_Service	0.335	0.107	3.110	0.0077***
l_BuildingConst	0.223	0.092	2.418	0.0298**

Model 5 variants.

Regression Statistics	Figure	Regression Statistics	Figure
Mean dependent variance	9.90	S.D. dependent var	0.992
Sum squared residual	2.06	S.E. of regression	0.383
R-squared	0.87	Adjusted R-squared	0.851
F (3, 14)	33.3	P-value(F)	1.25e-06
Log-likelihood	−6.1	Akaike criterion	20.14
Schwarz criterion	23.6	Hannan-Quinn	20.53
rho	0.28	Durbin-Watson	1.367

Note: Significance codes: '***' 0.001 '**' 0.01.

The results indicated that from 2001 to 2018, the distribution of FDI registered projects among the various sectors was not significant in the agriculture and manufacturing sectors. This implies that greater effort is needed to enhance the performance of both the agriculture and manufacturing sectors in terms of attracting FDI and domestic investment. Regarding employment creation from FDI through the registered projects, only the manufacturing sector seemed not to have a significant response in terms of the number of jobs generated through investment during the selected period. A critical point of the analysis is that more FDI projects are allocated to the service sector than to other sectors in the Ghanaian economy. The recent efforts in the manufacturing sector on the part of the current administration seek to address the low performance in that sector. The excellent performance of the building & construction sector in terms of FDI employment is due to the huge investment in housing and construction activities in the country in recent years. The results of all the models show that the manufacturing sector's responses to FDI and local investment were at a 5% significance level, which indicates a less significant impact. However, based on the results, we cannot rule out that FDI and domestic investment have no effect on the manufacturing sector. We excluded the significance level of investment in the manufacturing sector as a result of our restriction to a 5% significance level. The R-squared from all the models indicates an excellent fit.

5. Conclusion

This study has confirmed the significance of FDI and domestic investment registered projects distributed among the agriculture, building & construction, manufacturing, and service sectors. The KPSS test indicated a unit root presence in the selected time series variables. OLS regression showed that registered FDI projects have no significant effect on the agriculture and manufacturing sectors. However, the building & construction and service sectors enjoy a significant impact from the registered investment projects. On the other hand, when testing for the influence of FDI on the employment created in the selected sectors, no significant effect was found on job creation

in the manufacturing sector. Conversely, FDI did have a positive impact on employment generated in the agriculture, building & construction, and service sectors. This study has significant implications for policymakers and the government of Ghana since the outcome showed that some sectors are not responding optimally to FDI and domestic registered investment projects. Manufacturing is an essential tool for transforming an economy, and there is a need for the government to improve the investment situation in the manufacturing sector. However, there are fewer registered projects in the agriculture sector, although it serves as a source of employment for most people in the country. It would be helpful for the government to boost these non-performing sectors with incentives to attract more investors. Also, there is a need to modernize the agriculture sector to enhance its efficiency. Based on the results, the service sector performs better than the other sectors. However, this outcome may not be sufficient to explain the factors behind the non-performance of the manufacturing sector in terms of employment creation from investment. As the results confirm that the agriculture and manufacturing sectors are not responding optimally to FDI and domestic investments, it would be good to allocate resources and incentives to boost their performance. The findings apply to the situation in Ghana and would differ for other countries.

References

Alhassan, M., Gakpetor, E. D., Kyei, S. N. K., & Akomeah, E. (2018). Foreign Direct Investment (FDI), economic growth and bank performance in Ghana. *International Journal of Finance and Accounting, 7*(4), 97-107.

Amin, S., & Glenn, P. J. (2021). Impact of foreign direct investment and international tourism on long-run economic growth of Estonia. *Journal of Economic Studies, 49*(2), 364-378.Available at: https://doi.org/10.1108/jes-11-2020-0543.

Areej, S., Aftab, & Shahid, A. (2017). Impact of foreign direct investment on sectoral growth of Indian economy. *International Journal of Economics and Financial Issues, 7*(3), 477-488.

Dadirai, M., Adane, H. T., Arega, D. A., Julius, M., Shiferaw, F., Tahirou, A., & Victor, M. (2021). The effects of foreign direct investment on youth unemployment in the Southern African Development Community. *Development Southern Africa, 38*(6), 863-878.Available at: https://doi.org/10.1080/0376835x.2020.1796598.

Dimitar, N. (2017). The impact of Foreign Direct Investments on employment: The case of the Macedonian manufacturing sector. *Eastern Journal of European Studies, 8*(2), 147-165.

Donny, S. (2018). The impact of foreign direct investment on economic growth(a Causal Study in the United States). *BISE: Journal of Business Education and Economics, 4*(1), 50-63.

Ebenezer, A. B., Agoba, A. M., & Abebreseh, R. (2017). Foreign direct investment in Ghana: The role of infrastructural development and natural resources. *African Development Review, 29*(4), 575-588.Available at: https://doi.org/10.1111/1467-8268.12297.

Eduardo, S., Ozuna, T., & Zamora, H. (2020). The effect of FDI on low and high-skilled employment and wages in Mexico: A study for the manufacture and service sectors. *Journal for Labour Market Research, 54*(1), 1-15.

Evans, K., Samuel, M., & Prince, M. S. (2021). Effect of foreign direct investment on economic growth in Ghana: The role of institutions. *Economics of Dvelopment, 20*(1), 23-34.Available at: https://doi.org/10.21511/ed.20(1).2021.03.

Evans, Y., & Rose, G. K. (2021). An overview of employment generation in the sectors of GHANA'S economy: Foreign direct investment perspective. *Global Journal of Business, Economics and Management: Current Issues, 11*(1), 48-57.

Fisher, R. (1925). *Statistical methods for research workers*. Edinburgh, Scotland: Oliver & Boyd.

Fisher, R. (1935). *The design of experiments*. London: Collier Macmillan.

GIPC. (2021). *Quarterly investment report*. Accra: Ghana Investment Promotion Centre.

Granger, C. W. (1981). Some properties of time series data and their use in econometric model specification. *Journal of Econometrics, 16*(1), 121130.Available at: https://doi.org/10.1016/0304-4076(81)90079-8.

Haider, A., & Muhammad, T. A. (2016). *The role of the sectoral composition of foreign direct investment on economic growth: A policy proposal for CPEC and regional partners.* Paper presented at the The Pakistan Development Review Papers and Proceedings: The 32nd Conference of the Pakistan Society of Development Economists December 13 - 15 (pp. 89-103). Islamabad: Pakistan Institute of Development Economics.

Huiqun, L., & Lu, J. (2011). The home-employment effect of FDI from developing countries: in the case of China. *Journal of Chinese Economic and Foreign Trade Studies, 4*(3), 173-182.Available at: https://doi.org/10.1108/17544401111178212.

Kusi, G. (2012). *Regulatory framework for investing in Ghana*. Accra: Ghana Investment Promotion Centre.

Macarena, S. (2016). Foreign direct investment and income inequality in Latin America: A sectoral analysis. *Cepal Review, 118*, 45-61.Available at: https://doi.org/10.18356/13c68e36-en.

Mario, P., Kusanović, T., & Jakovac, P. (2021). The determinants of FDI sectoral structure in the Central and East European EU Countries. *Economies, 9*(2), 66.Available at: https://doi.org/10.3390/economies9020066.

Miteski, M., & Stefanova, D. J. (2017). The impact of sectorial FDI on economic growth in Central, Eastern and Southeastern Europe. Working Paper, No. 1/2017. National Bank of the Republic of Macedonia.

Okwu, A. T., Oseni, I. O., & Obiakor, R. T. (2020). Does foreign direct investment enhance economic growth? Evidence from 30 leading global economies. *Global Journal of Emerging Market Economies, 12*(2), 217-230.Available at: https://doi.org/10.1177/0974910120919042.

Plaxedes, G., & Seetanah, B. (2020). The effect of mining foreign direct investment inflow on the economic growth of Zimbabwe. *Journal of Economic Structures, 9*(1), 1-17.Available at: https://doi.org/10.1186/s40008-020-00230-4.

Ram, K. P., & Seema, S. (2018). A sectoral analysis of foreign direct investment on the economic growth of Nepal. *Journal of Business and Social Sciences Research, 3*(1), 1-14.Available at: https://doi.org/10.3126/jbssr.v3i1.24834.

Riccardo, C., Ganau, Roberto, & Storper, M. (2022). Does foreign investment hurt job creation at home? The geography of outward FDI and employment in the USA. *Journal of Economic Geography, 22*(1), 53-79.Available at: https://doi.org/10.1093/jeg/lbab016.

Rodan, G. (1997). *Singapore: Economic diversification and social divisions. In: Rodan, G., Hewison, K. and Robison, R, (eds.) The political economy of South-East Asia: An introduction*. Melbourne: Oxford University Press.

Ronismita, M., & Swapnamoyee, P. (2020). Role of FDI on employment scenario in India. *International Journal of Recent Technological Engineering, 8*(6), 1481-1489.Available at: https://doi.org/10.35940/ijrte.f7777.038620.

Saidatulakmal, M., & Abdillahi, N. M. (2021). Impact of foreign direct investment on economic growth in Ethiopia: Empirical evidence. *Latin American Journal of Trade Policy, 4*(10), 56-77.

Saswata, C., Nitya, N., & Bhawna, T. (2020). Impact of FDI on economic growth in South Asia: Does nature of FDI matters? *Review of Market Integration, 12*(1-2), 51-69.Available at: https://doi.org/10.1177/0974929220969679.

Sayre, S. (1994). Structural adjustment in Africa: A failing Grade So Far. *The Journal of Modern African Studies, 32*(4), 679 -692.Available at: https://doi.org/10.1017/s0022278x00015901.

Umit, A. O., & Alkan, H. I. (2016). The effects of foreign direct investments and economic growth on employment and female employment: A time series analysis with structural breaks for Turkey. *International Journal of Business and Economic Sciences Applied Research, 9*(3), 4349.

Unctad. (1999). *Foreign direct investment and the challenge of development*. Paper presented at the Geneva, Switzerland: United Nations Conference on Trade and Development.

UNCTAD. (2020). *World investment report; International production beyond the pandemic*. Paper presented at the Geneva: United Nations Conference on Trade and Development.

World Bank. (2010). *World investment report 2010: Investing in a Low-Carbon economy*. Washington DC: World Bank.

Yeboah, E., & Anning, L. (2020). Investment in Ghana: An overview of FDI components and the impact on employment creation in the Ghanaian economy. *Economics, Management and Sustainability, 5*(1), 6-16.Available at: https://doi.org/10.14254/jems.2020.5-1.1.