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## **RESEARCH ARTICLE**

### Foreign direct investment and employment: host country experience

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This study investigates the effect of foreign direct investment (FDI) on employment creation and wages in Ghana. A simultaneous panel regression model is used in estimating the effect FDI has on employment and wages. The results of this study indicate that FDI has a statistically significant and positive effect on employment levels in Ghana, but has an insignificant effect on wages. FDI can greatly augment domestic efforts by creating more jobs in the economy. The results clearly demonstrate that FDI flows affect employment quantitatively, but not necessarily qualitatively. The study identifies other factors including, productivity, wages, sub-sector, and location as important in influencing employment levels. Also, productivity, labour union, firm size, sub-sector, and location are noted as significant in affecting wages in Ghana. The main value of this paper is in respect of the fact that it provides insight into the effects of FDI flow on employment from a host country perspective. The study recommends that FDI should be considered as an integral part of the Ghanaian economic policy in order to spur on economic growth.

Keywords: foreign direct investment; employment; wages; Ghana

#### 1. Introduction

Foreign direct investment (FDI) is regarded as capital investment in a foreign firm with the aim of establishing and maintaining permanent equity relations with the foreign firm and at the same time exercising a noticeable influence on the management of that firm (Golejewska 2002). Until recently, inward FDI was perceived to be disadvantageous for host countries, and governments were often sceptical of the potential benefits associated with it. FDI was considered a source of foreign influence, or even control, and of competition with local entrepreneurs (Blomström, Fors, and Lipsey 1997). However, there is now a move towards attracting FDI by host countries, considering the perceived benefits it offers. Many countries have now relaxed their regulations on FDI flows. For example, a recent UN World Investment Report (UN 1999) shows that of 145 regulatory changes made by 60 countries, 94% created more favourable conditions for FDI. Many host countries are now offering generous tax and financial incentives to attract FDI inflows (Barry, Holger, and Strobl 2005). While potential benefits of FDI to host countries have been identified to include capital formation, export promotion, and superior technology, employment creation may be critical to a developing country like Ghana, considering the high unemployment rate it exhibits. Ghana's unemployment rate is estimated to be around

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20% (CIA World Factbook 2007). We are therefore interested in knowing whether FDI inflows can play any significant role in employment generation in Ghana.

Since 1990, Ghana has made substantial policy moves in attracting FDI. The government sees FDI inflows as an integral part of its economic policy and has therefore pledged to create 'a golden age' for business through private sector development, regional integration, and good governance. The ultimate aim is acceleration of Ghana's development and the creation of employment opportunities in an enabling environment. This resolve is being well received by investors, and FDI inflows have picked up to precrisis levels (UNTAD 2003). We believe that this provides enough incentive to empirically examine the benefits FDI brings to the economy in terms of employment generation. Though FDI is expected to have a positive spillover effect on labour productivity, it is however not clear what effect it has on employment levels in host countries. FDI can play an important role in employment generation, but it is also possible for it to be associated with displacement of labour or employment because of technology-based production methods that comes with it. Dunning (1993) suggests that the primary role of FDI in employment is likely to be its industrial composition, its skills mix, its quality, and its productivity, rather than on its amount. The benefit of labour spillovers may occur through movement of labour, whereby workers trained by or working in multinationals may decide to leave and join an existing or open up a new domestic firm, taking with them some or all of the firm-specific knowledge of the multinationals (Görg and Strobl 2002).

In spite of the importance of this issue, little is known empirically about the effect of FDI on the levels of employment in host countries. Previous studies have tended to focus on the effect of FDI on the employment in home countries (Blomström, Fors, and Lipsey 1997), and wages, labour skills, and labour productivity in host countries (Blomström and Wolff 1994; Barry, Holger, and Strobl 2005). This current study contributes to the scanty empirical studies by investigating the relationship between FDI on employment levels in Ghana. We also examine how FDI inflows affect wage levels. In particular, we investigate the role of FDI in job creation and wages. This paper focuses on manufacturing firms over the period 1992–2002. We focus on the manufacturing sector because it is believed that most FDI in the country is concentrated in the manufacturing sector. It is relevant to study how the FDI inflows affect employment creation and wages in the country.

The rest of the paper proceeds as follows. Section 2 provides an overview of FDI and employment in Ghana. Section 3 reviews the existing literature on the effect of FDI on employment. Section 4 includes the methodology used in the study. Section 5 discusses the empirical results of the study. Finally, Section 6 concludes the study.

#### 2. FDI and employment in Ghana

The need to attract FDI into the Ghanaian economy had been one of the major policy objectives of Ghana's Economic Recovery Program (ERP), which started in 1983 under the auspices of the World Bank and the International Monetary Fund (IMF). Since the inception of the programme, the country's policy of encouraging foreign investment is demonstrated in many ways, including sending investment missions abroad and hosting major international events that focus on FDI. The privatization programme embarked upon by the country in the early 1990s also helped in attracting significant inflow of private capital into the economy. However, in 1998, the country slipped into economic crisis and has only recently been actively involved in encouraging the inflow of FDI as an integral part of its economic policy.

The Government of Ghana recognizes that attracting FDI requires an enabling legal environment, and has passed laws that encourage foreign investment and replaced those that previously stifled investment. The principal law that was enacted as a result is the Ghana Investment Promotion Centre (GIPC) Act, 1994 (Act 478). The Act governs investment in all sectors of the economy except minerals and mining, oil and gas, and the free zones. Sector-specific laws further regulate banking, non-banking financial institutions, insurance, fishing, securities, and real estate. The GIPC is the key government agency handling enterprises involved in the area outside mining and energy. Between September 1994 and June 2002, the GIPC registered 1309 FDI projects (excluding 88 registered liaison offices) mainly in the service (388), manufacturing (368), tourism (153), building and construction (106), agriculture (105), and export trade (91). In terms of ownership of the 1309 projects, 912 are joint foreign-Ghanaian and 397 wholly foreignowned projects. The establishing cost of these projects was estimated at US\$1.72 billion of which US\$1.40 billion are foreign capital (US\$450.22 million equity and US\$977.26 million debt) and US\$296.17 million in local funding made up of US\$207.79 million equity and US\$91.50 million debt. The main sources of the FDI into the Ghanaian economy include Great Britain, India, China, USA, Lebanon, Germany, Korea, Italy, Switzerland, Netherlands, Canada, France, Nigeria, South Africa, and Malaysia.

FDI is reported to have had some positive effects on the total formal employment, the quality and skill levels of Ghanaian workers (Antwi-Asare 2005). The GIPC's reports on the number of jobs created since 1994 indicate that about 74% of enterprises registered since 1994 are in operation and are employing the envisaged number of workers (GIPC 2000). These FDI inflows have created a cumulative total of 76,350 jobs for the period 1995–2002 out of which 71,635 were for Ghanaians. Available data from the Ghana Living Standard Survey (GLSS) from 1991–2000 shows that increase in the proportion of FDI in GDP resulted in a decline in both private and formal employment. It suggests that after 1990, FDI has been associated with a fall in employment. However, reports from GIPC indicate that FDI has been successful given that there has been an increase in the number of jobs created in the economy (Antwi-Asare 2005).

#### 3. Overview of literature

Employment creation has arguably been identified as one of the potential benefits of inward FDI to host countries. FDI may be said to have a direct and indirect, as well as quantitative and qualitative effects on employment. However, the effect could either be positive or negative. In terms of quantitative effects of FDI on the volume of employment, the ILO (1984) report indicates that new jobs could be created directly through the establishment of foreign subsidiaries or even expanding existing ones. Employment could also be generated indirectly through forward and backward linkages or through distributors and suppliers (Golejewska 2002). It has been estimated that the number of jobs generated indirectly in developing countries depends on the industry. For instance, strong effects were found for industries such as automobile and food processing. But weaker effects were found for clothing, electronics, and mechanical engineering.

According to Grieco (1985), in the case where foreign and domestic capital are not perfect substitutes in a developing country, an increase in FDI will result in an increase in the demand for labour. Multinational corporations (MNCs) are said to represent the largest proportion of FDI into most developing countries and depending on how they operate in a given country, the effects on employment may differ. In the first place, they may locate in a country to pursue import-substituting production to take advantage of trade protection. Considering that import-competing goods require more capital and/or skilled labour-intensive methods of production, their activities may not have any significant impact on the labour market. This is because they would employ fewer workers per unit of investment than similar domestic firms (Grieco 1985). Antwi-Asare (2005) explains that the second type of MNC activity may be to produce goods almost solely for export. In this case, competitive pressures would force such MNCs to employ the lowest-cost techniques, which invariably mean labour-intensive production. Thus, the inflow of FDI would lead to increased demand, particularly for unskilled labour.

It is expected that the size of the FDI, especially in the case of FDI in labour-intensive production, would generate high employment. This is because countries in export-oriented activities with abundant low-cost labour are more likely to create high employment opportunities. Medium-term employment effects were experienced through increased demand stimulated by improved efficiency and restructuring of competing firms, and also jobs are preserved because of acquisition and restructuring of firms that would otherwise go bankrupt. However, jobs could be lost through disinvestment, closure of the foreign affiliates, the liberalization of protected activities, changes in parent companies' strategies, or restructuring of acquired firms in host countries (ILO 1984; Golejewska 2002).

With respect to the qualitative effect of FDI, the extant literature stipulates that FDI can impact on wages, job security, labour skills profile, and labour productivity. Foreign firms mostly pay higher wages compared to domestic firms in the same industry, more especially where the industry requires higher levels of skills and technology. The relatively large sizes, competitive positions, and need for a stable workforce of foreign firms suggest that they are better able to offer job security than their domestic counterparts. MNCs also invest directly in training in order to improve the skills sets of their employees. They can also influence certain parties like suppliers, competitors, government, and industry associations to provide local workers with training to meet their quality standards (Golejewska 2002). FDI can also generate technological spillovers for domestic firms. Generally, spillovers occur when the MNCs cannot fully reap all the productivity or efficiency benefits that follow in the host country's domestic firms as a result of the entry or presence of the foreign affiliates (Blomström and Kokko 1997). Technological spillover may take place when domestic firms improve their efficiency through accelerated diffusion of new technology of foreign affiliates operating in the local market. This could occur either through imitation or by recruiting workers trained by the foreign affiliates (Teece 1977; Javorcik 2004). Some studies have shown positive spillovers on labour productivity in Mexico (Blomström and Wolff 1994) and Brazil (Bielschowsky 1994). But a negative relationship was established in the case of Czech Republic (Djankov and Hoekman 2000; Zukowska-Gagelmann 2000). Others support the hypothesis that inward FDI in developed countries is more likely in industries with workforces comprising a large share of skilled workers (Markusen and Venables 1997; Taylor and Driffield 2005).

Mickiewicz, Radosevic, and Varblane (1999) suggest a model in explaining the relationship between FDI and employment during the transition process. It involves a three-stage model. First, FDI is targeted at host countries with the aim of gaining host market share and using low-cost labour. Investors therefore take advantage of being the first in the market, but they also need to consider the economic risk and uncertainty in the transition economies. Capitalization and technology content of FDI tend to be low. The size of employment generated by FDI as a result will be small (Lankes and Venables 1996; Meyer 1998). In the second stage, the conditions of FDI activities improve as transition progresses. FDI tends to be influenced at this stage by cost advantages, skill endowments, and opportunity to serve the local market directly through export. Foreign

investors begin setting up local subsidiaries. Increase in capitalization and technology content of FDI generates increase in the demand for diversified skills, thus, resulting in a positive impact on the size and structure of employment in the host country (Golejewska 2002). Third, local suppliers grow to become regionally or globally rationalized exporters. Inflows of foreign technology, investments in skill formation, and better access to world production and distribution networks improve productivity in industry. Foreign firms generally pay higher wages compared to their domestic counterparts, but the increase in FDI flows is likely to influence domestic firms to begin offering higher wages, therefore reducing the wage gap between foreign firms and domestic firms. This is more likely to bring about reallocation of labour from foreign firms to domestic firms (Hunya 1997; Golejewska 2002).

In summary, FDI can affect employment either qualitatively or quantitatively. The employment creation effect of FDI is likely to depend on a number of factors, including the size of the FDI, the size of existing firms, the composition of their output, their innovative capacity, and the general performance of the economy.

The literature on the effect of FDI on employment creation is, however, very limited. Little work has been done in this area, hence the need for an empirical investigation to further our understanding on the issue. The present study focuses on how FDI inflows to Ghana have impacted on the generation of employment. We expect that FDI will have a positive effect on the volume of employment in Ghana. We also investigate how FDI inflows affect wages.

#### 4. Data and econometric method

This study relies on the Regional Project on Enterprise Development (RPED) data-set. The data-set consists of information on the Ghanaian manufacturing sector covering the period 1992–2002. This data was collected in six rounds over the period 1992–2002 as part of the RPED organized by the World Bank. The composition of the sample is indicated in Table 1. About 37% of the firms have unionized labour. Medium-sized firms are the most represented (67.2%), employing between 30 and 99 staff, followed by small-sized firms (24.3%), with employee strength between 6 and 29. Micro-sized firms with employee size of less than 6 account for 8.5% of the sample. Considering the sectoral classifications, the garment sub-sector shows the highest percentage of the total sample with 22.36%, followed by the furniture sub-sector (21.95%), metal sub-sector (6.91%), and textiles subsector (4.07%). The machine sub-sector is the least represented, accounting for only 3.66% of the firms in our sample. Over half of the firms are located in the capital city (Accra), representing approximately 59%. About 31 and 6% of the firms are located in Kumasi and Takoradi, respectively. Only 4% of the sample firms are located in Cape Coast.

We estimate a simultaneous panel regression model to examine the effects of FDI on employment and wage levels. Panel data involves the pooling of observations on a cross section of units over several time periods. The panel data approach is more useful than either cross-section or time-series data alone because of the provision of several data points, increase in degrees of freedom, and reduction of collinearity among the explanatory variables, thus improving the efficiency of economic estimates. Also, panel data can control for individual heterogeneity due to hidden factors, which, if neglected in time-series or cross-section estimations lead to biased results (Baltagi 2005). We employ a random effects model considering the nature of our data. Baltagi (2005) suggests that the random effects model is appropriate for specification if we are drawing N individuals

Variable	Freq	Per cent	Cum
Union:			
Unionized	1236	37.05	37.05
Non-unionized	2100	62.95	100.00
Total	3336	100.00	
Firm size:			
Micro (1–5)	305	8.50	8.50
Small (6–29)	872	24.30	32.80
Medium (30–99)	2411	67.20	100.00
Total	3588	100.00	
Sub-sector:			
Garment	660	22.36	22.36
Bakery	288	9.76	32.11
Textiles	120	4.07	36.18
Wood	276	9.35	45.53
Furniture	648	21.95	67.48
Metal	648	21.95	89.43
Machines	108	3.66	93.09
Chemical	204	6.91	100.00
Total	2952	100.00	
Location:			
Accra	2052	58.76	58.76
Kumasi	1080	30.93	89.69
Takoradi	216	6.19	95.88
Cape Coast	144	4.12	100.00
Total	3492	100.00	

Table 1. Composition of the sample.

randomly from a large population. Our empirical model can therefore be stated compactly as follows:

$$Emp_{it} = \alpha_i + \beta_1 FDI_{it} + \sum_{j=2}^N \beta_j Controls_{it} + \mu_{it}$$
(1)

$$Wages_{it} = \alpha_i + \beta_1 FDI_{it} + \sum_{j=2}^N \beta_j Controls_{it} + \mu_{it}$$
(2)

where dependent variables, *Emp* measured as the log of employment and *Wages* measured as the log of real wages, are endogenous to the model. *FDI* is an independent variable and it is defined as a dummy variable and takes the value of one for fully or partially (at least 10%) foreign-owned firms and zero otherwise. *Controls* is a vector of our control variables. The control variables in the employment model include: productivity, profitability, wages, sub-sector, and location. The control variables in the wages model are productivity, profitability, union, firm size, sub-sector, and location. Productivity is defined as log(real output divided by number of employees), profitability is defined in terms of return on assets, union is a dummy, 1 if firm has unionized labour, firm size is

defined in terms of log of number of employees. We also interact union with productivity, union with profitability, firm size with productivity, and firm size with profitability.

Subscript *i* is the firm index, subscript *t* is the year index, and *N* is the number of control variables. Finally,  $\mu$  is the random error term.

Most panel applications utilize a one-way error component model for the disturbances, with

$$\mu_{it} = \mu_i + v_{it} \tag{3}$$

where  $\mu_i$  is time-invariant and accounts for any unobservable firm-specific effect that is not included in the regression model. The term  $v_{it}$  represents the remaining disturbance, and varies with the individual firms and time. It can be thought of as the usual disturbance in the regression.

The estimation technique adopted in this study is the instrumental variable (IV) panel regression. This method is preferred to OLS estimation of the individual equations in the system because, as noted by Greene (2003), the OLS estimation introduces 'simultaneous equations bias' and therefore the estimators are inconsistent. This therefore requires IV methods like two-stage least squares (2SLS) to obtain consistent parameter estimates (Baltagi 2005). The structural equations in the model are over-identified so there is no problem of identification in this system. We use average number of years of education of a worker as an instrument for wages. The rationale for using this instrument is that we expect workers who had more years of education to earn higher wages but this will not in any way affect the level of employment of a firm. We also use output of the firm as an instrument for employment. The rational for this is that firms with higher employment levels are likely to produce higher output but this higher output may not necessarily lead to higher wages for workers.

#### 5. Empirical results

#### 5.1. Descriptive statistics

Table 2 presents the descriptive summary statistics. The mean log of employment is shown as 3.2209. Log of wages is given as 15.2256. The mean FDI is also shown as 25.75%. This means on average foreign capital represents approximately 26% of the sample firms have at least 10% foreigner ownership of capital. Log of productivity is given as 14.1195 and the average level of profitability is approximately 6%.

#### 5.2. Regression results

The regression results are reported in Tables 3 and 4. We first present the results of the employment model in Table 3. Consistent with our hypothesis, the results of this study show a significantly positive relationship between FDI and employment. This suggests that firms with relatively greater FDI inflows tend to employ more staff. In other words, firms with a high percentage of foreign ownership appear to exhibit higher levels of employment compared to low or no foreign ownership. This could be explained by the fact that FDI inflows could affect firms' scale of production and as a result increase their demand for more hands, hence the increase in employment.

The results reveal that a 1% increase in productivity leads to a 0.19% reduction in employment. The statistically significant and negative relationship between productivity and employment suggests that highly productive firms tend to require fewer hands. This

Variable	Mean	Std. dev.	Min	Max	Obs.
Employment	3.2209				
Overall		1.4358	0	7.4955	N = 2067
Between		1.4464	0	7.3390	n = 280
Within		0.3878	-0.1617	5.0802	T-bar = 7.3821
Wages	15.2256				
Overall		2.3576	7.5603	21.0341	N = 1856
Between		2.3612	8.3744	20.7982	n = 272
Within		0.6857	11.6447	17.7526	T-bar = 6.8235
FDI	0.2575				
Overall		0.4373	0	1	N = 3588
Between		0.4366	0	1	n = 298
Within		0.0000	0.2575	0.2575	T-bar = 12.0403
Productivity	14.1195				
Overall		1.2866	8.5820	18.0179	N = 2018
Between		1.2127	10.6012	17.6935	n = 278
Within		0.6363	10.8336	16.8471	T-bar = 7.259
Profitability	6.0232				
Overall		83.4119	-14.4220	2944.182	N = 1937
Between		79.1918	-1.7103	1291.383	n = 269
Within		58.8222	-1271.69	1658.822	T-bar = 7.2007

Table 2. Descriptive statistics.

Table 3. Regression results: employment.

Variable	β	Std. error	t	Sig.
Constant	0.7943	0.2308	3.44	0.001
Foreign direct investment	0.4728	0.0960	4.92	0.000
Productivity	-0.1876	0.0152	-12.31	0.000
Profitability	-0.0002	0.0001	-1.31	0.190
Wages	0.3166	0.0117	27.03	0.000
Sub-sector:				
Bakery	-0.0789	0.1397	-0.56	0.572
Textiles	0.6859	0.2114	3.25	0.001
Wood	0.9204	0.1488	6.18	0.000
Furniture	0.3394	0.1142	2.97	0.003
Metal	0.2158	0.1162	1.86	0.063
Machines	0.0554	0.2052	0.27	0.787
Chemical	0.7036	0.1652	4.26	0.000
Location:				
Kumasi	-0.2020	0.0859	-2.35	0.019
Takoradi	0.2189	0.1565	1.40	0.162
Cape Coast	-0.0718	0.2121	-0.34	0.735
<i>R</i> -squared:				
Within	0.2101			
Between	0.7702			
Overall	0.7514			
F-statistic	98.23			
Prob > F	0.0000			

Variable	β	Std. error	t	Sig.
Constant	2.7565	0.8951	3.08	0.002
Foreign direct investment	0.1254	0.1302	0.97	0.332
Productivity	0.6011	0.0635	9.47	0.000
Profitability	0.0043	0.0018	2.45	0.015
Union	2.8120	1.0582	2.66	0.008
Firm size	1.2593	0.3173	3.97	0.000
Union * productivity	-0.1542	0.0740	-2.08	0.037
Union * profitability	0.0136	0.0062	2.20	0.028
Firm size * productivity	-0.0152	0.0225	-0.68	0.500
Firm size * profitability	0.0037	0.0016	-2.33	0.020
Sub-sector:				
Bakery	-0.0405	0.1695	-0.24	0.811
Textiles	0.4835	0.2552	1.89	0.058
Wood	0.6620	0.1989	3.33	0.001
Furniture	0.3951	0.1366	2.89	0.004
Metal	0.4835	0.1405	3.44	0.001
Machines	1.0689	0.2411	4.43	0.000
Chemical	0.4552	0.2317	1.96	0.050
Location:				
Kumasi	-0.3549	0.1033	-3.44	0.001
Takoradi	-0.4650	0.1840	-2.53	0.012
Cape Coast	-0.4683	0.2435	-1.92	0.055
<i>R</i> -squared:				
Within	0.2746			
Between	0.9286			
Overall	0.8730			
F-statistic	174.07			
$\operatorname{Prob} > F$	0.0000			

Table 4. Regression results: wages.

implies that highly productive firms would choose to engage in technology-intensive methods of production rather than employ labour-intensive methods. Therefore, we would expect such firms to employ few staff, especially factory hands. Also, this may result from market limitations that place restrictions on output such that increase in productivity will mean a reduction in the workforce in order to remain within output limits so as to avoid stock pile up.

One would have expected a significantly positive relationship between profitability and employment, since profitable firms are more likely to attract highly skilled labour to augment their profitability level. However, in this Ghanaian study, the results did not show any significant relationship between profitability and employment level.

Again, it is expected that wages would negatively impact on employment suggesting that firms that pay higher wages employ less in order to maintain good service conditions for their few staff. The result of this study however indicates that a 1% increase in wages results in a 0.32% increase in employment. The statistically significant positive relationship suggests that firms that pay high wages are more likely to increase their employment. Payment of higher wages is often used in attracting especially more highly skilled personnel.

It is argued that in developing countries the number of jobs generated indirectly depends on the industry. In terms of the sub-sector effect, the results of this study indicate

that firms in the textiles, wood, furniture, metal, and chemical sub-sectors are significantly more likely to exhibit high levels of employment compared to the reference sub-sector (i.e. garment sub-sector). No significant effects are found for the bakery and machine subsectors. Since the wood and furniture sub-sectors typically require labour-intensive methods of production, it is likely to expect high employment generation from these subsectors. The extant literature also suggests that countries in export-oriented activities with abundant low-cost labour are more likely to create high employment opportunities. In Ghana, a number of the non-traditional exporters are located in the textiles, wood, and furniture sub-sectors, therefore we expect high employment from these sub-sectors.

With respect to location, the results show that firms located in Kumasi are significantly less likely to employ a greater labour force compared to the reference location, Accra. This is interesting in the sense that, firms located in Accra may be relatively larger firms and therefore we should expect high employment generation from these firms. Takoradi and Cape Coast are not significant in our model.

It is generally argued that increased FDI inflows bring about higher wages. This is because of FDI's efforts to penetrate the local market, attract and retain highly skilled labour. For instance, Hunya (1997) and Golejewska (2002) argue that foreign-owned firms generally pay higher wages compared with their domestic counterparts. Also, in order to stay competitive and retain a stable workforce, foreign firms tend to offer better job security than their domestic counterparts. The regression results of the wages model as indicated in Table 4 denote a positive relationship between FDI and wages. However, this is insignificant. This may suggest that foreign firms normally adjust their wages to the domestic labour environment in Ghana. This reveals the lack of competition for labour in the country.

We find that a 1% increase in productivity brings about a 0.60% rise in wages. The significantly positive relationship between productivity and wages is indicative of the fact that higher levels of productivity would result in firms paying higher wages. This implies that an increase in productivity levels could lead to increase in sales revenue and this could also result in the firm being able to accommodate higher wage bills. Higher wages are seen as an incentive for higher labour productivity and therefore firms would consider paying higher wages as long as the increases in wages commensurate with higher productivity.

A priori, profitable firms should be in the position to pay higher wages. As expected, the result indicates a significantly positive relationship between profitability and wages. That is a 1% increase/decrease in profitability leads to a 0.0043% increase/decrease in wages. Clearly, firms with high profit levels are mostly capable of paying higher wages and maintaining better service conditions for their staff.

The results also suggest a significantly positive relationship between the union dummy and wages. This implies that firms with unionized labour are significantly more likely to pay higher wages than firms with non-unionized labour. Obviously, labour unions are able to negotiate higher wages and better service conditions for their members. Such unions may often resort to agitations and unrest in pressurizing management to maintain better working conditions for their members. Therefore, the presence of labour unions in firms should lead to higher wage levels in such firms. On the other hand, firms with nonunionized workers may be unable to present a unified front in wage negotiations, hence are more likely to receive lower wages and poorer service conditions.

In relating the firm size of the company to wages, the results reveal a statistically significant effect of firm size on wages. That is, 1% increase in firm size increases wages by 1.26%. This is suggestive of the fact that relatively larger firms tend to pay higher wages compared to smaller ones. The size of the firm could signal high levels of productivity and

thus increase the firm's capacity to accommodate higher wages. It stands to reason that, relatively larger firms, in attempting to dominate and maintain their leading position in the market, generally offer better conditions of service for their workers compared to their smaller counterparts. This finding seems to confirm the view of Golejewska (2002), that size of the firm is positively related to paying higher wages.

The interaction of union and productivity has a significantly negative relationship with wages, while the interaction of union with profitability shows a significantly positive relationship with wages. These results imply that highly productive firms with unionized labour pay lower wages, whereas highly profitable firms with unionized labour pay higher wages. We argue that wage negotiation by unionized labour is based on profitability not on productivity. In other words, highly productive firms with unionized labour are not able to command higher wages but highly profitable firms with unionized labour rather tend to demand higher wage levels.

We also find that the interaction of firm size and productivity has a statistically significant negative effect on wages, suggesting that relatively larger firms with higher profitability appear to pay lower wages. This may be explained by the fact that firms with higher profitability and larger labour force may cut down on wages in order to accommodate the high wage bill and be able to retain some profits for financing future growth. The interaction of firm size and productivity did not show any significant relationship with wages.

In terms of the sub-sector effect, the results do not show any significance with respect to the bakery sub-sector. All the other sub-sectors are found to be significantly more likely to pay higher wages compared to the reference sub-sector, the garment sub-sector. This means that, firms in the textiles, wood, furniture, metal, machines, and chemical subsectors appear to be more capable of paying higher wages and providing better working conditions to their staff than those in the garment sub-sector.

Regarding the location effect, Kumasi, Takoradi, and Cape Coast all denote statistically significant but negative relationships in comparison with the reference location, Accra. The results generally suggest that firms located in the capital city, Accra, tend to pay higher wages compared to firms located outside the capital. One major reason could be due to the fact that Accra being a premium area is associated with a very high cost of living compared to other cities and towns in the country. Workers in Accra may agitate for higher wages and service conditions in other to keep up the high cost of living associated with living in a major city like Accra.

#### 6. Conclusion

FDI has been perceived to play an important and determining role in the economic progress of most countries. While financing flows often proved volatile and prone to recurrent misallocation, FDIs are sought by many countries because of the large, positive externalities they are expected to carry with them. Potential benefits associated with FDI to host countries have been identified to include capital formation, export promotion, and superior technology. FDI can also play an important role in employment generation, but it is also possible for it to be associated with displacement of labour or employment because of technology-based production methods that come with it. The issue of employment creation is very crucial to a developing country like Ghana, given its current high unemployment rate.

This paper sought to examine the effect of FDI on employment and wages in Ghana. The results of this study generally demonstrate that increased FDI flows would lead to high levels of employment. This is explained by the fact that FDI brings in large-scale production and therefore the need to increase the labour force to maintain the high production. The results support previous empirical work in the area. The findings clearly demonstrate that the textiles, wood, furniture, metal, and chemical sub-sectors are more likely to benefit from FDI flows by way of generating more employment. Firms located in Accra were found to be more likely to provide high employment compared to those located in Kumasi. We found that relatively larger firms, highly profitable firms, and highly productive firms can easily support high wage payments. The results also suggest that firms with unionized labour are more likely to pay higher wages in the sense that labour unions often demand and negotiate better wages and service conditions for their members. With the exception of the bakery sub-sector, all the other sub-sectors were found to be more likely to pay higher wages compared to the garment sub-sector. We did note that firms located outside the capital city, Accra, are more likely to pay lower wages compared to those located in Accra. Clearly, this could be attributed to the high cost of living in a premium area like Accra. It is expected that workers of firms located in Accra would agitate and demand higher wages in order to meet the high cost of living associated with living in such a premium area.

This study has provided some insights into the effect of FDI on employment generation in Ghana. It is obvious that increases in FDI inflows would lead to improved job creation. The implication of this study is in respect of the fact that FDI flows need to be considered as an integral part of the Ghanaian economic policy to propel economic growth.

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