Do Private Transfers and Foreign Direct Investment Crowd Out Official Transfers in Ghana?

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Abstract

The empirical studies so far have portrayed from a different perspective that private transfer payments, and foreign direct investment (FDI), have diverse outcomes on official transfers. African economies specifically Ghana are currently at the receiving end of financial transfer transactions with more FDI and other transfer payments for which proper strategies need to be adopted to improve optimum usage of this situation. To address this issue, the ordinary least squares (OLS) regression technique is utilized to estimate the effect of FDI and private transfers on official transfers, and the study makes use of the Dependency theory in econometric estimation. Granger causality was applied to analyze the causality between the study variables. The study utilized time series data for 2003 quarter 1 to 2022 quarter 4 for Ghana. The empirical results show that foreign direct investment and net private transfer significantly reduce net official transfer in Ghana. Furthermore, pairwise causality confirms the causal link between study variables. Specifically, the study has confirmed the detrimental effect of growth in FDI and private transfer on net official transfer in Ghana. Based on the result, various strategies have been proposed, including financial sector strengthening, sector-specific promotion, and liberalizing the economy. Policies aimed at improving FDI, liberalizing the capital account, improving financial intermediary development, and increasing macroeconomic stability will be beneficial.

Keywords: Private transfer payments, official transfers, foreign direct investment, capital account

1. Introduction

Official flows to developing countries, including Sub-Saharan Africa, have been declining, particularly in the form of aid. The trend of declining aid volume has led to a decrease in real aid per capita to Sub-Saharan Africa. The net transfer of resources from developed to developing
countries has been historically opposite to the development strategy promoted by the United Nations. Africa has been a net creditor to the world in terms of resource transfers, with estimates ranging from US 597 billion to 1.4 trillion over the period 1980-2009 (Kaltenbrunner, 2015). The long-term historical trend has been a net transfer of resources from developed to developing countries, but this trend has become more pronounced with increased private international capital flows. Positive net resource transfers are difficult to sustain due to the instability they create, leading to a reversal of net flows (Tiits et al., 2008). Global trends in transfer payments can be observed in the context of reducing greenhouse gas emissions and international migration. In the context of reducing greenhouse gas emissions, there is a need for large financial flows from richer to poorer countries, which would require transfer payments (Khanal & Todorova, 2021). Social cash transfer programs have been implemented in many countries in sub-Saharan Africa, providing unconditional cash transfers to asset- and labor-poor households. These programs aim to improve the welfare of beneficiaries and stimulate local economies by increasing demand for local goods and services (Gronbach, 2023). In addition, the manual disbursement of cash in these programs is being replaced by digital, financially inclusive payments through formal financial channels, involving private payment providers (Nzabarinda et al., 2021). The tax authorities in Africa are also focusing on transfer pricing issues, aiming to prevent excessive profits from being extrapolated out of their countries (Kendall et al., 2012). Remittances from Africans living outside their home countries have also played a significant role in the region's economies, contributing to economic growth, supporting microenterprises, and enhancing economic activity (Taylor et al., 2014). These global trends highlight the importance of transfer payments in Africa and the need for effective policies and regulations to ensure their positive impact on poverty reduction and economic development. Foreign direct investment (FDI), net private transfers, and net official transfers have been the focus of global perspectives. The effect of net official flows on current accounts has been analyzed using a cross-country panel framework. It has been found that net official flows have a significant impact on current account balances, with larger effects observed when instrumental variables are used (Bayoumi et al., 2015). FDI, as a type of international capital flow, plays an important role in globalization and its evolution has been investigated from a network perspective (Li et al., 2018). The net transfer of resources from developed to developing countries, including private international capital flows, has been a long-term trend, leading to
challenges in achieving sustained positive net flows (Bosworth & Chodorow-Reich, 2007). The outlook for global demand and supply of capital depends on factors such as fiscal consolidation in industrial countries and the reform of social security systems (Kaltenbrunner, 2015). Factors such as the Logistics Performance Index (LPI), Global Competitiveness Index (GCI), and Interest Rates (IR) have also been found to influence FDI in the African region (Rathnayake et al., 2023). Despite the increase in FDI inflows to Africa, the continent still faces challenges in achieving economic integration and development, and there is a need to focus on regional integration and local development projects to boost Africa's economic growth and global integration (Marandu et al., 2018). Net official flows, which include foreign exchange intervention, have a significant impact on current account balances. The estimated effects are larger when instrumental variables are used, indicating a possible bias in regressions without instruments due to the endogenous response of net official flows to private financial flows (Bayoumi et al., 2015). In contrast, private capital flows, such as FDI and net private transfers, have different implications. Private capital flows are associated with real exchange rate appreciation, expansion in domestic money supply, stock market growth, liquidity, and volatility. FDI and net trade have a positive impact on GDP in the long run, with FDI also showing a short-run impact (Kipchirchir & Mose, 2024). Private net lending to developing countries exhibits a procyclical or acyclical pattern, while official debt net flows exhibit a countercyclical pattern.

2. Literature Review

The dependency theory is used in various literary works (Morawska, 2022) and has attracted increasing attention in academia in the last two decades (Tenzin & Lee, 2022). Dependency theory has seen a revival in recent decades, indicating its continued relevance in understanding uneven development in today's global economy (Kvangraven, 2023). It allows for the evaluation of potentialities, tensions, and limitations of development projects, particularly in Latin America (Langa, 2023; Treacy, 2022). The theory helps explain the persistence of underdevelopment in the region, even after neoliberal hegemony and profound changes in the world economy (Ghosh, 2019). It also highlights the importance of recovering aspects of dependency theory to understand the development crisis in the Third World. Dependency theory is still considered relevant in explaining and understanding the development crisis, especially given its Marxist perspective. By
examining historical factors, the theory explains why certain countries have remained underdeveloped, with internal factors playing a secondary role. Overall, dependency theory provides a valuable framework for analyzing and addressing issues of dependency and underdevelopment in various contexts. It provides a framework for analyzing finance capitalism and the structural racial inequalities sustained by legal and financial technologies in the context of increasing financialization (Kiss, 2022).

Net official transfers (NOT) refer to the financial flows between countries that involve the transfer of resources from one country to another. Foreign direct investment (FDI) and net official transfers (NOT) have been analyzed in several studies. Ortega and Sanjuán, (2023) found a positive association between changes in FDI flows and trade-related illicit financial outflows, particularly in low-income countries. Malik, (2018) focused on India and found that FDI and net trade have a positive impact on GDP in the long run, with FDI showing a short-run impact. Bayoumi et al. (2015) and Gronbach (2023) examined the effect of net official flows on current accounts and found that these flows have a large effect, especially when capital flows are restricted. Kar and Mitra (2021) also found a long-run association between FDI and economic growth, with economic growth determining the flow of FDI. Dreyer and Schmid (2015) analyze the enormous net fiscal transfers in the US and suggest their dependence on relative GDP and GDP growth during crisis periods. Shellito (2011) correlates aid flows with reductions in child and infant mortality rates using a new foreign aid measure. Cobham et al. (2016) argue that wealthier European Union member states make financial transfers to poorer member states as a device to smooth the market integration process. Foreign direct investment (FDI) in Ghana has had varying impacts on different sectors of the economy. The agriculture and manufacturing sectors have not shown significant employment generation from registered investment projects (Yeboah et al., 2022). However, FDI has been found to have a positive effect on industrialization in both the long- and short-run, while trade openness hurts industrial progress (Akorsu & Okyere, 2023). FDI inflows have been found to improve population health in Ghana, indicating its potential as a tool for development (Immurana, 2022). On the other hand, heavy external debt has a negative influence on FDI inflows, while economic growth has a positive effect (Prah & Ofori, 2022). Overall, these studies highlight the importance of FDI and net official transfers in economic growth and trade-related illicit financial flows.
Net Private Transfer (NPT) refers to the transfer of wealth between individuals or households, and it has been found to have an impact on social welfare and family welfare in China (Kar, 2013). Inward private transfer payments (IPTP) have been observed to decrease social inequality, particularly in rural areas, but counterfactual analysis suggests that IPTP increases inequality (Fan & Zou, 2019). Inward private transfer payments (IPTP) directly subsidize family income and indirectly promote increases in family income and consumption expenditure (Bayoumi et al., 2015). However, IPTP does not significantly impact the poverty level of Chinese households (Bayoumi et al., 2015). Net official transfers (NOT), which mainly involve foreign exchange intervention, have been found to have a significant effect on current account balances (Novick & Lombardi, 2017). The impact of NOT on current accounts is larger when international capital flows are restricted and smaller when capital is highly mobile. Lagged net official flows also have a positive effect on current accounts, likely through the portfolio balance channel (Novick & Lombardi, 2017; Kendall et al., 2012; Gronbach, 2023). Net private transfers (NPT) in developing economies have been the subject of much research and debate. Studies have found that private transfers play an important role in these economies, with common patterns observed across diverse countries (Alger & Weibull, 2010). Private transfers are influenced by factors such as age, income, and the presence of public pension systems (Vo, 2010). Non-linear relationships between income and private transfers have been found in some countries, indicating the potential for crowding out effects. Higher levels of net transfer payments such as remittances from expatriates or donations from self-funded institutions can provide the recipient country with a stable source of income. This level of increased economic interdependence can account for the reduction in the demand or need for official transfers for socio-economic development. Overall, understanding the dynamics of NPT in developing economies is important for designing effective social policies and promoting economic growth.

3. Materials and Methods

The study applied a longitudinal research design to investigate the influence of foreign direct investment, and private transfer on official transfer in Ghana for the period 2003 quarter 1 to 2022 quarter 4 (80 observations). Ghana has experienced an influx in foreign capital inflow recently. This study offers new insights due to the usage of current data on these indicators. African
economies specifically Ghana are currently having financial inflows to and from for which proper strategies need to be adopted to advance the fortunes of the country. Time series secondary data was obtained from the Ghana Statistical Service. During analysis, the study used an ordinary least squares (OLS) estimation technique combined with Granger causality analysis.

Building on Gisore (2021) empirical analysis, a simple growth regression model was developed as shown below.

\[
\text{NOT} = F(\text{FDI, NPT})
\]

Net official transfer is the dependent variable while foreign direct investment and net private transfer are the explanatory variables. The model was established as presented below. Thus, the econometric baseline model to be estimated is specified in logarithm form:

\[
\ln\text{NOT}_t = \beta_0 + \beta_1 \ln\text{FDI}_{t} + \beta_2 \ln\text{NPT}_t + \epsilon_t
\]

(1)

Where,

\[
\beta - \text{are parameters to be estimated} \\
t - \text{time dimension} \\
\epsilon_t - \text{the error term}
\]

\[
\ln\text{NOT}_t - \text{Official transfer proxied by net official transfer inflows,}
\]

\[
\ln\text{FDI}_t - \text{Foreign direct investment proxied by foreign direct investment net inflows,}
\]

\[
\ln\text{NPT}_t - \text{Private transfer proxied by net private transfer inflows.}
\]

The study constructed time series data based on secondary data obtained from World Bank and Ghana Statistical services along three dimensions: official net transfer, private transfer and foreign direct investment. Table 1 provides a detailed description of the study variables.

**Table 1: Measurements and Variable Definitions**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Unit of Measurement</th>
<th>Data source</th>
<th>Expected sign</th>
</tr>
</thead>
</table>
Time-series analysis approach was employed during data analysis. Macroeconomic statistics data are generally characterized by stochastic trends, which might be removed by differencing. This study adopted the Augmented Dicky Fuller unit root or Phillips-Perron (PP) technique to verify the presence of unit root. Following the Engel-Granger cointegration approach, the study attempted to work out whether a long-run relationship exists between the variables. Granger causality test was conducted to check for association between study variables. The time series data was estimated using the ordinary least squares (OLS) estimation technique. Post-estimation diagnostic tests were conducted during the study. Heteroskedasticity (Breusch-Pagan test) and serial correlation (Breusch-Godfrey test) tests were analyzed for the above models before estimation and corrected accordingly.

4. Results and Discussion

The unit root test was adopted to eliminate any possibility of spurious regressions and erroneous inferences. This involved determining the order of integration or stationarity of the time series through a unit root test. Accordingly, the Phillips-Perron (PP) test was conducted and the results are reported in Table 2.

**Table 2: Stationarity Test**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Level t-Statistics</th>
<th>P-Value</th>
<th>Variable</th>
<th>First difference t-Statistics</th>
<th>P-Value</th>
<th>Integration order</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \ln NPT )</td>
<td>-5.524199</td>
<td>0.0000</td>
<td></td>
<td></td>
<td></td>
<td>I(0)</td>
</tr>
<tr>
<td>( \ln FDI )</td>
<td>-2.472961</td>
<td>0.1259</td>
<td>( \Delta \ln FDI )</td>
<td>-18.10398</td>
<td>0.0001</td>
<td>I(1)</td>
</tr>
<tr>
<td>( \ln NPT )</td>
<td>-3.207710</td>
<td>0.0232</td>
<td></td>
<td></td>
<td></td>
<td>I(0)</td>
</tr>
</tbody>
</table>

Based on the unit root result, official transfer and private transfer variables were stationary, implying the variables were integrated of order zero, I(0) while FDI was integrated of order one,
I(1). However, FDI became stationary after differencing. Since the dependent variable was stationary, a cointegration or long-run relation test was not necessary. Cointegration is only possible when the dependent variable is non-stationary, I(1). This therefore implies there was no co-integration since the variables are of different integration. The study proceeded to regression analysis using the OLS estimation approach. Table 3 reports the results of the regression analysis on the effect of foreign direct investment and net private transfer on net official transfer.

Table 3: OLS Regression result

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Standard error</th>
<th>t- Statistics</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>cons</td>
<td>84.4631***</td>
<td>21.0210</td>
<td>4.018</td>
<td>0.0001</td>
</tr>
<tr>
<td>ln FDI</td>
<td>−1.70460***</td>
<td>0.744494</td>
<td>−2.290</td>
<td>0.0248</td>
</tr>
<tr>
<td>ln NPT</td>
<td>−7.42639***</td>
<td>2.82315</td>
<td>−2.631</td>
<td>0.0103</td>
</tr>
</tbody>
</table>

Goodness of fit: R-Squared 0.475675

Econometrics Problems
- Serial Correlation: Breusch-Godfrey LM, F-statistics 1.607437, P-value 0.1580
- Heteroscedasticity: Breusch-Pagan-Godfrey, F-statistics 8.240250, P-value 0.0162

Note: * p < 0.1, ** p < 0.05, *** p < 0.01 are significance levels, in which the null hypothesis is rejected. Dependent variable: NOT

Based on regression results shown in Table 3, an increase in foreign direct investment inflow will lead to a reduction in net official transfers in Ghana. Specifically, on average, an increase in foreign direct investment by 1% will reduce net official transfers by 1.7%. Thus, enhancing foreign direct investments will be detrimental to net official transfer growth as opposed to the positive findings by Ortega and Sanjuán (2023) empirical research. When a nation attracts a higher level of foreign direct investment, it enhances and indicates economic sustainability. As a result, the country's economy strengthens, thereby leading to a decreased need for official transfers from international organizations, aimed at economic development (Prah & Ofori, 2022). Furthermore, foreign direct investment may influence positively the revenue streams, infrastructure and technology transfer, and managerial skills of the recipient country, reducing its reliance on official transfers for technical assistance, and capacity building. FDI inflows that are channeled towards infrastructure development, such as the building of roads, utilities, and ports can reduce the need for official assistance in infrastructure projects, thereby leading to a further decline in net official transfer.
transfers (Kipchirchir & Mose, 2024). The findings do not agree with research by Ortega and Sanjuán, (2023), and Malik (2018) empirical studies.

An increase in net private transfers will also lead to a decrease in net official transfers for Ghana. The study is contrary to Novick and Lombardi, (2017) finding. In Ghana, an increase in private transfer by 1% will reduce official transfer by over 7.4%, as presented in Table 3. Private capital flows are associated with real exchange rate appreciation, expansion in domestic money supply, stock market growth, liquidity, and volatility. Private transfers are often used for social welfare purposes and poverty alleviation at the individual household levels, as private transfers increase, there might be reduced pressures on the government to make available social assistance initiatives leading to the reduction in net official transfers aimed at poverty alleviation (Kannan & Hari, 2020). Furthermore, higher levels of net private transfers diversify a country's financial sources, leading to a reduction in the dependence on official transfers, and allowing the government to efficiently allocate resources, more effectively, potentially reducing the need for additional official assistance from international organizations. In addition, an increase in net private transfers can signal confidence in the domestic country's economic resilience and stability. This can lead to increased levels of trade, economic growth, and investment, potentially reducing the need for official transfers for economic and stabilization efforts. Economic growth, increased financial interdependence, and improved capacity for self-sufficiency from either FDI or net private transfers are the driving forces behind the reduction of net official transfers as identified in this study.

The coefficient of determination is 0.47, implying about 47% of the variation in the net official transfer is explained by the change in FDI and net private transfer. The study also conducted diagnostic tests and controlled for the effect. Based on the diagnostic result, serial correlation was not a problem in the regression model while heteroscedasticity was detected, the study used robust standard errors to control the heteroscedasticity effect.

A pairwise causality test was applied to confirm the association between FDI, private transfer, and official transfer. Table 4 shows the pairwise causality result.
Table 4. Granger Causality Test

<table>
<thead>
<tr>
<th>Direction</th>
<th>F-Statistic</th>
<th>P-Value</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDI → NOT</td>
<td>9.34014***</td>
<td>0.0031</td>
<td>One way causality</td>
</tr>
<tr>
<td>NOT → FDI</td>
<td>1.81553</td>
<td>0.1818</td>
<td></td>
</tr>
<tr>
<td>NPT → NOT</td>
<td>8.44271***</td>
<td>0.0048</td>
<td>Bi-directional causality</td>
</tr>
<tr>
<td>NOT → NPT</td>
<td>10.0838***</td>
<td>0.0022</td>
<td></td>
</tr>
<tr>
<td>FDI → NPT</td>
<td>1.39508</td>
<td>0.2412</td>
<td>One way causality</td>
</tr>
<tr>
<td>NPT → FDI</td>
<td>3.30843*</td>
<td>0.0729</td>
<td></td>
</tr>
</tbody>
</table>

Note: * p < 0.1, ** p < 0.05, *** p < 0.01 are significance levels, in which the null hypothesis is rejected.

The study result has identified one-way causation running from FDI to net official transfer while a bi-directional relationship was confirmed running from private transfer to official transfer and vice versa. Bi-directional causality indicates that an increase in net private transfer causes the net official transfers to increase and vice versa, feedback effect is present. Unidirectional causality runs from FDI to net official transfer, implying an increase in FDI causes the net official transfer to increase. Unidirectional causality runs from private transfer to FDI, implying an increase in private transfer causes FDI to increase.

5. Conclusion

Economies in Africa particularly at the moment, Ghana is getting a greater amount of FDI and other transfer payments, thus appropriate measures must be taken to make the most of this circumstance. To achieve the goal of the study, the research used a variety of econometric techniques to analyze the impact and causal link between official transfers, transfer payments, and foreign direct investment to achieve its goal. The (OLS) estimation technique combined with the Granger causality analysis and the Phillips Peron unit root test were all used in the research. We utilized secondary data for Ghana from the first quarter of 2003 to the fourth quarter of 2022. The findings point to a negative link between FDI inflow, private transfers, and net official transfers.
Particularly, an increase in FDI inflow will be detrimental to net official transfers. When a nation attracts a higher level of foreign direct investment, it enhances and indicates economic sustainability. As a result, the country’s economy strengthens, thereby leading to a decreased need for official transfers from international organizations, aimed at economic development. In addition, an increase in private transfers led to a decline in official transfers in Ghana. Private transfers are often used for social welfare purposes and poverty alleviation at the individual household levels, as private transfers increase, there might be reduced pressures on the government to make available social assistance initiatives leading to the reduction in net official transfers aimed at poverty alleviation. Finally, a causal link between FDI, private transfer and net official transfer has also been confirmed by the research empirical analysis.

Numerous recommendations have been suggested in response to the findings. We advocate for the policy and regulatory reforms targeted at enhancing the overall investment climate in Ghana, which includes reducing bureaucracy, streamlining regulations, and enhancing transparency. Prioritizing specific sectoral development is amongst the numerous recommendations this research proposes based on our findings. Ghana should focus on the sectors with high growth potentials such as energy, manufacturing, agriculture, and technological developments. Steps must be taken to strengthen the financial sector to increase access to finance for local businesses and foreign investors, which includes measures to develop the capital market and improve the general regulatory structure, liberalize the capital account, foster the development of financial intermediaries, and lessen macroeconomic instability. Furthermore, transfer payments will boost efficiency, especially in the information and communication technology (ICT) industry. To boost commerce and interaction between Ghanaians and the outside world, stable and environmentally friendly conditions must also be established. Additionally, foreign direct investment (FDI) must be economically beneficial, and incentives are required to reroute private finance toward environmentally sustainable enterprises and development. Finally, the effectiveness of FDI and transfer payments on the total amount of transactions between residents and nonresidents may both be improved with the usage of effective governance frameworks. For further studies, robust results could be found by increasing the sample size to cover all countries in sub-Saharan Africa.
References


