The impact of international portfolio investment on economic growth: the case of selected African states

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ABSTRACT

The main aim of this study was to investigate the impact of foreign portfolio investment on economic growth in Africa. The motivation to explore the effects of portfolio investment and growth stemmed from the fact that Africa has recorded large capital inflows since the global financial crisis. These capital flows can have positive or negative consequences. The effects of foreign portfolio investment on the African economy is an area of interest because very little has been done on the subject area. The study used quarterly panel from 1995 to 2014. The study used only five African countries; South Africa, Botswana, Kenya, Mauritius and Nigeria. These countries were chosen because they are in the top five of the African financial markets index. A GMM model was adopted to test the effects of portfolio flows on economic growth in the selected African states. Results showed that there is a weak relationship between portfolio investment and economic growth and that there is a positive relationship between INT and GDP. Results also show a positive relationship between EXCH and GDP in the long run. A depreciation in the rand exchange rate is seen to be depressing economic growth. The study recommended that the Central Banks in African countries develop better strategies to enhance capital flows' benefits. This can be done by establishing and improving financial institutions which are still developing.

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Introduction

Foreign portfolio investment (FPI) is an component of global capital flows consisting of transfer of financial assets: such as bonds, stocks or cash across international boundaries in order to make a profit (Baghebo and Apere, 2014). It happens when foreign investors acquire controlling interest in foreign companies or make financial investments in countries other than their place of residence. It is commonly acknowledged that these sort of investment flows have its own benefits on the host country (OECD, 2002; Duasa and Kassim, 2009, Ndong, 2015 and Tsaurai, 2017). An OECD (2002) report stated that foreign portfolio investment (FPI) improves the liquidity of financial markets and may facilitate the development of market efficiency. It can thus be said that FPI can assist the establishment of an effective capital market and, in turn, bring positive benefits to the host country.

In order to close the savings and foreign exchange deficits brought on by a quick pace of capital accumulation and expansion, the international community has long recognized that emerging countries require a sizable input of external finances (UN, 2000). In most developing economies investment has been insufficient in terms of boosting the economy to allow it meet growth targets. This has been caused, partly, by the mismatch that exists between capital and savings rates. According to Shinozaki (2014) and Worrell, Mamingi and Weekes (2016) lack of adequate finance is a key obstacle to investment in emerging market economies and developing countries and other potentially competitive investments. Out of their own savings, which are unsatisfactorily low, it is difficult to sustain a high economic growth rate. FPIs, therefore, fill the gap that exists between capital requirements and savings (World Bank, 2013 and Adekunle, 2018). Foreign private investment, therefore, supplements insufficient financial resources to support the host country to carry out effectively its development activities.
Although several studies have argued that capital inflows are undeniably an significant factor that promotes economic growth in the host economy, this does not imply that complete agreement has been reached (Mishkin, 2005; Ajayi, 2006; Stiglitz, 2000; Obiechina and Ukeje, 2013 and Alley, 2017). There are some scholars that are skeptical about the positive link between foreign portfolios and economic growth. For instance, Mishkin (2005), stresses that capital inflows can lead to domestic lending booms by lending institutions, along with inmoderate risk taking, which may result in enormous loan losses and collapse of balance sheets of financial institutions.

Other scholars have also stressed the financial fragility and the rapid occurrence of economic crises triggered by international capital flows (Dani Rodrik 1998; Stiglitz 2000; Obiechina and Ukeje, 2013 and Fernandez et al. cited in Alley, 2017). International capital flows have been predominantly volatile (Broner et al., 2012; IMF, 2012; Lee, Park and Byun, 2012) and have been exposed to overshootings, unpredicted reversal and unintended stops (Boudias, 2014; Broner et al., 2012). These characteristics of capital flows can cause domestic instability and weaken economic growth. Furthermore, dependency theorists had earlier argued that reliance on foreign capital can have a negative effect on economic growth (Bornschier and Chase-Dunn, 1985). Ajayi (2006) further argued that foreign investment may form a business system in which monopoly is predominant resulting in the formation of an ‘enclave’ economy in which domestic investors are eliminated. In this case FPIs will have a negative impact on economic growth. This shows that there is no settled opinion with regards to the impact of portfolio investments and growth and this makes this study valuable.

In Africa, capital inflows could reduce the problem of low savings. Africa has the lowest savings rate in the developing world (Dovi, 2008; Aryeetey and Udry, 2012; Arawomo, 2012, Amazon, 2015 and Robinson, 2018). Given the low savings rate in Africa, international capital inflows could play an important part in increasing investment and sustaining economic growth in Africa. This view is supported by Oluwatoyin (2017) who states that the low domestic capacity to save requires African countries to source other avenues of capital from outside the region. Abu, Zaini and Aziz (2014) concur and state that despite the fact that that low savings stifles economic growth, increased access to foreign capital can cushion the negative effects associated with having a savings deficit in an economy. Foreign capital flows have contributed greatly to economic growth by augmenting local investment in several developing countries (Adams and Klobodu, 2017).

Gadhi (2018) states that capital inflows to Africa have been increasing for the past few years and were around 8 percent of GDP in 2017. This is supported by the IMF (2018) which claims that international portfolio flows to the African region have risen sharply since the financial crises of 2008. The volatility and disruption of capital flows presents problems for policymakers, complicates monetary and exchange rate policies, and may jeopardize financial stability (Kose and Prasad, 2020). However, it is important to keep in mind that capital flows to the African continent are quite erratic and, furthermore, extremely enormous in comparison to the recipient countries' economies (Hassan, 2016; IMF cited in Alley, 2017; Saini, 2021). This may be disastrous for the African economy as it can create instability and hamper economic growth. It is for this reason that Magaji and Yahaya (2010) and Hassan (2016) warns against relying on capital flows to augment the savings gap in Africa. According to Magaji and Yahaya (2010), using foreign capital to close the savings gap is flawed since it instead results in high external debt-servicing costs that account for a sizable portion of Africa's GDP. The UN has previously recognized that efforts to draw private flows (to Africa) through a rapid liberalization of the capital account had not led to an increase in such capital inflows but rather to higher volatility, with associated consequences for exchange rate instability and misalignments. Many developing nations, particularly those in Africa, have very low levels of resilience and ability to withstand negative short-term shocks (Allen and Giovannetti, 2011 & Mamvura, 2018). Against this background, this study seeks to establish the impact of portfolio investment on economic growth in selected African states. The effects of foreign portfolio investment on the African economy are yet to be known because very little has been done on the area.

Literature review

Empirical Literature

Durham (2003) investigated the impact of foreign portfolio investment (FPI), among other things, on economic growth using panel data. The results from the study showed that foreign portfolio investment had not impact on economic growth. Akinlo (2004) also examined the effects of foreign investment (FPI) on economic growth in Nigeria. The study used a Vector Error Correction Model and it was shown that there was a marginal but insignificant relationship between FPI and growth. Durham (2004) used data on 80 nations from 1979 to 1998 to assess the effects of foreign direct investment (FDI) and equity foreign portfolio investment (EFPI) on economic growth. The results largely support the idea that lagged FDI and EFPI do not have immediate, undeniable positive effects on growth, but some data support the idea that these effects depend on the “absorptive capacity” of host countries, particularly with regard to their level of institutional or financial development. Additionally, extreme bound analysis (EBA) of significant data shows that the estimations are reliable in comparison to prior empirical growth research.

Ahmed et al. (2005) examine the effect of capital flows FDI, Portfolio debt, Equity and Portfolio investment) and economic growth. Their study showed that there is a positive relationship between portfolio investment and GDP growth. Klein and Olivei (2008) used panel data to examine the effects of portfolio flows on growth on 100 countries. The study concluded that economies that are open to foreign capital flows were more likely to have increased growth that countries that had restrictions on capital flows. Duasa (2009) investigated the connection between foreign portfolio investment (FPI) and economic growth in Malaysia. In particular, the study used the Granger causality to test relationship between GDP and FPI. The study showed that the relationship between FPI and GDP
run from GDP to FPI and not vice versa. Duasa and Salina (2009) examined the connection between Malaysia's economic performance and foreign portfolio investment (FPI). To determine the direction of causation between the two variables, the study specifically examined the link between FPI and real gross domestic product (GDP) using the commonly used Granger causality test and the more recent Toda and Yamamoto (1995) non-causality test. A similar methodology is used to examine the connection between FPI volatility and real GDP. The work also employs an innovation accounting by simulating impulse response functions and variance decompositions for additional inferences. The study finds evidence that economic growth pauses changes in the FPI and its volatility rather than the other way around using quarterly data spanning the years 1991 to 2006.

Glaucio de Vita and Kyaw (2009) used a dynamic panel model and a large data set of 126 developing countries for the period 1985 to 2002. Results from using the system-generalized methods of moments (GMM) estimate methodology imply that only emerging nations that have attained a certain level of economic development and absorptive capacity are able to fully benefit from both types of investment inflows' ability to spur growth. Al-Irani and Fatima Al-Shamsi (2010) tested the association between FPI and GDP in the six countries comprising the Gulf Cooperation Council (GCC). Results showed that the relationship between FPI and GDP ran from both sides. Nuri and Huseyin (2012) investigated the interactions and feedbacks between types of capital flows and GDP in Turkey. The study showed that portfolio investments on government bonds had a positive effect on growth. Narayan (2013) tested the causality relationship between FPI and GDP in India. Results from the study showed that GDP caused FDI and FPI.

Guluzar and Bener (2013) looked into the connection between Turkey's macroeconomic variables and FPI. No connection between FPI and industrial production was discovered by the study. Gumus et al. (2013) used secondary data using vector aggressive granger causality tests, impulse responses, and variance decomposition to assess the link between foreign portfolio investments and macroeconomic indicators in Turkey from 2006 to 2012. The study found that foreign portfolio investment in Turkey was highly impacted by macroeconomic variables. Baghebo and Apere (2014) investigated the effect of FPI and growth in Nigeria. The study found a positive relationship between FPI and economic growth.

Atobrah (2015) looked into the factors that influence Sub-Saharan Africa's portfolio inflows (PI) (SSA). The study made use of panel data from 17 SSA nations from 2005 to 2013. The study discovered that portfolio inflows are negatively correlated with current account balance and financial development by using the Generalized Methods of Moment (GMM) dynamic panel estimating framework. The findings also revealed that portfolio flows to SSA are positively influenced by market size, historical portfolio inflows, and industrialized countries' growth rates. The results showed a long-term inverse link between portfolio inflows and economic growth. Additionally, there is no short-term correlation between economic growth and portfolio inflows, but the opposite is true. Based on secondary data from 1986 to 2011, Baghebo and Apere (2014) examined the effect of foreign portfolio investment on economic growth and used the Augmented Dickey-Fuller (ADF) test, Johansen cointegration technique, and error correcting mechanism techniques in their analysis. The study found that real gross domestic product in Nigeria showed positive long-term relationships with foreign portfolio investment, market capitalisation, and trade openness. With the help of ordinary least square analysis, Bada (2016) examined the impact of foreign portfolio investment on Nigerian economic growth from 1991 to 2014. The results showed that both foreign portfolio investment and other variables used in the study had a positive impact on economic growth in Nigeria.

Albulescu (2015) tested the impact of FPI on growth in Central and Eastern European (CEE) nations using panel data. The study's findings suggested that, over time, FDI and FPI had an impact on economic growth. In their 2016 study, Haider et al. looked into what factors influenced foreign portfolio investment in the Chinese economy from 1997 to 2014. The study used OLS for analysis and found that China's overseas portfolio investments were significantly impacted by the GDP, population growth, currency rate, and external debt. Claudiu (2015) uses a panel structure to examine the impact of foreign direct investment (FDI) and foreign portfolio investment (FPI) on long-term economic growth in CEE nations. We use a system-GMM approach to achieve this, which corrects the endogeneity problems between growth and investment, and a sizable number of control variables, including the interest rate, CPI inflation, unemployment rate, money supply, exchange rate, primary energy consumption, and educational attainment. The sample consists of 13 CEE nations: Bulgaria, Croatia, Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, the Slovak Republic, and Slovenia. The study's analysis covers the years 2005 to 2012. We discover that investments, both direct and portfolio, have an impact on long-term economic growth. Using a different GMM, Abdullahi, Murtala, and Magaji (2017) conducted an empirical investigation of the effect of foreign capital influx on the economic growth of sub-Saharan African nations between 2010 and 2015. It was discovered that foreign capital inflow has a negative impact on the expansion of the economies in sub-Saharan Africa. The implication is that because of the region's high levels of insecurity and unfavorable business climate, sub-Saharan African countries do not have adequate access to the foreign capital that mostly comes in the form of FDI. As a result, the level of economic development in these countries is negatively impacted rather than positively by the inflow of foreign capital.

brahim (2017) gives an explanation for the weak relationship between private capital flows and the region's sub-Saharan economic growth as well as policy suggestions for a stronger relationship and growth optimization. In support of the stylised facts, estimation of a straightforward growth equation demonstrates that the flows have no impact on growth. Additional research that takes into account the surge components of these flows as well as the implications of capital regulations offers insightful information. Oluwaseyi (2017) investigates the nature of the relationship between foreign capital inflows and the rate of economic growth in a few West African nations, as well as the causation between the various elements of these inflows and economic growth. The Two Gap Theory was used in this study to evaluate how foreign capital inflows affected the economic growth in the chosen West African countries.
using panel data from 1980 to 2015. Additionally, we use the Granger causality test and Pedroni cointegration. A long-term association between foreign capital inflows and economic growth in a particular West African country is demonstrated by the data. Although all the variables were favorable, only foreign direct investment is noteworthy.

Tsaura (2017) examined the effect of foreign portfolio equity investments on economic growth using a panel data of 14 Asian and European emerging nations. In all of the nations examined, the study found a favorable but negligible correlation between FPI and economic growth. Over a 30-year period, from 1984 to 2014, Waweru (2017) looked at the immediate and lag effects of several types of capital flows, including portfolio flows, “Other investments capital flows,” and FDI flows, on economic growth in Kenya. The GDP growth rate is negatively impacted by FDI and portfolio investment flows, albeit this effect is not statistically significant. According to the study’s findings, a significant slowdown or reversal in capital flows into Kenya in the form of “Other Investment Capital Flows” results in a significant slowdown in the nation’s economic growth.

Adekunle (2018) looked into the relationship between various types of capital flows and economic expansion in Nigeria. The findings indicated that FPI had a negative impact on economic growth while FDI had a positive impact. By controlling the “globalization” variables of trade openness, foreign direct investment (FDI), and portfolio investment in addition to the structural break dummy, Fukuda (2019) looked into the relationship between finance and growth in Mexico. Two measures of size and efficiency are used as proxies for financial development. Using the cointegration and Granger causality tests, we discovered that financial size is negatively correlated with economic growth without any feedback, financial efficiency and economic growth are negatively correlated bilaterally, trade openness and portfolio investment are positively correlated with economic growth, and FDI is negatively correlated with both economic growth and financial efficiency.

In order to ascertain the duration or rate of convergence, Suidarma et al. (2020) investigate the impact of foreign direct investment and portfolio investment on the convergence incidence of economic growth of nations in the ASEAN + 3 region. The study’s findings demonstrate that foreign direct investment (FDI) and portfolio investment, the first lag variable of economic growth, have a considerable impact on economic growth in ASEAN + 3, but not in ASEAN without China, Japan, and Republic of Korea. Portfolio investments have less of an impact on changes in economic growth than does foreign direct investment (FDI).

The dynamic character of the relationship between foreign investment and economic growth in Nigeria from 1980 to 2018 was examined by Toyin and Oludayol (2020). The study experimentally confirms and conceptually establishes that market capitalization, domestic savings, foreign investment, and government spending all affect long-term trends in the growth of Nigeria’s gross domestic product. Practically, the empirical finding showed that Nigeria’s significant domestic savings deficit creates barriers to the nation’s successful economic growth both in the short and long terms. Portfolio foreign investment accelerates economic growth more quickly in the long run than it does in the short run. Al-karasneh, Bataineh, Hayajneh, and Khodirat (2021) used econometric techniques including ARDL and Error Correction Models to analyze the effects of short- and long-term active foreign portfolio investments (FPI) on Jordan’s economic growth (EG) from 1996 to 2017. Findings show that FPI have both a short-term (-5%) detrimental impact on EG at level and a long-term (-5%) statistically favorable influence on EG at level, with EG needing roughly ten years to make a full adjustment.

The correlation between international capital inflows and economic growth in emerging economies is examined by Ndiweni and Lumengo Bonga-Bonga (2021). The data demonstrate that there is a threshold effect in the relationship between capital inflows and growth. More specifically, the results showed that after a predetermined threshold level of institutional quality has been reached, the influence of capital inflows on economic growth is positive and considerable. The link between capital inflows and growth appears to be non-existent at any point below that threshold level. These findings lend credence to the idea that the relationship between capital inflows and economic growth depends on the degree of institutionalization of a country’s economy.

In Nigeria between the years 1986 and 2017, Ndugbu, Otiwu, and Uzowuru (2021) looked at the connection between foreign portfolio investment and economic growth. Granger causality and the Vector Error Correction model (ECM) were used in the investigation. While gross domestic product serves as a stand-in for economic growth in Nigeria, the independent variables were market capitalization, foreign portfolio investment, and trade openness. Results showed that among the three study factors, market capitalization and trade openness were significant in fostering economic growth in Nigeria, however foreign portfolio investment is unimportant and negative. Therefore, we urge policymakers to work to increase capital market activity in order to encourage capital transactions, which will then boost the country’s economic performance and growth.

Researchers have frequently stated that this precarious link can be explained by a number of conditional elements. One well-known theory focuses on a country’s absorptive capacity, which may be divided into three components: macroeconomic management, infrastructure, and human capital. This theory helps to explain the impact of these conditional factors. The idea is that a country with a high capacity for absorption can strengthen a relationship; otherwise, it will suffer. This is supported by the World Bank (2001) which demonstrated that economies with low absorptive capacity, such as Morocco, Uruguay, and Venezuela, did not benefit from spillovers, but countries with stronger absorptive capacities, such as Malaysia and Taiwan, did. Some academics place a strong emphasis on indirect channels, contending that the growth advantages of financial globalization are driven by these channels’ collateral benefits as well as their direct financial flows. These indirect channels include strengthening macroeconomic policies, developing the domestic financial sector, and enhancing institutions (defined broadly to include governance, the rule of law, etc.). Evidence suggests that while most capital markets in African nations are relatively underdeveloped, those nations that have
implemented reforms aimed at fostering the growth of capital markets have been able to experience growth that is both faster and more sustainable. According to a 2011 report, South Africa has had tremendous growth since 2000 in terms of market capitalization and trade volume, making it the continent's largest and most sophisticated capital market.

Methodology

Data sources

This study made use of secondary data. Information and statistics was sourced from the World Bank. The study used panel quarterly from 1995 to 2014. This study period was chosen because of the following reasons; firstly, due to the accessibility of the data, and, secondly, in this period, many African countries received high levels of capital flows. The study used only five Africa countries; South Africa, Botswana, Kenya, Mauritius and Nigeria. These countries were chosen because they are in the top five of the African financial markets index rankings (ABSA, 2018). The study argues that countries with better financial markets are likely to receive high capital flows because there would be easy access to their markets. Furthermore, well developed financial markets are likely to ensure the efficient and productive use of capital flows (OMFIF, 2018).

Model specification

The neoclassical growth model extended by Alley (2015) to analyze the effects of shocks to private capital flows on growth of 14 Sub-Saharan Africa countries provides the model for this study. The model by Alley (2015) was adopted with modifications (the current study did not focus on shocks to private flows to growth but rather on the impact of portfolio flows on growth. The model is estimated was follows:

\[ \text{GDP} = f (\text{PI}, \text{EXCH}, \text{NDC}, \text{INT}, \text{MS}, \text{FDI}) \]

Where GDP will be a function of Foreign Portfolio Investment (PI), Exchange rate (EXCH), Interest rates (INT), Domestic Credit (NDC), Money supply (MS) and Foreign Direct Investment (FDI). The model can be expressed in its linear form as:

\[ \text{GDP}_{it} = \beta_0 + \beta_1 \text{PI}_{it} + \beta_2 \text{EXCH}_{it} + \beta_3 \text{NDC}_{it} + \beta_4 \text{INT}_{it} + \beta_5 \text{MS}_{it} + \beta_6 \text{FDI}_{it} + \epsilon_{it} \]

Where \( \text{GDP}_t \) (Gross domestic product) is at time \( t \), PI is foreign portfolio investment, EXCH is the real exchange rate, EXP is exports, INT is interest rates and \( \mu \) is the error term. Table 1 below shows the description of variables.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description and Unit of Measurement</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>China Foreign Direct Investment (stock) in Africa</td>
<td>World Bank</td>
</tr>
<tr>
<td>EXCH</td>
<td>Net Electricity Consumption Billion Kilowatt/hour</td>
<td>World Bank</td>
</tr>
<tr>
<td>PI</td>
<td>GDP per capita (constant 2010 constant prices) US Dollar</td>
<td>World Bank</td>
</tr>
<tr>
<td>NDC</td>
<td>Gross Fixed Capital Formation as (% of GDP) Percentage</td>
<td>World Bank</td>
</tr>
<tr>
<td>INT</td>
<td>Exports of goods and services (% of GDP) Percentage</td>
<td>World Bank</td>
</tr>
<tr>
<td>MS</td>
<td>Imports of goods and services (% of GDP) Percentage</td>
<td>World Bank</td>
</tr>
<tr>
<td>FDI</td>
<td></td>
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</table>

Estimation procedures

The main advantages of these GMM estimators relate to their perceived robustness to heteroscedasticity and non-normality of the disturbances. The inclusion of instrumental variables also aids in addressing biases brought on by reverse causality. However, there are several unanswered questions regarding the effectiveness of such approaches. Inconsistent estimations will result from the violation of moment criteria (such as the presence of non-stationarity). Furthermore, according to Roodman (2009), the asymptotic qualities of the estimators and specification tests might be impacted by the quantity (and caliber) of instruments produced by difference and system GMM approaches. In samples with large \( T \), instrument proliferation can be particularly serious, inducing two main types of problems: (i) overfitting endogenous variables; and (ii) imprecise estimates of the optimal weighting matrix.. Estimation that is based on the GMM alleviates the endogeneity bias, provided that the study chooses optimal instrumental variables. However, the process of choosing instruments is a difficult undertaking. Good instruments hard to find (University of Warwick, 2019). In most cases, the appropriate set of instrumental variables may consist of lagged values of the dependent and independent variables. This is in line with Piper (2018) who states that GMM estimation allows not only the lagged dependent variables but also any potentially endogenous explanatory variables to be instrumented by “internal” instruments (i.e. lagged levels and lagged differences). The study, thus used lagged independent variables as its instruments.

Presentation of results

The results from the GMM results are shown below.
The study drew from the fact that capital inflows to sub-Saharan Africa have increased sharply since the global financial crisis. Given Africa’s chronically low savings rate and resulting savings imbalance, an increase in capital inflows could be essential to sustaining greater levels of investment and growth. On the other hand, capital flows into the African continent are extremely unpredictable and astronomically large in comparison to the economies of receivers. Due to the potential for instability and stifled economic growth, this might be terrible for the African economy. This made it desirable to look into how portfolio investments affected certain African states’ economic progress.

Results showed that there is a weak relationship between portfolio investment and economic growth. The results of this study have a number of policy implications. The weak but positive relationship between foreign portfolio investments and economic growth signals the need for Central Banks in African countries to come up with better strategies that enhance the benefits of capital flows.
This can be done by establishing and improving financial institutions which are still developing. Having a well-functioning financial system is an essential condition to reap the benefits of capital flows. Furthermore, the is a need to stabilise both the economic and political environment of African economies. Capital flows are usually sensitive to the political and economic conditions of any region. Governments in Africa should remove all impediments that make it hard for foreign investors to invest the respective economies.

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Author Contributions: Conceptualization, Methodology, Data Collection, Formal Analysis, Writing—Original Draft Preparation, Writing—Review And Editing by author who has read and agreed to the published the final version of the manuscript.

Institutional Review Board Statement: Ethical review and approval were waived for this study, due to that the research does not deal with vulnerable groups or sensitive issues.

Data Availability Statement: The data presented in this study are available on request from the corresponding author. The data are not publicly available due to privacy.

Conflicts of Interest: The author declares no conflict of interest.

References


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