Impact of Foreign Direct Investment and Domestic Investment on economic growth in South Africa: A time series analysis

Andile Mhlabane
University of Mpumalanga
201880946@ump.ac.za

Rachel Nishimwe-Niyimbanira (PhD)
University of Mpumalanga
R.Niyimbanira@ump.ac.za
Orcid ID: 0000-0002-2428-4728

Abstract

Since post-apartheid, South Africa has made great strides in increasing its investment through foreign cash inflows and domestic investment. This research tries to establish the effects of Foreign Direct Investment (FDI) and domestic investment on economic growth in South Africa. Guided by the unit root test results, this study uses the Autoregressive Distributed Lag (ARDL) cointegration technique and the vector error correlation model to investigate the effect of FDI and domestic investment on economic growth in South Africa from 1990-2019. To assess the validity of a model used, a number of diagnostic tests were conducted, including heteroskedasticity, multicollinearity and normality tests. The study found a statistically significant positive long-run relationship between domestic investment and economic growth. Conversely, the study found a negative relationship that is not statistically significant between FDI and economic growth. This finding is in line with a number of studies, including those conducted in South Africa. Possibly due to high levels of unemployment in South Africa, the study found a negative relationship between population growth and economic growth. The study concludes that policymakers should implement investment policies and promote strategies that will reduce linkages in investment to foster and promote job creation, political and social stability, and sustainability in encouraging economic growth.

***Keywords*:** Foreign Direct Investment, domestic investment, economic growth, population growth, South Africa

1. INTRODUCTION AND BACKGROUND

Foreign direct investment (FDI) has been labelled by most researchers as the core of building economies in developing countries (Teece, 1977; Hodrab, Maitah & Kuzmenko, 2015; Bouchoucha & Bakari, 2019). Foreign direct investment inflows are known to react to growing investment needs that will help enhance economic growth at an increased rate and further contribute to the macroeconomic stability of a country (Bouchoucha & Bakari, 2019). Foreign direct investment serves as a technology transfer mechanism from one economy to another. In fact, multinational firms are known to bring new knowledge and reduce the technological gap between developed and developing countries (Teece, 1977). On the other hand, domestic investment is also

considered an important economic factor contributing to the internal growth of an economy.

Foreign direct and domestic investments are essential due to the role both play in the growth of an economy. An increase in private investment is the key to high returns in investment in the national economy. It can also be argued that the entry of foreign firms stimulates a competitive environment. However, recent studies have found that foreign direct investment can have a 'crowding out effect' on domestic investment (Ahmad, Ahmed & Atiq, 2018).

South Africa is a recipient of large FDI inflows mostly from China. China has been South Africa's most significant trading partner for two decades. Chinese investment into South Africa reached 15.2bn dollars in 2017, equivalent to 19% of total FDI. The most significant investment by China was the Industrial and Commercial Bank of China's acquisition of a 20% stake in Standard Bank for 5.5bn dollars in the year 2007 in South Africa, resulting in a significant middle-income consumer segment (Torrens, 2018).

In the past few years, the South African budget has been failing to maintain its growth rate and improve investment (Mothibi & Ferreira, 2019). Instead, government spending continues to remain high for the tax base, and the gap has only increased due to the 2020 recession caused by the global Covid-19 lockdown. Therefore, it has been of great importance that South Africa maintains its relationship with foreign investors to stabilise its economy and prevent a further worsening of its growth trend with high levels of unemployment, poverty and inequality as the GDP per capita continues to decline (Mothibi & Ferreira, 2019).

South Africa is struggling to maintain a steady economic growth rate with its continuous policy uncertainty leading to poor sector performance, declining investments and slow economic growth (Mothibi & Ferreira, 2019). Investment has proven to play an important role in growing the South African economy. Nonetheless, policymakers usually argue whether the effects of FDI and domestic investment are effective enough to stabilise an economy and keep substantial economic growth in developing countries. The impact of FDI on economic growth in developing countries is highly controversial. For instance, researchers find positive impact of FDI on economic growth (Sahoo & Mathiyazhagan, 2003; Khan, 2007; Ghazali, 2010; Mahmood & Kashif-ur-Rehman, 2012; Rahman, 2014; Awolusi and Adeyeye, 2016; Javaid, 2016; Nguyen & Nguyen, 2021) while others find negative effect (Falki, 2009; Mamingi & Martin 2018; Mothibi & Ferreira, 2019). This research tries to establish the effects of FDI and domestic investment on economic growth in South Africa.

After the introduction and background, the study presents the literature review and methodology. The study further presents and discusses the results and ends with a conclusion and suggestion.

2. LITERATURE REVIEW

Theoretical Literature Review

Foreign direct investment can be defined as the knowledge, technology and capital combined to create a positive impact between growth and development of a developing country (Balasubrammanyam, Salisu & Sapford, 1996). Balasubrammanyam *et al*., (1996) reiterate that foreign direct investment has the impact of increasing and improving skills development, training as well as organizational development in a particular country. There is often a debate between policymakers on whether FDI or DI should be the main focus in developing countries. However,

the literature does identify a number of advantages that come with investment, identifying its long-term growth potential and development of a country. According to Bayar (2013) some of these benefits involve the creation of jobs, skills development, and increased international access to the markets and financing, as well as technology spill-over. Theories underpinning this research include modernization theories and dependency theories.

Modernisation theories are founded on neoclassical and endogenous growth theories, which propose that FDI could stimulate economic growth in developing countries (Hodrab *et al.,* 2015). The argument is that foreign direct investment adds an advantage to the host country as it gains more capital. This justifies the assumption that when capital input increases for each worker, the total output will also increase for each worker (Solow, 1956). Shrum (2000) argued that the development of countries is linked to modernization by technology importation, forms of organisation, as well as political and social changes that follow.

According to literature pertaining to the modernization growth theories, foreign direct investment is considered an important factor when moving technology to developing countries as these economies lack basic infrastructure, particularly in the social and economic markets and the educated population that is expected to be innovative towards enhancing production (Güngör & Ringim, 2017). Apart from technology and capital, foreign direct investment comes with a stream of resources involving managerial and organisational skills, marketing and market access, contributing towards capital accumulation and increasing total factor productivity (Adams, 2009).

Conversely, dependency theories accentuate that FDI is expected to have a negative effect on economic growth. The dependency theories explain the development of economies emphasizing why poor economies remain poor and wealthy economies get wealthier. The dependency theory states that the international environment was kept in control by dominant states despite developing countries experiencing an increase in trade; furthermore, dominant states were also able to maximize their benefits at the expense of developing countries (Sunkel, 1969). The dominant countries are the advanced industrialized economies; on the other hand, the dependent economies are those with a struggling GDP per capita and depend on commodity exports (Balasubrammanyam *et al.*,1996). Dependency theories emphasize that foreign investment is a way for developed countries to gain power in developing countries. In fact, it also argued that foreign direct investment in developing countries is expected to have a negative relationship with the growth of the host economy (Moss, Ramachandran & Shah, 2004).

Empirical Literature Review

A number of studies mostly in Pakistan and Sub-Saharan Africa, have found a positive relationship between FDI and economic growth (Sahoo & Mathiyazhagan, 2003; Khan, 2007; Ghazali, 2010; Mahmood & Kashif-ur-Rehman's, 2012; Rahman, 2014; Awolusi and Adeyeye, 2016; Javaid, 2016; Nguyen & Nguyen, 2021). Based on Autoregressive Distributed Lag- Error Correction Model (ARDL-ECM) technique, Javaid (2016) found a significant positive impact of FDI on the GDP growth of Pakistan both in the long-term and in the short-term. Endorsing the modernisation theories, Mahmood and Kashif-ur-Rehman's (2012) findings supported the hypothesis of the positive impact of FDI on economic development of Pakistan. The study concluded FDI is more effective than domestic investment in promoting economic growth. The current study also aims to investigate which type of investment (FDI or domestic investment) has the most significant impact on economic growth in South Africa. Awolusi and Adeyeye (2016) found a positive but negligible

impact of FDI on economic growth in African countries, including South Africa, Egypt, Nigeria, Kenya, and the Central African Republic. In East Africa, Bekere and Bersisa (2018) also found a positive impact of FDI on economic growth.

On the other hand, Mothibi and Ferreira (2019), using autoregressive distributive lag model (ARDL) over the period 1994 to 2018 in South Africa, found a negative relationship between and FDI economic growth. Precisely, a 1% increase in FDI was on average found to result in a 0.003% decrease in economic growth. However, their results revealed a positive relationship between economic growth and domestic investment, that a 1% increase in domestic investment would, on average, result in a 0.24% increase in economic growth (Mothibi & Ferreira, 2019). Falki (2009) found a negative relationship between FDI and economic growth in Pakistan based on the data from1980 to 2006. Falki (2009) suggested that an improved export sector and an increase in FDI inflows would be achieved by increasing Greenfield investment and large scale manufacturing investment. Falki (2009) recommended to implement policies that will encourage the improvement of infrastructure and human resources, accompanied by a stable macroeconomic environment that would strengthen local entrepreneurship of which all of these incentives will encourage positive FDI inflows and will cause significant implications for growth in the country. Mamingi and Martin (2018) empirically examined the relationship between foreign direct investment (FDI) and economic growth in the countries of the Organisation of Eastern Caribbean States (OECS), and they found a small negative effect of FDI on economic growth. Precisely, 1% increase in FDI was shown to lead to a 0.048% decline in economic growth.

While domestic investment is found to positively impact economic growth consistently in the above-mentioned reviewed empirical literature (Ghazali, 2010; Bakari, 2018; Mothibi & Ferreira, 2019; Nguyen & Nguyen, 2021), it is observed that a negative of positive relationship between FDI and economic growth is possible in a country probably depending on the time series taken into consideration.

3. RESEARCH METHODOLOGY

The study uses time series data covering the period from 1990-2020 collected from the World Bank database. The dependent variable for this study is economic growth, while independent variables include FDI, domestic investment and population growth. To assess the validity of the model used, a number of diagnostic tests were conducted, including heteroskedasticity, multicollinearity and normality tests. Based on the unit root test results, the current study uses the Autoregressive Distributed Lag (ARDL) cointegration technique and the Error Correlation Model (ECM). The econometric analysis was performed using Eviews 12.

This study uses the following functional form:

GDP= f(FDI, DI, POP)

Econometrically, the time-series regression estimated is as follows:

$$GDP_t = \beta_0 + \beta_1 FDI_t + \beta_2 DI_t + \beta_3 POP_t + \varepsilon_t$$

GDP represents the Gross domestic product, FDI denotes foreign direct investment, DI is the domestic investment, POP stands for population growth, time is represented by *t* and ε is the error

term.

The apriori expectations β_1, β_2, $\beta_3 \neq 0$. The proxy for economic growth is the GDP annual percentage growth, DI is measured by the annual percentage growth in gross capital formation, FDI is measured in terms of annual percentage growth in FDI inflows, while the proxy for population growth is the annual percentage of population growth.

4. RESULTS AND DISCUSSION

Diagnostic test

The diagnostic tests were used to evaluate the distribution of the model's error term and the structural specification of the model in terms of its functional form, the choice of regressors, and possible measurement errors (DeBenedictis & Giles, 1996). Heteroskedasticity was tested using the Breush-Pagan-Godfrey test. Table 1 suggests that Breush-Pagan-Godfrey heteroskedasticity has a probability value of 0.9490. This indicates that H_0 cannot be rejected since the P-value is greater than a 5% significance level, portending that the errors' variance are constant.

The normality test, which used the Jarque-Bera test, was run to test for normality distribution in the residuals. Table 1 shows that the p-value is 0.430313, which indicates that the null hypothesis cannot be rejected, implying that the residuals are normally distributed (Bayar, 2014).

Table 1: Diagnostic tests.

Test	Null Hypothesis	Probability	Conclusion
Breush-Pagan-Godfrey Heteroskedasticity	No Heteroskedasticity	0.9490	Do not reject H_0
Jarque-Bera	Residuals are normally distributed	0.430313	Do not reject H_0

Multicollinearity was tested using the variance inflation factors of which the VIF values for all the variables were below five thus suggesting that no severe multicollinearity exists in the model (De Mello, 1999) as indicated in Table 2.

Table 2: Multicollinearity

Variable	Centered VIF
GDP(-1)	1.858710
DI	1.403033
FDI	1.232775
POP	1.838231

Unit Root test

Table 3: ADF Unit Root Test results

Variables	Level and difference	T statistic	P Value	Decision
GDP	Level (none)	-1.346405	0.1613	
	Level (intercept)	-1.378480	0.5793	
	Level (trend and intercept)	-1.353412	0.8540	
	1st difference (none)	-4.573405	0.0000*	I(1)
DI	Level (none)	-2.703570	0.0086*	I(0)
FDI	Level (none)	-5.31519	0.0000*	I(0)
POP	Level (none)	-2.531794	0.0133**	I(0)
Notes:* significant at 1% level of significance; ** significant at 5% level of significance				

As shown in Table 3, the ADF unit root test was employed to test the order of integration of the variables, including GDP, DI, FDI and POP. The results show that GDP is integrated at first difference I (1) while domestic investment (DI), foreign direct investment (FDI) and population growth (POP) are integrated at level I (0). This further suggests that the ARDL bounds tests can be used since there are no variables integrated at the second difference I(2) (Mothibi & Ferreira, 2019).

Bounds testing

Table 4: ARDL bounds testing results

Dependent variable: GDP		
F-statistics	10.41713	
K	3	
Critical value bounds	**I(0) Bound**	**I(1) Bound**
10%	2.37	3.2
5%	2.79	3.67
2.5%	3.15	4.08
1%	3.65	4.66

The F-statistic was found to be 10.41713, which is greater than the lower and upper bound critical value at a 5% significance level. This implies the H_0 cannot be rejected, concluding that the dependent and independent variables have a long-run relationship.

Table 5: Long run results

Variable	Coefficient	Standard error	t-statistic	Prob.
DI	0.265043	0.04964178	5.339123	0.0000*
FDI	-0.085857	0.067857	-1.265256	0.2179
POP	-0.2104546	0.0949946	-2.215439	0.0365**
Constant	4.371038	1.504214	2.905862	0.0078*

Notes: * significant at 1% level of significance; ** significant at 5% level of significance

The long-run estimation equation from Table 5 is illustrated using the following equation.

GDP = 4.3710+26.50436*DI - 0.0859FDI - 2.1045**POP

Notes: * significant at 1% level of significance; ** significant at 5% level of significance

The results indicate a statistically significant positive relationship between domestic investment (DI) and economic growth (GDP), suggesting that a 1% increase in domestic investment would, on average, result in a 0.265% increase in economic growth. This is in line with the findings of several studies undertaken in different countries (Bakari, 2018; Bouchoucha & Bakari, 2019; Mothibi & Ferreira, 2019; Nguyen & Nguyen, 2021). With the economic conditions faced in South Africa, such as high unemployment, inequality and poverty, it is not surprising that domestic investment has a significant positive impact on the economy and its success.

An insignificant negative relationship between foreign direct investment (FDI) and economic growth (GDP) was found in this study. This finding is consistent with that of Mothibi and Ferreira (2019), Mamingi and Martin (2018) and the dependency theory. Dependency theory highlights that foreign direct investment has an expected negative impact on the growth of the host economy, especially in developing countries (Moss *et al*., 2004). Falki (2009) also had similar results of an insignificant negative impact between FDI and economic growth and suggested that the government must implement policies that focus on infrastructure and human resources improvement, accompanied by a stable macroeconomic environment that would strengthen local entrepreneurship. Consequently, FDI inflows will significantly affect the country's growth. Nunthirapakorn (2020) argued that unregulated FDI can downgrade domestic research and development, reduce competition, crowding out domestic firms and lower employment. Moreover, sometimes, the expected benefits of FDI may be elusive to the host economy if the economy in question cannot take advantage of the technologies and knowledge transferred through FDI (Nunthirapakorn, 2020).

Furthermore, the results also indicated a negative relationship between population growth and economic growth. Demographic changes can affect GDP growth through several channels. Notably, lower growth in population directly implies reduced labour input (Kim, 2016). However, the situation in South Africa seems to be different. The estimated overall population growth rate has been consistently increasing. For example, the population increased from approximately 1,0% from 2002–2003 to 1,4% from 2018–2019 (StatsSA, 2019). Labour force participation increased from 47.3% in 2020 to 57.5% in 2021, denoting a 10.2% increase (StatsSA, 2021). Nevertheless, the increase in population leading to higher labour force participation seems to translate into a high unemployment rate. For instance, in the fourth quarter of 2021 the official unemployment rate in South Africa hit a high record of 35.3%, the highest since the start of the Quarterly Labour Force survey publication in 2008 (StatsSa, 2022). The unemployment rate further reaches 46.2% based on the expanded definition that includes discouraged workers (StatsSA, 2022). Economic growth is unlikely to be achieved by having people enter the labour market just to be unemployed. Given the low level of technology that prevails in developing a negative relationship between population growth and economic growth, it would not be surprising, and also keeping in mind the argument of Thomas Malthus that population growth would depress living standards in the long run. According to Fox and Dyson (2015), “high birth rates and rapid population growth in poor countries would divert scarce capital away from savings and investment, thereby dragging on economic development”.

Results from ECM
Table 6: Short-run and ECM

Variable	Coefficient	Std.Error	t-Statistic	Prob
D(FDI)	-0.020725	0.019773	-1.048155	0.3050
CointEq(-1)	-0.794927	0.101975	-7.795293	0.0000
R-squared	0.687816			

The ECM (CointEq) should be negative, and the probability value should be statistically significant to conclude the short-term adjustments back to equilibrium (Mothibi & Ferreira, 2019). Therefore, the results reveal that ECT is -0.7949, meaning that 79.5% of disequilibrium is corrected annually between the variables. Thus, when domestic investment, foreign direct investment and labour force changes are considered, it takes one year to fix and restore the long-run equilibrium in GDP. R-squared is 0.687816, indicating that the independent variables explain 69% of the variation in the economic growth in South Africa.

5. CONCLUSION AND RECOMMENDATION

The study analysed the impact and relationship of domestic investment, foreign direct investment and population growth on economic growth by providing evidence through results obtained from data analysis and are further interpreted to conclude the findings. Diagnostics tests indicated that there is no heteroskedasticity, normality test showed that residuals are normally distributed, and multicollinearity tests were run to identify problems with the residuals that may provide an ineffective model and concluded that there is no severe Multicollinearity in the model. The unit root test showed that all the variables were stationary at I(0) except GDP, which was stationary at first difference I(1). The results from unit root test recommended the use of ARDL cointegration technique. The long-run estimated equation assisted in verifying the relationship between each variable and economic growth. A statistically significant positive relationship between DI and economic growth was found, whereas a statistically insignificant negative relationship between FDI and economic growth was found. Lastly, the results also found a negative but statistically significant relationship between population and economic growth.

The South African government needs to foster an environment that will transfer the benefits of FDI into a domestic economy to avoid linkages between FDI and DI created by foreign companies. For future studies, this study recommends using panel data to clarify the effect of FDI and economic growth in different developing countries, especially in Africa.

REFERENCE LIST

Ahmad, M.H., Ahmed, Q.M. & Atiq, Z., 2018. The impact of quality of institutions on sectoral FDI: evidence from Pakistan. *Foreign Trade Review*, 53(3): 174-188.

Awolusi, O.D. & Adeyeye O.P. (2016). Impact of foreign direct investment on economic growth in Africa. *Problems and Perspectives in Management*, 14(2-2), 289-297. doi:10.21511/ppm.14(2-2).2016.04.

Bakari, S. 2018. The Impact of Domestic Investment on Economic Growth: New Policy Analysis from Algeria. *Bulletin of Economic Theory and Analysis*, 3(1): 35-51.

Balasubramanyam, V., Salisu, M. and Sapsford, D. 1996. Foreign Direct Investment and Growth in EP and IS countries. *Economic Journal*, 106 (434): 92-105.

Bayar, Y., 2014. Effects of foreign direct investment inflows and domestic investment on economic growth: Evidence from Turkey. *International Journal of Economics and Finance,* 6(4): 69-78.

Bekere, B. & Bersisa, M. (2018). Impact of Foreign Direct Investment on Economic Growth in Eastern Africa. In: Heshmati, A. (eds) Determinants of Economic Growth in Africa. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-319-76493-1_4

Bouchoucha, N. & Bakari, S. 2019. The Impact of Domestic and Foreign Direct Investment on Economic Growth: Fresh Evidence from Tunisia. *MPRA Paper No. 94777*. https://mpra.ub.uni-muenchen.de/94777/

DeBenedictis L.F. & Giles, D.E.A. 1996. Diagnostic Testing in Econometrics: Variable Addition, RESET, and Fourier Approximations. *In* A Ullah & D.E.A. Giles (eds.), Handbook of Applied Economic Statistics, Marcel Dekker, New York, 1998, pp. 383-417.

De Mello, L.R. 1999. Foreign direct investment-led growth: evidence from time series and panel data. *Oxford Economic Papers*, 51(1999):133-151.

Falki, N. 2009. Impact of foreign direct investment on Economic growth in Pakistan, *Review of Business papers*, 5(5).

Fox, S. & Dyson, T. 2017. Is population growth good or bad for economic development? IGC International Growth Center. Is population growth good or bad for economic development_ - IGC Blog.pdf (lse.ac.uk)

Ghazali, A. 2010. Analyzing the relationship between foreign direct investment domestic investment and economic growth for Pakistan. *International Research Journal of Finance and Economics,* 47: 127-135.

Güngör, H. and Ringim, S.H., 2017. Linkage between foreign direct investment, domestic investment and economic growth: evidence from Nigeria. *International Journal of Economics and Financial Issues*, 7(3): 97-104.

Hodrab, R., Maitah, M. & Kuzmenko, E. 2015. The Effect of Foreign Direct Investment on Economic Growth: Case Study Palestine. *The 2015 WEI International Academic Conference Proceedings,* Prague.

Khan, M. A. (2007). Foreing Direct Investment and Economic Growth: The Role of Domestic Financial Sector. *Pakistan Institute of Development Economics (PIDE) Working Paper* 18.

Kim, J. 2016. The Effects of Demographic Change on GDP Growth in OECD Economies. IFDP Notes. Washington: Board of Governors of the Federal Reserve System, September 28, 2016. https://doi.org/10.17016/2573-2129.22

Javaid, 2016. Impact of Foreign Direct Investment on Economic Growth of Pakistan-- An ARDL-ECM Approach. Handledare: Anh Mai Thi Van Södertörns högskola | Department of Economics Magisteruppsats 30 hp Economics | Spring 2016.

Mahmood, M.T. & Kashif-ur-Rehman (2012). The Impact of FDI on Economic Development of

Pakistan. *Journal of Social and Development Sciences* 3(2): 59-68.

Mamingi, N. & Martin, K. 2018. Foreign direct investment and growth in developing countries: evidence from the countries of the Organisation of Eastern Caribbean States. *CEPAL Review N° 124.*

Moss, T.J., Ramachandran, V. & Shah, M.K. 2004. Is Africa's Skepticism of Foreign Capital Justified? Evidence from East African Firm Survey Data. *Center for Global Development, Working paper* No.41. Available at: https://www.cgdev.org/sites/default/files/2748_file_cgd_wp041rev.pdf

Mothibi, L. & Ferreira, L. 2019. An empirical analysis of foreign direct investment and domestic investment as drivers of economic growth in South Africa. 52nd International Academic Conference, Barcelona. DOI:10.20472/IAC.2019.052.047

Nguyen, T.K. & Nguyen, H.T. 2021. The Impact of Investments on Economic Growth: Evidence from Vietnam. *Journal of Asian Finance, Economics and Business* 8 (8) 0345–0353.

Nunthirapakorn, T. 2020. Effects of Foreign Direct Investments on the Host Country. *NIDA Business Journal*, 26 (2020): 217-220.

Rahman, Z. U. 2014. Impact of Foreign Direct Investment on Economic Growth in Pakistan. *Journal of Economics and Sustainable Development* 5(27): 251-255.

Sahoo, D. & Mathiyazhagan, M. K. (2003). Economic Growth in India: Does Foreign Direct Investment Matter? *The Singapore Economic Review*, 48(2): 51-171.

Shrum, W. 2000. Science and story in development: the emergence of non-governmental organizations in agricultural research. *Social studies of Science,* 30(2000): 95-124.

Solow, R. 1956. A Contribution to the Theory of Economic Growth. *Quarterly Journal of Economics*, 70(1):65-94

StatsSA. 2019. Mid-year population estimates. STATISTICAL RELEASE P0302. Government Printers.

StatsSA. 2021 Quarterly Labour Force Survey Quarter 2: 2021. STATISTICAL RELEASE P0211. Government Printers.

StatsSA. 2022. Quarterly Labour Force Survey (QLFS) – Q4:202. MEDIA RELEASE, 29 March 2022. Media release QLFS Q4 2021.pdf (statssa.gov.za)

Sunkel, O. 1969. National Development Policy and External Dependence in Latin America. *The Journal of Development Studies*, 6(1): 23-48.

Teece, D.J., 1977. Technology transfer by multinational firms: The resource cost of transferring technological know-how. *The economic journal*, 87(346): 242-261.

Torrens, C. 2018. Chinese investment in South Africa. Retrieved from Control Risks. https://www.controlrisks.com/our-thinking/insights/chinese-investment-in-south-africa