Financial System Development and Economic Development in Malawi

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Abstract

The financial system development and economic development nexus has been a debate for over a decade. Both theory and empirical evidence provides conflicting evidence on the direction and nature of the relationship between financial system development and economic development. Results vary widely depending on whether one uses bank-based or market-based indicators of financial development. This paper seeks to address by using the composite indicator of financial development, developed by the International Monetary Fund(IMF), which captures depth, access, and efficiency of the financial system. Using yearly data of the period range 1980 to 2019, and employing an Autoregressive Distributed Lag (ARDL) cointegration technique or bound cointegration technique, the paper finds a significant long run negative relationship between financial system development and economic development, which runs from financial system development to economic development of Malawi. Therefore, in order to improve economic development, Malawi has been advised to improve its financial system through easy credit access and boosting its forex market, improve infrastructure and implement financial literacy programs that would teach citizens how best they can utilize resources given to them.

Keywords: Autoregressive Distributed Lag Model, Economic Development, Financial Development Index, Malawi.

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Table of Contents

1. Introduction

A good financial system helps to ensure effective and efficient allocation of financial resources. Therefore, a developed financial system, is a key element of economic development. According to King and Levine (1993), financial system development is the foundation of economic development, especially in developing countries. Despite existence of wide literature on the relationship between financial system development and economic development, there is no consensus on the nature and direction of the relationship between the two. As a result, there has been continued debate on this topic, with different methodologies being used to better understand the relationship.

Earliest views on the relationship between financial system development and economic development can be traced back to Schumpeter (1911), who argues that financial system development is the backbone of economic development. This view has been referred to as the finance-led growth theory or the supply-side hypothesis, as it suggests that financial development has a direct/indirect effect on economic development. This is because a better financial system ensures efficient allocation of resources which results to positive development. A number of scholars support this view, for example, McKinnon (1973) and Shaw (1973), suggest that financial liberalisation, which is the deregulation of the financial systems (which may include, interest rates flexibility and independence of banks from the government) has a positive effect on savings, that in-turn promotes investments and, in the long run, subsequently increases economic development.

Further, Goldsmith (1969) suggests that financial system development, results in efficient and effective allocation of physical and capital investment. This ultimately, results in improved loan accessibility, thus, increasing investment in small and medium scale businesses, which in turn increases total factor productivity and boosts aggregate output. This would imply that effective supply of financial services is a pre-requisite of economic development (King and Levine, 1993; McKinnon, 1973; Neusser and Kugler, 1998).

On the other hand, other scholars like Robinson (1952) and Jung (1986) dispute this finance-led growth theory and contend that it is economic development that results in financial system development. They argue that a country's need of financial system arise due to expansion in aggregate output. As the economy grows, people's disposable incomes also increase and so does the need to save and/or invest. This then leads to a demand for financial services, for

example, financial advice on how they can best utilise their finances (Robinson, 1952). This view is referred to as the demand-leading hypothesis or theory (Friedman & Schwartz, 1963).

The third view suggests that, there is no relationship between financial system development and economic development. According to Lucas (1988), the role of financial development on the economy is overstated and there is a need for a more balanced work on this association because this has significant policy implications. In essence, Lucas (1988) agrees more with Robinson (1952) than he does with Schumpeter (1911). However, other researchers like Mauro (1995) suggest that financial development worsens the economy rather than making it better. He argues that financial system development alone cannot improve the economy, thus, it needs to be accompanied by well-searched factors such as excellent private investments, political stability and human capital accumulation, among others. It is only the presence of a conducive environment, in which all the aforementioned factors have been addressed, that financial system development may have an effect on the economy.

It is important to understand that financial system development is multi-dimensional, although it can be broadly categorised into two branches namely; (1) financial institutions and (2) financial markets. Financial markets, is the branch of financial system development that helps individuals and firms raise funds and diversify their savings through stocks, bonds and foreign exchange markets. On the other hand, financial institutions are establishments that act as conciliators of financial dealings, for example, central banks and commercial banks. Based on this, most researchers characterise financial system development as encompassing access, efficiency and depth of the financial system (Ayala et al., 2015).

This paper seeks to examine the relationship between financial system development and economic development in Malawi. The financial system in Malawi, like most developing countries, was heavily regulated by the government in the 1970s. There were restrictions on savings interest rates, with very little to no access to private credit. In 1981, after many criticisms of such actions, the Malawi government embarked on financial sector reforms aimed at removing restrictions to access finance (Chirwa, 1999). Thus, it would be important to examine the relationship between financial system development and economic development, especially in light of these financial sector reforms. Past studies, for example, Chiuma et al (2012) and Kapaya (2020) use either proxies of financial institutions or financial markets-based indicators to capture financial system development. Unfortunately, such approaches may

misrepresent the role of financial system development as it places much emphasis on one dimension. This paper uses the financial development index (FDI), developed by the International Monetary Fund (IMF) in 2016, and thus capture the main aspects of financial system development, which are; access, depth and efficiency. To the best of the author's knowledge, this index has not been used in any studies on Malawi, making this the first paper to embark on this journey. This will heavily contributes to the strand of literature by analysing whether financial system development, in all its full measurement, is benefiting Malawi or not.

Some studies, for example, Agbetsiafia (2003), Abu-Bader and Abu-Qarn (2008) and Baliamoune-Lutz, (2008) use cross-country approach to examine the finance-growth nexus in Africa. However, this inadvertently assumes that African countries face similar challenges and these need to be dealt with collectively. This often results in recommendations and application of uniform policies or intervention strategies across countries. However, the nature and extent of the relationship between financial system development and economic development often varies across countries due to different policies and other country specific factors like corruption, politics and human capital, which are often not adequately captured in cross country studies. Therefore, by focusing on an individual country, this study seeks to provide a better understanding of country-specific problems and the crafting and formulation of suitable and effective policies and recommendations.

The study employs the autoregressive distributed lag (ARDL) bound procedure or cointegration technique to investigate the relationship between financial system development and economic development in Malawi using annual data over the period 1980 to 2019. Unlike other estimation models, the ARDL to cointegration approach does not require unit root tests and is applicable even if the variables have an integration order of zero or one (i.e. I(1) or I(0)) or a combination of both (Pesaran et al., 2001). Further, the long-run estimates are robust and consistent for small sample sizes, and thus suitable for this research

The rest of the paper is structured as follows: Section 2 provides an overview of Malawi's financial sector and its economy. Section 3 provides a review of both empirical and theoretical literature. Section 4 covers the data and methodology, followed by Section 5 with presentation and discussion of results. Finally, Section 6 provides the recommendations and conclusion.

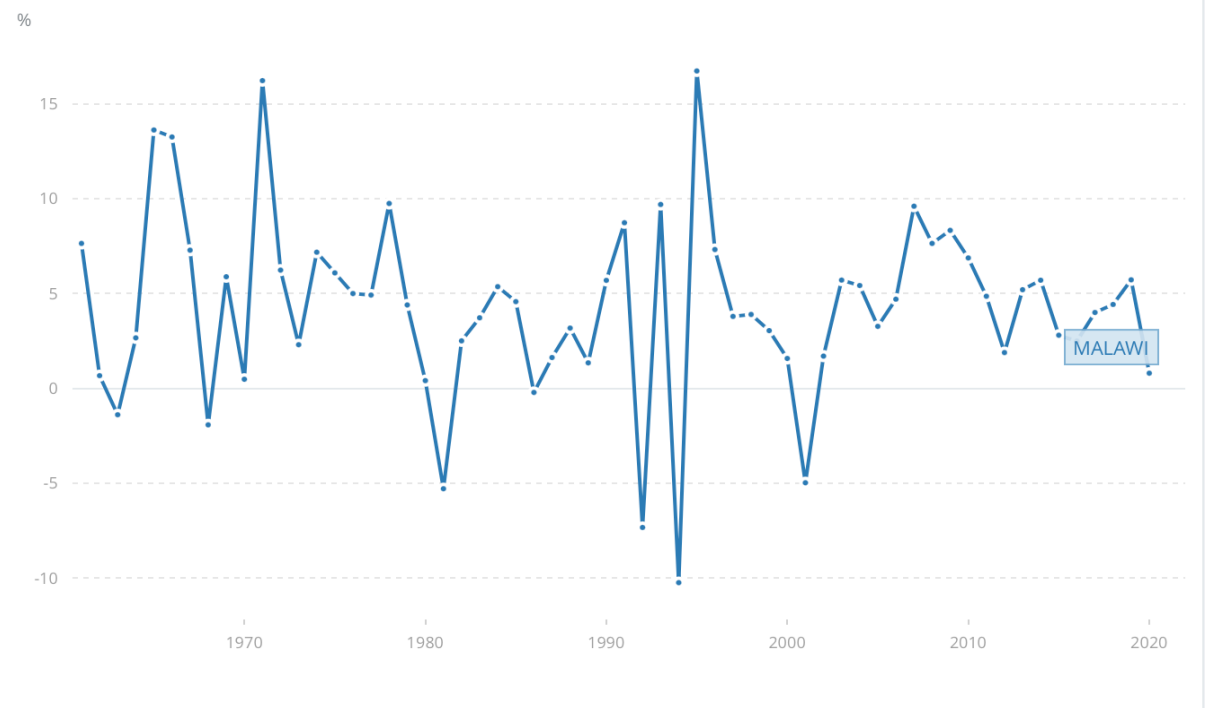
2. Overview of Malawi's financial sector and the economic development

2.1. Economic development in Malawi

Malawi's GDP growth rate has been fluctuating over the years as shown in Figure 1 below. Huge slumps were present in years 1961, 1981, 1992, 1994 and 2002. These slumps alternated with peaks in years 1965, 1973, 1993, 1995 and 2007. The fluctuations were due to unfavourable weather conditions like floods, and global shocks like the financial crisis and pandemics that destabilised the economy. The economy is heavily dependent on agriculture. About 39% of the gross domestic product (GDP) comes from agriculture activities and 80% of the country's exports comes from agricultural produce. Further, 80% of the labour work force is employed in agriculture. The country being highly dependent on agriculture means unfavourable weather conditions hugely affects the economy. This together with the global financial crisis and global pandemics, could explain the fluctuations in Figure 1.

In addition, small holder farmers over the years have failed to make profits due to a number of factors. One of the factors being the lack of access to credits as most of them lack collateral (JICA, 2021). Secondly, the tourism sector has been deteriorating due to natural disasters like cyclone Idai as this is unattractive to tourists as it is a threat to their lives. The cyclone Idai has also affected transportation in the country, which plays a big part in the development of the economy of moving goods and services from one place to another. These setbacks have amounted to adverse development of the economy as seen in Figure 1 (African Development Bank Group, 2022).

Figure 1: Economic growth in Malawi from 1961 to 2020



Source: The World Bank (2021)

Moreover, since 2017, the government embarked on a fiscal consolidation journey to reduce its debt, hence the seemingly stagnant growth of the economy from 2017 to 2020. This stagnant growth is compared to the previous years of 1961 to 2007 that happened to have better and higher output. Unfortunately, in 2020, the economy worsened due to the COVID 19 pandemic that affected the whole world (African Development Bank Group, 2022).

On the other hand, Malawi is a landlocked country located in the southern part of Africa. This leads to the country having high export and import transportation costs which hinders the development of the economy. The population of Malawi has been growing drastically more than its GDP. In 2019, its population was at 18.6 million which has been predicted to radically increase in the next 15 years (The World Bank, 2021). More than 80% of the population lives in the rural areas depicting the slow industrialisation and urbanisation process in Malawi (Burrit, 2006). There is also lack of foreign and domestic private investments in the country topped up with low levels of human capital. Low levels of human capital has been a major contributor of economic development setback for Malawi as there is poor investment in the education and health sectors (Milanzi et al, 2018). All this has accumulated to Malawi being an import and heavily consumer based economy.

2.2. Financial sector of Malawi

In 1981, the Malawi government embarked on measures to liberalise the financial sector by easing the control of interest rates, exchange rate and capital flow within and between countries (Chirwa, 1999). The government also initiated policies to privatize the financial sector in an attempt to improve efficiency within the sector. Furthermore, over the years, it has permitted foreign investors to have 100% ownership of the shares in the country to fuel economic development (Burritt, 2006).

The financial system is largely comprised of banks which constitute 80% of the financial institutions. There are 8 commercial banks (a decline from 11 in 2014), 4 microfinance institutions, 2 leasing companies, 1 government-owned savings bank, and a number of pension funds and insurance companies. However, these insurance companies are used by only 3% of the population as the rest cannot afford them (Sigh and Bariti, 2017). The composition of the financial institution stands up to date (Trade Financing, 2022).

Nevertheless, the infrastructure system has improved in the country. The Automated Teller Machines have increased from a total of 435 in the country in 2014 to 496 in 2019 and the banks' branches have increased from 94 total bank branches in 2014 to 110 in 2019 (Hawthorne et al., 2020). It is also one of the few countries in Africa that has a forex stock exchange (Market Reports, 2021).

Although a large population resides in the rural areas, like most developing economies, most of the financial system is located in urban areas. Most of the rural individuals survive on donations and informal banking like village banks (Burritt, 2006). The Malawian government propelled a development agenda in 2021 called "Malawi 2063 vision" where they decided to be working on improving the financial system, education, investment, health, energy and industrialising the country so it can be in the upper-middle class by 2063 (The World Bank, 2021). This agenda might be positive for Malawi as it promises to boost the financial sector and other sectors of the country further.

The financial sector in Malawi is both bank-based and market-based as the economy depends on banks to play a leading role in supplying businesses with loans that would help in their businesses. At the same time, it allows demand and supply to detect the welfare of exchange of goods and services on the market. Therefore, the financial development index could be a

good indicator of financial system development, as it captures the access, depth and efficiency of the financial system on both sides of the coins.

3. Literature review.

3.1 Theoretical review

In 1997, Levine introduced the supply-leading hypothesis or theory in support of Schumpeter's view on financial development leading to development of the economy. According to Levine (1997) the increase of credits to suppliers helps boost private investment, which results in economic growth (Levine, 1997). Consequently, he advocates for the development and implementation of technology in the finance sector, as it reduces transaction costs and increase money liquidity, with a positive impact on economic development.

Related to the above is the complementarity hypothesis by McKinnon, (1973) and Shaw, (1973) which posits that an increase in the real interest rates leads to an increase in savings. High interest rates act as incentives for people to save more. In the long run, these savings are transformed into investments, consequently, having a positive effect on GDP (McKinnon, 1973; Shaw, 1973).

On the other hand, Robinson (1952), Kuznets (1955), Friedman and Schwartz (1963) disagree with these theories. They propose the demand-leading hypothesis or theory, which suggests that higher economic development create the need or better financial system, hence the development of the financial sector happens. They continued to explain that a country's need of financial system arise due to expansion in aggregate output. As the economy grows, people's disposable incomes also increase and so does the need to save and/or invest. This then leads to a demand for financial services, for example, financial advice on how they can best utilise their finances. This view is referred to as the demand-leading hypothesis or theory (Friedman & Schwartz, 1963).

However, Lucas (1988) disagrees with the stated relationships and concludes that financial system development is overstressed in supporting economic development. Mauro (1995) further states that financial system development cannot achieve positive economic growth without strong support system like better infrastructure, better human capital and good governance. Thus, he encourages countries to look into these other factors that affect growth

to create a strong anchor for the financial system to prosper in achieving positive development of the economy. If countries are already economically weak, the financial system development leads to negative economic growth due to lack of adequate support from other factors mentioned (Mauro, 1995).

3.2 Empirical review

Empirical evidence on the relationship between financial development and economic development, can be broadly categorised into cross country studies and individual country studies.

3.2.1 Cross-country studies

Using panel data, Beck et al (2000) employed General Method of Moments (GMM) methodology to explore the relationship between financial system development and economic development in various 40 countries. They established that there is a positive causal relationship, where financial development leads to growth of the economy in all the 40 countries under their study. They concluded that better functioning financial systems lead to efficient allocation of resources which accelerates total factor productivity. However, the use of GMM in this topic only shows the short-run results and not long-run results. The long-run results can be present only after applying the delta method on top of the GMM. In an attempt, to adequately capture the long-run relationship between financial development and economic development, Christopolous and Tsionas (2004) applied the vector error correction model which tests for unit root and cointegration techniques for panel data of 10 developing countries. Their results showed positive association between financial development and economic growth. Although they combatted the GMM flaw that Beck et al (2000) had in their paper of producing short run and long run using one method, they did not consider the problem of cross-sectional dependency in their analysis which would have distorted the results somehow. This is one flaw that cross-country studies have.

Furthermore, Ghirmay (2014) conducted a study on 13 Sub-Saharan countries using the Johannsen cointegrating test as their methodology. They found a long run relationship between financial development and economic growth in 12 out of the 13 countries. However, causality tests suggest that the direction of the relationship differs across the countries as only 8 countries had financial development causing economic development. The rest of the countries had no causal direction. This point alone pinpoints why single country studies are encouraged in order

to dive deep into each country and help policy makers understand better ways to address their outstanding issues. Single country studies would show how and why each country is experiencing the behaviour they are experiencing.

Even though supply leading hypothesis is prevalent in cross country studies, other studies found different findings parallel to the famous view. Al-ward and Harb (2005) investigated the direction and causality of this nexus in the Middle East. They employed new methodologies for their study which is the Johannsen cointegration, granger causality and post-test methods called variance decompositions. The results found possible non-significant long run relationship between the development of the economy and financial development. However, in the short run, they found the relationship to be significant where the development of the economy granger causes financial development. Although the paper employed a modern methodology, they used credit to the private sector as the proxy for financial development which does not capture all the dimensions of the financial system, hence not yielding in-depth results to concretely conclude on this topic. The same Johannsen cointegration methodology was applied in Africa using 8 countries by Agbetsiafa in 2004. Results were similar for the poorest countries, where supply leading hypothesis was found to be present. For countries like South Africa and Nigeria, bidirectional causality was present. These results were in line with Patrick stages of growth (1966) as South Africa and Nigeria are economically richer than the other African countries involved, hence the two countries experiencing demand leading hypothesis.

Ductor and Grechyna (2015) worked on finance development and economic development topic involving 101 rich and poor countries. They employed the credit to the private sector as their proxy for financial development and used first difference generalised method of moments to analyse their panel data. They found a negative relationship in most of the developing economies whilst positive relationship in most of the developed countries. The reason for the negative relationship was as a result of an imbalance growth between the financial and the real sector. They concluded that other variables in the exception of financial system development are important in playing a part in the growth of an economy. Thus, good governance, better human capital, among others, are the recommended variables that would effectively, together with financial system development, push the economy forward, especially in the poor countries.

Moreover, in 2018, a study was conducted in South Asia by Jianguo and Qumruzzaman for four countries (Bangladesh, Pakistan, Sri Lanka and India). The data was quarterly data starting from 1975 to 2016. Like this paper, they employed the ARDL to cointegration model to analyse data in the four sampled countries. The proxy for economic development used was GDP per capita. On the financial side, they concentrated on financial innovation and used the ratio of broad-to-narrow-money as their proxy. They used trade openness, gross capital formation and domestic credit to private sector as macroeconomic variables that would bring about robustness in their study. They run all the necessary diagnostic tests for the model before producing results which they deemed valid. The ARDL to cointegration model results found showed that there exists long run relationship between financial innovation and economic development in all the four economies. Still, they recommended the different countries to keep on improving their financial system through inclusivity, infrastructure and allow bank based and market based sides operate together to bring the best they can to financial innovation.

Another interesting study was conducted by Mtar & Belazreg (2021) on whether financial development and trade openness effect economic development of 27 countries. Data used was yearly data ranging from 2001 and 2016. They opposed the granger causality test method and opted for Vector autoregressive model as they thought this would be best fit for the panel data they had. They also vouched for this method as it allowed them to analyse the data linking three main variables, which are financial innovation, financial development and trade openness on economic development. The results showed a causality from economic development to financial development for the 27 countries. It was also found that openness and financial innovation have a bi-directional relationship with economic development. They suggested that governments in the specific countries need to have better structures that regulate the development of the financial system. It was also said that different countries face different problems, thus a need for single country studies, to directly find out what causes such behaviours in the specific countries studied as country specific features play big roles in economies.

3.2.2 Single-country studies

Abu-Bader and Abu-Qarn (2008) explored the relationship between finance and growth in Egypt from 1960 to 2001 using co-integration and error correction model to get the granger causality results. They used four proxies for financial development covering depth, access and

efficiency. Results suggest that financial development Granger-causes economic growth in Egypt. Since the results were positive, they praised the government for the policy reforms they enacted in 1990 of improving the efficiency of the financial system, by reducing interest rates, which led to more savings behaviour by individuals, at the end resulting in positive economic development.

Ang and Mckibbin (2007) investigated this same topic in Malaysia. They used time series data ranging from 1960 to 2001. They employed cointegration and causality tests to evaluate this relationship. They concentrated on financial liberalisation through the removal of high interest rates to investigate if it has any impact on economic development. Results showed that financial depth through financial liberalisation is associated with the development of the economy. However, the orthodox findings produced results in support of Robinson's view where economic development leads to financial development, especially in the long run.

In Africa, a study was conducted in Ghana on the finance and development nexus by Prah and Quartey (2008) from 1970 to 2013 . They used four proxies of financial development. While exploring this relationship using a bivariate vector auto-regressive model, they found different results for different proxies. Beginning with broad money to GDP ratio, they found that there exists demand leading hypothesis theory. On the other hand, private credit to GDP ratio, domestic credit to GDP ratio and private credit to domestic credit ratio were not in support of the demand leading, supply leading and Patrick stages of development hypotheses. Thus, they recommended a better and a multidimensional proxy that can be tested at once to give a conclusive finding of whether there exists any relationship between finance and economic development in Ghana.

Odhiambo (2008) also employed cointegration and error correction models to analyse if financial depth effect economic growth in Kenya. The results found showed economic growth causes financial development. He concluded that this might be the case as Kenya is not in the early stages of development any more, thus people would be in high demand of financial services . This is in line with Patrick's view (1966) who specifies the stages of development that states that supply leading hypothesis mostly happens in the early stages of development, whilst demand-leading hypothesis happens in the later stages of development. This finding is important as cross country studies do not go in depth into specifying what kind of a relationship

exists for each country when studies are conducted. Therefore, this single country study takes a lead on superiority concerning what constitutes a good study.

Frank (2007) conducted a study in South Africa to find out if there is a relationship between financial system development and economic growth by using data from the financial institutions and financial markets. Data used was from 1989 to 2001, and he employed a simple ordinary least squares model. Proxies used for financial development were credit to the private sector to GDP, stock market index volatility and stock market index development. There were positive results flowing from finance to growth through credit to the private sector to GDP but not the same for stock market index variables. These two variables were negatively associated with growth. It was explained that this was due to the underdevelopment of the stock market in South Africa, .Thus, policies need to be implemented in order to boost the financial market as it is a modern tool for economic growth. The study could have done better in employing a competitive model other than OLS that could help produce non debatable results.

A very recent study was done in Nigeria by Olorogun et al in 2020 that concentrated on data ranging from 1970 to 2018. They were eager to see the relationship between foreign direct investment, financial development with economic development. The explanation to such a topic was to found out if other alternative means of expanding the economy are viable, apart from the government expenditure. Through the use of ARDL to cointegration model, results showed financial development to have an indirect relationship with economic development. This relationship was through gross capital formation. They concluded that financial development, without better investment and other supporting features, would not have led to a positive causal effect on economic development. They also found Foreign direct investment to be causing a positive effect on economic development, thus deemed a viable channel for the betterment of Nigeria.

Moreover, Hussain et al (2021) investigated how they can acquire economic development without foregoing their future generation's prosperity in Pakistan. They decided that for this to be possible, financial development and trade openness will need to create a way to their economy's sustainable development. Through the use of the ARDL to cointegration model and data running from 1975 to 2018, they found financial development through the use of domestic credit to private sector to have a positive relationship with economic development in the long run. They also found positive relationship between trade openness and economic development

to be a short run phenomenon. Granger causality also showed to favour a unidirectional relationship where financial development and trade openness cause economic development. They closed by stating that Pakistan's government should work more on their financial system and their openness in order to continue having a sustainable economy that would benefit everyone.

As seen in the literature discussed, most of the literature lacks a collective proxy as the measurement of financial system development. Also, most of the studies focus on financial institutions and neglect financial markets in the evaluation of this relationship. Thus, the paper intends to explore the relationship between the two variables using financial development index as a multi-dimensional proxy for financial system development, touching on both the financial institutions and financial markets.

4. Data and methodology

4.1 Data

The data used in this paper is yearly data ranging from 1961 to 2019 period. The data is obtained from two credible sources called The World Bank and International Monetary Fund. This year range was chosen as one of the key variables called "Financial development Index (FDI)" had data in this year range only at the time of extraction. All the data will be transformed by logging them. Logging variables has been said to reduce skewness in the variables. It also results in better explanation and understanding of the variables.

4.2 Variable Description

4.2.1 Financial development

As stated earlier, financial development is defined as improvement in the depth, access and efficiency of the financial sector. A number of indicators have been used as proxies for financial development. For financial institutions, researchers have frequently used interest rate, private sector credit to GDP ratio, branches per 1000 adults, and M2 to GDP ratio as measures of financial institutions development whilst they have used private debt securities to GDP ratio, stocks traded to GDP ratio, domestic securities to total debt securities ratio and turnover ratio as measures of the financial markets development (Gisanabagabo & Ngalawa, 2017). However, the private sector credit to GDP ratio takes the lead in all the financial system development

proxies as it is deemed to be a direct channel of transacting money from the banks straight to economic investments through small and medium businesses (Guidotti & De Gregorio, 1992)

However, single financial development measures above have shortfalls of not capturing all the dimensions of financial system development. Thus, FDI was formed to combat such a problem. FDI proxy is compiled using a standardized three step method that collapses all parts of financial system into one. Firstly, the variables are normalized. This is followed by the aggregation of the normalized variables into sub-indices that represent the different proxy dimensions of access, depth and efficiency of financial institutions and financial markets. Lastly, these sub-indices are merged into one figure termed financial development index (International Monetary Fund, 2021). The scale of the FDI is from 0 to 1. The expected results is to find a positive relationship between economic development and financial development.

4.2.2 Economic Development

The dependent variable is economic development, represented by GDP per capita. GDP per capita measures the output of an economy as per population. If GDP per capita increases, it signifies positive economic development of an economy, and if it decreases, it signifies negative development of an economy. The GDP per capita data was taken from the World Bank Development indicators database (2021). GDP per capita is expressed in US dollars.

The control variables include private investment as percentage of GDP, political stability, government expenditure as percentage of GDP and human capital. These variables have been found to have a close relationship with GDP per capita. Each of the controlled variables are discussed in detail below.

1) **Private investment as percentage of GDP :** The private investment as percentage of GDP is very crucial in the analysis of financial development and economic development as it has been studied to be among the limited variables that have a strong relationship with economic development. This variable has been supported by the neoclassical model in elaborating that capital formation is vital for the development of the economy (Mustefa, 2014). Thus, including it in the paper will help in eradicating any biases that the paper may incur (Demirguc-Kunt, 2006). Just like the GDP per capita variable, the investment variable was taken from World Bank (2021) and is

measured as percentage of GDP per capita. The results of the relationship between investment and economic development are expected to be positive.

2) **Government expenditure**:. The Keynesian hypothesis emphasizes that government expenditure is vital in expanding the economy when the fiscal policy is proactive (Al Gifari, 2015). The results can be both positive or negative depending on where the economy is at that particular time (Usai & Vannini, 2005; Roubini & Sala-i-Martin, 1992). Increasing expenditure or cutting down taxes can push the economy forward. However, if the expenditure is above tax revenue, the government runs a deficit which affect the economy negatively. At the end, the monetary policy comes in to solve the problem that fiscal policy has failed to eradicate (Al Gifari, 2015). Therefore, this variable is important in helping explain the relationship between finance and economic development. Government expenditure variable was also taken from World Bank (2021) and is measured in US dollars as a percentage of GDP per capita. The paper expects to find a positive relationship between government expenditure and economic development.
3) **Human capital**: It has been shown in many studies that human capital extensively effect economic development, mostly in the long run. The models backing up this theory are the endogenous and neoclassical models by Romer (1990) and Becker (1993). They explain that this is done through better education, improvement of technology and health care facilities. These models also support Lucas (1988) on his theory of finance and economic development that finance system development alone cannot push the economy forward, but with the help of other relevant factors. Bundell et al (1999) as cited in Pelinescu (2015) stated that a rise in the level of education leads to an extensive surge in economic development. Also, Jenkins (1995) as cited in Pelinescu (2015) conducted a study in in the UK which he realised that a 1% increment in human capital rose economic growth by 0.21 percentage points. This variable has also been found to be useful in the growth of Malawi as found out in the study by (Milanzi et al, 2018). Thus, it will be crucial to not leave out such an important factor of economic growth when exploring financial system development and economic development. The variable was also extracted from World Bank (2021) where small values mean low literacy rate and big values mean high literacy rate. The paper expects to find a positive relationship between human capital and economic development.
4) **Political stability:** There is a strong relationship between Political stability and economic development. Policies are said not to be efficient if political instabilities are

present in the economy. This is so as these policies are only executed for a short duration. The political unsteadiness also portrays that there are uncertainties in policies made, hence resulting to a stagnant economic development due to lack of incentives for investors to invest in the economy. The variable was also extracted from World Bank (2021) where small values mean excellent political stability and big values is vice versa. The paper expects to find a positive relationship between political stability and economic development (Aisen & Viega, 2011).

4.2 Methodology

4.2.1 Econometric model

The ARDL to cointegration model was created in 1999 by Perasan and Shin. It was later extended in 2001 by Pesaran et al. The ARDL model is best known for its unique features when dealing with data. Firstly, it is excellent in dealing with a combination of variables that are integrated of I(1) or I(0). This means that it does not restrict its model in having one specific integration order. However, the models do not have to exceed integration of order 2 as the models can collapse. Secondly, unlike other cointegration techniques, the ARDL model is effective in estimating results that have small or finite sample sizes. Thirdly, the ARDL model can have a mixture of endogenous and exogenous variables, thus the need for the different lag lengths. Lastly, the paper seeks to assess whether there is a relationship, and if this relationship is a short run, long run relationship or both to help policy makers in determining the duration in which the relationship can take effect. Therefore, the ARDL model provides such a feature (Nkoro and Uko, 2016). With all this in mind, the ARDL to cointegration model is suitable for the paper's time series data as it embraces all the features that the data has and that the paper wants to analyse. In consequence, producing unbiased results.

The undifferenced comprehensive ARDL(p, q) model is specified as follows

$$Y_t = \partial_{0j} + \sum_{j=1}^{p} \beta_{1j}\, Y_{t-1} + \sum_{j=0}^{q} \beta_{2j}\, FDI_{t-j} + \sum_{m=0}^{r} \beta_{3m}\, H_{t-m} + \sum_{c=0}^{f} \beta_{4c}\, INV_{t-c} + \sum_{d=0}^{s} \beta_{5d}\, POL_{t-d} + \sum_{l=0}^{g} \beta_{6l}\, GOV_{t-l} + \mathcal{E}_{jt} \quad (1)$$

where : Y_t is a vector and it represents the current explained variable which is the GDP per capita.

∂_{0j} is the constant or the drift in the model.

The p and q represents the optimal lag orders, where p denotes optimal lags in the GDP per capita and q denotes optimal lags in the financial development index. The control variables each have their own representation: r for optimal lags in human capital, f for optimal lags in investment, s for optimal lags in political stability and g for optimal lags in government expenditure. $\mathcal{E}_{jt}$ is the vector of error terms which is assumed to follow a white noise distribution.

As highlighted above, the dependent variable is a function of its lagged values, the current and lagged values of the exogenous variables which are financial development index, political stability, private investment, government expenditure and human capital. It should also be noted that the lag lengths of the variables do not need to be of the same length, they can vary. Moreover, all the variables are logged in the model for easy finding of elasticity between economic development and the rest of the variables. Also, the logging is crucial as it reduces skewness of the variables, thus better estimations (Al-Ward and Harb, 2018).

Certain tests need to be conducted before an ARDL cointegration model is estimated, as it helps in achieving unbiased and valid ARDL to cointegration model results.

4.3 Model Diagnostic tests

4.3.1 Unit root test

Checking for stationarity in ARDL model is important as the model cannot function if some of the variables are integrated of order 2 and above (Davidson and MacKinnon, 2004). In that manner, we need to make sure that all variables are integrated of order 1 or 0. There are many ways that one can check for stationarity. That is through correlogram, graphical time series plots and descriptive statistics. These stationary checks have to show that the mean and variance are not varying with time (Gujarati, 2003). When there is varying mean or variance, it means that unit root is present in the data, hence, a need for the non-stationarity time series to be transformed into a stationary one. This is when differencing is applied to time series until the data is stationary.

Even though some pictorial measures of stationarity of time series can show that the series is stationary, it is recommended to use a formal test to absolutely conclude on this. One of the famous formal test is the Augmented Dicky Fuller (ADF) test . The ADF test consists of error

terms following a known order autoregressive process . This is in accordance with the ARDL to cointegration model since the ADF test follows an autoregressive model that the ARDL model also possesses (Davidson & MacKinnon, 2004). The null hypothesis is that there is unit root in the time series, and the alternative hypothesis is that there is no unit root. If there is a unit root, the time series needs to be differenced until it becomes stationary.

4.3.2 Optimal lag order

This step follows after unit root test as it is vital in selecting the appropriate lag length needed for the ARDL model to produce concrete results since it possesses both endogenous and exogenous variables. The right lag-length ensures that the model does not encounter residuals that are not gaussian. Gaussian residuals do not suffer from serial correlation, they are normally distributed and homoscedastic. The Akaike Information Criteria (AIC) and Schwartz Bayesian Information Criteria (SBIC) are used to determine the number of lags needed for each variable in the equation (Hatemi and Hacker, 2009). Though the SBIC is preferred to AIC as it is parsimonious and has great strength in small samples. Therefore, making the paper use the SIC. The lower the value of the SIC or AIC, the better the model (Gujarati, 2003).

4.3.3 Cointegration

The best way long run effects can be shown to be present or absent in an ARDL to cointegration model for time series is through cointegration method. This methodology is crucial in finding if there exists long run effects in ARDL to cointegration model between two dynamic variables which are non-stationary but integrated to orders of zero and one. This step also aids in finding convergence in ARDL to cointegration model when time is changing from short run to long run in time series data. In consequence, cointegration provides statistical and economic footing for empirical error correction model (ECM). The ECM unify the short-run and long-run data evidence in modelling variables (Nkoro and Uko, 2016).

The cointegration technique used in ARDL to cointegration model is called the bounds procedure. Since we are dealing with an ARDL to cointegration model, the bound procedure is applicable in the paper as cointegrating vectors will be recognised by singularly running a long run relationship for each variable present in the paper (Pesaran and Shin, 1999). Every variable will take turn in being the dependent variable and see if the relationship also exists in the long run. When a long run relationship is found to be present, the ARDL to cointegration

model of the cointegrated vector is reparametrised into ECM. This reparametrised equation gives the short run dynamics. This is possible with an ARDL to cointegration model as it possesses features of a dynamic single model and of the same structure with the ECM. This is why ARDL to cointegration model is defined as the enclosure of the limitless lag of the explanatory variables in the regression function (Nkoro and Uko, 2016).

The null hypothesis of bounds procedure test cointegration is that the coefficients of long run variables are equal to zero which means that there is no cointegration, or there is no long run relationship of the said dependent variable. The alternative is that the long run coefficients are not equal to zero, thus there is cointegration or long run relationship of the said dependent variable. The critical values used for the rejection of the null hypothesis are from Narayan (2005) who advocates that the critical values in Perasan et al (2001) work better in large sample sizes and not sample sizes of 30 to 80 observations. The paper's observations are within the small sample size range of 39 observations, thus, the Narayan (2005) critical values will be used where 2.496 - 3.346 are for 0.1 significance level, 2.962 – 3.910 are for 0.05 significance level, and 4.068 – 5.250 are for 0.01 significance level. If the F-statistic is found to be above the upper bound, the paper concludes that there is cointegration or long run relationship of the said dependent variable. If they are found to be below the lower bound, the paper concludes that there is no cointegration.

When cointegration is present in all the variables, the equation 1 is remodelled as

$$\Delta Y_t = \partial_{0j} + \sum_{j=1}^{p} \beta_{1j}\, \Delta Y_{t-1} + \sum_{j=0}^{q} \beta_{2j}\, \Delta FDI_{t-j} + \sum_{m=0}^{r} \beta_{3m}\, \Delta H_{t-m} + \sum_{c=0}^{f} \beta_{4c}\, \Delta INV_{t-c} + \sum_{d=0}^{s} \beta_{5d}\, \Delta POL_{t-d} + \sum_{l=0}^{g} \beta_{6l}\, \Delta GOV_{t-l} + \Phi ECT_{t-1} + \mathcal{E}_{jt}$$

Where all the values with Δ represents the short run coefficients and the ECT coefficients represents the long run. The Φ is equal to (1- $\sum_{j-1}^{p} \delta j$) which represents the speed adjustment parameter. The sign on this parameter ought to be negative as this depicts convergence in the long run. If it is positive, it means that there is no convergence. ECT is equal to (Yt – ØXt) which is the error correction term. Ø is equal to $(\frac{\sum_{j=0}^{p} \beta_j}{\partial})$ which is the long run parameter. It is

also supposed to be significant as this is the only way to confirm that there exists long run relationship between the variables (Nkoro and Uko, 2016).

4.3.5 Granger causality

Granger causality test is used to assess the direction of the causal relationship between the main variables. This method will answer the question of whether financial system development causes economic development or if it is vice versa (Chiuma et al., 2012).

5. Results and Discussion

5.1 *Descriptive statistics.*[1]

Table 1: Descriptive statistics of the times series data variables present

Statistic	FDI	Per-capita GDP	Political stability	Government expenditure	Human capital	Investment
Minimum	0.05	121.30	3.10	2.34	60.15	10.78
Median	0.09	228.60	3.30	2.73	133.22	15.03
Mean	0.09	274.30	3.32	2.75	115.36	17.03
Maximum	0.12	583.10	3.90	3.483	156.40	29.10
Observations	39	39	39	39	39	39

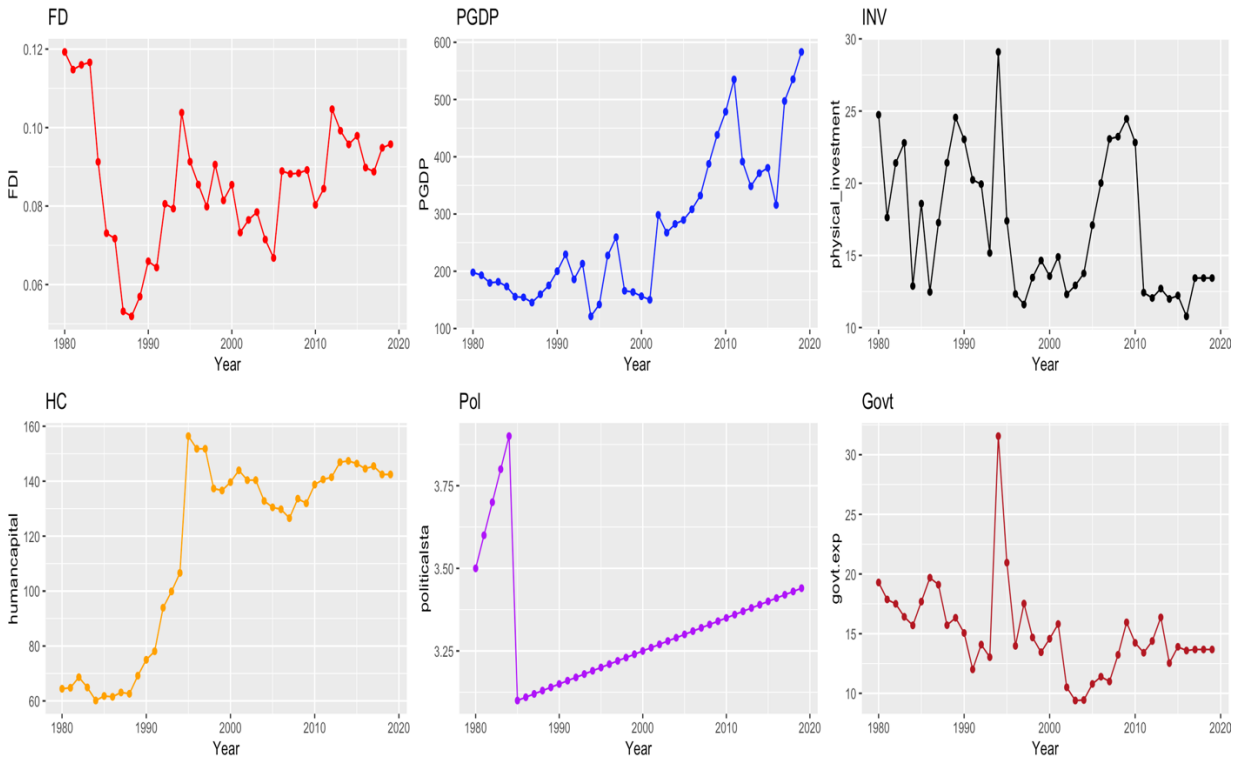
Source: The data ranges from 1980 to 2019 and it has been compiled from R studio by the author.

From Table 1, above, the means and medians of the variables are not far from each other which depicts a symmetrical distribution of the data variables making the data good data for further estimations, as suggested by Gogtay and Ranganathan (2019). For FDI: median is 0.09 and mean is 0.09, GDP per capita: median is 228.60 and the mean is 274.30, Political stability: median is 3.30 and mean is 3.32, Government expenditure: median is 2.73 and mean is 2.75, Human capital: median is 133.22 and mean is 115.36, Investment: median is 15.03 and mean is 17.03. For this reason, the data is deemed valid for the paper to progress with the study. The variable with the largest variation is GDP per capita showing that there has been difference in growth rates between the old and recent years. Moreover, when the data is logged, it will smoothen out the differences and lead to better estimation of results.

[1] All the variables in table 1 have not been logged. This is to see how the data is behaving in its raw-est form before transformation.

5.3 Diagnostic tests

Figure 1: The time series data graphical plots of the variables present from 1980 to 2019.



Source: Calculations from R studio by the author where FD stands for Financial development index, PGDP stands for GDP per capita, INV stands for Investment, HC stands for Human capital, Pol stands for political stability and Govt stands for government expenditure.

It is seen from figure 1 that none of the variables are stationary as all the time series line graphs do not have constant means and constant variances as time progresses. Even though variables are shown to be non-stationary by visual check, one cannot give concrete stationarity conclusion from this without the formal unit root testing. Hence, the table 2 below will conclude if indeed the visual checks are saying the truth or not. Moreover, the graphs portray the trends of the variables over the years. It is displayed that overall, all the variables have increased in the year range being studied. However, government expenditure and Investment variables seem to have increasing and decreasing growth alternating over the years.

Table 2: Showing stationarity and lag length results of the time series variables after ADF test and lag determination tests are conducted.

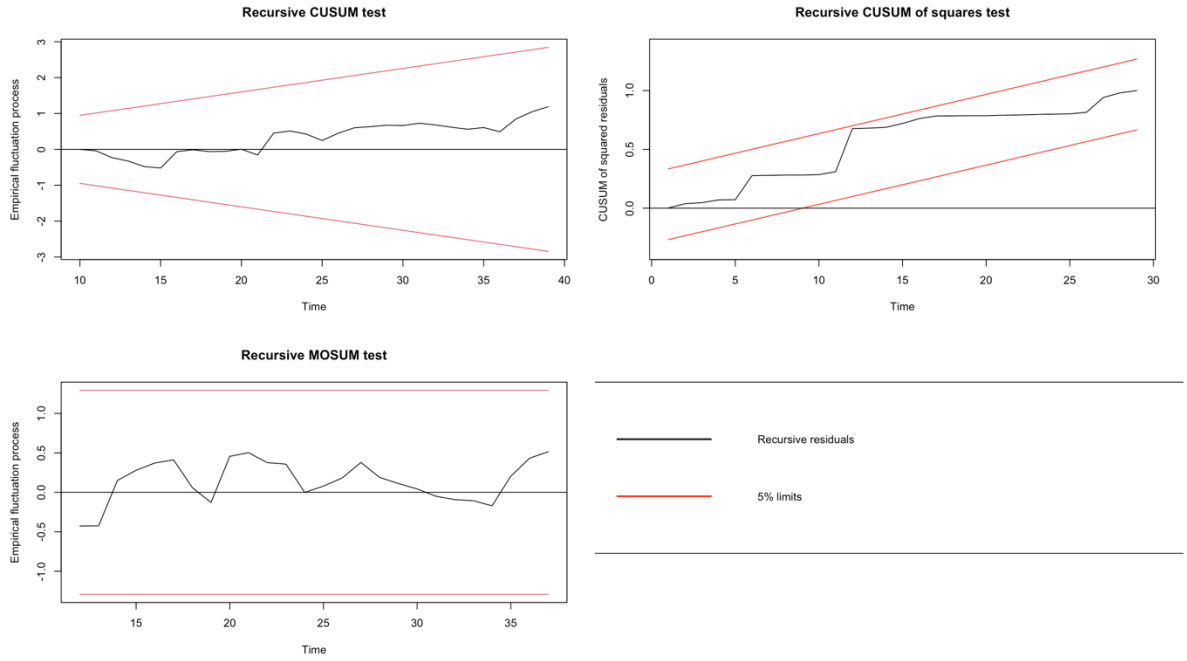
Variables (logged)	**(ADF test statistic) in levels**	**(ADF test statistic) for 1st difference**	**Integration order**	**Lag-Lengths**
FDI	-4.93**	-	I(0)	2
PGDP	-2.67	-4.39**	I(1)	1
Investment	-3.06	-3.98**	I(1)	2
Govt expenditure	-2.48	-3.86**	I(1)	2
Human capital	-1.64	-3.59*	I(1)	3
Political stability	-1.97	-3.97**	I(1)	3

*Source: Own calculations from R studio. The data spans for 39 years. The ***, ** and * represents 0.01, 0.05 and 0.1 significance level. If the value is not within these ranges then accept the null hypothesis.*

The variables in table 2 are shown to be non-stationary at levels, except for FDI. This means that all the non-stationary variables except for FDI need to be differenced in order for them to be stationary. When the variables are first differenced, they are shown to be stationary at 0.05 and 0.1 significant levels. Since they are all stationary when first differenced, they are said to be I(1) whilst FDI is I(0) which allows them to be analysed through ARDL model. Some of these findings concur with findings by Odhiambo et al (2021) who found investment, government expenditure and GDP per capita to be integrated of order 1. However, he found the proxies of financial development to be integrated of order 1, which is contrary to what this paper has found. This might be as a result of the different papers using different proxies. The results showing I(0) and I(1) in variables means that no spurious results will be generated throughout the paper, making the ARDL model fit for analysing the data.

In the same table 2, it is seen that the lag lengths for each variable have been determined where the PGDP has lag length of 1, FDI, Investment and Government expenditure have lag length of 2, Human capital and Political stability have lag lengths of 3. These lags will be incorporated in the ARDL model for better and unbiased estimation.

Figure 3: Showing the CUSUM and MOSUM graphs after stability test.



Source: Own graphical computations from R studio.

Figure 3 displays the accumulated sum of squared residuals for the ARDL model generated. It is seen that none of the recursive residuals are outside the 5% significance level. This symbolises that the coefficients in the model are stable throughout the period span.

Additionally, the residuals are tested for normality, serial correlation and heteroskedasticity.

Table 3: More diagnostic checks

Diagnostic test	T statistic	P value
Serial correlation	2.8191	0.1935
Heteroskedasticity	18.014	0.3879
Normality	0.9531	0.1127

Source: Own calculations from R studio.

Table 3 displays that there exists normality, there is no heteroskedasticity and no serial autocorrelation in the residuals. This means that the model is unbiased, efficient and consistent in yielding results. In short, it entails that the model is robust. Therefore, these results can with no doubt be said to be reliable in stating the case of financial system development and economic development in Malawi. These diagnostic findings are similar to findings of the paper by

Jianguo and Qumruzzaman (2018) which showed that their model was viable for further estimations.

ARDL bounds test

Table 4: Showing the bounds test/cointegration results of the variables present.

Variable	**Level of significance**	**Bounds critical values**		**F statistic**
GDP per Capita		Lower	Upper	
	1%	4.324	5.642	
	5%	3.116	4.094	
	10%	2.596	3.474	3.855

Variable	**Level of significance**	**Bounds critical values**		**F statistic**
FDI		Lower	Upper	
	1%	4.324	5.642	4.220
	5%	3.116	4.094	
	10%	2.596	3.474	
Investment	1%	4.324	5.642	
	5%	3.116	4.094	
	10%	2.596	3.474	2.355
Human capital	1%	4.324	5.642	
	5%	3.116	4.094	3.111
	10%	2.596	3.474	
Government expenditure	1%	4.324	5.642	
	5%	3.116	4.094	
	10%	2.596	3.474	2.552
Political stability	1%	4.324	5.642	
	5%	3.116	4.094	3.011
	10%	2.596	3.474	

Source: Own calculations from R studio . The critical values used in the table are from Narayan (2005) which work better with small sample sizes like the one in the paper.

In table 4, it is displayed that when GDP per capita is the dependent variable, the F statistic falls under the significance level of 10%. The F statistic value 3.855 is above 3.474 critical value. This means that there is long run relationship between GDP per capita and the rest of the explanatory variables. This is because the null hypothesis of absence of long run relationship is rejected when the F statistic is above the upper bound critical value. It is accepted when the F statistic is below the lower bound critical value. When the F statistic is between the

upper and lower bound, the results are inconclusive, thus more tests need to be run in order to have a conclusive model.

The FDI proxy and controlled variables have also each been tested for long run relationships by each being placed as dependent variable. Their results display no cointegration when they are the dependent variables. This means that only the equation with cointegration or having presence of long run relationship needs to be reparametarised to ECM in order to yield both short run and long run estimates, at the same time obtaining the ECT to know if the relationship stabilizes, and at what rate this happens. This equation is the one that has GDP per capita as the dependent variable.

Table 5: Long run results: Explained variable is Y(PGDP)

Variables	Coefficients	Standard errors	P values
FDI	-0.16370	0.27193	0.01935*
Human capital	0.10705	0.00491	0.23349
Govt expenditure	-0.23425	0.24650	0.35455
Political stability	0.37970	0.42630	0.38528
Investment	0.04488	0.20225	0.82649
Constant	-5.82484	1.95945	0.00764 **

*Source: Own calculations from R studio. *** presents 1% significance level, ** presents 5% significance level and * presents 10% significance level.*

Table 6: ECM results: Explained variable is ∆ Y (PGDP first differenced)

Variable	Coefficients	Standard errors	P values
∆ *FDI*	-0.078383	0.036955	0.144014
∆Human capital	0.014635	0.003414	0.000237
∆ Govt expenditure	-0.545690	0.231010	0.02963 *
∆Political stability	-0.623457	0.263090	0.025830 *
∆Investment	0.445891	0.192793	0.029250 *
ECM(-1)	-0.112726	0.023923	7.86e-05 ***
Constant	-5.824841	1.239193	8.10e-05 ***
R squared	0.661		
S.E of regression	0.156		
F test	4.431		0.0009886

*Source: Own calculations from R studio. *** presents 1% significance level, ** presents 5% significance level and * presents 10% significance level.*

Table 7: Granger causality test check [2]

Null hypothesis	**Observations**	**P values**
FD does not granger cause PGDP	39	0.03158**
PGDP does not granger cause FD	39	0.89962

Source: Own calculations from R studio

From table 5, it is seen that there is a significant relationship between financial system development and economic growth where a 1% increase in financial system development significantly decreases economic development by 16% at 0.1 significance level, which is a big decline considering the range of the FDI is 0 to 1. However, when table 6 is looked at, the same results are not present in the short run since the relationship between financial system development and economic development is not significant at all significant levels. This means that the relationship between financial system development and economic development is only a long run phenomenon in Malawi for the duration of the years analysed. These findings do not concur with findings in Malawi by Chiumia et al (2012), whereby the use of two proxies from the financial institution found a positive long run relationship between financial development

[2] One needs to know that association does not equal to causation. There can be association without causation but there cannot be causation without association. Thus, the need for granger causality.

index and economic development. The results might be different due to the financial system development proxies used as they only looked at financial institutions whilst the paper looked at the whole financial system development of Malawi.

Moreover, the granger causality tests show that this relationship between financial system development and economic development is a unidirectional relationship. This affirms it that financial system development granger causes economic development in Malawi and not the other way round. This causation is significant at 0.05 significance level. These results are not in accordance with the famous Schumpeter's (1911) view where he states that financial system is vital for efficient economic development of a country. Also, the results do not follow Patrick stages of development theory (1966) where developing countries are likely to experience supply leading hypothesis type of growth as the financial system plays a critical role in small and medium businesses which aggregate to the growth of the economy. Thus, these particular results concurs with Mauro (1955) who states that financial system alone cannot effect positive change in the economy, it rather makes the economy worse. For there to be positive economic change, financial system needs to be backed up by good exogenous factors like excellent human capital, political stability and good private investment, to mention a few.

Moving to controlled variables, and beginning with human capital variable in the short run. The variable displays to not have a significant relationship with economic growth. The same results are seen in the long run, where a 1% increase in the human capital increases economic growth by 0.14%, which is very small. Although the relationship is positive, the change is not economically significant as it shows that human capital needs to be improved on in order to bring substantial changes in economic growth as this is vital for the development of the economy. This also explains the financial system having a negative relationship with economic development as there is poor human capital accumulation in Malawi. The results concur with Milanzi et al (2018) where they found human capital to a big factor in stagnating the development of Malawi using the same methodology as this paper. It would also be wise to try other measures of human capital like secondary school enrolment and not just primary school to see if there can be any changes to the human capital results.

The investment variable shows to have a significant relationship with economic development in the short run and not in the long run. In the short run a 1% increase in investment raises economic growth by 0.45 percent, which is also very small. The fact that investment seems to

be a short run phenomenon in Malawi shows that the finances do not last long to have an impact in the long run, thus, businesses end up failing in the long run. The finding disagrees with the findings of Olorogun et al (2020) who found a long run relationship between investment and economic growth. Therefore, this calls for implementation of financial literacy in Malawi to teach small and medium businesses how best to utilise the resources at their disposal in order to have sustainable economic development through investment. This suggestion concurs with the neoclassical model which states that capital accumulation is essential for the growth of the economy, regardless of what is already present.

As for political stability, it is seen that it is significant in the short run and not in the long run. However, signs change from negative sign in the short run to positive sign in the long run. This change in sign as it moves from short run to long run is good as an increase in political stability leads to better economic growth. However the non-significant long run relationship is not good for the economy as it shows that it has no tangible positive effect on economic development. When political stability exists, it shows good governance which later attracts investors domestically and internationally, at the end effecting positive economic development.

The last controlled variable is government expenditure. Government expenditure has a negative relationship with economic development both in the short run and long run. However, the relationship is significant only in the short run where a 1% increase in government expenditure decreases economic development by 0.54%. Like said by Ang and Mckibbin (2007), financial liberalisation leads to better economic development as government does not accrue finances for their own benefit since the country's financial system is independent of the government. Also, the Keynesian hypothesis by Al Gifari (2015) explains the downside and upside of government expenditure. In this scenario, the paper sees the downside of it where government spending is not effective in Malawi. Instead of it bringing positive change, it is deteriorating the economy. Fiscal consolidation policies that the government has been working on are being proven to cause more damage than good. Hence, better policies need to be put in place in order to bring the economy to fruition.

The paper continues with another important component called the ECM coefficient. It is seen that the ECM has a negative sign, and it is significant. This is vital as it shows that the unstable equilibrium present in the short run between the financial system development and economic development becomes stable in the long run regardless of previous shocks in the explanatory

variables. The ECM has a coefficient of 11.27% showing that the relationship is very slow at stabilising to equilibrium. Normally, we would want the stabilisation to not be too slow or too fast. All in all, there is convergence in the long run amidst all the variables involved in the ARDL model. This proves that cointegration does indeed exists between the variables and that the bounds test was right in showing that there exists a long run relationship between the variables, and that this relationship becomes stable as it moves from short run to long run.

6. Recommendations and Conclusion

The paper investigated if there exists a relationship between financial system development and economic development in Malawi. The granger causality test was also analysed to see the direction of causality between the two variables. Results showed there exist a significant negative long run relationship between financial system development and economic development and that the causation runs from financial system development to economic development. The data used in the paper was annual time series that span from 1980 to 2019. The ARDL to cointegration model was used in analysing this time series data as it encompasses the shortfalls that Johansen cointegration model has in analysing small sample size data.

These findings do agree with some of the literature like Mauro (1995), Frank (2007) and Grechyna (2015), where financial system development, without good supportive factors, worsens the economy. The findings also contrast with some of the famous views on this topic like finance-led growth by Schumpeter (1911), Patrick stages of growth by Patrick (1966) and demand-leading hypothesis by Robinson (1952).

Regardless, the findings in the paper can help in refining the existing policies in Malawi, or in creating new ones. For starters, the paper found insignificant relationships between human capital and economic development. This depicts that there is low literacy rate in Malawi, low technology and poor health care facilities. (1)Thus, government needs to invest in education so that people can acquire the required skills and knowledge needed for effective work that would boost the economy. It also needs to build better health care facilities for people to get the acquired medical aid needed. Together, creating a strong labour force participation that can improve the growth of the nation. (2)The government should also have proper investment channels in which effective returns from investments can be seen as this is a vital component of economic development. (3) Most importantly, the government should work on developing

both its financial institution and financial markets so that they can bring positive change to the development of the economy (4) There should also be lessons on financial literacy to guide participants on the best way they can utilise the finances at their disposal, at the end effecting positive economic development.

Nevertheless, the paper has shortfalls. Firstly, the data is secondary data. This means that findings from the paper are limited on the validity of this data. Moreover, it would have been more insightful to analyse data that has a life span of 50 years and above to see how this relationship has progressed over the longest period of time. However, such year range does not exists for the financial development index variable in Malawi.

Nonetheless, the paper, without any uncertainty, contributes to the growth of the empirical literature on this topic. This also means that Malawi needs to refine its financial system in order to develop its economy as the financial system has been found to be important for economic development in many developing countries. Therefore, the paper closes in favour of Mauro (1995).

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