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**THEME**

**The relationship between financial liberalization and economic growth:**

**The case of Tanzania**

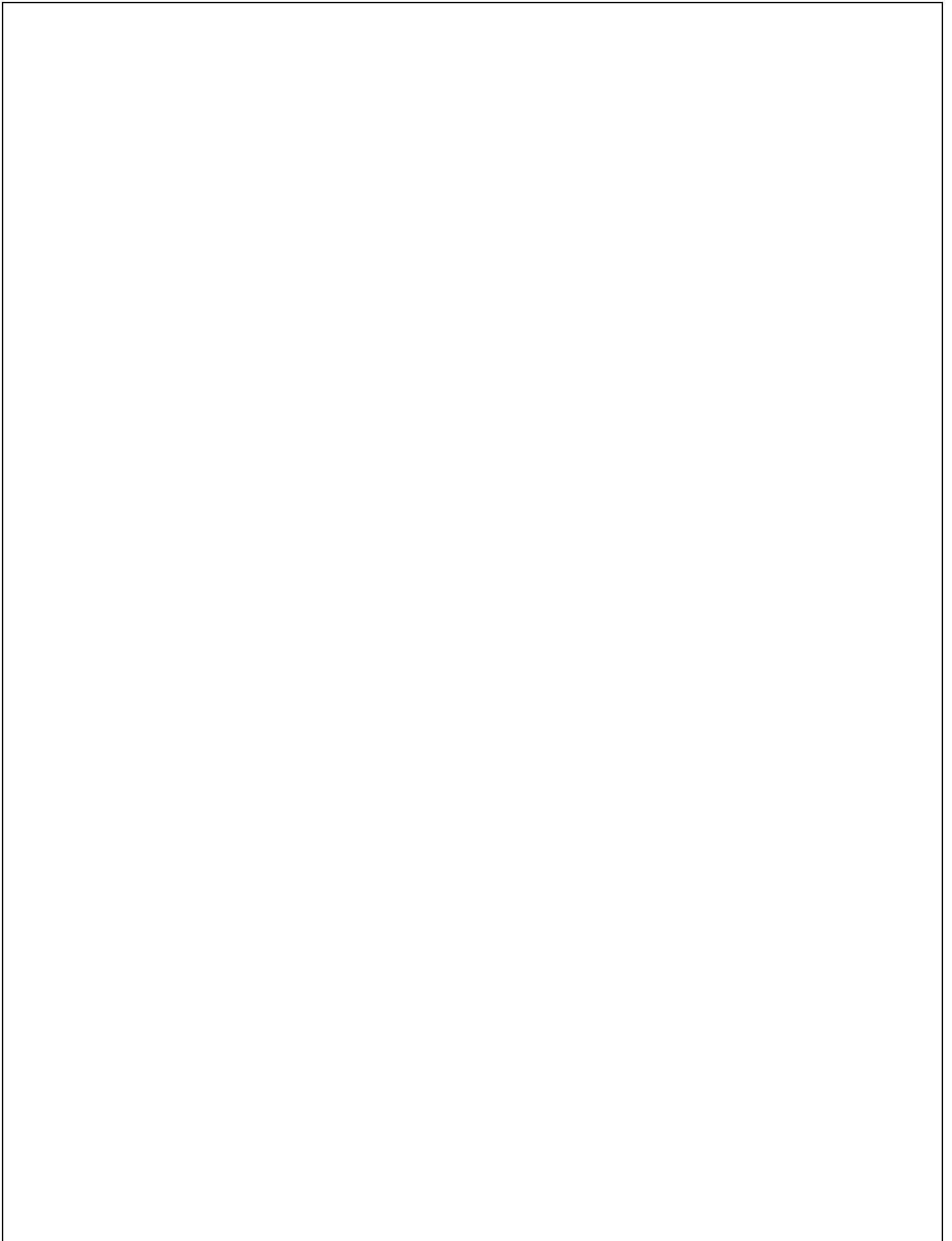
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## **DEDICATION**

I dedicate this dissertation to my mother Veronica NTUGWA

To all of my family ; siblings, aunts, uncles especial Francia LAWI, Juliet JOHN, Emmanuel JOHN, Jerry MAHONA, Suzana BASIL and Peter BABILE

To my late uncle Lawi TAMBILJA

## **ACKNOWLEDGEMENT**

This work has been possible to be achieved under the strong supervision, guidance and consultation of Dr NEMIRI- YAICI Farida and madam DENAHMED Kafia , who have made tremendous contribution, I would like to express my special gratitude to them. Likewise I would like to thank Mr ABDERRAMANI- Fares.

# Introduction

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## General introduction

Since the widespread acceptance of the ideal of financial liberalization, many countries have made attempts to liberalize their financial sectors by deregulating interest rates, eliminating or reducing credit controls, allowing free entry into the banking sector, giving autonomy to commercial banks, permitting private ownership of banks, and liberalizing international capital flows. However, of these six dimensions of financial liberalization, Interest rate liberalization has received the main focus of attention. Unfortunately, the countries that embarked on interest rate liberalization have had mixed experiences. Whether financial liberalization does indeed impact positively on savings, financial deepening, and economic growth still remains a question for the empirical investigation.

Although a number of empirical studies have been conducted on the link between financial liberalization and economic growth, the majority of these studies have concentrated mainly on Asia and Latin America, affording sub-Saharan African (SSA) countries either very little coverage or none at all. Even where such studies have been undertaken, findings on the role of financial liberalization and its effect on financial deepening, savings, and economic growth are at best questionable.

The financial system performs a number of important functions in an economy. Basically, it takes care of mobilizing financial resources, facilitating risk management, allocating resources to the most efficient projects, monitoring the use of financial resources and providing a payment system that makes trade among economic participants more efficient(Levine, R 1997. p691). Financial development occurs when a financial system is able to improve on performing these functions.

There is a large part of theoretical and empirical work emphasizing that financial development is positively associated with economic growth. Closely related to the discussion of the relationship between finance and growth is the discussion of the role that financial liberalization can play in this relationship. The main idea is that financial liberalization may impact on financial development which, in turn, affects economic growth. There is an ongoing debate about whether

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the role of financial liberalization with respect to the finance–growth nexus is positive or negative. While there may be several different characterizations of what financial liberalization contains, in most studies financial liberalization includes official government policies that focus on deregulating credit as well as interest rate controls, removing entry barriers for foreign financial institutions, privatizing financial institutions, and removing restrictions on foreign financial transactions.

Hence, financial liberalization has both a domestic and foreign dimension. In general, liberalization focuses on introducing or strengthening the price mechanism in the market, as well as improving the conditions for market competition. In the literature, several arguments in favor of liberalization have been put forward during the last thirty years; the literature on development of finance has evolved. Following the decline in development aid and the crisis of external indebtedness, attention was paid to the necessary conditions for that financial systems in developing countries can mobilize enough resources and support growth.

Indeed in developing countries, governments have used national financial systems as a policy instrument funding involved in the different stages of financial intermediation. The orientation of the interventionist fiscal policy is part of the idea that in developing countries, economic growth is constrained by the lack of financial resources. The state must intervene to ensure the financing of growth sectors. This policy was abandoned because it would be less than the scarcity of insufficient mobilization of financial resources. Thus research has been more interested in the conditions for successful financial liberalization policy in developing countries.

From the theoretical point of view, we witnessed the birth of the "school of financial liberalization". The paradigm of financial liberalization has helped to highlight a fundamental difference between the neoclassical approach and the neo-structuralist approach inspired by Keynesian analysis.

For neoclassical, financial liberalization should replace financial repression put in place by too many developing countries. They are indeed convinced that many developing states place such strong constraints on the financial sector that it is unable to grow. Therefore, they recommend

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higher interest rates, the opening of the capital account, the deregulation of the banking and financial system and the withdrawal of government intervention. Their objective is the mobilization of domestic savings and improving its allocation to more profitable investment projects and therefore an increase in growth. For neo-structuralist, the increase in interest rates after financial liberalization policy can only increase inflation and therefore slow growth. Indeed, the neo-structuralist approach takes into account the existence of an informal market; therefore low interest rates may be beneficial for investment and stimulate growth. Tanzania, like many other countries, has implemented a number of reforms since the widespread acceptance of the ideal of financial liberalization.

Although Tanzania started pursuing financial reforms as early as the 1980s, it was only in the 1990s that full financial reforms were implemented, it is necessary to determine whether or not, the financial policy has accelerated the development and economic growth of Tanzania. This means that does financial liberalization have an impact on economic growth in Tanzania? The purpose of the study is to provide a better understanding of the relationship between financial liberalization and economic growth in Tanzania. The methodology used to analyze the relationship between financial liberalization and economic growth in Tanzania is the methodology of VAR modeling.

The hypothesis is a temporary answer to the questions raised in the issue. In the specific case of our work, we proposed the following assumption: there is relationship between financial liberalization and economic growth.

The study is organized through three major chapters. Chapter1 provides a large literature on financial liberalization and economic growth, it reviews the main theoretical and empirical research that highlight the impact of financial liberalization on economic growth. Chapter2 is an overview of Tanzanian economy and financial liberalization in Tanzania. And, chapter 3 is econometric analysis of the relationship between financial liberalization and economic growth

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### **Introduction:**

Although a number of empirical studies have been conducted on the link between financial liberalization and economic growth, the majority of these studies have concentrated mainly on Asia and Latin America, affording sub-Saharan African (SSA) countries either very little coverage or none at all.

#### **1. Brief Review of the literature:**

From the theoretical point of view, the concept of financial liberalization appeared in the early 70s in the writings of RI McKinnon in 1973 and E .Shaw in 1973. Both authors present the liberalization of the financial sector as an effective and simple way to accelerate the economic growth of developing countries. This theory quickly found a favorable echo among both large international organizations (IMF, World Bank) than from some developing countries. She seduces by the simplicity of its implementation. For both authors, the developing countries suffer less from a lack of financial resources as an intermediary, primarily bank, become ineffective because of distortions related to the administration of interest rates.

The development of their work led to the paradigm of financial repression. The main proposal of economic policy is the liberalization of the financial conditions of the banks, the interest rate being the main control variable. In this case, it should follow a rise in interest rates that enable banks to be more efficient in the mobilization of savings and the financing of the economy. A package of economic literature on the subject has been set up whose objective is to test the validity of the thesis of financial liberalization that a liberalized financial system plays a positive role in financing economic development.

In one study, Bandiera (2000, p.239-263.) analyze the private savings function in a sample of eight developing countries. In six countries, regressions between private savings and the real rate of credit interest lead to a negative correlation. In addition, the short term effect of financial liberalization on savings can be observed when the reforms have just been implemented.

An assessment of the impact of different financial reforms on savings requires an analysis of the different transmission channels of financial liberalization and the separation of the effects of short-term and long-term carried by the transmission process. The short-term effect was mainly due to a change in interest rates and amounts of credits available. In this case savings will fall

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during the first years of financial liberalization giving way to a consumption boom. In the long term, financial liberalization has allowed financial development that will positively influence the growth of production and income, and therefore savings.

However, the failure of financial liberalization experiences in many developing countries has been the emergence of the origin of several analyzes from new theoretical currents. These include, for example, analyzes of neo-structuralist. These analyzes have tried to show the negative effects of liberalization on economic development. The neo-structuralist critics consider not only the formal financial sector but the informal financial sector. They have highlighted the negative effects: a rising Interest rates has a direct consequence of financial liberalization.

### **1.1. The financial liberalization thesis**

This part attempts to demonstrate the problematic nature of 'market liberalization' by concentrating in an area where renewed interest has resurfaced, this being financial markets. More precisely, the focus of this contribution will be on the setting of financial prices by central banks, especially in developing countries, a fairly common practice in the 1950s and 1960s, which was challenged by Goldsmith in the late 1960s and by McKinnon and Shaw in the early 1970s.

They attributed the poor performance of investment and growth in developing countries to interest rate ceilings, high reserve requirements and quantitative restrictions in the credit allocation mechanism. They proposed instead the thesis which has come to be known as 'financial liberalization', which can be succinctly summarized as amounting to 'freeing' financial markets from any intervention and letting the market determine the allocation of credit.

The history of banking shows that in both developing and developed countries which implemented financial liberalization and pursued corresponding policies experienced varied consequences. It actually points to two striking findings. The first is that over that past thirty years or so, financial and banking crises have been unusually frequent and severe, especially in developing countries.



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It ought to be noted that the statement ‘letting the market determine’ the outcome, as though the market was some natural phenomenon, is not unproblematic. The magnitude of the crises is clearly indicated by the fact that at least over *two thirds* of the IMF member countries experienced significant banking-sector problems during the period 1980-today. In Africa, in Asia, and in the transition economies of central and Eastern Europe, over 90 percent of the IMF country members suffered at least *one* serious short time of banking difficulties over the period.

The second important finding is that beyond the financial costs of banking crises for the local economies involved, they exacerbate downturns in economic activity, thereby imposing substantial real economic costs. Banks in developing countries hold the lion's share of financial assets, operate the payments system, provide liquidity to financial markets, and are major purchasers of government bonds. In addition, bank liabilities have been growing much faster in developing countries over the past two decades than economic activity. Moreover, the increasing weight and integration of developing and emerging economies in international

### **1.2. What is financial liberalization?**

A number of writers question the understanding of financial repression, arguing that it has negative effects on the real economy. The main impact of financial repression was the effect on the efficiency of capital. Financial repression affects how efficiently savings are allocated to investment, through its effect on the return to savings. It also affects the equilibrium level of savings and investment. In this framework, therefore, investment suffers not only in quantity but also in quality terms since bankers do not share the available funds according to the marginal productivity of investment projects but according to their own discretion. Under these conditions the financial sector is likely to stagnate. The low return on bank deposits encourages savers to hold their savings in the form of unproductive assets such as land, rather than the potentially productive bank deposits. Similarly, high reserve requirements restrict the supply of bank lending even further directed credit programs distort the allocation of credit since political priorities are, in general, not determined by the marginal productivity of different types of capital.

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The implications of this analysis are quite direct: remove interest rate ceilings, reduce reserve requirements and abolish directed credit programs. In short, liberalize financial markets and let the free market determine the allocation of credit, where it is assumed that there will be a 'free market' with just a few banks, thereby ignoring issues of oligopoly and, of course, of credit rationing type of problems, Stiglitz and Weiss, (1981 p. 393).

With the real rate of interest adjusting to its equilibrium level, at which savings and investment are assumed to be in balance, low investment projects would be eliminated, so that the overall efficiency of investment would be enhanced. Also, as the real rate of interest increases, saving and the total real supply of credit increase, which induce a higher volume of investment. Economic growth would, therefore, be stimulated not only through the increased investment but also due to an increase in the average productivity of capital.

Moreover, the effects of lower reserve requirements reinforce the effects of higher saving on the supply of bank lending, at the same time as, the abolition of directed credit programs would lead to an even more efficient allocation of credit thereby stimulating further the average productivity of capital.

Even though the financial liberalization thesis met increasing uncertainty over the years, it nevertheless had a relatively early impact on development policy through the work of the IMF and the World Bank, perhaps in their traditional role as promoters of what were claimed to be free market conditions, were keen to encourage financial liberalization policies in developing countries as part of more general reforms or stabilization programs.

When events following the implementation of financial liberalization prescriptions did not confirm their theoretical premises, there occurred a revision of the main doctrines of the thesis. Initially, the response of the proponents of the financial liberalization thesis was to argue that where liberalization failed it was because of the existence of implicit or explicit deposit insurance coupled with inadequate banking supervision and macroeconomic instability ( <https://openknowledge.worldbank.org/bitstream/handle/10986/5970/WDR%201987%20-%20English.pdf?sequence=1> )

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The financial liberalization analysis lead to recommendations, which included adequate banking supervision', aiming to ensure that banks had a well-diversified loan portfolio, macroeconomic stability', which refers to a low and stable inflation and a sustainable fiscal deficit, and the sequencing of financial reforms. Gradual financial Liberalization is to be preferred, in this gradual process to sequence of financial liberalization. Successful reform of the real sector came to be seen as a prerequisite to financial reform. Thus, financial repression would have to be maintained during the first stage of economic liberalization.

Sequencing becomes important again. It is suggested that liberalization of the `foreign' markets should take place after liberalization of domestic financial markets. In this context, proponents suggest caution in `sequencing' in the sense of gradual financial liberalization, emphasizing the required preconditions for successful financial reform. The preconditions include the achievement of stability in the broader macroeconomic environment and adequate bank supervision with in which financial reforms were to be undertaken. It is also argued by the proponents that the authorities should move more aggressively on financial reform in good times and more slowly when borrowers' net worth is reduced by negative shocks, such as recessions and losses due to terms of trade world bank, (1989 p. 133-153)

University of Cambridge working paper no 05/05 by Philips Arestis (2005, p.7) reviewed the financial reforms in a number of primarily developing countries and concluded that managing the reform process rather than adopting a laissez-faire approach was important, and that sequencing along with the initial conditions in finance and macroeconomic stability were identical elements in implementing successfully financial reforms. All these modifications, however, indicate that there is no doubt that the proponents of the financial liberalization thesis do not even contemplate abandoning it. No amount of revision has changed the objective of the thesis, which is to pursue the *optimal* path to financial liberalization, free from any political, i.e. state intervention. Still another financial liberalization development is related to the emergence of the 'new growth' theory.

The endogenous growth model: This development incorporates the role of financial factors within the framework of new growth theory, with financial intermediation considered as an endogenous process. A two-way causal relationship between financial intermediation and growth

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is thought to exist. The growth process encourages higher participation in the financial markets, thereby facilitating the establishment and promotion of financial intermediaries. The latter enable a more efficient allocation of funds for investment projects, which promote investment itself and enhance growth. Furthermore, in such models financial development can affect growth not only by raising the saving rate but also by raising the amount of saving directed to investment and/or raising the social marginal productivity of capital.

The endogenous growth literature views government intervention in the financial system as distortionary and predicts that it has a negative effect on the equilibrium growth rate. Increasing taxes on financial intermediaries is seen as equivalent to taxes on innovative activity, which lowers the equilibrium growth rate. Imposing credit ceilings reduce individual incentives to invest in innovative activity, which retards the growth of the economy. New growth theory suggests that there can be self-sustaining growth without exogenous technical progress.

The endogenous growth theory supporters argue for deliberate and fast development of stock markets, especially in developing countries. By contrast, the financial liberalization promoters view stock market development as either unimportant or at best as a slow evolutionary process. The most recent development includes “*structural* characteristics of finance, such as the relative importance of banks and securities markets and *infrastructural and institutional* prerequisites, such as the legal and informational environment as well as the regulatory style” (Honohan, 2004, pp. 1-2).

### **1.3. What are the problems with financial liberalization?**

This section summarizes a number of critical issues of the financial liberalization. They are: sequencing, causality, free banking leads to stability of the financial system, financial liberalization enhances economic growth, savings cause investment, absence of serious distributional effects as interest rates change, financial liberalization is pro-poor, no role for speculation, favorable financial policies. Here is a discussion of these critical issues.

#### **1.3.1. Sequencing**

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Sequencing does not save the financial liberalization thesis for the simple reason that it depends on the assumption that financial markets clear while the goods markets do not. But in the presence of asymmetric information, financial markets too are marred by the so-called imperfections. But even where the 'correct' sequencing took place, where trade liberalization had taken place before financial liberalization, not much success can be reported (Lal, 1987, p. 273-299.) The opposite is also true, namely that in those cases, like Uruguay, where there reverse sequencing took place, that is financial liberalization before trade liberalization.

More recent research on sequencing produced similar results, for example, Kaminsky and Schmuckler (2003, p.31) when discussing relevant findings conclude that "the ordering of liberalization does not matter in general. Opening the capital account or the stock market first does not have a different effect than opening the domestic financial sector first".

### **1.3.2. Causality**

The difficulty of establishing the link between financial development and economic growth was first identified by Patrick in 1966 and further developed by McKinnon in 1988 who argued that: "Although a higher rate of financial growth is positively correlated with successful real growth, Patrick's (1966 p. 390) problem remains unresolved. What is the cause and what is the effect? Is finance a leading sector in economic development, or does it simply follows growth in real output which is generated elsewhere?"

The relationship between financial development and economic growth is, therefore, controversial issue, which could be resolved potentially by resorting to theoretical arguments backed up by convincing empirical evidence. A recent attempt to explore this aspect of the debate has been attempted by King and Levine (1993, p.717-718) who have argued that Schumpeter may very well have been 'right' with the suggestion that financial intermediaries promote economic development (1911, p. 100). Using data for a number of countries, covering the period 1960 to 1989, they found that "higher levels of financial development are significantly and robustly correlated with faster current and future rates of economic growth, physical capital accumulation and economic efficiency improvements" King and Levine. (1993 Quarterly Journal of Economics 108 (3): 713-37.)

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They, thus, show that the level of financial intermediation is a good predictor of long-run rates of economic growth, capital accumulation and productivity improvements. It has been shown elsewhere (Arestis and Demetriades, 1997, *The International Journal*, 107, may, p. 783-799.) that although King (1993a) attempted to tackle in an ingenious way an issue, which has plagued the empirical literature on the relationship between finance and development for a long time, their causal interpretation could be improved further. Once the contemporaneous correlation between the main financial indicator and economic growth has been accounted for, there is no longer any evidence to suggest that financial development helps predict future growth. Furthermore, the cross section nature of the King data set cannot address the question of the link between finance and growth in a satisfactory way.

### **1.3.4. Free banking leads to stability of the financial system**

The fundamental assumption of the thesis is that market forces do produce stability in the banking and financial systems, as they do in other sections of the economy. At the limit, since there would be no possibility of government bailouts in free banking, any insinuation of imprudence would cause customers to shift to competitors. Consequently, the market discipline would be stronger the larger the number of independent note issuers.

### **1.3.5. Financial liberalization enhances economic development**

In demonstrating that a positive relationship exists between financial liberalization and economic developments, the thesis under scrutiny ignores a number of aspects, which are of significant importance. We discuss two such aspects: hedge effects and control markets first, followed by the lack of perfect competition aspect.

**Hedge Effects and Control Markets:** The higher interest rates from financial liberalization might leave unchanged or, indeed, decrease the total supply of funds. This is due to hedge effects, which may not materialize in which case the total supply of funds, may not be affected, or to curb effects, which may reduce it. Hedge effects are due to substitution of hedge assets; gold and land are the most obvious examples, for bank deposits brought about by higher interest rates.

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**Lack of Perfect Competition:** The McKinnon and Shaw type of models are based on the unrealistic assumption of perfect competition, which is particularly arbitrary in the case of Less Developed Countries (LDCs). For it is true to argue that perfect competition is 'always and everywhere' unrealistic and impossible in all countries and markets, but especially so perhaps in credit markets. Given, then, that banking sectors are undoubtedly rather oligopolistic, the result of financial liberalization could very well be the monopoly result whereby the decrease in loans and the increase in the real interest rate are higher magnitudes than that under perfect competition. This result may occur for reasons, which have to do with the possibility of inadequate regulation over banking practices, which leads to undue risk-taking, especially in the presence of deposit insurance. Under such circumstances the banks are beneficiaries of an unfair bet against the government: if the projects they have financed do well they make a lot of profit, if they do badly they rely on the government to rescue them. Such a situation has been termed as 'upward financial repression'.

### **1.3.6. Relationship between savings and investment**

In the McKinnon/Shaw model savings precedes investment. But savings can only fund investment, i.e. it can only facilitate the finance of investment. Savings cannot *finance* capital accumulation; this is done by the banking sector, which provides loans for investment without necessitating increases in the volume of deposits. With a credit-creating financial system, it is banks, and not savers, which finance investment.

Consequently, it is finance, and not saving, along with entrepreneurial long-term expectations, which are the prerequisites to capital accumulation. Savings, nonetheless, has a different, and important, role to play, which is to achieve and maintain the financial stability of the growing economy. A second problem with the McKinnon/Shaw model is the related assumption that deposits create loans. In modern banking systems, including most developing countries, loans create deposits not the other way round.

### **1.3.7. Interest-rate changes and distribution of income**

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The financial liberalization thesis does not pay much attention to distributional effects of income. It is worth noting that the liquidity preference of the banks is very important, As a result, the contributions initiated on this issue have been rather small, both theoretical and quantitative. Fry (1995 p.205) surveys the limited work that has been conducted on this issue, to conclude that "financial repression and the ensuing credit rationing worsen income distribution and increase industrial concentration".

Consequently, financial liberalization and the subsequent freeing of credit markets improves income distribution and decreases industrial concentration, due to extended access to finance and decreased degree of credit market segmentation. This benefits small firms because it avoids subsidizing priority sectors, which leads to market segmentation, an obvious characteristic of the financial repression case, which hits them harshly.

### **1.3.8. Financial liberalization is Pro-Poor**

The advocates have claimed that financial liberalization mobilizes savings and allocates capital to more productive uses, both of which help increase the amount of physical capital and its productivity. Financial liberalization, therefore, increases economic growth, which reduces poverty.

Fry (1995 p 205.), when surveying the limited work on this issue, concludes that "financial repression and the ensuing credit rationing worsen income distribution and increase industrial concentration. By implication, then, financial liberalization and the ensuing freeing of credit markets improve income distribution and poverty. Nonetheless, one would expect the economic and institutional changes brought about by a financial liberalization package to have a more complex effect on the living conditions of the poor than merely through the presumed growth channel and the simplistic view summarized by Fry.

It is possible that the poor might be more severely affected by such crises. The channel, which we label the crisis channel, works via the changes in the macroeconomic dynamics, increasing volatility and vulnerability to financial crises following liberalization. The second channel proposed, concentrates on the possible changes in poverty caused by better access to credit and financial services that financial liberalization is expected to yield. To the extent that a



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liberalization program increases the financial resources available to the previously disadvantaged and to the extent that the poverty problem is related to lack of consumption smoothing mechanisms, there is room for financial liberalization to help alleviate poverty.

### **1.3.9. The Role of speculation**

Financial liberalization induces two types of speculative pressures: expectations-induced and competition-coerced, both of which contribute to the increased presence of short-term, high risk speculative transactions in the economy and to the increased vulnerability to financial crises.

The first emanate from expectations-induced pressures to pursue speculative transactions in view of the euphoria created by financial liberalization. Given the proliferation of speculative opportunities, this euphoria rewards those speculators who have short-time horizons and punish the investors with a long-term view.

### **1.3.10. Financial policies**

A comprehensive literature has established that the financial sector in an economy can be important in determining the average productivity of capital, itself being one of the main channels of economic growth. The screening and monitoring of investment projects, which the financial system routinely engages in, are likely to help boost the efficiency of investment Pagano, (1993, p.613-622).

A growing body of literature demonstrates that the development of the financial system has positive effects on the long-run rate of economic growth or the volume or efficiency of investment. However, the causal nature of this relationship is now known to exhibit considerable variation across countries, which indicates that institutional factors or policies may play a critical role in determining how the process of financial development affects economic growth. The importance of institutional factors is confirmed, to demonstrate that institutional quality is inversely related to the incidence of financial fragility that usually follows episodes of financial liberalization.

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### **Summary and Conclusions**

We have identified in this chapter number of key theoretical propositions of the financial liberalization thesis, and have suggested that they are marred by serious difficulties. We have also selectively indicated where operative assumptions are flawed and others are omitted. Furthermore, and as we have shown elsewhere, the available empirical evidence does not offer much support to the thesis either. Space limitations preclude detailed discussion of the empirical evidence, though there are two types of evidence: experience of individual countries, which went through financial liberalization, and evidence based on econometric investigation. It is clear from this review that no convincing empirical evidence has been provided in support of the propositions of the financial liberalization hypothesis.

Generally, lessons learned from the experience of some countries in Latin America, Southeast Asia or Scandinavia also confirm that the success of a process of financial liberalization depends on a good macroeconomic policy. This is indeed the way to avoid a growing imbalance in the financial markets and mitigate financial crises when the panic is raging. Rigorous management of public finances, due to which deficits do not grow out of proportion, avoiding the temptation to resort to external borrowing which could complicate debt management, undermining the country credit or make it more vulnerable to external shocks. Monetary policy can be used to counteract disturbances in the markets, it can mitigate the contraction of the economy in case of downturn economic conditions (fiscal and monetary expansion can stimulate production and employment, and to address the effects of transient disturbances.

## **Chapter II: Overview of Tanzanian economy and financial liberalization.**

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### **Introduction**

The Tanzanian economy continues to perform strongly, recording growth of 7.3% in 2013, up from 6.9% in 2012, driven by information and communications sectors, construction industry, manufacturing and other services. Medium-term prospects are favorable, with growth projected to remain above 7%, supported by public investments in infrastructure, particularly in the transport and energy sectors. Agriculture remains the mainstay of the economy, employing the majority of the workforce, but the sector is plagued by infrastructure gaps and low productivity. Inflation has stabilized at single digits over the past year, declining to an annual average of 6.8% in 2014 due to prudent monetary policy, a favorable food situation and declining fuel prices. Export performance remains strong, driven by gold and tourism/travel receipts. But the import bill has grown, mainly due to imports of capital and intermediate goods, particularly oil, keeping the current account deficit wide at around 11% of GDP. The foreign reserves position has remained healthy, with 4.1 months of import cover. (<https://www.bot-tz.org/>)

Tanzania has continued to maintain a healthy fiscal position, keeping the deficit at sustainable levels and managing expenditure growth in line with the broad objective of sustaining macroeconomic stability. In the medium term, the fiscal deficit is projected to be maintained at around 5-6% of GDP, while expenditures and government net borrowing are projected at around 25% of GDP, in line with targets of the Policy Support Instrument programme. Financing uncertainties emerged in the first half of fiscal year 2014/15 due to delayed disbursements of budget support funds by development partners, partly resulting in the frontloading of government domestic borrowing to finance development projects (Government expenditure). Spatial inclusion remains problematic in Tanzania, mainly due to regional disparities. The poorer regions are predominantly rural and their economies are much less diversified. Agriculture is the main economic sector in these areas, with low productivity and low-paying employment. As a result, per capita incomes in these regions are less than half that of Dar-es-Salaam, the wealthiest area. And the poverty rate is eight times higher than in Dar-es-Salaam. To increase spatial inclusion, Tanzania needs to boost earning opportunities for the rural population, mainly through improved productivity in agriculture supported by rural infrastructure investments, particularly rural roads, and improved overall connectivity between rural and urban areas. (<https://www.bot-tz.org/>)

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### **1. Overview of Tanzanian economy.**

In this case study of Tanzanian economy, the sources of data are; World Bank ([www.worldbank.org](http://www.worldbank.org)), bank of Tanzania (<https://www.bot-tz.org/>) and National bureau of statistic ([www.nbs.go.tz](http://www.nbs.go.tz))

Tanzania is the second largest economy in the East African community and the twelfth largest in Africa. The country is largely dependent on agriculture for employment, accounting for about half of the employed workforce. The economy has been transitioning from a command economy to a market economy since 1985. GDP has increased since these reforms began; GDP per capita dropped sharply at first, and only exceeded the pre-transition figure in around 2007. Following the rebasing of the economy in 2014, the GDP expand by 33% to \$41.33 billion. ([www.worldbank.org](http://www.worldbank.org)),

Significant measures have been taken to liberalize the Tanzanian economy along market lines and encourage both foreign and domestic private investment. Beginning in 1986, the government of Tanzania embarked on an adjustment program to dismantle the socialist economic controls and encourage more active participation of the private sector in the economy. The program included a comprehensive package of policies which reduced the budget deficit and improved monetary control, substantially depreciated the overvalued exchange rate, liberalized the trade regime, removed most price controls, eased restrictions on the marketing of food crops, freed interest rate, and initiated a restructuring of the financial sector.

The economy of Tanzania is overwhelmingly agricultural; plantations grow cash crops, including coffee, sisal, tea, cotton, pyrethrum, cashews, tobacco, sugarcane, and cloves. Most of the population, however, is engaged in subsistence farming, growing corn, wheat, cassava, bananas, fruits, and vegetables. In addition, large numbers of cattle, sheep, and goats are raised. Timber is important and includes mahogany, teak, ebony, camphor wood, and mangrove. Manufactures include processed agricultural goods, beverages, wood products, and basic consumer items. Refined petroleum, fertilizer, aluminum goods, and construction materials are also produced. Diamonds, tanzanite, and other gemstones are mined; other minerals extracted in significant quantities include gold, salt, gypsum, phosphates, and kaolin. There are also tin mines in NW

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Tanzania and coal and iron ore deposits near Lake Nyasa. Natural gas from deposits around SongoSongo Island, off the Southern central coast, is used to produce electricity. The principal exports are gold, coffee, cashews, diamonds and other gemstones, manufactures, and cotton. The principal imports are consumer goods, machinery, transportation equipment, industrial raw materials, crude oil, and foodstuffs. The leading trade partners are China, India, and South Africa. ([www.nbs.go.tz](http://www.nbs.go.tz))

Driven largely by communications, transport, financial intermediation, construction, agriculture and manufacturing, in the medium term, growth will be supported by the ongoing investments in infrastructure and the projected good weather conditions. Also, these medium-term growth projections are backed by continued investments in the recently discovered natural gas reserves in Tanzania and the expansion in public investments (including the ongoing construction of USD 1.2 billion gas pipeline from Mtwara to Dar es Salaam), as well as the related investments aimed at stabilizing power generation in the country. ([www.nbs.go.tz](http://www.nbs.go.tz))

The main development challenge is that Tanzania's growth is not sufficiently broad-based and poverty levels still remain high. Despite high growth averaging 7% over the past decade, the recent household budget survey results indicate that 28.2% of Tanzanians are poor, and poverty remains more prevalent in rural areas than in urban areas. Tanzania has continued to strengthen its fiscal position by embarking on fiscal consolidation measures throughout 2012/13.

Its financial system remains stable highlighting several years of successful financial sector reforms. External debt grew to USD 13 billion in November 2013, an increase of about 23% over the USD 10.6 billion recorded during the same period in the previous year. However, despite such an increase in external borrowing, Tanzania's external debt remains sustainable.

Export performance remained strong, largely driven by gold and services receipts, which account for a combined share of about 44% of total exports. Tanzania has continued to promote regional integration through tariff reduction. In 2012/13, the Common External Tariff (CET) on electricity was reduced from 10% to 0%. This was intended to reduce the cost of importing electricity into East African Community (EAC) member states. The volume of trade between

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Tanzania and EAC partners has more than doubled, from USD 520 million in 2008 to about USD 1.2 billion in 2012.

The performance of the Tanzanian economy has remained strong, recording growth of 6.9% in 2012, driven by a high uptick in manufacturing, agriculture, trade, transport, communications and financial intermediation. Growth was boosted by good weather and timely supply of subsidized inputs, which supported agricultural production and the normalization of power generation, which in turn buoyed industrial production. Preliminary estimates indicate that the economy grew 7.0% in 2013, having posted growth of 7.5% in the first quarter of 2013, driven by robust performance in agriculture, transport, communications, construction, mining and quarrying, electricity, tourism and financial intermediation.

Growth of the agriculture sector is estimated at 4.3% in 2013, driven by increased production of the major food crops, strong performance of the communications and trade sub-sectors resulted from increased use of mobile phone services, the start-up of new trade services and an increase in the trade of domestically manufactured and imported goods. Strong performance of the mining sector (estimated growth of 7% in 2013) resulted from increased production in gold and tanzanite.

Financial intermediation continued to perform strongly, growing at about 11% in 2013, increased levels of deposits, lending by commercial banks, and the services provided by Insurance companies all drove this growth. In 2014 and 2015 the economy is expected to continue on its growth path of around 7%. The projected marginal decline in 2015 is largely on account of possible uncertainties due to elections. Previous elections in Tanzania have been characterized by sharp increases in financial outflows. For instance, according to the recently published report by Global Financial Integrity, financial outflows during the 2005 and 2010 elections were in the order of 6% of GDP. This had an effect on output growth, especially in 2005, when real GDP declined by about five percentage points. Despite this, the projected growth will be supported by ongoing investments in infrastructure, the recently discovered natural gas reserves and the expansion of related public investments. The latter include the current construction of a USD 1.2 billion gas pipeline from Mtwara to Dar es Salaam, as well as the related investments aimed at stabilizing electricity generation in the country. (<https://www.bot-tz.org/>)

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Tanzania has licensed 16 international energy companies to search for oil and gas. Based on discoveries, recoverable natural gas resources are currently estimated to exceed 43 trillion cubic feet as oil and gas exploration activities continue to attract foreign investments, it is projected that net foreign direct investment (FDI) to Tanzania could increase from about 6.3% of GDP in 2013 to 7.0% of GDP in 2014.

### **1.1 Fiscal policy**

Tanzania has continued to strengthen its fiscal position by embarking on fiscal consolidation. Measures throughout 2012 and 2013, with particular focus on managing expenditure growth and keeping fiscal deficits within the levels recommended under the IMF program. In FY 2012 and 2013, cumulative domestic revenue (tax and non-tax) amounted to 17.8% of GDP, close to the budgeted target of 18.0% of GDP for FY 2012/13. It was still significantly higher (by 22%) than the collections of the previous FY. Current expenditure remained dominant, estimated at around 18.7% of GDP, while capital expenditure was about 9% of GDP. Execution of the recurrent budget was around 97%, while the execution of the development budget was only around 88%. This is partly because of low out-turn of donor funding for development projects during the fiscal year. (<https://www.bot-tz.org/>)

Overall, fiscal deficit for FY 2012/13 was 6.2% of GDP, slightly above the programmed 5.0% of GDP for FY 2012/13. This was because of the need to finance emergency power to meet the energy challenges facing the country. The largest part of the deficit – about 3.3% of GDP – was financed through external non-concessional borrowing, while the remaining part was financed through domestic borrowing (just above the programmed 1% of GDP) and external concessional loans and grants. Financing to support the energy sector was necessary to ensure stability in power generation and avoid power cuts, which would have led to disruption of economic activity and subsequent dampening of economic growth.

There was no threat of crowding out of private sector credit since the largest part of deficit financing was through external non-concessional borrowing. In 2013/14, fiscal policy aims to maintain fiscal consolidation through strengthening tax administration, as well as improved expenditure and debt management. The 2013/14 budget puts total spending at about TZS 18.2

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trillion, with about 69% of the budgeted resources allocated for recurrent expenditure and the remaining 31% earmarked for development expenditure. Domestic revenues are projected to increase to 20.2% of GDP in 2013/14. The revenue target appears ambitious, and the government outlined several revenue measures to achieve it. (<https://www.bot-tz.org/>)

The 2013/14 budget aimed to achieve medium-term growth objectives, while maintaining single digit inflation. The identified priorities are consistent with the objective of achieving growth and reducing poverty. They include transport, agriculture, industry, energy, education and water. The wage bill is expected to increase largely on account of the government's efforts to address the challenge of human resource shortages in key service delivery sectors, particularly health and education, as well as the planned increase in minimum wages.

### **1.2 Monetary policy**

Tanzania's monetary policy aims to support economic growth and maintain price stability.

In line with these objectives, the Bank of Tanzania continued to pursue tight monetary policy to anchor inflation expectations in FY 2012/13. In the implementation of monetary policy, the central bank has continued to deploy a mix of monetary policy instruments, namely the sale of government securities, foreign exchange operations, repurchase agreements and stand-by facilities (i.e. the discount window and Lombard facility). In the year ending November 2013, money supply grew at an annual rate of 10.3%. This was slightly less than the 10.6% recorded in the corresponding period in 2012. (<https://www.bot-tz.org/>)

Annual growth of private sector credit was 14.6% in November 2013, less than the 15.8% recorded in the corresponding period in 2012. Trading activities accounted for the largest share of credit, followed by loans held in personal, manufacturing and agriculture activities. With the net domestic borrowing by the government limited to 1% of GDP under the IMF program, fiscal policy has remained in line with monetary policy objectives, and public spending has not resulted in crowding out of credit to the private sector. Improved food supply and a relatively stable energy situation (stability in power generation) in the country, coupled with prudent monetary policy, have helped ease inflationary pressures in the economy. Annual headline inflation fell consistently from 12.1% in December 2012 to 5.6% in December 2013. Inflation declined from an annual average of 16.0% in 2012 to 7.9% in 2013. The annual average of food inflation declined from 20.2% to 8.6% over the same period. The core inflation, which excludes



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food and energy, also declined from an annual average of 8.8% in 2012 to 6.2% in 2013. (<https://www.bot-tz.org/>)

Tanzania has continued to enjoy currency stability, with the Tanzanian Shilling (TZS) shedding only about 0.2% of its value against the US dollar over the past year. This stability is partly explained by good export performance and the Bank of Tanzania's continued efforts to ensure foreign exchange market operators adhere to regulations, plus the overall soundness of the market. Gross official reserves amounted to USD 4.5 billion in November 2013, sufficient to cover about 4.4 months of projected imports of goods and services.

### **1.2. Economic co-operation, regional integration and trade**

The country remains an active participant in a number of regional trading agreements and regional economic communities, the most important being the EAC and the SADC. The country has made considerable progress in promoting participation and accelerating regional integration through tariff reduction in conformity with signed protocols. Tariff reductions are commodity, or service, specific. A particularly noteworthy development in 2012/13 was the reduction of Common External Tariff (CET) on electricity from 10% to 0%, intended to reduce the cost of importing electricity into the EAC. In implementing the EAC and SADC protocols, Tanzania has made significant progress, particularly through increased exports to the regions. This has enhanced employment, investment, and production in the country. Tanzania's trade with its regional partners in EAC and SADC has increased significantly over the past five years.

The current account deficit is estimated at about 14% of GDP in 2013, largely on account of oil imports for emergency power generation. Oil imports account for about 32% of total imports of goods and services. In line with the key changes in Tanzania's economy, especially with gold becoming the dominant export commodity, its trading partners have also changed, with exports shifting from the EU to China, Switzerland, South Africa and the EAC.

In 2013, there were reports in the media of a growing rift in the EAC, with Tanzania and Burundi excluded in some important negotiations. The other three partners (Kenya, Uganda and Rwanda) continued discussions in what was termed in the media as a "coalition of the willing".

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While the key reasons for these developments have not been fully revealed, Tanzania has maintained its official position that the country remains fully committed to EAC regional integration. In November 2013, the presidents of Tanzania addressed the parliament to highlight the key developments and emphasize Tanzania's official position in the EAC. (<https://www.bot-tz.org/>)

### **1.4. Debt policy**

Tanzania's external debt stock stood at USD 13 billion as of the end of November 2013, equivalent to about a 23% increase over the USD 10.6 billion recorded during the corresponding period in the previous year. The increase in external debt resulted largely from newly disbursed external debt to the government and accumulation of interest arrears. Despite such an increase in external borrowing, Tanzania's external debt remains sustainable. Tanzania's borrowing and public debt developments are guided by the 2011 Medium Term debt Management Strategy. The strategy aims to meet the government's financing requirement at the lowest possible cost, with a prudent degree of risk and development of the domestic financial markets. In the recent Policy Support Instrument review, the IMF underlined the importance of a continued sound debt-management strategy, conservative approach to non-concessional Economic and political governance. . (<https://www.bot-tz.org/>)

### **1.5. Private sector**

The ongoing reforms in Tanzania, and particularly economic liberalization policies, have reshaped the country's corporate environment, with private players taking over production and distribution while the government assumes the role of facilitator and regulator. Tanzania has made significant progress in reforming the economy, and creating a favorable environment for the private sector to function. However, the country ranked 145 out of 189 economies in the World Bank report *doing Business 2014*, representing a drop of nine from the rank of 134 out of 183 countries in the previous year (it was 19 out of the 47 sub-Saharan countries). The report also notes that Tanzania's ranking in eight of the ten indicators dropped by between 1 and 6 positions. Tanzania Nevertheless, it reported reforms in the categories Getting Credit and Reforming Insolvency.

The government continues to undertake sectorial and macro reforms to streamline the ease of doing business and investing. A particular significant development is the ongoing

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implementation of the roadmap for improvement of the business environment and investment in 2013. At the same time, the government also launched the Big Results Now (BRN) initiative, which seeks to enhance the results delivered in key areas, including energy, transport, agriculture, water, education and resource mobilization. In addition, with the support of the Organization for Economic Co-operation and Development (OECD), the government undertook a self-assessment of the prevailing investment framework against global best practices from 2011-13. The country has recently simplified procedures for starting a business by eliminating the requirement for inspections by health, town and land officers as a prerequisite for a business license. Also, since 2011 Tanzania has been implementing the Pre-Arrival Declaration system and electronic submission of customs declarations, which has made trading across borders much faster.

Another important measure has been the reduction of the number of permanent road blocks within the country from 50 in 2010 to 15 in 2012. This is part of efforts to make trading across borders easier. These achievements are partly a result of the ongoing implementation of the roadmap to improve the business environment in Tanzania, which started in 2010. The ongoing reforms, which are aimed at simplifying, starting up businesses and promoting competition, include business registration and licensing reform, tax administration reform, regulatory reforms and financial sector reform.

### **1.6. Financial sector**

Tanzania's financial sector has continued to grow. The number of banking institutions increased from 49 in March 2012 to 52 in 2013, while bank branches increased from 521 to 559 during the same period. At the same time, the number of insurance companies reached 26 and established financial Non-Governmental Organizations (NGOs) and financial companies exceeded 100 and 150, respectively. In addition, Savings and Credit Co-operative Societies (SACCOS) number over 5 000. The increase in the number of commercial banks and other nonbank financial institutions (including several micro-credit institutions/companies and, more recently, mobile phone companies) has resulted in increased competition in the sector and the introduction of new products. Tanzania's financial sector remains dominated by the banking sector, which accounts for about 74% of financial assets. . (<https://www.bot-tz.org/>)

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According to the recent financial sector stability review, the country's banking sector remains sound, profitable, highly liquid and adequately capitalized. The banking sector's core capital represents 18.6% of total risk-weighted assets, significantly higher than the minimum regulatory ratio of 10%. This is explained by adequate capitalization of the sector, coupled with high profitability. Liquid assets stand at 38.4% of demand liabilities, a higher ratio than the regulatory minimum of 20%. The high level of liquidity in the banking sector is partly explained by the cautionary lending approach adopted by banks, with significant investment in liquid government securities. . (<https://www.bot-tz.org/>)

The quality of assets as measured by the percentage gross non-performing loans (NPLs) make up of gross loans improved to 7.1% in March 2013, from a slightly higher 7.5% recorded in March 2012. However, this remains slightly higher than the targeted ceiling of 5%. The ongoing reforms in the financial sector, which include the introduction of the Credit Reference System, formalization of businesses and properties and the enhancement of creditors and insolvency rights, are expected to further improve credit market conditions and subsequently lower the NPLs in the medium term.

It is worth noting, however, that access to financial services has recently been boosted by the fast expanding mobile money services in the country. With an estimated 27 million mobile phone subscribers, mobile money services allow users to store, send and receive money via mobile phones, a particularly useful service in the face of the low penetration of traditional banking services in Tanzania. It is estimated that more than half of poor households in Tanzania (daily household expenditure of less than USD 2) own an active SIM card and about a third use mobile money services.

### **1.7. Public sector management: institutions and reform**

From 2009 to 2013, the overall International Property Rights Index (IPRI) score of Tanzania decreased by 0.5 points. Its IPRI score decreased by 0.1 point in 2013 and the country was ranked 80 out of 130 countries. While the legal and political environment and physical property rights remained unchanged between 2012 and 2013, international property rights declined by 0.1 point. They declined because of a 0.3-point loss in the protection of intellectual property rights. The country's major strength is political stability. Tanzania has made significant governance advances according to the recent Ibrahim Index of African Governance (IIAG). The country was ranked 17 out of 52 countries, with a score of 56.9 out of 100, higher than the African average

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(51.6). It ranked 3 out of 11 in East Africa, with a higher score than the regional average. In addition, the country improved slightly in the East African Bribery Index (EABI) in 2013, coming third after Uganda and Burundi (Tanzania was ranked second in 2012). ([www.worldbank.org](http://www.worldbank.org)),

Yet the fight against corruption remains a significant challenge. In this regard, notable recent developments have included the president's drive to curb corruption in the ruling party, increased citizen and media awareness of the challenge as measured by perception surveys, as well as the new national anti-corruption strategy, which is currently in its advanced stages. Other anti-corruption efforts include action taken by the government to tackle corruption in ports, transport and the energy sector, as well as in the police force. It has also dismissed ministers and heads of government agencies as part of its anti-corruption initiative. Public sector governance is being reinforced by the implementation of the Open Governance Partnership (OGP), reviewing procurement and financial management. The OGP aims to promote transparency and accountability and ensure the institutions' adhere to public reporting mechanisms. Other measures include promoting active participation of society in the process of developing and reviewing the national constitution.

### **1.8. Poverty reduction and social protection**

The new official poverty figures announced by the government on 14 November 2013 indicated a rate of poverty incidence of 28.2% in 2011/12, using a basic poverty measure line of TZS 36 482, which translates roughly to USD 1.4 per adult per day at 2005 purchasing power parity (PPP).

Although this figure indicates a decline in poverty incidence from 33.6% in 2007, changes to the survey instruments and poverty estimation methodologies mean that caution should be applied when comparing the two sets of figures, with further analysis being required to evaluate changes in poverty between the two points in time. Inequality in mainland Tanzania declined slightly, with the Gini coefficient at 0.35 in 2007 and 0.34 in 2011/12. Although the Household Budget Survey data indicates that poverty and inequality have declined, poverty difference is significant between urban and rural areas (4.2% and a Gini coefficient of 0.35 in Dar es Salam, 21.7% and a Gini coefficient of 0.37 in other urban areas and 33.3% and a Gini coefficient of 0.29 in rural areas). ([www.worldbank.org](http://www.worldbank.org)),

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The difference in poverty between urban and rural areas implies that poverty is still high in rural areas and that the income gap between the poor and the rich is higher in urban areas compared to rural areas.

This concern, among others, has led the government of Tanzania to launch the BRN initiative. BRN identifies six priority areas for strengthened delivery, extrapolated from the Tanzania National Development Vision 2025. These include energy and natural gas, agriculture, water, education, transport and mobilization of resources. These were selected according to the number of beneficiaries, the relative impact on the quality of life and the feasibility of achieving measurable impact within a relatively short timeframe. Implementation of the BRN initiative is in progress and the main goal is to push up the growth rate in order to reduce poverty.

Key policy challenges going forward include fostering strong inclusive growth through improving productivity in sectors with maximum impact on poverty reduction (agriculture and manufacturing), productive infrastructure investment, enhancing the institutional framework to ensure that possible future revenues from the country's wealth of natural resources benefit all citizens and improving the business climate.

### **2. Financial liberalisation in Tanzania**

Tanzania embarked on financial liberalization in 1992 aimed at sustaining growth in the real sector by boosting resource mobilization, motivating competition in the financial market and enhancing quality and efficiency in credit allocation. These reforms have changed the direction and quality of financial services offered in the country. New merchant banks, commercial banks, bureau de change, insurance companies, stock exchange and related financial units have been established. The entry of new banks and non-bank financial institutions has enhanced the competition and improved the quality and type of financial products and services provided. Tanzania's financial sector has continued to grow. The number of banking institutions increased from 49 in March 2012 to 52 in 2013, while bank branches increased from 521 to 559 during the same period. At the same time, the number of insurance companies reached 26 and established financial Non-Governmental Organizations (NGOs) and financial companies exceeded 100 and 150, respectively. In addition, Savings and Credit Co-operative Societies (SACCOS) number over 5 000. Each of these institutions plays an important role in financial resource mobilization

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The Bank of Tanzania (BOT) bears the responsibility of establishing conducive monetary stipulations that will generate low and stable inflation over time. . (<https://www.bot-tz.org/>)

As it is disclosed in the BOT Act, 1995 section 5 (3), "The primary objective of the Bank shall be to formulate and implement monetary policy, directed to the economic objective of maintaining price stability, conducive to a balanced and sustainable growth of the national economy of Tanzania In an effort to liberalize the banking sector, the Banking and Financial Institution Act, 1991 was introduced to provide the legal framework for banking operations in Tanzania that will grant authorization of financial institutions to receive money on current account subject to withdraw by cheque. As a result of the Act, the entry of new banks has enhanced financial competition resulting into some improvement of the quality and quantity of the financial services offered . (<https://www.bot-tz.org/>)

### **2.1. The Origin of Financial Liberalization in Tanzania**

Tanzania, like many other developing countries, has implemented a number of reforms since the widespread acceptance of the ideal of financial Liberalization. Although Tanzania started pursuing financial reforms as early as the 1980s, it was only in the 1990s that fully-fledged financial reforms were implemented. This was because the country wanted to avoid a rapid or 'big bang' financial liberalization situation. Moreover, it was necessary for the country to attain some level of macroeconomic stability before fully liberalizing its financial sector. For example, it was only in 1992 that the Bank of Tanzania (BOT) lifted its responsibility of setting interest rates (except for the maximum lending rate). In the same year, the Foreign Exchange Act of 1992 was passed and replaced the Exchange Control Ordinance. In 1993 the lending interest rate ceiling of 31% was abolished and the 91-day Treasury Bill Auction commenced. During the same year, a number of foreign exchange reforms were undertaken. A bureau-de-change market was introduced in April 1993 in an effort to liberalise foreign exchange, and, in July 1993, the BOT began auctioning foreign exchange. This had the joint effect of liquidity management and market-based exchange rate determination. In August 1993, bureaus and official exchange rates were unified and, thereafter, for ex auctions were extended to include commercial banks.

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In 1994 the requirement of a positive real deposit rate was abolished. A year later, the liquidity asset ratio was also abolished, and in 1996 the credit ceiling on the lending of commercial banks was also abolished<sup>4</sup>. Unfortunately, the implementation of the financial liberalization policy in Tanzania, just as in many other developing countries, resulted in a number of challenges. These include high interest rates, a wide and expanding spread between lending and deposit rates, a systematic decline in domestic credit to the private sector, an unstable exchange rate, and mixed trends in financial depth. . (<https://www.bot-tz.org/>) For example, since the liberalization of interest rates in 1994, the spread between the lending and deposit rates has widened significantly. The general trend of domestic credit to the private sector has also declined dramatically from 28.62% in 1991 to 6.98% in 1998. Although savings and investment have shown positive trends since 1998, the pre-reform average savings and investment levels generally exceed the post-reform levels. . (<https://www.bot-tz.org/>)

### **2.2. Interest rates behavior before and after liberalization**

During the period 1961-1967, the Tanzanian interest rate policy was largely controlled by the East African Currency Board (EACB) – a board that was established in December, 1919. The EACB was mainly concerned with the interest rates on government securities. There was no concern with interest rates charged by commercial banks. The emphasis at this time was on keeping the local Treasury Bill rate at approximately 12.5% below the UK treasury Bills. . (<https://www.bot-tz.org/>)

The so-called ‘big three’ commercial banks in Tanzania tied their interest rates to money market rates in London. However, during this period the interest rate on saving deposits did not show any significant change. For example, the deposit rate decreased from 3.5% per annum in 1961 to 3% per annum in 1962 and remained unchanged until 1964. The interest rate later increased to 3.5% in 1965, which prevailed until 1966. The small variations in the deposit rate could be attributed to the cartel nature of commercial banks that operated in the country during this period. Following the Arusha Declaration in April 1967, the interest rate policy was changed substantially. This marked the beginning of an era of administratively-fixed interest rates in Tanzania. In 1969, for example, the Government lowered the Treasury bill rate to 4.3% per annum from 4.6% in 1968, a rate that was maintained for 14 years. The foundation for this move was to lower the cost of government borrowing from the banking system.



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However, the rate was later adjusted upward to 5.00% in 1983 and 5.70% in 1985. Although the nominal Treasury Bill rate remained more or less fixed during the period 1967-1985, the real rate remained virtually negative throughout this period, with the lowest rate (-26.95%) being recorded in 1981. The negative real interest rate is attributed to the high and persistent inflation that prevailed during this period. As in the case of Treasury Bills, the bank rate was administratively fixed throughout this period. The nominal bank rate remained fixed at 5.00% during 1967 to 1977. The rate was later adjusted to 6.00% in 1979, a rate that was maintained until 1986. Although the nominal rate remained fixed during this period, the real bank rate followed a different trend. The rate remained negative during 1973 to 1985, with the lowest rate (-28.88%) being recorded in 1985. The deposit rate also remained fixed at 4% per annum over the period 1967 to 1984. . (<https://www.bot-tz.org/>)

It was then adjusted to 4.5% in 1985, reflecting an increase of only 50 basis points after a period of almost 20 years. However, the real deposit rate remained largely negative throughout the pre-reform period. Likewise, the nominal lending rate followed a similar trend. The lending rate was lowered from 7% per annum in 1967 to 6.5% in 1968, and there after remained unchanged until 1977. It was then adjusted upwards to about 6.54% in 1978 and reached 13% in 1984. The real rate, on the other hand, remained negative throughout this period.

Since 1986, there has been reversal of interest rate policies. This is evidenced in the upward trend of The Impact of Financial Liberalization in Developing Countries interest rates recorded since 1986 following the liberalization of interest rates in 1992 and 1993, Tanzania suffered sharp increases in both nominal and real interest rates. For example, during 1993 to 2001, nominal discount and lending rates remained at a double-digit level, except in 2001. During the same period, the Treasury Bill rate reached 40.33% in 1995 while the deposit rate reached 26% in 1994. The real lending rate, which was largely low and negative before interest rate liberalization, persistently remained positive and high throughout the period

### **2.3. Financial sector development in Tanzania**

The financial system in Tanzania is still in its beginning. The system is mainly bank centered. The financial deepening and widening has not reached the expected level. The financial market is underdeveloped. There is no significant development of leasing institutions; housing finance

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institutions; and hire purchase and retail credit companies. The long-term end of the market remains under-developed with small and weak contractual saving institutions and a relative small stock exchange, which was only established in 1996 and became operational in 1998. As a result, money and capital intermediaries such as dealers, brokers, discount houses, and merchant banks have not developed to the level expected. . (<https://www.bot-tz.org/>)

However, the government of Tanzania attaches great importance to financial institutions and instruments. Within the Tanzanian economic context, financial institutions perform a number of roles. The most significant of their roles is that they mobilize financial resources from the public, keep custody of the mobilized financial resources, finance activities of the economy through credit extension, and participate in economic activities through equity, and offer advisory services on financial activities of the economy.

The key players in the Tanzanian financial sector are the BOT(which is the Central Bank), commercial banks, development banks, Postal Bank, contractual savings institutions (e.g. National Insurance Corporation, National Social Security Fund, etc), hire purchase companies, savings and the credit societies, informal deposit and credit groups, and the Dar-es-Salaam Stock Exchange (DSE).The central bank of Tanzania, which is popularly known as the Bank of Tanzania (BOT), was established in 1965 following the decision to dissolve the East-Africa Currency Board (EACB). The BOT was formed by the Bank of Tanzania Act of 1965. The Act empowered the BOT to perform all the traditional central banking functions. However, within eight months of its inauguration in February 1967, the Arusha Declaration was proclaimed, and with it, the BOT had to re-orient its policies. Most of the traditional instruments of indirect monetary policy stipulated in the Act became inoperative, as there was no longer an effective environment for indirect instruments. . (<https://www.bot-tz.org/>)

Currently, the BOT is empowered by the Bank of Tanzania Act of 1995, with the primary objective of formulating and implementing monetary policy, which is directed towards the economic objective of maintaining price stability and soundness of the financial system overtime<sup>5</sup>. In addition, the Bank has other subsidiary functions that include issuing currency; serving as the bank of, banker and the government; advising the government; serving as the guardian of the country's international reserves; supervising banks and financial institutions; and promoting of financial development. The BOT is currently using three main instruments to

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implement its monetary policies. These include the discount rate, minimum reserve requirements, and open market operation. The banking sector in Tanzania is relatively small and less developed when compared to that of South Africa.

A number of factors have contributed to the current underdevelopment of the Tanzanian banking sector. The main constraint is financial repression although a weak and unclear institutional framework also has its own contribution to this effect. The key elements of financial repression include restrictions on entry into the banking sector, and these were often combined with public ownership of major financial institutions.

Other restrictions were high reserve requirements on deposits, statutory ceilings on bank lending and deposits, quantitative restrictions on credit allocation, restrictions on capital transaction, and foreign exchange transactions. Before the financial reform in the 1990s, state-owned banks dominated the Tanzanian banking sector. For example, in 1980 the National Bank of Commerce (NBC) expanded its operations to most parts of the country. By 1990, the bank had, apart from the head office in Dar-essalaam,<sup>25</sup> regional offices, district offices in all mainland districts, 182 branches, and 220 agencies. The main purpose of this was to try to reach as many people as possible in an effort to mobilize domestic savings.

Since the 1990s, the government has implemented a number of policy and institutional reforms in order to strengthen the development of financial institutions in Tanzania. For example, the Banking and Financial Institutions Act of Tanzania was passed in 1991 in order to modernize the legal and regulatory framework so as to allow for competition in the delivery of financial services. A law was also passed by the Parliament in 1991, which led to the establishment of the Loans and Advances Realization Trust (LART). The main aim of this law was to address the large portfolio of non-performing loans. In 1997 the government began restructuring NBC, which by then had a market share of 90%.  
[www.nbs.go.tz](http://www.nbs.go.tz))

The move was aimed at scaling down bureaucracy and building an efficient, modern, and highly competitive banking institution. The effects of restructuring resulted in the splitting of the NBC into three institutions, namely, NBC (1997) Limited, the National Microfinance Bank (NMB)

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Limited, and the NBC holding corporation. These institutions began operations on 1<sup>st</sup> October 1997 under the ownership of the government, pending their privatization. The government later appointed a transitional management committee to handle the transitional issues and arrangements. In order to improve the efficiency of these institutions and enhance the stability of the financial system at large, the government also committed itself to restructuring the remaining state-owned banks and financial institutions.

Currently there are about 18 banks, 11 non-bank financial institutions, and 80 foreign exchange bureaus operating in Tanzania. The directorate of banking supervision of the BOT is responsible for licensing the commercial banks in Tanzania. Tanzania's financial market is under-developed with a relatively small stock exchange, which was established in 1996 and only became operational in 1998. ([www.nbs.go.tz](http://www.nbs.go.tz))

As a result, money and capital intermediaries such as dealers, brokers, discount houses, and merchant banks have not developed to the level expected. The establishment of money and capital markets in Tanzania was done in phases. For example, in 1993 the Treasury Bills market was introduced. In 1994, the Capital Markets and Securities Act of 1994 was enacted, thereby providing an enabling environment for the establishment of a stock market to provide long-term capital. By 1998, the inter-bank money market and the Dar-es-Salaam Stock Exchange (DSE) were operational. ([www.nbs.go.tz](http://www.nbs.go.tz))

The Tanzanian money market is not yet fully developed. At present, dealings in the money market by the BOT are mainly dominated by Treasury Bills and repurchase agreements (REPOs). Open market operations have been undertaken exclusively in 91-day Treasury Bills (liquidity papers), the proceeds of which are sterilized in a blocked BOT account, while 182-day and 364-day Treasury Bills (in the form of financing papers) are used for financing the governments' deficits. Treasury Bills are sold in the primary market through auctions, which The Impact of Financial Liberalization in Developing Countries started in August 1993, to commercial banks, other financial institutions, official entities, businesses, and individuals. The bills can be discounted at the BOT at the prevailing discount rate, at the discretion of the Bank. The secondary market in Tanzania is still at an early stage of development.

## **Chapter II: Overview of Tanzanian economy and financial liberalization.**

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Until the 1990s, capital markets in Tanzania were almost non-existent. The development of capital markets only began in the 1990s, after financial reforms. The country decided to develop its capital market because of the transition from a 'planned' economy dominated by parastatal enterprises to a 'market' economy, where the private sector is expected to play an increasingly important role.

In 1994, the Capital Markets and Securities Authority (CMSA) were established and became operational as a unit of the BOT. The unit later became autonomous in July 1995. The CMSA's vision, as expressed in section 10 of the CMSA Act of 1994, is to develop and regulate a sustainable capital market that is efficient, transparent, orderly, fair, and equitable to all. Since its creation, the CMSA has initiated several activities aimed at strengthening the capital market development of Tanzania. Following the establishment of the CMSA Act of 1994, the Dares-Salaam Stock Exchange (DSE) was incorporated in September 1996. . [www.dse.co.tz/](http://www.dse.co.tz/)

The establishment of the Dar-es-Salaam Stock Exchange, which was a government initiative, was an important milestone in the effort toward the development of a well-functioning capital market for the mobilization and allocation of long-term capital to the Tanzanian private sector. Trading operations of the DSE started in April 1998 with the listing of the first company, the Tanzania Oxygen Limited. The second company to be listed was the Tanzania Breweries Limited, and one of the latest listing is the Tatepa. . [www.dse.co.tz/](http://www.dse.co.tz/)

By December 1999, four companies had been listed on the DSE. Three of these companies raised a combined equity capital of 28.57 billion shillings in the primary capital market. There are presently five stock broking firms licensed to deal in exchange. [www.dse.co.tz/](http://www.dse.co.tz/)

There are also a number of pending listings of large companies, and trading is expected to pick up once the government authorizes the participation of foreign firms in the market. Overall, the Tanzanian capital market is still relatively under-developed when compared to South Africa's. Bank financing and government subsidies have for a long time been the source of finance for public corporations and companies. There is a noticeable absence of public companies (i.e. companies allowed to invite subscriptions from the public). Many companies in Tanzania are

## **Chapter II: Overview of Tanzanian economy and financial liberalization.**

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private, and their rights to transfer severely restricted. The number of securities is rather limited, with government debt instruments being the only securities in the market (i.e. stocks and Treasury Bills). A secondary market for government securities is now in the process of being established. Pension and provident funds are the only major collective investment schemes.

### **2.4. Other Financial Intermediaries in Tanzania**

Apart from the BOT and the commercial banking sector, there is a financial intermediary in Tanzania. These are non-bank financial intermediaries (for example, institutions offering leasing and hiring services) and the informal financial sector. This last category includes, for instance, informal commercial money-lenders as well as financial associations among neighbors. Each of these sets of financial intermediaries will be discussed separately below.

#### **2.4.1 .Non-Bank Financial Institutions in Tanzania**

Non-bank financial institutions, as defined within the Tanzanian context, are institutions or persons authorized by law to engage in banking business not involving the receipt of money on current account subject to withdrawal by cheque. The number of non-bank financial institutions in Tanzania has increased from three in the 1980s to 11 in November 2000. Non-bank financial institutions in Tanzania can be divided into deposit-taking and non-deposit-taking institutions. Deposit-taking institutions incur liabilities in forms other than demand deposits (e.g. time and savings deposits). They also mobilize deposits by offering various types of deposit schemes (in Tanzanian shilling and foreign exchange), providing banking services (other than cheque accounts), and by participating in money market operations. [www.nbs.go.tz](http://www.nbs.go.tz)) Non-deposit-taking institutions, on the other hand, can be grouped as follows:

- i) **Institutions offering leasing and hire purchase services:** This service had been monopolised by one state-owned company until 1991, when the Banking and Financial Institutions Act of 1991 was enacted.
- ii) **Institutions offering development finance:** These institutions provide long-term finance to the public and private sector in the form of loans for medium- to large-scale investment. Due to stiff competition from commercial banks, these institutions are planning to become merchant banks.

## **Chapter II: Overview of Tanzanian economy and financial liberalization.**

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### **iii) Institutions offering pension funds and insurance services:**

These are the most active of all groups in terms of outreach, volume, and frequency of payments. They include pension funds and insurance companies, among others. [www.nbs.go.tz](http://www.nbs.go.tz))

### **2.4.2. Informal financial sector**

Apart from the formal financial institutions highlighted in the preceding sections, there are a number of informal financial institutions operating parallel to formal financial institutions. Informal financial institutions in Tanzania can be broadly classified into three groups.

#### **i) Financial arrangements among relatives, neighbors, and friends:**

These arrangements have a long tradition in Tanzania. No interest is charged on the loans given out to relatives, neighbours, and friends. At present there are no in-depth studies focused on informal financial associations, and so it is not possible to gauge the magnitude of this phenomenon in Tanzania. However, there is evidence that this kind of financial arrangement is substantial. Credit from friends and relatives constitutes an important source of start-up capital for many informal sector enterprises. In 1985, credit from this group constituted up to 55% of total start up investment funds<sup>7</sup>. [www.nbs.go.tz](http://www.nbs.go.tz))

**ii) Savings and Credit Societies (SCSs):** This type of financial arrangement consists of groups of people who have ethnic, residential, or occupational bond and adhere to internally set rules and regulations. Most of these groups are formed spontaneously, though in some situations the Government has tried to influence their formation. According to the Co-Operatives Societies Act of 1991, primary co-operatives are allowed to raise money from their members through the deposits and shares that the farmers pay when they first enter a society.

**iii) Rotating Savings and Credit Associations (ROSCAs):** The Rotating Savings and Credit Association (ROSCAs) are popularly known as *Upatu* in Tanzania. These financial associations are owned and controlled by a group of people, and in most cases they offer both credit and saving services. A study done in the 1990s found that *Upatu* groups intermediate a substantial volume of savings among their members. The study also found that members participate in these thrift groups as a response to the economic hardships they face due to increases in the cost of living and the inaccessibility of formal financial credit. [www.nbs.go.tz](http://www.nbs.go.tz))

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### **CONCLUSION**

Beginning in 1986, the Government of Tanzania embarked on an adjustment program to dismantle the socialist economic controls and encourage more active participation of the private sector in the economy. The program included a comprehensive package of policies which reduced the budget deficit and improved monetary control, substantially depreciate the overvalued exchange rate, liberalized the trade regime, removed most price controls, eased restrictions on the marketing of food crops, freed interest rates, and initiated a restructuring of the financial sector.

Tanzania has recorded a dramatic recovery in economic growth since the onset of financial liberalisation in the 1990s, significant measures have been taken to liberalize the Tanzanian economy along market lines and encourage both foreign and domestic private investment. Current GDP per capita of Tanzania grew more than 40 percent between 1998 and 2007. ([www.nbs.go.tz](http://www.nbs.go.tz))

If liberalization should be combined with adequate prudential guidelines and strong supervision of banking and capital markets, improved financial intermediation capable of raising the level of other relevant causal factors will be achieved. This scenario will invariably spur the growth of the economy. Thus, government embarking on financial liberalization should set in order a sound capital base, prudential guidelines and a strong supervisory agency that will follow up action to ensure compliance.



## **Chapter III: Econometric analysis of the relationship between financial liberalization and economic growth.**

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### **Introduction:**

For the objective of clarifying our analysis of the relationship between the financial liberalization and economic growth, after having seen chapter 1 the literature ( Theoretical ) overview on financial liberalization and economic growth . Chapter 2 reviews the main empirical research that highlight the impact of financial liberalization on economic growth. Chapter 3 is the overview of Tanzanian economy and financial liberalization in Tanzania. We will present in this chapter proceeds by an econometric estimation approach based on modeling VAR (vector auto Regressive) to assess the relationship between financial liberalization and economic growth in Tanzania

This chapter will be the subject of two sections, the first is to explain the method and assumptions in the application of the model, and the second will be devoted to the analysis and interpretation of the chosen variables.

However, before starting this chapter, it's useful to show why it is important to choose the certain particular model, the economic variables, each one can well explained by itself and on others as well, therefore the favorable model is VAR modeling because allows us to analyse the effect of each variable on itself and on other variables in general

### **1.1 The method of estimation**

The methods of estimation is composed of four steps as follow

- i. specification of the model by determination of the number of retard (p) par la criteria of (AIC) and (SC)
- ii. Estimation with the series which are stationary, determination of optimum VAR
- iii. Validation of the model
  - For the significance of coefficients
  - For analyzing of the residue

### **1.2 Empiric analyse**

## Chapter III: Econometric analysis of the relationship between financial liberalization and economic growth.

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i the hypotheses of regression

H1; The model is linear in  $x_t$

H2; Values of  $x_t$  are observed without errors

H3;  $E(\varepsilon_t)=0$ , the mathematical Esperance of error is nil

H4;  $E(\varepsilon_t^2) = \sigma^2\varepsilon_t$ , the variance of error is constant

H5;  $E(\varepsilon_t, \varepsilon_{t'}) = 0$  if  $t \neq t'$  errors are not correlated

H6;  $COV(\varepsilon_t, \varepsilon_{t'})= 0$  The error is independent of explicative variable

### 1.3 Models autoregressive which based on tests of ADF

- First model;  $X_t = \rho_1 X_{t-1} + \varepsilon_t$  (model without trend nor constant)
- Second model;  $\rho_1 X_{t-1} + c + \varepsilon_t$  (model with constant)
- Third model;  $\rho_1 X_{t-1} + c + \beta_t + \varepsilon_t$  (model with trend and constant)

## 2. Analyse and interpretation of la relationship between financial liberalisation and economic growth by VAR modeling.

### 2.1. The choice of variables;

The objective of this chapter is to empirically investigate the relationship between the financial liberalization and economic growth in Tanzania. To do this, economic growth is measured by the GDP growth rate in percentage. The financial liberalization is apprehended through variables most used in the economic literature namely: financial development indicators are given the bank credit to the private sector (as a percentage of GDP), the money supply to GDP and an indicator reflecting the degree of liberalization of the economy, namely the openness rate of the Tanzanian economy. The data used in this study are taken from the World Bank database and Bank of Tanzania covering the period between 1984 and 2013.

We express the variables in logarithm to flatten differentials between the series used.

### Chapter III: **Econometric analysis of the relationship between financial liberalization and economic growth.**

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Before estimating the relationship between financial liberalization and economic growth, it is first necessary to study the stochastic characteristics of different series. This analysis is often required to avoid spurious regressions problems that may arise in case of non-stationary variables. For this, we use unit root tests, the most recommended and simplest is the Augmented Dickey-Fuller (ADF test). Thus, the study is carried out based on the following model:

$$\mathbf{LGDPGR} = F(\mathbf{LCBSP}_t, \mathbf{LM2GDP}_t, \mathbf{LOPENRATE}_t)$$

With:

**LGDPGR** (Economic growth rate): Annual growth rate of GDP, economic growth indicator.

**LBCPS**: Bank Credit granted to the Private Sector as a percentage of GDP; it measures the importance of credit allocated to the private sector in the economy.

**LM2GDP**: Ratio of the money supply or money supply to GDP; (**M2GDP**), it is the size of financial intermediaries in the economy. This indicator also said liquidity ratio, indicates the ability of a financial system to attract savings. Hence, the importance of this ratio is synonymous with the weakness of the financial system in the collection of savings.

**OPENRATE.:** Open rate of the Tanzanian economy, indicating the importance of trade with the **rest of the world (exports and imports) to GDP, it is expressed by the ratio (imp+exp)/gdp.**

#### **i. Banking credit to private sector**

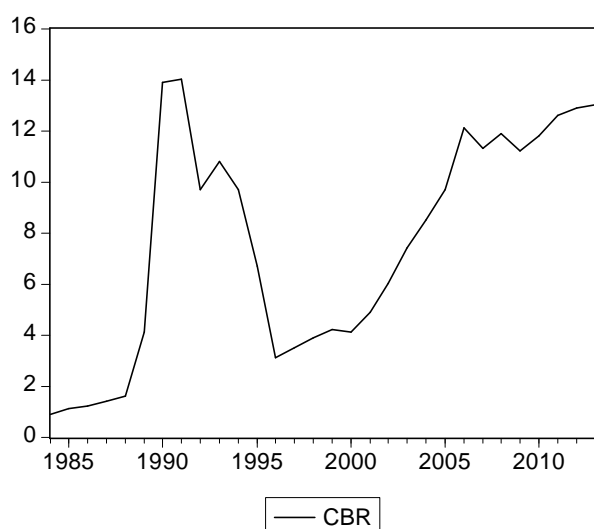
Domestic credit to private sector refers to financial resources provided to the private sector by financial corporations, such as through loans, purchases of non equity securities, and trade credits and other accounts receivable, that establish a claim for repayment. For some countries these claims include credit to public enterprises. The financial corporation includes monetary authorities and deposit money banks, as well as other financial corporation where data are available (including corporations that do not accept transferable deposits but do incur such liabilities as time and savings deposits). Examples of other financial corporations are finance and

### Chapter III: Econometric analysis of the relationship between financial liberalization and economic growth.

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leasing companies, money lenders, insurance corporations, pension funds, and foreign exchange companies.

#### **Evolution of banking credit to private sector in ration of gdp in Tanzania from the year 1984 -2013**



Set out by the author according to given data of Word bank and Bank of Tanzania

#### **ii. Economic growth**

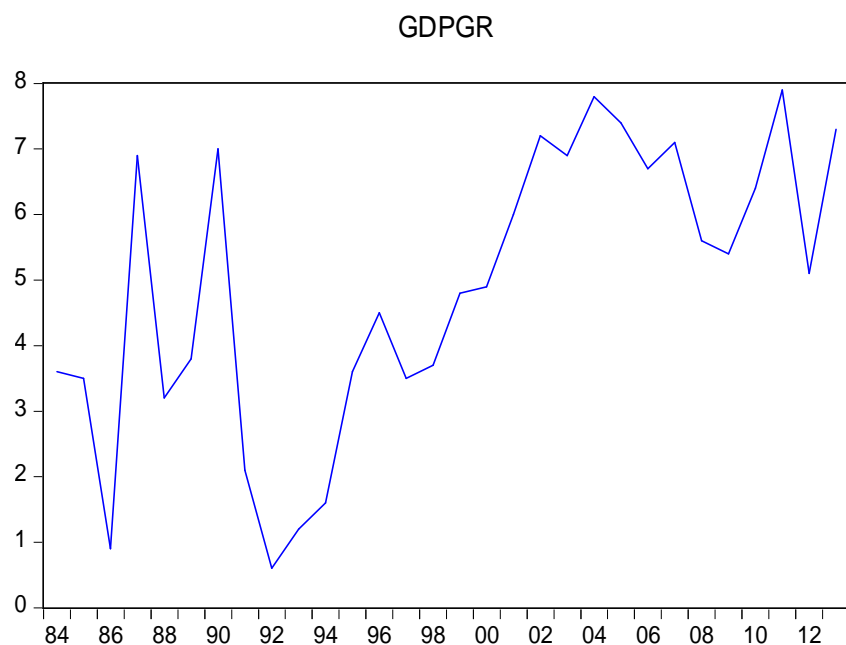
Economic growth is the increase in the inflation-adjusted market value of the goods and services produced by an economy over time. It is conventionally measured as the percent rate of increase in real gross domestic product, or real GDP.<sup>[11]</sup> Of more importance is the growth of the ratio of GDP to population (GDP per capita, which is also called per capita income). An increase in growth caused by more efficient use of inputs (such as physical capital, population, or territory) is referred to as intensive growth. GDP growth caused only by increases in the amount of inputs available for use is called extensive growth.<sup>[21]</sup>

In economics, "economic growth" or "economic growth theory" typically refers to growth of potential output, i.e., production at "full employment". As an area of study, economic growth is generally distinguished from development economics. The former is primarily the study of how countries can advance their economies. The latter is the study of the economic development process particularly in low-income countries.

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#### Evolution of economic growth in Tanzania from the year 1984 to 2013



Set out by the author according to given data of World bank and Bank of Tanzania

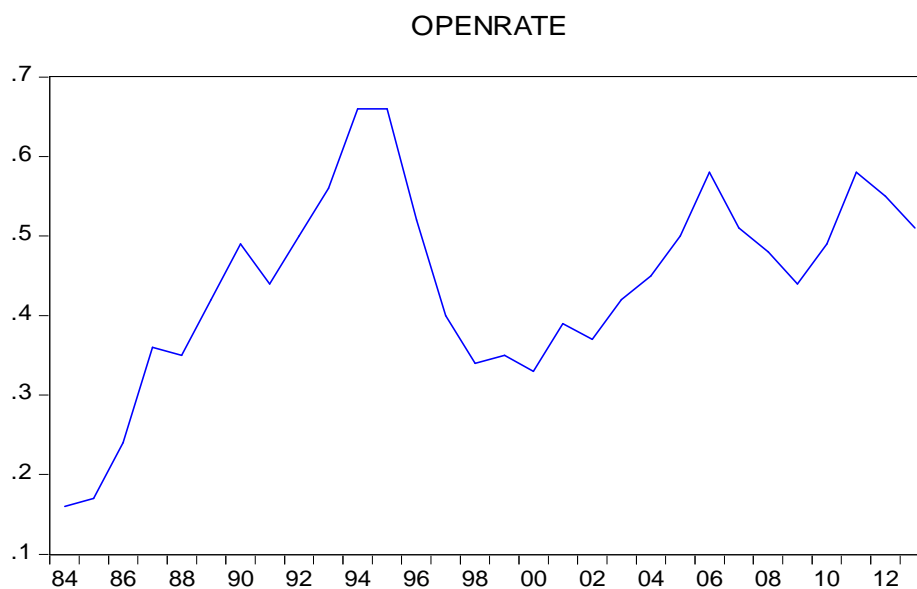
#### **iii. Openness rate;**

The opening rate of an economy measure the place that the rest of the world in the economy of a country. It measures the level of the external constraint and evaluated by multiple significant and informative elements of the level of trade of an economy with the rest of the world. Thus flow as net imports or exports may be used. Significant ratios (ratios) can be too. In this sense, for example the dependency ratio can be measured by imports, exports or average relative to GDP. The rate of coverage of imports by exports may be used in this sense.

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#### The evolution of openness rate in Tanzania from 1984-2013



Set out by the author according to given data of World bank and Bank of Tanzania

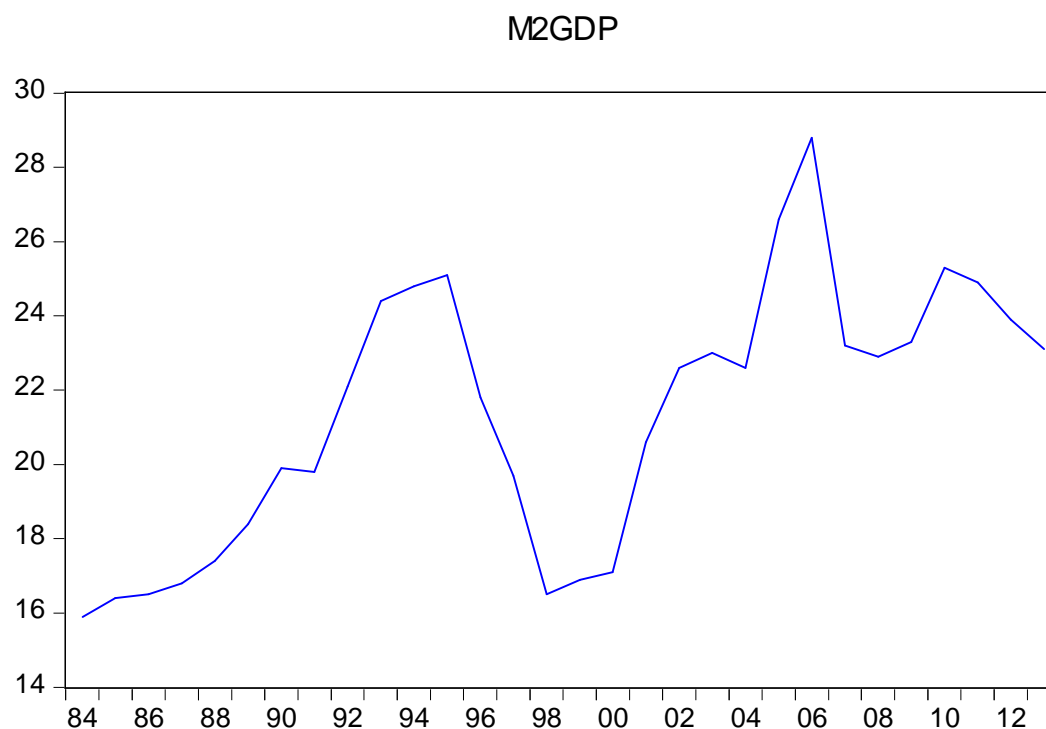
#### **iv. Broad money supply**

Money and quasi money comprise the sum of currency outside banks, demand deposits other than those of the central government, and the time, savings, and foreign currency deposits of resident sectors other than the central government. This definition of money supply is frequently called M2

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#### **The evolution of broad money supply (m2) in the ratio of GDP in Tanzania from the year 1984-2013**



Set out by the author according to given data of World bank and Bank of Tanzania

The graphs of CBR, GDPGR, OPENRATE and M2GDP show that during the same periods, the curves have approximately a common trend, either upward or downward, which indicates that there may be dependent relationships or causality between these variables (CBR, GDPGR, OPENRATE and M2GDP); in other words, economic growth seems to be influenced by the financial system indicators. Considering the graphs above reveals two critical periods, the rupture is in the early 1990s marking the beginning of the process of liberalizing Tanzania's economy as a result of the adoption and implementation of the adjustment program in 1990s.

Indeed, the study modeled period is from 1984 to 2013. This period includes actually two major sub periods. During the first period, that of the centrally planned economy from 1980s to 1990, the monetary authority has used direct management instruments in the implementation of monetary policy, namely, supervision of bank lending and fixing rediscount ceilings.

The second period, that of the era of liberalization of the economy, from the 1990s-2013 years (stand-by, followed by structural adjustment) when the Bank of Tanzania has implemented under

### Chapter III: **Econometric analysis of the relationship between financial liberalization and economic growth.**

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the leadership IMF, indirect monetary instruments which the credit adjudication, Open Market and the reserve requirement but where the refinancing with the central bank continued to be the primary means for banks to ensure liquidity.

**2.2. Tests of Augmented Dickey and fuller** ; this test consist of determining the stationary of series and to precise if the process is not stationary determinist (TS) or not stationary stochastic (DS).

- **Application to the series of banking credit to private sector %of gdp (lbcps)**

The variable lbcps is stationary after first derivative which is DS, is first model without derivative I(1) according to the results given by ADF -3.424674 which is inferior to the critical value -1.953858

The variable	Test ADF	Critical value	Decision
Lbcps	-3.424674	-1.953858	Series is stationary

- **Application to the series of lgdpgr**

The variable lgdpgr is stationary after first derivative it is DS, is first model with derivative I(1) , according to the results given by ADF -5.642618 which is inferior to the critical value -2.653401

The variable	Test ADF	Critical value	Decision
Lbcps	-5.642618	-2.653401	Series is stationary

- **Application to the series of lopenrate**



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The variable lopenrate is stationery at the level, it is second model I(0), the value of constant is 0.0017 which is inferior to the probability of 0.05

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOPENRATE(-1)	-0.325436	0.079167	-4.110752	0.0004
D(LOPENRATE(-1))	0.293286	0.147259	1.991638	0.0574
C	-0.246922	0.070033	-3.525786	0.0017

- **Application to the series lm2gdp**

The variable lm2gdp is at stationary after first derivative it is DS, first model with I(1), according to the results given by ADF -3.297290 which is inferior to the critical value -1.953858

The variable	Test ADF	Critical value	Decision
Lbcps	-3.297290	-1.953858	Series is stationary

### 3 Estimation of VAR (Vector Autoregressive) model

the use of VAR model is justified by the fact that it remains the most adequate technique to explain the relationship between the financial liberalization and economic growth , the objective of using VAR model is to examine the past effect of each variable on itself and on the other variable, the requirement of estimation of VAR model is that the series should stationary st , so we use the series of ; dlbcps dldpgr lopenerate and dlm2gdp

#### 3.1 Determination of number of retard for the model of VAR (Vector Autoregressive)

	1	2	3	4
AIC	5.451114	4.304894	4.188706	1.548379
SCH	6.402688	6.032677	6.704899	4.863721

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The number of retard which eliminate the criteria of Akaike & Schwarz is number 4 for Schwarz and number 4 for Akaike therefore we take the number 4 as our retard for our estimation of VAR model

### 3.2 Estimation of VAR model

The estimation of VAR model is permitted because the stationary condition series are met, the estimation of VAR model is done by the help of ordinary least squares (OLS) (MCO). The procedure is to verify the significance of coefficients of every variable; we compare the value of t – statistic of student with calculated statistic which is less than 1.96

	DLBCPS	DLGDPGR	DLM2GDP	LOPENRATE
DLBCPS(-4)	0.037485 (0.29715) [ 0.12615]	-0.714201 (0.49536) [-1.44179]	6.576239 (2.73159) [ 2.40748]	0.137675 (0.18309) [ 0.75195]
DLGDPGR(-4)	0.151086 (0.08378) [ 1.80337]	-0.121038 (0.13966) [-0.86664]	-0.937913 (0.77015) [-1.21783]	-0.077128 (0.05162) [-1.49411]
DLM2GDP(-4)	-0.015030 (0.02784) [-0.53979]	0.008450 (0.04642) [ 0.18204]	-0.146797 (0.25597) [-0.57350]	-0.005241 (0.01716) [-0.30550]
LOPENRATE(-4)	-1.704424 (0.54678) [-3.11719]	-1.806211 (0.91150) [-1.98159]	4.143797 (5.02632) [ 0.82442]	-0.047070 (0.33690) [-0.13971]

Established by the author on basis of given data of word bank and bank of Tanzania

### 4 Study of Granger causality

The finality of tests of Granger causality is to examine the causal relationships between the different variable of the model. Therefore the variable X Granger causes the variable Y if the

### Chapter III: Econometric analysis of the relationship between financial liberalization and economic growth.

past knowledge of X improves the prediction of Y. The basic idea of this test is to accept or reject the null hypothesis “Ho” that the variable X does not cause y. The opposite case we accept the hypothesis “Ho”

#### Test of causality between the variables

Null Hypothesis:	Obs	F-Statistic	Prob.
DLGDPGR does not Granger Cause DLM2GDP	25	0.52261	0.7206
DLM2GDP does not Granger Cause DLGDPGR		0.29701	0.8756
LOPENRATE does not Granger Cause DLM2GDP	25	1.81090	0.1761
DLM2GDP does not Granger Cause LOPENRATE		0.49046	0.7428
DLBCPS does not Granger Cause DLM2GDP	25	2.05616	0.1346
DLM2GDP does not Granger Cause DLBCPS		0.47518	0.7534
LOPENRATE does not Granger Cause DLGDPGR	25	0.91611	0.4785
DLGDPGR does not Granger Cause LOPENRATE		4.31986	0.0147
DLBCPS does not Granger Cause DLGDPGR	25	4.53553	0.0122
DLGDPGR does not Granger Cause DLBCPS		2.40646	0.0925
DLBCPS does not Granger Cause LOPENRATE	25	2.07028	0.1325
LOPENRATE does not Granger Cause DLBCPS		9.00390	0.0005

Established by the author on basis of given data of word bank and bank of Tanzania

The hypotheses of test of causality are as follow;

Ho: y does not cause X

H<sub>1</sub>: y cause X

If the probability is inferior to 5% it is hypothesis H<sub>1</sub> which is accepted and we reject hypothesis H<sub>0</sub>

The results of tests of causality proves there is **unidirectional causality exist between economic growth rate and the openness rate;** that is economic

### **Chapter III: Econometric analysis of the relationship between financial liberalization and economic growth.**

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growth causes openness rate but openness rate does not cause economic growth rate. From economical point of view increases in the production of goods and services lead to the increase of exportation.

The results of tests of causality prove there **is bidirectional causality existing between Banking credit to private sector and economic growth rate (reasoning at the probability of 10%)**. Each one of the two variable causes to each other in the sense of the Granger, therefore we have the effect of feedback, banking credit to private sector influences economic growth rate and economic growth rate influences banking credit to private sectors.

From economical point of view banking credit finance investment therefore when banking credit increases causes investment to increase thus increase in production which lead to the economic growth. When there is economic growth that is increase in production leads to increase in income and thus increase in saving which facilitate banking credit

The results of tests of causality proves there is unidirectional **causality exist between rate of openness and banking credit to private sectors**, that is openness rate causes banking credit to private sectors but banking credit to private sectors does not cause openness rate. From economical point of view increase in exportation leads to the increase of income as the result increase in saving this facilitates banking credit.

#### **5 Variance composition of the error of prevision**

The variance decomposition of the error of prevision is for objective of calculating of each one of the innovation (shock) it's contribution to the variance of error of prevision, the interpretation of the results is important, it's given as follow refers to the table of variance decomposition of the error of prevision, we found that the source of variation of economic growth rate depends much on its past values.

In the beginning of five years the sources of variation of economic growth rate comes to 75.772% from its own past values and 24.228% from the past of other variables, which are banking credit to private sector, openness rate and broad money supply.

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#### Variance composition of error of previon of dlgdpgr

Period	S.E	DLBCPS	DLGDPGR	DLM2GDP	LOPENRATE
1	0.306835	6.522945	93.47706	0.000000	0.000000
2	0.326689	6.331255	90.17823	0.728502	2.762017
3	0.373789	7.549994	86.67808	1.293980	4.477948
4	0.394350	6.828662	87.86563	1.168692	4.137017
5	0.438471	9.519207	75.77206	0.945963	13.76277

#### **6 Analyzing the function of impulse responses;**

One of the main uses of VAR process in the application is empirical analysis based on impulse response. It summarizes information concerning the Evolution of a sequence variable has a pulse, shock on another variable at time  $t = 0$  and assuming that all other variables are constant.

In our model check annex we notes the following results

- The shock of banking credit to private sector gives positive effects on economic growth in the first period and negative effects in the second period
- The shock of broad money supply(m2) gives positive effect on the economic growth in the first period until third period where it gives negative effect
- The shock on openness rate gives positive response on economic growth in the first period and negative response on the second period

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#### **Conclusion**

According to our econometric analysis we can conclude by the VAR model (vector autoregressive) we have found out the results which shows that economic growth depend on its past and on the banking credit to the private sector but it does not depend on broad money supply nor the openness rate, thus is very important to do the study of causality between the variables, by the tests of classic causality (check the annex)

The results of tests of causality proves there is unidirectional causality exist between economic growth rate and the openness rate; that is economic growth causes openness rate but openness rate does not cause economic growth rate. . From economical point of view increases in the production of goods and services lead to the increase of exportation.

The results of tests of causality prove there is bidirectional causality existing between Banking credit to private sector and economic growth rate (reasoning at the probability of 10%). Each one of the two variable causes to each other in the sense of the Granger, therefore we have the effect of feedback, banking credit to private sector influences economic growth rate and economic growth rate influences banking credit to private sectors.

From economical point of view banking credit finance investment therefore when banking credit increases causes investment to increase thus increase in production which lead to the economic growth. When there is economic growth that is increase in production leads to increase in income and thus increase in saving which facilitate banking credit

The results of tests of causality proves there is unidirectional causality exist between rate of openness and banking credit to private sectors, that is openness rate causes banking credit to private sectors but banking credit to private sectors does not cause openness rate, . From economical point of view increase in exportation leads to the increase of income as the result increase in saving this facilitates banking credit

We have done as well the variance decomposition of the error of prevision for objective of calculating each one of the innovation (choc) it's contribution to the variance of error of prevision, we found that the source of variation of economic growth rate depends much on its past values In the beginning of five years the sources of variation of economic growth rate

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comes to 75.772% from its own past values and 24.228% from the past of other variables, which are banking credit to private sector, openness rate and mass monetary

we have analyzed the function of impulse responses, in which we found out the shock of banking credit to private sector gives positive effects on economic growth in the first period and negative effects in the second period the shock of broad money supply (m2) gives positive effect on the economic growth in the first period until third period where it gives negative effect

The shock on openness rate gives positive response on economic growth in the first period and negative response on the second period.

## **General conclusion:**

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### **General conclusion**

Tanzania, like many other countries, has implemented a number of reforms since the widespread acceptance of the ideal of financial liberalisation. Although Tanzania started pursuing financial reforms as early as the 1980s, it was only in the 1990s that full-Fledged financial reforms were implemented. Beyond academic debate (the neo-structuralist approach), and considering the "operational" character of financial liberalization, it is necessary to determine whether or not, the financial policy has accelerated the development and economic growth of Tanzania.

The first empirical part which forms part of these analyzes resulted in a positive, as a whole, between financial liberalization and economic growth. This result is consistent with the neoclassical theoretical perspective which states that financial liberalization is associated with good economic performance (Levine, R 1997 35(2) financial development and economic growth journal of economic literature). However it should be noted that this impact is relatively low despite financial system reforms. Thus, financial liberalization has not yet achieved the desired results.

In another part that is second part we have found the results which are logical specifically the causality between variable is verified. The results of tests of causality prove there is bidirectional causality existing between Banking credit to private sector and economic growth rate (reasoning at the probability of 10%). Each one of the two variable causes to each other in the sense of the Granger, therefore we have the effect of feedback, banking credit to private sector influences economic growth rate and economic growth rate influences banking credit to private sectors. The results of tests of causality proves there is unidirectional causality exist between rate of openness and banking credit to private sectors, that is openness rate causes banking credit to private sectors but banking credit to private sectors does not cause openness rate

We have done as well the variance decomposition of the error of prevision for objective of calculating each one of the innovation (choc) it's contribution to the variance of error of prevision, we found that the source of variation of economic growth rate depends much on its past values. In the beginning of five years the sources of variation of economic growth rate comes to 75.772% from its own past values and 24.228% from the past of other variables, which are banking credit to private sector, openness rate and mass monetary



## **General conclusion:**

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we have analyzed the function of impulse responses, in which we found out the shock of banking credit to private sector gives positive effects on economic growth in the first period and negative effects in the second period the shock of broad money supply (m2) gives positive effect on the economic growth in the first period until third period where it gives negative effect The shock on openness rate gives positive response on economic growth in the first period and negative response on the second period.

Therefore the results which we have got by the by the estimation of VAR modeling confirms the effects of banking credit on private sector on economic growth and the negligible effects of openness rate and of broad money supply (m2).

Thus there is relationship between financial liberalization and economic growth in Tanzania however that relationship is very little, the economic growth depends much on its past. For example In the beginning of five years the sources of variation of economic growth rate comes to 75.772% from its own past values and 24.228% from the past of other variables, which are banking credit to private sector, openness rate and broad money supply (measure of financial liberalisation).

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## **Dissertation and these**

1) ABDERRAMANI- Fares << Test of application of the theory of cointegration and error correction model (ECM) dissertation of Magister, university of Bejaia.

## **Internet site;**

[www.worldbank.org](http://www.worldbank.org)

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## **The list of annexes**

Annex n°1: Test of ADF of stationary of series lcbps

Annex n° 2 Test of ADF of stationary of series lgdpr

Annex n° 3 Test of ADF of stationary of series ln2gdp

Annex n°4 Test of ADF of stationary of series openrate

Annex n° 5 Estimation of VAR model

Annex n° 6 Granger Causality Tests

Annex n° 7 analyse of shocks

Annex n° 8 Variance decomposition of the selected variables

### **List of abbreviations**

ADF	Augmented Dickey-Fuller
BOT	Bank of Tanzania
DS	Determinacy stationary
IMF	International monetary fund
NBS	National bureau of statistics
TS	Trend stationary
TZSH	Tanzanian shilling
VAR	Vector Auto Regressive
WB	World Bank

## Annexes

. Tests of Augmented Dickey and fuller ; this test consist of determining the stationary of series and to precise if the process is not stationary determinist (DS) or not stationary stochastic (DS).

- Application to the series of banking credit to private sector %of gdp (lbcps)

The variable lbcps is stationary after first derivative which is DS, is first model without derivative I(1) according to the results given by ADF -3.424674 which is inferior to the critical value -1.953858

### Annex n°1

Null Hypothesis: DLBCPS has a unit root  
Exogenous: None  
Lag Length: 1 (Fixed)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.424674	0.0014
Test critical values:		
1% level	-2.653401	
5% level	-1.953858	
10% level	-1.609571	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
Dependent Variable: D(DLBCPS)  
Method: Least Squares  
Date: 06/03/15 Time: 21:43  
Sample (adjusted): 1987 2013  
Included observations: 27 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLBCPS(-1)	-0.681477	0.198990	-3.424674	0.0021
D(DLBCPS(-1))	0.267344	0.191573	1.395518	0.1751
R-squared	0.322621	Mean dependent var		-0.002937
Adjusted R-squared	0.295526	S.D. dependent var		0.384106
S.E. of regression	0.322391	Akaike info criterion		0.645085
Sum squared resid	2.598401	Schwarz criterion		0.741073
Log likelihood	-6.708643	Hannan-Quinn criter.		0.673627
Durbin-Watson stat	1.869246			

The variable lgdpg is stationary after first derivative it is DS, is first model with derivative I(1) , according to the results given by ADF -5.642618 which is inferior to the critical value -- 1.953858

## Annex n°2

Null Hypothesis: DLGDPGR has a unit root  
 Exogenous: None  
 Lag Length: 1 (Fixed)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-5.642618	0.0000
Test critical values:		
1% level	-2.653401	
5% level	-1.953858	
10% level	-1.609571	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(DLGDPGR)  
 Method: Least Squares  
 Date: 06/03/15 Time: 21:44  
 Sample (adjusted): 1987 2013  
 Included observations: 27 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLGDPGR(-1)	-1.633829	0.289552	-5.642618	0.0000
D(DLGDPGR(-1))	0.216688	0.178123	1.216510	0.2352
R-squared	0.726336	Mean dependent var		0.063584
Adjusted R-squared	0.715389	S.D. dependent var		1.074945
S.E. of regression	0.573471	Akaike info criterion		1.796970
Sum squared resid	8.221736	Schwarz criterion		1.892958
Log likelihood	-22.25909	Hannan-Quinn criter.		1.825512
Durbin-Watson stat	1.251096			

- Application to the series lm2gdp

The variable lm2gdp is at stationary after first derivative it is DS, first model with I(1), according to the results given by ADF -3.297290 which is inferior to the critical value -1.953858

### Annex n°3

Null Hypothesis: D(DLM2GDP) has a unit root

Exogenous: None

Lag Length: 1 (Fixed)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.297290	0.0019
Test critical values:		
1% level	-2.653401	
5% level	-1.953858	
10% level	-1.609571	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(DLM2GDP,2)

Method: Least Squares

Date: 06/05/15 Time: 03:44

Sample (adjusted): 1987 2013

Included observations: 27 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(DLM2GDP(-1))	-0.791873	0.240159	-3.297290	0.0029
D(DLM2GDP(-1),2)	0.098714	0.199584	0.494599	0.6252
R-squared	0.364998	Mean dependent var		-0.001486
Adjusted R-squared	0.339598	S.D. dependent var		0.112603
S.E. of regression	0.091507	Akaike info criterion		-1.873612
Sum squared resid	0.209339	Schwarz criterion		-1.777624
Log likelihood	27.29377	Hannan-Quinn criter.		-1.845070
Durbin-Watson stat	2.025860			



Application to the series of lopenrate

The variable lopenrate is stationery at the level, it is second model I(0), the value of constant is 0.0017 which is inferior to the probability of 0.05

## Annex

n°4

Null Hypothesis: LOPENRATE has a unit root  
 Exogenous: Constant  
 Lag Length: 1 (Fixed)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.110752	0.0036
Test critical values:		
1% level	-3.689194	
5% level	-2.971853	
10% level	-2.625121	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(LOPENRATE)  
 Method: Least Squares  
 Date: 06/03/15 Time: 21:31  
 Sample (adjusted): 1986 2013  
 Included observations: 28 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOPENRATE(-1)	-0.325436	0.079167	-4.110752	0.0004
D(LOPENRATE(-1))	0.293286	0.147259	1.991638	0.0574
C	-0.246922	0.070033	-3.525786	0.0017
R-squared	0.472027	Mean dependent var		0.039236
Adjusted R-squared	0.429789	S.D. dependent var		0.159063
S.E. of regression	0.120112	Akaike info criterion		-1.299828
Sum squared resid	0.360672	Schwarz criterion		-1.157092
Log likelihood	21.19759	Hannan-Quinn criter.		-1.256192
F-statistic	11.17544	Durbin-Watson stat		2.067455
Prob(F-statistic)	0.000341			

## Estimation of VAR mode

### Annex n°5

Vector Auto regression Estimates

Date: 06/03/15 Time: 12:00

Sample (adjusted): 1989 2013

Included observations: 25 after adjustments

Standard errors in ( ) & t-statistics in [ ]

	DLBCPS	DLGDPGR	DLM2GDP	LOPENRATE
DLBCPS(-1)	0.083283 (0.22852) [ 0.36445]	-0.623588 (0.38095) [-1.63694]	-4.173220 (2.10068) [-1.98660]	-0.054325 (0.14080) [-0.38582]
DLBCPS(-2)	-0.380421 (0.23379) [-1.62722]	-0.674566 (0.38972) [-1.73088]	6.007549 (2.14908) [ 2.79541]	0.115254 (0.14405) [ 0.80011]
DLBCPS(-3)	-0.197173 (0.28498) [-0.69188]	-0.717020 (0.47507) [-1.50929]	-3.513155 (2.61970) [-1.34105]	-0.142865 (0.17559) [-0.81362]
DLBCPS(-4)	0.037485 (0.29715) [ 0.12615]	-0.714201 (0.49536) [-1.44179]	6.576239 (2.73159) [ 2.40748]	0.137675 (0.18309) [ 0.75195]
DLGDPGR(-1)	-0.129104 (0.13972) [-0.92400]	-0.385341 (0.23292) [-1.65438]	0.935109 (1.28442) [ 0.72804]	-0.065743 (0.08609) [-0.76365]
DLGDPGR(-2)	-0.102096 (0.17374) [-0.58765]	-0.803049 (0.28962) [-2.77277]	0.201784 (1.59707) [ 0.12635]	-0.105013 (0.10705) [-0.98100]
DLGDPGR(-3)	0.107811 (0.13089) [ 0.82371]	-0.275573 (0.21819) [-1.26301]	1.434816 (1.20317) [ 1.19253]	-0.046957 (0.08065) [-0.58227]
DLGDPGR(-4)	0.151086 (0.08378) [ 1.80337]	-0.121038 (0.13966) [-0.86664]	-0.937913 (0.77015) [-1.21783]	-0.077128 (0.05162) [-1.49411]
DLM2GDP(-1)	-0.070173 (0.03305) [-2.12336]	0.011954 (0.05509) [ 0.21699]	-0.033271 (0.30380) [-0.10952]	0.011728 (0.02036) [ 0.57594]
DLM2GDP(-2)	-0.016089 (0.03756) [-0.42831]	-0.001370 (0.06262) [-0.02187]	-0.898787 (0.34531) [-2.60287]	-0.003742 (0.02315) [-0.16167]
DLM2GDP(-3)	-0.071500 (0.03009) [-2.37590]	-0.026892 (0.05017) [-0.53604]	0.244183 (0.27664) [ 0.88268]	2.88E-05 (0.01854) [ 0.00155]

DLM2GDP(-4)	-0.015030 (0.02784) [-0.53979]	0.008450 (0.04642) [ 0.18204]	-0.146797 (0.25597) [-0.57350]	-0.005241 (0.01716) [-0.30550]
LOPENRATE(-1)	0.575925 (0.64515) [ 0.89270]	0.661003 (1.07548) [ 0.61461]	0.611992 (5.93059) [ 0.10319]	0.656191 (0.39751) [ 1.65074]
LOPENRATE(-2)	-0.745784 (0.80615) [-0.92512]	-0.527513 (1.34386) [-0.39253]	-3.937145 (7.41054) [-0.53129]	0.107366 (0.49671) [ 0.21615]
LOPENRATE(-3)	0.594674 (0.78944) [ 0.75328]	0.631881 (1.31602) [ 0.48015]	-9.743775 (7.25700) [-1.34267]	-0.190534 (0.48642) [-0.39171]
LOPENRATE(-4)	-1.704424 (0.54678) [-3.11719]	-1.806211 (0.91150) [-1.98159]	4.143797 (5.02632) [ 0.82442]	-0.047070 (0.33690) [-0.13971]
C	-0.945388 (0.23952) [-3.94707]	-0.579994 (0.39928) [-1.45260]	-7.123269 (2.20176) [-3.23525]	-0.359406 (0.14758) [-2.43535]
R-squared	0.918917	0.859418	0.797946	0.883103
Adj. R-squared	0.756751	0.578255	0.393838	0.649308
Sum sq. resids	0.271032	0.753184	22.90290	0.102896
S.E. equation	0.184062	0.306835	1.692000	0.113411
F-statistic	5.666521	3.056651	1.974586	3.777256
Log likelihood	21.08149	8.305555	-34.37831	33.18797
Akaike AIC	-0.326519	0.695556	4.110265	-1.295038
Schwarz SC	0.502317	1.524391	4.939100	-0.466202
Mean dependent	0.083798	0.032989	0.228000	-0.756425
S.D. dependent	0.373198	0.472477	2.173231	0.191510
Determinant resid covariance (dof adj.)		2.29E-05		
Determinant resid covariance		2.40E-07		
Log likelihood		48.64526		
Akaike information criterion		1.548379		
Schwarz criterion		4.863721		

## Granger Causality Tests;

### Annex n°6

Pairwise Granger Causality Tests

Date: 06/03/15 Time: 12:11

Sample: 1984 2013

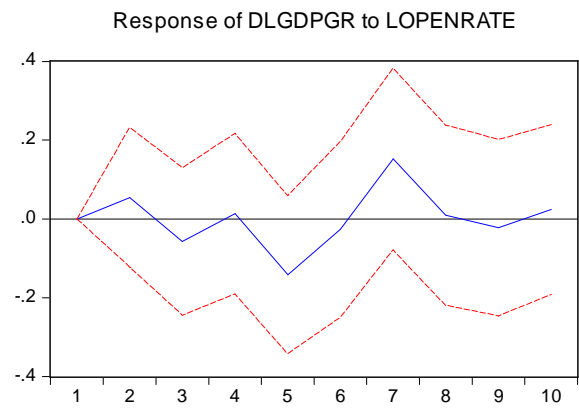
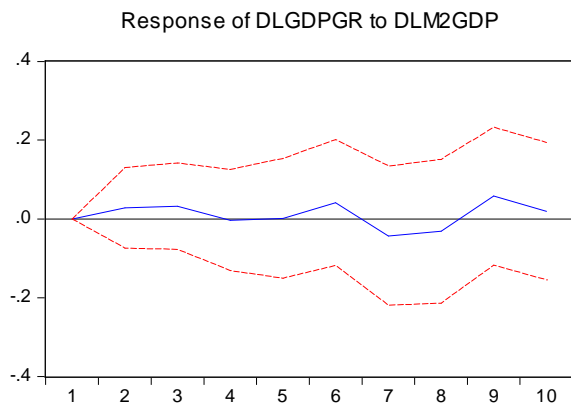
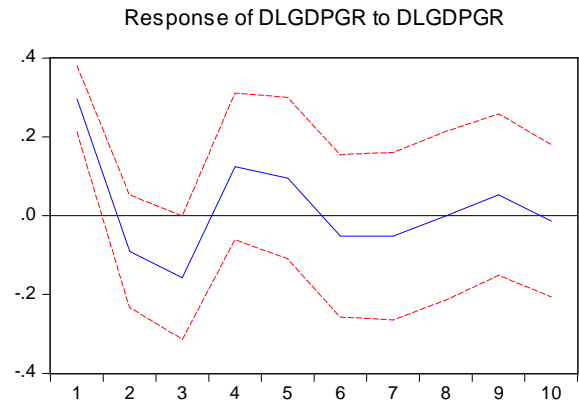
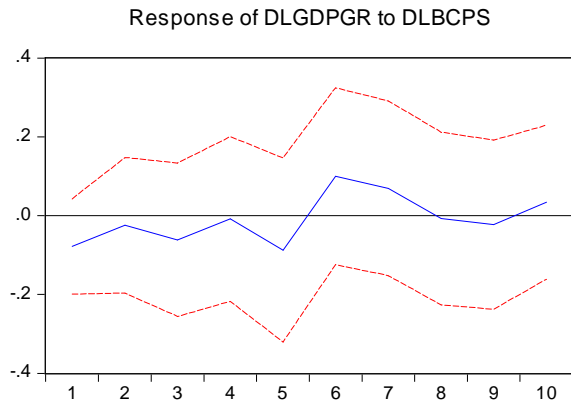
Lags: 4

Null Hypothesis:	Obs	F-Statistic	Prob.
<hr/>			
DLGDPGR does not Granger Cause DLM2GDP	25	0.52261	0.7206
DLM2GDP does not Granger Cause DLGDPGR		0.29701	0.8756
<hr/>			
LOPENRATE does not Granger Cause DLM2GDP	25	1.81090	0.1761
DLM2GDP does not Granger Cause LOPENRATE		0.49046	0.7428
<hr/>			
DLBCPS does not Granger Cause DLM2GDP	25	2.05616	0.1346
DLM2GDP does not Granger Cause DLBCPS		0.47518	0.7534
<hr/>			
LOPENRATE does not Granger Cause DLGDPGR	25	0.91611	0.4785
DLGDPGR does not Granger Cause LOPENRATE		4.31986	0.0147
<hr/>			
DLBCPS does not Granger Cause DLGDPGR	25	4.53553	0.0122
DLGDPGR does not Granger Cause DLBCPS		2.40646	0.0925
<hr/>			
DLBCPS does not Granger Cause LOPENRATE	25	2.07028	0.1325
LOPENRATE does not Granger Cause DLBCPS		9.00390	0.0005
<hr/>			

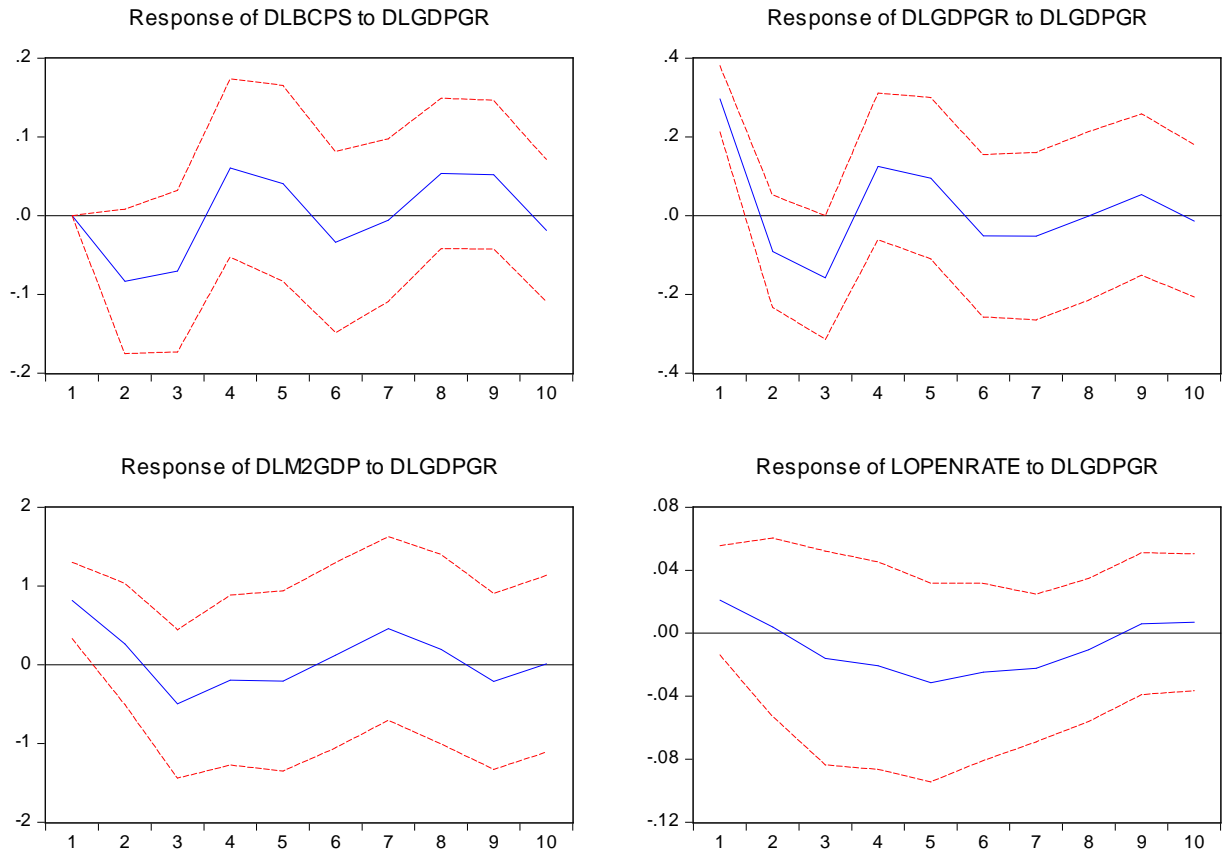
## Analyse of chocks

### Annex n°7

Response to Cholesky One S.D. Innovations  $\pm 2$  S.E.



Response to Cholesky One S.D. Innovations  $\pm 2$  S.E.



**DECOMPOSITION OF THE VARIABLES**

**Annex n°8**

VARIANCE DECOMPOSITION OF DLBCPS

Period	S.E.	DLBCPS	DLGDPGR	DLM2GDP	LOPENRATE
1	0.184062	100.0000	0.000000	0.000000	0.000000
2	0.216616	72.26515	14.86645	8.099272	4.769128
3	0.235550	63.95779	21.53523	8.031213	6.475764
4	0.252684	60.19680	24.42137	7.031125	8.350706
5	0.264945	55.87475	24.57292	6.431002	13.12132

VARIANCE DECOMPOSITION OF DLGDPGR

Period	S.E.	DLBCPS	DLGDPGR	DLM2GDP	LOPENRATE
1	0.184062	100.0000	0.000000	0.000000	0.000000
2	0.216616	72.26515	14.86645	8.099272	4.769128
3	0.235550	63.95779	21.53523	8.031213	6.475764
4	0.252684	60.19680	24.42137	7.031125	8.350706
5	0.264945	55.87475	24.57292	6.431002	13.12132

VARIANCE DECOMPOSITION OF DLM2GDP

Period	S.E.	DLBCPS	DLGDPGR	DLM2GDP	LOPENRATE
1	1.692000	37.02538	23.25012	39.72450	0.000000
2	1.904421	48.30014	20.26057	31.36962	0.069671
3	2.151776	37.90548	21.23557	36.64733	4.211615
4	2.331550	38.13477	18.79603	32.30796	10.76124
5	2.454909	38.40369	17.66632	31.79428	12.13571

VARIANCE DECOMPOSITION OF LOPENSESS

Period	S.E.	DLBCPS	DLGDPGR	DLM2GDP	LOPENRATE
1	0.113411	40.07700	3.392522	4.076227	52.45425
2	0.139614	41.59380	2.311577	6.578493	49.51613
3	0.159032	46.83176	2.781071	6.322569	44.06460
4	0.162662	46.32221	4.268866	6.359126	43.04980
5	0.170295	46.03057	7.292698	6.513903	40.16283

Cholesky ordering: DLBCPS DLGDPGR DLM2GDP LOPENRATE

## **Abstract**

This article aims to assess the relationship of financial liberalization on the measurement of the Tanzanian economic growth in the period of time from 1984 to 2013.

The endogenous growth models indicate that financial liberalisation has a positive effect on the growth of the real sector. Some analyzes argue for bidirectional way between the two sectors of an economy.

That's so check the relevance of these statements in the case of Tanzania.

Analysis was used to test the positivity of the relationship between financial development and growth of the real sector and the existence of a bidirectional relationship between the two variable of the Tanzania economy.

Based on the econometric results, this analysis shows that including Tanzania, financial liberalization has a positive impact on growth, but the direction of causality between different financial variables and measurement of economic growth remains mixed.

Keywords: banking credit, financial liberalisation, financial services, and economic growth.



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