

# Impact of Financial Liberalization on Macroeconomic Variables in Developing Countries: A Survey of the Literature

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## සංකීර්ණය

1970 දශකයේ සිට මූල්‍ය ලිහිල්කරණ ප්‍රතිපත්තින් රටක ආර්ථික පරිසරය තුළ ඉතා වැදගත් ස්ථානයක් හිමි කර ගනිමින් සිටියි. මන්ද යත් එමගින් රටක මූල්‍ය වෙළඳපල වඩා විවෘත වීම හරහා ආර්ථිකයට හිතකර ප්‍රතිඵල අත්කර ගත හැකිය යන අපේක්ෂාවෙනි.

සංවර්ධනය වෙමින් පවතින රටවල් නිරන්තරයෙන්ම මූල්‍ය ලිහිල්කරණය ප්‍රතිපත්තින් කෙරෙහි අවධානය යොමු කරමින්, මූල්‍ය ලිහිල්කරණ ප්‍රතිපත්තින් ක්‍රියාත්මක කළද එමගින් එම රටවල් සඳහා ධනාත්මක ප්‍රතිඵලයක් හිමි කර ගැනීමට හැකිවී ඇත්දැයි විමර්ශනය කිරීම ඉතා වැදගත්ය. මූල්‍ය ලිහිල්කරණ ප්‍රතිපත්තින් මගින් ජනිත කරන්නාවූ ප්‍රතිඵලයන් විමර්ශනය සඳහා ඒ හා සම්බන්ධ වූ පෙර අධ්‍යයනයන් පිළිබඳ පරීක්ෂා කිරීම මෙම විමර්ශනාත්මක ලිපිය තුළින් උත්සාහ දරයි. එබැවින් මූල්‍ය ලිහිල්කරණයෙහි ප්‍රතිඵල සංවර්ධනය වෙමින් පවතින රටවල ආර්ථික වර්ධනය, පොලී අනුපාතය, ආයෝජනය සහ මුදල් ඉල්ලුම යන සාර්ව ආර්ථික විචල්‍යයන් කෙරෙහි කෙසේ බලපා ඇත්ද යන්න පිළිබඳව කරනු ලබන අධ්‍යයනයන් පිළිබඳව මෙමගින් අනාවරණය කෙරේ.

## Introduction

The financial liberalization thesis of McKinnon (1973) and Shaw (1973) has had a far reaching influence on the policy prescriptions adopted by many developing countries during the 1970s and 1980s, which tended to encourage more financial saving by increasing real interest rate. This was motivated by the argument that financial repression policies were regarded

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to be largely accountable for the poor economic performance of developing countries in the 1960s, where low saving and credit rationing were widely observed. Mackinnon and Shaw challenged the financial repression ideology and provided a new paradigm in the design of financial sector policies.

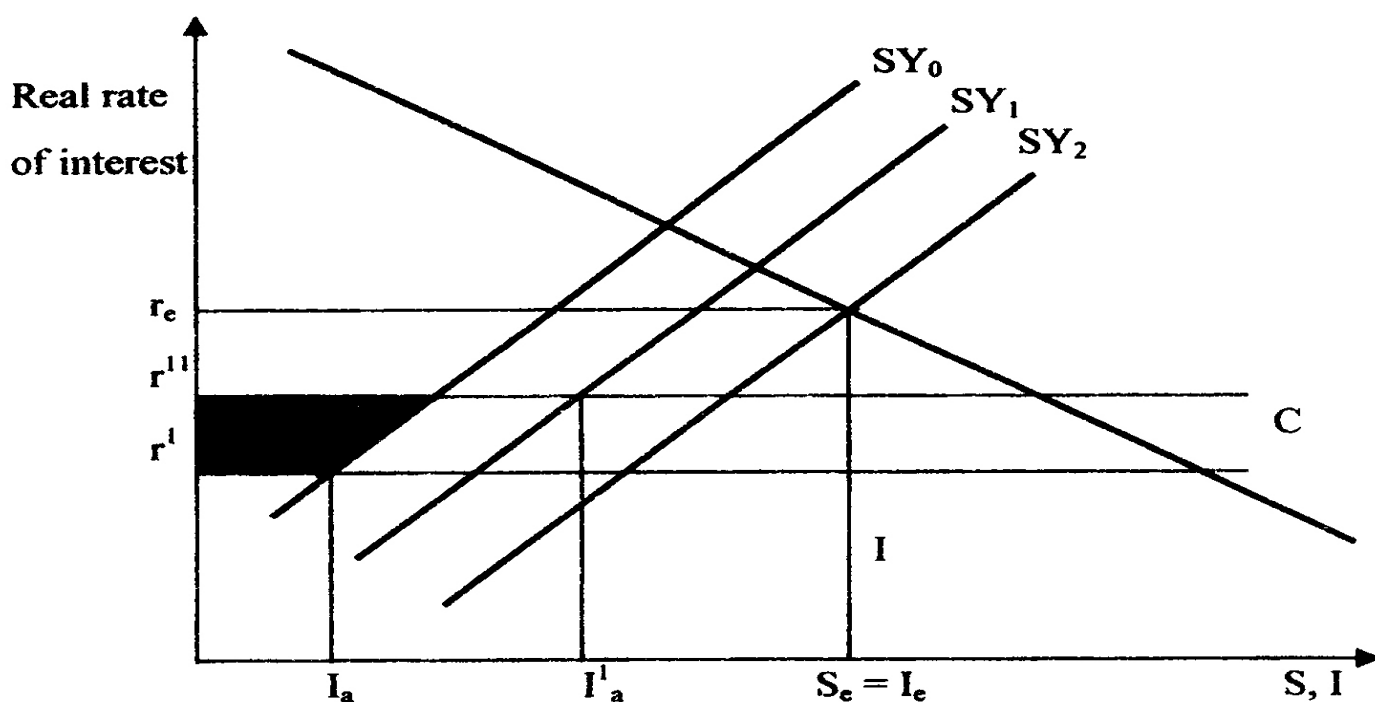
A wave of financial liberalization occurred in most developing countries during the 1970s and 1980s. Financial liberalization removes restrictions on domestic financial agents and their access to capital from outside the domestic financial area, removes restrictions on the entry of foreign financial agents and dilutes control on their operations in the domestic market so that easy access to resources can be established. Since the mid 1980s the World Bank and International Monetary Fund (IMF) started to prescribe financial liberalization as a basic framework for developing member countries to accelerate economic growth.

This paper presents the survey of the literature on impact of financial liberalization on macroeconomic performance and theoretical background of financial liberalization. Since the 1970s financial liberalization has become an important part of the financial system of most countries in the worldwide economy. Financial sector liberalization can be viewed as a set of operational reforms and policy measures designed to deregulate and transform the financial system and its structure with the view to achieving a liberalized market oriented system within an appropriate framework. Since the 1970s financial liberalization has been one of the debatable issues with a variety of thoughts. Various organizations and individuals have carried out research using various methodologies and shown through their published materials. Financial liberalization in a country is not limited to the domestic level. It has been extended toward international level. The survey of financial liberalization literature helps to form a theoretical base as different views and opinions, different aspects and link between financial liberalization and economic variable such as economic growth, money demand, investment and savings in developing countries.

### ***Theoretical foundation of financial liberalization***

The theory of financial liberalization (MCKinnon 1973; Shaw 1973) is based on the premise that the real rate of interest, the greater degree of financial deepening, the more saving there will be, and financial saving will be allocated and invested more efficiently than if saving

invested directly in the sector in which it takes place; without financial intermediation. Till the 1960s, the dominant view in the finance and growth literature was the neo-Keynesian perspective, which argued that interest rates should be kept low in order to promote capital formation. In 1973, the dominant theoretical position was challenged by Roubini, McKinnon and Edward Shaw. According to their framework, the interest rate is positively associated with savings, investment and economic growth. It is also argued that an administratively determined nominal rate of interest holds the real interest rate below its equilibrium level. These features of a repressed economy can be explained by figure 1.1.



Source: Ghatak (1995)

Figure 1.1: Financial repression and economic growth McKinnon and Shaw model

The basic features of the McKinnon and Shaw (1973) can be illustrated with help of figure 1.1. Let the real rate of interest be measured on the vertical axis and the investment and saving be measured on the horizontal axis. Let saving (S), at different income levels ( $Y_0, Y_1, Y_2$ ) be a function of the real rate of interest. Let investment (I) be an inverse function of the real interest rate. In a free market without any financial constraint (C),  $r_e$  will be equilibrium real interest rate where  $S_e = I_e$ . But because of

financial constraint or 'repression', the institutional interest rate is given by  $r^i$  which is less than free market equilibrium real rate,  $r_e$ . The amount of actual investment is constrained to  $I_a$  because of the limited saving available at  $r^i$ . If monetary authorities decide to ease the financial repression and raise the real rate from  $r^i$  to  $r^{i1}$ , both saving and investment will rise. The low yielding investment activities, as indicated by the shaded area in the diagram will be eliminated and overall efficiency of investment will increase. This will lead to a rise in income and savings and hence the saving curve will shift to the right to  $SY_1$ . Actual investment will rise  $I_a^1$ . If monetary authorities are bold enough to abolish financial repression altogether and decide to dispense with the ceiling on the interest rate, then the level of actual saving and investment will rise further leading to a further expansion of income. The model thus implies that an increase in the real rate of interest will induce savers in the LDCs to save more, which will enable more investment to take place. This will raise the rate of growth of the economy. It is in this context that Shaw contends that saving, investment and financial intermediation would be suboptimal when the real rate of interest is arbitrarily fixed at a point which is much lower than its equilibrium level. Financial intermediaries, in this context, render a valuable service in raising the real rate of return to savers and in lowering the real costs to investors by providing liquidity and information.

The McKinnon model rests on the following assumptions: (a) all economic agents are restricted to self-finance; (b) there are important indivisibilities in investment activities. Before undertaking actual investment, the potential investors must accumulate money balances. The higher the real interest rate, the greater will be the accumulation of money balances and the larger will be the inducement to invest. The indivisibility in investment means, that the aggregate demand for money will be larger, the greater the ratio of investment to total expenditure.

### ***Financial liberalization and its objectives***

In the literature, McKinnon (1973), Shaw (1973) has documented the financial liberalization in relation to economic growth. Ever since then, numerous views have been presented to define financial liberalization and its objectives. The following definitions and objectives provide a sound basis for financial liberalization definitions and objectives.

**MCKinnon (1973) and Shaw (1973) recognized that financial repression, which consisted of interest rate ceilings, high reserve requirements and directed credit policies, reduced the amount of domestic investment and its productivity. MCKinnon (1973), Shaw (1973) clearly presented that the main objective of financial liberalization is to increase the supply and improve the allocation of funds for investment so that the national economy can be boosted.**

**The economic performance of many countries deteriorated more and more under the policy of financial repression. Financial system in these countries contracted, and the efficiency of their operations deteriorated eventually leading to widespread bank insolvency. The declared distributional goals of the policies also could not be met. From this backdrop, the concept of financial liberalization emerged. (Honohan et al 2001)**

**Financial liberalization can be viewed as a set of operational reforms and policy measures designed to deregulate and transform the financial system and its structure with the view to achieving a liberalized market oriented system with an appropriate regulatory frame work (Johnston 1999).**

**Financial liberalization is a process of liberalizing the financial system of an economy by reducing controls in interest rate, financial intermediaries and markets (Paudel 2007).**

**Kaminsky and Schmukler (2003) opined that financial liberalization consists of deregulation of foreign sector, and the stock market sector viewed separately from the domestic financial sector.**

**Siddiki and Auerbach (2004) define financial liberalization as the examination of a series of impediments in the financial sector in order to being in the line with that of the developed economies. There are principally three types of financial liberalization. Firstly this term may be used to describe domestic financial sector reforms such as privatization and increases in credit extension to the private sector. Secondly, financial liberalization may be used to refer to stock market liberalization. In this case, stock market liberalization occurs when a country opens up its stock market to foreign investors, at the same time allowing domestic firms' access to international financial markets.**

Finally, financial liberalization may refer to the liberalization of the capital account. This is a situation where special exchange rates for capital account transaction are relaxed, where domestic firms are permitted to borrow funds from abroad and where reserve requirements are lowered. From the above definition, it is obvious that financial liberalization focuses on abolishing controls that restrict financial activities and allowing the market forces to serve as the price mechanism for financial services. Financial liberalization can be termed to mean the deregulation of the financial system.

Chandraseker (2004) financial liberalization refers to measures directed at diluting or dismantling regulatory control over the institutional structures, instruments and activities of agents in different segment of the financial sector. Tokalidis (2001) and Leaven (2003) stated that the explicit objective of financial liberalization is to increase interest rates from the low levels found in many developing economies that are substantially negative in real terms

When the literature examines on the objectives of financial liberalization, it may differ from country and some of them are common objectives. These objectives are summarized as;

- To increase supply and improve the allocation of funds for investment.
- To increase employment by mobilizing savings and investment; and developing financial intermediaries
- To reduce directed credit programmes and make a competitive environment
- To produce economic development by increasing savings, investment and the productivity of capital and resources
- To make strong financial intermediaries and financial market based on open economy
- To reduce government control and eliminating distortion in the financial sector

(Paudel 2007)

## ***Sequence of financial liberalization***

Sequence of financial liberalization is the steps to be followed in liberalizing a financial system. McKinnon (1991) mentioned that the sequence of the liberalization process is critical importance. According to his view, there is an optimal order of liberalization that may vary from economics. It depends on their initial condition of liberalization process. Government should not undertake all liberalization activities simultaneously. The optimal order of liberalization process advocated by McKinnon consists of balancing government's finance in the first place. It says fiscal control should precede financial liberalization. Second step of liberalization process is the opening of the capital market so that depositors receive and borrowers pay substantial real interest rate. Similarly, the banking should be freed to set interest rate on deposits and loans, and freed from heavy reserve requirement. After liberalization of domestic trade and finance, there is an appropriate pace for the liberalization of the foreign exchanges. On the balance of payment side, current account should be first and foreign exchange on capital account should be the last step in the optimal order of liberalization.

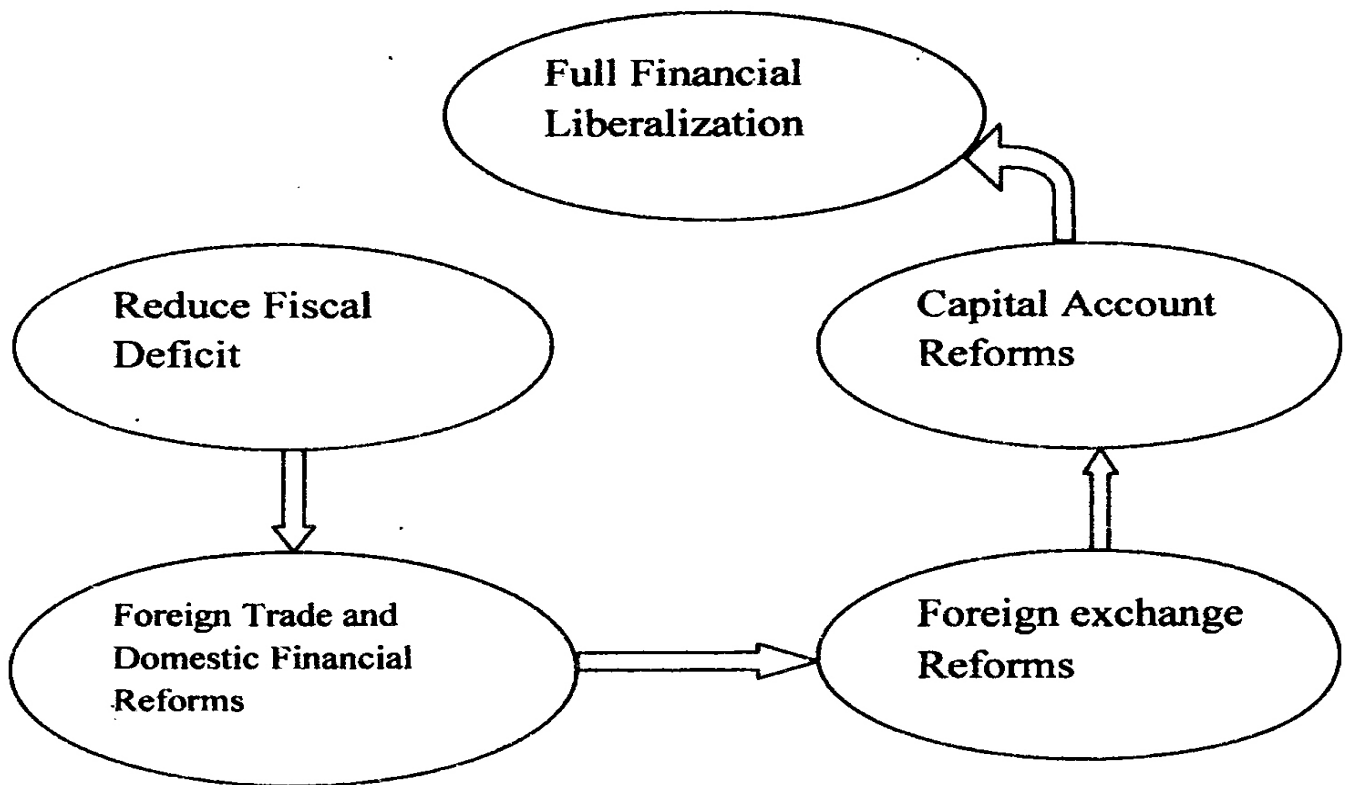
Gibson and Tsakalots (1994) have explained process and order of financial liberalization clearly. They say the domestic financial liberalization is to be formed after the industrial and real sector liberalization, table 2:1 shows that the domestic financial sector is to be freed before the external financial sector to control the flight of capital from the national economy.

<b>Domestic</b>	<b>External</b>
<ul style="list-style-type: none"> <li>• Setting up market price system</li> </ul> <p><b>Real</b></p> <ul style="list-style-type: none"> <li>• Removal of implicit or explicit taxes or subsidies of firms</li> <li>• Privatization</li> </ul> <p style="text-align: center;"><b>1</b></p>	<ul style="list-style-type: none"> <li>• Removal of trade barriers</li> </ul> <p><b>(Current Account)</b></p> <ul style="list-style-type: none"> <li>• Trade Account Convertibility</li> </ul> <p style="text-align: center;"><b>3</b></p>
<ul style="list-style-type: none"> <li>• Domestic Banking System</li> </ul> <p><b>Financial</b></p> <ul style="list-style-type: none"> <li>• Domestic capital convertibility</li> </ul> <p style="text-align: center;"><b>2</b></p>	<ul style="list-style-type: none"> <li>• Removal of capital control i. e. Short capital account convertibility</li> </ul> <p style="text-align: center;"><b>4</b></p>

(Source: Gibson and Tsakalots (1994))

**Table 2:1 Sequence of financial liberalization**

In the light of the results showed in Latin American financial liberalization in the 1970s and early 1980s, many researchers recommend that financial liberalization in developing countries is most successful when it is followed as gradually. (Kahkonen 1987; McKinnon 1989; Villanueva and Mirakhor 1990). In principle it is widely agreed that gradual process is recommended for successful financial liberalization and the appropriate sequencing of financial liberalization consists of reductions of deficits, foreign trade and domestic financial reforms, foreign exchange rate reforms and capital account reforms and capital account reform, left to the last. The order of liberalization now accepted by some economists is the following sequence as in figure 2.1 Hallwood and MacDonald (2000).



Source: Hallwood and MacDonald (2000)

**Figure 2.1 Gradual process of financial liberalization**

According to Sundararajan (1999) of liberalization often requires implementation of critical and massive reforms simultaneously. A package of reforms involving different components of the financial sector is needed. The different components are banking supervision, money markets, monetary operations and central banking. He argues that, at least, this is necessary for financial stability reasons, and to be able to be effective in the implementing stabilization policies.



Liberalizing too fast poses certain danger, but too slow a pace can also defeat reform programs. Reform may lose momentum and new distortions could emerge if liberalization takes too long. In determining the appropriate sequencing of interest rate liberalization, the authorities need to distinguish not only between wholesale and retail transaction. Interest rates on wholesale transaction between sophisticated entities should be liberalized first, followed by lending rates and lastly deposit rate. This gradual approach safeguards the profitability of banks while allowing time for people and firms to adjust to liberalization (Laurens et al 1997).

Kaminsky and Schmukler (2008) complete liberalization is accomplished when at least two sectors in the economy are fully liberalized, and one sector is partially liberalized. Partial liberalization occurs when at least two sectors are partly liberalized.

## ***Impact of financial liberalization on Macro economic variables***

### ***5.1 Financial liberalization on economic growth***

The financial system plays an important role in the process of economic development. Its primary task is to move those who borrow for consumption and investment. By making funds available for lending and borrowing the financial system provides the means for economic growth.

However, economists differ in their viewpoints regarding the role of financial sector on economic growth. The relationship between financial development and economic growth has remained an issue of debate. Views are found not only on the role of a financial system but also the contribution of financial development to economic growth. Major question is created among researchers, whether the financial liberalization plays an important role in economic growth or not.

Rancirere et al (2006) tried to develop an integrated framework to quantify and contrast dual effects of financial liberalization. They examined positive direct effect and indirect negative effect of financial liberalization.

1. Financial liberalization tends to relax borrowing constraints, leading to higher investment and higher average growth.
2. Financial liberalization encourages risk taking, generates financial fragility and financial crises.

Empirical strategy consists a standard growth regression a financial liberalization dummy and financial crises dummy used as an endogenous variable that depends on several variables including financial liberalization. The sample consists of sixteen countries including Sri Lanka over the period 1980-2002. The estimation results based on two models as growth model and crisis model. Empirical analysis results show that financial liberalization has a direct positive effect on per capita GDP growth, even though it also leads to occasional crises.

Shrethra (2005) conducted a research on “Financial Liberalization in Nepal”. He examined rationale of executing financial liberalization policy in general and evaluated the impact of various liberalization measures on financial system and economic growth of Nepal. Causality test and co integration test are used in this study to address the objectives. Nepalese quarterly data from 1970 – 2003 were employed to test hypothesis which are made on impact of financial liberalization. Shrethra constructed a financial liberalization index for Nepal based on the method following Bandiera, Caprio et al (2000). Eight main components are included for this index. They are (1) Interest rate, (2) Procom petition measures (3) Reserve requirements (4) Direct credit (5) Banks’ ownership (6) Prudential regulation (7) Stock markets (8) International financial liberalization.

The empirical test results show that financial liberalization in Nepal has brought a mixed impact. The major findings are discussed in sub sections as economic growth and industrial development, financial stability, employment and redistribution of income. The composite index of the financial liberalization is positively associated with per capita income as well as with industrial development. It suggests that increased availability of financial resources has encouraged the opening of new investment projects in the agricultural sector. As a consequence, it has promoted the economic growth of the country.

Chaisrisawatsuk et al (2003) pointed out that in most developing economies; capital is scarce resource and an important fuel for economic growth. Accumulation of capital is proved that it is a necessary condition for economic growth. Chaisrisawatsuk analyzed the effect of financial liberalization through exchange rate variation on growth. He focused on ASEAN four countries (Indonesia, Malaysia, Singapore and Thailand) and studied the relationship of exchange variation with financial depth, saving rate and capital to GDP ratio which have a positive effect of growth. All

data for variables; exchange rate, money ( $M_2$ ), gross national income, consumption, gross fixed capital and gross domestic product are annually from 1970 to 2002. And the data are obtained from International Financial Statistics (IFS) annual reports. The study concluded that well developed financial system and suitable variation in exchange rate are key elements to a stable economic growth the following conclusions are made by his findings.

1. Not allowing the variation in exchange rate under fixed exchange rate system is itself a source of distortion.
2. By allowing for some variation in exchange rate it reflects and enhances the role of market mechanism which leads to economic growth.
3. Excessive volatility on exchange rate can create huge negative impacts on economic growth such that it outweighs the potential positive effects on growth.

Paudel et al (2007) examined the role of financial liberalization on money demand and economic growth in Sri Lanka for the period of 1963 to 2005. The authors introduced two major hypotheses to test the impact of financial liberalization in money demand and economic growth. The hypotheses are financial liberalization contribute to increase money demand in Sri Lanka and financial liberalization enhanced economic growth in Sri Lanka. Results show that the financial liberalization has a significant negative impact on narrow money demand in the long run while such impact is found to be positive in the short run but not significant. And the financial liberalization has a significant negative impact in broad money demand in the long run and significant positive impact in the short run. In economic growth, financial liberalization has not significant relationship in the long run. Paudel did not find significant positive relationship in money demand and economic growth of Sri Lanka as the findings of Ghatak (1997) study. Ghatak pointed out that according to the advocates of financial liberalization in less developed countries (LDCs), a rise in the real interest rates is essential to stimulate savings, investment and the output growth rates. A simple econometric model is set up to examine the validity of the conflicting theories in the light of the experience of financial

liberalization in Sri Lanka. The results confirmed a positive and significant effect of financial liberalization on economic growth of Sri Lanka between 1950 and 1987.

Ahmed (2008) utilized data from 15 Sub Saharan African countries for the period 1976-2005 to estimate the relationship between financial liberalization, financial development and growth. He used the ratio of private sector credit and share of domestic credit to income as indicators of financial development. Heterogeneous panel investigation and time series methodology were used to obtain the results. Ahmed's results show that, the elasticity of income growth respect to financial liberalization is negative and insignificant and little evidence of a long run linkage between financial liberalization and per capita GDP growth. He pointed out that there is little evidence to support the hypotheses that financial liberalization directly lead to growth and it acts as an engine of growth in the process of economic development.

Chaudhry (2007) examines the impact of financial sector liberalization indicators on macroeconomic performance in Pakistan. The study undertakes by using time series econometric analysis over the time period 1972 – 2006. Engle Granger Approach and Autoregressive Distributed lag Approach are employed for data analysis. The findings of this study reveal the long run and short run relationship between the indicators of financial liberalization, economic growth and investment in Pakistan. The main data sources are IMF's international statistics, the world development indicators and various publications of state bank of Pakistan. In this study, an attempt is made to quantify the impact of financial sector liberalization undertaken in Pakistan on its macroeconomic performance. Since there are many variables and proxies to measure the financial liberalization globally, some significant and widely accepted indicators used in this study are the ratios of broad money, private sector credit and stock market capitalization to real gross domestic product. In addition to the variables, trade openness and foreign direct investment in terms of net inflow are included as controlled variables. Macroeconomic performance assessed by undertaking two major variables, economic growth and investment in terms of gross fixed capital formation. This asserts that financial liberalization development improve economic growth in Pakistan. There is bidirectional relationship between broad money as a significant measure of financial intermediation and private sector credit and economic growth in Pakistan.

Okpara (2010) analyzed the effect of financial liberalization on selected macroeconomic variables in Nigeria. The variables are foreign direct investment, financial deepening, Gross Domestic Product (GDP), savings and inflation rate. The data were selected and given pre/post liberalization comparative analysis. The data were sourced from the statistical bulletin of the central bank of Nigeria. The pre liberalization variables covers from the period 1965 to 1986 while post liberalization period covers from 1987 to 2008. Paired t statistic, Wilcoxon signed rank test and the discriminate analysis are used to carry out the data analysis. Okpara found that real GDP, national savings and foreign direct investment are significantly sensitive to financial liberalization policy. It says that there is a significant difference between the performance of the selected variables before and after the introduction of financial liberalization. This effect is in conformity with the finding Gallego and Loanza (2002). Further the results also show that there is no significant difference between the rate of inflation and financial deepening in the pre liberalization period and post liberalization period.

Bekaert et al (2003) argued that, though substantial research has been conducted on the relation between financial development and economic growth, both the finance and development literature lacks a comprehensive analysis of the effect of the equity market liberalization process on economic growth. Regression analyses were employed to analysis different country samples. The largest samples cover 75 countries and the smallest samples cover 28 countries. They demonstrated that equity market liberalization (by allowing foreign investors to transact in local securities and vice versa) increased economic growth. The equity market liberalization leads to an approximate 1% increase in annual real per capita GDP growth and it is statistically significant.

Levine (2001) study existing theory and evidence to assess whether international financial liberalization by improving the functioning of domestic financial markets and banks accelerate economic growth. Levine first indicates that the presence of foreign banks tends to foster a more efficient domestic banking system, which positively effects productivity and growth. Second, liberalizing restrictions on international portfolio flows tends to boost domestic stock market liquidity, which positively effects productivity and growth. Levine concluded that, liberalizing restrictions on international portfolio flows tends to enhance stock market liquidity. In turn, improvements in stock market liquidity accelerate economic growth primarily by boosting productivity growth. And, allowing greater foreign

bank presence tends to enhance the efficiency of the domestic banking system. Then, better banks spur economic growth primarily by accelerating productivity growth. This international financial integration can promote economic development by encouraging improvements in the domestic financial system with positive effects for long-run productivity growth.

Rengin et al (2011) examine the relationship between financial development and economic growth. Growth rate of real GDP studied as an indicator of growth and the rate of  $M_2$  money supply values to GDP, the rate of the credits for private sector to GDP and the rate of total financial asset to GDP examined as an indicator of financial development level. Analysis covers annual data for the period 1985 – 2006 in Turkey. The ADF test is used to examine the unit root status in the time series. Rengin et al pointed out that there is a long term relationship between the series examined as an indicator of financial development and growth rate. It shows that the increase in financial in the long run will have an effect causing an increase in growth rate. When the short term relationships are taken into consideration, it is seen that  $M_2$  credits for the private sector have an effect on growth rate.

Erbrill et al (2008) studied the impact of financial liberalization on economic growth in 10 European countries and Turkey between 1995 and 2007. Their findings show that financial liberalization has no positive effect on private credit and private investment because interest rate has been negative for some years due to high inflationary situation. The study recommended more need for the deregulation of interest rate so that savings could be mobilized to promote capital that leads to economic growth.

## ***5.2 Financial liberalization on Money demand***

Financial liberalization refers to the process to liberalize the financial sector of a country with an aim to create favorable environment to increase the money demand in the economy. It takes place either by increasing the financial resources to lead a supply induced demand for money or by creating a suitable environment for making an investment in the economy.

Perera et al (2007) examines the role of financial liberalization on money demand and economic growth employing Autoregressive Distributed Lag Approach in Sri Lankan data for the period of 1963-

2006. They assert that financial liberalization has a significant negative impact on narrow and broad money demand in the long run, while such impact is found to be positive in the short run but not significant.

Blevins (1999) examined the effects of financial liberalization on the money demand in Peru for the period 1979-1997. Author has presented evidence of a change in the long run elasticity of money demand and its determinants which occurred in 1991. The shift in the money demand function was caused by the measures which the government took to bring down inflation as well as by the financial reforms that have been instituted. Despite the changes in the structure of the financial system, there has been a close relationship between the rate of growth of money and the rate of inflation in Peru. He concluded that there is no consensus about the sequence that must be followed in a process of financial liberalization with complete opening of the capital account in order to reach price stability and economic growth.

Aktham (2003) tests empirically whether there is a stable function of demand for money in Jordan over the period of 1976 – 2000. A stable money demand function is considered essential for the formulation and conduct of efficient monetary policy. An accurate calibration of the long-run and dynamics and effects of rate of return on the demand for money are important in the design and assessment of the macroeconomic implications of financial liberalization and for the adoption of indirect monetary policy instruments. The empirical foundation for the conduct of a stable money demand function in Jordan is evaluated using the co integration analysis and error correction model. The results indicate that financial liberalization since 1988 may have induced a significant change in money demand in Jordan by increasing financial savings in the form of money holdings in the domestic banking system.

Reinhart et al (2005) studied what happens to key macroeconomic variables following domestic and external financial liberalization. Their sample covers 50 countries, 14 developed countries and 36 developing countries for the period 1970-1998. The selected annual data series were gross national savings, gross investment, current account balance, gross private capital flows, foreign direct investment, GDP growth, consumption, real interest rate, their ratio of narrow money to broad money ( $M1/M2$ ), credit to private sector and the spread between lending and deposit rates. He analyzed what happen to the variables before and after financial liberalization. He compared pre and post liberalization means for each

indicator and test for differences, allowing the possibility that the variances may have also changed across regimes. Reinhart concluded that; with greater certainty, financial liberalization appear to deliver; high real interest rates, lower investment, but not lower growth; a higher level of foreign direct investment; and high gross capital flows the catch is that occurs only in the higher income countries. Liberalization appears to deliver financial deepening, as measured by the credit and monetary aggregate but again, low income countries do not appear to show clear signs of such a benefit. As regard savings, savings increased following financial sector reforms in some regions, but in the majority cases savings declined.

### ***5.3 Financial liberalization on Interest rate, Savings and Investment***

Bonfiglioli (2005) assessed the effect of international financial liberalization and banking crises on investments and productivity in sample size 93 countries observed time duration 1975 and 1999. Author pointed out that ,it is important to know the channels which effect to financial liberalization .The study attempted to probe deeper in to relation by studying the impact on two sources of income growth; productivity and capital accumulation .Bonfiglioli found that financial liberalization has little effect on capital accumulation while it has a strong positive effect on productivity.

Hollwood and MacDonald (1994) employed the data of 80 developing countries from the World Bank to investigate the relationship of growth with financial depth (the M2-GDP ratio), high saving rate (Gross national saving/ GDP), and lower capital-output ratio. According to Hallwood and MacDonald, a high level of economic growth in developing countries is associated with greater financial depth, high saving rate, and lower capital-output ratio.

Bandiera et al (2000) construct an index of financial liberalization on the basis of different components; interest rate, reserve requirements, directed credit, bank ownership, prudential regulation, securities market degradation and capital account liberalization. The data spans from 1970 – 1994 for Chile, Ghana, Indonesia, Korea, Malayasia, Mexico, Turkey and Zimbabwe. Among the key findings of the estimation of their benchmark model is that, there is no evidence of any positive effect of the real interest



rate on saving. Indeed in most cases the relationship is negative and significantly so in the cases of Ghana and Indonesia. Furthermore, the effects of financial liberalization index on saving are mixed. Corresponding to the realized change in the index, the estimated model indicates a permanent decline in the saving rate of 12% and 6% in the Korea and Mexico, and a rise of 13% and 6% in Turkey and Ghana.

Loayza et al (2000) construct results that the direct effects of financial liberalization are detrimental to private saving rates. The real interest rate has a negative impact on the private saving rates. Its income effect probably outweighs the sum of its substitution and human wealth effect. A 1% increase in the real interest rate reduces the private saving rate by 0.25% in the short run. The indicator of financial depth ( $M_2 / \text{GNP}$ ) has a small and statistically significant impact on the private saving rate. The flow of private domestic credit relative to income has a negative and significant coefficient. The researcher suggest that though they do not find direct positive effects of financial liberalization on the saving rate, if financial reform has a positive impact on growth, it has potentially important indirect positive effect on the saving rate.

Robin (2008) explores the consequences of financial liberalization policy execution in banking sector in Bangladesh. The author applies both exploratory and econometric techniques with time series data for the period 1981 – 2008. The study emphasizes that financial liberalization does not achieved domestic private saving by raising real interest rate. No significant positive correlation has been observed between domestic private savings and real deposit interest rate.

Reinhart et al (2001) use data from 50 countries consisting of 14 developed and 36 developing ones. The data spans over the 1970 – 1998 period. Based on their findings, they argue that with greater certainty, financial liberalization appears to deliver higher real interest rates, lower investment but not lower growth. They find that in some countries savings increased following financial sector reforms; but in the majority of cases, savings declined following the reforms.

Morisset (1993) asserts that the most favored justification for a high interest rate policy in the developing countries is derived from the presence of liquidity constraints on private investment. Policies that impose artificially low interest rate ceiling tend to constrain the supply of capital

and lead to an excessive demand for capital relative to what would happen if the deposit interest rate were allowed to find its market clearing level. Because the principle constraint on investment is the quantity, rather than the cost of financial resources, a rise in interest rates will increase the supply of credit to finance private investment.

Serven et al (2002) use data for 35 countries for the period of 1973–1995 to estimate the correlation between financial liberalization and savings. They find a positive significant relationship between financial reforms and savings. A higher degree of financial liberalization is observed in countries that an average reform of financial liberalization is observed in countries that an average save more, although simple association does not reveal anything about the direction of causality.

Concerning the effect of financial liberalization on the volume and efficiency of investment there are also different results depending on the study. Laumas (1990) implements an empirical study for India for the periods 1954 – 1955 through 1974 – 1975. Following McKinnon's complementarily hypothesis, he estimates two equations; a demand for money equation that relates time deposits to real income, the ratio of real investment to real income and the real deposit rate; an investment function that relates investment as a ratio of income to the average real rate of return to physical capital, real deposit rate, inflation and government investment as ratio of income. His findings, using 2SLS estimation, indicate that a market determined positive real interest rate has favorable effects on savings and investment as the incentives to save and the efficiency of investment increase. However, he points out the need for a stabilization policy, so as to maintain inflation low and money can play its role as a store of value and link between savings and investment.

Uygur (1993) conducts a study in Turkey in order to examine whether the investment has increased after the financial liberalization process that started in 1980. As an indicator, he uses efficiency the incremental capital-output ratio. A smaller value of incremental capital-output ratio indicates increasing efficiency of investment. The results are inconclusive since, although incremental capital-output ratio declines after 1980 following a rise in 1977-1980, these decreased figures of ratio are similar to reduced figures before 1977 where the regime was that of financial repression.

## ***Conclusion***

The objective of this paper was to present a review of the literature on impact of financial liberalization on macroeconomic variables in developing countries. It is clear that financial liberalization creates favorable impact on macroeconomic variables. But, it is differ from short run and long run. However, the financial liberalization is ultimately related to the globalization process and the openness of both the real and financial sector in the world economy. From this point of view, the question is how should be implemented and how it plays the political and economic stability in Less Developing Countries.

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