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The Impact of Financial Sector Foreign Direct Investment on Poverty Alleviation

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ABSTRACT

Foreign private capital flows, portfolio investment and foreign direct investment (FDI), have been important external sources of financing growth and investment around the world. Since the start of the new millennium, FDI has become a major source of external finance for many developing countries mainly due to the economic benefits associated with this investment. Developing countries have been jostling for FDI in an attempt to resolve some of their structural problems, such as poverty. Poverty is a sensitive and persistent issue in most developing countries. More recently, FDI into the financial sector (FSFDI) has increased significantly, reshaping the sector significantly. The widely-held perception is that FSFDI is associated with financial development, job creation and skills transfer which are critical factors in alleviating poverty. In spite of the significant inflow of investment, new estimates of poverty in the developing world are disconcerting.

The main objective of this study was to evaluate the impact of FSFDI on poverty alleviation in developing countries. Linear regression analysis was done to determine the relationship between FSFDI inflow and other variables that were viewed as reducing agents of poverty, namely financial sector employment, employee training and financial access. The sample data used for this research represents South Africa and a convenience sampling technique was utilised.

The research established that there was no significant relationship between FSFDI and financial sector employment, while a moderate relationship was established with employee training and financial access. The overall analysis suggested that there was a moderate relationship between FSFDI and poverty alleviation.

Keywords: FSFDI, financial development, poverty alleviation

DECLARATION

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements of the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

CHRISTOPHER KAYIYA

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ABBREVIATIONS, ACRONYMS AND GLOSSARY

FDI	Foreign Direct Investment
FASSETA	Financial and Accounting Services SETA
FSFDI	Financial Sector FDI
GDP	Gross Domestic Product
HDI	Human Development Index
IMF	International Monetary Fund
M&As	Mergers & Acquisitions
MNC	Multinational Corporation
LDC	Less-Developed Country

CHAPTER 1: THE RESEARCH PROBLEM

1.0 INTRODUCTION

Since the start of the new millennium, foreign direct investment (FDI) has become a major source of external finance for many developing countries (Adams, 2009; Goldberg, 2004). A number of the nations have little savings and FDI is considered a path that offers the required capital inflow to stimulate growth. Several studies on economic growth and FDI commonly point to a positive correlation between these two variables and present several, standard justifications for the aforementioned (Adams, 2009). FDI may affect economic growth, through its impact on market rivalry, capital accumulation, transfer of technology or skills transfer (Faeth, 2009; Chor, Davin, Foley, Kalina & Stanley, 2008; Moolman, Roos, Le Roux & Du Toit, 2006). Further benefits include employment and skills development, which in turn are critical for poverty alleviation. As such, this is one of the main motivations for attracting FDI by developing countries (Mwilima, 2003). Mwilima (2003) states further that all of these factors can contribute in making a country more competitive.

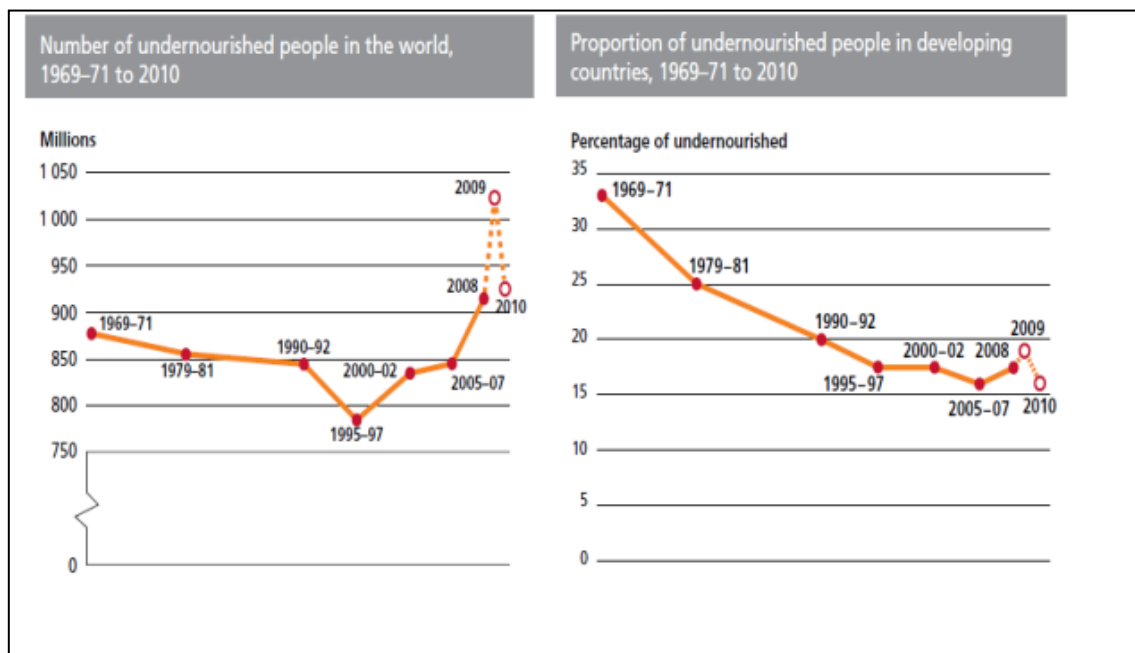
As a result of these theoretical benefits, developing countries have been jostling for FDI in an attempt to resolve some of their structural problems such as poverty. There is immense competition between developing countries to attract FDI (Mwalima, 2003). Policymakers have used various different methods to attract FDI, including giving financial incentives such as subsidies; tax breaks; cash grants; infrastructure improvements; up-skilling the labour to satisfy investor needs and expectations; having sound and predictable regulatory environment and reducing red tape (Mwalima, 2003). More recently, FDI into the financial sector has increased dramatically and the sector is being reshaped considerably (Goldberg, 2004). Financial sector FDI (FSFDI), a relatively new phenomenon, classically takes the shape of banks in developed countries setting up branches and facilities in developing countries (Goldberg, 2004). Financial Services are fundamental to economic growth and development (Fink, Haiss & Vuksic, 2005). Financial sector FDI is widely believed to significantly

contribute to the development of the financial sector of recipient countries. Financial development entails enhancements in the mobilization and pooling of savings and the exchange of goods and services, the creation of information about prospective investment projects, examination of investments, trading, diversification and management of risk (Levine, 2005). Financial development not only leads to growth, as research shows that the poor specifically can benefit substantially when financial sector performance improves (Goldberg, 2004; Iyare & Moore, 2011).

FSFDI not only leads to financial development, but as is the case with other types of FDI, it is furthermore associated with job creation and skills transfer, which in turn are critical in poverty alleviation (Chor *et al.*, 2008; Moolman *et al.*, 2006). The key channel through which financial sector development directly affects poverty is increased access to financial services. Empirical evidence such as proven by Beck, Demirguc-Kunt & Levine (2004) proposes that companies' and households' access to financial services increases with financial development. Financial services assist citizens in safeguarding against uncertainty and building financial resources (Spencer & Wood, 2005). At the same time they also assist in facilitating businesses to expand, increase efficiency and compete in local and international markets (Spencer & Wood, 2005). For the underprivileged, these services reduce vulnerability and enable people to manage the assets available to them in ways that generate income, options which ultimately allow them to creating paths out of their poverty (Sutton & Jenkins, 2007). Nations with well developed financial sectors experienced quicker reductions in the share of people living on less than US \$1 a day during the 1980s (Beck *et al.*, 2004).

In spite of these remarkable FDI figures presented by developing countries and the associated theoretical benefits to poverty alleviation, the most recent approximate shows a sharp contradiction. Records show that 925 million people in the world were undernourished in 2010 (FAO, 2010). As indicated in Figure 1, the number of hungry people increased significantly during the 1990s and the majority of these are in developing countries.

Figure 1 : Undernourished People in the World and Developing Countries



Source: (FAO, 2010)

Latest calculations of poverty in the developing nations are concerning, as the prevalence of extreme poverty is significantly higher than in previous estimates (Chen & Ravallion, 2008). Poverty has become a sensitive and persistent issue in almost all developing countries of the world. There is no denying it that in today's wealthy nations, poverty is far less prevalent than it was previously, unlike developing countries that still have widespread poverty. Although poverty cannot realistically be eradicated completely, high levels of poverty in a nation is not desirable because it can lead to an increase in other social problems such as crime.

While significant progress has been made in education, healthcare, housing and the provision of basic services, the general consensus is that poverty is still widespread in most developing countries. When poverty is widespread, the development of the financial sector benefits only a small segment of the population who have greater access to financial services (Beck *et al.*, 2004). Therefore, in light of the severity of poverty in developing countries it is critical that these countries accrue the benefits of financial development which is driven by the inflow of Financial Sector FDI.

1.1 RESEARCH OBJECTIVE

One of the central subjects in international business research today centres around developing economies, specifically emerging economies and how these economies have built their global presence. Literature has revealed that in most cases there is a direct relationship between FDI and economic growth. This has prompted developing countries to create conditions that are conducive and attractive for foreign investment (Chor *et al.*, 2008; Faeth, 2009; Mwalima, 2003). During the past two decades we have witnessed a large inflow of FSFDI into developing countries (Goldberg, 2004). This inflow has resulted in the expansion and development of the financial sectors of these countries, which in turn has resulted in a number of benefits (Fink *et al.*, 2005). One of these perceived benefits is poverty alleviation which is achieved by making financial services easily accessible to the poor, through job creation and skills development (Beck *et al.*, 2004). In developing countries, the economies on the African continent, very few studies have been conducted on the correlation between poverty and investment.

Given the critical role that the financial sector can play in the economic emancipation of citizens, it is important to understand and ascertain the impact financial sector FDI has on these developing countries. This study is expected to provide a better understanding of the impact the inflow of this type of FDI in developing countries has on poverty reduction and the relationship between these factors. According to the literature as explored in more detail in Chapter 2, there are two conduits through which financial sector development can impact poverty reduction. One works indirectly through economic growth. The other works directly through the poor benefiting from access to financial services, the creation of employment opportunities and skills transfer.

This research project mainly focused on the direct impact of financial development on poverty reduction, for example job creation, investment in human capital and financial access. This study is also seen as a means to enhance literature in the field of FDI while the outcome of the research is expected to contribute to the existing body of literature on poverty alleviation.

Stakeholders such as governments and policymakers aiming to formulate policies intended to attract more investment can find this research valuable. Companies can also benefit from this research when devising investment strategies relating to developing economies. The chief objective of this study was to contribute to the existing literature dealing with effects of FSFDI in developing economies by focusing on the linkages between FSFDI and poverty alleviation.

1.2 RESEARCH STRUCTURE

The research will contain seven chapters dealing with each subject area in detail. Chapter 1 presents the introduction to the research problem and the motivation behind the research project. Chapter 2 presents a comprehensive literature review, the research hypotheses are presented in Chapter 3 and the research methodology is described in Chapter 4. Chapter 5 presents the research results which will be analysed further in Chapter 6. The final conclusion and further recommendations are presented in Chapter 7.

CHAPTER 2: LITERATURE REVIEW

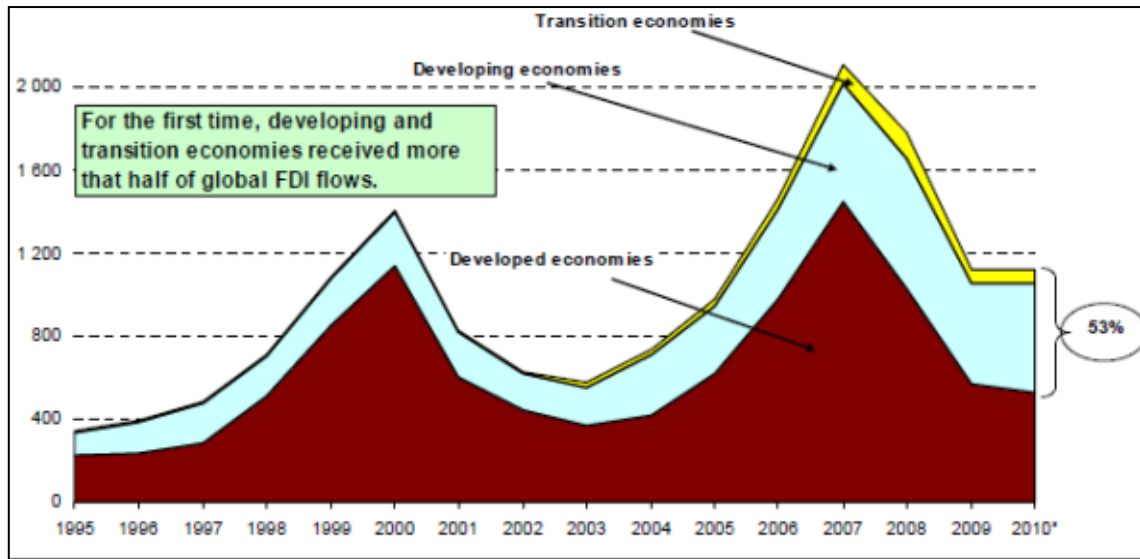
2.0 INTRODUCTION

This research focuses on the effects of financial sector foreign direct investment (FSFDI) on poverty alleviation, particularly in developing countries. The literature review draws from past studies and provides an explorative view of these relationships. The chapter will be organised into major themes that have been identified as relevant to the study. As a point of departure, the chapter will begin by giving a brief overview of FDI and how it has impacted nations. Next the literature on FSFDI is explored in great detail, focusing particularly on how this investment impacts poverty alleviation. Following this, poverty will be explored in detail and this will include looking at channels that help in poverty alleviation.

2.1 FOREIGN DIRECT INVESTMENT

According to standard growth theories, the major factors driving economic growth are capital accumulation and technological innovation (Wang & Wong, 2010). Foreign private capital flows, portfolio investment, and FDI have been important external sources of financing growth and investment around the world (Özkan-Günay, 2011; Garcia-Herrero & Navia, 2003). The past decades witnessed a dramatic increase in foreign capital flows into developing countries, wherein FDI has played a crucial role. Developing countries have become targets for FDI mainly because of the business opportunities they present. Some of the big Multinational Corporations (MNCs) are experiencing lower returns in developed countries and as such are turning to emerging economies to broaden their markets and pursue higher returns (Zhang, Li, Li & Zhou, 2010). FDI in developing countries has seen a significant increase in recent times (See Figure 2). Gaining momentum just before the turn of the millennium, the trend of FDI culminated for the first time in 2010 when developing and transition economies received more than half of global FDI flows (UNCTAD, 2010).

Figure 2: FDI Inflows, Global and by Group of Economies, 1995-2010
(Billions of dollars)



Source: UNCTAD (2010)

FDI in general is considered to transfer physical capital and intangible assets such as technology between countries (Chor, Davin, Foley, Kalina & Stanley, 2008). Over the 1980s and 1990s, empirical evidence has identified a number of channels through which FDI sways economic growth in emerging economies (Adams, 2009). A number of these studies have concluded that there is a positive relationship between FDI and economic growth, but none have decisively proven a connecting relationship between the variables (Choong & Lam, 2011; Chor *et al.*, 2008; Freeman, 2004). FDI contributes positively to economic growth through increased competitiveness (Adams, 2009). Conversely, Alfaro, Chanda, Kalemli-Ozcan & Sayek (2004) have found that FDI promoted economic growth only when certain economic conditions were met in the host country. They recognized the importance of well-developed financial intermediaries in enhancing technological innovation, capital accumulation and economic growth. Wide-ranging studies have investigated the factors driving FDI into a country (Moolman *et al*, 2006; Özkan-Günay, 2011). Conventional factors attracting FDI can include:

- Economic capacity
- Economic growth
- Market size

- Administrative bottlenecks
- Entry restrictions
- Cost differences between locations,
- Availability of factors of production
- Financial development (Moolman *et al.*, 2006)

2.1.0 Forms of FDI

FDI originates predominately in the form of multinational corporations (MNCs). In more recent times, MNCs have grown in power and visibility (Blomström & Kokko, 1998). MNCs can accomplish two types of FDI namely cross-border Mergers & Acquisitions (M&As) and greenfield investment (Rusike, 2007). M&As involve purchasing existing facilities while greenfield investment entails setting up new facilities (Rusike, 2007). These forms of FDI are different in nature and have varied growth impacts on host countries (Wang & Wong, 2009). Using a sample of 84 countries from 1987 to 2001, Wang & Wong (2009) found that the growth effect of greenfield investment was significantly positive, while that of M&A was negative. They found that greenfield investment promoted economic growth regardless of the host country's level of human capital and as such contributed positively to poverty alleviation (Wang & Wong, 2009). This inevitably has policy implications for governments in developing countries. Often policy makers favour greenfield investments and accordingly may create enabling environments for this type of investment, while alternatively endorsing restrictive policies against M&As such as competition laws (Wang & Wong, 2009).

Investors have varied reasons why they choose the final destination for their investments. Often FDI classification is based on the motives of the investors. Common classifications include export-oriented, market-seeking and government initiated.

- i. Market-seeking FDI mainly focuses on the local market conditions and this can include the size and makeup of the market, consumer preferences and access to other global markets (Faeth, 2009).

- ii. Export-oriented FDI may include foreign firms using resources from the recipient country to produce products for other markets (Faeth, 2009).
- iii. Governments in some cases play an important role in attracting FDI inflow by providing incentives with the main aim of addressing structural problems such as poverty and unemployment (Rusike, 2007).

2.1.1 Determinates of FDI

Because of the high demand and perceived importance of FDI in reducing poverty, considerably research has gone into assessing determinates of this type of investment. As mentioned earlier, attracting FDI has become an important matter in many developing countries, however investors do not randomly invest in developing countries. The attractiveness of the country to investment in plays a key role in luring potential investors. Countries compete with each other to promote FDI by offering financial incentives; decreasing administrative barriers and bureaucracy and by improving domestic infrastructure and the general business environment (Özkan-Günay, 2011). FDI policies can have an effect on poverty reduction and likewise poverty reduction policies can affect FDI. Some factors that determine FDI inflows include the size of the market; the openness of the economy; the amount of available natural resources; investment climate; infrastructure; availability of skilled labour and incentive policies (Faeth, 2009). In this section some of the important determinants of FDI inflows will be discussed.

2.1.1.1 Governance

As mentioned earlier, the economic performance of a country can have a positive effect on poverty reduction. It is widely argued that a country's economic performance over time is to a great extent determined by its political, institutional and legal environment (Mengistu & Adhikary, 2011). This is referred to as the governance of a country. According to Kaufmann, Kraay & Mastruzzi (2009) the definition of governance is:

“.....the traditions and institutions by which authority in a country is exercised. This includes the process by which governments

are selected, monitored and replaced; the capacity of the government to effectively formulate and implement sound policies; the respect of citizens and the state for the institutions that govern economic and social interactions among them” (Kaufmann *et al.*, 2009 p.5).

After examining the effects of governance on foreign direct investment (FDI) inflows in 15 Asian economies for the period 1996–2007, Mengistu and Adhikary (2011) found that countries which have prudential laws and regulations and institutional efficiencies in order to protect the property rights and civil rights of investors, can better attract FDI. However, there are instances where this assertion does not hold true. For instance China has a poor legal system and a poor record of property rights protection, but it has become a major recipient of foreign direct investments and in the process achieved exceptional growth rates (Mengistu & Adhikary, 2011).

2.1.1.2 Economic Fundamentals

There is a strong agreement in literature that multinational firms invest in specific places as a result of strong economic fundamentals in the host countries which may include large market size; a stable macroeconomic environment and a well-developed financial sector (Ang, 2008; Alfaro *et al.*, 2004). FDI tends to increase where there is high levels of private investment, possibly due to a signalling effect as higher private investment is seen as an indication of high returns to capital (Ndikumana & Verick, 2008). In a study of Malaysia which looked at the period 1960–2005, Ang (2008) found that the extent of trade openness of the country was an essential stimulant to attract FDI, which in turn helped to reduce poverty. This was substantiated by Karim and Ahmad (2009) in another study of Malaysia which established that there was a positive relationship between the flow of FDI and reduction of poverty for the period 1984-2005.

Countries with trade liberalisation policies that are viewed as being progressive tend to attract higher levels of FDI than those countries that don't have similar

policies (Moolman *et al.*, 2006). Nonetheless, this assertion was dispelled by Vadlamannati and Tamazian (2009) who found that nations like Algeria, Nigeria, Democratic Republic of Congo, Zambia and Tanzania did not embark on significant economic policy reforms as compared to the rest of Africa, but FDI inflows were noticeably higher in these nations than in others who had significant reforms in the region.

A country that has produced a remarkable economic growth rate in the past is prone to attract more foreign investors (Ndikumana & Verick, 2008). The straightforward rationale is that a stable GDP growth rate symbolizes soundness and stability of economic policies and the effectiveness of the government institutions which are sought after by investors (Ndikumana & Verick, 2008).

2.1.1.3 Natural Resources & Infrastructure

Natural resources are sought after by those countries that are not originally endowed with such assets. Sub-Saharan Africa has low levels of FDI in comparison with other developing regions, and is concentrated in a few countries; mostly targeting the natural resources sector and this is mainly driven by the recent commodity price boom (Ndikumana & Verick, 2008). Some of the countries that have managed to attract significant amounts of FDI and are also rich with natural resources include South Africa, Botswana, Angola, Mozambique and Tunisia. On the other hand, infrastructure like telecommunication; road networks; energy sources; schools and health services are important drivers of foreign investment in non-resource-rich countries (Fedderke & Romm, 2006). In most cases, these countries have to work harder to attract FDI (Fedderke & Romm, 2006). A sound infrastructure minimizes the cost of doing business by increasing effective labour hours.

2.1.1.4 Labour

A major reason why foreign investors look abroad is the availability of cheap labour that would decrease their production costs, since labour-abundant countries are more likely to develop varied skills at a lower cost (Ndikumana &

Verick, 2008). It is with this notion that countries like China witnessed high levels of FDI mainly due to the perception that it had low labour costs. On the other hand countries with more skilled labour are expected to grow more rapidly and the increased growth rate will then motivate foreign investors to move in (Noorbakhsh, Paloni & Youssef, 2001). Availability of a skilled labour force is seen to attract FDI predominately in the services sectors (Noorbakhsh, Paloni & Youssef, 2001). Skill labour has been seen to be more productive than their unskilled counterparts (Todo, Zhang & Zhou 2009).

2.1.2 Costs and Benefits of FDI on Poverty Reduction

FDI can influence poverty directly or indirectly. The direct impacts of FDI are due to its contribution to economic growth, considering that it is widely been accepted that economic growth affects poverty reduction positively (Hemmer & Phuong Hoa, 2002). The direct impacts of FDI on poverty are linked to its effects on employment levels. FDI may create more jobs for the local poor as well as improve their lives (Hemmer & Phuong Hoa, 2002). FDI plays an important role by creating employment opportunities through globalisation. Faeth (2009) further states that inward FDI can contribute to job creation in the host country when multinational companies (MNCs) assist domestic suppliers to set up new production facilities. They can further assist in the same way when former skilled MNC-employees establish their own businesses and thus help with alleviating poverty due to the creation of new employment opportunities. These are the spillover effects of FDI. Another benefit associated with FDI that has been mentioned earlier includes skills transfer.

According to Kose, Prasad, Rogoff and Wei (2006), the impact of FDI on economic growth depends on a host country's economic foundation. Reaping better economic growth and other benefits associated with FDI requires nations to meet appropriate conditions which may include sufficient level of financial development, well developed institutions, good governance and suitable policies (Kose *et al.*, 2006). When FDI occurs in a context of high level of aggregate demand and effective regulatory framework which in turn limits the destructive aspects of competition, then FDI may indeed have a positive impact

on nations and communities (Crotty, Epstein & Kelly, 1998). Alfaro *et al.* (2004) established that better developed financial systems have a propensity to benefit more from FDI. On the other hand, when this is absent, FDI tends to have negative consequences on workers in the host countries (Crotty *et al.*, 1998). In other words, the country should obtain a minimum level of economic development before it can absorb the benefits from FDI. This is referred to as the absorptive capacity.

There are groups that argue that the benefits to be derived from FDI inflows are somewhat minute compared to the adverse effects. The downside of FDI include loss of political independence, obstruction of domestic industries; and increase in current account deficit due excessive importation by foreign firms and repatriation of profit (Kose *et al.*, 2006). As a result, some developing countries are sceptical about the virtues of FDI.

2.2 FINANCIAL SECTOR AND ECONOMIC THEORY

The Financial sector plays an essential role for any economy and it is important to understand how it works in order to make the link between financial sector development and economic growth. This section will attempt to accomplish this. The financial sector is essential in bringing together savers and investors who are in most cases faced with risk and uncertainty (Stiglitz, 1998). The financial sector helps in matching the risks appetites of these two segments without necessarily pooling their money (Stiglitz, 1998). Furthermore, in cases where funding is required by businesses or investors this sector provides an intermediation service that facilitates and brings together the providers of money with those that are seeking it (Goldberg, 2004). Commercial banks are major players in this process and also provide the relevant information for both sides to participate effectively (Goldberg, 2004). The financial system increases the efficient allocation of resources. Neoclassical growth models enlighten how this efficiency is the main driver of economic growth (Stiglitz, 1998).

2.3 FINANCIAL SECTOR FDI IN DEVELOPING NATIONS

Financial sector FDI (FSFDI), a relatively new phenomenon, typically takes the form of banks in industrialized countries establishing branches and facilities in developing countries (Goldberg, 2004). Financial services are fundamental to economic growth and development (Fink *et al.*, 2005). FSFDI is widely believed to significantly contribute to financial development in recipient countries.

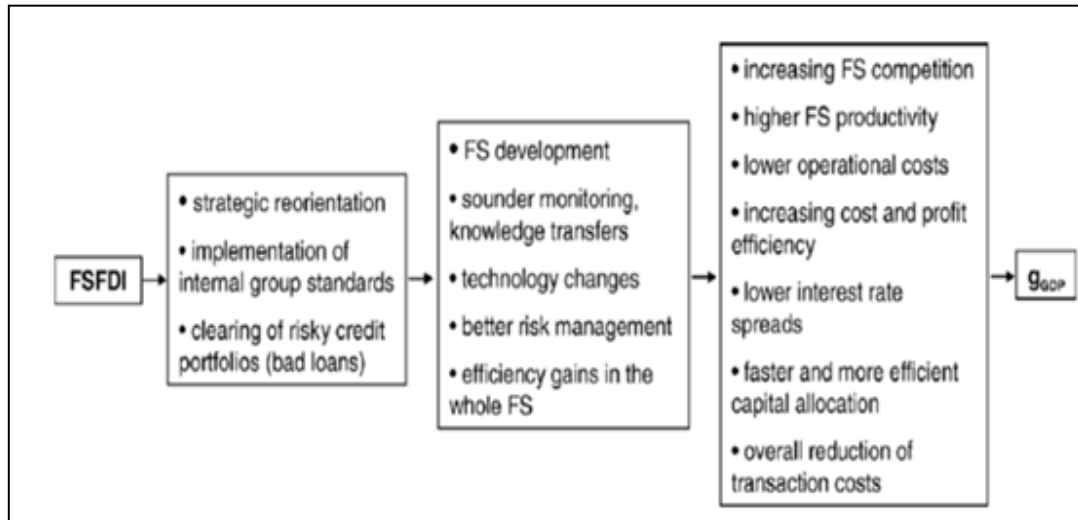
Empirical evidence shows that financial development contributed to poverty reduction (Levine, 2005). This led to the widespread adoption of financial liberalization and reform measures in developing countries in the 1980s (Duttaray, Dutt & Mukhopadhyay, 2008; Jalilian & Kirkpatrick, 2002; Levine, 2009; Perez-Moreno, 2011). Over the same period, these countries have undergone economic structural adjustments with the intent of opening their markets to foreign firms and attract FDI (Levine, 2009). The outcome of this has lead to FDI inflows increasing tremendously. In the past, investments in the resources sectors had dominated overall FDI inflows into developing countries, particularly countries in Africa, but this trend is slowly changing and the financial sector is growing in importance, mainly because of the benefits highlighted earlier (Klein, Aaron & Hadjimichael, 2001). As a consequence, higher growth rates have been experienced by developing nations since opening their economies to international investment (Duttaray *et al.*, 2008). The body of literature on FDI tends to draw their results primarily from real-side investment such as activity in primary resource industries and manufacturing (Goldberg, 2004). The emerging body of FSFDI addresses some issues that have not received much attention in real-side studies (Goldberg, 2004).

2.3.0 Financial Sector Development through FDI

A well-developed financial sector may help raise economic growth. FDI has been widely believed to contribute to financial development through skills, knowledge, technology and capital transfer (Levine, 2005). FSFDI may contribute to economic growth through the efficiency channel, this means that FSDI leads to financial sector development and in turn, this makes the sector

more efficient through a number ways as illustrated in Figure 3 (Eller, Haiss & Steiner, 2006).

Figure 3: Financial Sector (FS) FDI- Induced Efficiency-led Growth



Source (Eller *et al.*, 2006)

Increased competition; enhanced accessibility and quality of financial services; easier access to capital and technology transfer are seen as the main benefits associated with foreign entry into financial systems (Javorcik, 2004). Financial sector FDI enhances the efficiency of firms in the host markets (Goldberg, 2004). This leads to financial sector development. Foreign owned banks doing business in developing nations tend to be more efficient than local banks and this applies to both private and state owned entities (Javorcik, 2004). This implies that domestic firms are forced to become more efficient after foreign firms enter, particularly in the area which foreign firms opt to compete. The development and expansion of the financial sector also contributes significantly to economic growth and in turn also attracts more FDI due to efficient financial intermediaries (Fink *et al.*, 2005).

The rate of economic growth can be increased because FDI and local financial sectors are complementary when it comes to facilitating the process of technological diffusion. Notwithstanding these benefits, the growing involvement of foreign firms in the financial systems of developing nations has given rise to concerns, especially where a majority of the banking assets have become foreign-owned. Regrettably, developing nations, even after liberalising their

economies, frequently suffer from skilled labour shortages (Noorbakhsh, Paloni, & Youssef, 2001). The positive relationship between economic growth and financial liberalization is threatened by this scenario. Transformation in the financial sector has instigated interests in analysing the implications of financial sector FDI on the host countries.

2.4 POVERTY ALLEVIATION

Poverty has become a sensitive and persistent issue almost in all developing countries (Hinson, 2011). Poverty is a phenomenon that affects an individual and has many dimensions which include not being able to manage resources, no access to basic needs, lack of education and skills, inferior health, political oppression, susceptibility to shocks (Hinson, 2011). Poverty can be looked at from a number of angles: poverty can either be relative or absolute. Absolute poverty can be eradicated but relative poverty cannot (Chaudhry, Malik, Hassan & Faridi, 2010). Relative poverty is a dynamic concept as it involves assessments between groups (Chaudhry *et al*, 2010).

Another widely used measure of poverty is the Human Development Index (HDI). The central argument underlying the calculation of the HDI is that human welfare is not best measured by average income alone (Siggel, 2010). The level of income per capita hides the distribution of income and poverty (Siggel, 2010). It also excludes aspects of human welfare that lie beyond material wealth, in particular education and health (Siggel, 2010). At the Millennium Summit in September 2000, world leaders committed to the global community the intention to halve the magnitude of people experiencing poverty and hunger by 2015 (Chen & Ravallion, 2008). Latest estimates of poverty in developing nations are concerning, as the incidence of extreme poverty is considerably higher than was previously thought (Chen & Ravallion, 2008).

2.5 POVERTY ALLEVIATION CHANNELS

Poverty alleviation is high on the agenda for almost all developing nations, particularly those in sub-Saharan Africa. These countries have been attempting varied strategies to reduce the scourge of poverty which often puts a burden on governmental budgets. With this in mind, there are a number of poverty reduction channels that have been identified and these will be explored in this section.

2.5.0 Good Governance

There is widely held views that Good governance is an essential ingredient for alleviating poverty (Globerman & Shapiro, 2002). This includes among other things reducing corruption; improving accountability; decentralizing government; managing public funds better; establishing equality before the law in practice as well as in rhetoric and restructuring the civil service (Grindle, 2004). When looking at developing countries, almost without exception their institutions are weak, vulnerable, and mostly imperfect; their decision processes spaces are made difficult by the presence of international role players with multiple agendas, their public organizations are bereft of resources and are generally managed badly; while government workers are generally poorly trained and not motivated (Grindle, 2004).

2.5.1 Economic Growth

There is a general agreement that rapid and sustainable growth plays a key role in the reduction of absolute poverty in developing countries (Hermes & Lensink, 2003). Fanta and Upadhyay (2009) confirm that economic growth is beneficial for poverty alleviation. In addition, they find that the realization of a higher level of development enables a country to translate a given growth into greater poverty reduction (Fanta and Upadhyay, 2009). After economic reforms and increased economic growth, the proportion of the poor and incidence of poverty in rural China has declined dramatically (Chow, 2006). A fundamental question in the discussion about globalization is the extent to which growth decreases poverty. In situations where economic growth is beneficial for all citizens and in

identical proportions, the gap between the incomes of rich and the poor is not widened (Deaton, 2005).

2.5.2 Education and Skills Development

Education plays a vital role in poverty alleviation and is the most important factor that distinguishes the poor from the non-poor; according to Chaudhry *et al.* (2010). Education may affect poverty in many ways. It may raise the income of those who are educated. Knight, Shi & Quheng (2009) showed that education and poverty were significantly related in a number of ways, and that the interactions amongst a set of variables related to poverty and education are capable of generating a vicious circle of learning deprivation and poverty, as well as a virtuous circle of positive interaction between education and income. Households can get caught in a poverty trap because they experience both a poorer quality and minor quantity of education (Knight *et al.*, 2009). Education is accepted as a tool of high importance for other development outcomes, particularly for moving out of poverty. This is why one of the Millennium Development Goals is achieving universal primary education. This substantiates the notion that poverty is highly prejudiced by education. Local universities can help developing countries by improving the skills of human capital which ultimately become helpful in poverty alleviation.

MNCs play a pivotal role in educating their employees. According to a study done by Thomo (2010), the majority of MNCs who were part of his study had formal training programmes, and the majority of these programmes targeted employees within the organisation for training. His results further showed that a large number of employees were trained after the inducement of inward FDI. It must be noted that the majority of his sample included MNCs in the form of greenfield investments which were non-existent before inward FDI, and as such the training of new employees was imperative where new technology was involved (Thomo, 2010). Fortanier and van Wijk (2010) noted that foreign firms in the services industry (hospitality industry) conducted more training than their

domestic counterparts mainly due to higher service demands on them. Although this study specifically looked at the hospitality industry in sub-Saharan Africa, parallels can be drawn with other service industries such as the financial sector which also has high service demands. In their study which looked at MNCs in China, Todo *et al.* (2009) found that better educated employees of MNCs contributed to improved productivity of domestic firms when compared to less educated employees in the same industry. Education not only benefits the employees themselves, who can improve their income, but because of their high productivity it inevitably causes an increase in economic growth which in turn helps in poverty alleviation: a virtuous cycle.

2.5.3 Financial Development and Access

Financial development entails enhancements in the mobilization and pooling of savings and the exchange of goods and services, the creation of information about prospective investment projects; examination of investments; trading; diversification and management of risk (Levine, 2005). FSFDI is seen a conduit for financial development (Hermes & Lensink, 2003). In the same vein, financial development is widely viewed as a reducing agent to absolute poverty. This is supported by evidence that indicates financial development causes less income inequality (Clarke, Zou, & Xu, 2003; Levine, 2005). Beck *et al.* (2004) found a strong link between finance and poverty alleviation. Nations with well developed financial sectors experienced quicker reductions in the share of people living on less than US \$1 a day during the 1980s (Beck *et al.*, 2004). Financial access improvement is the most important channel through which financial sector development directly affects poverty (Beck *et al.*, 2004). It is estimated that about 90 per cent of people living in developing nations lack access to financial services (Hinson, 2010). Empirical evidence such as proven by Beck *et al.* (2004) proposes that companies' and households' access to financial services increases with financial development. Financial services assist citizens in safeguarding against uncertainty and building financial resources (Spencer & Wood, 2005). At the same time they also assist in facilitating businesses to expand, increase efficiency and compete in local and international markets (Spencer & Wood, 2005). Consequently, this study will focus on FSFDI and

establish if this type of investment can indeed contribute to poverty alleviation as the literature suggests.

2.5.4 Job Creation

Job creation is perhaps one of the central obstacles for developing nations. Improvement in human welfare on a huge scale can be challenging to achieve without a significant increase in employment. Karlsson, Lundin, Sjöholm and He (2007) analysed FDI and job creation in China by means of a big sample of manufacturing firms for the period 1998 to 2004. The end result was that FDI had a positive effect on job creation. There also seemed to be a positive indirect effect on employment in locally-owned firms, seemingly caused by spillover effects (Karlsson *et al.*, 2007). Kim (2009) in his study on South Korea found a correlation between the two modes of inward FDI on formation and job creation. The study revealed that greenfield investment was positively correlated to employment compared to cross-border mergers and acquisitions which had an inverse relationship (Kim, 2009). There is one more consequence of FDI inflow which can decrease employment in local firms. This typically happens when foreign companies raise the competition and compel local firms to exit the market or cut back on their labour (Karlsson *et al.*, 2007). This is the crowding out effect of FDI.

2.6 FINANCIAL SECTOR DEVELOPMENT AND POVERTY ALLEVIATION

Financial services assist citizens in safeguarding against uncertainty and building financial resources (Spencer & Wood, 2005). At the time they also assist in enabling businesses to expand, increase efficiency and compete in local and international markets (Spencer & Wood, 2005). These services are critical for the poor as it decreases exposure and allows people to control those assets available to them in ways that generates income and options, ultimately creating paths out of poverty (Sutton & Jenkins, 2007). An important but indirect way that the financial sector can assist the poor is by hastening the growth rates of the nations in which they reside. This is possible through the following: It can mobilise savings in a financial form by offering instruments with good yields and

suitable maturities that people desire to acquire (Spencer & Wood, 2005). It can also increase the efficiency of investment by screening project proposals and by monitoring the behaviour of borrowers and issuers of equity (Spencer & Wood, 2005).

Less developed countries (LDCs) that lack financial development and outreach to efficiently and effectively provide a broad range of affordable financial services to all, tend to have high incidence of poverty (Beck *et al.*, 2004). Most developing countries such as South Africa, Zambia, Kenya and Nigeria have perennial problems of unemployment and poverty. Given the critical role of the financial sector in expanding economic opportunity, the governments of these countries are working hard to develop and adopt a set of principles that encouraged the economic empowerment of under-served communities. Financial services are consequently critical not only for lowering income poverty, but also for dealing with other elements of poverty which include improving education levels; health and improving access to financial resources (Claessens and Feijen, 2007).

Summarily, primitive and under-developed financial sectors can provide fewer services at higher costs for the reason that they cannot make use of economies of scale and often lack sufficient competition, which can lead to underperformance and hence FSFDI is critical in this regard (Eller *et al.*, 2006). In least-developed nations there is a common restricted use of, and access to, financial services (IMF, 2012). This is exposed by lower penetration of banking branches and ATMs and a lower usage of deposits, loans and insurance policies (IMF, 2012).

The harsh reality is that poor people in developing countries mostly still lack access to sustainable financial services, whether savings, credit or insurance (Hinson, 2010). This leads to high levels of unemployment and poverty (Hinson, 2010). It is the reason why job creation and poverty alleviation is high on the political agenda of these countries accordingly financial sector will play a key role in this regard. FDI has been seen to contribute significantly to the development of the financial sector. Based on the poverty alleviation

strategies highlighted in existing literature, FSFDI can possibly influence or affect poverty alleviation through job creation, skill development and improving financial access.

2.7 CONCLUSION

The purpose of the chapter was to refine the statement of the research problem. This was accomplished by conducting an in-depth analysis of literature with the aim of acquiring a better understanding of how FSFDI affects poverty alleviation. Through this process, it was revealed that FSFDI had theoretical benefits for the poor. FSFDI was identified as a conduit for financial development and this development can lead to economic growth through the efficiency channel. When the financial sector is more efficient, benefits may include making transactional cost lower, improving the allocation of financial resources and increasing financial access. Further benefits of FSFDI highlighted in the literature also included job creation and skills transfer, both of which were also identified as poverty reducing agents.

CHAPTER 3: RESEARCH HYPOTHESIS

3.0 INTRODUCTION

The principal aim of the study was to investigate the extent to which financial sector FDI (FSFDI) can be an efficacious tool for poverty alleviation. Within that broader aim, three hypotheses were proposed and these are outlined in detail later on in this section. There are a number of variables that could have been used to assess poverty alleviation such as changes in the Human Development Index (HDI) as FSFDI enter a country, but for the purpose of this research only three variables were considered to be part of the scope of the research. These variables are employment, training and financial access. Based on existing literature, these variables or indicators are strong reducing agents of poverty. Some of the reasons these variables were used in this study are detailed below.

3.1 HYPOTHESIS 1

Null Hypothesis (H_0): *There exists no relationship between FDI in the financial sector and employment in the sector.*

Alternative Hypothesis (H_a): *There exists a relationship between FDI in the financial sector and employment in the sector.*

Many countries view inward FDI as an important instrument to improve the local labour market conditions in terms of employment (Dinga & Munich, 2010). Improvement in human welfare on a huge scale can be challenging to achieve without a significant increase in employment. It is with this background that it is important to ascertain if FSFDI does indeed have a relationship with job creation.

3.2 HYPOTHESIS 2

Null Hypothesis (H_0): There exists no relationship between FDI in the financial sector and employees trained.

Alternative Hypothesis (H_a): There exists a relationship between FDI in the financial sector and employees trained.

Education plays a vital role in poverty alleviation and is considered to be the most important factor that distinguishes the poor from the non-poor, according to Chaudhry *et al.* (2010). FDI has been associated with skills transfer which is a form of employee education. It is understood that most foreign firms in the services industry conducted more training than their domestic counterparts mainly due to higher service demands on them (Fortanier & Van Wijk, 2010).

3.3 HYPOTHESIS 3

Null Hypothesis (H_0): There exists no relationship between FDI in the financial sector and financial access.

Alternative Hypothesis (H_a): There exists a relationship between FDI in the financial sector and financial access.

Empirical evidence such as proven by Beck *et al.* (2004) proposes that companies' and households' access to financial services increases with financial development. Financial services assist citizens in safeguarding against uncertainty and building financial resources (Spencer & Wood, 2005). At the same time they also assist in facilitating businesses to expand, increase efficiency and compete in local and international markets (Spencer & Wood, 2005). FSFDI has been viewed to be a conduit of financial development which among other things also involves the improvement of financial access. With this backdrop it is essential to ascertain if FSFDI does have a relationship with financial access.

CHAPTER 4: RESEARCH METHODOLOGY

4.1 RESEARCH DESIGN

The approach that researchers adopt to develop research designs is fundamentally affected by whether the research question is descriptive or explanatory. Research design is seen as a logical plan that links the start to the end. This design helps in the process of collecting, analysing and interpreting the data (Yin, 2008). The research design for this study was quantitative and descriptive in nature. In quantitative research the aim is to determine the link between an independent variable and a dependent in a population (Yin, 2008). In this case, the objective of the study was to determine the relationship between Financial Sector Foreign Direct Investment (FSFDI) and poverty alleviation and hence the quantitative approach was appropriate.

Descriptive studies can be referred to as observational studies, because subjects are observed without other intervention (Zikmund, 2003). Descriptive research seeks to find out the responses to who, what, when, where and how questions (Yin, 2008). This research made use of quantitative secondary data in its design. According to Saunders, Lewis & Thornhill (2009), a major advantage of working with secondary data is that it is convenient and cheaper as the data has already been collected, and the researcher does not have to allocate resources to this stage of research. It must be noted that one drawback of using secondary data is that the data might not have been collected to answer the specific research questions the current researcher might have (Saunders *et al.*, 2009).

4.2 POPULATION

Since the 1990s, foreign direct investment (FDI) has become the largest single source of external finance for many developing countries (Goldberg, 2004). For the purpose of this research, the population reference was all developing countries that receive financial sector FDI (FSFDI).

A developing country is also known as a less-developed country (LDC) and is normally characterised by a low standard of living; undeveloped industrial base and low Human Development Index (HDI) relative to other countries.

4.3 SAMPLE METHOD

Researchers almost invariably have to work with a sample of subjects rather than the full population. In order to infer from the sample to the population, the sample has to be representative of the population (Zikmund, 2003). A convenience sample technique was used in this study. Convenience sampling is referred to as a non-probability sampling technique. Non-probability sampling focuses on sampling techniques that are based on the judgement of the researcher (Zikmund 2003). A convenience sample is simply one where the units that are selected for inclusion in the sample are the easiest to access (Zikmund 2003). In the case of this study, all data was South African in origin due to the various considerations, include the ease of access. Some of the reasons for the sample choice are discussed below.

4.3.0 Reasons for Sample Choice

South Africa was an excellent case to explore as it has an advanced financial sector which sometimes is compared to other developed nations and has one of the best managed stock exchanges in the world (Rusike, 2007). Since the early 1970s the largest flow of FDI into the country has been in the mining sectors, but a surge in financial sector FDI has characterised the 1990s and more recent times (Rusike, 2007). Literature has revealed how financial development is associated with inflow of FSFDI. Despite the influx of financial sector FDI, the country has still retained high levels of poverty and inequality (Adato, Carter, & May, 2006). The majority of the citizens do not have access to financial services, particularly those in the rural areas (Adato *et al.*, 2006). Since the advent of democracy and the abolishment of the apartheid system, the country has managed to attract significant amounts of FDI but even so the high prevalence of poverty remains a significant problem in the country. Adato *et al.* (2006) revealed that the number of the poor in South Africa had risen to almost 43 per cent by 1998, while the average poverty gap increased to 33 per cent.

When presenting his maiden *State of the Nation* address in Parliament, President Zuma highlighted that the fight against poverty remained the cornerstone of his government's focus (Presidency, 2009). Bearing these factors in mind, South Africa proved to be an ideal country to study in the investigation on how FSFDI impacts poverty alleviation.

4.4 UNIT OF ANALYSIS

The unit of analysis was based on the hypotheses discussed in Chapter 3. In this study the researcher had three units of analysis which were: financial sector employment; work force trained and financial access.

4.5 DATA COLLECTION

The data for this study was obtained from multiple data sources. This section will describe the data sources that were used. All the data utilised in this study was available in the public domain. The next section will describe the nature and source of data obtained for the research.

4.5.0 Financial Sector FDI Data

The data for financial sector FDI was obtained from the South African Reserve Bank. This data is released annually by the bank and was obtained by looking at the foreign liabilities of South Africa by the nature of economic activity. What was important for this data was the ability for the researcher to differentiate FDI by sector and this was possible with the set of data obtained in this manner.

4.5.1 Work Force Training & Employment

Skills development data for the financial sector was obtained from the Financial and Accounting Services SETA (FASSETA) annual report. This is the Sector Education and Training Authority (SETA) for Finance, Accounting, Management Consulting and other Financial Services. This report released annually and is a series of reports commissioned by the Sector Education and Training Authority for Finance, Accounting, Management Consulting and other Financial Services (FASSETA) that analyses the grant application forms submitted by its members

(FESSET, 2012). The report looks at successful grant submissions submitted for each financial year. The grant applications analysed in this report are for the grants payable on the submission of a Workplace Skills Plan (WSP) and an Annual Training Report (ATR) (i.e. the Mandatory Grant); the Strategic Cash Grant (SCG) and the Learnership Cash Grant (LCG) (FASSET, 2012). Member organisations are also required to submit employment figures. The data for financial sector employment were also sourced from this database.

4.5.2 Financial Access

The dataset obtained for financial access was sourced from the International monetary Fund (IMF) database titled the Financial Access Survey (FAS). The FAS database distributes key indicators of geographic and demographic outreach of financial services, as well as the underlying data (IMF, 2012). The reach of financial services use variables that measure bank branch network; availability of automated teller machines and also use three key financial instruments: deposits, loans and insurance. The major objective of the database is to support policymakers and researchers in strengthen their understanding of the determinants and implications of financial access and usage (IMF, 2012). There are 44 variables used in this database to measure financial access. These variables are then subdivided, as shown below in Table 1, into two main segments. Some are used to measure geographic outreach and some are used to measure the use of financial services. A description and explanation of each variable can be found on Appendix B.

Table 1: Financial Access Variables

Geographic Outreach	Use of Financial Services
Number Of Commercial Bank Branches Per 1000 Km2	Borrowers From Commercial Banks Per 1000 Adults
Number Of ODC Branches Per 100,000 Adults	Borrowers From ODCs Per 1000 Adults
Number of Other Financial Corporations	Depositors With Commercial Banks Per 1000 Adults
Number of Other Financial Intermediaries	Depositors With ODCs Per 1000 Adults
Number of Commercial Bank Branches, Excluding Headquarters	Number of Depositors with Other Depository Corporations
Number of Commercial Banks	Number Of Household Borrowers from Commercial Banks
Number Of ODC Branches Per 1000 Km2	Household Borrowers From Commercial Banks Per 1000 Adults
Number of Other Depository Corporation Branches, Excluding Headquarters	Insurance Technical Reserves (% of GDP)
Number Of ATMs Per 100,000 Adults	Number Of Borrowers from Other Deposit Takers
Number Of ATMs Per 1000 Km2	Number Of Borrowers from Commercial Banks
Number Of Automated Teller Machines (ATMs), Country Wide	Number Of Borrowers from Other Depository Corporations
Number Of Commercial Bank Branches Per 100,000 Adults	Outstanding Deposits with Commercial Banks
Number of Insurance Corporations	Number of Depositors with Other Deposit Takers
Number of Other Deposit Taker Branches, Excluding Headquarters	Outstanding Deposits With Commercial Banks (% of GDP)
Number of Other Depository Corporations	Outstanding Deposits With ODCs (% of GDP)
	Outstanding Deposits with Other Deposit Takers
	Outstanding Deposits with Other Depository Corporations
	Outstanding Deposits/Acquired Funds/Insurance Technical Reserves with Other Financial Corporations
	Outstanding Loans by Other Financial Intermediaries
	Outstanding Loans by Other Depository Corporations
	Outstanding Acquired Funds by Other Financial Intermediaries
	Outstanding Loans From Commercial Banks (% of GDP)
	Outstanding Loans From ODCs (% of GDP)
	Overall Outstanding Loans (% of GDP)
	Outstanding Loans by Other Deposit Takers
	Outstanding Insurance Technical Reserves with Insurance Corporations
	Outstanding Deposits/Provided Funds (% of GDP)

The data sources for the obtained data are summarised in Table 2 below.

Table 2: Data Sources

Data	Data Sources
Trends In foreign sector FDI	South African Reserve Bank
Employment Trends in financial sector	Statistics SA (Labour Force Survey)
Skills development in financial sector	Financial & Accounting Services SETA
Financial Access	IMF Financial Access Survey (FAS)

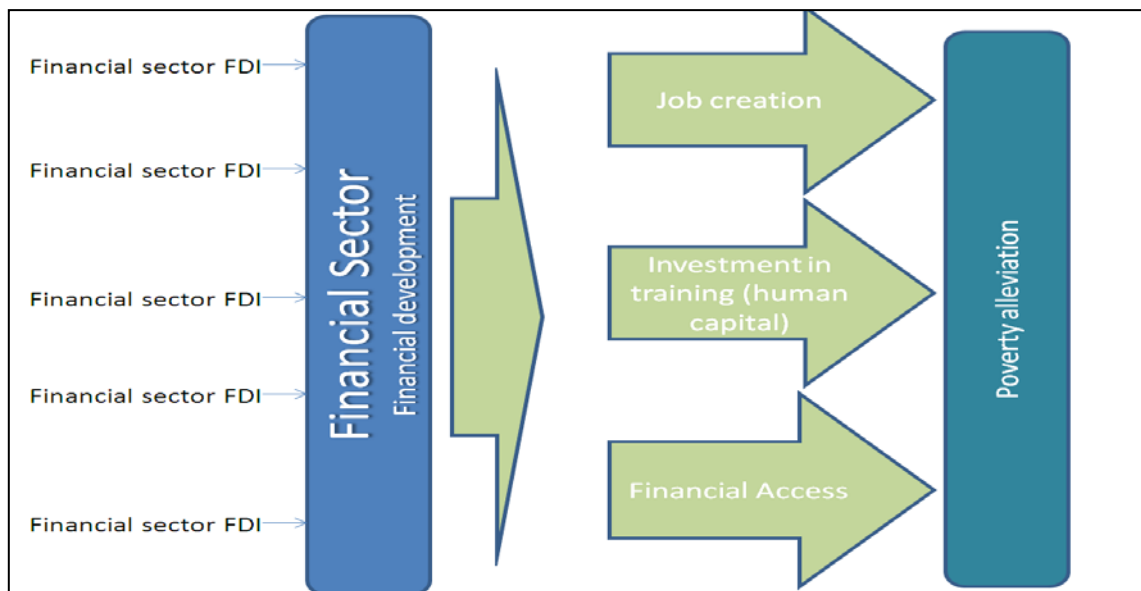
4.6 DATA ANALYSIS

Data analysis is crucial as it prohibits the interpretation of data in an entirely subjective way. Data analysis has the great advantage that it allows us to be as precise as possible in the interpretations of the findings obtained (Saunders *et al.*, 2009). The methods used in this study to analyse the data obtained from the different data sources is discussed in the following section and are outlined in Table 3 below.

Table 3: Data Analysis Approach

Research Themes	Method of Analysis
1. What impact does financial sector FDI have on human capital investment?	Simple regression and comparative analysis.
2. What impact does financial sector FDI have on job creation?	Simple regression and comparative analysis.
3. What impact does financial sector FDI have on financial access?	Simple regression and comparative analysis.

Figure 4: Data Analysis Framework



Adopted from Claessens and Feijen (2007)

Simple linear regression was used to determine the linear association between the independent variable (FSFDI) and the dependent variables (employment; work force trained and financial access) as depicted in Figure 4. This analysis method was appropriate for the reason that based on the literature review the variables had an assumed level of correlation. The intention was to establish whether the linear relationship between FSFDI and the dependent variables was predictive at a statistically significant level as the starting point in analysing the hypotheses proposed. As the statistical measure of association between the dependent and independent variables, the correlation coefficient (r) was examined. The R^2 was also examined as a measure of the total variance in the dependent variable that was accounted for by knowing the value of the independent variable (Zikmund, 2003). It must be noted that this test did not establish causality but merely examined the strength, if any, between the variables being tested.

4.6.0 Reasons for Using Linear Regression

Regression best explains a linear relationship between two variables (dependent and independent). In establishing correlation, previous researchers have used the Pearson correlation technique which works best with linear relationships. This technique does not work well with curvilinear relationships these are relationship that do not follow a straight line.

Firstly it was tested whether such a linear relationship expressed as $\hat{y} = \beta_0 + \beta_1 x$ did exist, where x predicted the values of $\hat{y}$. To do this it was needed to test if the parameter β_1 did exist. If the parameter did not exist, it was clear that there was no relationship between $\hat{y}$ and x . To do this test a 95 per cent confidence interval was used and a t-test statistic, thus a significance level or $\alpha = 0.05$.

The t-test statistic that was used to test whether the predicted value of beta 1, $\hat{\beta}_1$, was based on this same parameter:

$$t_0 = \frac{\hat{\beta}_i - \beta_i}{se(\hat{\beta}_i)} \quad \text{where } se(\hat{\beta}_i) = \sqrt{\frac{\frac{\sum_{r=1}^n e_r^2}{n-2}}{\sum_{r=1}^n (x_r - \bar{x})^2}}$$

The researcher would then take t_0 and test this value against a value from the t -tables. This test would then conclude whether $\hat{\beta}_1$ is significantly different from zero. For the purpose of this study, if beta did not differ from 0, then the model was not significant.

This test result as well as the predicted value of β_1 was obtained in the output of the regression analysis. As mentioned earlier, a key statistic was the 'Coefficient of determination' or R^2 . This static ranged between 0 and 1 and was the fraction of the variability in the dependent variable (employment, training or financial access) which can be explained by the variability in the independent variable (FSFDI).

As mentioned in Chapter 3, the null hypothesis stated that there existed no relationship between FDI in the financial sector and (1) Employment in the sector or (2) Training in the sector or (3) Financial access. The alternative hypothesis stated that there is a relationship between FDI and one of the criteria mentioned above.

Therefore a simple linear relationship (SLR) exists between FSFDI and Employment or Training or Access.

This can be viewed as:

1. Employment = $\beta_{10} + \beta_{11}\text{FSFDI}$
2. Training = $\beta_{20} + \beta_{21}\text{FSFDI}$
3. Access = $\beta_{30} + \beta_{31}\text{FSFDI}$

$$H_0: \beta_{i1} = 0$$

$$H_1: \beta_{i1} \neq 0$$

To clarify: β_i refers to the regression coefficient of the i_{th} relationship, $i=1, 2, 3$.

The test is based on a t-test with statistic:

$$T_0 = \frac{\widehat{\beta}_i - \beta_i}{se(\widehat{\beta}_i)}$$

Where $\widehat{\beta}_i$ is the predicted value of the respective coefficient.

$$se(\widehat{\beta}_i) = \sqrt{\frac{\frac{\sum_{r=1}^n e_r^2}{n-2}}{\sum_{r=1}^n (x_r - \bar{x})^2}}$$

The standard error of the coefficient is calculated as a function of the explanatory variables and the error. H_0 (The Null Hypothesis) would be rejected at 5 per cent level of significance, i.e. a p-value smaller than 5 per cent.

The regression analysis was done after obtaining the logarithms of both independent and dependent variables.

4.6.1 Reasons for Using Logarithms

- A better model fit is obtained by using logarithms; this has to do with the residuals.
- Logarithms also tend to capture growth of the variables better.
- Lastly when logs are taken, it effectively means that the parameter $\widehat{\beta}_1$ now becomes an elasticity. Thus if x were to change by 1 per cent then $\widehat{y}$ would change by $\widehat{\beta}_1$ per cent, ceteris paribus.

4.7 RESEARCH LIMITATIONS

Limitations based on the proposed scope and design of the research investigation must be recognized:

- 1 The results obtained from the data analysis will make it difficult to extrapolate to the rest of the population due to the sampling method used. The sample only included South Africa and this was not fully representative of the entire population (consisting of all developing countries) since South

- Africa might possess unique qualities and characteristics that could be vastly different from other countries.
- 2 The available data spans from 1994-2010 for FDI; 2001-2010 for both employment and training and 2004-2010 for financial access. This implies that the usable data period was 2001-2010 for the first two relationships and 2004-2010 for financial access. This presents a problem in the sense that smaller samples can sometimes lead to inaccurate results. These results are valid but they should be used cautiously.
 - 3 Financial access was difficult to classify since there were multiple sub-classifications. Regression was run on each subsection and the results obtained. Note that where significant relationships existed, it might have been due to a number of other factors, since both FDI and financial access are expected to increase over time.
 - 4 The South African government, together with key businesses came up with the Financial Sector Charter (FSC), which is a set of voluntary principles aimed at creating more inclusive practices that do not exclude the poor from gaining access to financial services. Although these principles are voluntary, some MNCs' actions might have been influenced by this agreement.

CHAPTER 5: RESEARCH RESULTS

5.0 INTRODUCTION

In the preceding chapter, a description of the research methodology approach to test the hypotheses was outlined. The following chapter will present the results from the statistical analysis expressed earlier. This chapter will start by briefly analysing variables used in the test and this will then be followed by the presentation of results obtained after the statistical test. The results will be grouped according to the hypotheses outlined in Chapter 3.

5.0.0 Financial Sector FDI

Table 4 indicates that since 1994, FDI inflow into South Africa has been increasing dramatically. To some extent, this can be attributed to the advent of democracy and the reopening of international financial markets to South Africa. The data also shows a striking trend namely the increasing dominance of Financial Sector FDI (FSFDI) into the country.

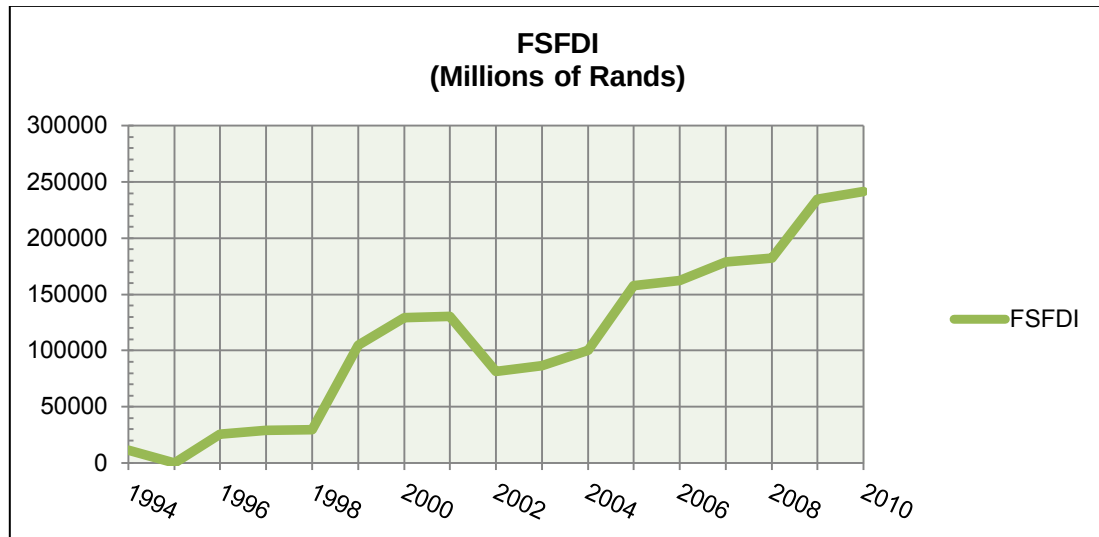
Table 4: FDI Stocks in the Host Economy by Industry, 1996-2006
(Millions of Rand)

Sector/Industry	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Total	36024		61976	81463	91852	318630	328859	370695	255837	303545	355088	489317	611722	751925	632619	865664	1015517
Agriculture, forestry & fishing	315		356	387	387	405	457	653	655	500	719	734	888	858	935	932	932
Construction	562		158	209	304	506	314	1761	1858	1938	1986	1977	1983	1972	2033	2037	2044
Trade	6696		7335	8007	8237	10595	11895	15141	13312	13425	14517	14722	16172	27766	30990	31148	34511
Transport, Storage & Communication	467		534	5373	5779	8411	8521	8825	10131	22043	14112	9449	13809	12840	15525	64943	83942
Finance	11097		25743	29057	29357	104992	129162	130562	81634	86733	100215	157590	162521	178580	182420	234955	241792
Community, Social & Personal service activities	44		100	100	100	138	187	217	352	358	518	518	527	527	568	567	575

A trend analysis was done on the independent variable FSFDI and as illustrated in Figure 5 below, this type of FDI has been on an upward trajectory since 1994. There was a slight decline in 2002 which picked up again in the following years.

A number of possible reasons could account for this decline, but one of the most likely explanations is that this period coincided with the dot-com bubble that caused some international markets to crash.

Figure 5: FSFDI Trends 1994-2010



Figures 6 and 7 illustrate some additional information found when comparing FDI inflow in the financial sector and the mining sector. This analysis was done in order to ascertain how FDI in the financial sector fared against other major contributors to FDI. It can be seen that, since the country has abundant natural resources, FDI in the mining sector was quite significant and eventually surpassed the financial sector in 2005.

Figure 6: FSFDI and Mining FDI Trends 1994-2010

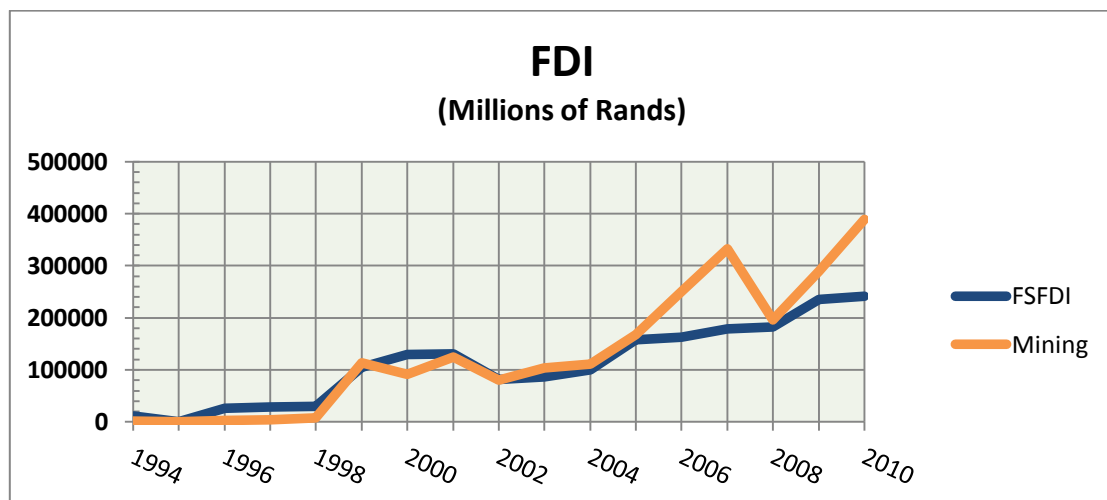
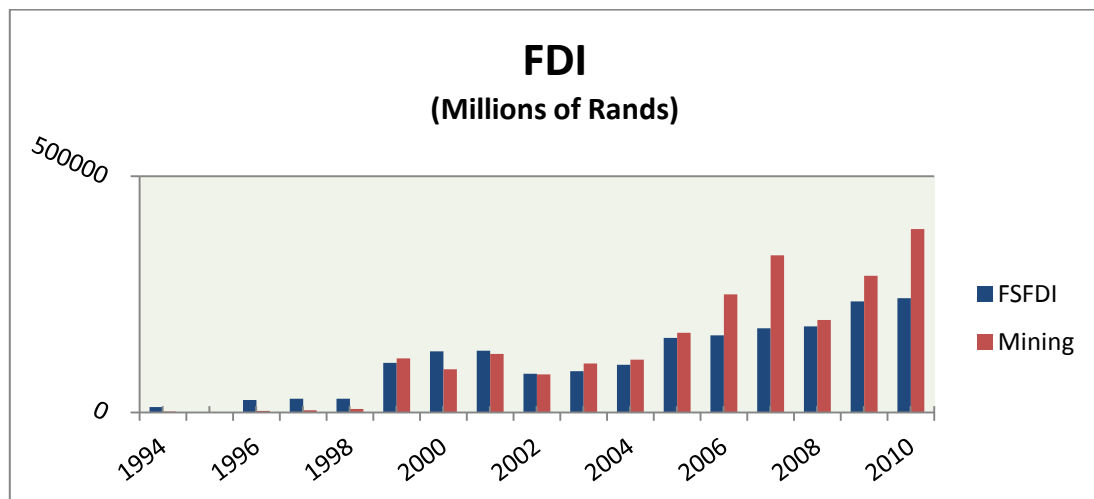


Figure 7: FSFDI and Mining FDI Trends 1994-2010



Further analysis of the independent variable was done using descriptive statistics. Table 5 provides the descriptive statistics for FSFDI. The mean level of FSFDI over the time period 1994-2010 is 129162 million Rands; the standard deviation which is the deviation from the mean is 69168 million Rands.

Table 5: Descriptive Statistics for FSFDI

Financial Sector FDI	
Mean	125020.8667
Standard Error	17859.33336
Median	129162
Mode	#N/A
Standard Deviation	69168.90066
Sample Variance	4784336819
Kurtosis	-0.763406541
Skewness	0.112648545
Range	216049
Minimum	25743
Maximum	241792
Sum	1875313
Count	15
Confidence Level (95.0%)	38304.46032

5.0.1 Financial Sector Employment

The first dependent variable used in this test was Financial Sector Employment. Firstly this data was examined in an effort to determine any patterned trend over

the time period. Figure 8 below shows the trend analysis for Financial Sector Employment and here the observation was a gradual increase over time culminating in it peaking to 120 000 in 2008. A slight decline was witnessed in 2009 before flattening in 2010. The recent global recession which occurred in 2008 could have contributed to this decline.

Figure 8: Financial Sector Employment Trends 2001-2010

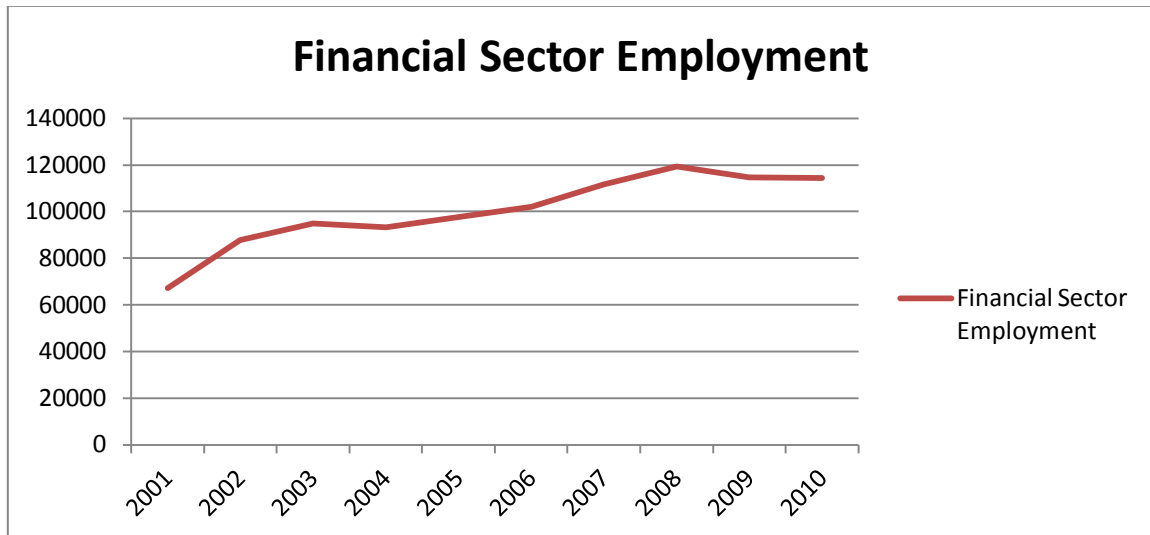


Table 6: Provincial Distribution of Employees in Financial Sector 2001-2010

Province	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Eastern Cape	3%	3%	3%	4%	4%	5%	5%	5%	5%	5%
Free State	3%	3%	3%	3%	3%	3%	3%	4%	4%	3%
Gauteng	67%	62%	63%	60%	59%	54%	51%	48%	48%	51%
KZN	9%	8%	9%	9%	9%	10%	10%	10%	11%	11%
Limpopo	1%	1%	1%	2%	1%	2%	2%	2%	2%	2%
Mpumalanga	1%	2%	2%	2%	2%	2%	3%	3%	3%	2%
Northern Cape	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
North West	2%	2%	2%	2%	3%	3%	3%	3%	3%	3%
Western Cape	12%	18%	16%	18%	19%	20%	22%	23%	24%	21%
Total %	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Total Number	67107	87868	94838	93261	97602	102086	111803	119327	114671	114528

*Owing to rounding, percentages don't always add up to 100

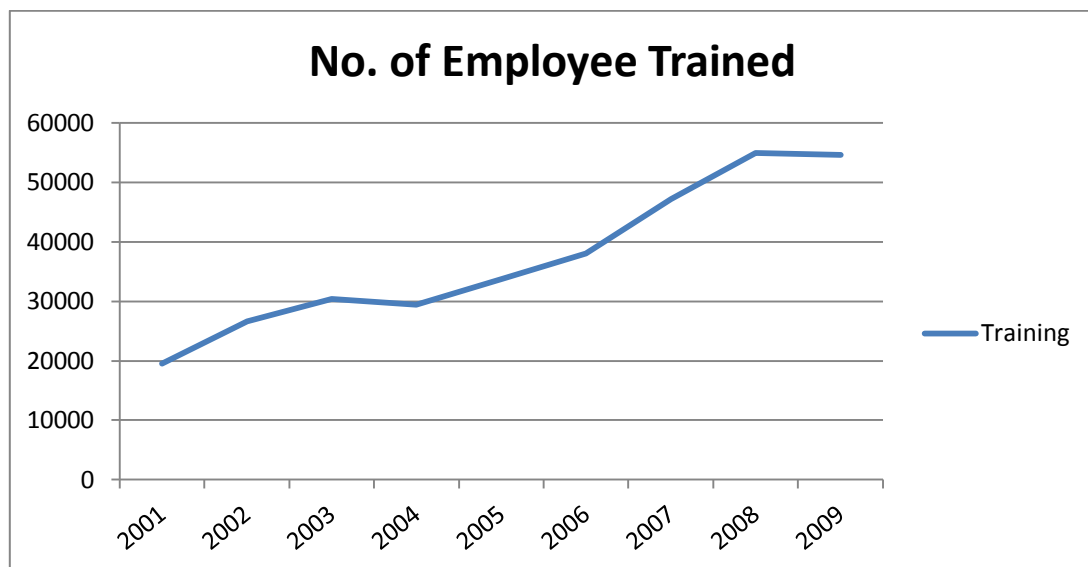
Table 6 above shows a provincial distribution of employees and from the data it was clear that the Gauteng province, which is viewed as the financial capital of South Africa, contributes the highest to employment in the financial sector. This

state of affairs has however been changing over time, where the Western Cape has been increasing its contribution to financial sector employment. Starting from a mere 12 per cent in 2001 and gradually increasing to 21 per cent in 2010.

5.0.2 Work Force Training

The extent to which employers engage in the training and development of their workers, either directly through their own training divisions and programmes or indirectly through outsourced training opportunities, is reflected in the annual training reports submitted to FASSETA. This data was then analysed for the period 2001 to 2009 and the results are presented below. Figure 9 shows a trend analysis of employee training over the time period and from the data it was evident that there was a steep increase from 2001 to 2008 but this picture changed in 2008 where it started flattening. There could be a number of possible reasons why this trend changed in 2008 but it must be noted that the flattening of the employee training coincided with the global financial crises.

Figure 9: Financial Sector Training



**Please note that the FASSET report for 2006 was not complied and hence there is no training data for that year. In order to show a complete graph in the trend analysis, the figure for 2006 was obtained by taking the average of 2005 and 2007.*

5.0.3 Financial Access Data

A description and explanation of the significance of the 44 financial access variables used in the test can found in Appendix B. This will also explain how

some of these variables are calculated. Because of the number of variables used to measure financial access only a few key highlights of some of the variables was presented below.

- The number of ATMs countrywide saw this variable increase significantly from only 9491 ATMs in 2004 to 20419 ATMs in 2010. This means that the population had more ATMs available countrywide.
- The number of commercial bank branches per 100,000 adults increased from four branches in 2004 to ten branches in 2010. This variable comprises of resident commercial banks and other banks functioning as commercial banks that meet the definition of Other Depository Corporations (ODCs).
- The number of commercial banks remained constant at around 34, but it must be noted that the majority of the South-African population utilise the services of the four major retail banks in the country.
- The number of household borrowers from commercial banks was decreasing over the years.
- There was little or no change in the number of commercial bank branches per 1000 km² witnessed. It remained consistent at approximately two banks throughout this period.
- The number of other deposit takers was constant throughout on two but suddenly surged to 32 in 2010.
- The number of other financial intermediaries has been decreasing significantly from 65 in 2004 to 52 in 2009. A further substantial decrease was witnessed again in 2010 when it dropped to 19.
- The outstanding deposits with other deposit takers has been increasing slowly from R 26.7B to R33.4B in 2010.
- The outstanding loans from commercial banks (% of GDP) has been increasing gradually from 57% to 70%. It must be noted that this metric does indicate if more people were getting loans, it could be that more loans were being taken out by the same customers.

- The household borrowers from commercial banks per 1000 adults has decreased from 1.3 to 0.5 in 2010. This could be an indication of the highly indebtedness of the population.

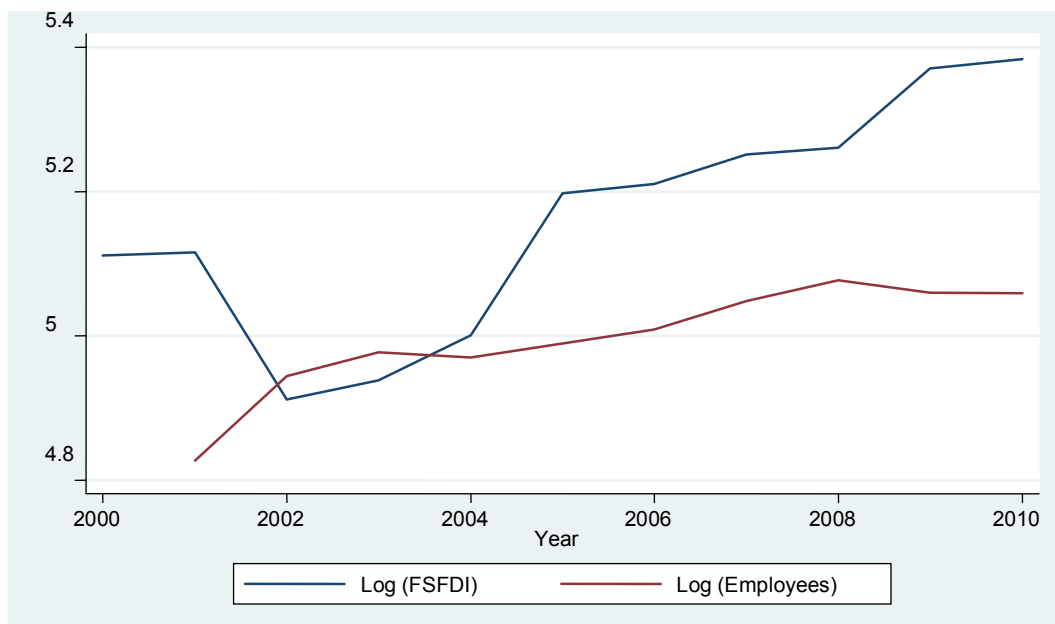
5.1 HYPOTHESIS 1

H₀: There exists no relationship between FDI in the financial sector and employment in the sector.

H_a: There exists is relationship between FDI in the financial sector and employment in the sector.

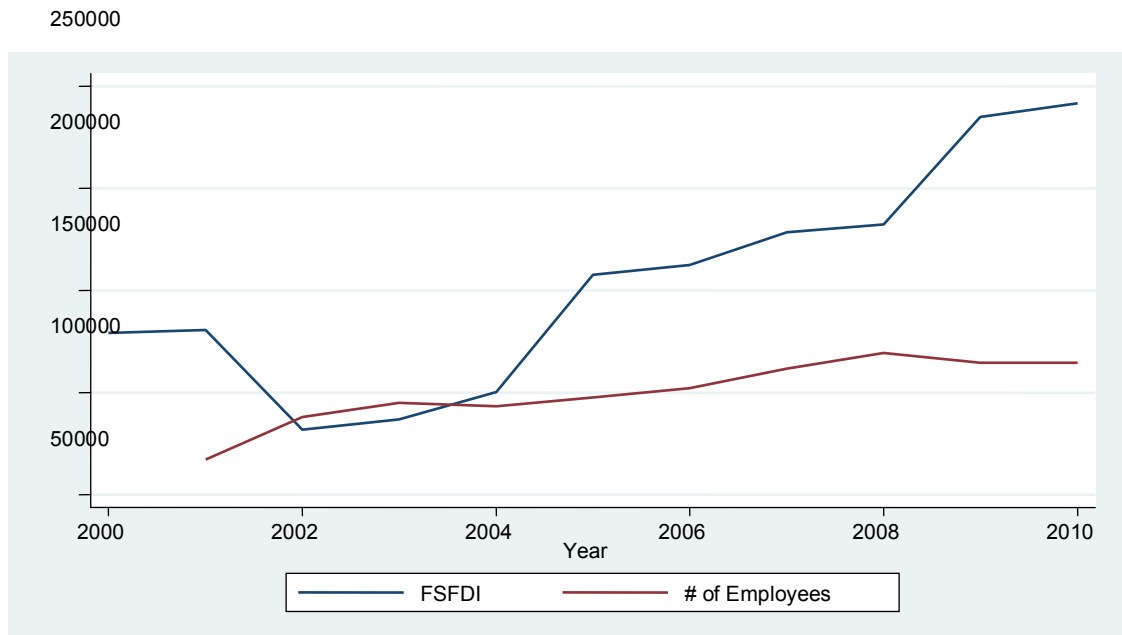
As a point of departure, the relationship between the Logarithm of FSFDI and Logarithm of Employment was analysed over the time period. The comparison of the two variables is presented graphically in Figure 10 below.

Figure 10: Comparisons of Log (FSFDI) and Log (Employment)



From the results it becomes evident that FSFDI and employment both had an upward trend during the analysed period, except for the period from 2001 to 2003 where the FSFDI dropped temporarily. Figure 11 on the next page shows what would happen if logarithms were not used in the test.

Figure 11: Comparisons of FSFDI and Employment



From this, it was evident that the trend showed no major change, even as the values at this point become much bigger and growth seemed to be more than expected.

As pointed out in Chapter 4, in order to test the hypothesis, employment in the financial sector was regressed against FSFDI. The test was conducted as explained in the preceding chapter and the results are presented in Figure 12 on the next page.

Figure 12: Regression results for FSFDI and FS Employment

reg LogEmployees LogFinance					
Source	SS	df	MS		
Model	.01903652	1	.01903652	Number of obs =	10
Residual	.030843198	8	.0038554	F(1, 8) =	4.94
Total	.049879718	9	.005542191	Prob > F =	0.0570
				R-squared =	0.3816
				Adj R-squared =	0.3014
				Root MSE =	.06209
LogEmployees	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
LogFinance	.2732628	.1229763	2.22	0.057	-.0103211 .5568466
_cons	5.584731	.6353847	8.79	0.000	2.119527 5.049927

Estimate of Beta Hat: .2732628
 Standard Error of Beta Hat: .1229763
 T-Value of Beta Hat: 2.22
 P-Value of Coefficient: 0.057

P-Value of Model: 0.0570
 Coefficient of Determination: 0.3816

As it is essential to understand what the numbers in Figure 12 represent, the important figures to note are highlighted and labelled in red. From these results it can be seen that this model exhibited three properties which are presented below:

1. Since the $\hat{\beta}_1$ is positive, there is a positive relationship between FSFDI and Employment.
2. This relationship was not significant, since the F-test p-value associated with this test was above 0.05. This meant that the null hypothesis could not be rejected; no significant relationship existed between employment and FDI. Furthermore, it can be seen the $\hat{\beta}_1$ was not significant, as the parameter had a p-value above 0.05.
3. This did not explain much of the variation in the employment, since the R^2 (The coefficient of determination) value was very low. Only 38 per cent of the variation in employment could be explained by the change in FSFDI.

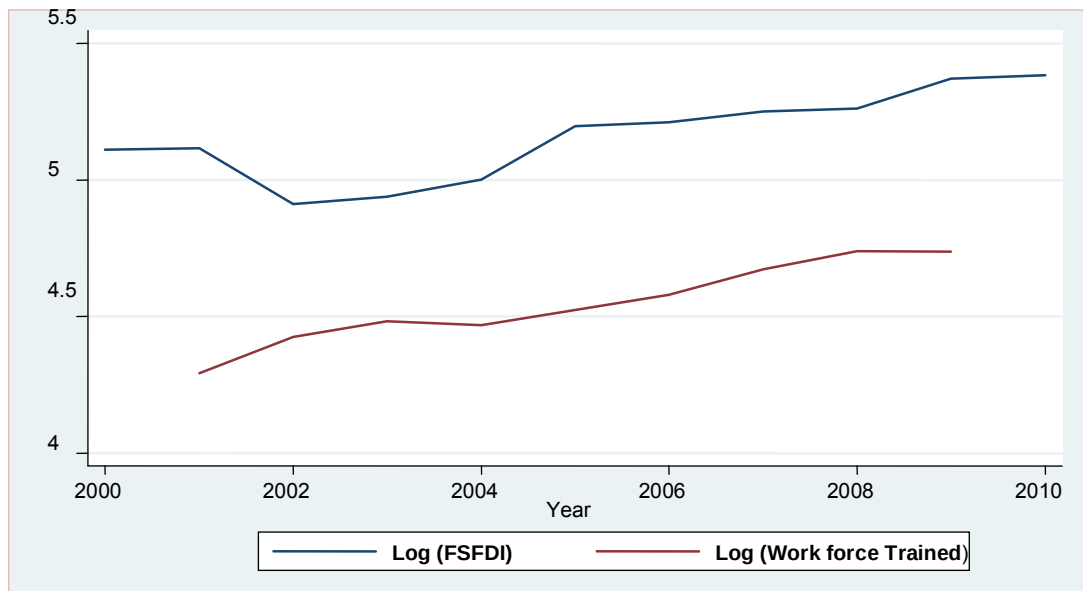
5.2 HYPOTHESIS 2

H_0 : Null Hypothesis: There exists no relationship between FDI in the financial sector and employees trained

H_a : Null Hypothesis: There exists is relationship between FDI in the financial sector and employees trained

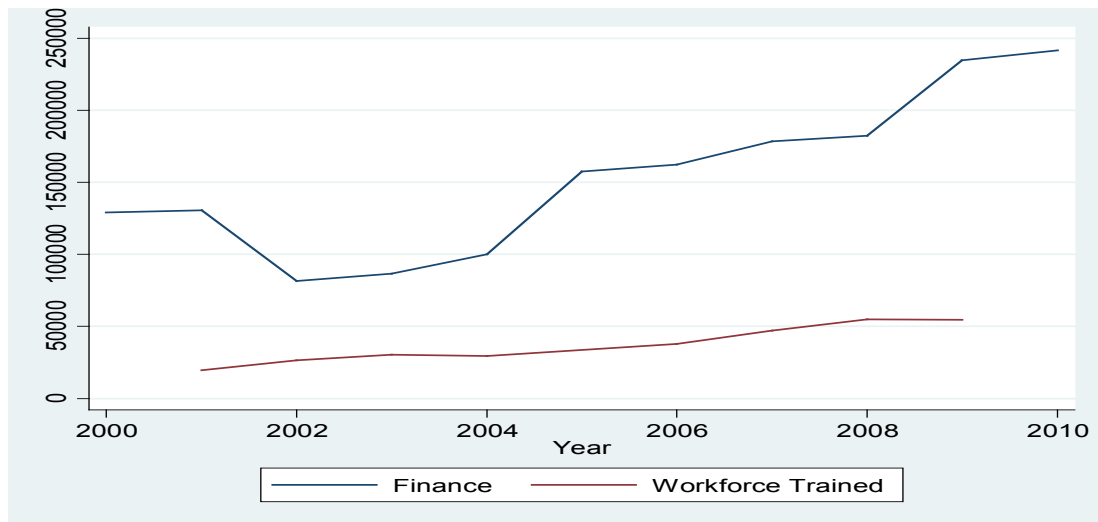
Similar to the first test, the relationship between the Logarithms of FSFDI and Logarithms of Employees trained over time was analysed. The comparison of the two variables is presented graphically in Figure 13 below.

Figure 13: Relationship between Log (FSFDI) and Log (Employees Trained)



As with previous variables, both show an upward trend over time. The graph on the next page shows what would happen if logarithms were not used in the test.

Figure 14: Relationship between FSFDI and Employees Trained



In this instance, the growth of training might not be captured. Note that when using regression with data that have a trend over time, results may be spurious. Since the data follows an almost similar upward trend, it was necessary to make use of regression.

In order to test the hypothesis financial sector employees trained, it was regressed against FDI in the same sector. The results are present in Figure 15 below.

Figure 15: Regression Results for FSFDI and Employees Trained

reg LogTrained LogFinance						
Source	SS	df	MS			
Model	.10180709	1	.10180709	Number of obs = 8		
Residual	.079150551	6	.013191758	F(1, 6) = 7.72		
Total	.180957641	7	.025851092	Prob > F = 0.0321		
				R-squared = 0.5626		
				Adj R-squared = 0.4897		
				Root MSE = .11486		
LogTrained	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LogFinance	.7173916	.2582371	2.78	0.032	.0855082	1.349275
_cons	.8675971	1.326076	0.65	0.537	-2.377193	4.112387

According to this model it can be seen that:

1. The model and the parameters were significant since both had a P-value of 0.0321 and this was below 0.05. As a consequence the

null hypothesis was rejected. This signified that a significant relationship existed between the two variables.

2. The variation in FDI explained moderate variation in employees trained, since the R^2 value was moderate.
3. This did explain a moderate variation in the employment, since the R^2 (The coefficient of determination) value was moderate. Additionally, 56 per cent of the variation in employee training could be explained by the change in FSFDI.

5.3 HYPOTHESIS 3

H₀: There exists no relationship between FDI in the financial sector and financial access.

H_a: There exists is relationship between FDI in the financial sector and financial access.

Financial access was difficult to classify since there were multiple sub-classifications. Regression was run on each subsection and results obtained. Note that where significant relationships exist, it might be due to a number of other factors, since both FDI and access are expected to increase over time. The results obtained when FSFDI was regressed with two variables will be analysed in the following section. One variable was from the sub segment that measures geographical outreach and another from the sub segment that measures use of financial services. A summary of all the results will be presented and the end of this section. Depositors with Commercial Banks per 1000 adults (financial access) were regressed against FSFDI and the results are shown below in Figure 16.

Figure 16: Regression results for FSFDI and Depositors with Commercial Banks per 1000 Adults

reg LogL2 LogFinance					
Source	SS	df	MS		
Model	.110659462	1	.110659462	Number of obs =	7
Residual	.007898257	5	.001579651	F(1, 5) =	70.05
Total	.118557719	6	.01975962	Prob > F =	0.0004
				R-squared =	0.9334
				Adj R-squared =	0.9201
				Root MSE =	.03974
LogL2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
LogFinance	1.061987	.1268836	8.37	0.000	.7358223 1.388152
_cons	-2.732122	.6649801	-4.11	0.009	-4.441508 -1.022736

With this model it can be seen that:

1. The model and the parameters were significant since both had a P-value of 0.0004, and this was below 0.05. As a consequence the null hypothesis was rejected. This signified that a significant relationship existed between the two variables.
2. The variation in FDI explains most of the variation in depositors with commercial banks per 1000 adults, since the R^2 value is very high.
3. The results explained a significant variation in the dependent variable, since the R^2 (the coefficient of determination) value was high. Of the variation of the dependent variable, 93 per cent could be explained by the change in FSFDI.

The number of household borrowers from commercial banks (financial access) was regressed against FSFDI. The results are shown in Figure 17 on the next page.

Figure 17: Regression results for FSFDI and Number of Household Borrowers from Commercial Banks

reg LogAD2 LogFinance						
Source	SS	df	MS			
Model	.104948601	1	.104948601	Number of obs = 7		
Residual	.027258667	5	.005451733	F(1, 5) = 19.25		
				Prob > F = 0.0071		
				R-squared = 0.7938		
				Adj R-squared = 0.7526		
Total	.132207268	6	.022034545	Root MSE = .07384		
LogAD2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LogFinance	-1.034221	.2357177	-4.39	0.007	-1.640153	-.4282891
_cons	9.874042	1.235365	7.99	0.000	6.698435	13.04965

This model illustrates that:

1. The model and the parameters were significant since both had a P-value of 0.0071, and this was below 0.05. As a consequence the null hypothesis was rejected. This signified that a significant relationship existed between the two variables.
2. The variation in FDI explains most of the variation in the number of household borrowers from commercial banks, since the R^2 value is high.
3. This explained a significant variation in the dependent variable, since the R^2 (the coefficient of determination) value was high. Furthermore, 79 per cent of the variation of the dependent variable could be explained by the change in FSFDI.

Regression was run on each of the financial access variables for the different subsections and summary of the findings are presented in the Table 7 below.

Detailed results for all the tests conducted for this study can also be found on Appendix A.

Table 7: Results for All Regression Tests

$\alpha = 0.05$

	p-value	R ²	
Employment in the Financial Sector	0.057	0.3816	FSFDI & Employment
Training in the Financial Sector	0.0321	0.5626	FSFDI & Financial Sector Training
Number Of Commercial Bank Branches Per 1000 Km2	0.0018	0.879	FSFDI & Financial Access
Number Of ODC Branches Per 100,000 Adults	0.0062	0.8048	Geographic Outreach
Number of Other Financial Corporations	0.0774	0.4957	
Number of Other Financial Intermediaries	0.1286	0.3982	
Number of Commercial Bank Branches, Excluding Headquarters	0.0018	0.8799	
Number of Commercial Banks	0.0113	0.7537	
Number Of ODC Branches Per 1000 Km2	0.0017	0.8806	
Number of Other Depository Corporation Branches, Excluding Headquarters	0.0017	0.8806	
Number Of ATMs Per 100,000 Adults	0.0628	0.5321	
Number Of ATMs Per 1000 Km2	0.0505	0.5676	
Number Of Automated Teller Machines (ATMs), Country Wide	0.0505	0.5676	
Number Of Commercial Bank Branches Per 100,000 Adults	0.0031	0.8502	Use of Financial Services
Number of Insurance Corporations	0.0586	0.5436	
Number of Other Deposit Taker Branches, Excluding Headquarters	0.1882	0.3169	
Number of Other Depository Corporations	0.4621	0.1125	
Borrowers From Commercial Banks Per 1000 Adults	0.2733	0.2869	
Borrowers From ODCs Per 1000 Adults	0.2892	0.2193	
Depositors With Commercial Banks Per 1000 Adults	0.0004	0.9334	
Depositors With ODCs Per 1000 Adults	0.0003	0.9376	
Number of Depositors with Other Depository Corporations	0.003	0.9368	
Number Of Household Borrowers from Commercial Banks	0.0071	0.7938	
Number of Depositors with Commercial Banks	0.0004	0.9327	
Household Borrowers From Commercial Banks Per 1000 Adults	0.0062	0.8048	
Insurance Technical Reserves (% of GDP)	0.1982	0.3055	
Number Of Borrowers from Other Deposit Takers	0.0259	0.7493	
Number Of Borrowers from Commercial Banks	0.172	0.4083	
Number Of Borrowers from Other Depository Corporations	0.2993	0.2114	
Outstanding Deposits with Commercial Banks	0.0035	0.8436	
Number of Depositors with Other Deposit Takers	0.0728	0.5066	
Outstanding Deposits With Commercial Banks (% of GDP)	0.1524	0.3627	
Outstanding Deposits With ODCs (% of GDP)	0.1565	0.3571	
Outstanding Deposits with Other Deposit Takers	0.0516	0.5643	
Outstanding Deposits with Other Depository Corporations	0.0035	0.8435	
Outstanding Deposits/Acquired Funds/Insurance Technical Reserves with Other Financial Intermediaries	0.0057	0.8106	
Outstanding Loans by Other Financial Intermediaries	0.0076	0.7885	
Outstanding Loans by Other Depository Corporations	0.0045	0.8267	
Outstanding Acquired Funds by Other Financial Intermediaries	0.0048	0.8236	
Outstanding Loans by Commercial Banks	0.0045	0.8277	
Outstanding Loans From Commercial Banks (% of GDP)	0.558	0.5518	
Outstanding Loans From ODCs (% of GDP)	0.0626	0.5326	
Overall Outstanding Loans (% of GDP)	0.0566	0.5493	
Outstanding Loans by Other Deposit Takers	0.009	0.774	
Outstanding Insurance Technical Reserves with Insurance Corporations	0.008	0.7837	
Outstanding Deposits/Provided Funds (% of GDP)	0.1104	0.4289	

All results with an asterisk as shown in Table 7 above possess two properties:

1. The model and the parameters are significant since both have a P-value of less than of 0.05. Consequently the null hypothesis was rejected. This signified that a significant relationship existed between the two variables.
2. The variation in FDI explained most of the variation in the dependent variable, since the R² value is high or moderate.

The remainder of the variables did not have a significant relationship with FSFDI and as such the null hypothesis could not be rejected. As shown in Table 7, these variables were in the minority.

Financial Access Results Summary

From the regression results it was noted that 11 out of 15 variables that measured geographic outreach had a significant positive relationship with FSFDI. This meant that 73 per cent of the variables in this sub segment had a positive relationship with FSFDI. Although a significant number of the variables had a significant relationship with FSFDI, some of these relationships were stronger than others. Overall there seemed to be a positive relationship between FSFDI and geographic outreach. Table 7 also revealed that 22 out 29 variables that measured use of financial services had a significant relationship with FSFDI and this also meant it is 76 per cent of the variables had a significant relationship with FSFDI. When taking all results into consideration, it was observed from regression test that 75 per cent (33 out of 44) of the financial access results rejected the null hypothesis.

CHAPTER 6: ANALYSIS OF RESULTS

6.0 INTRODUCTION

The main objective of this study was to evaluate the impact of Financial Sector FDI (FSFDI) on poverty alleviation in developing countries. In order to establish the significance of this impact, three hypotheses were proposed in Chapter 3. The sample data used for this test was that of South Africa and a convenience sampling technique was utilised. The tests conducted established whether any relationship existed between FSFDI and other variables that were viewed as reducing agents of poverty, namely employment, employee training and financial access. This chapter will discuss the results presented in Chapter 5 with the aim of rejecting or accepting the hypotheses outlined in Chapter 3. As a precursor to discussing the hypotheses independently, it was essential to elucidate a number of general observations with regards to findings of the research from the data analysis phase.

6.1 KEY OBSERVATIONS

International capital flows are very important for the South African economy as with any other developing nation, due to the benefits as highlighted in existing literature (Chor *et al.*, 2008; Faeth, 2009; Moolman *et al.*, 2006). Against this backdrop, the relevant data on South Africa's FDI trends since 1994 was presented in Table 4. From the analysis of inward FDI it showed that FDI had increased significantly over the years. Based on the data, the financial sector was one of the major recipients of FDI, also contributing significantly was the mining sector. The financial sector contributed to approximately 31 per cent of total FDI since 1994, the mining sector contributed with 33 per cent and manufacturing with 26 per cent. The remaining sectors attracted negligible FDI over the past years.

The observed trends seen in the South African FDI inflows were in line with Goldberg's (2004) observations which stated that the financial sectors in developing countries had emerged as attractive investment sectors over the last

decade. The South African financial sector, according to world standards particularly the banking sector, is well developed and prides itself with having one of most efficient and well run stock exchanges in the world (Rusike, 2007).

It must be noted that the emergence of the financial sector as an attractive investment sector in South Africa can be partly attributed to the advent of democracy in 1994. However, in line with some developing countries, the subsequent liberalization of the South African financial sector could also have been a major contributing factor in attracting this type of FDI, which is in line with the observations of Duttaray *et al.* (2008). This phenomenon has resulted in the shift of FDI from the traditional mining- and manufacturing sectors. The trend could imply the possibility of a change in terms of the motives of FDI from natural resource seeking to market and efficiency seeking FDI.

As observed from literature, improvement in human welfare can be challenging to achieve without a significant increase in employment (Karlsson *et al.*, 2007). Accordingly, job creation is considered a major benefit of FDI inflow which in turn affects poverty alleviation. As such it was important to analyse the employment trends in the South African financial sector. As observed in the preceding chapter, in particular Figure 8, employment has been on an upward trajectory with the number of employed in 2001 being just above 60 000 and doubling by the year 2008. On the surface, this trend seems to be good for poverty alleviation due to the associated benefits of employment.

The Gauteng province contributed significantly to the total employment in the sector and this could partly be as a result of the bulk of financial firms having headcounters in Johannesburg. The financial sector predominately attracts skilled labour due to the sophisticated nature of the industry and as such, most multinational corporations (MNCs) embark on skills development programmes for their employees. In light of this it was noted in Figure 9 that employee training in the sector had seen a steep increase during the period 2001 to 2008. This was in line with Thomo's study (2010). Thomo (2010) observed that the majority of MNCs had formal training programmes and the majority of these programs targeted employees within the organisation.

It must be noted that through the trend analysis, the research objectives could have been met because the results seemed to suggest that FDI was contributing to an increase in employee training. Further statistical tests needed to be conducted before such assertions could be substantiated. The next section will then discuss the various tests conducted in order to reject or accept the null hypotheses proposed with the overall aim to establish the impact of FSFDI on poverty alleviation.

6.2 HYPOTHESIS 1

H₀: There exists no relationship between FDI in the financial sector and employment in the sector.

H_a: There exists is relationship between FDI in the financial sector and employment in the sector.

Job creation ranks high in most developing countries and as a consequence it is one of the major reasons for attracting FDI (Dinga & Munich, 2010). South Africa is no different in this regard and as such the country has adopted policies that seek to attract FDI in the hope that it will contribute to economic growth and most importantly, reduce poverty (Moolman *et al.*, 2006). The first point of call was to investigate the impact of Financial Sector FDI (FSFDI) on employment in the sector. The research first proposed a null hypothesis which was outlined above. FDI has general been associated with an increase in employment and existing literature states that this type of foreign investment is seen to contribute more to job creation than portfolio investment (Kim, 2009). The literature review further revealed that different types of FDI had varied consequences on job creation. A correlation between FDI and job creation was established by Kim (2009) and his findings revealed that Greenfield investment contributed more significantly to job creation than M&As. This was due to the physical presence of the MNC.

Based on the results analysis in the preceding chapter, it was apparent that both FSFDI and employment in South Africa were on an upward trajectory for

the periods analysed. On the surface this would appear to confirm literature that states that FDI has a positive influence on job creation (Kim, 2009).

However, when a regression was run on the two variables, contrasting results emerged. Looking at regression results in Figure 12 it was observed that the model exhibited two properties. The first revealed that the relationship between the variables was not significant, since the F-test p-value associated with the test was above 0.05. This meant that the null hypothesis could not be rejected. Consequently no significant relationship existed between financial employment and FDI based on the results. The second property revealed that only 38 per cent of the variation in financial sector employment could be explained by the change in FSFDI.

Because of the increased competitiveness associated with foreign firms, a crowding effect, as purported by Karlsson *et al.* (2007) could have occurred where local firms exited the market or downsized their workforce, thereby contributing to the contradicting results. Possibly the net effect of FSFDI on employment might have been much stronger had it not been for the effects of crowding out. The employment data used in this test was a combination of both local and foreign firms. In order to ascertain the crowding out effect of foreign firms on the local players, it would have been beneficial for the data to have enabled the distinction between the two, i.e. separate employment trends for local and foreign firms. Nonetheless, it must be noted that spillover effects could also have resulted in an increase in employment for local firms who may have employed more skilled personal in order to avert the threat to their competitiveness by foreign firms. The absorptive capacity of the South African financial sector can also be a plausible reason for not benefiting from job creation through FSFDI inflow.

Based on the overall results, there seems to be an insignificant relationship between FSFDI and employment. As mentioned earlier, this is a contradiction to many studies such as the one conducted by Hemmer and Phuong Hoa (2002) which states that the direct impacts of FDI on poverty are linked to its effects on employment levels. Had it been possible to obtain data for the last 30 years, it

could have been possible to see a stronger relationship between FSFDI and employment. This constraint was highlighted in Chapter 4 as one of the limitations of the study which could make it difficult to infer the findings to other developing countries.

6.3 HYPOTHESIS 2

H₀: Null Hypothesis: There exists no relationship between FDI in the financial sector and employees trained

H_a: Null Hypothesis: There exists is relationship between FDI in the financial sector and employees trained

The extent to which employers engage in the training and development of their workers is reflected in the annual training reports submitted to Financial and Accounting Services SETA (FASSETA). This data was used to test the hypothesis presented above. Based on the results from the previous chapter, an increase was seen in both FSFDI and employee training. On the surface it would appear to indicate that there was a symbiotic relationship between the two variables. These results seemed to confirm Thomo's observations (2010) that MNCs played a pivotal role in educating their employees. A regression test was run against these variables and the results were presented in the preceding chapter. The relationship between employees trained and FSFDI was investigated using correlation coefficient. Preliminary analyses were performed to ensure no violation of the assumptions of normality and linearity. Looking at regression results in Figure 15 it was observed that the model exhibited two properties. One of these was that the relationship between the variables was significant, since the F-test p-value associated with the test was 0.0321 which is below the confidence level of 0.05. This meant that the null hypothesis could be rejected. Consequently the alternative hypothesis could be accepted. There was a moderate positive correlation between the two variables, meaning that a moderate level of employees trained was associated with moderate level of FSFDI.

These findings were in line with the existing body of literature which indicates that FDI inflow over time contributed to skills development (Thomo, 2010). The

increase in employee training should be viewed as an excellent development for the sector and South Africa because educated employees are seen to improve overall productivity (Todo *et al.*, 2009). A productive workforce over time will lead to benefits that accrue at a country level such as economic growth. Economic growth has been revealed to contribute to poverty alleviation. Cheng and Wu (2010) found that a high rate of economic growth had contributed to a dramatic decline in the number of China's poor as well as the national level of poverty. Another way in which the increase of skilled labour could be beneficial to the sector and the country at large, was through the ability to attract more FDI (Noorbakhsh, Paloni, & Youssef, 2001). A skilled labour force has been viewed as a major determinate of FDI inflow into a country. These findings are also in line with Fortanier and Van Wijk's assertions (2010) that foreign firms in the services industry tended to train their workforce more than their local counterparts. This training is of paramount importance as relating to its effect on poverty. This is undoubtedly the most important benefit of employee training since education has been viewed as a major reducing agent of poverty (Chaudhry *et al.*, 2010; Knight *et al.*, 2009). This is mainly because education may raise the incomes of those people with skills.

Training is conducted either directly through the firm's own training divisions and programmes or indirectly through outsourced training opportunities. The data obtained did not specify the type or quality of training offered to employees. The type and quality of the education offered by the financial sector firms can possibly have different degrees of effectiveness on poverty alleviation. In their study, Knight *et al.* (2009) revealed that households could get caught in a poverty trap due to the fact that they experienced both a poorer quality and minor quantity of education.

6.4 HYPOTHESIS 3

H₀: There exists no relationship between FDI in the financial sector and financial access.

H_a: There exists is relationship between FDI in the financial sector and financial access.

Financial access has been recognized to be a major reducing agent of poverty (Clarke, Zou, & Xu, 2003; R. Levine, 2005). In order to test the hypothesis proposed above, regression tests were run between the independent variable (FSFDI) and the 44 financial access dependent variables.

As noted in Chapter 4 which described the nature of obtained data in detail, financial access was measured using 44 variables. These variables were subdivided into two main groupings. One group of variables measured geographical outreach, i.e. this measured the footprint of the financial facilities. The second grouping of variables measured how much of the financial services were being used by the population. The combination of these groupings would then give an overall measure of financial access.

Some key highlights from the financial access data analysis was the dramatic increase in the number of ATMs and bank branches over the time period. It is interesting that the number of commercial banks remained constant over the same period, meaning that the existing banks were increasing their footprint in the rest of the country. This upward trend was a similar occurrence for the majority of the remaining variables in the geographic outreach grouping, indicating a general increase in geographic outreach for the observed time period. The data did not indicate where these new facilities or equipment such as ATMs were being installed. These installed devices or facilities could possibly be increasing more in areas which already have considerable financial access.

The greatest benefit for the poor would be in instances where the majority of these new facilities were being installed in areas with very little previous access, or in areas where the population were not previously exposed to such services. In such cases it could be safe to say an increase in geographic outreach would

be beneficial to the broader population. It is understandable that in most cases firms are not benevolent but instead are looking at profitability. Naturally these facilities would be situated in areas where the greatest profit will be made rather than providing societal welfare. This increase may also be evidence of a more aggressive stance of financial service provision by banks as competition and technological advancement enables them to reach the less privileged segments of the population.

In terms of the use of financial services, a general improvement was observed where there was an increase in the use of financial services. This could possibly be attributable to the increase of financial facilities like banks and ATMs as mentioned above. When there are more financial facilities, more people have the ability to utilise them, which enables them to open bank accounts and access loans for instance. According to Claessens and Feijen (2007), financial services are critical not only for lowering income poverty, but also for dealing with other elements of poverty which include improving levels of education, health and improving access to financial capital.

In order to ascertain if any relationship existed between FSFDI and financial access, regression test were run against FSFDI and all the variables for financial access. This meant that 44 regression tests were run and a majority of the results showed a significant relationship. Table 7 indicates that the first 15 variables measure geographic outreach and the last 29 variables measure the use of financial services. When focusing on geographic outreach, 78 per cent of the variables in this sub segment had a positive and significant relationship with FSFDI based on the confidence level outlined in Chapter 4. It must be noted that some of the relationships were stronger than others, but overall there seemed to be a positive relationship between FSFDI and geographic outreach. When the “use of financial services” results were analysed, it emerged that 76 per cent of the variables had a significant relationship with FSFDI, again indicating that FSFDI had a positive relationship with use of financial services. In short, it emerged from the regression tests that 75 per cent (33 out of 44) of the test results rejected the null hypothesis and accepted the alternative

hypothesis, implying that financial access and FSFDI had a positive relationship.

Financial development entails enhancement in the efficient exchange of goods and services, trading, mobilisation and pooling of savings (Levine, 2005). This also means an improvement in financial access. Improvement in financial access is the most important channel through which financial sector development directly affects poverty. This can be done for instance through the increase of banking and ATM facilities. Financial services assist citizens in safeguarding against uncertainty and building financial resources (Spencer & Wood, 2005). At the time they also assist in enabling businesses to expand, increase efficiency and compete in local and international markets (Spencer & Wood, 2005). For the poor, these services reduce vulnerability and enable people to manage the assets available to them in ways that generate income and provide options that ultimately creates paths out of poverty (Sutton & Jenkins, 2007). Nations with well developed financial sectors experienced quicker reductions in the share of people living on less than US \$1 a day during the 1980s (Beck *et al.*, 2004). The findings seem to agree with prior literature which states that FSFDI is recognised as a conduit of financial development because of the significant relationship established between FSFDI and financial access (Hermes & Lensink, 2003). In light of this, financial development is widely viewed as a reducing agent to absolute poverty. This is supported by evidence showing that financial development causes less income inequality (Clarke, Zou, & Xu, 2003; Levine, 2005) It is important to bear in mind that the regression test merely establishes if a relationship exists between two variables and does not determine causality.

6.5 CONCLUSION

The tests conducted established if any relationship existed between FSFDI and other variables that contributed to poverty alleviation. Three hypotheses were proposed, with the null hypothesis stating that there was no relationship between FSFDI and the poverty alleviation variables. Based on the test and available data, two of the null hypotheses were rejected at a 95 per cent

confidence interval. A summary of the results indicated that there seemed to be no significant relationship between FSFDI and employment, while a significant moderate relationship was established with employee training and financial access. The overall analysis suggested that there was a moderate relationship between FSFDI and poverty alleviation. While there is no reason to suggest that the findings of this study are not representative of South Africa, caution needs to be exercised when considering other countries. The next chapter will explore the implications of these findings and offer some recommendations.

CHAPTER 7: CONCLUSIONS AND RECOMMENDATIONS

7.0 INTRODUCTION

The purpose of this chapter is to highlight the main findings from the results analysis presented in Chapter 6. This section will also include recommendations to key stakeholders who might be affected, or those in positions of authority to advance the poverty alleviation agenda. The final contribution of this chapter will be that of providing proposals for future research.

There is an increased pressure from developing countries to explore ways of accelerating poverty alleviation. This is what prompted the researcher to explore how FDI in the financial sector impacted poverty alleviation. The genesis of this research started with an in-depth analysis of literature with the aim of acquiring a better understanding of how this investment in the financial sector affects poverty alleviation. Through this process, it was revealed that FSFDI had theoretical benefits on the poor. FSFDI was identified as a conduit for financial development and this development can lead to economic growth through the efficiency channel. As a consequence of the efficiency of the financial sector, benefits included amongst others making transactional cost lower, improving the allocation of financial resources and increasing financial access. Further benefits of FSFDI highlighted in the literature also included job creation and skills transfer, both of which were also identified as poverty reducing agents.

From the tests conducted in the study it was established that FSFDI in South Africa was indeed a significant ingredient for reducing poverty. This was based on the investment having a moderate relationship with the poverty alleviation variables, namely employee training and financial access. No such relationship was established with financial sector employment. The body of literature revealed that employment was a critical poverty alleviating agent and in some way equivalent to the other variables used in the test. In the context of this study employee training is highly dependent on employment. For instance, employees would not receive training if they were not employed in the first place

and this makes employment much more important. However in general, one can argue that training or education is more important because without it finding employment would be a difficult task.

As much as the tests did not established causality, the results still shed some light on the topic. The next section of this chapter will delve deeper into understanding and appreciating the implications of these findings to South Africa and developing nations. These will be presented and organised according to the three hypotheses proposed earlier.

7.1 IMPACT ON EMPLOYMENT

Most developing nations, particularly those in Africa need substantial investment in respect to education and training. Literature revealed that improvement in poverty on a large scale was challenging to achieve without a significant increase in employment. Employment, and the quality of employment i.e. decent work, is crucial for poverty reduction. The linkage between economic growth, employment and poverty reduction is therefore a process in which growth brings about an increase in production and decent employment, which in turn leads to an increase in the income of the poor and a reduction in poverty. The study failed to establish a link between FSFDI inflow and employment in the South African financial sector, which was in sharp contradiction to most existing literature on the subject. Probable reasons for this result were proposed in the preceding chapter, namely the small dataset used and the possible crowding out effects of foreign investment on local firms. This could also signify that this type of FDI does not create enough jobs because of the absorptive capacity (or lack) of the financial sector to job creation. Lack of skills is a major challenge facing South Africa which can make it difficult for the country to benefit from foreign investment particularly if this investment is directed to a sector that requires professional skills like the financial sector.

There is no doubt that job creation is an important and crucial ingredient in the fight against poverty. These results are not encouraging to policy makers who

are advocating for this type of investment. Given these results, it would be important for policy makers in South Africa to enact policies that would create an environment to ensure more jobs are created and protected when foreign firms enter the local market. This can also act as another signal for policy makers to focus their energy on other sectors that have a higher correlation between FDI and employment such as manufacturing.

7.2 IMPACT ON EDUCATION AND TRAINING

Improvements in education and skills transfer can significantly assist in reducing skills shortages like those in South Africa and improve the chances to benefit from technology transfers and spillovers. Apart from reducing poverty, education is very important when it comes to wealth creation. Education not only benefits the employees who can improve their income, but because of their high productivity, the outcome can inevitably be an increase in economic growth, which in turn helps in poverty alleviation. This is a virtuous cycle.

This study established a relationship between FSFDI and employee training which was in line with existing literature. This finding was critical in the fight against poverty because of the benefits already mentioned of educating employees. Due to the country having shortages in skilled labour, South Africa will benefit immensely from this investment. A skilled labour force has also been viewed as a major determinate of FDI inflow into a country because of their increased productivity. A productive workforce overtime will lead to benefits that accrue at a country level such as economic growth.

7.3 IMPACT ON FINANCIAL ACCESS

During the recent global financial crises, FDI proved to be resilient and remained stable, particularly in developing countries like South Africa. This resilience can lead many of these countries to favouring FDI over other forms of capital flow. Financial development also helped reduce adverse shocks to the poor resulting from financial instability as experienced during the recent global financial crisis.

Literature revealed that FSFDI was a conduit of financial development. Financial development involves improvements in the trading, mobilization and pooling of savings and the exchange of goods and services. This also means an improvement in financial access. Financial access has been recognized to be a major reducing agent of poverty. As previously mentioned, financial services assist citizen's safeguard against shocks, increase financial resources, enables start up companies to develop and increase competence while competing in local and international markets. Not only is financial access important in reducing poverty, it is also key to wealth creation. At a micro level, financial access will help citizens save more and this will be beneficial for the economy at a macro level. Savings can be used within a country for internal investment. The study established that there was indeed a relationship between FSFDI and financial access. This is an encouraging result for those who are involved in poverty alleviation strategies. Small businesses which are the heart of most developing economies can benefit immensely when financial access improves. This would mean they can have greater access to loans to expand their businesses and their customers will have a greater propensity to buy their goods. When these businesses expand, they can also contribute to job creation. Citizens also benefit with the improvement in financial access because they will similarly be able to acquire loans for such things as education, which is critical for the poor in helping them escape the bondage of poverty.

7.4 RECOMMENDATIONS TO STAKEHOLDERS

Poverty is conceivably one of the central challenges for developing countries. The relationship between lack of education and poverty seems entirely obvious, yet significant progress in prevailing over the obstacles to education has eluded governments in developing countries for some time now. Looking at the results of this study, some key recommendations for policymakers; researchers; education practitioners; development professionals and activists in non-governmental organisations include:

- Insisting that financial access comes with relevant education. The impact on poverty because of an improvement in financial access can be greater if

citizens are given the necessary knowledge on how to use financial services effectively. Inappropriate and reckless use of these services can reverse the gains on poverty when individuals are caught up in the spiral of debt.

- Viewing financial access as a basic right for all citizens in developing countries because without this, it is almost impossible to escape the clutches of poverty. Policymakers should demand that financial institutions operating within their borders make financial services affordable and accessible to the poor.
- Enacting policies that encourage formalising the informal sector. Many developing countries have robust and vibrant informal sectors. In order to reduce poverty significantly the informal sector needs to be brought into the main stream where businesses can benefit from being formal for example being able to access loans that can assist in expanding these businesses and in the long run increase the incomes of the poor and reduce poverty.
- Removing the precondition of employment as a way to attain training. Government should embark on educating citizens with basic financial knowledge. Educated people can also educate other community members through social interaction, which in turn will have a ripple effect.
- Give more emphasis on tertiary institutions to encourage enrolment for financial subjects which can improve the absorptive capacity for the country in benefiting from FSFDI inflow.

Some key recommendations that are not entirely related to this study include:

- Bringing in robust policies to ensure a closer link between training and employment.
- Establishing creative initiatives that are outside the formal education sector. These can include promoting self-employment and access to other forms of capital such as loans and property.
- Encourage systems that can present opportunities to acquire more technical skills. This can be through vocational training and apprenticeships.

7.5 RECOMMENDATIONS FOR FUTURE RESEARCH

To conclude the chapter, this section will use the outcome of this study to propose future research.

- Although not included in the scope of this study, it would be worthwhile to understand why poverty in developing countries is still considerably high when taking into account that results from this study revealed that there is a positive relationship between FSFDI and poverty alleviation. There could be a number of possible reasons why the financial sectors in developing countries often fail to work for the poor in the ways this study has outlined. It may be largely due to weaknesses in the governance structures of financial sectors as well as institutional voids within the respective countries (Khanna & Palepu, 2010). It would add greatly to the body of literature if some understanding could be gained of how these institutional voids impede poverty alleviation programmes.
- Because the study did not establish a relationship between FSFDI inflow in South Africa and financial sector employment this can be due to the absorptive capacity of the financial sector which hinders the sector from benefiting from this investment. It would be worthwhile to take this research further and establish where the bottleneck lies.
- As highlighted earlier, small businesses are the cornerstone of most developing nations and play a significant role in the economy. Small to Medium Enterprises (SMEs) are important in poverty alleviation since they provide citizens with jobs. It would be ideal to assess the impact that FSFDI has on these businesses.

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APPENDICES

Appendix A: Regression Results

1 Employment in the Financial Sector

reg LogEmployees LogFinance						
Source	SS	df	MS	Number of obs = 10		
Model	.01903652	1	.01903652	F(1, 8) = 4.94		
Residual	.030843198	8	.0038554	Prob > F = 0.0570		
				R-squared = 0.3816		
				Adj R-squared = 0.3044		
Total	.049879718	9	.005542191	Root MSE = .06209		
LogEmployees	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LogFinance	.2732628	.1229763	2.22	0.057	-.0103211	.5568466
_cons	3.584727	.6353847	5.64	0.000	2.119527	5.049927

2 Training in the Financial Sector

reg LogTrained LogFinance						
Source	SS	df	MS	Number of obs = 8		
Model	.10180709	1	.10180709	F(1, 6) = 7.72		
Residual	.079150551	6	.013191758	Prob > F = 0.0321		
				R-squared = 0.5626		
				Adj R-squared = 0.4897		
Total	.180957641	7	.025851092	Root MSE = .11486		
LogTrained	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LogFinance	.7173916	.2582371	2.78	0.032	.0855082	1.349275
_cons	.8675971	1.326076	0.65	0.537	-2.377193	4.112387

3 Borrowers From Commercial Banks Per 1000 Adults

reg LogH2 LogFinance						
Source	SS	df	MS	Number of obs = 6		
Model	.007379422	1	.007379422	F(1, 4) = 1.61		
Residual	.018337717	4	.004584429	Prob > F = 0.2733		
				R-squared = 0.2869		
				Adj R-squared = 0.1087		
Total	.025717139	5	.005143428	Root MSE = .06771		
LogH2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LogFinance	.3158827	.2489759	1.27	0.273	-.3753851	1.00715
_cons	.9866967	1.298839	0.76	0.490	-2.619457	4.592851

4 Borrowers From ODCs Per 1000 Adults

```
. reg LogJ2 LogFinance
```

Source	SS	df	MS	Number of obs =	7
Model	1.62975747	1	1.62975747	F(1, 5) =	1.40
Residual	5.80127988	5	1.16025598	Prob > F =	0.2892
				R-squared =	0.2193
				Adj R-squared =	0.0632
Total	7.43103735	6	1.23850622	Root MSE =	1.0772

LogJ2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
LogFinance	-4.075552	3.43876	-1.19	0.289	-12.91517 4.764062
_cons	23.56928	18.02208	1.31	0.248	-22.75796 69.89651

5 Depositors With Commercial Banks Per 1000 Adults

```
. reg LogL2 LogFinance
```

Source	SS	df	MS	Number of obs =	7
Model	.110659462	1	.110659462	F(1, 5) =	70.05
Residual	.007898257	5	.001579651	Prob > F =	0.0004
				R-squared =	0.9334
				Adj R-squared =	0.9201
Total	.118557719	6	.01975962	Root MSE =	.03974

LogL2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
LogFinance	1.061987	.1268836	8.37	0.000	.7358223 1.388152
_cons	-2.732122	.6649801	-4.11	0.009	-4.441508 -1.022736

6 Depositors With ODCs Per 1000 Adults

```
. reg LogN2 LogFinance
```

Source	SS	df	MS	Number of obs =	7
Model	.108826319	1	.108826319	F(1, 5) =	75.18
Residual	.007237654	5	.001447531	Prob > F =	0.0003
				R-squared =	0.9376
				Adj R-squared =	0.9252
Total	.116063972	6	.019343995	Root MSE =	.03805

LogN2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
LogFinance	1.053154	.1214616	8.67	0.000	.7409272 1.365381
_cons	-2.669235	.6365638	-4.19	0.009	-4.305574 -1.032895

7 Number Of Commercial Bank Branches Per 1000 Km2

. reg LogP2 LogFinance						
Source	SS	df	MS	Number of obs = 7		
Model	.07753231	1	.07753231	F(1, 5) =	36.33	
Residual	.01066994	5	.002133988	Prob > F	= 0.0018	
				R-squared	= 0.8790	
				Adj R-squared	= 0.8548	
Total	.08820225	6	.014700375	Root MSE	= .0462	
LogP2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LogFinance	.8889274	.1474759	6.03	0.002	.5098287	1.268026
_cons	-4.354438	.7729013	-5.63	0.002	-6.341244	-2.367632

8 Number of Depositors with Other Depository Corporations

reg LogR2 LogFinance						
Source	SS	df	MS	Number of obs = 7		
Model	.129477348	1	.129477348	F(1, 5) =	74.12	
Residual	.008734364	5	.001746873	Prob > F	= 0.0003	
				R-squared	= 0.9368	
				Adj R-squared	= 0.9242	
Total	.138211712	6	.023035285	Root MSE	= .0418	
LogR2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LogFinance	1.14874	.1334306	8.61	0.000	.8057459	1.491735
_cons	1.350801	.6992922	1.93	0.111	-.4467867	3.148389

9 Number Of ODC Branches Per 100,000 Adults

reg LogT2 LogFinance						
Source	SS	df	MS	Number of obs = 7		
Model	.008554143	1	.008554143	F(1, 5) =	20.61	
Residual	.002075381	5	.000415076	Prob > F	= 0.0062	
				R-squared	= 0.8048	
				Adj R-squared	= 0.7657	
Total	.010629524	6	.001771587	Root MSE	= .02037	
LogT2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LogFinance	.2952658	.0650412	4.54	0.006	.128072	.4624597
_cons	-.3606739	.3408725	-1.06	0.338	-1.236915	.5155668

10 Number of Other Financial Corporations

reg LogV2 LogFinance						
Source	SS	df	MS	Number of obs = 7		
Model	.008070159	1	.008070159	F(1, 5) =	4.91	
Residual	.008210374	5	.001642075	Prob > F =	0.0774	
				R-squared =	0.4957	
				Adj R-squared =	0.3948	
Total	.016280533	6	.002713422	Root MSE =	.04052	
LogV2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LogFinance	-.2867913	.1293664	-2.22	0.077	-.6193382	.0457555
_cons	3.821151	.6779919	5.64	0.002	2.078317	5.563985

11 Number of Other Financial Intermediaries

reg LogX2 LogFinance						
Source	SS	df	MS	Number of obs = 7		
Model	.085967737	1	.085967737	F(1, 5) =	3.31	
Residual	.129938054	5	.025987611	Prob > F =	0.1286	
				R-squared =	0.3982	
				Adj R-squared =	0.2778	
Total	.215905791	6	.035984299	Root MSE =	.16121	
LogX2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LogFinance	-.9360363	.5146454	-1.82	0.129	-2.258975	.3869019
_cons	6.603317	2.697188	2.45	0.058	-.3300253	13.53666

12 Number of Commercial Bank Branches, Excluding Headquarters

reg LogZ2 LogFinance						
Source	SS	df	MS	Number of obs = 7		
Model	.080425453	1	.080425453	F(1, 5) =	36.64	
Residual	.010975707	5	.002195141	Prob > F =	0.0018	
				R-squared =	0.8799	
				Adj R-squared =	0.8559	
Total	.091401159	6	.015233527	Root MSE =	.04685	
LogZ2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LogFinance	.9053608	.149574	6.05	0.002	.5208686	1.289853
_cons	-1.362663	.7838975	-1.74	0.143	-3.377735	.6524101

13 Number of Commercial Banks

. reg LogAA2 LogFinance							
Source	SS	df	MS	Number of obs = 7			
Model	.001849483	1	.001849483	F(1, 5) = 15.30			
Residual	.000604386	5	.000120877	Prob > F = 0.0113			
Total	.002453869	6	.000408978	R-squared = 0.7537			
				Adj R-squared = 0.7044			
				Root MSE = .01099			
LogAA2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]		
LogFinance	-.1372935	.0350992	-3.91	0.011	-.2275189	-.0470682	
_cons	2.25946	.1839502	12.28	0.000	1.786601	2.732319	

14 Number Of Household Borrowers from Commercial Banks

. reg LogAD2 LogFinance							
Source	SS	df	MS	Number of obs = 7			
Model	.104948601	1	.104948601	F(1, 5) = 19.25			
Residual	.027258667	5	.005451733	Prob > F = 0.0071			
Total	.132207268	6	.022034545	R-squared = 0.7938			
				Adj R-squared = 0.7526			
				Root MSE = .07384			
LogAD2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]		
LogFinance	-1.034221	.2357177	-4.39	0.007	-1.640153	-.4282891	
_cons	9.874042	1.235365	7.99	0.000	6.698435	13.04965	

15 Number Of ODC Branches Per 1000 Km2

. reg LogAF2 LogFinance							
Source	SS	df	MS	Number of obs = 7			
Model	.01504488	1	.01504488	F(1, 5) = 36.88			
Residual	.002039947	5	.000407989	Prob > F = 0.0017			
Total	.017084827	6	.002847471	R-squared = 0.8806			
				Adj R-squared = 0.8567			
				Root MSE = .0202			
LogAF2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]		
LogFinance	.3915789	.0644836	6.07	0.002	.2258185	.5573393	
_cons	-1.432318	.33795	-4.24	0.008	-2.301047	-.5635903	

16 Number of Other Depository Corporation Branches, Excluding Headquarters

```
. reg LogAH2 LogFinance
```

Source	SS	df	MS		Number of obs =	7
Model	.01504488	1	.01504488		F(1, 5) =	36.88
Residual	.002039947	5	.000407989		Prob > F =	0.0017
					R-squared =	0.8806
					Adj R-squared =	0.8567
					Root MSE =	.0202
Total	.017084827	6	.002847471			

LogAH2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
LogFinance	.3915789	.0644836	6.07	0.002	.2258185 .5573393
_cons	1.652068	.33795	4.89	0.005	.7833403 2.520797

17 Number of Depositors with Commerical Banks

```
. reg LogAJ2 LogFinance
```

Source	SS	df	MS		Number of obs =	7
Model	.131476176	1	.131476176		F(1, 5) =	69.34
Residual	.00948002	5	.001896004		Prob > F =	0.0004
					R-squared =	0.9327
					Adj R-squared =	0.9193
					Root MSE =	.04354
Total	.140956196	6	.023492699			

LogAJ2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
LogFinance	1.157573	.1390095	8.33	0.000	.8002379 1.514909
_cons	1.287914	.7285304	1.77	0.137	-.5848333 3.160661

18 Household Borrowers From Commercial Banks Per 1000 Adults

```
. reg LogE2 LogFinance
```

Source	SS	df	MS		Number of obs =	7
Model	.125244489	1	.125244489		F(1, 5) =	20.62
Residual	.030372783	5	.006074557		Prob > F =	0.0062
					R-squared =	0.8048
					Adj R-squared =	0.7658
					Root MSE =	.07794
Total	.155617272	6	.025936212			

LogE2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
LogFinance	-1.129807	.2488183	-4.54	0.006	-1.769415 -.4901993
_cons	5.854007	1.304023	4.49	0.006	2.501908 9.206105

19 Insurance Technical Reserves (% of GDP)

. reg LogG2 LogFinance						
Source	SS	df	MS	Number of obs = 7		
Model	.005878442	1	.005878442	F(1, 5)	=	2.20
Residual	.013364487	5	.002672897	Prob > F	=	0.1982
				R-squared	=	0.3055
				Adj R-squared	=	0.1666
				Root MSE	=	.0517
Total	.019242929	6	.003207155			
LogG2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LogFinance	-.2447688	.1650502	-1.48	0.198	-.6690439	.1795063
_cons	3.014801	.8650061	3.49	0.018	.7912316	5.23837

20 Number Of ATMs Per 100,000 Adults

. reg LogI2 LogFinance						
Source	SS	df	MS	Number of obs = 7		
Model	.071173947	1	.071173947	F(1, 5)	=	5.69
Residual	.062597295	5	.012519459	Prob > F	=	0.0628
				R-squared	=	0.5321
				Adj R-squared	=	0.4385
				Root MSE	=	.11189
Total	.133771243	6	.022295207			
LogI2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LogFinance	.8516977	.3572052	2.38	0.063	-.0665274	1.769923
_cons	-2.900114	1.872065	-1.55	0.182	-7.71241	1.912181

21 Number Of ATMs Per 1000 Km2

. reg LogK2 LogFinance						
Source	SS	df	MS	Number of obs = 7		
Model	.088046156	1	.088046156	F(1, 5)	=	6.56
Residual	.06707588	5	.013415176	Prob > F	=	0.0505
				R-squared	=	0.5676
				Adj R-squared	=	0.4811
				Root MSE	=	.11582
Total	.155122036	6	.025853673			
LogK2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LogFinance	.9472839	.3697627	2.56	0.051	-.0032215	1.897789
_cons	-3.964466	1.937877	-2.05	0.096	-8.945937	1.017006

22 Number Of Borrowers from Other Deposit Takers

. reg LogM2 LogFinance						
Source	SS	df	MS	Number of obs = 6		
Model	.055029217	1	.055029217	F(1, 4)	=	11.95
Residual	.018413704	4	.004603426	Prob > F	=	0.0259
				R-squared	=	0.7493
				Adj R-squared	=	0.6866
Total	.073442921	5	.014688584	Root MSE	=	.06785
LogM2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LogFinance	-.8626036	.2494912	-3.46	0.026	-1.555302	-.1699051
_cons	8.991564	1.301527	6.91	0.002	5.377946	12.60518

23 Number Of Automated Teller Machines (ATMs), Country Wide

reg LogQ2 LogFinance						
Source	SS	df	MS	Number of obs = 7		
Model	.088046156	1	.088046156	F(1, 5)	=	6.56
Residual	.06707588	5	.013415176	Prob > F	=	0.0505
				R-squared	=	0.5676
				Adj R-squared	=	0.4811
Total	.155122036	6	.025853673	Root MSE	=	.11582
LogQ2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LogFinance	.9472839	.3697627	2.56	0.051	-.0032215	1.897789
_cons	-.8800788	1.937877	-0.45	0.669	-5.86155	4.101393

24 Number Of Borrowers from Commercial Banks

reg LogQ2 LogFinance						
Source	SS	df	MS	Number of obs = 6		
Model	.012479151	1	.012479151	F(1, 4)	=	2.76
Residual	.018087439	4	.00452186	Prob > F	=	0.1720
				R-squared	=	0.4083
				Adj R-squared	=	0.2603
Total	.03056659	5	.006113318	Root MSE	=	.06724
LogQ2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LogFinance	.4107779	.247271	1.66	0.172	-.2757564	1.097312
_cons	5.010285	1.289945	3.88	0.018	1.428824	8.591746

25 Number Of Borrowers from Other Depository Corporations

reg LogS2 LogFinance						
Source	SS	df	MS	Number of obs = 7		
Model	1.55420674	1	1.55420674	F(1, 5) =	1.34	
Residual	5.79920334	5	1.15984067	Prob > F =	0.2993	
				R-squared =	0.2114	
				Adj R-squared =	0.0536	
Total	7.35341008	6	1.22556835	Root MSE =	1.077	
LogS2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LogFinance	-3.979966	3.438144	-1.16	0.299	-12.818	4.858066
_cons	27.58931	18.01886	1.53	0.186	-18.72963	73.90826

26 Number Of Commercial Bank Branches Per 100,000 Adults

reg LogU2 LogFinance						
Source	SS	df	MS	Number of obs = 7		
Model	.061754723	1	.061754723	F(1, 5) =	28.37	
Residual	.010884184	5	.002176837	Prob > F =	0.0031	
				R-squared =	0.8502	
				Adj R-squared =	0.8202	
Total	.072638907	6	.012106484	Root MSE =	.04666	
LogU2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LogFinance	.7933413	.1489491	5.33	0.003	.4104554	1.176227
_cons	-3.290087	.7806223	-4.21	0.008	-5.29674	-1.283433

27 Outstanding Deposits with Commercial Banks

reg LogW2 LogFinance						
Source	SS	df	MS	Number of obs = 7		
Model	.073967785	1	.073967785	F(1, 5) =	26.96	
Residual	.013717799	5	.00274356	Prob > F =	0.0035	
				R-squared =	0.8436	
				Adj R-squared =	0.8123	
Total	.087685585	6	.014614264	Root MSE =	.05238	
LogW2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LogFinance	.8682529	.1672177	5.19	0.003	.4384062	1.2981
_cons	7.375937	.8763655	8.42	0.000	5.123168	9.628706

28 Number of Depositors with Other Deposit Takers

reg LogY2 LogFinance						
Source	SS	df	MS			
Model	.067595073	1	.067595073	Number of obs = 7		
Residual	.065846347	5	.013169269	F(1, 5) = 5.13		
Total	.13344142	6	.022240237	Prob > F = 0.0728		
				R-squared = 0.5066		
				Adj R-squared = 0.4079		
				Root MSE = .11476		
LogY2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LogFinance	.8300084	.3663581	2.27	0.073	-.1117451	1.771762
_cons	1.582764	1.920034	0.82	0.447	-3.35284	6.518368

29 Outstanding Deposits With Commercial Banks (% of GDP)

reg LogE2 LogFinance						
Source	SS	df	MS			
Model	.00196724	1	.00196724	Number of obs = 7		
Residual	.003456854	5	.000691371	F(1, 5) = 2.85		
Total	.005424095	6	.000904016	Prob > F = 0.1524		
				R-squared = 0.3627		
				Adj R-squared = 0.2352		
				Root MSE = .02629		
LogE2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LogFinance	.1415969	.0839422	1.69	0.152	-.0741835	.3573772
_cons	.8885829	.43993	2.02	0.099	-.2422932	2.019459

30 Outstanding Deposits With ODCs (% of GDP)

reg LogG2 LogFinance						
Source	SS	df	MS			
Model	.001898956	1	.001898956	Number of obs = 7		
Residual	.003419193	5	.000683839	F(1, 5) = 2.78		
Total	.00531815	6	.000886358	Prob > F = 0.1565		
				R-squared = 0.3571		
				Adj R-squared = 0.2285		
				Root MSE = .02615		
LogG2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LogFinance	.1391177	.0834837	1.67	0.157	-.075484	.3537194
_cons	.9030855	.437527	2.06	0.094	-.2216135	2.027784

31 Outstanding Deposits with Other Deposit Takers

reg LogI2 LogFinance						
Source	SS	df	MS	Number of obs = 7		
Model	.004276297	1	.004276297	F(1, 5) =	6.47	
Residual	.003302377	5	.000660475	Prob > F	= 0.0516	
				R-squared	= 0.5643	
				Adj R-squared	= 0.4771	
Total	.007578674	6	.001263112	Root MSE	= .0257	
LogI2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LogFinance	.2087656	.0820452	2.54	0.052	-.0021384	.4196695
_cons	8.365069	.429988	19.45	0.000	7.25975	9.470389

32 Outstanding Deposits with Other Depository Corporations

reg LogK2 LogFinance						
Source	SS	df	MS	Number of obs = 7		
Model	.073545981	1	.073545981	F(1, 5) =	26.94	
Residual	.013650182	5	.002730036	Prob > F	= 0.0035	
				R-squared	= 0.8435	
				Adj R-squared	= 0.8121	
Total	.087196163	6	.014532694	Root MSE	= .05225	
LogK2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LogFinance	.8657738	.166805	5.19	0.003	.4369878	1.29456
_cons	7.39044	.8742029	8.45	0.000	5.14323	9.63765

33 Outstanding Deposits/Acquired Funds/Insurance Technical Reserves with Other Financial Corporations

reg LogM2 LogFinance						
Source	SS	df	MS	Number of obs = 7		
Model	.026488226	1	.026488226	F(1, 5) =	21.40	
Residual	.006190223	5	.001238045	Prob > F	= 0.0057	
				R-squared	= 0.8106	
				Adj R-squared	= 0.7727	
Total	.032678448	6	.005446408	Root MSE	= .03519	
LogM2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LogFinance	.5195788	.1123293	4.63	0.006	.2308271	.8083304
_cons	9.326215	.5887029	15.84	0.000	7.812906	10.83952

34 Outstanding Loans by Other Financial Intermediaries

reg LogP2 LogFinance						
Source	SS	df	MS	Number of obs = 7		
Model	.195263826	1	.195263826	F(1, 5) = 18.64		
Residual	.052363597	5	.010472719	Prob > F = 0.0076		
				R-squared = 0.7885		
				Adj R-squared = 0.7462		
				Root MSE = .10234		
Total	.247627423	6	.041271237			
LogP2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LogFinance	1.410704	.3267042	4.32	0.008	.570884	2.250524
_cons	3.406332	1.712213	1.99	0.103	-.9950515	7.807715

35 Outstanding Loans by Other Depository Corporations

reg LogQ2 LogFinance						
Source	SS	df	MS	Number of obs = 7		
Model	.09757535	1	.09757535	F(1, 5) = 23.85		
Residual	.020452465	5	.004090493	Prob > F = 0.0045		
				R-squared = 0.8267		
				Adj R-squared = 0.7921		
				Root MSE = .06396		
Total	.118027816	6	.019671303			
LogQ2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LogFinance	.9972293	.2041798	4.88	0.005	.4723684	1.52209
_cons	6.917679	1.070079	6.46	0.001	4.166953	9.668405

36 Number of Insurance Corporations

reg LogS2 LogFinance						
Source	SS	df	MS	Number of obs = 7		
Model	.001450613	1	.001450613	F(1, 5) = 5.96		
Residual	.001217752	5	.00024355	Prob > F = 0.0586		
				R-squared = 0.5436		
				Adj R-squared = 0.4524		
				Root MSE = .01561		
Total	.002668365	6	.000444727			
LogS2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LogFinance	-.1215908	.0498218	-2.44	0.059	-.2496618	.0064802
_cons	2.830167	.2611093	10.84	0.000	2.158964	3.50137

37 Number of Other Deposit Taker Branches, Excluding Headquarters

reg LogU2 LogFinance						
Source	SS	df	MS	Number of obs = 7		
Model	.000357586	1	.000357586	F(1, 5) = 2.32		
Residual	.000770636	5	.000154127	Prob > F = 0.1882		
				R-squared = 0.3169		
				Adj R-squared = 0.1803		
Total	.001128222	6	.000188037	Root MSE = .01241		
LogU2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LogFinance	-.0603692	.0396337	-1.52	0.188	-.1622508	.0415125
_cons	3.731453	.2077149	17.96	0.000	3.197505	4.265401

38 Number of Other Depository Corporations

reg LogW2 LogFinance						
Source	SS	df	MS	Number of obs = 7		
Model	.006444574	1	.006444574	F(1, 5) = 0.63		
Residual	.050840025	5	.010168005	Prob > F = 0.4621		
				R-squared = 0.1125		
				Adj R-squared = -0.0650		
Total	.057284599	6	.009547433	Root MSE = .10084		
LogW2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LogFinance	.2562843	.3219162	0.80	0.462	-.5712276	1.083796
_cons	.2592732	1.68712	0.15	0.884	-4.077606	4.596153

39 Outstanding Acquired Funds by Other Financial Intermediaries

reg LogY2 LogFinance						
Source	SS	df	MS	Number of obs = 7		
Model	.160360483	1	.160360483	F(1, 5) = 23.34		
Residual	.034350086	5	.006870017	Prob > F = 0.0048		
				R-squared = 0.8236		
				Adj R-squared = 0.7883		
Total	.194710569	6	.032451762	Root MSE = .08289		
LogY2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LogFinance	1.27842	.2646085	4.83	0.005	.5982223	1.958618
_cons	4.021044	1.386778	2.90	0.034	.4562173	7.58587

40 Outstanding Loans by Commercial Banks

reg LogAA2 LogFinance						
Source	SS	df	MS	Number of obs = 7		
Model	.101029666	1	.101029666	F(1, 5) =	24.01	
Residual	.021034758	5	.004206952	Prob > F =	0.0045	
				R-squared =	0.8277	
				Adj R-squared =	0.7932	
Total	.122064423	6	.020344071	Root MSE =	.06486	
LogAA2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LogFinance	1.014727	.207066	4.90	0.004	.4824475	1.547007
_cons	6.820464	1.085205	6.28	0.001	4.030856	9.610073

41 Outstanding Loans From Commercial Banks (% of GDP)

. reg LogAC2 LogFinance						
Source	SS	df	MS	Number of obs = 7		
Model	.008142361	1	.008142361	F(1, 5) =	6.16	
Residual	.006614231	5	.001322846	Prob > F =	0.0558	
				R-squared =	0.5518	
				Adj R-squared =	0.4621	
Total	.014756592	6	.002459432	Root MSE =	.03637	
LogAC2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LogFinance	.2880714	.1161127	2.48	0.056	-.0104057	.5865485
_cons	.3331099	.608531	0.55	0.608	-1.231169	1.897389

42 Outstanding Loans From ODCs (% of GDP)

reg LogAE2 LogFinance						
Source	SS	df	MS	Number of obs = 7		
Model	.007183228	1	.007183228	F(1, 5) =	5.70	
Residual	.006303472	5	.001260694	Prob > F =	0.0626	
				R-squared =	0.5326	
				Adj R-squared =	0.4391	
Total	.0134867	6	.002247783	Root MSE =	.03551	
LogAE2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LogFinance	.2705732	.1133522	2.39	0.063	-.0208079	.5619542
_cons	.4303243	.5940636	0.72	0.501	-1.096765	1.957414

43 Overall Outstanding Loans (% of GDP)

reg LogAG2 LogFinance						
Source	SS	df	MS	Number of obs = 7		
Model	.008134472	1	.008134472	F(1, 5) = 6.09		
Residual	.006674485	5	.001334897	Prob > F = 0.0566		
Total	.014808957	6	.002468159	R-squared = 0.5493		
				Adj R-squared = 0.4592		
				Root MSE = .03654		
LogAG2	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LogFinance	.2879318	.1166404	2.47	0.057	-.0119018	.5877654
_cons	.3587459	.6112965	0.59	0.583	-1.212642	1.930134

Appendix B: Financial Access Survey (FAS)—Explanatory Notes

(IMF, 2012)

Indicator Name	Description
Geographical Outreach	
Number of Institutions	
Other depository corporations (ODCs)	Comprise commercial banks and other deposit takers. These include all resident financial corporations and quasi-corporations (except the central bank) that are mainly engaged in financial intermediation and that issue liabilities included in the national definition of broad money.
Commercial banks	Comprise resident commercial banks and other banks functioning as commercial banks that meet the definition of ODCs.
Other deposit takers	Include all resident financial intermediaries other than central bank and commercial banks that meet the definition of ODCs—that is, they accept deposits or issue other types of liabilities that are included in the national definition of broad money. These institutions have varying names in different countries, such as savings and loan associations, building societies, credit unions and credit cooperatives, post office giro institutions, post office savings banks, savings banks, microfinance institutions, and money market funds.
Other financial corporations	Consist of a diverse group of resident financial corporations that provide financial services, either through intermediation or auxiliary services, and that do not issue liabilities included in broad money. The FAS covers other financial intermediaries and insurance corporations (but excludes pension funds and financial auxiliaries).
Other financial intermediaries (OFIs)	Include resident financial intermediaries that do not meet the definition of ODCs—that is, they raise funds by issuing liabilities that are not included in the nationally defined broad money, and use the funds to extend loans, mainly to nonfinancial corporations and households, actively competing with ODCs. Financial auxiliaries, insurance corporations, and pension funds are excluded from this category.
Insurance corporations	Comprise all resident insurance corporations

	providing financial benefits to policyholders and their survivors in the event of accidents, illness, death, disasters, or incurrence of various personal expenses.
Branches	
Number of branches	Includes all units of each type of reporting institution covered in the FAS that provide financial services to customers and are physically separated from the main office but not organized as legally separated subsidiaries (located in the reporting country). The number of headquarters (shown under the “Number of Institutions” above) is excluded.
Number of branches in 3 largest cities	Includes all branches as defined above of each type of reporting institution (covered in the FAS) located in 3 largest cities by population in the reporting country.
Indicator Name	Description
Number of branches per 1000 km ²	For each type of reporting institution calculated as: (number of institutions + number of branches)*1000/land area of the reporting country in square kilometers. ²
Number of branches other than in 3 largest cities per 1000 km ²	For commercial banks and overall number of branches calculated as: (number of branches - number of branches in 3 largest cities)*1000/land area of the reporting country in square kilometers.
Number of branches per 100,000 adults	For each type of reporting institution calculated as: (number of institutions + number of branches)*100,000/adult population in the reporting country. ³
Automated Teller Machines (ATMs)	
Number of ATMs	The total number of ATMs in the reporting country.
Number of ATMs in 3 largest cities	The number of ATMs in 3 largest cities by population in the reporting country.
Number of ATMs per 1000 km ²	Calculated as: (number of ATMs)*1000/land area of the reporting country in square kilometers.
Number of ATMs other than in 3 largest cities per 1000 km ²	Calculated as: (number of ATMs - number of ATMs in 3 largest cities)*1000/land area of the reporting country in square kilometers.
Number of ATMs per 100,000 adults	Calculated as: (number of ATMs)*100,000/adult population in the reporting country.

Use of Financial Services		
Number of Depositors (for ODCs); Customers (for OFIs); Insurance Policy Holders (for Insurance corporations)		
ODCs/commercial banks/ other deposit takers		The total number of deposit account holders that are resident nonfinancial corporations (public and private) and households in each type of institution. For many reporting countries, however, data cover the total number of accounts due to lack of information on account holders. Explanations for such data coverage for some countries are not available in the country specific notes.
OFIs		The total number of resident customers that are nonfinancial corporations (public and private) and households who have provided funds to OFIs. Typically, the OFIs issue liabilities other than deposits, such as securities, loans, and other liabilities. For many reporting countries, however, data cover the total number of customer accounts due to lack of information on account holders. Explanations for such data coverage for some countries are not available in the country specific notes.
Insurance corporations	The total number of life and nonlife insurance policy holders (resident) that are resident nonfinancial corporations (public and private) and households. Depositors with ODCs/commercial banks per 1,000 adults	
Indicator Name		Description
Household depositors with ODCs/commercial banks per 1,000 adults		For each type of institution calculated as: (reported number of household depositors)*1,000/adult population in the reporting country.
Depositors/customers per 1,000 adults		Calculated as: (reported number of depositors with ODCs + reported number of OFIs' customers)*1,000/adult population in the reporting country.

Household depositors/clients per 1,000 adults	Calculated as: (reported number of household depositors with ODCs + reported number of OFIs' household customers)*1,000/adult population in the reporting country.
Insurance policy holders per 1000 adults	Calculated as: (number of insurance policy holders)*1,000/adult population in the reporting country.
Household insurance policy holders per 1000 adults	Calculated as: (number of household insurance policy holders)*1,000/adult population in the reporting country.
Number of Borrowers	
ODCs/ commercial banks/ other deposit takers/OFIs	The total number of resident customers that are nonfinancial corporations (public and private) and households who obtained loans from the reporting institution. For many reporting countries, however, data cover the total number of loan accounts due to lack of information on loan account holders. Explanations for such data coverage for some countries are not available in the country specific notes.
Borrowers per 1,000 adults	For each type of reporting institution calculated as: (reported number of borrowers)*1,000/adult population in the reporting country.
Household borrowers per 1,000 adults	For each type of reporting institution calculated as: (reported number of household borrowers)*1,000/adult population in the reporting country.
Liabilities: Outstanding Deposits (for ODCs); Acquired Funds (for OFIs); Insurance Technical Reserves (for Insurance Corporations)	
ODCs/commercial banks/other deposit takers	The total amount (in millions of national currency) of all types of outstanding deposits (transferable and nontransferable) of resident nonfinancial corporations (public and private) and households with each type of institution.
OFIs	The total amount (in millions of national currency) of funds provided by resident nonfinancial corporations (public and private) and households to OFIs. For several reporting countries, however, data cover the total amount of funds provided by all clients. Explanations for such data coverage for some countries are not available.

Insurance corporations	The outstanding amount (in millions of national currency) of insurance technical reserves (related to residents). Insurance technical reserves consist of net equity of households in life insurance reserves and prepayments of insurance premiums and	For each type of reporting institution calculated as: (outstanding deposits)*100/ GDP. ⁴
Indicator Name		Description
reserves against outstanding claims. All these are considered assets of the beneficiaries and policyholders. Net equity of households in pension funds is excluded because pension funds are not covered in the FAS. Outstanding deposits with ODCs/commercial banks (% of GDP)		
Outstanding deposits of nonfinancial corporations with ODCs/commercial banks (% of GDP)		For each type of reporting institution calculated as: (outstanding deposits - outstanding deposits of households)*100/ GDP
Outstanding deposits of households with ODCs/commercial banks (% of GDP)		For each type of institution calculated as: (outstanding deposits of households)*100/ GDP
Outstanding deposits/provided funds (% of GDP)		Calculated as: (outstanding deposits with ODCs + funds provided to OFIs)*100/GDP.
Outstanding deposits/provided funds of nonfinancial corporations (% of GDP)		Calculated as: (outstanding deposits with ODCs - outstanding deposits of households with ODCs + funds provided to OFIs – funds provided by households to OFIs)*100/GDP.
Outstanding deposits/provided funds of households (% of GDP)		Calculated as: (outstanding deposits of households with ODCs + funds provided by households to OFIs)*100/GDP.
Insurance technical reserves (% of GDP)		Calculated as: (insurance technical reserves)*100/GDP.
Assets: Outstanding Loans		
ODCs/commercial banks/other deposit takers/OFIs		For each type of reporting institution covered in the FAS, the total amount (in millions of national currency) of outstanding loans to resident nonfinancial corporations (public and private) and households.

Outstanding loans from ODCs/commercial banks (% of GDP)		For each type of reporting institution calculated as: (outstanding loans)*100/ GDP.
Outstanding loans from ODCs/commercial banks to nonfinancial corporations (% of GDP)		For each type of reporting institution calculated as: (outstanding loans - outstanding loans to households)*100/ GDP.
Outstanding loans from ODCs/commercial banks to households (% of GDP)	For each type of institution calculated as: (outstanding loans to households)*100/ GDP. Overall outstanding loans (% of GDP)	
Indicator Name		Description
Overall outstanding loans to nonfinancial corporations (% of GDP)		Calculated as: (outstanding loans from ODCs - outstanding loans to households from ODCs + outstanding loans from OFIs - outstanding loans to households from OFIs)*100/ GDP.
Overall outstanding loans to households (% of GDP)		Calculated as: (outstanding loans of households from ODCs + outstanding loans to households from OFIs)*100/ GDP.