

**GLOBALIZATION, POVERTY, AND ECONOMIC GROWTH:  
THE CASE OF SOUTH AFRICA**

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**ABSTRACT**

This paper takes a cursory look at the empirical relationship between the inflow of capital, globalization (as proxied by the degree of openness), poverty, and economic growth in South Africa. The vector autoregressive modeling technique was used in determining the relationship between these variables. It was found that variation in economic growth in South Africa was explained by factors beyond foreign capital inflow and economic openness in the short run; however, it is of little consideration in the long run. Capital inflow explains a significant change noticed in the human development index as the inflow of capital and economic openness had positive impact on poverty reduction.

In essence, trade liberalization has not substantially impacted on the growth rate of the South African economy. This implies that fluctuations in real economic growth in this country should be seen beyond the external shock from the capital inflows or trade flows.

Accordingly, the paper recommends that policy focus should be on areas that will encourage job creation and these include, for instance, investments in real sector rather than portfolio investment, which has been the case.

Keywords: Globalization, Poverty, Economic growth, Investments and Autoregression

**INTRODUCTION**

Sub-Sahara Africa has a long history of regional integration and cooperation agreements that gives credence to the saying that globalization is “old wine in a new bottle”. The South African Custom Union (SACU), for example, evolved from an earlier union that was established in 1910 in the Southern African sub-region. Similarly, member states of the recently resurrected East African Community (EAC)

– Tanzania (then Mainland of Tanganyika), Uganda, and Kenya first established a common internal market early during this century while the Congo Basin Treaty emerged from the Berlin Conference of 1884. Since the wave of independence movements in the 1960s, African leaders have time and again spoken of the importance of regional integration and cooperation agreements consummated in Africa than outside the continent. But with few exceptions (notably the SACU and perhaps the Franc monetary zones), these agreements have yielded disappointing results. They have not led to increased trade within the region, or between the states of the region and the rest of the world (Akinbobola and Akinlo, 2005). Moreover, except for the Franc zone monetary unions, they have had little success in actually integrating the economies of the member states. For example, according to Uzodike (1999: 80), Africa is one of the least integrated economic zones in the world as internal trade between Africa states is among the lowest of the world's economic regions. However, the rapid economic growth of developing states such as the Asian tigers that opened their market to free international trade during the past two decades has stimulated a huge debate and generated enormous theoretical and empirical literature on the impact of globalization (open trade) on economic growth. While some literature conclude that globalization and growth were positively correlated during the 1970s and 1980s (Dollar, 1992; Edwards, 1992; Levine and Renelt, 1992; Sachs and Warner, 1995; Vamvakidis, 1997), several others, while casting doubts on its positive effect on growth, emphasize that globalization comes with some costs that far outweigh its proclaimed benefits in most developing states (Easterly, 1993; Rodrik and Rodriguez, 1999; Stiglitz, 2003).

Conceptualized in this paper as the increased international mobility and integration of goods, services, technology, labor, and capital, globalization is visible everywhere. In any large city in any country, Japanese cars ply the streets, the world-wide-web (www) telephone calls connect people half a world away, local businesses no longer function without computers from United States, and foreign nationals have taken over large segments of the service industries of host states. Over the past twenty years, foreign trade and cross border movement of technology, labor, and capital have been massive and irresistible. During the same period, within developed states, the demand for highly skilled workers has increased at the expense of less skilled workers, and accordingly, the income gap between the two groups have widened significantly. There is no doubt that globalization has coincided with higher unemployment among the less skilled and with widening income inequality (Slaughter and Swagel, 1997).

While globalization truly occurs in many fronts such as the political, economic and socio-cultural, this paper is focused on economic globalization wherein the internationalization of financial markets implies the integration of trade and financial transactions into a global village, the outcome of which are increased volume of trade and capital flows, technological advancement, and economic growth. Economic globalization is facilitated by the application of advanced information and telecommunication facilities, elimination of artificial barriers through trade liberalization and financial deregulation, which also permits creation of complex webs of financial products and emergence of financial conglomerates offering various services. However, as aforementioned, globalization is also associated with high risk of volatility, which creates profound implications for domestic macro economic policies and management. Thus, it is apt to contend that while opening up numerous economic opportunities, globalization also constitutes formidable challenges to relatively weak states, their economies and peoples (Ihonvbere, 1999; Lipalile, 2000).

Indeed, the convergence that was predicted by the standard neoclassical theory of comparative advantage put less emphasis on the risk and challenges that globalization pose to developing economies. In summary, the theory espouses a flow of economic benefits from where it is abundant to where it is scarce, but with little or no consideration for the risks: developments within the financial institutions (capital market) and the structural bottlenecks and incompatibilities within and between regions that could impede the flow of these benefits. In practice, it is only in Asia did matters look a bit different as in some cases, they were actually leading it. For example, East Asia provides the strongest testimony in favor of the impact of globalization on growth which was counter to the view that globalization necessarily results in increased poverty. This was largely based on export-led growth, based in part on closing the technology gap between them and the more advanced industrial states. In the benefits of globalization thesis, states such as China and Indonesia also benefited enormously from foreign direct investment, while others, such as Korea made little use of it (Stiglitz, 2003). It should however be noted that, the key to the successes of these states was that they regulated the globalization process, enabling them to benefit from the opportunities it afforded, while not suffering much from the downside risks associated with globalization.

Against this background and in the face of recent African economies' agenda of regional integration and the challenges that globalization of world economies pose, it becomes highly imperative to see how, if at all, developing states in Africa are faring with the globalization process. For instance, have they been able to take advantage of the New International Economic Order tagged globalization? More specifically, this paper is concerned with addressing questions around whether globalization has stimulated economic growth in South Africa considering its consequent influences on the domestic macroeconomic policies of the country? And has the level of openness led to inflow of capital/industrialization, which consequently, creates more jobs and reduces poverty? In grappling with these concerns, the paper is divided into five sections. Having introduced the paper in section one, section two gives a brief overview of the literature on globalization, poverty and growth. Section three takes a cursory look at the poverty level in a number of Southern African economies while section four presents our findings based on empirical investigation and analysis of data using the vector autoregressive modeling technique. The final section discusses some policy implications of our analysis and concludes the paper.

## **SURVEY OF LITERATURE**

An extensive literature has developed on the influence of openness on growth across states. A number of studies, using different approaches, have found growth to be enhanced by foreign trade, or openness, or trade liberalization (Dollar, 1992; Sachs and Warner, 1995; Ben-David, Nordstrom, and Winters, 2000; Edwards, 1998). A general methodology problem arises in determining the impact of trade on growth because trade and output are determined simultaneously. Each researcher has developed surrogates for measuring the degree and character of openness, and each surrogate is open to disputation. Indeed, Rodriguez and Rodrick (2001) have provided a withering critique of the studies mentioned in the preceding paragraph, raising serious doubts about whether the authors have demonstrated their claim that pursuits of liberal trade policies have enhanced growth. Rodriguez and Rodrick persuasively find fault with the surrogates, with choice of data, or with specifications of the model to be fitted.

Frankel and Romer (1999) also find a significant impact of openness on levels of per capita income. To avoid the problem of simultaneity, they constructed an index of trade possibility ban geographic factors and find that it is strongly correlated with per capita income. They also found that actual trade is positively correlated ( $r=0.62$ ) with trade possibilities that enhance income through three diverse

channels: greater stock of capital, greater stock of education, and higher total factor productivity. But they explicitly caution against using their results to draw inferences for trade policy, which brings different issues into play.

Ades and Glaeser (1999) conjectured that greater openness, by relaxing constraints imposed by the extent of the domestic market, should be associated with higher growth. More particularly, they hypothesize that initial levels of per capita income should have greater (positive) impact on growth for more closed economies than for more open ones, since more open economies are less bound by domestic market size. Their hypothesis was broadly confirmed with the use of data for 66 states (1960-85). They confirmed that the relationship of growth to initial per capita income is statistically significant for closed economies and insignificant for open ones.

Closely connected to the impact of globalization debate is the issue of human capital flight, which often can lead to “Brain drain”, and which has become a policy challenge in most developing states. This phenomenon describes the emigration of educated and highly skilled workers to the more developed states of the world. The search for wealth and better opportunities elsewhere leaves labor exporting economies in a tight corner of how to develop when the best and brightest routinely set out in search of greener pastures. Not surprisingly, brain drain is viewed as having a negative impact on less developed states even though most states do not collect detailed personal data to substantially prove this point. A World Bank commissioned study by Adams (2003) sought to overcome these empirical shortcomings by creating a data set based on United States and OECD countries’ estimates of migration and education levels. The vast majority of legal immigrants, according to Adam’s study, are educated at the secondary level or higher. In fact, only 10 percent of the university-educated population of labor-exporting states was lost to migration, which means the magnitude of the effect labor migration has on increasing unemployment as perceived may not really be as significant. What is far more important is the creation of jobs – capital mobility within national economies.

In the view of IMF, the World Bank, and most Northern governments, removing barriers to trade is one of the most powerful things that governments can do to give the poor a bigger stake in global prosperity. As a World Bank Report (2001) posits, openness explains why globalization leads to faster growth and poverty reduction in poor states. Expressed differently, openness, along with associated free market

reforms holds the key to making globalization work for the poor. Some critics respond by asserting that globalization can never work for the poor and that integration into global markets will inevitably cause more poverty and inequality (see Kanbur, 2001). Most arguments justifying globalization, have always tied its potential merits around the experience of East Asia. These arguments are usually hinged on the notion that globalization can provide poor states and peoples with access to markets, technologies, and ideas needed to sustain higher and more equitable patterns of growth and in this way, act as a catalyst for poverty reduction. However, the argument that globalization is working for the poor can be fallen on its head because between 1988 and 1998, for example, the incidence of global poverty fell by derisory rate of 0.2 percent a year (Watkins, 2002), while global income inequalities widened significantly, and continue to do so (see Wade, 2002; Ravallion, 2003). At the end of the 1990s, high income states, representing 14 percent of the world's population, accounted for over three quarters of world income – roughly the same as at the start of the decade (Watkins, 2002). The world economy ended the 1980s more unequal than any national economy, and since then it has even been more unequal as the global Gini Coefficient rose by 3 points between 1988 and 1993 alone (World Bank Report, 1999). As Watkins (2002) aptly reveals, international trade reinforces income inequalities. Because exports grow faster than global GDP, they have an increasingly important bearing on income distribution, and world trade shares mirror income distribution patterns. Thus, for every \$1 generated through export activity, \$0.75 goes to the world's richest states while Low income states receive around \$0.03. Therefore, unless developing states capture a far larger share of exports, trade will continue to fuel widening gaps in absolute income.

Stiglitz (2003) asserts also that those who believe in “unfettered globalization” for the emerging markets put forward two arguments. The first is that today, globalization is a matter of choice – unlike in the 19th century where it was the result of gunboat diplomacy<sup>1</sup> and more open military intervention (the Opium war). Now, whether they are benefiting from globalization or not, states choose to globalize and adopt the institutions and practices that it seems to require because it enhances their welfare, but those within the developing states seen in today's economic power as being the surrogate of yesterday's military power. The United States, under its trade laws, so-called 301 and super-301 actions (U.S. Department of State, 2000) sets itself up as prosecutor, judge, and jury (without the defendant being able to mount an effective defense) on charges that the country has engaged in unfair trade practices. States

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<sup>1</sup> For example, Admiral Perry “opening up” Japan or Consul Beecroft forcing protectionist treaties from West African traditional rulers in the Bight of Benin in 1849 (See Isike, 2009).

are threatened with economic sanctions; and there are huge costs of not caving to U.S. demands. Similarly, a country in the throes of economic crisis, believing that it needs outside assistance, inevitably caves into IMF demands, as unrelated as those demands go beyond economics into politics, in violation of the Articles of Agreement of the IMF (Feldstein, 1998). It simply is not true that liberalization measures are undertaken voluntarily. A second related argument sometimes put forward is that states that have partaken of globalization almost never reverse course, evidently, whatever the costs, the benefits exceed the costs. This argument is again subject to the same criticisms, states are keenly aware of the consequences of reversing, because of the pressure imposed, say by the IMF and the United States.

One recent IMF review of seven Poverty Reduction and Growth Facility Programmes found that each loan came with seven trade policy conditions attached. Following the 1997 financial collapse in East Asia, the IMF's rescue loans again came heavily laden with import-liberalization requirements. Most northern governments fully support this approach. For example, the U.K. Department for International Development's white paper on globalization provided a ringing endorsement of trade openness, citing World Bank "evidence". Unfortunately, the evidence in question is based on dubious economics and a highly selective interpretation of data and does not justify the confidence of the policy prescription (Watkins, 2002).

In reality, states such as China, Thailand, and Vietnam may be premier globalizers. They also have a strong record of growth and poverty reduction. Yet they have liberalized imports very slowly and still have relatively restrictive trade barriers. Conversely, states such as Brazil, Haiti, Mexico, Peru, and Zambia have been world-beaters when it comes to import liberalization, but have a weak record on growth and poverty reduction. In short, many first-rate globalizers have fifth-rate records on poverty reduction.

A report by the ILO governing body in 1999, points out that globalization is good for the world's economy but tough on its workforce, which must cope with an increasing onslaught of competition and an accelerating rate of technological change, often with reduced government resources. The report however, rejects protectionist solutions; it says that adequate strengthening of globalization's "social pillar" via improved education and training, social safety nets, the adoption of labor legislation that

combines the need for economic adaptability with that of protection of vulnerable groups, and observance of core international labor standards “can greatly contribute to making globalization successful and socially sustainable”. This report highlights concerns of developing states that globalization “has rendered their economies more vulnerable to international shocks, especially where their export base is very narrow and their exposure to changes in the terms of trade is correspondingly high”. It underscores concern about the volatility of short-term capital flows notably states where internal financial institutions are probably too weak to sustain the large swings in short-term capital movements engendered by free capital mobility, “there is a danger that short-term capital flows, far from being a mere reflection of economic fundamentals, will determine exchange rate fluctuations and consequently, output and employment”. The report highlighted the fact that the experience of the states studied demonstrates that the world cannot divorce social and employment issues from other developments in the global economy if the processes of globalization are to prove sustainable. Where then do we go from here? While several studies have supported the fact that globalization leads to growth or that there exists a positive relationship between globalization and growth (Edwards, 1998; Sachs and Warner, 1999; Ben-David, Nordstrom, and Winters, 2000; Dollar and Kraay, 2001), very few have linked globalization to poverty in developing states. However, some studies cast doubt on its positive effects on growth (Easterly, 1993; Rodriguez and Rodrik, 1999).

Having reviewed the pros and cons of globalization, the major contention this paper tries to address is whether globalization has impacted positively on economic growth in South Africa vis-à-vis reduction of poverty level. In view of the discussions above, this study intends to fill the gap in terms of the scant literature on the impact of globalization on poverty in South Africa. This study uses the vector autoregressive modeling approach to estimate the relationship between these variables in South Africa.

### **BRIEF REVIEW OF POVERTY IN SOUTHERN AFRICAN ECONOMIES**

Poverty remains an endemic feature of Southern African states. The economies of a number of these states such as South Africa and Botswana have a dual character in that on the one hand, they are highly industrialized and productive; they are also characterized by huge income inequalities, high unemployment rates and endemic poverty on the other hand. Indeed, South Africa has a two-tiered economy, one rivaling developed economies and states of the North, and the other with only the most basic or near absence of infrastructure. It is therefore a productive and industrialized economy that also

exhibits many characteristics associated with developing states such as a division of labor between formal and informal sectors, and an uneven distribution of wealth and income. The formal sector, which is based on manufacturing, services, mining, and agriculture are well developed and this operates side by side with the second (informal) economy which is characterized not only by high levels of poverty and unemployment, but also by high levels of overall economic inactivity amongst unemployed adults (Reynolds and van Zyl, 2006). This has made most communities so economically dysfunctional that they are incapable of self-generated growth and development. To worsen matters, poverty and unemployment are structural rather than cyclical in nature, and as Frye (2006) contends, chronic structural manifestation of poverty and unemployment are far more difficult to address in terms of policy interventions than transient cyclical episodes. The extent of the marginalization of poor people from the formal mainstream economy and opportunities for income generation is of a level that demands that successful intervention must address issues of distribution of resources in the country.

Of the population of 46 million in South Africa, 48.5 percent of people were living in poverty in 2002. This was based on the national poverty line of R354 per month per adult equivalent (1995 value). In 2002, 23.8 percent of people were living on less than US\$2 per day, and 10.5 percent on less than US\$1 per day (UNDP, 2003). In 2004, 41 percent of working age people were unemployed, according to the expanded definition of unemployment<sup>2</sup>, and 26.2 percent, according to the narrow definition (Statistics South Africa, 2004). There has been steady increase in the level of unemployment from 34.3 percent in 2000 to 40.5 percent in 2005 (Statistics South Africa, 2005)

Research, undertaken by a project team in the office of the President, assisted by the Department of Social Development, has attempted to highlight salient problems faced by the economy. While the government's performance in the provision of health, education, and other basic services has been commendable, the report notes that "two economies persist in one country". The first is an advanced, sophisticated economy, based on skilled labour, which is becoming more globally competitive. The second is a mainly informal, marginalized, unskilled economy populated by the employed and those

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<sup>2</sup> According to statistics South Africa (2006), unemployment is defined strictly and officially in terms of people in the economically active population who: (a) did not work during the seven days prior to the interview, (b) want to work and are available to start work within a week of the interview, and (c) have taken active steps to look for work or to start some form of self-employment in the four weeks prior to the interview but have been unsuccessful.

unemployable in the formal sector. The report cited President Mbeki's address at the annual conference of the Black Management Forum, where the President likened the "two economies" in the country to a double storey house "without a connecting staircase". Despite the impressive gains made by the first economy, the benefits of growth have yet to reach the second economy, and with the enormity of the challenges arising from social transition, the second economy risks falling further behind if there is no decisive government intervention, the report warns. The report concluded, however, that the central economic challenge is to address the negative impact of social transition – with far reaching social and political implications, while ensuring much higher rates of growth and employment creation. Between 1995 and 2002, the number of people classified as unemployed, according to the narrow definition of those actively seeking work, had risen from just over 1.9 million to over 4.2 million – an increase of over 2.3 million. By 2005, the number had risen to 4.8 million people putting the national unemployment average at 30.5 percent (DBSA, 2005) and fallen back to 4.2 million with variations of increases and decreases in the unemployment statistics by provinces (Statistics South Africa, 2009).

According to Statistics South Africa, in 1995, 28 percent of households and 48 percent of the population were living below poverty line. In 1999, just fewer than 33 percent of households were living below the poverty line – most of them defined as African (black indigenous South Africans). This is an indication of the impact that the exclusion from the broader economy, through apartheid job reservation legislation, and the prejudicial nature of state assistance, has had on black communities. Since 1994, the states expenditure on social grants has increased from R10 billion (about US\$1.4 billion) to R34.8 billion (about US\$5 billion) in 2003. Similarly, there has been a concurrent increase in beneficiaries as the state attempts to address the legacy of apartheid. Expenditure on public works programs has increased almost ten fold since 1998, employing a total of 124,808 people. However, most of these jobs were temporary. Some 3,407 jobs were created by public works projects between 1999 and 2002 and a further 141 permanent jobs were created in the first half of 2003. Research indicates that public work programs vary in their efficiency of transferring income to the poor with the average expenditure per worker varying between R27 242 (US\$3,928) in Limpopo province to R6 515 (US\$939) in the Eastern Cape Province. It was noted that provision of assets to the community, public works programs, are not as efficient as income grants in alleviating poverty (UN Special Report, 2007).

All the above analysis is a pointer to the fact that a grave incidence of poverty does exist in South Africa. Though noted that the issue of unemployment in South Africa is also affected by many variables, such as race, age, gender, home ownership, etc, the fact remains that a considerably high percentage of the active population are without jobs and this has consequently aggravated poverty within the country.

In Namibia, a large number of studies have been carried out on the incidence of poverty and evidence of the distribution and characteristics of poverty is persuasive. The evidence points in the direction of a relatively high GDP per capita, concealing severe income differentials along lines of geographical location, occupation, age, and gender. The general political context of the following analysis is, thus, one of a country with deep and widespread poverty, but also with a great deal of wealth concentrated on relatively few hands. The combination of poverty and inequality presents an almost unique opportunity in the African context for redistribution of wealth or income to alleviate poverty.

Available data, in regard to poverty and distribution, show that Namibia is one of the most unequal societies in the world (CSO, 1996; UNDP, 1998). This is illustrated by the Gini Coefficient of 0.70, measuring the inequality of income distribution among the Namibian population. The richest 10 percent of the society receive 65 percent of income, the remaining 90 percent share among themselves only 35 percent of the national income. Namibia's ranking as the 107<sup>th</sup> poorest out of 177 states surveyed, with HDI of 0.52 in 1997, though have improved in recent years, to 0.63 in 2004, clearly shows evidence of poverty within the country. It should be noted, however, that HDI provides a composite measure of three dimensions of human development: living long and healthy life (measured by life expectancy), being educated (measured by adult literacy and enrollment at primary, secondary, and tertiary level), and having a decent standard of living (measured by purchasing power parity, PPP, and income). The index is not, in any case, a comprehensive measure of human development. It ignores important indicators such as inequality, and is difficult to measure indicators, like respect for human rights and political freedom. However, for the purposes of this work, the value of HDI and levels of unemployment are good and standard indicators of poverty.

In 2005, the UN categorized Namibia as a country of medium human development, having a HPI rank of 60 and a value of 33 percent. This is an improvement from a HPI rank of 64 and a value of 37.7 percent in its report from 2004. The UN report further shows that 34.9 percent of the population of

Namibia was living on less than US\$1 per day and 55.8 percent on less than US\$2 per day between 1990 and 2003. For a small country in terms of population (about 2 million), these figures are of great significance and show that poverty is indeed prevalent in the country.

The UNDP report of 2006 clearly indicates that in Botswana, 47 percent of the population lives below national poverty line. With income of the poorest 20 percent of the population being 4 percent of the total income, and income of the 20 percent of the richest being 59.3 percent of the total income, then it is clear that a reasonably high level of income inequality exist in Botswana. Unemployment rate is put at 15.8 percent, while the per capita income had dropped to P18.340 (US\$3 056) compared to US\$12 at independence in 1960. The HDI for Botswana of 0.570, ranks the country 131<sup>st</sup> out of 177 states surveyed in the world. Botswana's Human Poverty Index (HPI) of 48.3 is also a pointer to the fact that a high percentage of the population suffers extinction.

Swaziland's current position of 114<sup>th</sup> puts it in the lowest 25 percent of the Medium Human Development Group of states. The major aim of its National Development Strategy is to improve its HDI indicators, so that by 2022, it will be in the top 10 percent of the Medium Human Development Group of States. There are about 106,000 jobs in Swaziland's formal and informal sectors – about one for every nine people and about 171,236 households in the country – about one for every 5.3 persons. That is, well over half as many jobs again as currently exist would have to be created just to allow one breadwinner per household. Even then the chance of an exact match of breadwinners skills and job opportunities would be nil, and on the average those jobs would need wages enough to cater for a family of six or thereabout. So even if one breadwinner per household in formal sector is achieved, numerous households would still be living in absolute poverty (Scek, 1997).

The above analysis clearly suggests that income inequality, high unemployment rate and poverty are prevalent within the sub region. In an effort to address poverty in the sub region, the Southern Africa Development Community (SADC) took a major step to synthesize each country's initiatives and take policy steps towards alleviating poverty.

**Table 1: Human Development Index for selected Southern Africa States**

Country	1980	1985	1990	1995	2000	2002	2004
South Africa	0.672	0.697	0.729	0.735	0.690	0.666	0.653
Botswana	0.574	0.633	0.675	0.666	0.620	0.589	0.570
Namibia	-	-	-	0.667	0.625	0.607	0.626
Swaziland	0.544	0.565	0.611	0.606	0.548	0.519	0.500

Source: Compiled from UNDP HDI Statistics (1980 - 2004)

## **DATA DESCRIPTION AND MODEL SPECIFICATION**

### **Definition and Measurement of Variables**

The study examines the impact of globalization on poverty vis-à-vis economic growth in South Africa in the period 1980- 2005. The choice of period is premised on the fact that it was a start of monetarism in South Africa. Detailed information on the definition of variables used in the analysis is presented below:

- (a) *Globalization (GLO)*: in the literature, the popular measure of globalization is the degree of openness. The use of this measure is premised on the argument that the more a country opens, the higher the level of its integration with global economy and, consequently, a resultant increase in economic growth. This actually explains the various liberalization policies in Sub-Saharan Africa since the mid 1980s. There are several measures of openness in literature. These include ratio of trade (exports + imports) to GDP; increase in export, Sach Warner index, and export-import ratio. Following Cigno *et al* (2002), among others, we used the ratio of trade to GDP, as our measure of degree of openness. Since globalization involves dispersion of production activities and location of different segments of the same process in different states, we anticipate that globalization will boost economic growth and equally and positively impact poverty reduction of these economies.
- (b) *Gross Domestic Product (GDP)*: this is defined as the rate of growth of GDP and is used as a measure of the attractiveness of the host country's market. Theoretically, investment will go primarily to markets that are large enough to support the scale economies needed for production. This simply means the higher the rate of growth of the GDP, the greater the possibility of increased inwards capital flow; however, considering the lack-luster performance of African economies in the last three decades, GDP growth might not have a significant effect on inward capital flows.

(c) *Poverty index (HDI)*: we used the already computed UNDP statistics of HDI, having as components: living long and healthy life (measured by life expectancy), being educated (measured by adult literacy and enrolment at primary, secondary, and tertiary level) and having a decent standard of living (measured by purchasing power parity, PPP, income).

### **Methodology/Empirical Analysis**

The causal nexus between globalization (openness), poverty, and economic growth is examined within the context of a four-variable vector autoregressive (VAR) system. The model is specified and estimated using annual data for 1980-2005. The size of our system requires large observations in order to have enough degree of freedom for estimation. A vector autoregressive process of order  $\beta$ , VAR (p), for a system of k variables can be written as:

$$X_t = A + B(L)X_t + U_t$$

Where  $X_t$  is a  $(k \times 1)$  vector of system variables,  $A$  is a  $(k \times 1)$  vector of constants,  $B(L)$  is a  $(k \times k)$  matrix of polynomials in the lag operator  $L$ , and  $U_t$  is a  $(k \times 1)$  vector of serially uncorrelated white noise residuals. The standard Sims (1980) VAR is an unrestricted reduced form approach and uses a common lag length for each variable in each equation. Likewise here, no restrictions are imposed on coefficient matrices to be null, and the same lag length is used for all system variables. Four variables are included in the model: degree of openness (DO), capital inflow (CI), growth rate of GDP ( $\Delta$ GDP), and poverty index (HDI). The data for all of the variables are obtained from the International Financial Statistics (IFS) and UNDP. Prior to estimation of the VAR, augmented Dickey-Fuller tests were employed to check for the first-order unit roots. These tests suggested that the first differences of the logs of DO, CI, HDI, and GDP should be used in specifying and estimating the model. Based upon the arguments of Engle and Granger (1987), co integration tests were also performed for the four variables that required differencing to achieve their stationarity. Since no evidence of co integration was found, the system was estimated with differences of all system variables.

### **The Model**

The model represented by a four-component vector is, thus, defined as:

$$V = [DO, CI, HDI, GDP] \dots \dots \dots (1)$$

Where  $V$  is the vector containing the four variables, DO is the degree of openness, CI is the capital inflow, GDP is the growth rate of GDP, and HDI is the human development index.

Equation (1) is an identity that would be estimated using the VAR technique. The impulse response functions (IRFs) and the variance decompositions (VDCs) are based on the moving-average representations of the VAR model and they reflect short-run dynamic relationships between variables. The VDCs show the percentage of the forecast error variance for each variable that may be attributed to its own innovations and to fluctuations in other variables in the system. The IRFs indicate the direction and size of the effect of a one standard deviation shock to one variable on other system variables over time. Since model variables are converted to first differences prior to estimation of the model, the VDCs and IRFs reported here indicate the effects of a shock to the changes in the growth rates and human development index on the changes in capital inflow and the degree of openness. The equations of the VAR contains only lagged values of the system variables, it is assumed that the residuals of the VAR model are purged of the effects of the past economic activity. Any contemporaneous relations among the variables are reflected in the correlations of residuals across equations. The Choleski decomposition is used to orthogonalize the variance-covariance matrix. The variables are ordered in a particular fashion, and as such, some structure is imposed in computation of the VDCs and IRFs; when a variable higher in the order changes, variables lower in the order are assumed to change. The extent of the change depends upon the covariance of the variables higher in the order with that lower in the order. Therefore, the order in which the variables enter the VAR system affects the outcome of the analysis. The preferred ordering in this paper is LCI, LDO, LGDP, and LHDI. Accordingly, an increase in the capital inflow is assumed to stimulate investment within the economy, apparently improving exports and opening up the economy (LDO), out rightly leading to growth (LGDP) and, consequently, leads to a reduction in poverty (HDI).

### **Basic Results**

The causal nexus and sources of variation in globalization (openness), capital inflow, economic growth, and poverty are examined through the computation of impulse response functions (IRFs), and the variance decompositions (VDCs), which in turn, are based on the moving-average representations of the VAR model, and they reflect short-run dynamic relationships between variables. The VDCs shows the percentage of the forecast error variance for each variable in the system. The IRFs indicates the direction and size of the effect of a one standard deviation shock to one variable on other system variables over time. Since model variables are converted to first difference prior to estimation of the model, the VDC

and IRFs reported here indicate the effect of a shock to the changes in globalization and foreign capital inflow on the changes in economic growth rates and human development index.

As established by previous studies (see Akinlo, 2003; Akinbobola and Saibu, 2004), an increase in net inflow is assumed to lead to increase in external trade that boost the ratio of trade to GDP, hence, enhancing degree of economic openness. The degree of economic openness has also been found to have a positive relationship with economic growth, so increase in capital inflow and greater access to international goods and factor markets not only lead to increased productivity, but also promote transfer of technology and knowledge spillover that bring about higher economic growth, and thus reducing poverty.

The data was further subjected to the Augmented Dickey Fuller (ADF) test so as to establish their univariate time series behavior in order to determine the basic unit of observation. The essence of this test is to determine whether the subsequent estimation could use the level, first or second difference of each time series. Since all of the variables were not stationary at levels, there was the need for first differencing, more so that all variables are I(1) series. Consequent to these tests, we estimated the impulse response and the variance decomposition.

It is evident from the forecast error variance decomposition result that in the long-run, the capital inflow variable largely determines variations in the human development index (HDI) with 44 percent of variations in HDI caused by capital inflow in the 10<sup>th</sup> horizon. The degree of openness variable is also a significant variable that determines the variations in the human development index, with 25 percent of its own innovations caused by the degree of openness variable. From the result, the rate of growth of the South African economy plays an insignificant role in the determination of the innovations in the poverty index. Table 2 shows the forecast error variance decomposition of the variables for 10 horizons. Innovations in HDI are largely due to variations of the DO variable and the CI variable, with 25 percent and 44 percent in the tenth quarter respectively.

**Table 2: VAR Forecast Error Variance Decomposition**

<b>Period</b>	<b>CI</b>	<b>DO</b>	<b>GDP</b>	<b>HDI</b>
(CI)				
1	1.00	0.00	0.00	0.00
4	0.53	0.12	0.04	0.30
8	0.41	0.16	0.06	0.38
10	0.49	0.13	0.05	0.33
(DO)				
1	0.09	0.91	0.00	0.00
4	0.10	0.65	0.00	0.24
8	0.34	0.45	0.03	0.18
10	0.25	0.58	0.02	0.14
(ΔGDP)				
1	0.20	0.01	0.78	0.00
4	0.35	0.25	0.35	0.07
8	0.28	0.42	0.18	0.11
10	0.37	0.39	0.13	0.11
(HDI)				
1	0.19	0.01	0.01	0.79
4	0.19	0.02	0.02	0.77
8	0.60	0.07	0.06	0.28
10	0.44	0.25	0.04	0.27

Source: Computed by authors, 2008

## **POLICY REMARKS/CONCLUSION**

From the above results, some deductions can be made regarding the implications of globalization on the reduction of poverty in South Africa. Policies that will boost capital inflow will improve the human development index and consequently reduce poverty. Movements of capital take several forms: direct investment by foreigners (for instance, in constructing factories) and portfolio investment. Portfolio investment can either take the form of short-term capital flows (short-term lending) or long-term flows (e.g. long-term bonds). There are different consequences of these different forms of capital flow. Foreign direct investment is widely praised for bringing, not only capital, but also enabling access to foreign markets, technology, and human capital. More over, it suffers from less cyclical volatility than does portfolio capital. Infrastructure-based policies pursued in South Africa is a good direction towards

alleviating poverty; however, focus should also be directed towards policies that would increase the level of foreign capital inflow; investments in real assets that create jobs, rather than in financial assets. Therefore, policies such as adjustment of liberalization packages in the overall actually lead to negative change, which makes the economy less attractive to invest in. Concisely, adjustment packages of trade liberalization, often accompanied by tight monetary policy and high interest rates, which rise to levels where it becomes unattractive to invest (even in a country like the United States with a good business climate), should be discouraged.

Turning away from world markets is surely not a good way to alleviate domestic poverty; however states that have scored the most impressive gains are those that have developed their own version of the rulebook while taking advantage of world markets. The regulations that developing states have to put up with in those markets are highly asymmetric with import barriers at its highest for manufactured products, which are of greatest interest to the poor states, such as garments.

Policies, which only generate inflow into the portfolio investment of the financial sector of the economy, with little impact on job creation, need to be revisited. Uneven liberalization is one of the reasons why industrialized states continue to capture the lion's share of the benefits from globalization. Developing states are absorbing the costs of adjustment to more open trade regimes, while northern protectionism excludes them from market opportunities. Current approaches to IMF-World Bank loan conditionalities are reinforcing this unequal trade bargain. It is certainly hard to imagine the governments of France or the United States accepting liberalization conditions in agriculture routinely applied in poor states. In as much as the level of openness means improvement in the poverty index, liberalization packages should be well tailored to suit the development targets of Third world states. In this regard, policies that will encourage investments in real assets, such as lowering of interest rates targeted for industrialists and entrants into the manufacturing sector, will in the long-run boost job creation and reduce poverty in South Africa.

Finally, while the case of South Africa alone cannot be used to generalizations on the impact of globalization on Africa, it aptly showcases that the prospect of the continent leveraging on the benefits remain bleak given South Africa's relatively developed first economy. If South Africa, in spite of its First World economic infrastructure and strength is not able to escape the vagaries of globalization such

as poverty and inequality, then much poorer African states would not fare any better and at best have a long way to go. Indeed, the prospects of African states leveraging on the benefits of globalization are bleak given the different levels of political development, trade opportunities, social and cultural barriers (Miyanda, 2000) that militate against regional integration in the continent, as well as the vexed question of unequal power structures and relations between developed and developing states which is marked by dependency of the latter on the former. An issue that again emerges from all of this study is the significance of governance as a critical factor in managing globalization in Africa. As Ihonvbere (1999) contends, African governments and their leaders have been unable to use integration as a scheme to fight dependence, underdevelopment, foreign domination and gross inequalities in the continent's relations with the rest of the world. And worst still, they have not been able to sell regional integration schemes to their own people, and like in the case of the Economic Community of West African States (ECOWAS), "regional integration has tended to deepen contradictions and conflicts within and between nations rather than serve as a tool for mobilization for self-reliance and growth" (Ihonvbere, 1999: 207). Indeed, as the Asian Tiger governments did, African governments need to be able to develop their own version of the rule book based on the specificities (history, economic and social values, and production techniques) of their states and peoples. They should be strong enough to develop, canvass and win concessions from developed economies particularly in the area of policy choices otherwise Africa will continue to be at the margins of a fast globalizing world. Also, since delinking from the global economy is not a viable option, regional integration within Africa should be vigorously pursued as part of Africa's own rule book of globalization. As Lipalile (2000: 305-306) argues, for Southern Africa, and indeed Africa, to survive in the current scheme of the global economy, it has to be active participants in the globalization process through active interventionism by government to enable equitable distribution of goods, benefits, service and international financial reserves.

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