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POVERTY, INCOME INEQUALITY AND ECONOMIC DEVELOPMENT

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ANNUAL SYMPOSIUM 2003

POVERTY, INCOME INEQUALITY AND ECONOMIC DEVELOPMENT IN NAMIBIA

Edited by Research Department

TABLE OF CONTENTS

PREFACE AND OVERVIEW

Preface

The fifth Annual Symposium of the Bank of Namibia on the topic Poverty, Income Inequality and Economic Development took place on August 22, 2003 at the Windhoek Country Club Resort. One of the objectives of the conference was to discuss the link between poverty and income inequality and their impact on economic development in Namibia.

It is important to point out that the Bank of Namibia supports and promotes economic policies that help to achieve sustainable economic growth, and which can reduce poverty and improve equity in the economy. On that basis, another main objective was therefore to identify effective policy strategies that assure that the benefits of the growth are shared equally among the population. For this reason, international experts in these fields have been invited by the Bank of Namibia to participate in the Annual Symposium and to share their knowledge and experiences with the view to contribute to the reduction of poverty in Namibia.

Overview and Reflections

Mr. Tom K. Alweendo, the Governor of the Bank of Namibia in his opening speech emphasized the importance of reducing poverty and achieving a more equal income distribution, so that everybody can benefit from economic growth. He emphasised that while, the interest of the Bank of Namibia is to promote economic policies that maintain monetary and financial stability and lead to economic growth, these policy should also be consistent with poverty alleviation and the improvement of equity.

Dr. Anne Epaulard from the International Monetary Fund presented a paper on Growth, Income Inequality, and Poverty Reduction in Namibia . The paper gives an overview of the key economic variables that describe the current status of poverty and income inequality in Namibia. Namibia has one of the highest GDP per capita among the Sub-Saharan African countries, but also has one of the most unequal income distribution in the world. The paper identifies three different scenarios for the evolution of income inequality and growth in Namibia. The plausible scenario, which takes into account a slow reduction of the inequality (the gini-coefficient of 0.63), shows that the annual growth rate needed to half the poverty rate within 10 years is 3.7 percent. These projections appear to be quite achievable. Finally, sectoral policies are believe to be more effective than overall macroeconomic policies in reducing income inequality.

In the paper "Economic Diversification, Income Inequality and Economic Development in Namibia , Prof. Samwel Wangwe from the Economic and Social Research Foundation, Tanzania, addresses the question how strategies that involve economic diversification can be formulated to reach a high and sustainable level of economic growth and simultaneously lead to poverty alleviation and a more equal income distribution. The paper concludes that economic diversification should be implemented on different levels, namely within the same sectors, into new sectors as well as in diversifying exports. Furthermore, Prof. Wangwe identifies productivity as a key contributor towards diversification and advises a shift from low to high productivity production systems. Special attention should be paid to the agriculture, the SME and the informal sector as well as to tourism, manufacturing and education.

Mr. R.L. Ritter (Economist), as a discussant, pointed out that economic diversification is a product of pursuing a policy of wealth creation through competitive advantages. He believes the objective rather should be to pursue competitive advantages and learning clusters within a framework of sustainable development. He further argues that Namibia has a small internal market and its future ability to grow will depend more on growing exports.

Prof. A. O. Akinboade from the University of South Africa presented a paper on Fiscal Policy, Income Inequality and Poverty Alleviation in Namibia . First, The paper acknowledges that Namibia has already made important strides in poverty reduction policies, which can be seen e.g. in the consistent fiscal spending on social services in several areas. The paper also gives a poverty profile of Namibia, revealing e.g. the fact that the vast majority of the poor lives in rural areas, and that the households headed by women are living in poverty more often than those headed by men. It is also affirmed that poverty is more pronounced, especially among the unemployed. The paper suggested that the tax policy could be considered and used as an instrument to achieve a more equal income distribution. A number of policy suggestions are made by the paper, which include the reforms of the school fee system, the health sector and the implementation of a revised social safety nets program. The discussant, John Steytler of the Bank of Namibia, complemented the paper for its detailed analysis on the role of fiscal policy. However, he cautioned that the analysis would be more meaningful if placed in the in the context of the Namibian economy.

GROWTH, INCOME INEQUALITY, AND POVERTY REDUCTION IN NAMIBIA
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The paper looks at poverty and income distribution in Namibia. Due to its highly unequal income distribution, Namibia has a higher poverty rate than one would predict just by looking at its per capita GDP. This paper considers three scenarios for growth and income inequality. In the most plausible scenario, in which the Gini coefficient slowly declines towards that of other lower middle-income countries, the aim of halving the poverty rate in 10 years could be achieved with a per capita GDP growth rate of about 3.7 percent (and only 1.4 percent if the horizon to halve the poverty rate is extended to 15 years).

The paper discusses economic policies that could be implemented to achieve these levels of growth and income distribution. For reducing income inequality, sectoral policies are needed that increase the assets of the poor (both physical and human) and that help them to participate in the economy.

I. INTRODUCTION

Since independence, Namibia s economy has enjoyed high economic growth and in recent years stable macroeconomic conditions. However, the economic growth and macroeconomic stability have not been enough to reduce the poverty rate. According to the best household survey available so far, the percentage of population living below the $1 a day international poverty-line was around 35 percent in 1994. One of the millennium development goals is to halve the poverty rate by 2015. The aim of this paper is to evaluate the economic growth, the change in income distribution, and the macroeconomic and sectoral policies that are needed for Namibia to reach this goal.

The paper is organized as follows. Part II of the paper gives a description of poverty in Namibia using various measures for poverty. Poverty and income distribution in Namibia are compared to that of other sub-Saharan countries as well as that of other lower middle-income countries. The third part of the paper presents three

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different scenarios for the reduction of income inequality over time in Namibia. For each scenario, we calculate the annual growth rate needed to reach the millennium development goals. The fourth part of the paper describes the main empirical evidence on the effect of macroeconomic and sectoral policies on economic growth and poverty reduction. It discusses the main aspects of the strategy for poverty reduction as presented in the Namibia s second development plan (NDP2).

II. OVERVIEW OF POVERTY IN NAMIBIA

Although Namibia s per capita income of US $2000 in 2001 is among the highest in Sub-Saharan Africa, its income distribution is skewed given that the Gini coefficient is 0.7, the highest in the world (National Planning Commission, 1996). As a result, by all measures the poverty rate is quite high. For example, using the international poverty line of $1 a day[2], the Namibia poverty rate was evaluated in the 1993/1994 Namibia household income and expenditure survey at 34.9 percent. This means that 34.9 percent of the population was living with less than the 1993 PPP equivalent of US $ 1 per day. The poverty gap, which measures the depth of poverty below this line, is equal to 14 percent. In the development millennium goals set by the United Nations, one of the objective is to halve the below $1 a day poverty rate (extreme poverty). There are other measures of poverty as well. For example, Namibia classifies a household as being relatively poor if it uses over 60 percent of its expenditure on food, and as being extremely poor if such expenditure exceeds 80 percent. Going by that definition, 35.8 percent of Namibian households were relatively poor, and 8.7 percent were extremely poor according to the 1993/1994 survey. Table 1 shows various measures for poverty in Namibia. These figures point out that the poverty rate is much higher in rural areas than in urban areas.

The dimensions of poverty vary by region. According to the Human Povery Inicator (HPI), which combines life expectancy, nutrition, illiteracy and access to water and health with income data, the poverty rate is the highest in Caprivi (39.6 percent of the population) followed by Ohangwena (34.2 percent), Omaheke (33.4 percent), Oshikoto (32.9 percent), and Kavango (32.6 percent). All other regions have an HPI below 30 percent. Yet, the index varies greatly among the remaining regions, as reported in Table 2, the lowest being Erongo (18.7 percent) and Khomas (19.7 percent).

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[2] The $1 a day poverty line refers to a poverty line defined at 1993 international purchasing power parity (PPP) prices. See Deaton (2003) for a survey of the pro s and the con s of the use of this international povertyline.

Comparing Namibia with Sub-Saharan African and Lower Middle Income Countries

Figure 1 shows how Namibia compares to other countries on poverty rate. The scatter plot shows how the $1 a day poverty rate is related to the per capita real GDP (measured by the real GDP in 1995 dollars at PPP prices). On average, the higher the GDP the lower the poverty rate. However, the figure for Namibia is away from this average pattern: countries with the same GDP per capita have lower poverty rates, and countries with the same poverty rate as Namibia have lower GDP per capita. Interestingly enough, there is an observation that is close to that of Namibia for the year of 1993: Botswana had in 1986 the same level of GDP per capita and the same poverty rate as Namibia in 1993. Seven years later, in 1993, Bostwana s poverty rate had declined to 23.5 percent (down from 33.5 percent in 1986).

Going through other dimensions of poverty (Table 3) we see that regarding most of the indicators, Namibia is doing better than the average sub-Saharan Africa countries but worse than the average lower middle-income country. Only 72 percent of the population has access to safe water (compared with 80 percent for lower middle-income countries). Life expectancy in Namibia is above the average for sub-Saharan Africa and infant mortality is less than that for the region, although it is almost twice that for the lower middle-income countries. Health status in Namibia has been eroded due to the high levels of HIV (20 percent pof the population compared with 8.2 percent for sub-Saharan Africa). The Namibia adult illiteracy rate (20 percent) is a half of that of sub-Saharan Africa, whereas the lower middle-income countries have 14.4 percent. However, this is bound to change since primary school enrollment percentage in Namibia is significantly higher than that for both sub-Saharan Africa and lower middle-income countries.

III GROWTH, INEQUALITY AND POVERTY REDUCTION: THREE SCENARIOS FOR NAMIBIA

A. Growth, Poverty Reduction, and Inequality: What We Know

Few would refute the statement that, on average, growth benefits the poor and that poverty reduction is a product of economic growth. Moreover, empirical studies agree that, on the average the income of the poor increase by the same amount as that of the other income groups in the process of growth.

Ravallion (2001) shows that, on average, the elasticity of the $1 a day headcount poverty rate to economic growth is about -2. However, looking beyond the average,

one can see that the efficiency of growth in reducing poverty varies greatly from one country to another. Using panel data across Indian states, Datt and Ravallion (2002) show that the elasticity of the $1 a day headcount poverty rate is around -1 and probably less (in absolute value) than that for the 1958—91 period. Ravallion (1997) shows that part of the cross-country variance for the elasticity of poverty with respect to growth is explained by inequality, with high inequality lowering the absolute value of the elasticity poverty rate to economic growth. Epaulard (2003) shows that the level of development (measured by the income or consumption per capita) and the Gini coefficient are good predictors of the actual elasticity of poverty to growth. In the absence of change in the income distribution, the higher the per capita consumption the more growth will reduce poverty, and the higher the Gini coefficient the less growth will reduce poverty.

A number of interesting empirical papers on poverty use the dataset put together by Deininger and Squire (1998). The main result is that the bottom quintile of the income distribution benefits from growth, although there is some uncertainty about the size of the effect. Dollar and Kraay (2001) report that, on the average, a 1 percent growth in per capita GDP translates into a 1 percent growth in the income of this population. However, Roemer and Gugerty (1997) find a relationship between the income of the bottom quintile and average income that is less than one-to-one. Ghura, Leite, and Tsangarides (2002) also show that the one-to-one relationship might not be as robust as the Dollar and Kraay results would suggest.

B.   Three Scenarios for Growth, Income Inequality and Poverty Reduction in Namibia

Namibia has one of the highest GDP per capita among Sub-Saharan African countries, but with a Gini coefficient around 0.7, it has also the most unequal income distribution in the world: much higher than 0.43, which is the mean of the Gini coefficient for the group of lower middle-income countries. What are the consequences of these two features for poverty reduction in Namibia?

In 1994 the below $1 a day poverty rate in Namibia was about 35 percent. What would be the economic growth needed to reduce the poverty rate to 17.5 percent (i.e., to halve the poverty rate)? Under the standard hypothesis that income distribution can be approximated by a log normal distribution, and given the Gini coefficient, one can evaluate the growth in per capita consumption needed to achieve this goal under different hypothesis for the evolution of inequality in

Namibia (see appendix). We consider three different scenarios regarding the evolution of income inequality:

. Scenario 1: No change in inequality: that is, the Gini coefficient stays at 0.7.

. Scenario 2: Rapid reduction in inequality. In this scenario after 10 years, the difference in the Gini coefficient between Namibia and other middle lower income countries is reduced by half. This means that at a 10-year horizon, the Gini coefficient is equal to 0.56.

. Scenario 3: Slow change in inequality. In this scenario, after 10 years, the difference in the Gini coefficient between Namibia and other middle lower income countries is reduced by a quarter. This means that at a 10-year horizon, the Gini coefficient is equal to 0.63.

Figure 2 presents the evolution of the Gini coefficient over a 22-year period in the three scenarios. In the first scenario, the annual growth of per capita consumption needed to halve poverty over a 10-year period is equal to 8.5 percent, and 5.5 percent if the goal is to halve poverty in 15 years (see Table 4). Between 1997 and 2000, Namibia s mean annual per capita GDP growth rate has hardly been above 0.4 percent. Thus, scenario 1 tells us that it is not likely that the goal of halving the $1 a day poverty rate will be met, either at a 10- or 15-year horizon, unless some changes occur income distribution.

In the second scenario, the annual growth rate of per capita consumption needed to halve the $1 a day poverty rate in 10 years is equal to 0 percent. This means that poverty is reduced not through growth, but rather only by transferring income from the rich to the poor. This scenario is unlikely as well, for there is not a single example in the world where poverty was reduced in the long run solely by transferring income from the rich to the poor and without any economic growth.

In the third scenario, in which the decline in inequality is slower, the annual growth rate needed to halve the below $1 a day poverty rate in 10 years is 3.7 percent, and if the goal is to halve the poverty rate by 15 years it is only 1.4 percent. In this scenario, the Gini coefficient decreases from 0.7 to 0.63 in 10 years, and to 0.60 in 15 years. This corresponds to a slow convergence towards the average Gini coefficient for lower middle-income countries.

How plausible is this evolution? Using the Deninquer and Squire (1998) database we can compute the mean annual change in the Gini coefficients observed between two consecutive comparable surveys. Using only observations with negative changes in the Gini coefficient, we calculate that the mean annual change in the Gini coefficient is -0.004, which corresponds to a change of -0.4 over a 10-year period and -0.6 over a 15-year period. If we look now at percentage changes rather than at absolute changes, for negative changes the mean annual relative change across countries is -1 percent, which corresponds to a 10 percent decrease over a 10 year period and corresponds exactly to the drop from 0.7 to 0.63 in scenario 3. Hence, although the decrease in the Gini coefficient in scenario 3 may look slow, the evolution of inequality is plausible.

Finally, we look at the evolution of the per decile income distribution in the three scenarios. Figure 3 presents the initial income distribution and the income distribution at a 10-year horizon for the three scenarios. In each scenario, the below $1 a day poverty rate is divided by 2 after 10 years. In the first scenario, in which the Gini coefficient stays the same, income of each decile increases by the same percentage (+8.5 percent per year). In the second scenario (fast reduction in inequality, no economic growth, pure redistribution), the income of the top decile is lower than its initial level. Finally, in the third scenario, income is higher than initial level in all deciles, the relative change in income is higher for the bottom decile than for the higher decile. However, the absolute change in income is higher for the top decile than for the lower decile of the income distribution.

The main lesson from these simple and rough simulations is that poverty in Namibia cannot be reduced significantly without a reduction in income inequality. In our simulations, the per capita growth rate required to achieve the objective of halving poverty in 10 or 15 years without a change in income distribution is simply too high (+8.5 percent per year over 10 years or +5.5 percent per year over 15 years). Under a reasonable path for inequality reduction (the Gini drops to 0.63 from 0.70 in 10 years), the annual growth rate needed to achieve the objective of poverty reduction drops to 3.7 percent per year (or 1.4 percent per year for 15 years and a drop of the Gini coefficient to 0.6 over the 15 year-period).

C.   Limits of the Analysis

The data for the evolution of growth and inequality reported in the previous section show what is needed to achieve poverty reduction in Namibia. However, it is true that they have been obtained under simple assumptions that could be challenged.

It is hence useful to review some important points that affect the link between growth, inequality and poverty reduction and thus the evaluation of economic growth needed to achieve poverty reduction.

National account data / household survey data

A well-known problem for poverty reduction analysis is that the variable needed to evaluate poverty rate and poverty reduction is consumption (or income) measured in households surveys. But, the evolution of consumption in household survey can be quite different from that of per capita consumption (or per capita GDP) reported in national accounts (see, for example, Deaton 2001, 2003, and Ravallion, 2003). There is a discrepancy between household survey observations and national account figures. Per capita consumption reported in national accounts is larger than the one reported in household surveys. This is due to underreporting of consumption by the rich households in surveys and to the fact that housing and banking services are left out of household surveys but are included in national accounts. Moreover, the gap between the two figures tends to widen as the economy develops. As a result, the growth rate in per capita consumption from national accounts needed to halve poverty is probably higher than the one reported in Table 4.

Consumption of services

Another well-known problem with household surveys is that they rarely cover consumption of certain services (or the option of using them) that are crucial for the well-being of the poor. The ubiquitous example of this coverage problem is a bus service that allows a poor woman to visit her relatives in the next village. Should the bus service be interrupted, the woman s well-being would decrease greatly but this decrease would not show up in most household surveys because valuing this service in the income (or the consumption) of the poor is both difficult and controversial. As a result, increase or decrease in the provision of public services to the poor impacts the well-being of the poor without modifying (at least on the short run) their income or consumption levels, leaving the poverty rate unchanged.

Income and consumption poverty / other dimensions of poverty

So far, our discussion on poverty reduction has focused on income or consumption poverty and neglected other dimensions of poverty. A number of empirical papers (Anand, 1991; Anand and Ravallion, 1993; Ranis, Stewart, and Ramirez, 2000; and Moser and Ichida, 2001) reached the conclusion that human development

indicators (excluding income) are significantly correlated with average income. However, one should be cautious when restricting the analysis of poverty reduction to that of reduction of income poverty, especially when monitoring policies aimed at reducing poverty. Because reliable household surveys are difficult and costly to collect, most countries have one every five years or so. Moreover, income and consumption are more difficult to compute than other dimensions of poverty, such as infant mortality, life expectancy at birth, illiteracy. As a result, at least on the short run, discrepancies between the evolution of the headcount poverty rate and other indicators of poverty may appear. The annual U.N. Human Development Index (HDI) combines income, literacy and life expectancy. Because the conceptual foundation of such a measure is weak, it cannot be used as a substitute of the poverty rate measured by household survey (see Kanbur, 2002). However, it can be useful to keep an eye on the evolution of HDI, along with that of the headcount poverty rate or the poverty gap.

Growth and poverty reduction: is there a trade-off?

Results presented in Table 4 underline the need for a relative high per capita growth rate over a long period to reduce poverty in Namibia. The model used to derive these results is quite simple and does not allow for the possibility of a trade-off between growth and poverty reduction. If there was a trade-off, it would be that when a country enjoys a high growth rate it is less efficient at reducing poverty for each percentage of growth. Epaulard (2003) proposes two different ways of testing for the existence of such a trade-off in a sample of 43 countries that enjoyed positive growth rates. The conclusions are that (i) there is no clear evidence that countries that are good at reducing poverty for each percentage growth do so at the expense of growth, and (ii) countries that are the most efficient at reducing poverty per percentage growth, given their initial distribution, exhibit higher growth rates as well. As for the growth needed in Namibia to reduce poverty, the results presented is Table 4 do not need to be adjusted upward.

IV.   STRATEGY FOR POVERTY REDUCTION IN NAMIBIA

The three scenarios presented in the previous section (and especially scenario 3) provide an evaluation of the growth and the changes in inequality needed to achieve the goal of halving poverty rate at a 10- or 15-year horizon. However, they do not provide any insights on the kind of macro and sectoral policies needed to allow for economic growth and poverty reduction.

A.   Macroeconomic Policies, Growth, and Poverty Reduction

Sound macroeconomic policies are necessary for growth, and in that sense, sound macroeconomic policies help reduce poverty. One would think that there might be additional channels through which macroeconomic policies could help reduce poverty. However, most of the empirical studies on poverty reduction have difficulties to finding these. For example, most of empirical studies conclude that there is no direct effect of macroeconomic policies on income distribution.   This view is challenged by Ghura, Leite, and Tsangarides (2002), who, when controlling for a large set of policy variables, show that inflation, along with life expectancy and secondary and primary schooling, might have a direct impact on the income of the lowest quintile. Moreover, there is a general finding that neither the degree of openness to trade (measured by the ratio of exports to GDP or the ratio of the sum of exports and imports to GDP) nor trade liberalization has a significant direct impact on the income of the bottom quintile once controlled for overall economic growth.

Inflation is bad for everyone, and even worse for the poor

After two decades of intensive empirical work on the relation between long-run growth and inflation, a consensus has emerged among empirical macroeconomists that there is a nonlinear relationship between growth and inflation. Under a certain level, inflation does not affect long-term growth, but for inflation rates above this threshold, there is a negative relationship between growth and inflation. Economists are now debating the level of the inflation threshold: there is evidence that it is higher for developing and transition economies than for industrial economies (see, for example, Khan and Senhadji, 2001).

Regarding poverty, this nonlinear negative relationship between growth and inflation means that medium and high inflation rates hurt the poor through their negative effects on growth. Nevertheless, there might be an additional channel through which inflation hurts the poor. The traditional argument is twofold. First, the poor are affected by inflation through the decline in their real wages owing to the rigidity of nominal wages. Second, because the poor have limited access to banking services, they cannot insulate their cash savings from inflation and thus suffer relatively more from inflation than wealthier people. This argument is often dismissed on the ground that the cash holdings of the poor are very small. Cardoso (1992) finds cash holdings by poor households in Latin America to be small. However, a study by Lim and Townsend (1994) argues that among Indian households, grain and cash represent the major forms of precautionary saving. A

study by Fafchamps, Pender, and Robinson (1995) on Zimbabwe shows that in 1994, when the inflation rate was about 25 percent, small investors were receiving a negative real return on their savings while large investors with access to the money market were receiving a positive real return.

Empirical results on the potential remaining effect of inflation on poverty, once controlled for the direct effect of economic growth on poverty, are mixed. Easterly and Fisher (2001) find a positive relationship between inflation and changes in the poverty rate, and Datt and Ravallion (2002), using panel data on poverty among Indian states, find that inflation matters to India s poor and attribute this effect to short-term adverse shocks on the real wages of unskilled labor. Allowing for non-linear effect of inflation on poverty changes, Epaulard (2003) shows that high inflation harms the poor even more than other segments of the income distribution.

Trade policies, growth, and poverty reduction

Winters (2000) proposes a general analytical framework to analyze the impact of trade and trade liberalization on poverty in which he distinguishes the effects that are likely to be channeled to the individuals through the private sector, income distribution, and the government. Clearly, the relation between international trade and poverty is complex. Moreover, it may take time before most of the poor directly benefit from it. So far, there is no empirical evidence of the existence of a link between trade and changes in poverty (Dollar and Kraay, 2001; Ravallion, 2001; Bannister and Thugge, 2001), just as there is no clear empirical evidence of the link between trade liberalization and economic growth (Rodriguez and Rodrik, 2000).

With the notable exception of monetary policy (through the effect on inflation), there is so far no clear empirical evidence that macroeconomic policies have any direct impact on poverty other than the one that is channeled through economic growth. It is likely that sectoral policies are better tools to achieve pro-poor growth. This is not to say that macroeconomic policies are irrelevant for poverty reduction, since good macroeconomic policies are needed for growth.

B. Achieving Pro-Poor Growth through Sectoral Policies

Education

Namibia s indicators for education seem as good as those of other lower middle-income countries (see Table 3) and are much higher than those for sub-Saharan countries. However, the decomposition of the UN s Human Poverty Index (see

Table 2) shows that the illiteracy rate varies significantly from one region to another, and it is clear that education is needed in poorest part of the country. The Poverty Reduction Strategy of Namibia explicitly spells out the objective of reducing regional disparities in education. Moreover, the Africa Competitiveness Report 2000/2001 points out that the lack of educated workers for the needs of firms may deter foreign investment in Namibia. Among a group of nine Sub-saharan countries[3], Namibia has the second worst mark regarding the availability of skilled workers (see Table 6) after Mozambique. Lack of skill workers is one of the main reasons why FDI flows are not higher in Namibia, a country that has otherwise a good potential to attract foreign investment (see Basu and Srinivasan, 2002). Another indication of the lack of skilled workers in Namibia is the large gap between the unemployment rates between skilled and unskilled workers. The unemployment rate for the labor force with some technical or professional training beyond the secondary level is only 4 percent, in marked contrast to the rate over 30 percent that applies to the rest of the labor force. It might be true that higher and technical education would not help the poor directly. It would nevertheless foster investment needed to achieve the kind of growth needed to reduce poverty.

Health

Anand and Ravallion (1993) show that the poverty rate and public spending on healthare most accurate than the mean income in explaining life expectancy at birth. Gupta, Verhoeven, and Tiongson (2001) also assess the positive impact of public health care spending on the poorest, even though they doubt that increasing public spending alone in the absence of economic growth will be sufficient to reach the Millennium Development Goals on health. Finally, Lopes (2002) show that the total amount of social spending helps explain outcomes on health indicators such as life expectancy at birth and infant mortality rate.

Table 7, from the World Health Organization (2000), shows that the overall performance of Namibia compares to other South-African countries. The Namibia health system ranks 168 among the 191 countries the report covers. This is not a good ranking, especially if you consider that Namibia ranks 66 when it goes to per capita health expenditure. This reflects the high level of inequality in access to health services in Namibia.

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[3]Namibia, Lesotho, Bostwana, Ethiopia, Swaziland, South Africa, Malawi, Mauritius, Mozambique.

The Namibia Poverty Reduction Strategy in NDP2 aims at (i) maintaining the current level of life expectancy at birth around its (low) current level (a real challenge given the high prevalence rate of HIV-AIDS among the population), (ii) reducing infant and under-five mortality rates, (iii) reducing the maternal mortality rate, (iv) reducing under-nutrition among the under-five age group from 17 percent to 8 percent, and (v) increase rural access to adequate sanitation from 30 percent to 50 percent.

Promotion of agriculture and rural development

Because, as in many other developing countries, rural poverty is very high, promotion of agriculture and rural development is the main instrument to achieve pro-poor growth. Moreover, rural development and promotion of agriculture are efficient at reducing poverty: studying poverty reduction in India, Datt and Ravallion (2002) found that higher farm yields and higher state development spending were the main source of poverty reduction in India from 1960 to 1990. The elasticities of the poverty rate to agricultural yields (-0.11) and development spending (-0.14) are highly significant and more or less identical across different states of India. This means that, on the average, a 1 percent increase in per hectare yield would reduce the headcount poverty rate (national poverty line) by -0.11 percent, and a 1 percent increase of per capita development spending would reduce the poverty rate by -0.14 percent.

The Namibia s poverty reduction strategy aims at increasing total agricultural output by 5 percent. This alone is not sufficient to reduce significantly rural poverty in Namibia. A much higher increase in agricultural production through higher yields is necessary to reduce rural poverty in Namibia. Moreover, the land reform should explicitly be designed to promote growth and poverty reduction.

Safety net

Safety nets designed for poverty reduction should ensure that these programs help insure the poor against negative shocks. Because of the low level of their assets and the absence of financial services to rely on, the poor cannot insure themselves from idiosyncratic or macro shocks. These shocks cannot be eliminated either. Moreover, because safety nets should not lower the participation of the poor in economic activities, they should concentrate on helping the elderly, the disabled and the children.

Subbarao (1998) studied Namibia s formal and informal safety nets. He pointed out the central role of the extended family in absorbing shocks between and within households. However, he found these informal safety nets to be insufficient at times of drought (macro shocks) and strained when unemployment, and the burden of children of AIDS-infected parents, are high. As far as the formal safety net is concern, Subbarao acknowledged the positive impact on the poor of the social pension, the disability grant, and child allowances, although he concludes that the efficiency of these programs could be much improved and be made more even across regions and between urban/rural populations. With the northern and the northeastern provinces underserved, he considered that decentralization could help rationalize the deployment of staff resources in social welfare. The Second National Development Plan (NDP2) was designed to improve the efficiency and the coverage of the formal safety net with the aim of 95 percent coverage of all Namibians that qualify for social assistance grants.

V   CONCLUSION

Looking at Namibia s poverty profile, we see that the prevalence of poverty in Namibia is high compared with that of countries with similar GDP per capita. This paper shows that this is related to the fact that the Gini coefficient (an index of income inequality) for Namibia is the highest in the world. Moreover, Namibia s social indicators are poorer than those of similar countries. Finally, there are huge disparities between regions within Namibia. The paper build three different scenarios for growth and the evolution of income inequality in Namibia at 10 year and 15 year horizons. It shows that the annual per capita economic growth rate needed to divide the poverty rate by two is very high (more than 8 percent) and is not likely to be achieved. When income distribution inequality decreases towards the level of income inequality observed in lower middle-income countries, less growth is needed to achieve poverty reduction. For example, even when the decline in the Gini coefficient is slow (the most plausible scenario) the goal of halving poverty at a 10-year horizon can be achieved with an annual per capita growth is 3.7 percent. While sound macroeconomic policies are needed to foster economic growth, reducing income inequality is better achieved by sectoral policies that help the poor participate in the economy, and agricultural and rural development policies that are more likely to reach the poor, who mainly live in rural areas.

Table 1: Poverty in Namibia (in percent)

	1$ a day poverty line 1/		2$ a day poverty line 1/		Namibia poverty line 2/		Human Poverty Index 3/
	Headcount	Poverty gap	Headcount	Poverty gap	Extremely poor	Extr poor or Relatively poor	HPI
Total	34.9	14.0	55.8	30.4	8.7	35.8	24.7
Urban					2.6	18.6	17.4
Rural					11.8	48.7	29.0

All figures are computed using NHIES 1993/1994. The Human Poverty Index also incorporate other data sources (see UNDP, 2000).

Sources: 1/ World Bank (2000); 2/ Namibia Central Bureau of Statistics (CBS) (1996), 3/ UNDP (2000)

Table 2: Human Poverty Index (HPI) for Namibia by region

	Non survival up to 40	Illite-racy	Under-weight	Pop. without access to safe water	No health facilities	Nutrition water & health	Over 80% income on Food (Extr. poor)	HPI-G
Region								
Caprivi	53.7	24.6	8.4	25.2	42.0	25.2	7.0	39.6
Erongo	25.7	11.5	4.6	0.3	27.0	10.6	7.1	18.7
Hardap	36.2	19.3	13.9	3.3	43.0	20.1	4.7	27.5
Karas	35.5	11.4	16.7	0.2	43.0	20.0	4.1	26.2
Kavango	38.5	26.9	17.8	34.6	38.0	30.1	19.6	32.6
Khomas	27.6	6.0	18.5	0.2	17.0	11.9	1.1	19.7
Kunene	28.7	35.7	4.2	10.2	47.0	20.5	11.3	29.6
Ohangwena	33.5	24.0	13.8	45.1	64.0	41.0	9.9	34.2
Omaheke	31.2	36.0	4.9	4.2	89.0	32.7	25.1	33.4
Omusati	34.0	17.5	9.0	50.5	38.0	32.5	9.0	29.7
Oshana	32.4	14.6	15.5	18.5	54.0	29.3	5.5	27.5
Oshikoto	38.6	18.1	16.2	21.0	68.0	35.1	9.0	32.9
Namibia	**33.5**	**19.0**	**12.0**	**17.1**	**45.0**	**24.7**	**8.7**	**27.1**

Source: UNDP (2000), page 155.

Figure 1: Comparing Namibia Poverty Rate with that of other Countries

**Headcount Poverty Rate (below $1 a day)
and Level of development (log of per capita GDP PPP $ 1995)**

Namibia 1993
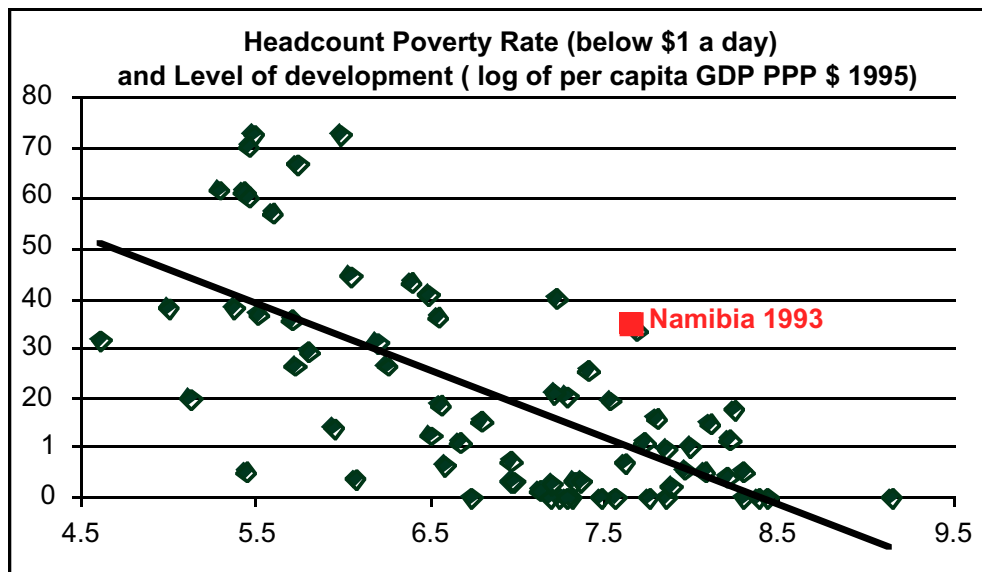
Figure 2: Evolution of the Gini coefficient in the three scenarios

Scenario 1: No change in the income distribution

Scenario 3: Slow convergence to the target Gini coefficient

Scenario 2: Rapid convergence to the target Gini coefficient

0.43 = Average Gini coefficient for lower middle income countries economies
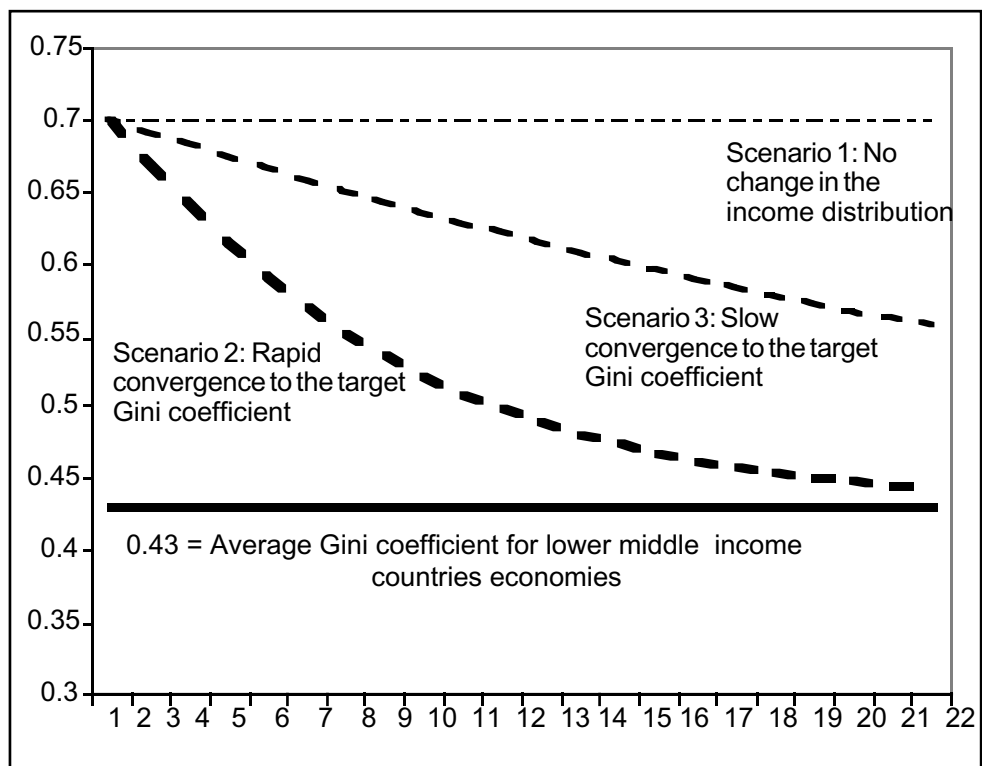
Table 3: Social indicators in Namibia, Sub-Sahara African and Lower Middle Income Counties

	Namibia	Sub-Saharan Africa	Lower Middle Income countries
GDP per capita (2001)			
In US $	1,960	470	1,230
Population characteristics			
Population density (per sq. km, 1997)	2	29	48
Urban population (percent of total, 2000)	30.9	35	45
Population age structure (percent of total, 1999)			
0-14 years	42	44	28
15-64 years	54	53	66
65 years and above	4	3	6
Population (2001)			
Total (million)	1.8	673	2200
Annual rate of growth (percent) 1990-2001	2.4	2.6	0.9
Health			
Life expectancy at birth (years, 1999)	50	47	69.2
Infant mortality (per 1,000 live births 1999)	63	92	33.9
Population per physician (1990-1999)	4.318	...	
Population per nursing person (1993)	339	...	
People living with HIV/AIDS (end 1990) percent of adult population	19.5	8.2	0.7
Income distribution and Poverty			
Poverty			
Gini coefficient	0.70	0.49	0.43
Poverty rate ($1 a day)	34.9	46.7	7.8
Labor force (1999)			
Total (in millions)	0.7	282	1.119
Female (percent of total)	41	42	43.2
Unemployment rate	38	...	...
Access to safe water			
Percent of population (1995-2000)			
Total	72	49	80.5
Urban	98	81	94.6
Rural	63	37	70
Education (1994-97)			
Percent of age group			
Primary school enrolment	131	78	120
Secondary school enrolment	61	27	70
Enrolment in tertiary education	9	3	9
Adult illeteracy rate(percent)1990	19	39	14.4

Sources: World Bank, World Development Indicators, 2002

Table 4: Annual growth and inequality needed to halve poverty at different horizons

	Scenario 1	Scenario 2	Scenario 3
10 year horizon			
Annual growth rate of per capita consumption	8.5%	0%	3.7%
Gini coefficient after 10 years	0.70	0.56	0.63
15 year horizon			
Annual growth rate of per capita consumption	5.5%	-1.3%	1.4%
Gini coefficient after 15 years	0.70	0.52	0.60

Figure 3: Per decile income distributions (initial and various scenarios)
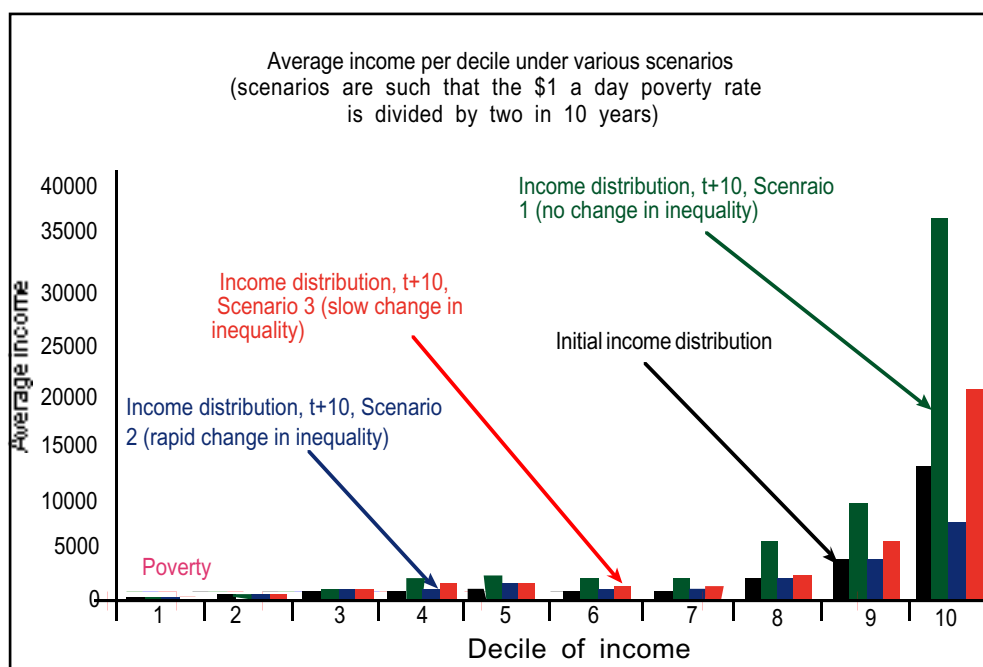
Table 5: Macroeconomic indicators from Selected Countries in Africa, 1985-99

	Botswana	Lesotho	Mauritius	Mozambique	Namibia-	Swaziland	Uganda
Real GDP growth (percent per annum)	7.4	4.8	6.3	6.0	5.5	5.8	6.4
Inflation (CPI; % per annum)	11.8	12.0	7.1	45.8	11.2	10.8	59.2
Gross fixed capital formation (percent of GDP)	27.3	47.4	25.8	20.1	18.9	26.0	13.5
Overall fiscal balance excl grants (percent of GDP)	7.9	-10.6	-3.8	-13.1	-5.7	-0.5	-11.0
Government spending on education (percent of GDP)	17.6	19.6	14.1	6.2	22.6	na	11.4
External current account balance excluding grants (percent of GDP)	6.5	-7.4	-1.8	-2.3	-10.8	1.2	-7.5

Source: Basu and Srinivasan (2002)

Table 6: Factors of competitiveness. Labor relations, productivity, skills (Mean-responses reported)

	Flexibility in determining hiring /firing practices 1/	Most important diseases or events affecting productivity: in 2000 (3 years ago) 2/	Enough educated workers for needs of firms 3/	Average days absent from work due to malaria 4/1	Most severe consequences to firm of AIDS epidemic 3/
Lesotho	4.0	Alcohol/substance abuse, 2.3 (2.6)	2.9	14	Time lost due to employees attending funerals, 2.7
Namibia	3.3	HIV/AIDS, 3.0 (3.6)	4.2	9.1	Time lost due to AIDS-related illness in employee, 2.4
Botswana	2.7	Malaria, 2.2 (2.2)	3.4	10.9	Firm's morale decreasing, 2.9
Swaziland	2.5	HIV/AIDS, 2.1 (3.1)	3.4	11.3	Time lost due to AIDS-rel. illness in employee, 2.9
South Africa	2.4	Violence, 2.7 (2.7)	4.0	7.2	Healthcare costs, 2.4
Ethiopia	4.7	HIV/AIDS, 3.3 (3.8)	3.0	13.5	Time lost due to AIDS-related illness in employee, 1.9
Malawi	4.8	HIV/AIDS, 1.8 (2.3)	3.2	11.6	Time lost due to employees attending funerals, 3.3
Mauritius	2.9	Alcohol/substance abuse 3.4 (3.4)	3.1	n/a	Healthcare costs, 1.3
Mozambique	2.9	Malaria, 1.9 (1.7)	5.1	13.8	Healthcare costs, 2.8

Sources: The Africa Competitiveness Report 2000/2001, World Economic Forum. CID
Note: 1/ 1=restricted/adverse, 6=flexible/favorable
2/ 1=strong impact/very important, 6=no impact/not relevant
3/ 1=strongly agree/very good, 6=strongly disagree/very bad
4/ Means reported

Annex I:

Under the assumption that the income distribution is log normal, the cumulative distribution function (F(x)) takes the familiar form:

$$F(x) = \frac{1}{\sqrt{2\pi\sigma^2}} \int_{-\infty}^{\ln x} e^{\frac{(t - \ln(c) + \sigma^2/2)^2}{2\sigma^2}} \, dt = \phi\left(\frac{\ln(x/c)}{\sigma} + \frac{\sigma}{2}\right)$$

where x is income and c is the distribution mean income, σ gives the dispersion of the distribution (the higher it is, the larger the income inequality), and ϕ is the cumulative density function for the standard normal distribution (the normal distribution that has a mean of zero and a standard deviation of 1).

The headcount poverty rate is simply defined by   where PI is the level of the poverty line.

Moreover, when the income distribution is lognormal, there is a simple relationship between the Gini coefficient and the dispersion of the income distribution:

$$Gini = 2\phi\left[\frac{\sigma}{\sqrt{2}}\right] - 1$$

Using these two relationships, one can compute the effect on the $1 a day poverty rate of both growth (a change in the per capita consumption c) and change in inequality (a change in the Gini coefficient). In case of Namibia, this simple model was calibrated using the data available for the year 1993 where the Gini coefficient was around 0.7 and the $ 1 a day headcount poverty rate equal to 34.9 percent.

Table 7: Health system attainment and performance in various African countries, estimates for 1997

	Health		Responsiveness		Fairness in financial contribution	Overall goal attainment	Health expenditure per capita in international dollars	Overall level of health	Overall health system performance
	Level	Distribution	Level	Distribution					
Botswana	187	146	76-79	111-112	89-95	168	85	188	169
Lesotho	171	164	145-147	148-149	89-95	173	123	186	183
Mauritius	78	77	56	3-38	124	90	69	113	84
Mozambique	180	190	189-190	175	38-40	185	160	168	184
Namibia	136	173	113	156	125-127	165	66	189	168
South Africa	160	128	73-74	147	142-143	151	57	182	175
Swaziland	164	140	108-110	110	156	164	116	184	177
Uganda	186	138	187-188	165	128-130	162	168	179	149
Zambia	188	171	132-135	171	155	174	148	190	182
Zimbabwe	184	98	122	166-167	175	147	110	191	155

Source: World Health Organisation (2000)

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