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# **Labour Markets and Social Frontiers**

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## Editorial overview

The underlying theme in this launch publication is socio-economic inequality and the dynamics that can either improve or prove detrimental to this fundamental issue. Discrepancies in living standards are a cause for concern for the general stability of South Africa, since excessive economic disparities may thwart economic growth and threaten macroeconomic stability. This is particularly true if these disparities manifest socially by, for example, age, population group and gender. High social inequality also questions the basic human rights ethos of South Africa's Constitution. Inequality indicates uneven economic participation as seen, *inter alia*, in poverty and hunger, high levels of unemployment, skewed skills profiles and inequitable access to productive resources.

The format adopted in this publication signals the overall approach of the series. It features different stages in a research process – from the probing of contemporary issues and empirical analysis to highlighting implications for policy and further research. This issue underscores inflation, income mobility, the diffusion of information and communication technologies and HIV/Aids as some of the critical factors in economic progress and the battle against socio-economic inequality. The different ways in which inflation and HIV/Aids affect the poor and non-poor are discussed against the backdrop of international experience. The spread of information and communication technologies (ICTs), on the other hand, offers a possible window of opportunity for extending economic participation.

This collection of research material starts with an article calling for more empirical research on the relationship between inflation and poverty. Although there is general consensus that the erosion of the purchasing power of poor households has more far-reaching implications than that of non-poor households, there is limited scientific research that unravels these dynamics over time. The article opens the debate by reviewing experiences in other countries and calls for empirical investigations into South Africa's current situation, as the globalisation of the economy intensifies.

The second article is a case study, using panel data on households in KwaZulu-Natal to analyse the economic and demographic dynamics of income mobility between 1993 and 1998. Conventional wisdom asserts that the success of any society should ultimately be measured in terms of vulnerable groups and those at the bottom end

of the social hierarchy. KwaZulu-Natal is one of the poorest provinces in the country. General upward income mobility is most needed in the poorest of provinces. The analysis decomposes income mobility outcomes of economic factors such as gain or loss of employment and income. Mobility effects of demographic changes such as household size and composition are also examined.

The next article attempts to link social mobility to overall economic inequality patterns. It explores various scenario outcomes of inequality, given the current level and incidence of HIV/Aids in South Africa. Researchers are challenged to examine the inter-generational transmission of factors that are likely to have a negative impact on the already high levels of inequality. The discussion is premised on the notion that economic growth prospects are partly dependent on the prevailing levels of inequality. Consequently assumptions used in predicting future macroeconomic outcomes of HIV/Aids should accordingly factor in intergenerational social mobility dynamics.

The fourth paper is a critical appraisal of current debates on the relationship between the diffusion of information and communication technologies (ICTs) and economic growth and other labour market trends such as employment and productivity. It also reviews various studies on factors that influence South Africa's capacity to absorb ICTs. Information on the role of ICT in ultimately broadening economic participation and mainstreaming, on the one hand, and fostering the country's competitive integration into the global economic system, on the other, cannot be overemphasised as areas for further research.

The overall argument in this issue is that demographic and economic variables, at household level, as well as macro-level factors such as inflation, ICTs and HIV/Aids can undermine the process of bridging the income divide. Further research to inform policy dialogue is required. In addition, the on-going scientific research and policy analysis on these and other related issues need to be accessible and to be brought to the attention of policy makers, business, labour and communities. It is for this reason that this series was initiated.<sup>1</sup> Contributions of articles to the series are therefore invited.

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<sup>1</sup> The closing box on p. 22 of this issue highlights the objectives underlying the series.

# Impact of inflation on the poor

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Poverty is an important development issue facing South Africa and other developing countries around the world. Likewise, inflation is a key issue as it affects a variety of economic variables in ways that are critical for international competitiveness, foreign investment, growth and, of course, poverty. The importance of both poverty and inflation is recognised through reforms implemented in the context of government's growth, employment and redistribution programme, which encompasses the monetary policy shift to inflation targeting.

A number of factors combine to determine whether or not a household can be defined as being poor. The existence of a regular-income earner may improve a household's chances of escaping poverty, as may remittances received from income earners outside the household. Income has also been found, internationally, to vary according to an individual's race, gender, location and education. However, one important economic variable, namely output prices, may have a significant impact on the welfare of indigent households.

Monetary and fiscal policy affect a wide range of macroeconomic and sectoral variables that may, in turn, influence the extent of poverty in a country. This requires from authorities a sensitivity to the implications that policy actions aimed at various economic and social objectives may hold for the poor. This is especially relevant for monetary policy that has low inflation as its primary objective, particularly as interest rates are the key determinants of a variety of other macroeconomic factors.

What are some of the linkages through which the extent and depth of poverty are affected by macroeconomic policy? This paper aims at presenting a brief overview of the literature on some of these linkages, which generally reflects much of the work on inflation and poverty. An approach less often utilised, namely that of analysing the role of inflation in eroding spending power, is also highlighted, leading to a possible

analytical framework for the investigation of this question in South Africa.

In a society with widespread poverty and inequality such as South Africa, it is important to understand the experiences of the poor. Poor households, like other households, are affected by changes in the macroeconomic environment, but may be even more vulnerable to price inflation than other households. Some households are in a better position to alter consumption patterns, in terms of quantity, quality or product, or to draw on previous savings when faced with rapid inflation. One of the main objectives of a study of this nature should be to determine the extent to which poor households are affected by inflation relative to other households. The period since 1994 is of particular interest, given the rapid economic changes occurring as South Africa is reintegrated into the international economy.

## Economic policy, poverty and inequality: International experience

Poverty and inequality are directly affected by employment (often correlated with output) and incomes, because increased employment and generally higher incomes help to lower the levels of poverty and inequality in a society. Accordingly, monetary policy can indirectly have an impact on the incidence of household poverty through its effects on these macroeconomic variables. However, since the outcomes of monetary policy vary over the long and short term, it is crucial to differentiate between the effects of monetary policies over these time frames. Furthermore, sweeping economic changes such as economic reforms or financial crises may lead to substantial changes in poverty and income distribution, necessitating rapid and focused responses from governments.

In the short term, the monetary authorities are able to raise output with expansionary policies, resulting in

greater employment levels and inflation. If the distribution of income remains unaffected, a cyclical expansion would directly lower the rate of poverty since average income would rise and all individuals would benefit equally from output expansion and higher employment. Romer and Romer find that income distribution may change as greater employment, labour force participation and real wages are likely to favour low-skilled workers, raising relative incomes and reducing inequalities.<sup>1</sup> However, this outcome would depend on the skills bias of the change in employment: if increased employment is concentrated in more highly skilled occupations, a reduction of income inequality would not be a likely outcome. This is of particular importance for developing countries such as South Africa. Unfortunately, the greater dependence of the poor on transfers means that, since transfers are less cyclical than wages, income inequality could worsen during an expansion.

Inflation has important distribution consequences for economic agents. Wages and transfers are eroded by rising prices, while unanticipated inflation redistributes wealth from creditors to debtors. Although declines in real income from wages and transfers do negatively affect the poor, in their role as net debtors the poor may benefit from inflation. However, monetary policy “cannot permanently reduce poverty and inequality by creating booms or preventing recessions”.<sup>2</sup>

Romer and Romer<sup>3</sup> found that, in the United States of America (USA) between 1969 and 1994, lower unemployment was associated with less poverty but did not seem to affect income distribution. By contrast, unanticipated inflation was related to a slight improvement in income inequality, by raising the income share of the poorest 20 per cent of households relative to other households. The authors contrast the weakness of their results with those of previous studies, which indicated a much stronger relationship between unemployment and income distribution. The difference in results can be attributed to the use of differing sample periods, since in the 1950s and 1960s there was rising unemployment associated with deteriorating income distribution, but this relationship was not present during

the 1970s and 1980s. However, the redistribution effect of inflation from creditors to debtors was found to be unimportant for the poor.

The study concludes that, over the long term, monetary policy that endeavours to achieve low inflation and stable aggregate demand is most likely to improve significantly the lot of the poor, based on international experience. High inflation has a negative impact on an economy, creating uncertainty and high effective rates of tax on capital, *inter alia*. This is detrimental to investment in all types of capital, including human capital, slowing growth and harming the poor in the long term. This is amplified by the fact that investment in human capital is one of the routes that the poor have open to them to mitigate poverty, and by the fact that lower investment reduces the capital stock, raising returns to capital higher than the returns to labour. Furthermore, unanticipated fluctuations in inflation and the macroeconomy may result in further redistribution.

There is generally a greater inequality in income distribution in those economies where average inflation and macroeconomic volatility are highest. However, the relationship between inflation and income distribution is non-linear.<sup>4</sup> Although lowering inflation from hyperinflation levels improves equality significantly, decreasing inflation further to very low levels has a barely noticeable impact on a country's Gini coefficient, an important measure of inequality. This means that monetary policy has a limited use in reducing inequality via this route. Volatile and increasing inflation was characteristic of the Venezuelan economy during and after its 1982 debt crisis. The inability of nominal wages to adjust quickly enough resulted in falling real wages throughout the economy, to the extent that by 1995, average real wages were 53 per cent lower than the 1982 levels.<sup>5</sup> This was clearly reflected in the near doubling of the poverty rate, from 26 per cent to 48 per cent, over the period.

A question that arises concerns the experiences of workers in the informal sector. Although the informal sector is generally characterised by low productivity

1 Romer, C.D., & Romer, D.H. 1998. Monetary policy and the well-being of the poor. *Paper presented at a Symposium on Income Inequality Issues and Policy Options*, which was sponsored by the Federal Reserve Bank of Kansas City, at Jackson Hole, Wyoming, August 27 – 29.

2 *Ibid.*, p. 175.

3 *Ibid.*

4 Bulir, A. 1998. Income inequality: Does inflation matter? *IMF Working Paper WPI/98/7*.

5 Mosconi, G.M. & Alvarez, C. 1996. *Poverty and the labor market in Venezuela 1982-1995*. No. SOC96-101. Inter-American Development Bank.

and hence by low wages for employment, it is not always the case that its workers are necessarily more vulnerable than formal-sector employees in times of rapid inflation. After the reversal of its adjustment policy in 1986, the Venezuelan government implemented an expansionary policy that led to high inflation. During the two years before the collapse of this policy, workers in the formal private and public sectors had a real wage deterioration of 1,8 per cent and 4 per cent annually, compared to an increase of 1,4 per cent annually in the informal sector.<sup>6</sup> Similarly, there was a decline in poverty in the early 1990s due to rising wages in the informal sector. Despite the lack of indexation in the informal sector, wage contracts in this sector may be of shorter duration than those in the formal sector, allowing more frequent renegotiations and thus affording these workers more opportunities to keep up with prices. However, it is highly unlikely that this would be a probable outcome, given the persistence of severe poverty in the informal sector, and the fact that this is not even representative of the Venezuelan experience in general.

Financial crises have been found to impact significantly on the channels through which poverty is affected. Relative to pre-crisis years, consumer price inflation and unemployment rose substantially in a sample of 65 developing countries undergoing episodes of financial crises.<sup>7</sup> This occurred together with a deterioration in poverty rates and poverty gaps,<sup>8</sup> although rather unexpectedly, it was the second-lowest income quintile, not the poorest, which suffered the largest declines in income. Poverty and income inequality were also adversely affected by output contractions following crises.

The macroeconomic channels by which poverty is impacted – inflation, growth and employment – are well documented, particularly in those countries that have undergone rapid and significant changes in economic conditions. Studies tend to focus on finding relationships between these macroeconomic variables and to observe changes in poverty and inequality measures. However, such studies tend to miss the finer details, such as the direct effect of inflation on raising the prices of consumer goods.

## Inflation and the poor in South Africa: An analytical paradigm

A unique way of looking at the impact of inflation on the poor relative to other groups is to construct a consumer price index for poor households and to compare it with a similar index for other households. Internationally, this method has not received much attention, although numerous studies have calculated inflation rates for the various demographic groups that may be more vulnerable to inflation. There is conflicting evidence regarding whether or not the poor actually do face higher rates of inflation. One USA study found that their “Poor Price Index” and “High Income Price Index” were well proxied by the general consumer price index (CPI), and another found that the poor faced higher inflation than other groups between 1967 and 1974.<sup>9</sup> A 1985 study by Kahn<sup>10</sup> with 1970 as the base year, found that in 1982 “there was a difference of almost 14 percentage points between the [CPIs of the] lowest and highest income groups”, and that the working poor and the unemployed were most vulnerable to inflation.

Given the many changes – economic, political and social – in South Africa since Kahn’s study, and knowing that similar changes have been found to affect incomes and poverty in other countries, it is timely to investigate how the poor have fared relative to the better-off, in terms of inflation. However, when undertaking such a study, it is crucial that the differences between the new findings and those in Kahn’s study should not be summarily attributed to the changes that occurred in the 1990s. Due to the varying causes of inflation and the numerous product categories through which price changes add to inflation, income groups will experience inflation to a varying extent over time. In periods when food inflation is high, for example, poorer groups tend to experience higher inflation rates. Therefore, the experience that an income group has with inflation is to a large extent specific to the associated economic circumstances and time period, and driven essentially by the goods and services the group consumes.

Interest in the calculation of price indices for various subpopulations began in the 1950s when Kenneth

6 Ibid.

7 Baldacci, E., De Mello, L. & Inchauste, G. 2002. Financial crises, poverty, and income distribution. *IMF Working Paper WP/02/4*.

8 The poverty gap is a measure of the ‘distance’ of poor individuals from the poverty line.

9 Kahn, B. 1985. The effects of inflation on the poor in South Africa. *Economic Learning Resources Series No. 5*. September. Cape Town: University of Cape Town. Also Perlman, R. 1976. Inflation and poverty. In: *The Economics of poverty*: 160-169. USA: McGraw-Hill.

10 Kahn, B. 1985. Op cit., p. 10.

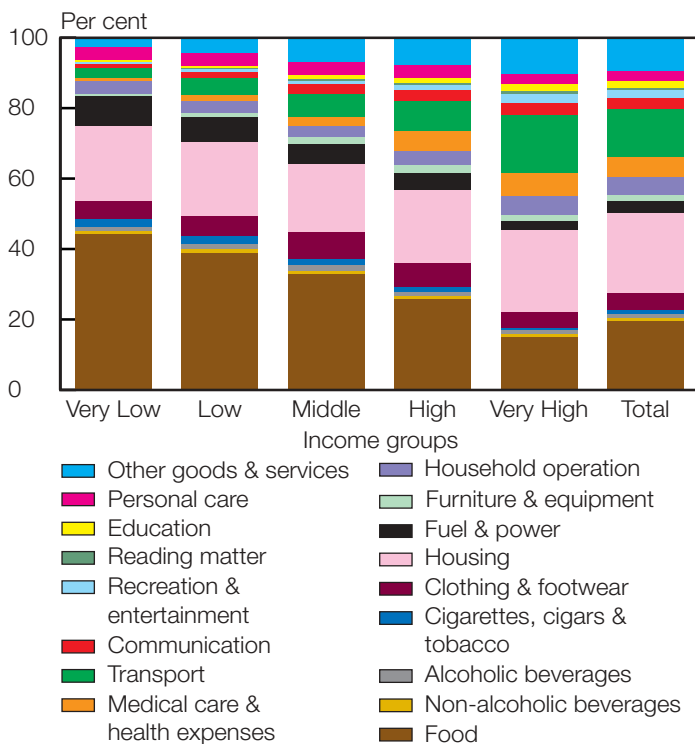
Arrow noted that individuals and households in different income categories would be likely to have differing patterns of consumption.<sup>11</sup> He mentions that it is now also “well established that demographic factors [such as the age, race, gender and educational attainment of the household head] exert an influence on consumption patterns net of price and income effects”.<sup>12</sup> Differing patterns of consumption imply different shares (or weights) of the various products in total expenditure, thus impacting on the actual inflation rates that each household experiences. However, there is still “no reason to expect that lower income groups will necessarily be faced with a higher inflation rate than any other group”.<sup>13</sup>

Differences in consumption patterns across income groups have been well documented for the USA, and there is a similar pattern in South Africa. Figure 1.1 shows the composition of annual household expenditure by quintile, with quintile one being the poorest 20 per cent of households according to expenditure, and quintile five being the

richest 20 per cent, according to Statistics South Africa's CPI weights for 1995. The difference in consumption patterns between the rich and the poor is clear.

The poorest quintile, the ‘Very Low’ income group, allocates over 46 per cent of its after-tax expenditure to food and beverages and 0,8 per cent to health, compared with 17 per cent and 6,5 per cent respectively for the ‘Very High’ income group. Higher income groups also spend relatively more on housing and transport than lower income groups. Middle-income groups tend to spend relatively more on clothing, and relative expenditure on furniture and equipment is highest among the groups in the top three quintiles. Communications, recreation and entertainment and other luxuries predictably consume greater proportions of total expenditure as income rises.

Figure 1.1: Composition of annual expenditure, by income group, 1995



Source: Statistics South Africa, 1995. Consumer Price Index 2000 Weights. (Historical metropolitan and other urban areas.) Statistical release P0141.5.

**Box 1.1: CPIX calculation and weights**

The consumer price index is calculated using weights derived from a breakdown of total expenditure into its various components, combined with detailed price data. The value of the index at any given time is to a large extent dependent on the weights applied, and these have changed since Kahn's 1985 study. The current weighting of the South African CPIX (the overall consumer price index, excluding interest rates on mortgage bonds), the SARB's inflation target, is presented below.

**Current weighting of the South African CPIX by expenditure category**

Product category	CPIX
Food and beverages.....	28,62
Cigarettes, cigars and tobacco.....	1,35
Clothing and footwear .....	4,06
Housing .....	11,57
Fuel and power .....	4,28
Furniture and equipment .....	3,15
Household operation .....	5,22
Medical care and health expenses .....	7,70
Transport .....	15,30
Communication .....	3,19
Recreation and entertainment.....	3,39
Reading matter.....	0,40
Education.....	3,77
Personal care .....	4,37
Other goods and services .....	3,63
<b>Total.....</b>	<b>100,00</b>

Source: South African Reserve Bank. 2002. *Monetary Policy Review*. April. Pretoria.

11 Garner, T.I., Johnson, D.S. & Kokoski, M.F. 1996. An experimental consumer price index for the poor. *Monthly Labour Review*, 119(9):32-42. September.  
 12 Idson, T. & Miller, C. 1999. Calculating a price index for families with children: implications for measuring trends in child poverty rates. *Review of Income and Wealth*, 45(2):3.  
 13 Kahn, B. 1985. Op cit., p. 8. This is confirmed by Hollister, R.G. & Palmer, J.L. 1972. The impact of inflation on the poor. In: Boulding, K.E. & Pfaff, M. (eds), *Redistributing to the rich and the poor*: 240-270. USA: Wadsworth Publishing Company.



A comparison of the expenditure compositions across income groups with those of all households (the 'Total' column) indicates that the official inflation rate is unlikely to represent accurately the experience of all groups in society, necessitating further investigation of the issue. The weighting for food and beverages in the CPI, for example, is 22,5, yet it accounts for 46 per cent and 17 per cent of total expenditure in the 'Very High' and 'Very Low' income groups respectively. Similarly, the CPI weighting for transport equals 13,65 though it ranges from 3,1 per cent to 16,5 per cent of total expenditure. It appears that the weights used in calculating consumer price indices are inherently biased, reflecting very closely the expenditure patterns of the higher income groups rather than those of the 'average household'. In fact, the current methodology followed in calculating expenditure weights means that the group in the top income quintile accounted for 71,3 per cent of the total weight in 2000, compared with 1,4 per cent for the group in the poorest quintile.<sup>14</sup>

## Conclusion

The adoption of inflation targeting has heralded a new era of monetary policy in South Africa. As the South

African Reserve Bank tries to attain its target range of inflation, it is crucial to understand how inflation actually impacts on the poor. Since Kahn's study, there has been no large scale effort to track the inflation experiences of the various income groups in South Africa and, although the experiences of other countries are useful, the implications of episodes of hyperinflation can be generalised only to a limited degree to our current situation.

If poor households face significantly different price inflation relative to other households, this would have important implications for the provision of benefits by government. These inflation rates could consequently be utilised in determining the extent to which recent changes in the levels of benefits have kept pace with price changes. The price indices generated in a South African study may furthermore provide the means to better deflate poverty lines for more accurate comparisons of poverty rates and other poverty indicators over time. A study of this nature would also enable the isolation of the key goods and services that drive each income group's rate of inflation, which might suggest policy options to government that could cushion vulnerable groups from the effects of inflation.

<sup>14</sup> Statistics South Africa, 1995. Consumer Price Index 2000 Weights (Historical metropolitan and other urban areas). *Statistical release PO141.5*.

# Income mobility and household dynamics in South Africa: The case of KwaZulu-Natal<sup>1</sup>

*Ingrid Woolard, Human Sciences Research Council*

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*Murray Leibbrandt, University of Cape Town*

This paper looks at the issue of income mobility in South Africa's most populous province, KwaZulu-Natal, for the period 1993 – 1998. The paper describes the extent of income mobility and then disaggregates the source of this mobility into 'demographic' and 'income' causes. It is found that KwaZulu-Natal has a high degree of income mobility – both upward and downward. When disaggregating the observed mobility, the finding is that demo-

graphic changes and employment changes are the most important determinants of mobility. Both are related to high unemployment (and the resultant high level of labour market churning) as well as to great demographic fluidity related to fertility and mortality.

The high levels of poverty and inequality in South Africa are obvious areas of concern for policy makers. A less

<sup>1</sup> This article is based on Leibbrandt, M. and Woolard, I. 2001. The labour market and household income inequality in South Africa: existing evidence and new panel data. *Journal of International Development* 13:671-689; and Woolard, I. and Klasen, S. 2002. Income mobility and household dynamics in South Africa. *Paper presented at the 27th General Conference of the International Association for Research in Income and Wealth*, Sweden, 18 – 24 August 2000.

discussed issue is that of income mobility – who is getting ahead, who is falling behind and who is standing still and why? Measuring the level of income mobility is complementary to measuring the level of income inequality in a given income distribution. Inequality measures the dispersion of income in any given time period whereas mobility measures how individuals or households move within the distribution between two time periods. Income mobility studies are therefore concerned with quantifying the movement of a *given* recipient unit (individual or household) from one point in the income distribution to another. This is of particular relevance in the South African context, as the reduction of poverty and racial disparities are some of the top priorities of the post-apartheid government. These priorities imply that the government was aiming at the process to increase mobility, with particular emphasis on enabling the upward mobility of previously marginalised Africans.<sup>2</sup>

Together with the documenting and interpreting of trends in income mobility, the sources of observed income mobility deserve closer inspection. In particular, the importance of two possible sources of mobility should be examined more closely. These are called demographic and economic events. Demographic events refer to changes in household size and composition, and economic events refer to changes in the incomes in that household. Among the economic events, a further distinction can be made between a change in employment, changes in the earnings of those who are employed, and changes in unearned incomes. Given the fluidity of household boundaries in South Africa and the prevalence of multi-generational households that can be affected by a variety of demographic shocks and high unemployment, demographic events and employment changes can be expected to play a significant role in accounting for mobility in South Africa.<sup>3</sup>

Here this framework is applied to equalised household incomes to measure the degree of mobility observed between 1993 and 1998 for African households in

KwaZulu-Natal. This paper focuses on the 1 003 African households in the KwaZulu-Natal Income Dynamics Study (KIDS) which collected follow-up data on households that had previously formed part of the 1993 Project for Statistics on Living Standards and Development (PSLSD) survey.

### Box 2.1: The KIDS data set

The KIDS survey, conducted in 1998, attempted to track all African and Indian households in KwaZulu-Natal that had been part of the 1993 Project for Statistics on Living Standards and Development (PSLSD) survey conducted by the Southern African Labour and Development Research Unit at the University of Cape Town. KwaZulu-Natal is South Africa's most populous province and has about a fifth of the country's population. Its social and racial stratification is similar to that of the country as a whole, making it a good case study. In particular, the province includes a wealthy metropolitan area (Durban) with poor townships surrounding it and a poor and largely rural former homeland (KwaZulu). Poverty and inequality in the province are relatively similar to the national level.<sup>4</sup> KwaZulu-Natal is atypical in one important respect, however: it is the province with the highest prevalence of HIV/Aids. This is likely to result in greater observed changes in household structure than might be the case in other provinces.

Data of this sort are referred to as "panel data" because the *same* households are interviewed in each round (or "wave"). One of the problems with panel data is that households may drop out between one survey round and the next because they refuse to continue participating or because they have moved and cannot be located. This is called sample attrition.

Sample attrition between the two survey periods in KIDS was surprisingly low: 85 per cent of Africans in rural areas and 90 per cent of Africans in urban areas who had participated in 1993 were traced and re-interviewed, despite the fact that the 1993 survey had not been planned as a panel study.

Most of the mobility literature concentrates on industrialised countries. The literature suggests that there may be a negative relationship between income inequality and income mobility. For example, in the United States (a country with a high level of social inequality) the increase in income inequality during the 1980s and 1990s was accompanied by low income mobility.<sup>5</sup> By contrast, Sweden, Norway and Denmark (which have

2 Government of South Africa. 1994. *White paper on Reconstruction and Development*. Pretoria: Government Printer.

3 Case, A. & Deaton, A. 1998. Large cash transfers to the elderly in South Africa. *Mimeo*: Princeton University, Woodrow Wilson School of Public and International Affairs, Princeton, New Jersey; also Klasen, S. and Woolard, I. 2001. Surviving unemployment without state support. Unemployment and household formation in South Africa. *CESifo Working Paper No. 533*.

4 Leibbrandt, M. & Woolard, I. 2001. The labour market and household income inequality in South Africa: existing evidence and new panel data. *Journal of International Development*, 13:671-689.

5 Barkhauser, R. & Poupore, J. 1996. A cross-national comparison of permanent inequality in the United States and Germany. *Review of Economics and Statistics* LXXIX(1): 1:10-18.

much lower income inequality than the United States) recorded greater income mobility over the same period.<sup>6</sup> Also, the increasing inequality in Sweden over the past 20 years appears to be correlated with lower income mobility during the same period.<sup>7</sup> Research on income distribution in Britain<sup>8</sup> indicates that the slow decline in income inequality since the 1980s has been accompanied by moderately high levels of mobility. Cantó-Sánchez<sup>9</sup> illustrates that this has also occurred in Spain: while income inequality in Spain was declining in the 1980s, mobility was increasing.

There are few studies on income mobility in developing countries and even fewer that are roughly comparable, mainly because of the paucity of panel data from developing countries. Some short-term panels exist, such as in the Cote d'Ivoire, but it is unclear to what extent observed mobility may simply be due to measurement error.<sup>10</sup> Generally, these studies suggest that income mobility in developing countries is somewhat higher than in industrialised countries, particularly at the bottom end of the distribution. They also seem to suggest increasing mobility over time in most places. Panel data from Peru, based on expenditures, indicate there was increased mobility in the 1990s.<sup>11</sup> Data from rural China point towards rapidly increasing mobility from very low levels in the 1980s.<sup>12</sup> These studies, as well as studies done in Chile and Malaysia, suggest that changes in employment and the demographic composition of households play a large role in explaining the existing mobility and in distinguishing between the transient and the chronic poor.

### The extent of household income mobility 1993 -1998

The mobility matrix (Table 2.1) shows the distribution of African households in KwaZulu-Natal by quintile<sup>13</sup> for 1993 and 1998. It can be seen that 56 per cent of the households that had been in the richest quintile in 1993 remained there in 1998 and another 23 per cent had moved down just one quintile. Likewise, 34 per cent of those that had been in the poorest quintile were still

there five years later and another 26 per cent had moved up just one quintile. It is immediately obvious that there is less mobility in the top and bottom quintiles than in the middle of the distribution. However, this is not surprising since the bottom (top) quintile can only stay in the same quintile or move up (down); also, the income brackets that make up these quintiles are much larger than those for the middle income groups. The figures suggest quite a high degree of income mobility among Africans in KwaZulu-Natal, certainly higher than that observed in most industrialised countries<sup>14</sup> but this mobility is also higher than that in rural China between 1978 and 1983, Malaysia between 1967 and 1976, and Peru in the 1980s and 1990s. It is quite similar, however, to rural China between 1983 and 1989 although the structure of mobility appears to differ somewhat.<sup>15</sup>

Table 2.1 Quintile mobility matrix for African households in KwaZulu-Natal, 1993-1998 (1003 households)

		1998 quintile					total
		1	2	3	4	5	
1993 quintile							
1		34,00	25,50	16,50	15,50	8,50	100
2		32,50	26,00	23,00	12,00	6,50	100
3		17,50	25,00	28,00	20,00	9,50	100
4		10,00	18,00	23,00	29,50	19,50	100
5		6,00	5,50	9,50	23,00	56,00	100

Key: ■ moved up  
■ moved down

Source: own calculations on PSLSD/KIDS data.

Table 2.1 indicates that a small number of households moved from the very top quintile to the very bottom quintile (or vice versa) over the five-year period between surveys. This is not unusual in panel data. For example, if the household experienced the death of the sole breadwinner, this could plunge them from the top to the bottom of the distribution. Similarly, a large windfall (such as a retrenchment package) in one of the two years could result in an unusually high transitory income in one of the rounds.

- 6 Aaberge, R., Bjorklund, A., Janti, M., Palme, M., Pedersen, P., Smith, N. & Wennemo, T. 1996. Income inequality and income mobility in the Scandinavian countries compared to the United States. *University of Stockholm Discussion Paper No. 98*. University of Stockholm.
- 7 Eriksson, I. & T. Petterson. 2000. Income distribution and income mobility – recent trends in Sweden. In Hauser, R. & I. Becker (eds). *The personal distribution of income in an historical perspective*. Berlin: Springer:158-176.
- 8 Jarvis, S. & Jenkins, S.P. 1998. How much income mobility is there in Britain? *Economic Journal*, 108:428-443.
- 9 Cantó-Sánchez, O. 1998. Income mobility in Spain: how much is there? *Mimeograph*. European University Institute. Florence.
- 10 Deaton, A. 1997. *The analysis of household surveys*. Baltimore: Johns Hopkins University Press.
- 11 Fields, G.S. 2001. *Distribution and development: a new look at the developing world*. Cambridge: MIT Press.
- 12 Nee. 1994. The emergence of a market society: changing mechanisms of stratification in China. *Working Papers on transitions from State Socialism*. 94.1 Ithaca: Cornell University.
- 13 Quintiles are numbered from 1 for poorest to 5 for richest.
- 14 Jarvis, S. & Jenkins, S.P. 1997. Low income dynamics in 1990s Britain. *Fiscal Studies*, 18:1-20.
- 15 Ibid.

## The determinants of welfare changes

Table 2.2 considers which is the biggest contributing 'event' associated with a movement into poverty (where poverty is defined as having an income of less than R212 per adult equivalent per month in 1993 terms).<sup>16</sup> First, the percentage change in the numerator and denominator between 1993 and 1998 is used for determining whether the change in adult equivalent income<sup>17</sup> is the result of a demographic event or an economic event. Clearly, there may be cases where, for instance, income fell *and* the household size increased – in these cases only the bigger of the two effects is recorded.

Table 2.2 Main event associated with the movement of a household *into* poverty (129 observations)

Main event	Percentage of households
Fall in money income as result of:	
<i>Demographic events</i> .....	28,7
<i>Income event, change in income from:</i>	
Head losing job .....	18,6
Fall in head's labour earnings .....	7,0
Other family member losing job .....	15,5
Fall in other household members' labour earnings	4,7
Fall in remittances .....	9,3
Fall in non-labour income of head/spouse .....	5,4
Fall in non-labour income of other household members .....	0,8
Fall in self-employment income .....	4,7
Fall in farm income .....	5,4
<b>Total</b> .....	<b>100</b>

Source: own calculations on PSLSD/KIDS data.

Table 2.2 shows that more than a quarter of the households that slid into poverty did so because of a change in demographic composition rather than because of a fall in income. However, the majority of households (71,4 per cent) became poor because of a fall in income. For these households it is then determined what type of income event had the greatest (absolute) impact on household earnings. For nearly half of the households those income changes were associated with job losses. However, a significant number of households fell into poverty because of a decline in remittance income, non-labour earnings (usually the loss of a state pension or grant), a drop in earnings, or a decline in earnings from small-scale agriculture.

<sup>16</sup> This is a relative poverty line that is chosen so as to classify the poorest 40 per cent of households "poor" in 1993.

<sup>17</sup> See Box 2.2.

Table 2.3 lists the types of events associated with a movement out of poverty. One in every five households (19 per cent) escaped poverty as a result of a shedding of household members. However, as in the case of movements into poverty, labour market activities were the most common reason for a significant change in a household's well-being. Again, getting a job is much more important than changes in earnings for movements out of poverty. This is not surprising since an additional job is likely to provide a much larger change in earnings than incremental wage increases. A significant proportion of households moved out of poverty because of an increase in state support or other non-labour income.

Table 2.3 Main event associated with the movement of a household *out of* poverty (223 observations)

Main event	Percentage of households
Rise in money income as result of:	
<i>Demographic events</i> .....	19,3
<i>Income event, change in income from:</i>	
Head getting a job .....	14,4
Increase in head's labour earnings .....	5,4
Other household member getting a job .....	17,0
Increase in other household members' labour earnings ..	9,0
Increase in remittances .....	9,4
Increase in non-labour income of head/spouse .....	7,6
Increase in non-labour income of other household members .....	3,6
Increase in self-employment income .....	9,9
Increase in farm income .....	4,5
<b>Total</b> .....	<b>100</b>

Source: own calculations on PSLSD/KIDS data.

Altogether, demographic events and employment changes account for more than 60 per cent of mobility out of poverty, and over 50 per cent into poverty. Clearly, rapidly shifting household dynamics (partly as a likely consequence of the HIV/Aids pandemic) and employment changes in a situation of mass unemployment are the biggest determinants of mobility in this economy.

Given the importance of demographic and employment changes for movements into and out of poverty, the absolute changes in income can be examined more generally in response to demographic and employment events.

The tables that follow consider some of the demographic and labour market covariates of these absolute income changes.

### Box 2.2: Adult equivalent income

The number of adult equivalents in the household were calculated by using the formula:

$$\text{Adult equivalents} = (\text{number of adults} + 0,75 \times \text{number of children})^{0,9}$$

Adult equivalent income is then defined as total household income divided by the number of "adult equivalents" in the household, that is,

$$\text{Welfare} = \text{adult equivalent income} = \frac{\text{household income}}{\text{adult equivalents}}$$

Therefore, changes in an individual's well-being arise through changes in money income (of one's own or other household members, via the numerator) which could be called economic events and/or changes in household composition (via the denominator) which we refer to as demographic events. This distinction between the welfare changes resulting from *economic events* and *demographic events* is often not considered but is of considerable relevance from a policy point of view. The economic events can be further broken down into events that relate to changes in income sources (e.g. through a change in employment status, and changes in the sources of non-labour income) and changes in existing income sources.

To reduce the false reporting resulting from minor measurement error and from focusing only on significant income changes, a household is only considered to have "moved ahead" (or "fallen behind") if household adult equivalent income increased (or decreased) by at least 10 per cent in real terms over the period.

Absolute income mobility of households due to the change in household size is reflected in Table 2.4. Few households (20 per cent) remained the same in size and half of the households grew or shrank by two or more persons. Not surprisingly, the households that grew were the least likely to get ahead since the additional persons were usually children or adult dependants unable to support themselves or contribute to overall household income. Households that lost members were generally better off than before, although in some cases the loss of economically active members led to a reduction in household income. A significant number of the households that added members were able to move ahead, as it clearly depends on what type of members joined (income earners or dependants).

Table 2.5 shows that households headed by a person over the age of 60 were the least likely to have experienced a loss of income; in fact, more than three in every five of these households 'got ahead'. The

Table 2.4 Absolute change in real adult equivalent income by change in household size

	Change in household size				
	Lost 2 or more persons	Lost 1 person	No change	Gained 1 person	Gained 2 or more persons
Got ahead	69,4	65,2	56,5	49,7	46,1
No change in income*	5,0	5,4	15,2	6,7	6,3
Fell behind	25,6	29,5	28,3	43,6	47,7

\* Households whose (inflation-adjusted) income in 1998 was within 10 per cent of their 1993 income

Source: own calculations on PSLSD/KIDS data.

households relied heavily on state support, which is not only a secure form of income, but has increased appreciably in real terms since 1993. Households with a head aged in the 40s were the most likely to have had a fall in income, largely related to worsening employment prospects. This group is also most likely to be unable to work as a consequence of Aids. Among younger people, the picture that emerges is somewhat brighter. Though poor employment prospects worsened incomes, improved earnings due to higher education and more opportunities for Africans in the post-apartheid period might have offset this.

Table 2.5 Absolute change in real adult equivalent income by age of household head in 1993

	Age of household head					
	<30	30-39	40-49	50-59	60-69	70+
Got ahead	47,83	57,49	45,81	62,00	60,87	61,95
No change in income*	13,04	4,79	8,37	6,50	8,21	9,73
Fell behind	39,13	37,72	45,81	31,50	30,92	28,32

\* Households whose (inflation-adjusted) income in 1998 was within 10 per cent of their 1993 income

Source: own calculations on PSLSD/KIDS data.

It is also interesting to note that female-headed households had a higher propensity to move ahead than male-headed households (table not shown). This is probably mostly because of the better prospects for households that are often headed by female pensioners.

Not surprisingly, households where additional people obtained employment were the most likely to experience upward income mobility (Table 2.6). Nevertheless, some households that gained workers actually had a decline in adult equivalent income. Many of these households had an increase in household size which more than compensated for the additional wage income. This is probably related to the fact that African households that are successful in securing employment will attract unemployed relatives who have been less fortunate, a process that has been analysed in greater detail in Klasen and Woolard.<sup>18</sup>

Table 2.6 Absolute change in real adult equivalent income by change in number of employed

	Change in the number of employed persons in the household				
	Lost 2 or more jobs	Lost 1 job	No change	Gained 1 job	Gained 2 or more jobs
Got ahead	30,3	44,6	54,7	71,5	79,8
No change in income*	6,6	7,3	9,8	5,7	3,6
Fell behind	63,2	48,0	35,6	22,8	16,7

\* Households whose (inflation-adjusted) income in 1998 was within 10 per cent of their 1993 income

Source: own calculations on PSLSD/KIDS data.

Table 2.7 shows the effect of a change in the number of unemployed household members. Clearly, this is related to the change in the number of employed members, but also relates to changes in household membership and to movements in and out of being economically inactive.

Table 2.7 indicates that shedding unemployed members (through their finding jobs, dying or moving to other households) was a strong indicator of 'getting ahead'. Interestingly, the result of an increase in the number of unemployed members was a roughly similar number of households that got ahead instead of falling behind. Many households which gained workers also gained unemployed members, either

Table 2.7 Absolute change in adult equivalent income by change in number of unemployed

	Change in the number of unemployed persons in the household				
	2 less unem played	1 less unem played	No change	Gained 1 unem played	Gained 2 or more unemployed
Got ahead	78,00	66,25	54,41	50,24	45,10
No change in income*	3,00	7,50	9,12	8,21	7,19
Fell behind	19,00	26,25	36,47	41,55	47,71

\* Households whose (inflation-adjusted) income in 1998 was within 10 per cent of their 1993 income

Source: own calculations on PSLSD/KIDS data.

because new unemployed members attached themselves to the household or because previously inactive household members were encouraged to seek work.<sup>19</sup>

### Concluding comments

A fairly high degree of mobility was found among African households in KwaZulu-Natal, compared with industrialised and most developing countries. Demographic events, particularly changes in household size, as well as changes in employment status are the predominant influences on mobility for Africans in post-apartheid South Africa. Given high unemployment and, therefore, great uncertainty about the labour market among many workers, as well as rapidly shifting household boundaries to cope with this uncertainty, it is not surprising that mobility in South Africa has been fairly high.

The univariate analyses show that households fared best if they increased the number of workers, reduced the number of unemployed, and shed other household members. But it is also clear that such households are few and far between, as households which were successful in one of these dimensions typically attracted new members who dragged down the household in other ways. Clearly, many demographic events are not exogenous shocks but endogenous responses to the fortunes of households that shed and receive members.

<sup>18</sup> Ibid.

<sup>19</sup> Ibid.

Elsewhere<sup>20</sup> multivariate techniques were used to examine the relative individual effects of the different covariates of mobility. The multivariate analysis confirms the importance of demographic and employment effects.

Three poverty traps that hinder the upward mobility of the poor were identified. These relate to large initial household size, low initial levels of education and low

initial participation in the labour market. Helping those who are trapped to participate in the opportunities generated in the new South Africa will be the great challenge for policy makers.

20 Woolard, I. & Klasen, S. 2002. Income mobility and household dynamics in South Africa. Paper presented at the 27th General Conference of the International Association for Research in Income and Wealth, Sweden, 18 – 24 August 2002.

## Income inequality prospects with HIV/Aids – a social dimension

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The macroeconomic impact of HIV/Aids in South Africa continues to preoccupy researchers, investors and policy makers alike. The dearth of empirical information that would quantify the risk levels and incidence of the epidemic in South Africa's population further complicates the challenge for analysts. The assumptions about the current and future prevalence and incidence of HIV/Aids are as varied as the sheer volume of the existing literature. Nevertheless, significant strides have been made and there have been consistent findings regarding the prevalence of HIV/Aids. More needs to be done, however, about the incidence of the disease at a micro level and the likely macroeconomic outcomes.

Studies on intergenerational social mobility<sup>1</sup> note that, over the long term, increasing numbers of children enjoy a better upward social mobility than their parents, as societies evolve under 'normal' conditions. The entry of HIV/Aids into the picture is likely to introduce unprecedented patterns of social and economic mobility and inequality in South Africa, given the exceptional prevailing legacy of gender and other social polarisation created by unequal income levels, access to services, education, employment, etc. Bonnel<sup>2</sup> asserts that HIV/Aids is more of a development crisis in that it affects a country's physical, human and social capital. Therefore, the feedback effects could magnify the

adverse impact of HIV/Aids on economic outcomes to a greater extent than conventional wisdom currently predicts. Deeper insight is required into the extent to which intergenerational transmission acts as a feedback channel which might counteract the 'normal' upward direction of social mobility, thereby worsening the existing economic inequality.

The purpose of this article is to stimulate debate and systematic research on the extent to which HIV/Aids, if left unchecked, is likely to exacerbate the current high levels of inequality in South Africa through inter-generational pass-through effects.

### HIV/Aids and inequality in South Africa

Inequality has become more prevalent throughout the world and South Africa features among the countries that have recorded a significant increase in inequality from the 1950s to the 1990s. In a study conducted by the World Institute for Development Economics Research, United Nations University, it was found that, of the 73 countries sampled, South Africa was one of the 15 developing countries whose income inequality had escalated between the 1950s and 1990s.<sup>3</sup> By contrast, Brazil had managed at least to maintain its income disparity at a constant level over the same period. The two

1 For example, Aldridge, S. 2001. *Social mobility*. Performance and Innovation unit. Admiralty Arch. London.

2 Bonnel, R. 2000. *Economic Analysis of HIV/Aids. Background Paper*. World Bank, Washington D.C.

3 Cornea, G.A. and Court J. 2001. *Inequality, Growth and Poverty in the Era of Globalisation*. United Nations University/World Institute for Development Economics Research (WIDER). Helsinki.

countries are known to be the nations with the highest income inequality in the world until the late 1990s.<sup>4</sup>

Although South Africa's long-term economic growth and its labour absorption capacity are still at inadequate, lacklustre levels, some degree of upward mobility is evident, largely due to government's service delivery programmes under the aegis of its 1994 Reconstruction and Development Programme (RDP). The South African Advertising Research Foundation recently released a Development Index which shows that there has been an improvement in the living standards of South Africans, attributable largely to RDP initiatives in the provision of housing and the reticulation of water and electricity. Employment creation is the only area that shows deterioration.<sup>5</sup> The same report finds that the proportion of the population in the lowest income segment (Living Standards Measure 1) dropped from 20 per cent in 1994 to 5 per cent in 2001. With the advent of HIV/Aids, however, there is likely to be a reversal of these notable achievements, especially in the current context of low economic growth and high unemployment.

Over and above the stubbornly high levels of inequality by international standards, South Africa also faces some of the world's highest HIV/Aids prevalence rates. An average of one in every four (24,8 per cent) pregnant women is infected with HIV/Aids.<sup>6</sup> South Africa's HIV/Aids affected and afflicted comprise broadly two polarised sectors of society, and the varying impact of the pandemic on these two groups could widen the gulf even further. As explained by the Jaipur Paradigm (see Box 3.1), the country's high levels of income inequality provide the basic ingredients for the accelerated spread of HIV/Aids. Numerous studies agree that social and economic inequality largely explain the high prevalence levels of HIV/Aids in South Africa. Indications are that it is those at the lower levels of the social hierarchy who are apparently more prone to infection. These tend to be African women,<sup>7</sup> probably living in below-standard neighbourhoods such as the 'informal' settlements, and they largely reside in the poorer provinces. Case studies<sup>8</sup> also reveal that it is mainly the unskilled or semi-skilled who are more vulnerable to infection.

### Box 3.1: The Jaipur Paradigm

In 1995, at a workshop in Jaipur, India, a conceptual model was developed to explain why some countries and regions have seen HIV spread uncontrollably, whereas other areas have much lower rates. This model is known as the Jaipur Paradigm.

The Jaipur Paradigm indicates that income levels and social cohesion are the two factors that can explain how HIV spreads. Social cohesion refers to control in society through religious, moral or political leadership.

According to this paradigm, many parts of sub-Saharan Africa have a high prevalence of HIV because they are poor and exhibit relatively less social cohesion. There are, however, lower income countries, such as Senegal, where HIV rates are much lower owing to stronger social cohesion, in this case based on the impact of religious bonding and good governance.

In the relatively richer communities of the world, where there are high levels of social coherence, it is predicted that fewer people will succumb to HIV/Aids.

It is predicted that countries such as South Africa, Namibia and Botswana will have an accelerated high prevalence of HIV, primarily because of their low levels of social cohesion and, although their levels of income are relatively high in the African region, the level of income inequality may be a contributory factor.

Source: Barnett, T. and Whiteside, A. The Jaipur Paradigm, HIV/Aids, Society and Economy. [www.rnw.nl/humanrights/zimbabwe/html/jaipur.html](http://www.rnw.nl/humanrights/zimbabwe/html/jaipur.html) (Accessed on 8 August 2002).

The next section presents a framework mapping the issues and dynamics that are relevant to analysing the intergenerational pass-through effects of HIV/Aids on inequality. Particular attention is given to the possible pathways for future populations, roughly segmented into the upper and lower ends of the social hierarchy.

### Inequality and intergenerational transmission among affected groups

It is generally agreed that HIV/Aids will have a severe impact on the South African population, from the micro-economic and social perspectives. There is consensus that the impact of the pandemic has already begun and will become more clearly manifested over time. It appears that because of the current status of the pandemic, most of the projections and impact analyses

4 SARB. 2002. *Labour Markets and Social Frontiers*, Number 1. March. Pretoria.

5 South African Advertising Research Foundation. 2002. *Development index*. Johannesburg.

6 Department of Health. 2002. *Summary report – National HIV and syphilis sero-prevalence survey of women attending public antenatal clinics in South Africa, 2001*. Pretoria.

7 Statistics South Africa. 1998. *Women and men in South Africa*. Pretoria.

8 Morris, C., Burge, D. and Cheevers, E. 2000. Economic impact of HIV infection in a cohort of sugar mill workers in South Africa. *Journal of South African Economics*, 68 (5).



have not adequately taken into account the longer-term, socially determined intergenerational effects.

Macroeconomic analysts tend to predict limited, short-term negative impact of HIV/Aids on aggregate outcomes such as economic growth.<sup>9</sup> There is general silence on assumptions regarding the pass-through effects on social cohesion and inequality from the end of current generations – which are likely to become worse, without the necessary intervention – to the initial conditions for the next generation. The role of inequality in fuelling the spread of the pandemic has been well researched. By contrast, researchers have tended to give less attention to the mechanisms through which HIV/Aids, if left unchecked, could drive or exacerbate income inequality. Various studies do, however, examine various HIV/Aids outcomes, which are linked to the dynamics of inequality. Bonnel (see footnote 2), for instance, found there were contradictory effects such as the relative rise in the wage levels of skilled labour on the one hand, and the greater probability that children in poorer affected households would be taken out of school and therefore be destined to earn lower incomes as adults, on the other. JP Morgan Equities Limited<sup>10</sup> also anticipates worsening inequality due to HIV/Aids. Its *Monthly Update* estimates that the HIV/Aids exposure score has the highest rating in the retail sector owing to a more polarised income distribution. However, Greener et al.<sup>11</sup> found that, in the case of Botswana, income inequality would remain constant and be unresponsive to HIV/Aids.

Whiteside and Barnett conceptualise the cycle of the disease as consisting of four ‘waves’ starting from the HIV infection wave, the tuberculosis wave, the Aids illness and death wave and, finally, the wave of impact. This last wave includes household poverty and orphaning.<sup>12</sup> Without adequate intervention to curb this scourge, the wave of impact will manifest through drawn-out direct and indirect means. Children are likely to be infected themselves (through mother-to-child transmission), to be orphaned or, in the case of lack of family networks, to become heads of households. Children who are directly or indirectly affected are destined to be tomorrow’s adults, citizens, producers and consumers. The chances for the children to acquire enablers such as a good education, proper nutrition and health care as well as

good shelter with the necessary amenities, all depend partly on what happens during the early stages of their development and transition to adulthood.

It is the last wave – the wave of impact – that can provide the framework for understanding and predicting the likely ‘feeders’ of future inequality outcomes. How, for instance, could orphaning predicate the social standing of such children and their chances for self-improvement given the fact that poorer households tend to be hardest hit by the epidemic?

A dynamic link is proposed between Whiteside’s and Barnett’s fourth wave of impact and the onset of the life cycle of the next generation. All else being equal, it could be expected that the epidemic proportions of the disease would have a significant impact on the social growth path of subsequent generations. However, a different, more positive picture could emerge if significant interventions were made to ensure that there would be social safety nets to provide children and youth, in particular, with empowerment enablers such as education, social support, health care and life skills. As Barnett<sup>13</sup> also argues, this requires researchers to develop well-founded conceptual frameworks that integrate the economic and social dynamics when modelling future economic outcomes and possible pathways for future generations.

Figure 3.1 broadly illustrates the factors that can be considered in analysing the dynamics and predictors of the trajectory of social mobility for the generations emerging from the upper and lower income segments of the population. In a more empirical approach, the real segmentation of the income continuum would be a far more nuanced process than is assumed below. The framework attempts to systematise an array of findings regarding the typical attributes and modalities through which HIV/Aids could affect households, given the social (and economic) propensities of these modalities.

Households at the upper end of the social hierarchy tend to have the ability to provide for themselves. This is largely attributable to their higher levels of education and skills which tend to enable them to access better health services, live in well-serviced housing and have the purchasing power to cover at least their basic needs. If adults, especially parents, are afflicted with HIV/Aids,

9 Haacker, M. 2002. The Economic consequences of HIV/AIDS in Southern Africa. *IMF Working Paper WP/02/38*. International Monetary Fund. Washington D.C.

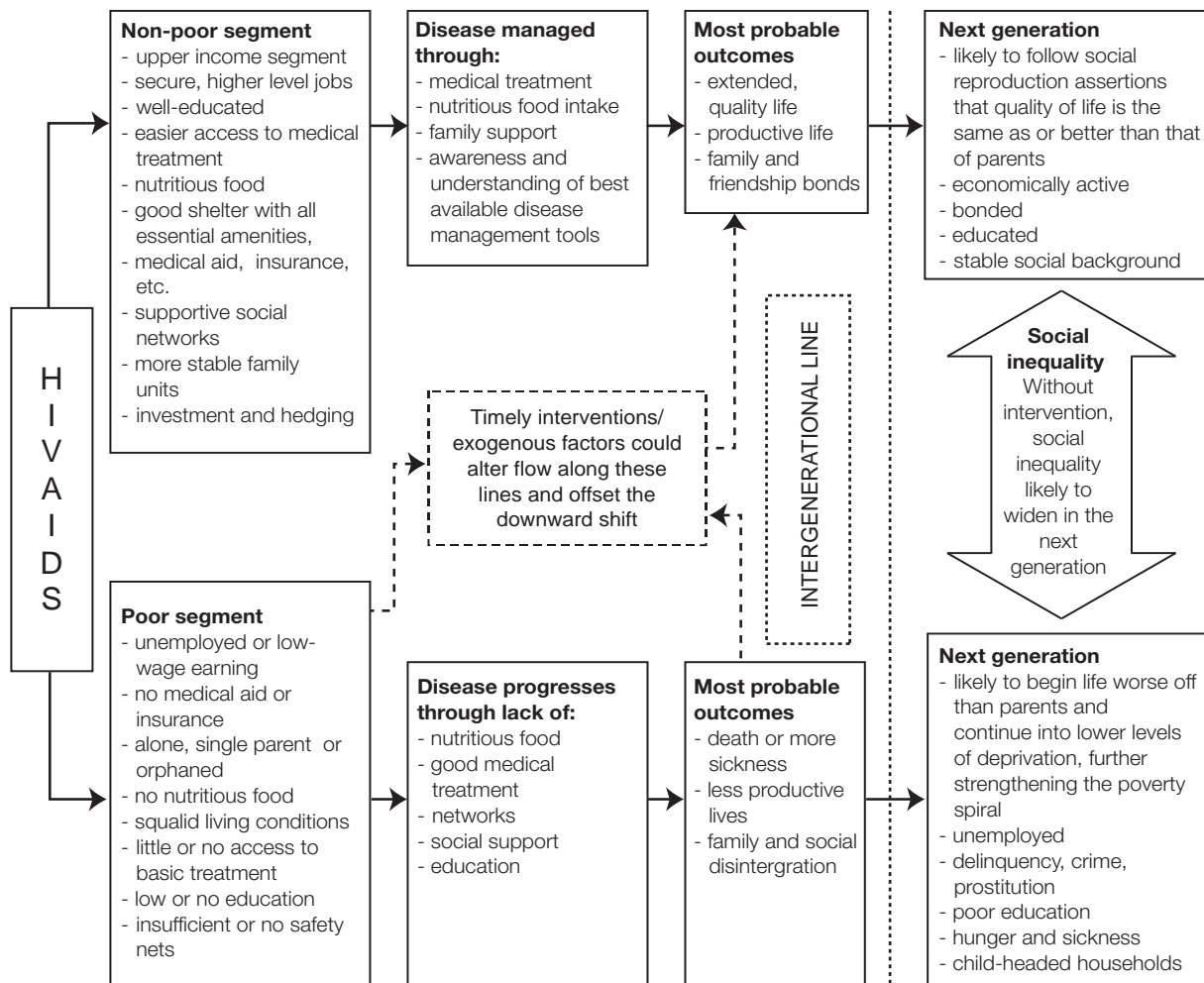
10 JP Morgan Equities Limited. 2002. *Monthly Update. Fund Manager’s Companion*. April 12. Johannesburg.

11 Greener, R., Jefferis, K. and Siphambe, H. 2000. The impact of HIV/Aids on poverty and inequality in Botswana. *South African Journal of Economics*, 68(5).

12 Whiteside, A. and Barnett, T. 2000. HIV/Aids, poverty and development. *Speech given at the Overseas Development Institute*.

13 Barnett, T. 2002. *Progress report – HIV/Aids impact studies II – some progress evident*. University of East Anglia, UK.

Figure 3.1: Intergenerational impact of HIV/AIDS on a hypothetical “two-tier” South African society

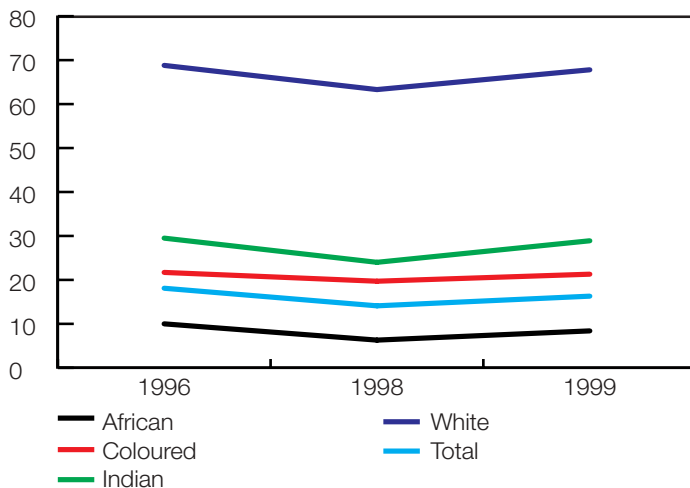


they are likely to be better positioned to live longer with the disease and to have a fully productive, quality life than would have been the case if they were poor. Their children are likely to be provided for through good education, insurance, trusts and other investments. The literature is not conclusive about the functionality of social support networks among more economically ‘self-reliant’ communities. Indications are that these segments tend to have stronger social support (see footnote 12). In the event of the death of either or both parents, this would be an important element in cushioning children from the resultant shock(s) to the family unit. Whether or not there are interventions that predispose such generations to upward social mobility, they would be better off than they would have been without these advantages.

Poorer households are likely to be in a different situation and their offspring would clearly be in a more precarious predicament. These more disadvantaged households tend to experience higher unemployment and if they are employed, their jobs tend to be insecure with low wages, and do not offer medical aid and other benefits. HIV/Aids affliction could mean a shorter, unproductive and lower quality life for such individuals. This can be attributed to a poorly managed cycle of disease due to poorer nutrition, lack of medication and education and an inadequate support network. With adequate intervention, the Aids sufferer might have a longer, better quality life. When the parent(s) die(s), the children are not likely to be provided for. With intervention programmes, the affected (and, to a lesser extent, infected) children might be given a better chance of

upward social mobility. Without intervention programmes, they might turn out to be worse off than their parents, implying downward social mobility. Interventions could be in various forms including adoption, foster-parenting, social responsibility programmes by the private sector and social safety nets.

Figure 3.2: Percentage of people with medical aid cover (October 1996, 1998 and 1999)



Source: Statistics South Africa, 2001. *South Africa in Transition*. Pretoria.

The magnitude of the impact on the inequality gap depends on multiplier factors such as the socio-economic status and size and structure of households affected by HIV/Aids – with particular implications for youth and children. In a study in Zambia, the results showed high levels of disintegration in 65 per cent of households where the mothers had died. Consequently, the children had to join other equally poor households that could not provide for the needs of the orphaned children.<sup>14</sup> The indications are that South Africa is also likely to go through similar patterns. Table 3.1 shows that the percentage share of child poverty is concentrated mainly in the provinces with high HIV/Aids prevalence rates. KwaZulu-Natal and the Eastern Cape – two of the poorest provinces in the country – currently account for 44 per cent of South Africa's poor children.

If the downward pressure exerted by HIV/Aids on inter-generational social mobility continues unabated, especially amongst poorer households, the rift between the poor and the non-poor is bound to become wider.

Table 3.1 Estimates of the share of HIV prevalence and child poverty

Province	HIV positive 95% CI (2001)*	Percentage share of child poverty(2002)**
KwaZulu-Natal	33,5	23
Free State	30,1	6
Gauteng	29,8	10
Mpumalanga	29,2	8
North West	25,2	8
Eastern Cape	21,7	21
Northern Cape	15,9	2
Limpopo	14,5	17
Western Cape	8,6	5
South Africa	24,8	100

\* Source: Department of Health. 2002. *Summary report – National HIV and syphilis sero-prevalence survey of women attending public antenatal clinics in South Africa, 2001*.

CI = Confidence interval

\*\* Source: IDASA. 2002. *Child Poverty Monitor No. 1* (estimates of child poverty shares based on OHS 1999 and poverty line of R400/month per capita).

The above outline explores the parameters and variables that might act as transmission channels for future generation mobility. One possible scenario of social mobility is where new generations maintain, or at best raise, their living standards to higher levels than those of their parents. The other is where, at best, the new generations maintain their parents' income levels or, at worst, cannot maintain these levels and fall into the cycle of poverty. A third scenario is an ideal non-HIV/Aids environment, where more 'normal' and less biased opportunities for upward mobility across the income spectrum would prevail. Which direction of the overall social mobility is South Africa likely to experience in the future?

## Conclusion

Research work to date has not only enhanced an understanding of the impact of HIV/Aids on different sectors and aggregate economic outcomes, but also highlighted the need for more information and research in support of policy development. The availability of data poses the greatest challenge and, where data is available, it is inadequate because of the exclusion of background information about those who died from the syndrome, those who are at risk of infection, those

14 Winter, A. and Hay, P. 2001. AIDS blunts economic growth, worsens poverty in hard-hit countries. [www.worldbank.org/news/pressrelease.nsf/](http://www.worldbank.org/news/pressrelease.nsf/) (Accessed August 2002).

infected and also those that are affected. Currently only age and gender are reflected in official sources.

Where projection models are engaged, challenges still arise in the nature and scope of the assumptions used. Attention should be given to differentiation in aggregate socio-economic profiles such as social cohesion, inequality and the various impacts of intergenerational feed-through effects at household and individual levels. More information on the actual and likely impact on socio-economic development in specific sectors would provide a useful tool for encouraging action by the

relevant policy makers, the private sector and communities. In addition, more comprehensive data can assist the design and implementation of more effective impact mitigation policies.

Currently, the micro-macro linkages between the negative outcomes at the household (and individual) level, on the one hand, and the overall aggregate production function, the demand side factors as well as external hedges, on the other, continue to evade investors and policy makers alike. Scientific research is best placed to inform or predict future developments.

## The information economy: Prospects for deriving greater benefits for economic growth and development

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The slackening of the South African economy in terms of economic growth and employment can be traced back to two to three decades ago. One study<sup>1</sup> concluded that economic growth in South Africa had been insufficient in generating additional employment for the poor since the 1970s. Four or five of the largest sectors have a disproportionately large impact on the aggregate level of employment. Indicators of formal sector employment show a serious deterioration in the relationship between economic growth and job creation in the first half of the 1990s. The South African Reserve Bank<sup>2</sup> argues that a new relationship has been established since the 1990s, indicating that much stronger economic growth is required to increase the overall level of employment.

The world employment situation outside the United States and some developed countries remains insufficient to employ productively those who have lost their jobs due to restructuring or to employ the new entrants into the labour force. The impact of information and communication technologies (ICTs) could affect the

shape of cyclical fluctuations in a way that would indicate a higher trend in economic growth.<sup>3</sup> The extent to which this higher growth trend would affect the economy might result in either long-term improvement in overall economic activity or in over-optimistic expectations about economic growth. It is often argued, for example, that higher productivity in the United States of America (USA) can be explained partly by economic growth led by ICTs in the 1990s.

The 2001 *World Employment Report* of the International Labour Organisation (ILO) brings to the fore the ongoing debate about the likely economic impact of Information and Communication Technology (ICT). It identifies two important issues relevant to the South African scenario. Firstly, the ILO argues that even if ICT access and use were to substantially increase in most economies of developing countries, it would not be sufficient to ensure the creation of the half a billion new jobs needed by 2010 to alleviate poverty. Apart from its potential to transform most economies in terms of the 'world of work', the ILO explores the likely impact of ICTs on economic growth

1 Standing, G., Sender, J. & Weeks, J. 1996. *Restructuring the labour market: the South African challenge*. ILO. Geneva.

2 South African Reserve Bank. 2001. *Annual Economic Report*. Pretoria.

3 Organisation for Economic Co-operation and Development. 2002. *Economic Outlook*. Paris.

and employment. The report further postulates that the emergence of new ICTs has brought with it real constraints in that, globally, some countries are better placed to adapt rapidly to change than others. In addition, access to and use of ICTs in developing countries are inextricably linked to concerns about the gap between the skilled and unskilled, on the one hand, and women and men, on the other. What then are the prospects of ICT in the context of South Africa given the existing inequalities in terms of access and use by skill and the country's relatively more advanced infrastructure and service sector?

This article firstly looks at the current debates on the impact of ICTs on economic growth and the transmission path that ICTs would take to achieve greater productivity and/or job creation. Secondly, the paper assesses South Africa's readiness to produce or use ICTs in the presence of a global digital divide. Finally, the paper addresses South Africa's economic policy framework for ICTs.

### ICTs and their impact on economic growth

The epicentre of ICT success continues to be the USA. This has led to the phenomenal growth of its economy with an impressive recovery in productivity growth and a positive impact on its labour markets. The debate continues about whether successful ICT diffusion in countries such as the USA, Finland and Sweden could be replicated elsewhere. In particular, the literature focuses on whether the opportunities presented by the ICT sector could be effectively utilised by developing countries such as South Africa, to increase their productivity and reduce unemployment.

The ILO suggests that in developing countries such as South Africa the key to positive economic growth would be sustained levels of investment in ICTs. This optimistic view recommends that investments in telecommunications, computer systems, hardware and software, and other related capital goods would suffice to create an enabling environment for ICTs to successfully benefit an economy. The optimistic perspective does not dispute the fact that ICTs could result in job losses in certain sectors, in particular the 'old sectors' such as manufac-

turing and mining. However, this school of thought argues that such job losses are likely to be ameliorated by greater labour productivity as the size of the service sector increases.

A number of recent studies have focused on the changing macroeconomic and labour market conditions in South Africa. Fedderke et al.<sup>4</sup> argue that despite an improvement in the macroeconomic environment in the late 1990s, the labour market has lagged behind with poor job creation and with modest growth in sectors that are small in absolute employment terms.

Increases in labour productivity are desirable because they reduce labour costs and would enable South Africa to participate in a competitive global environment. Fedderke et al. further recommend investment in human capital and an improvement in the skills base of the South African economy, as some of the methods that could solve the employment problem. Although the study does not make a direct reference to ICTs, clearly it would be one of the demand-side drivers for a skilled labour force.

Wolf<sup>5</sup> argues that the impact of ICTs on economic growth is difficult to assess purely on the value of investments because the relationship between gross domestic product per capita and ICTs may occur in both directions, i.e. as a production input as well as a consumption good. As a result, this situation has brought with it the 'productivity paradox' where investment in ICTs results in unexpected declines in the rates of productivity growth. This phenomenon has created a number of different responses concerning the reasons that this is happening both in developed and developing countries, despite heavy investments in ICT.<sup>6</sup> The most common of these explanations are, firstly, that ICT benefits are not correctly measured. Secondly, that there are time lags between purchases and the effectiveness of ICT due to human capital adjustments or incompatibility between various applications adopted in different countries and/or firms. However, the pessimistic view is that net benefits from ICT diffusion are overestimated, as borne out by the increases in costs such as maintenance, upgrading and skills development.

4 Fedderke, J., Henderson, S., Mariotti, M. & Vaze, P. 2001. *Changing factor market conditions in South Africa: the labour market – a sectoral description of the period 1970 – 1997*, Development Policy Research Unit, University of Cape Town.

5 Wolf, S. 2001. *Determinants and impact of ICT use for African SMEs: implications for rural South Africa*. Trade and Industrial Policy Strategies (TIPS). Johannesburg.

6 International Labour Organisation (ILO). 2001. *Life at work in the information economy*. *World Employment Report*. Geneva; Van der Wiel, H. 2001. *Does IT boost Dutch productivity growth?* Netherlands Bureau for Economic Policy Analysis. The Hague; Tanbun, J. & Singh, A. 2001. *ICTs and enterprises in developing countries: hype or opportunity?* *Small Enterprise Development (SEED) Working Paper*. ILO. Geneva.

A number of studies have confirmed the above-mentioned productivity paradox in developed countries. Some<sup>7</sup> argue that perhaps the information economy might not make noticeable changes in productivity or supply-side improvements, but instead create better consumption patterns on the demand side. In other words, despite moderate changes in the information economy, ICTs might be beneficial to those using or having access to them. The benefits could be, for example, better working conditions or more effective and convenient job searching when using different ICT instruments. In Britain, a study<sup>8</sup> of the Information and Technology consulting industry found that the Internet as a new technology did not give new firms an advantage over existing ones in terms of growth rates. In other words, technological changes brought about by personal computers and the Internet did not impair the competitive abilities of incumbent companies in the 1990s and 2000s. All of these studies show a pessimistic view of ICTs, subscribing to the notion that ICT use does not necessarily lead to an increase in productivity or supply-side changes, but instead may result in demand-side or consumption improvements.

The *World Employment Report* notes that, contrary to popular initial beliefs, the ICT sector does not create unemployment. For example, as the ICTs contribute to productivity increases without accelerating inflation, the prospects for a durable reduction in unemployment in the Organisation for Economic Co-operation and Development (OECD) countries are good. Campbell, using cross-country data of OECD countries, found positive relationships between ICT use and employment growth and also between the share of computer users in the labour force and employment growth. The study postulates that the labour market may benefit from the improvements in job search efficiency. Online job searching may speed up the matching process over wider geographical areas and is expected to be a factor in lowering the level of unemployment.<sup>9</sup>

South Africa has experienced mixed outcomes in the effects of its ICT on the economy. Nordas<sup>10</sup> suggests that producer services in South Africa recorded unprecedented growth in terms of overall output and labour productivity during the 1990s. The service sectors include transport and storage, communications, finance and business services. However, this phenomenon has not permeated the whole economy in terms of growth rates and the use of these services as input. The manufacturing sector has shown some reluctance about taking the opportunities presented by outsourcing, hence not favouring the expansion of the producer service sector to achieve economies of scale. It is important to note that producer services appear to be well developed in South Africa and they display a high potential to benefit from ICT penetration. However, the argument is that South African producer services show little effect on growth rates in other sectors using these as input. The suggestion is that the outsourcing of producer services might allow international companies to increase their investment and allow other sectors using these as input to benefit fully from the introduction of ICTs. This relates back to the earlier discussion about the need to link ICT growth to the restructuring process, taking full cognisance of its social and welfare implications.

Table 4.1 Employment in the ICT sector, selected countries, 1999

Country	ICT Employment (000's)	Percentage share of ICT employment in total employment	Percentage share of female employment in total ICT employment
Finland	118	5,4	36,6
Germany	1 255	3,5	33,2
Italy	632	3,1	31,1
Netherlands	302	4,1	28,4
United Kingdom	1 338	5,0	27,0
EU 15*	5 712	3,9	31,7
United States (1998)	7 400	6,1	N/A
South Africa	54	1,0	N/A
Australia (95/96)	256	2,4	N/A
Malaysia (1998)	3 000	1,0	N/A
Japan (1997)	87	4,3	N/A

N/A - data not available

\* The fifteen member states of the European Union.

Source: ILO. 2001. *World Employment Report*. Geneva.

7 Quah, D. 2001. *Technology dissemination and economic growth: some lessons for the New Economy*. TIPS. Johannesburg; CDC Marches. 1999. Potential growth and eurozone monetary policy, *Flash*. No. 990166. London.

8 Simons, K. 2001. *Information Technology and the dynamics of Firm and Industrial Structure: The British IT Consulting as a Contemporary Specimen*. United Nations University/World Institute for Development Economics Research (WIDER). Helsinki.

9 Campbell, D. 2001. Can the digital divide be contained? *International Labour Review*, 140(2). Geneva.

10 Nordas, H. 2001. *Information technology and producer services – a source of economic development: the South African case*. TIPS. Johannesburg.

Recent observations<sup>11</sup> of the automotive and the apparel industries in South Africa, shows that the development of business-to-business (B2B) e-commerce is lagging behind Australia, Brazil, North America, Western Europe, Singapore and South Korea in adopting e-commerce and using it to increase productivity, competitiveness, investment and employment. The lack of a co-ordinated strategy and effort within industry and the lack of partnerships with government for the dissemination of information on e-commerce and training are identified as major obstacles to the development of South African e-commerce. The study concludes that successful B2B e-commerce is important if the economy of South Africa is to compete globally. This observation does not analyse the impact of e-commerce on employment in these two sectors. However, the study is useful in reinforcing the argument that the adoption of ICTs will not in itself necessarily lead to productivity improvements, especially in the South African context.

Though it is clear that a globalising economy such as South Africa cannot afford to ignore the need for optimum use of ICT if it is to remain competitive, more research is required to track the economic performance of the various sectors. Even more important, the relevance of either the optimistic or pessimistic stance toward the outcomes for South Africa's labour markets should be a priority on the country's research agenda. In the meantime South Africa's readiness to embrace ICTs – a crucial ingredient for global competitiveness – should also be considered. The next section explores how ready SA is for an ICT expansion and development in terms of the adequacy of the skills base and the existing infrastructure.

### How ready is SA for ICTs and development?

Initial challenges for South Africa include the need for successful economic restructuring in a stable macro-economic environment with a well-developed infrastructure that translates into a socially inclusive labour market. Table 4.2 shows that, compared with other developing countries in the group of 'dynamic

adopters', South Africa is relatively on par with the Technology Achievement Index (TAI)<sup>12</sup> and e-readiness ranking except in human capital indicators, where it is less impressive in its ability to benefit from ICTs. Since the ICT industry seems to work when the service sector is present, the country faces the challenge of expanding its relatively well-developed service sector including its infrastructure.<sup>13</sup>

Table 4.2 Technology achievement index (TAI)

Leaders	Potential Leaders	Dynamic Adopters	Marginalised
Finland	Spain	South Africa	Nicaragua
US	Italy	Brazil	Pakistan
Sweden	Hong Kong	China	Senegal
Japan	Portugal	Peru	Ghana
South Korea	Malaysia	Tunisia	Kenya
UK	Mexico	Egypt	Nepal
Germany	Argentina	Algeria	Tanzania
New Zealand	Chile	Zimbabwe	Sudan
France		Indonesia	Mozambique
Israel		India	

Source: UNDP. 2001. *Human Development Report*. New York.

Steinmuller<sup>14</sup> argues that the possibilities that developing countries could leapfrog to higher levels of technology, would depend on the following: absorptive capacities to produce or use ICT; the ability to access technology with reasonable investment in skills and equipment without infringements of intellectual property rights; use of complementary technology; and finally down-streaming integration capabilities. South Africa's low ranking in terms of 'mean years of schooling' indicates its poor investment in human skills.<sup>15</sup> Compared with high-performer countries such as the USA and Norway with an average of 12,0 and 11,9 years of schooling respectively, this nation lags far behind with 6,1 as its average years of schooling in 2000. The country appears to be reasonably ready in most ICT indicators except in skills and access to the diffusion of technology (see Table 4.3).

11 Moodley, S., Morris, S. & Barnes, J. 2001. *Unlocking value in the new economy: Implications of B2B E-commerce for South African Apparel and automotive component firms*. TIPS. Johannesburg.

12 United Nations Development Programme (UNDP). 2001. *The Human Development Report*. New York. The UNDP introduced the technology achievement index (TAI). The TAI measures four aspects of technological capacity that are important for maximising ICT advantages, namely the creation of technology; diffusion of recent innovations; diffusion of old innovations; and human skills.

13 Campbell, D. 2001. Can the digital divide be contained? *International Labour Review*, 140(2). ILO. Geneva.

14 Steinmuller, W. 2001. ICTs and the possibilities for leapfrogging by developing countries, *International Labour Review*, 140(2). ILO. Geneva.

15 United Nations Development Programme. 2001 *Human Development Report*. New York.

Table 4.3 Diffusion of technology, ICT, selected countries

Country	Telephones (mainline and cellular) per 1 000 people 1999	Internet hosts (per 1 000 people) 2000	Cost of a three minute local (PPP US\$)* 1999	Human skills (mean years of schooling) 1999	GDP/capita (PPP US\$) 1999
Norway	1 329	193,6	0,07	11,9	28 433
USA	993	179,1	0,00	12	31 872
Japan	1 007	49,0	0,06	9,5	24 898
Finland	1 203	200,2	0,12	10	23 096
South Korea	938	4,8	0,06	10,8	15 712
Mexico	192	9,2	0,22	7,2	8 297
Mauritius	312	5,2	0,10	6,0	9 107
Brazil	238	7,2	**	4,9	7 037
<b>South Africa</b>	<b>270</b>	<b>8,4</b>	<b>0,21</b>	<b>6,1</b>	<b>8 908</b>
India	28	0,1	0,09	5,1	2 248

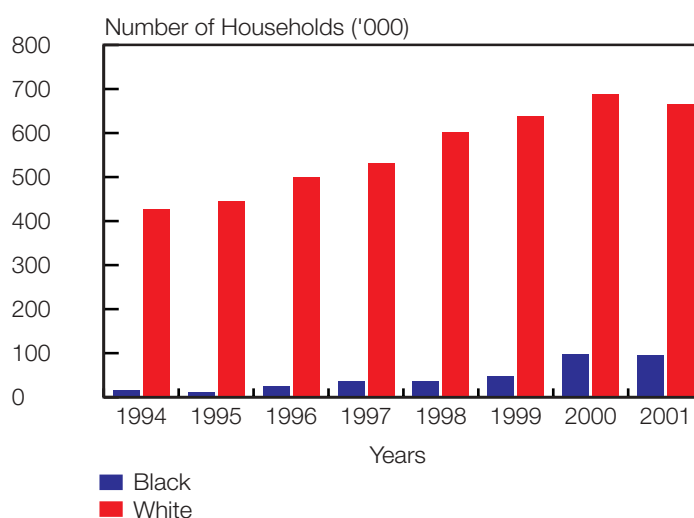
\* PPP refers to Purchasing Power Parity  
 \*\* Not available

Source: UNDP. 2001. *Human Development Report*. New York.

South Africa's poor human capital is compounded not only by skewed access to other resources but also to the presence of the digital divide. The skewed access to ICTs mirrors the inequalities present in South Africa. (See Figure 4.1) The Living Standard Measurement Survey (LSMS) of the World Bank<sup>16</sup> shows that the group in Panama's and South Africa's richest quintile is 43 and 125 times respectively more likely to have access to private telephones than the group in the poorest quintile.

The most important condition for the elimination of the digital divide is a developed physical infrastructure, which includes telecommunications infrastructure. Sub-Saharan Africa, except South Africa, is classified as marginalised in terms of the recently developed technology achievement index (TAI). The TAI classifies South Africa in the third position behind 'leaders' and 'potential leaders' but above the 'marginalised' countries. One of the main priorities of the New Economic Partnership for Africa's Development (Nepad) is to address Africa's deficiencies in physical and social infrastructure, in particular, its lack of communications infrastructure. South Africa has taken joint leadership in addressing Africa's lack of infrastructure. Its public and private enterprises have made substantial investments in Africa's tertiary sector. These companies have been

Figure 4.1: Computer ownership by population group



Source: SAtoZ. 2002. *Banking the unbanked*. Johannesburg.

Table 4.4 TAI ranking in Africa (selected), 1999

Country	Receipts of royalties and licence fees (US\$ per 1 000 people)	Internet hosts (per 1 000 people) 2000	High & medium technology exports (as % of total goods)	Telephones (mainline and cellular, per 1 000 people)
<b>South Africa</b>	<b>1,7</b>	<b>8,4</b>	<b>30,2</b>	<b>270</b>
Tunisia	1,1	*	19,7	96
Zimbabwe	*	0,5	12,0	36
Mauritius	0,0	5,2	4,3	312

\* Not available

Source: UNDP. 2001. *Human Development Report*. New York.

involved in wholesale and retail trade, transport and ICTs, as well as in financial services. This involvement has raised hopes that South Africa has a chance of achieving success with technological leapfrogging in production and its use of ICTs.

South Africa scores in the midrange of the 'e-business readiness' rating.<sup>17</sup> As with the TAI, the most e-ready countries are OECD countries, and the middle-level readiness countries include South Africa which is ranked alongside Japan, Spain and South Korea.

<sup>16</sup> World Bank. 2000. The network revolution, opportunities and challenges for developing countries. *Information Development Working Paper*. Washington D.C.

<sup>17</sup> Tanburn, J. & Singh, A. 2001. *ICTs and Enterprises in developing countries: hype or opportunity?* International Labor Organisation. Geneva. The e-business readiness ranking provides three levels of readiness, namely most e-ready, middle level and lower level. The ranking combines the Economist Intelligence Unit's (EIU) assessment of the business environment and a 'connectivity rating' developed by Pyramid Research, the EIU's communications division.



The country has the advantage of dealing with the digital divide as a 'dynamic adopter', which means that communication services are available as a result of a reliable electrical supply and telephones for business and government computer operations (see Table 4.2). Therefore South Africa has important high-technology industries, but the diffusion of old inventions is slow and incomplete.<sup>18</sup> Furthermore, the fact that people in the richest quintile are 145 times more likely to have telephones than those in the poorest quintile supports the view that access to new technological innovations such as the Internet is also likely to be skewed.

Since ICT advance is a cumulative process, expanding the diffusion of older technologies such as electricity and telephones is necessary for the development of recent innovations such as Internet hosts. The South African government has recently taken bold moves in formulating co-ordinated ICT strategies that seek to eliminate barriers such as the digital divide. The Presidential International Advisory Council on Information Society and Development has endorsed these strategies.<sup>19</sup> The focus of government strategies will be on three key areas: health and telemedicine, SMME growth, and education and development. The identification of these key areas should help to eliminate disparities in ICT literacy and human skills. The next challenge to government is a national focus on the concrete implementation of its ICT strategies to complement existing initiatives and to ensure that the digital divide is eliminated while at the same time creating job opportunities.

### ICTs: Challenges for the South African economic policy approach

It is not clear whether ICTs lead to improved efficiency, greater productivity and a higher level of output or whether their growth could accompany low inflation and low unemployment. Further research is necessary to determine whether ICTs could be linked to econom-

ic growth in South Africa. In particular, further research is needed on the pessimistic assertion that ICTs have so far proven advantageous only in changing consumption patterns such as convenient job searches, but have not done much to increase production. Secondly, the argument of the optimistic school is that ICTs – as in the case of the USA – have increased productivity with immense business gains in supply chains, requires empirical tests.

Evidence from selected literature indicates that South Africa has achieved most of its macroeconomic goals. Turning ICTs into a vehicle for economic growth and development requires purposive effort and public investment in social and physical infrastructure to enable wider diffusion of ICTs. Investment in creating and adapting ICTs could result in job creation.

The second issue raised in this article is the glaringly obvious digital divide encountered globally between developed and developing countries. To counteract any inequalities that may result from the expanding information economy, relevant policy sequencing, including partnerships with civil society and the private sector, is important.

In South Africa the challenge remains to use ICT for improving not only economic growth but also productivity and job creation. There is an even greater challenge to minimise the digital divide, mainly by facilitating the diffusion of ICT and other innovations across the economy so that poor people can access old technologies without exacerbating the cost of these services. Further research is needed to determine how best to expand the diffusion of old innovations and create rapid increases in technology while making ICT products affordable to the poor. So far, policy and research environments have identified the opportunities and challenges of technological transformation. The next step ought to be policy and research conducive to leapfrogging the country beyond its current standing as a 'dynamic adopter' in ICTs with high overall development achievements.

<sup>18</sup> United Nations Development Programme. 2001. *Human Development Report*. New York.

<sup>19</sup> The Presidential International Advisory Council is an advisory body of experts consisting of prominent ICT entrepreneurs from companies such as Hewlett Packard, Vivendi Universal and Cisco Systems.

## Why the new *Labour Markets and Social Frontiers* series?

South Africa's macroeconomic framework seeks to stimulate economic growth through, *inter alia*, financial stability. It is envisaged that with commensurate monetary and fiscal policy instruments, this will benefit the majority of South Africans by improving their living standards.

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Though it needs to protect its autonomy without fear, favour or prejudice, the Bank seeks to be transparent in policy formulation and to communicate the basis for its policy direction and decisions.

Through publications such as this new series, *Labour Markets and Social Frontiers*, the SARB

- reaches out by engaging with broader labour market and social development issues in order to develop a holistic, more integrated knowledge base and policy oversight,
- offers the opportunity for stakeholders to share their perspectives on monetary policy vis-a-vis labour markets and social development debates,
- encourages a wider readership to include a broader spectrum of labour, community and social partners, and
- aims to create an awareness of how monetary policy interacts with labour markets and social development dynamics.

After all, the ultimate aim of the Bank's contribution is to see all South Africans benefiting through more and higher quality jobs, economic 'mainstreaming' and better standards of living. This, in turn, minimises the threat that social and political destabilisation might pose to price stability and sound financial systems and markets, inspires greater investor confidence and promotes a thriving, globally competitive economy. It is for these reasons that this series was initiated to provide a platform for information sharing and for eliciting ideas from professionals, researchers and practitioners.

Contributions are invited for publication in this new venture, which will be published twice a year.

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