Economic Growth as an Instrument for Poverty Reduction in Mozambique: Framework for a Growth Strategy

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I. Introduction

1. Poverty reduction is the central goal of the Government's medium-term economic program. This commitment is expressed in many policy documents, including the *Programa do Governo para 2000*-2004, the *Government Document to the Consultative Group*, the *Interim Policy Reduction Strategy Paper* (I-PRSP), and the *Plano de Acção para Redução da Pobreza Absoluta 2000-2004 (*PARPA*).* The focus on poverty is equally endorsed by the international community, as reflected in the decision of the World Bank and the IMF in 1999 to frame future support for low-income countries on the basis of poverty reduction strategies.

2. Despite the remarkable progress that has been achieved over the past five years, Mozambique remains one of the poorest countries in the world.[1] According to the *National Human Development Report 1999* (NHDR99), Mozambique still has the lowest Human Development Index (HDI) and the highest Human Poverty Index among the 14 SADC member countries. The weakest component of the HDI for Mozambique is per capita income: "This imbalance, to the detriment of living standards, reveals a great weakness in the whole foundation that is indispensable to sustainable human development." (NHDR99, p.24.) Strengthening the *economy* is therefore indispensable for poverty reduction and human development.

3. The Government's economic program is designed to reduce absolute poverty by 30 percent by 2010, which implies a decline in the poverty head count to under 50 percent by the end of the decade.[2] According to Government estimates,[3] this goal can only be achieved if *per capita* income grows by at least 5 percent per year over the next ten years. This requires a GDP growth rate in the neighborhood of 8 percent per year or more.

4. This growth target is ambitious, but feasible.[4] For the decade 1985-95, nine countries managed to maintain *per capita* growth above 5 percent per year, including two from Africa: Botswana and Mauritius. These success cases[5] demonstrate that the objective can be realized, with appropriate policies. They also reveal that the benefits of success are profound. For these nine countries, per capita income grew at an average rate of 6.5 percent per year; at this rate, living standards double in just over a decade. If this growth can be sustained for a quarter century – as achieved by seven countries[6] -- average incomes rise nearly five-fold, completely transforming living standards and the quality of life for the people. In contrast, the average growth rate for all developing countries was 0.7% over the period 1985-95; at this rate, average incomes increase by only 19% in a quarter century, offering no hope for significant poverty reduction.

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5. No single ingredient or universal formula can guarantee success.[7] The appropriate package of policies must be specific to time and place. For example, the nine success cases noted above were quite different in many respects, such as the scope of government intervention, initial levels of education attainment, and degree of dependence on primary product exports. Still, valuable lessons can be learned from the last half-century of international experience. Indeed, the success cases shared many elements in common, including: political stability; a consistent commitment to macroeconomic stability; high rates of saving and investment, including investment in human capital and productive infrastructure; a leading role for the private sector as the engine of growth; development of reliable market-supporting institutions; deliberate policies to expand and diversify exports; and deepening of financial markets.

6. What, then, is the best strategy for Mozambique to sustain rapid growth that benefits the poor? This paper provides an analytical framework for addressing the question, based on a review of the lessons suggested by international studies of growth and poverty reduction, taking into account the special conditions and constraints in Mozambique. The analysis is based on six fundamental ideas about to the development process:

- First, that rapid, broad-based and sustainable growth is an *essential and powerful instrument for poverty reduction*. Prosperity for the people will remain out of reach unless there is a tremendous expansion in productive capacity, and a corresponding increase in the resource base for financing public-sector programs.
- Second, that *high rates of saving and investment, and rising productivity* are the foundation for rapid and sustainable growth . These three basic factors should therefore figure prominently in the development of a successful growth strategy. At the same time, the *distribution* of investment and productivity gains has to be broad based, to ensure that growth benefits the poor.
- Third, that *human development plays an essential role in fostering growth.* Growth and human development are mutually reinforcing: growth promotes human development, and human development promotes growth. An effective program to foster growth and human development creates a "virtuous circle" of accelerated progress in poverty reduction. Effective policies for human development are therefore a vital component of the growth strategy.
- Fourth, that *rapid, sustained and broad-based growth is achievable*. Fifty years ago no one dreamed that a poor country could sustain per capita income growth above 5% per year. Yet this outcome has been realized by a handful of countries. Mozambique is well placed to match or surpass this standard, but success depends on maintaining a high rate of investment and steady gains in productivity.
- Fifth, that *government policies, programs and institutions* are critical determinants of investment, productivity, and hence growth. While the private sector is the main engine of growth, government is the catalyst. Rapid, sustained and broad-based growth requires an environment of well-conceived and consistent policies, efficient administration of public programs, and effective public-sector institutions that facilitate private initiative.
- Finally, that *the people are the central players* in the growth process, not passive "target groups" for actions taken by government. The growth strategy must address the needs, capabilities, potentialities, aspirations and vulnerabilities of poor

households, as essential participants in a successful development process. It must also facilitate the development of domestic entrepreneurs, while taking full advantage of growth opportunities afforded by foreign investment.

7. The remainder of the paper is structured as follows. Section II begins by defining the concept of poverty that is used here. Section III discusses the links between growth and poverty reduction. Section IV examines the basic macroeconomic determinants of growth. Section V then assesses the policies and institutions that are most important for achieving success. Section VI discusses sectoral and regional considerations, while section VII highlights the importance of evaluating growth policies from the point of view of poor households themselves. Section VIII discusses the importance of an open, transparent and participatory policy process as an instrument for economic policy management. Finally, section IX offers a short summary and concluding comments.

II. Concept of Poverty

8. Poverty is a multi-dimensional concept involving not only material deprivation, but also deprivation in terms of capability, vulnerability, and influence over institutions that affect one's life (empowerment).[8] The Government's *Plano de Acção para a Redução da Pobreza Absoluta 2000-2004* (PARPA) has adopted a more specific definition of poverty as "the incapacity of individuals to assure themselves and their dependents of the minimum requirements for subsistence."[9] The PARPA also recognizes the importance of using additional indicators like illiteracy, infant mortality, access to potable water, and chronic malnutrition, including associated gender differences, to obtain a broader profile of the poverty situation.

9. Since the focus here is on economic growth, the material dimension of poverty is the primary concern, but not the only concern. One cannot define an effective strategy for rapid and equitable growth without addressing the need to enhance capabilities of the poor (through education and health) and reduce their vulnerability to economic shocks. Empowerment is also addressed partially, in connection with the issue of establishing participatory approaches for policy and program management.

III. The Link between Economic Growth and Poverty Reduction

10. Over the past five years, the quality and availability of international data on income distribution and poverty has improved enormously.[10] With this new empirical record in hand, researchers have been exploring the links between growth and poverty in more detail than ever before, and with more powerful statistical techniques. Recent studies consistently find a one-to-one average relationship between growth of per capita income, overall, and growth of income for the poor (generally defined as households in the bottom 20% of the income distribution).[11] This means that a 5% increase in per capita income, overall, is accompanied, on average, by a 5% increase in incomes for the poor. As explained by Dollar and Kraay (2000):

> *"…contrary to popular myths, standard pro-growth macroeconomic policies are good for the poor. …We do not want to be misinterpreted as arguing that growth is all that is needed to improve the lives of the poor. But we do want to get the message out that growth generally does benefit the poor…."*

11. Naturally, there is a lot of variation around the average one-to-one relationship between overall growth and income growth for poor households. Standards of living for the poor grow faster than average in some instances, and slower than average in others. Thus, the link between economic growth and poverty reduction is far from rigid. The fact that countries with similar GDP performance may differ substantially in human development performance is a standard theme of the UNDP's annual *Human Development Reports*. The UNDP rightly emphasizes the importance of pursuing explicitly pro-poor policies such as reallocating public resources to basic education and health programs for the poor.

12. Equally important is the *structure of growth*. Poverty reduction is enhanced when growth is broadly based rather than narrowly concentrated in enclaves or monopolies. For countries like Mozambique, where most of the population depends on agriculture and the labor force is expanding rapidly, the poverty impact of growth can be enhanced through policies to promote: (1) *agricultural productivity*, particularly for family farms;[12] (2) investments in *labor-intensive* industries and services, to accelerate job creation and expand the demand for labor; and (3) better opportunities for income generation in micro and small enterprises.[13]

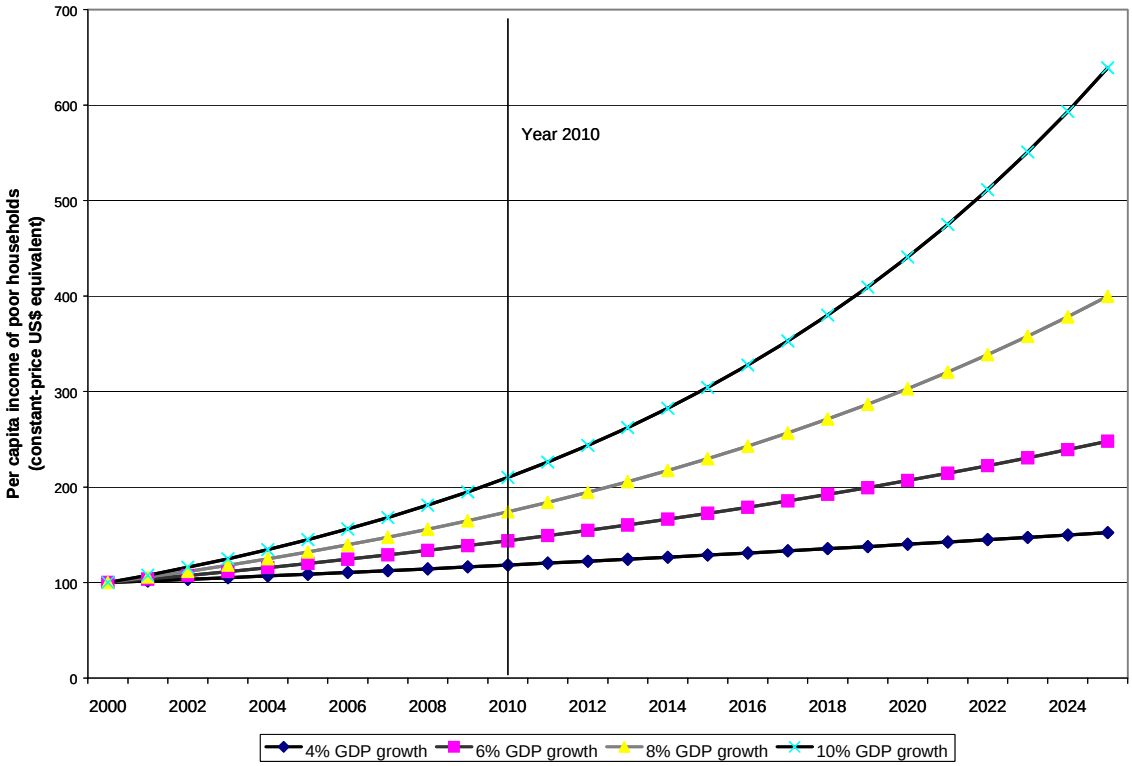
13. Still, the fact remains that economic growth is the most powerful and dependable instrument for poverty alleviation in the medium to long run. The most recent and comprehensive analysis (Dollar and Kraay, 2000) shows that income of the poor *almost always* rises (94% of 108 documented cases) when per capita income is increasing by at least 2% per annum, and it *almost never* rises when per capita income fails to grow.[14]

14. For poor countries like Mozambique, it is not possible to achieve a substantial reduction in poverty without a great expansion in productive capacity. Even an extreme and impractical program of redistribution cannot increase income for the poor beyond the prevailing level of per capita income, which is about $240 per person. Likewise, funds to finance public services for the poor are terribly constrained by the overall poverty of the economy. Thus, growth is essential to expand the resource base for improving health, education, and other vital services for the poor.

15. Figure 1 (next page) illustrates the importance of economic growth for poverty reduction. Presently, the poorest 40% of the population receive 17.3% of total household income, which implies an average income for the poor (PCI-P) of roughly US$100 per person. The graph shows how PCI-P would evolve over the next 25 years under several scenarios for GDP growth, assuming a stable distribution of income (in line with the one-to-one relationship cited above). The calculations assume that population growth will average 2.3% per year. The bottom line in Figure 1 shows that GDP growth of 4% would leave poor households deeply impoverished. Even after a quarter century, PCI-P would rise to only US$150. In the highly optimistic case of 10% GDP growth, PCI-P would more than double to $210 in 10 years, and reach US$640 by 2025 (at which point overall per capita income would attain US$1,500.) Given the PARPA target of 8% growth, PCI-P would rise from US$100 now to US$175 by 2010, and US$400 by 2025.

16. This simple arithmetic shows that *rapid and sustained growth* can deliver material benefits for the poor that are otherwise be completely unattainable. Moreover, the benefits for the poor could be even greater than indicated if the growth *structure* is pro-poor, as noted above.

~~Figure 1.~~ Average Per Capita Income for Poor Households (bottom 40%) over the period 2000-2025, at various rates of GDP growth

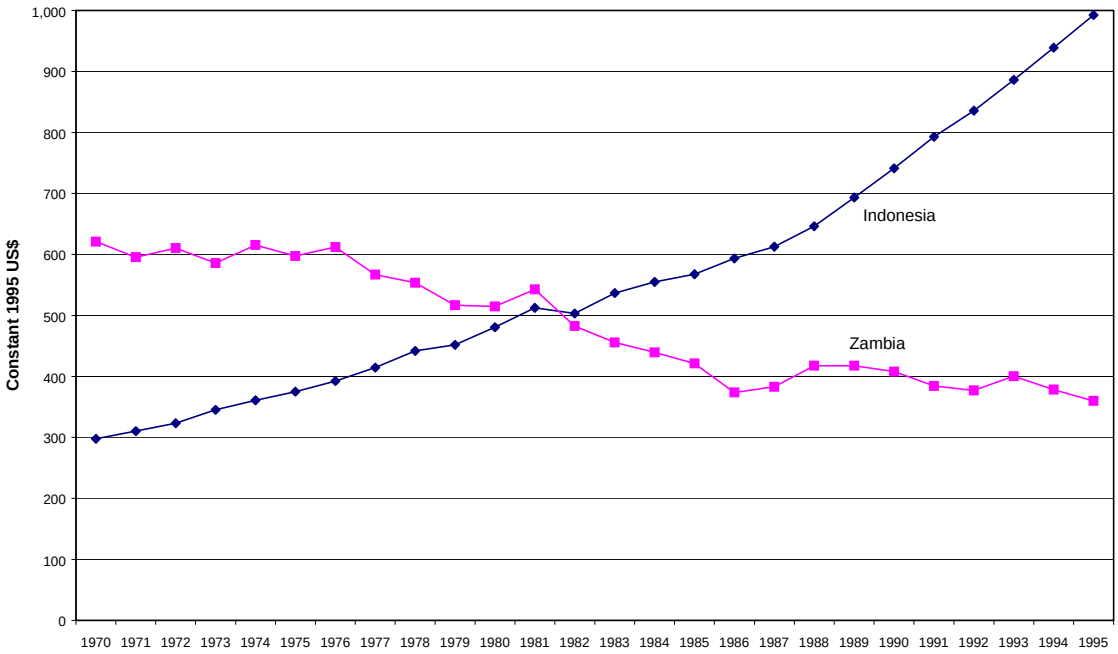


17. Similar arithmetic applies to the link between growth and public services for the poor. Present expenditure on education, health, agriculture and roads totals 42% of the government budget and 10% of GDP. This comes to about US$24 per person -- an abysmally small budget for such vital services. Some improvement can be achieved via budget reallocations and tax reforms, but only rapid growth can make it possible to *double* financial resources for essential public services over the next decade.

18. These are merely hypothetical calculations, but they mirror reality. Every one of the successful cases cited in paragraph 4, above, delivered enormous progress in poverty reduction, while poverty remained deeply entrenched in countries that failed to grow. Consider, for example, the cases of Indonesia and Zambia. As shown in Figure 2 (next page), Zambia's per capita income was twice as high as that of Indonesia in 1970. The two countries had comparably poor levels of educational attainment and high dependency on primary products. Many observers back then believed that "Asia appeared to be caught in a low-level equilibrium" and that "Asia's economies were destined for prolonged poverty."[15] Yet over the ensuing quarter century, income grew by nearly 5% per year in Indonesia while Zambia's economy deteriorated. By 1995, per capita income in Indonesia was nearly three times higher than in Zambia. Indonesia's outstanding growth performance reduced the incidence of absolute poverty to 8% (prior to the 1997 financial crisis), compared to more than 70% in Zambia.[16]

19. In summary, both the international evidence and the prevailing situation in Mozambique support the proposition that *rapid, broad-based and sustainable economic growth is an essential and powerful instrument for poverty reduction.*

~~Figure 2~~. Per capita income in Zambia and Indonesia 1970-1995



20. It is important to recognize that the link between growth and poverty reduction is a two-way street. Investments that are designed to enhance capabilities and opportunities for the poor, especially in health, education, and infrastructure, also contribute to economic growth, through two channels. First, recent evidence indicates that reducing income inequality tends to improve growth prospects (contrary to earlier views). Second, there is also evidence that rapid growth tends to be unsustainable if it is not accompanied by policies to invest in human development.[17] Thus, an effective strategy to foster growth and human development produces a "virtuous circle" of accelerated progress in poverty reduction.

IV. Macroeconomic Foundations of Sustainable Growth

21. In the early stages of an economic recovery program, several years of rapid growth may arise as a result of better capacity utilization in response to “first-generation” reforms, especially when the reforms are supported by a large increase in foreign financing. These basic reforms include improved macroeconomic management, an adjustment in the real exchange rate, and liberalization of various controls that are especially damaging to growth. Multiplier effects may sustain the momentum for a few years, but most of these factors involve once-off gains that do not provide a solid foundation for *sustained* rapid growth. What, then, are the main requirements for successful growth performance over the long term? This section provides a conceptual answer based on standard theories of growth. (The following section addresses the same question by examining lessons from the empirical literature on growth.)

22. The simplest framework -- called the Harrod-Domar (HD) model -- emphasizes two determinants of growth:

- The investment rate (ratio of capital investment to GDP), and
- The productivity of investment.

In this framework, the investment rate is determined by *savings* from two sources: foreign saving (net foreign financing), and domestic saving (in both the public and private sectors).[18]

In behavioral terms, the basic determinant of investment is the *expected returns*, relative to perceived *risk and uncertainty*. What policies can be used to address these underlying determinants of investment? Box 1 (next page) provides an outline.

23. The *investment productivity* factor (call it σ) in the HD growth framework can be defined as the "incremental output-capital ratio." The parameter σ measures the impact on GDP per unit of added capital stock. If σ is constant, then the H-D model implies that growth is determined by the rate of saving and investment. Empirically, however, this assumption is invalid: productivity changes are central to any understanding of the growth process. Rising productivity is also the ultimate driving force for achieving sustainable economy-wide improvements in the real wage. One immediate implication is that investment promotion policies should be designed to stimulate efficient and competitive projects, rather than fostering inefficiency; otherwise, the benefits of higher investment can easily be undermined by losses in productivity. Box 2, below, outlines other policies that can contribute to promote higher productivity.

24. Although the HD model vastly simplifies the analysis of a complex process, its two main elements – investment and productivity – are essential to even the most sophisticated analysis of economic growth. Moving beyond the simplest framework, the HD growth model can be converted into *per capita* growth terms by introducing a third basic factor:

- Population growth.

The growth rate of *per capita* GDP equals the overall GDP growth rate *less* the rate of population growth.[19] In some countries, such as China and Indonesia, *population* policies have been an important factor in improving per capita income in the medium to long run. Indonesia's successful population policies, for example, were pursued through health programs for women and children, with an emphasis on child spacing and nutrition. In most countris, though, population growth declines as a *consequence* of behavioral changes associated with urbanization, education (especially for girls), and rising standards of living, and not so much as a result of government policies.

25. A second standard growth theory – the Solow-Swan (SS) model – adds two additional factors to the growth equation:

- Labor force growth, and
- Investment in human capital.

The SS framework also converts the productivity term into a dynamic form as:

- The rate of "technical change."

26. *Labor*, of course, is a primary factor of production that can substitute for physical capital in many production processes. Hence, labor force growth is a basic determinant of changes in output. The positive effect on output of labor force growth (LFG) partially offsets the negative impact of total population growth (PG) on per capita income.[20] It is interesting to note that LFG and PG do not always move in tandem. During the early stages of a demographic transition LFG may exceed PG, since a declining birth rate takes 15 years to affect the labor force. In the interim, the number of "hands to work" continues to grow rapidly, while the number of "mouths to feed" grows more slowly. This demographic process reduces the dependency rate and improves per capita growth in the medium-term.[21]

Box 1. Policies to promote investment

What policies can be used to address the underlying determinants of investment? Consider first *domestic saving*. By far the strongest factor for boosting domestic saving is growth itself. As average income rises, private consumption standards tend to adjust with a lag. This results in higher private sector saving, creating another virtuous circle favoring rapid growth -- once growth is underway. Beyond this inherent feedback process, the mobilization and retention of domestic saving may be enhanced by policies aimed at:

- Maintaining low inflation.
- Fiscal reforms to increase *government saving* by strengthening revenue mobilization and controlling current expenses.
- Pension reforms to expand "compulsory" saving.
- General improvements in the investment climate to reduce costs and risks, in order to stem capital flight and encourage reinvestment of domestic earnings.
- Avoiding negative real interest rates, and developing attractive and convenient saving services for the broad population. While the overall impact of financial liberalization on saving is ambiguous, financial deepening undoubtedly improve the allocation of saving to more efficient investments.

Investment returns throughout the economy can be enhanced by government policies aimed at:

- Improving the quality of infrastructure, particularly in transportation, telecommunications (where moving slowly guarantees falling behind), energy, and water.
- Lowering duties and barriers on international trade, to reduce costs and provide better access to regional and global markets.
- Firmly committing to macroeconomic stability, to reduce borrowing costs and minimize risk premiums up and down the supply chain.
- Investing in education and health services, including programs to roll back pandemic diseases such as HIV/AIDS and malaria.
- Establishing a tax system with moderate effective tax rates, which requires a wide tax base and effective tax administration to raise sufficient revenues.
- Eliminating red-tape through deregulation, simplification of procedures, and civil service reform.
- Establishing effective laws and institutions to control corruption (which is a heavy implicit tax on business).

Finally, policies to stimulate investment by reducing *risk and uncertainty* can include:

- Maintaining a commitment to macroeconomic stability, including low inflation, a sustainable budget deficit, a sustainable debt profile, and a reasonably stable real exchange rate.
- Strengthening institutions to protect property rights, enforce contracts and control crime.
- Reducing the risk of a financial crisis through strict prudential regulations and effective banking supervision.
- Eliminating, as far as possible, bureaucratic discretion in the implementation of laws and regulations affecting investments and business operations.
- Ensuring repatriation of capital and profits from foreign investment, without restrictions.
- Enhancing the predictability of the tax system by establishing a well defined strategy for tax reforms.
- Improving transparency in macroeconomic and financial management by adopting international standards for data dissemination.
- Reducing balance of payments risk by maintaining a market-based exchange rate, pursuing policies to diversify exports, and reducing dependency on foreign aid.
- Improving the dependability of basic infrastructure services through mechanisms to introduce private management incentives, appropriate pricing for cost recovery, and timely maintenance systems.
- Reducing political risks by respecting basic human rights, establishing participatory approaches to governance, and developing effective procedures for dispute resolution.

Box 2. Policies to improve productivity

Firm-level empirical studies of do not provide many clear-cut results about specific policies that enhance investment productivity (Tybout, 2000; Bartelsman and Down, 2000). One well established empirical fact is that steady gains in aggregate productivity emerge from a complicated process of evolutionary changes at the firm level, as some firms grow and others shrink or fold. Joseph Schumpter long ago identified this process of "creative destruction" as a central feature of growth dynamics. In addition, basic principles suggest that the following policies can make an important contribution:

- Allowing resource allocation decisions to be determined primarily through the market mechanism and private enterprise, to harness the power of personal initiative and self-interest.
- Investing in human capital, including technical, scientific, and managerial education.
- Expanding the scope for specialization and scale economies by improving transportation and communications infrastructure and facilitating production for the export market.
- Strengthening competition throughout the economy by reducing trade barriers, eliminating legal and administrative impediments to entry and exit of new businesses, and reforming or privatizing industries that have been operating as state monopolies.
- Adopting policies to attract direct foreign investment as a major source of technical and managerial innovation.
- Ensuring the protection of property rights.
- Developing policies to facilitate the introduction and adaptation and development of more productive technologies.
- Reducing investment and production distortions due to the tax system.

27. The importance of investment in *human capital* -- through programs to improve education, technical training, preventative and primary health care, and nutrition -- is common to virtually every discussion of economic growth strategy for low-income countries. Broad-based human capital investment is also essential to any strategy for poverty reduction, since it directly enhances capabilities and opportunities for the poor.

28. The final term in the SS model is called "*technical change*," but it actually refers to *any source of efficiency enhancement* -- or more formally, growth of "total factor productivity." This may arise from developments having little to do with technology as such. For example, factor productivity can rise as a result of structural changes that shift resources to more productive sectors, better financial intermediation, or improved management techniques.

29. Early growth theories offered no clear explanation about the sources of productivity growth or technical change. Modern theories, however, focus on this vital component of the growth equation. These theories emphasize determinants such as:

- Knowledge externalities
- Economies of scale in production, and the
- "Catch-up effect."

30. *Knowledge externalities* arise from investments in modern machinery, production technology, information technology, education, and research and development, as well as direct experience (learning by doing). Such investments have a diffuse, lasting and cumulative effect on efficiency throughout the economy. Thus, knowledge is a form of "public good." This justifies government support for knowledge-generating processes. such as technical and scientific training programs, joint ventures involving technology transfer, imports of capital goods embodying appropriate new technology, promotion of export-

oriented manufacturing, and policies to create a competitive environment (and prevent monopolies) to stimulate productivity.

31. The role of *scale economies* has been understood for centuries, but only recently incorporated into formal growth theory. For many (but not all) production processes, larger scale yields lower unit costs, higher productivity and greater competitiveness. This is an important reason for pursuing outward-looking strategies, particularly in low-income countries where domestic markets are very small compared to vast regional and global market opportunities.

32. Finally, the *catch-up effect* indicates that *poor countries have the best prospects for rapid growth*. This is ironic, since most poor countries have *not* achieved rapid growth. (Otherwise they would no longer be poor!) As reviewed in the next section, however, the statistical evidence strongly confirms the validity of the catch-up effect and reveals that low growth is largely a result of policies and institutions that inhibit investment and saving, trigger capital flight, and undermine productivity. With appropriate and consistent policies and institutions, poor countries should be in a position to achieve very high rates of growth -- as evidenced by various success cases over the past forty years.[22]

33. In summary, economic theory suggests that an effective growth strategy should incorporate effective policies to foster a high rate of *investment in physical and human capital* and rising *productivity*. Policies to reduce *population growth* can also play an important role. The conceptual analysis also provides insights into the types of policies that are needed to sustain rapid growth. Ultimately, however, empirical analysis is needed to identify key policies and institutional reforms for fostering saving, investment and productivity. What, then, can we learn from actual experience around the world about the main requirements for sustaining rapid growth?

V. Empirical Evidence on Key Policies to Sustain Rapid Growth

34. An enormous volume of empirical research on economic growth has appeared in recent years. Researchers have studied a wide variety of indicators to establish the most important factors for fostering sustainable growth, through their effects on investment and productivity. Different studies use various methods, data definitions, and data samples and therefore come up with somewhat different results. Nonetheless, the overall empirical record points to a short list of seven main growth factors relating to *public policy*:[23]

- Peace and political stability
- A consistent record of sound macroeconomic management
- Investment in education and health
- Investment in infrastructure
- Openness to international trade – particularly, export promotion
- Quality of market-supporting institutions
- Financial market development.

35. Peace and political stability. A reasonable degree of peace and political stability may not guarantee economic success – witness the long period of political stability in Zaire under Mobutu, and in Malawi under Banda – but it is a *necessary* condition for sustaining rapid growth. The presence of hostilities is the first criterion used by Collier and Gunning (1999) to identify African countries with "hostile" environments for growth. Many studies have found that indicators of political and civil turmoil or measures of country risk have a significant

negative impact on growth. The development of policies, institutions and practices to prevent conflict and maintain order are fundamental to successful performance.

36. Macroeconomic stability. *Macroeconomic stability* is equally important. For example, high inflation is the second criterion used by Collier and Gunning (1999) to identify a hostile growth environment. (They define "high" as being above 25%).[24] Other indicators of macroeconomic stability which have been tested in econometric studies as determinants of growth include inflation volatility, volatility of the real exchange rate, and the budget deficit. In a recent survey of the empirical evidence on growth, Temple (1999) finds that no single indicator gives consistently strong results, but that differences in macroeconomic stability are generally "a key reason why growth rates differ across countries." The empirical evidence also suggest that inflation is especially harmful for the poor.[25] How high can inflation go before it undermines growth? Empirical estimates yield a variety of answers.[26] The prudent path is clearly to avoid inflation higher than single-digits.

37. Health and Education. Investment in health and education is another major policy determinant of growth.[27] In statistical tests, health status is typically measured by life expectancy, which reflects a host of factors related to well being, as well as the distribution of health improvements across the population. Gallup and Sachs (1999) test a direct indicator of malaria prevalence, which appears to have a remarkably strong negative effect on growth.

38. The empirical analysis of how education capital affects growth is complicated by measurement problems and long lags between the investment and its impact. On balance, the empirical results are mixed. An interesting skeptical view is provided by Freeman and Lindauer (1999), who contend that education investment in Africa has been rapid, but with little effect on growth. This suggests that much of the investment has produced a low rate of return. They draw two lessons: first, that the *quality* of education is just as important as quantity; and second, that the overall economic policy determines the impact of human capital investment. Another example is Barro (1997), who finds a highly significant growth effect from male secondary schooling, but not from primary schooling or girls education. Yet Dollar and Kraay (2000) report a positive effect of primary education, and other research demonstrates high returns from girls' primary education, operating through multiple channels which may simply be hard to pin down statistically.

39. Since the empirical evidence on the growth effect of education is mixed, one must take into account the context. Given the extremely low levels of education status in Mozambique, there is no question about the importance of education investment as a cornerstone of the growth strategy. Even so, the literature poses serious questions about the trade-off between quantity and quality in the education sector, as well as the allocation of public expenditure between primary, secondary, and technical/scientific education. Similar questions about expenditure allocation arise in the health sector: how should expenditure be split between preventative and curative health programs, nutrition programs, and interventions that target specific problems such as malaria and HIV/AIDS?

40. Infrastructure investment. As in the case of education investment, the effect of public expenditure on infrastructure on growth is not uniformly evident in the empirical literature. Some studies report that infrastructure investment has strong positive impact on growth, while others do not find significant effects. From their review of *micro*economic evidence on growth, Collier and Gunning (1999) conclude that the usual macro-statistics methodology seriously underestimates the importance of infrastructure in Africa, partly because of measurement problems. For Mozambique the critical importance of efficient infrastructure investment is obvious – especially investing in the road network and modernizing

telecommunications (where moving slowly means falling behind). As in the case of human capital investment, the main point of debate is how best to allocate scarce resources among competing infrastructure investments, particularly taking into account the need to ensure that the growth effect is broad based and pro-poor.

41. Openness to trade. The analysis in section III provides strong theoretical reasons to expect that openness to international trade is a vital determinant of economic growth. In addition to the basic advantage of gains from specialization and trade, openness can also stimulate growth through enhanced competition, access to larger markets, technology transfer, and foreign investment. This expectation is strongly confirmed in the empirical literature. In one widely cited study, Sachs and Warner (1997) develop an index of trade policy and find that this is the most important variable explaining why growth in Africa was much slower than in Asia during 1965-1990. Similar findings have been widely replicated by other researchers.

42. To be sure, there is some dispute about how to interpret the strong statistical link between trade and growth. Rodriguez and Rodrik (1999), for example, contend that the indicators which have been used to measure restrictive trade practices jointly capture the effect of other related policy problems. They point out, too, that rapid growth creates favorable conditions for expanding trade. Hence, the strong statistical relationship may partly be a reflection of "reverse causation" running from growth to trade.

43. Nonetheless, even Rodriguez and Rodrik emphasize that there is no credible evidence to suggest that protection is good for growth.[28] Their point is simply that the relationship between trade and growth may be complicated and country specific. Thus, one must take into account the specific context. For Mozambique, the case is clear-cut: Given the country's small domestic market, limited technical, favorable geographical position, and enormous dependency on donor funds as a source of foreign exchange, policies to expand trade and promote export growth must be a central component of the strategy for increasing investment and productivity.

44. Market-supporting institutions. The quality and effectiveness of *market-supporting institutions* is a key component of "second-generation" reforms that are needed to stimulate rapid and sustainable growth. This observation reflects a shift in thinking which arose in the 1990s after many African countries encountered unsatisfactory growth results despite major progress on basic reforms in the area of macroeconomic policy, trade policy, budget re-allocation, and market liberalization. New research has demonstrated that investment is clearly impaired by a weak or adverse institutional environment, especially in relation to the rule of law, property rights (including intellectual property), respect for contracts, and freedom to do business. Thus, the empirical literature points sharply to the need for an effective legal, judicial, and regulatory system, the elimination of red tape, effective efforts to reduce corruption, and a transformation of public administration to the role of facilitating private initiative.[29] Collier and Gunning (1999) refer to this as "public social capital." They consider that weakness in this respect have been a critical factor in explaining poor growth performance in Africa.

45. Financial markets. Business surveys always cite financial constraints as a major barrier to growth. Yet early development economists viewed financial deepening as a passive consequence of development rather than a leading cause. Views about this relationship changed radically in the 1970s and 1980s as a result of influential research that spotlighted the adverse effects of "financial repression" on saving, investment, efficiency, and equity. Yet programs to liberalize financial markets often led to serious problems with financial

instability. As a result of this experience, and related theoretical developments, a more balanced view is prevalent today. This view reflects the importance of financial-market development to economic growth, which is clearly confirmed by empirical studies.[30] At the same time, the new orthodoxy emphasizes the special risks that characterize financial transactions, the potential role for government in fostering financial innovations, and the enormous *systemic* risks that can arise from *unsound* financial practices (see section VII).[31] Thus, policies to develop a competitive, efficient, diversified, *and sound* financial system are another basic building block for the growth strategy.

46. Other considerations. In addition to *policy-related* factors, such as those outlined above, empirical growth studies also identify a variety of *conditioning factors* that influence growth performance. These include geographical factors, the demographic structure, and the presence of rich natural resources (which tend to depress growth, on average). In addition, nearly all statistical studies confirm the validity of the "catch-up effect" (discussed in section III), by showing that growth performance is inversely related to the *initial* level of per capita income, after controlling for other growth determinants.

47. Of course, initial per capita income is not something policy makers can change. Still, the empirical literature shows that the *strength* of the catch-up effect is reinforced by several factors that they can be controlled – most notably openness and education. In general, the literature indicates that *policy-related* variables account for most of the difference in growth performance between successful and unsuccessful countries. For example, Sachs and Warner (1997) use their econometric results to estimate how African growth performance might have been altered had different policies been in place over the period 1965-1990. Specifically, for three policy variables -- openness to trade, budget management, and institutional quality -- they replace the observed “African” parameter values with those of fast-growing Asian countries and calculate the implied growth results. The results suggest that better policies in these three areas alone could have increased the growth of per capita income in Africa from 0.8% to 4.3% per year. Extended over a quarter century, the higher growth rate translates into income levels that are more than twice as high, with correspondingly large improvements in reducing poverty .

48. For several of the critical growth factors outlined above, Mozambique received a very low score in the recent *Africa Competitiveness Report 2000*. The greatest deficiencies are in the following areas:

- Weak export performance;
- Burdensome regulations;
- Weak financial services and low supply of financial saving;
- Inadequate infrastructure, particularly transport and communications;
- Low education and health of the labor force;
- Weak legal and judicial system.

On the last point, in particular, Mozambique is ranked at the bottom of the list among 24 African countries covered by the report.

49. In summary, our understanding of the growth process has moved far beyond modeling the macroeconomic determinants. A tremendous amount of research has been devoted to identifying the underlying policies and institutions that “explain” differences in growth performance through their impact on investment and productivity. The seven factors discussed above appear to be the most important overall priorities.

VI. Sectoral and Regional Strategies

50. Rapid growth is not simply a macroeconomic phenomenon. It is the cumulative result of innumerable decisions across all sectors and regions of the economy. An appraisal of *sectoral* prospects for growth is therefore important to cross-check the macroeconomic analysis, and also to identify possible bottlenecks to growth. Suppose that a macroeconomic model based on assumptions about investment and productivity growth yields a projection of 7% growth over the medium-term (which means a doubling of GDP in ten years). To have confidence in the projection, its feasibility should also be assessed at the sector level. Given appropriate weights, will the expected sectoral growth rates add up to 7% growth in GDP?

51. Sector studies can also address important questions such as the following:

- What is the likely growth trend for the sector over the next ten years under present circumstances (the baseline scenario)?
- What sectoral and global measures are needed to strengthen competitiveness and accelerate growth in each main sector?
- How will the sectoral growth contribute to poverty alleviation?
- What measures can be adopted within each sector to strengthen the benefits for the poor?
- How does the sectoral structure of growth influence the impact on poverty reduction?
- What are the principal barriers to more rapid job creation in each sector?

52. One theme that often arises in considering sectoral growth prospects is the issue of "picking winners" and providing special support to certain favored activities. The history of selective industrial policy in most developing countries provides serious grounds for caution. Still, many observers claim that targeted industrial policies have been an important ingredient of success in Asia. These claims are a matter of dispute among experts, and in any case, the implications for Africa are not self-evident due to differences in the quality of governance and skill levels in the civil service.[32] These considerations are critical, since having "the government" pick winners means that bureaucrats and politicians are making investment decisions -- based, at best, on second-hand information, and at worst, on pressure group influences that bear no relation to efficiency. Whereas competitive market forces tend strongly to reward productivity and innovation, bureaucratic favoritism tends strongly to divert resources to inefficient uses. Besides, even within a "priority" sector, some investments have low rates of return and do not merit encouragement; at the same time, activities with high rates of return do not generally require special concessions.

53. One element of selective industrial policy that does stands out from Asian experience is that successful governments firmly supported export activities as a *central* focus of development strategy -- and with vigorous attention to results rather than pledges. This approach inherently favors competitive producers and provides strong incentives for rising productivity. In this spirit, economists in Latin America are debating *new* forms of industrial policy that will promote efficiency, technology, and training -- in line with modern growth theory – throughout the economy, in lieu of providing special support for a few particular sectors.[33]

54. Nonetheless, as discussed in section III, the poverty reduction effect of growth can be enhanced by giving particular attention to policies that foster increased productivity in agriculture (especially for family farms), investments in labor-intensive industries and services (including tourism), and opportunities for micro and small enterprise development. Thus, the policy matrix for the growth and poverty reduction strategy should establish a clear program to foster development in these key sectors. In general, the program should

emphasize (1) improving the provision of essential public services, (2) eliminating administrative obstacles that impair private initiative in these sectors, and (3) strengthening institutional support for the functioning of market forces. This strategic approach is more broadly effective --and less prone to abuse -- than schemes to provide special financial incentives.

55. Macroeconomic growth strategy should also be assessed from a *regional* perspective – though this is more difficult due to data limitations. [34] There is an inevitable tendency for growth to concentrate in geographic centers that offer special advantages in terms of access to markets, better transport and communications networks, a concentration of support services, and proximity to government decision makers. Still, an equitable growth strategy must ensure that every region participates in and benefits from rapid growth. Given the central objective of poverty reduction, it is unacceptable for any region to be left behind.

56. In terms of straight economic calculations, it may make sense to focus infrastructure investments in the main urban centers and along the primary development corridors, where production and trade are naturally concentrated. However, the *social* rate of return may be higher if priority is given to developing infrastructure and public services in regions with the greatest concentration of poor populations, as recommended by the World Bank (2000). To achieve rapid growth that is also pro-poor , a careful balance must be struck between economic and social criteria.

57. In summary, the growth strategy should look beyond macroeconomic considerations and include a careful analysis of the sectoral and regional building blocks for growth and poverty reduction. The sectoral analysis should de-emphasize the notion of "picking winners" and providing special financial incentives, in favor of policies to promote efficiency, technology and training throughout the economy. At the same time, the central concern for poverty reduction requires particular attention to increasing productivity in family agriculture, stimulating investment in labor-intensive industry and services, and creating a favorable environment for income generation in micro and small enterprises. The regional analysis is equally important to develop practical approaches for achieving a more balanced and pro-poor geographical distribution of growth.

VII. Risk Factors

58. A successful strategy for sustainable growth and poverty reduction also requires careful thought about how to minimize exposure to critical *risks* that can derail the overall economic program -- beyond the normal tendency of economies to encounter short-term business cycles. This section comments on six major risk factors facing countries like Mozambique: HIV/AIDS; potential banking crises; dependency on foreign aid; vulnerability to external economic or financial shocks; vulnerability to natural disasters; and self-inflicted damage caused by inconsistent policy management.

59. HIV/AIDS. The most immediate risk is the HIV/AIDS pandemic. This is a major economic problem, as well as a health problem. If unchecked, HIV/AIDS will result in the death of more than a million Mozambican adults over the next ten years, with the loss of life being concentrated among those of prime working age.[35] Compared to normal demographic trends, AIDS unchecked will reduce the economically active population by 13% in 2010. This will impair growth through several channels: there will be a large loss of trained and experienced workers, not least in public administration; a large loss of productive potential in family agriculture, where labor is often a binding constraint; a higher population dependency

rate, despite the lower population growth rate; higher labor costs and training costs for businesses; and greater risks of doing business. At the same time, high morbidity and mortality will impose a huge burden on the health system and on household coping systems, including a legacy of more than 1.1 million AIDS orphans. Any strategy for sustaining rapid growth must include vigorous measures to reduce the incidence of new HIV infections quickly as possible.

60. Banking crises. A financial crisis is one of the fastest and surest ways to derail growth and create a severe set-back for poverty reduction. Over the past quarter century more than sixty countries have experienced financial crises costing an average of more than 9% of GDP.[36] The crises have been provoked by a combination of macroeconomic imbalances, unsound banking practices, weak banking supervision, poor financial disclosure, and fragile confidence, combined with technology developments that make it increasingly easy to transfer funds rapidly to safer havens.

61. The growth strategy must therefore include effective measures to protect the soundness of the banking system. The Banco de Moçambique is already taking steps to strengthen prudential regulations and banking supervision. This is a fundamental step towards better risk management, particularly since domestic credit has grown very rapidly over the past few years.[37] It is important, too, for policy makers to understand that great damage can be done to the financial stemming by pressuring banks to extend risky, politically motivated loans without adequate guarantees. Another bitter lesson from international experience is that the damage from a financial crisis is often accentuated by a failure to stop fraudulent or unsound banking practices promptly, once problems are identified.

62. Aid dependency. Mozambique's high degree of aid dependency is another major risk factor. Many countries in the region (including Zimbabwe, Zambia, Tanzania and Kenya) have seen economic problems turn into crises as a result of an abrupt reduction in foreign aid. Usually the loss of donor support is triggered by poor economic policy management in the first place. The risk of a costly aid cut-off can be minimized by pursuing a consistent program of pro-growth and pro-poor reforms.

63. The present degree of aid dependency in Mozambique is fundamentally unsustainable. Foreign aid now finances half the government budget and more than half of the nation’s import bill. Therefore, the growth strategy must include a clear program for reducing aid dependency. This entails a concerted effort to increase *domestic revenue mobilization*, to reduce the budget gap. In addition, the program requires effective measures to improve the volume and diversity of *exports* and discourage import dependency, to reduce the balance-of-payments gap. One basic measure for dealing with the balance of payments gap is to maintain a more competitive *real exchange rate*, which will enhance the profitability of export activities and stimulate efficient import substitution. At the same time, steps should be taken to establish a more uniform structure of customs duty rates, since the present duty differentials favor the use of imported inputs and impair the development of backward linkage industries. More direct programs to stimulate exports should also be seriously considered, drawing on lessons from experience in Asia.

64. External shocks. Most African countries remain highly vulnerable to external shocks in the form of declining prices for key primary product exports, rising oil prices, downturns in the major market economies, and shocks in the international financial system. Ironically, this vulnerability was actually heightened in the past by inward-looking policies that stifled the expansion and diversification of exports, together with protective tariffs and exchange

controls that encouraged import-dependent investments and hindered backward linkages to upstream suppliers.

65. African governments are not in a position to prevent external shocks, but they can mitigate the impact through policies to diversify exports, reduce protection that favors import-dependent activities, reduce exposure to external debt, and discourage short-term capital inflows. In addition, African governments should strongly support international efforts to improve the stability of the international financial system. One further measure is to strengthen capacity for economic policy management, enabling the government to assess the implications of changing world market conditions and adjust policies accordingly.

66. Natural disasters. Every country in the region suffers periodic set-backs due to natural disasters, particularly from droughts and floods. In some cases the macroeconomic effects are relatively small, or they are reversed as soon as the weather returns to normal. But some disasters have a devastating effect on agriculture in large regions of the country, with subsidiary effects on industries that depend on agriculture through supply links or demand links (that is, reductions in spending on many other goods and services as a result of depressed agricultural incomes). A series of bad-weather years can substantially reduce medium-term growth performance and disrupt the program for poverty reduction. Coping measures include early warning systems, careful contingency planning, better systems for regional water management, and the development of appropriate small-scale irrigation technologies.

67. Inconsistent policy management. In many countries, economic recovery and growth have been reversed by inconsistent policy management. This can occur due to complacency that arises when the coast looks clear; impatience to deliver unaffordable benefits to various groups without due regard for the economic effects ("economic populism"); ad hoc responses to immediate problems; pressure from previously protected sectors that are having difficulty adjusting to reforms; or simply a lack of attention to good policy analysis in making political decisions. Indeed, one major reason for developing a coherent growth strategy is to minimize such inconsistencies and policy reversals.

68. For every one of the risk factors outlined above, the most potent way to minimize adverse effects is through sheer good luck. Unfortunately, this is not a reliable instrument for policy management -- hence the need for serious risk analysis and careful forward planning.

VIII. Capabilities and Opportunities for the Poor

69. Since *people* are central players in the growth process, the framework for a growth strategy is incomplete without taking into account the needs of the majority of the people, whose economic sphere lies primary in small-scale farming and micro and small-scale enterprises (MSEs). Jointly, these activities cover more than 90% of the population and account for nearly all of the income accruing to the poor in Mozambique. Small family farms and MSEs are not usually viewed as engines of long-term growth. Nevertheless, given the prevalence of poverty in Mozambique, policies to increase productivity and improve earning opportunities for poor households in these basic areas of activity can be more important for growth and poverty reduction than another billion-dollar megaproject. This is sometimes called the "*trickle-up*" approach to growth.

70. The question is how to design cost-effective policies and programs to ensure that the poor can contribute fully to growth and benefit fully therefrom. The challenge involves five distinct issues:[38]

- Improving access to productive *assets*.
- Increasing the *productivity* of these assets.
- Providing better *access* to markets and public services.
- Helping the poor establish better mechanisms for *coping* with risks; and
- Strengthening their *voice* in civic affairs that affect their lives.

71. The implications for policy include the need for: better provision of health and education services, especially in rural areas; expansion of the rural infrastructure, particularly local roads and markets; stronger agricultural research and extension services geared to small farmers; the development of viable financial services for small farmers and MSEs; the elimination of unnecessary administrative or regulatory requirements that impose costs or create obstacles for small farmers and MSEs; and the establishment of participatory processes for identifying, designing, monitoring, and evaluating local public services.

72. Even with the adoption of excellent programs to enhance capabilities and improve opportunities for the poor, some people will be left behind due to age or disability. An equitable growth program therefore requires selective and well targeted safety-net programs to assist these special groups. Until the economy gets much wealthier, however, such programs will inevitably have limited scope, leaving most of the burden of supporting these vulnerable groups in the traditional hands of family and friends.

IX. The Policy Process

73. The identification of priorities for a growth strategy requires well informed judgements and a bold strategic vision of what the country can achieve. Thus, the technical analysis has to be combined with consultations involving government officials and representatives of the business community and civil society.

74. Open debate between government, civil society, and the business community can help government to strengthen policy management, improve the delivery of public services, improve public administration, and clarify the role of the state in a free society. More specifically, there are seven major benefits from a participatory policy process.

- First, bottom-up approaches can help the government to program the use of public resources more efficiently by creating a mechanism for listening to the needs, concerns, expectations and plans of the people.
- Second, since government officials have no monopoly on information, ideas, wisdom or experience, the state can benefit from bringing a wider range of expertise to bear on the formulation and assessment of public policies and programs.
- Third, government can use the dialogue to explain its policies and decisions, to enhance public understanding and bolster support. The learning effect of more open policy discussion is thus a two-way street.
- Fourth, constructive dialogue is essential to help the government understand how its policies, regulations, and performance affect the people or impede their initiative.
- Fifth, greater transparency can prevent problems from exploding into crises. This is a basic lesson from the Asian crisis in 1997 and the Mexican crisis in 1994. If problems are hidden from view, governments are less likely to respond early, when solutions are most manageable.

- Sixth, open debate is a valuable means for peaceful accommodation and resolution of differing views and opinions.
- Finally, open discussion of government policy and performance is an inherent requirement for consolidating democracy and securing human rights.

75. These considerations suggest that open and participatory procedures can be used to strengthen the growth strategy, itself. More fundamentally, these reforms should also be an integral *element* of the strategy, serving as an on-going tool to improve the development and review of public sector policies and programs for growth and poverty reduction.

X. Conclusions

76. The Government's central goal of poverty reduction can only be achieved with rapid, sustained and broad-based growth. The prevailing Government Program sets a target growth rate of 8% or more over the next ten years. This is feasible, but very ambitious. Achieving it will require a clear understanding of the determinants of growth and a careful strategy to identify critical policy and program priorities. The purpose of the present paper has been to provide a conceptual framework for designing the growth strategy, as an input to the full Policy Reduction Strategy.

77. Recent research has confirmed that overall economic growth is an essential and powerful instrument for poverty reduction. In addition, there is strong statistical evidence to suggest that low-income countries have the best prospects for achieving rapid growth -- given an appropriate policy environment.

78. Starting with the macroeconomic fundamentals, a high growth rate requires a high rate of saving and investment, together with steady improvements in productivity. From the point of view of business behavior, decisions on investment depend primarily on the prospective rate of return, relative to perceived risks and uncertainties. Economic policy affects growth prospects in many ways by influencing these macroeconomic fundamentals, for better or for worse.

79. A huge number of empirical studies have been produced in recent years to improve our understanding of the main determinants of growth. While the various results are not always fully consistent, the evidence clearly suggests that investment and productivity performance are strongly affected by the underlying *policies and institutions*. The overall empirical record points to seven critical factors that are directly influenced by government policy:

- peace and political stability;
- macroeconomic stability;
- high investment in education and health;
- major investments to improve the infrastructure;
- openness to international trade, particularly export promotion;
- well-functioning market-supporting institutions (such as respect for property rights, an effective legal and judicial system, efficient and honest public administration, and a minimum of regulatory impediments); and
- development of deeper financial markets with sound financial institutions.

For many of these factors, Mozambique still ranks very low, even for Africa (according to the *Africa Competitiveness Report 2000*).

80. This analytical framework provides a basis for identifying priorities for the growth strategy. In additional, several other factors should be taken into consideration.

81. First, the growth analysis should be viewed not just from a macroeconomic perspective, but also in terms of sectoral and regional building blocks for growth and poverty reduction. Sectoral programs should de-emphasize the notion of "picking winners" and providing special financial incentives, in favor of policies to promote efficiency, technology and training throughout the economy. At the same time, the central concern for poverty reduction requires particular attention to increasing productivity in family agriculture, stimulating investment in labor-intensive industry and services, and creating a favorable environment for income generation in micro and small enterprises. The regional analysis is equally important to develop practical approaches for achieving a more balanced and pro-poor geographical distribution of growth.

82. Second, various risk factors can quickly derail the growth process and undermine progress in reducing poverty. These include: HIV/AIDS; bank crises; loss of foreign aid support; external economic shocks; natural disasters; and inconsistent policy management. While there is no way to avoid all such problems, a careful growth strategy has to include plans for minimizing vulnerability to these risks and coping with those that do arise.

83. Third, the design of a growth strategy for poverty reduction should take into consideration the needs of the poor, themselves. Every element should be reviewed from the perspective of how it will affect capabilities of the poor and opportunities for the poor to contribute to growth and benefit from economic progress.

84. Finally, the policy *process* is also very important. Developing a growth strategy is not just a matter of technical analysis. Both the design and implementation of the strategy can be improved greatly through a consultative process involving various ministries within the government and discussions with stakeholders in the business community and civil society.

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Endnotes

[1] According to the World Bank, *World Development Indicators 2000*, seven countries -- Ethiopia, the DRC, Burundi, Sierra Leone, Guinea Bissau, Eritrea and Niger -- rank lower than Mozambique in terms of per capita income for 1998. Using the Purchasing Power Parity measure of income, the WDI shows twelve countries below Mozambique.

[2] As stated in the PARPA and the I-PRSP.

[3] See the Government Document to the Consultative Group Meeting, June 2000.

[4] Even so, the UNDP's *National Human Development Report for 1999* views this target as "excessively modest and slow from the point of view of the population's needs." (p.32) In a similar vein, the World Bank's recent report on growth prospects for Mozambique (World Bank 2000) suggests that: "Making a significant dent in poverty…will require that the economy sustain the double-digit growth rates of the past three years." Neither report, however, provides a feasibility analysis for this super-growth scenario.

[5] China (the leader at 8.2% per year), Indonesia, Thailand, Mauritius, Malaysia, Chile, Korea, Hong Kong, and Singapore. Source: World Development Indicators CD-ROM, 2000, using series for per capita GNP in constant 1995 US$.

[6] For the 25-year period 1970-1995, 6 countries maintained average per capita growth of 5% or more: Botswana (the leader at 7.6% per year), China, Hong Kong, Korea, Singapore, and Thailand. Source: see previous footnote.

[7] This point is emphasized in the World Bank, *World Development Report 1999/2000*.

[8] The UNDP, in its *Human Development Report 2000*, defines multiple dimensions of human poverty, including "deprivations in a long and healthy life, in knowledge, in a decent standard of living, in participation." The World Bank also adopts a broad definition in its *World Development Report 2000/2001*: "Poverty is unacceptable human deprivation," encompassing not only low levels of income and consumption, but also low levels of education, health, and nutrition, as well as vulnerability and powerlessness.

[9] Specifically, the PARPA defines a monetary poverty line based on the minimal nutritional requirement of 2,150 kilocalories per person per day, taking into account regional price variations.

[10] 125 countries have produced at least one comprehensive household survey with national coverage. Approximately 80 countries have produced more than one survey with data of sufficient quality to permit a meaningful analysis of changes in poverty at different points in time. For some countries the data base covers up to 40 years of experience. See Deininger and Squire (1996) and Dollar and Kraay (2000).

[11] Dollar and Kraay (2000); Gallup, Radelet and Warner (1998); Roemer and Gugerty (1997); Timmer (1997). Easterly (1999) and Stryker and Pandolfi (1997) get similar results using a variety of other poverty measures, including indicators of education and health

[12] Timmer (1997) finds that growth in the agriculture sector has a particularly strong impact on increasing incomes for the poor.

[13] This is exactly the focus suggested in the World Bank's analysis of growth prospects for Mozambique (World Bank, 2000).

[14] See also Fields (2000) and Aghion et al. (1999).

[15] Lindauer and Roemer, 1994, p. 1.

[16] Measured in purchasing power parity, 1970 per capita income was $621 for Zambia and $298 for Indonesia. In 1995 it was $360 for Zambia and $992 for Indonesia. Absolute poverty here is defined by the standard definition of US$1 per day in terms of 1985 purchasing power parity. Source: WDI2000 and WDI1999. It should be noted that the incidence of absolute poverty in Indonesia rose to 15% after the crisis in 1997.

[17] On the first point see Aghion et el (1999). On the second, see Ranis, Steward and Ramirez (2000).

[18] Foreign saving entails five types of net flows: official loans and grants; borrowing from private foreign creditors; flows of portfolio capital into domestic financial markets; foreign direct investment, and capital flight (which has been extremely high in Africa). Public sector saving is generally defined as current revenue *less* current expenditure. Private saving is defined as income less consumption expenditure, and includes business retained earnings.

[19] Th relationship given in the text is an approximation, which is reasonably accurate for the range of parameter values relevant here. The exact relationship is: (Per capita GDP growth) = (1+GDP growth) / (1+population growth) - 1, where all of the growth rates are expressed in decimal units.

[20] Temple's (1999) survey of the empirical evidence finds a small negative effect of population growth, overall.

[21] Sachs and Warner (1997) find that the ratio LFG/PG was higher in rapidly growing Asian countries than in Africa during the period 1965-1990, and that this was a highly significant factor in explaining international differences in per capita growth performance.

[22] A model developed by Lucas (2000) to simulate global economic growth performance over the past two hundred years suggests that poor countries today face a better chance than ever of achieving rapid growth, due to expanding "catch-up" opportunities via global markets, global finance, and global technology transfers.

[23] Important contributions include: Sachs and Warner (1997); Collier and Gunning (2000); Barro (1997); Temple (1999); Beck, Ross and Loayza (2000); Aron (2000); Gallup and Sachs (1999), among many others.

[24] They use three criteria. The third is a minimum degree of allocative efficiency, defined on the basis of a scoring system covering trade policy, development of the financial sector, interventions that distort markets for land, labor, and final products, the role of parastatals in the economy, and the allocation of public expenditures.

[25] Dollar and Kraay (2000).

[26] Stiglitz (1998) is the extreme case, citing evidence that inflation triggers a "low-growth trap" only when it reaches 40% or more. Other studies (cited, for example, in Collier and Gunning 1999) indicate that inflation above 8% can has a negative effect on growth.

[27] Since rising income obviously leads to better health and education outcomes, researchers use the *initial* value of such variables at the beginning of the data period, to minimize the problem of picking up reverse causation in the statistical relationship.

[28] Rodriguez and Rodrik (1999), p. 39. Elsewhere, Rodrik (1997) emphasized the fact that there are transitional costs of lowering trade barriers, since businesses that have thrived on protection often face serious difficulties in adjusting to a more competitive environment. The fact remains that a more competitive environment is essential for growth. Even in the short run, increased competition yields real gains for consumers and downstream producers, as a result of lower prices and wider product choice.

[29] See Aron (2000) for a review of the literature on growth and institutions.

[30] For example, see Beck, Levine and Loiza (2000) on the growth effects, but also Kaminsky and Reinhard (1999) on risk factors leading to an economic crisis.

[31] See Stiglitz 1998.

[32] See Ito (1997), Harrold, *et al*. (1996); Lindauer and Roemer (1994).

[33] See Ramos (2000) for a discussion of new policy directions in Latin America.

[34] The basis for regional economic analysis has been strengthened greatly by the technical work undertaking in preparation of the national *Human Development Report 1999*.

[35] See Ministério de Saude, et al.. (2000).

[36] Caprio and Honohan (1999).

[37] Rapid growth in bank credit is a classic warning sign of potential banking system problems. It often indicates lax lending standards or a loss of control over the loan portfolio, as lending volume overloads internal control systems. In either case, the result is a greater risk of bad debts, which can suddenly undermine confidence in the financial system. Since the end of 1996, bank credit to the private sector in Mozambique has been growing by 35% per year.

[38] This list is in same spirit as the World Development Report 2000/2001, but with slightly different details.