FEBRUARI 2008 • ARNE BIGSTEN, ANN-SOFIE ISAKSSON

Country Economic Report 2008:3

# Growth and Poverty in Rwanda: Evaluating the EDPRS 2008–2012

# Foreword

This country economic report on growth and poverty reduction in Rwanda, is part of a series of studies, undertaken by various Swedish universities and academic research institutes in collaboration with Sida. The main purpose of the studies is to enhance our knowledge and understanding of current economic and political development processes and challenges in Sweden's main partner countries for development co-operation. It is also hoped that they will have a broader academic interest and that the collaboration will serve to strengthen the Swedish academic resource base in the field of development economics.

The study scrutinizes the Economic Development and Poverty Reduction Strategy (EDPRS) for Rwanda, guiding development in the 2008 to 2012 period. The macro-economic analysis shows that growth in Rwanda in the last three years has been reasonably good, although below the Sub-Saharan average. Growth has, however, not been pro-poor in the strict sense, since the majority of the population has experienced a rather modest income growth compared to the highest income deciles. The study highlights two major challenges for Rwanda. The first is its geographical isolation in the African inlands, causing difficulties for export expansion. The second is the substantial social division in Rwanda, putting particular pressure on institutional reform. The authors conclude that the reform measures proposed in the EDPRS are generally sensible for addressing these challenges, but the question remains whether the Rwandan government has the ability to prioritize and whether the day-to-day implementation of the policies will work well. The study was undertaken by Arne Bigsten and Ann-Sofie Isaksson at the Department of Economics at Göteborg University.

*Per Ronnås*
*Chief Economist*

Published by Sida 2008
Department for Policy and Methodology
Authors: Arne Bigsten, Ann-Sofie Isaksson
Printed by Edita Communication, 2008
Art. no.: SIDA40987en
ISBN 978-91-586-8063-0
ISSN 1404-031X
This publication can be downloaded/ordered from www.sida.se/publications

# Table of Contents

# 1. Introduction[1]

Rwanda is still marked by the consequences of the 1994 genocide, which apart from being a tremendous human tragedy caused a massive drop in output. Economic policy in the subsequent period has focused on reconstruction, and after years of recovery Rwanda has now virtually managed to restore its pre-1994 per capita income level. Still, the country is very poor, even by African standards.[2] The government of Rwanda has set out ambitious development goals, one of the most central being for the country to reach middle income status and to halve poverty by 2020. To guide policy towards the longer term targets, medium term poverty reduction strategies have been formulated.

In 2002 Rwanda published its first Poverty Reduction Strategy Paper (PRSP) covering the period up to 2005. The PRSP, which was developed in a post-conflict context and thus focused on issues of reconstruction, was exposed to a comprehensive evaluation, identifying progress made as well as challenges needing more careful attention. Rwanda's second poverty reduction strategy, the Economic Development and Poverty Reduction Strategy, or EDPRS was recently approved. The EDPRS is intended to cover the five year period 2008 to 2012 and seeks to redefine some priorities from concerns of a more transitional nature to policy focused on promoting sustainable economic development. Basically it should provide a medium-term framework for achieving the Rwanda's long term development objectives, as embodied in Rwanda's Vision 2020 and the Millennium Development Goals. As such, the wider goal of the EDPRS is to achieve sustainable economic growth and social development, ultimately improving the quality of life of all people in Rwanda (Republic of Rwanda 2006b).

This report, commissioned by Sida, scrutinizes the EDPRS strategy for promoting economic growth and poverty reduction. The poverty reducing impact of growth measures, to what extent growth is pro-poor (Sida 2006), is central. Drawing on insights from development economics literature we identify major growth constraints in Rwanda, and ways to address these. In particular, we focus on Rwanda's geographical con-

[1] We would like to thank officials of the Rwandan government and other institutions for very helpful discussions. We are grateful to Mr Munyakazi of the National Institute for Statistics for assistance with data, and to Abebe Shimeles for help with the poverty analysis. Finally, we are grateful for all the help received from Marianne Kronberg and Arne Ström of the Swedish Embassy.

[2] In 2005 the countrySection 1 s PPP adjusted GDP per capita in current international $ was only 36 percent of the SSA average (calculation based on data from the World Bank 2007b).

straint of being landlocked along with its implications for internal and external trade, as well as its history of social divisions and the institutional needs this brings. Next, we consider actual performance, particularly with regard to trade and institutional development, as well as trends in terms of poverty and inequality. The relevance of EDPRS priorities is evaluated on the basis of the extent to which they address the identified growth constraints, as well as to what degree they acknowledge and attend to the constraints identified from performance with respect to trade and institutional development, and from poverty outcomes.

In the next section we provide a brief overview of the contents of the EDPRS, so as to introduce its main priorities as well as the policy framework in which it is founded. Section 3 relates theoretical insights from the development economics literature to the Rwandan development context in order to identify some main growth constraints as well as ways to address these. To better be able to evaluate the relevance of the EDPRS priorities in relation to these constraints section 4 reviews recent macroeconomic developments, trade performance and institutional development. To identify the magnitude of needs, and to get a picture of to what extent the poor have been able to share in on the benefits of growth, Section 5 looks at recent developments in terms of poverty and income inequality. In section 6 we return to the EDPRS and seek to evaluate the relevance of its priorities against the key messages emerging from the above analysis. Section 7 concludes the discussion.

# 2. EDPRS Overview

Rwanda recently formulated its second poverty reduction strategy, the EDPRS. This section gives a brief overview of its main contents and priorities, as well as of the policy framework on which it is based.

### The EDPRS in a Policy Context

The EDPRS, which is intended to cover the five year period 2008 to 2012, should be understood as a medium term strategy for achieving Rwanda's long term development goals, as formulated in the Millennium Development Goals (MDGs) and Vision 2020 (Republic of Rwanda 2006d). As noted, it is the second of its kind, following the PRSP which covered the period between 2002 and 2005.

| PRSP | **EDPRS** | MDGs | Vision 2020 |
| --- | --- | --- | --- |
| (2002–2005) | **(2008–2012)** | (2015) | (2020) |

Considering the close connection between these policy documents, it seems that in order to understand the priorities of the EDPRS one should at least have a basic understanding of the objectives in Vision 2020 and the recommendations from the evaluation of the PRSP.

#### Vision 2020

Vision 2020 (Republic of Rwanda 2000) formulates long-term development goals for Rwanda. It puts forward wide development objectives based around the pillars of good governance, agricultural transformation, private sector development, human resource development, infrastructural improvements, regional and international economic integration, and the cross-cutting issues of gender equality, environmental protection and ICT development, as well as specific targets for a wide range of key indicators relating to these fields.[3] Given that Vision 2020 is a national development plan, its formulations are naturally somewhat more specific than the international guidelines given in the MDGs.[4]

[3] For an overview of the pillars of Vision 2020 see appendix 1.

[4] For an overview of the MDGs see appendix 2.

An overriding objective in the Vision is for Rwanda to achieve middle income status and to halve poverty by 2020. For this to materialise it is estimated that GDP per capita would have to reach $900, which is around four times the income level seen at the time of the vision formulation, and more than three times the current income level.[5] For GDP per capita to reach this level it would have to grow at an average annual rate of around 8 percent[6] (Republic of Rwanda 2006b). These goals are certainly ambitious, but arguably the alternative – aiming for modest change – would not be suitable considering the state Rwanda is in. Moreover, with reference to development success stories such as those observed in East Asia, the government judges the objectives as attainable. The ambitious long-term goals of Vision 2020 (and the MDGs) guide the medium-term poverty reduction strategies formulated in the PRSP and the EDPRS.

**The PRSP**

Rwanda's first poverty reduction strategy, the PRSP[7] (Republic of Rwanda 2002b), was developed in a post-conflict context why it naturally focused to a great extent on transitional issues of reconstruction (Republic of Rwanda 2006b). Its priority areas of rural development and agricultural transformation, human development, economic infrastructure, good governance, private sector development and institutional capacity building closely reflect the pillars of Vision 2020.

In preparation for the EDPRS, the PRSP has been comprehensively reviewed, both in terms of relevance, implementation, and actual outcomes. The review material includes an external Independent Evaluation (Evans et al. 2006), annual progress reports, and more detailed self-assessments from the different sector working groups. These reviews point to progress made, as well as challenges that need to be more carefully addressed. With regard to the latter, some key messages from the sector self-evaluations (as summarised in Republic of Rwanda 2006c) and the Independent Evaluation (Evans et al. 2006) emerge.

Restructuring agriculture and raising agricultural productivity, as well as creating non-farm employment, are still emphasized as fundamental challenges that need to be addressed. Also, there are calls for a clear pro-poor focus in public spending, with improved targeting of basic health-care, education and other core services to the poorest. In addition, the evaluators point to the need to address Rwanda's population growth rate, which is considered to be problematic for food security, incomes and the environment. Moreover, the reviews stress that good governance, in terms of the rule of law, democratisation, and the protection and promotion of rights, need continued focus, and that weak institutional capacity needs to be addressed since it undermines policy implementation. Also, it is suggested that issues such as gender, HIV/AIDS, and environmental protection were poorly addressed in the sector strategies under the PRSP, and that these need more systematic targeting and reporting in the EDPRS.

With respect to structural issues to do with the formulation and implementation of the policy document, the reviews stress that the government programme needs to be result based, with policy, planning and budgeting processes being more effectively aligned. Likewise, they

[5] GDP per capita (in constant 2000 US$) was 226 in 2000 and 268 in 2006 (using data from the World Bank 2007b).

[6] Taking population growth into account GDP would have to grow by roughly 10 percent.

[7] For an elaborate account of the PRSP see Bigsten and Yanagizawa (2005)

suggest that there is a need to strengthen the system for monitoring and evaluation and to streamline sector reporting formats. It is argued that the EDPRS should ensure a multi-sectoral focus on growth, with joined-up thinking across sectors. In terms of co-ordination it is also suggested that there is a need to build up the aid management capacity within government and to streamline donor processes, with a set of principles guiding the alignments relevant for the EDPRS. In addition, in order to ensure public accountability the need for a popularised version of the EDPRS, giving non-technical accounts of its targets and strategies, is stressed.

## The EDPRS 2008–2012: Main Priorities

This report mainly discusses the EDPRS (Republic of Rwanda, 2007e) which was approved by the Government of Rwanda. However, it also takes into account the discussion in the preceding drafts (Republic of Rwanda 2006b and 2007d), as well as in other documents from the formulation process (such as sector strategy drafts and recommendations from the EDPRS launch workshop).[8] The EDPRS emphasises three flagship programmes; Sustainable Growth for Jobs and Exports, Vision 2020 Umurenge, and Governance, as well as a number of cross-cutting issues (Republic of Rwanda 2007e). Below we give a brief account of what priorities these different sections incorporate.

### Sustainable Growth for Jobs and Exports

The EDPRS should promote sustainable economic growth and reduce poverty. In order to do so it stresses the need to increase both internal and external trade. More generally it notes the pressing need for creating employment opportunities, especially considering the large number of young people that will enter the labour market shortly.[9]

Against this background the first flagship programme of the EDPRS focuses on accelerating growth to create employment and to generate exports. Its ambition is to make the Rwandan business environment more competitive, thereby achieving private sector growth. It points to the problems of having low levels of human capital, a lack of skills and weak infrastructure. In line with this it argues that first order priorities should include fostering human capital, promoting business skill development, and upgrading infrastructure. Measures brought up in this context include improving energy supplies and transport networks and focusing on ICT development. Also, it points to the needs to promote skill development and the service sector, and to increase the private sector's capacity to innovate and to adopt new technology.

It stresses the need to create non-farm employment by general private sector development, but also, and in line with the PRSP evaluations, it points to the need to modernize agriculture to increase agricultural production and productivity. It is recognised that in the short term reinforcing the production and export potential of the traditional sector is central for poverty reduction, considering that the lion's share of Rwanda's poor live in rural areas and are engaged in traditional agricultural activities. For sustained growth over the longer term, however, it notes that there is a need to diversify the economy by promoting non-traditional agricultural activities and the non-farm sector.

8 See http://www.devpartners.gov.rw/docs/EDPRS/ for a good overview of the available EDPRS documents.

9 In 2005 two thirds of the labour force were under 25, and it is estimated that between 2007 and 2012 approximately half a million additional young people will be looking for employment (Republic of Rwanda 2007d)

**Vision 2020 Umurenge**

Vision 2020 Umurenge is a rural development programme which aims to increase the efficiency of public service delivery and to reduce poverty, with the goal to eliminate extreme poverty by 2020. The programme should reflect grass root priorities and will be implemented at the village level using community-based participatory approaches. Since a prime objective is to release the productive capacities of the poor and extremely poor it is suggested that Vision 2020 Umurenge could be seen as a pro-poor growth for job and exports programme.

Roughly speaking, the programme, which is now being piloted, identifies certain vulnerable target groups and aims to deliver packaged interventions that meet the specific needs of a certain group. Farmers owning small plots of land, for example, could be assisted with various initiatives aimed at increasing agricultural productivity. Similarly small scale entrepreneurs should be targeted by technical assistance schemes and micro-finance programmes. The often very poor agricultural wage labourers should be targeted by schemes to provide on- as well as off-farm employment, training, and better access to financial services. And finally, landless individuals that are unable to work because of disability should be reached by social assistance. To improve service delivery locally the rural population will be encouraged to move into more concentrated village settlements.

To be more specific, the EDPRS puts down that Visions 2020 Umurenge should be implemented in three components. First, public work with community-based planning and participation should help build community assets and create an on and off-farm employment infrastructure. Examples of projects mentioned in this context include improving land productivity (e.g. by building watersheds or constructing irrigation mechanisms), improving formal market infrastructure (e.g. by constructing roads or bridges), and improving access to drinking and irrigation water. Second, it should use credit packages to tackle extreme poverty and to foster entrepreneurship and off-farm employment opportunities. And third, it should include direct support to improve access to social services or to provide for landless households with no members qualifying for public works or credit packages. By encouraging the creation of off-farm employment opportunities, accelerating the process of formalisation of the economy, and facilitating the redirection of social protection to the neediest people it is hoped that Visions 2020 Umurenge will help release poor people's productive potential.

A key finding in the PRSP evaluations was that there is a need for improved targeting of health-care and education and other core services to the poorest and most vulnerable groups in society, such as female-headed households, orphans, and people with disabilities. According to a previous EDPRS outline, social protection accounts for a significant portion of public expenditure, but still lacks a coordinated government strategy (Republic of Rwanda 2006b). Government and donor interventions are described as being scattered over a large number of small projects lacking strategic orientation and coherence, and reaching a very limited number of people. The need for coordinating the interventions, but also for systematically monitoring their poverty impact, is emphasised. Here Vision 2020 Umurenge could, if it is systematically implemented and evaluated, have an important role to play.

### Good Governance

The third flagship programme of the EDPRS aims at promoting good governance. This is described as a pre-condition for poverty reduction and development, and is judged as particularly important in light of Rwanda's history of conflict (Republic of Rwanda 2006b). It is also noted that improving governance is important for achieving the targets of the other two flagship programmes. A major objective of Vision 2020 Umurenge, for example, is to increase the efficiency of public service delivery, something which in turn requires good governance. Similarly, the flagship programme focused on accelerating growth to create employment and to generate exports aims to make Rwanda attractive in the eyes of foreign investors, and in the EDPRS it is argued that given Rwanda's relatively poorly developed hard infrastructure the country should try to create a comparative advantage in 'soft infrastructure', that is, in good governance and institutional arrangements important for private investors.

Key policy areas pointed to in this context include defence and security, unity and reconciliation, justice and human rights, public financial management, and political transparency and accountability. Moreover, the EDPRS emphasises the importance of maintaining Rwanda's reputation of having low levels of, and zero tolerance for, corruption. A continued focus on issues of good governance is in line with the recommendations of the PRSP reviews.

### Cross-cutting Issues

The PRSP reviews stressed the need for systematically addressing identified cross-cutting issues in the sector strategies. This critique is picked up in the EDPRS, where gender equality, social inclusion, environmental protection, and HIV/AIDS are put forward as cross-cutting issues that should be given focus in the sector strategies.

With regard to gender, the EDPRS points to progress made in promoting girls' education and in terms of female parliament representation, but also emphasises that serious problems, such as physical abuse of women and weak female property rights, remain. With respect to social inclusion the EDPRS aims to enable vulnerable and marginalised groups to participate in productive employment and to access social services, something which it claims was not properly treated in the first PRSP. By the end of the EDPRS period improvements should include reduced inequality, improved access to and quality of education and health services for vulnerable groups. With regard to environmental protection it is argued that this received little attention in the implementation of the PRSP. The EDPRS points to the problem of overexploitation of lands and fragile areas, and emphasises the need to tackle issues of land management, soil erosion, deforestation, and pollution. It is argued that this will call for joint sector strategies, and it is established that all sectors will now be required to integrate environmental evaluations in any development project. Finally, the EDPRS outline stresses that although HIV/AIDS is less prevalent in Rwanda than in many other African countries, it still poses a potential threat to development and thus needs to be addressed.

## The EDPRS: Structural Issues

The identified flagship programmes should, according to the EDPRS, reveal its policy priorities, mobilise resources, and improve implementation by contributing to intersectoral coordination. More detailed targets are formulated in close connection with the MDGs and Vision 2020 objectives, and Sector Strategic Plans elaborate on how to reach these. On top of the function-based dimension of the Sector Strategic Plans, the EDPRS has an area-based dimension in the form of District Development Plans that should seek to balance the national priorities with local needs. The Medium Term Economic Frameworks (MTEFs), which cover three year periods, should indicate how funds are to be used to reach the objectives over the medium term, and the annual budgets should do the same on a yearly basis.

In line with the PRSP evaluations, the EDPRS argues that implementation failures experienced under the PRSP implementation period was a result of limited institutional capacity, a lack of result focused objectives, weak systems for monitoring and evaluation, coordination failures between sectors, and weak linkages between budget lines and policy objectives. Via public administration reforms designed to promote accountability, the introduction of flagship programmes to strengthen intersectoral coordination, improved alignment between donors and EDPRS priorities, greater involvement of the private sector in policy implementation, communication of the EDPRS to all stakeholders, and careful monitoring of performance when it comes to reaching the set out targets the EDPRS claims to address these issues.

Hence, when it comes to structural issues with regard to implementation, again the EDPRS appears to incorporate the recommendations following the PRSP evaluations. Emphasis is placed on government sectors working jointly, the need to make the document accessible at all levels of Rwandan society and for achievable targets and explicit monitoring and evaluation in order to hold the government accountable for performance (Republic of Rwanda 2006b, 2006d, 2007d and 2007e). These issues of co-ordination, performance orientation and accountability were, as noted earlier, all stressed in the PRSP reviews.

### A First Impression

An overall impression is that the EDPRS reflects the goals expressed in Vision 2020, and largely incorporates the recommendations following the PRSP evaluations. Seemingly, this applies for the policy priorities put forward, as well as for the structural issues raised. Considering that the EDPRS outline is the result of a broad consultative process clearly drawing on the PRSP reviews, this is perhaps not very surprising. Moreover, it seems important to remember that advancements in the strategy formulation do not necessarily imply corresponding improvements in terms of implementation or outcomes. Still, the former should certainly pave the way for the latter, why clearly the fact that the EDPRS process appears responsive to lessons learned from the past is important.

The measures called for seem well motivated and in line with PRSP recommendations. What one could call into question is if they all are realistic in terms of financing and institutional capacity for implementation. Consider Vision 2020 Umurenge for example. It seems difficult to argue that this programme is not needed, but at the same time one must be concerned about the administrative and financial feasibility of a programme with such wide reaching ambitions. A key message from the PRSP reviews and from the EDPRS launch process was that the EDPRS needs to be tightly prioritised. Moreover, the importance of having strong links between objectives and budget lines was stressed (see for example Evans et al. 2006, Republic of Rwanda 2006c and 2007b). The EDPRS claims to be tightly prioritised, but still it certainly expresses very wide ambitions for the social as well as the productive sectors. Moreover, while it gives the implementation of the strategy an explicit price tag[10] it is not entirely clear what this cost estimation is based on, why it is difficult to assess whether it is realistic. If it is, then judging from the available public financing listed in the EDPRS (domestic tax and non-tax revenues, external budgetary grants, external project grants and loans, and external net borrowing), it is clearly underfunded. According to the EDPRS, which in the same breath reminds the reader of the G8 commitments made in Gleneagles in 2006, this implies that there is a need for more external grants or further external borrowing to implement the strategy.

Summing up, the medium term strategy of the EDPRS seems to be consistent with long term Vision 2020 goals, as well as responsive to recommendations from the PRSP process. To be able to further evaluate the relevance of the priorities set out, however, we need to relate insights from the development economics literature to the Rwandan development context, as well as take a closer look at actual performance.

[10] RwF 5,151 billion, including both public and private expenditures (Republic of Rwanda 2007e, p. 127).

# 3. Growth Constraints

In the literature seeking to explain what accounts for the huge income differences around the world, four strands of thought have, in addition to the classical perspectives focusing on investment and technological progress, received a great deal of attention in recent years, namely explanations focusing on geographical, trade related, divisional and institutional determinants of economic performance. Studies emphasizing the importance of geography[11] point to growth effects of factors such as climate, natural resource endowments, disease burden, transport costs and agglomeration benefits. Literature highlighting the role of international trade[12] views market integration as a driver of productivity, and as fostering economic convergence. Studies proposing a role for societal divisions often consider ethnic fractionalisation or polarisation[13] and point to the negative growth effects of allowing sectional interests to dominate national ones. Scholars focusing on institutional quality,[14] finally, tend to point to the importance of strong property rights for stimulating economic activity.

With these suggested growth determinants in mind, we consider the AERC growth project classification of countries with different growth opportunities (Ndulu and O'Connell 2006). In this setup the African economies are grouped by location and resource endowments and divided into three categories; coastal and resource-poor, landlocked and resource-poor, and resource-rich (irrespective of location). Out of these geographically defined categories Rwanda belongs to the least fortunate, namely the group of countries that are resource-scarce and landlocked. In addition, a number of anti-growth syndromes of a more political character are identified. One of these refers to state breakdown in situations of civil war and political instability, and another points to the danger of favouring sub-national, often ethno-regional, interests instead of focusing on growth for the nation as a whole. Rwanda's experience of social divisions and conflict seemingly suggests that the country is prone to these syndromes. Against this background, and with the above growth determinants in mind, it seems relevant to consider Rwanda's geographi-

11 See for example Gallup et al. (1998) or Sachs (2003).

12 See for example Sachs and Warner (1995), Frankel and Romer (1999) and Dollar and Kraay (2003)

13 See for example Easterly and Levine (1997) or Alesina et al. (2003)

14 See for example North (1994), Knack and Keefer (1995), Hall and Jones (1999), Acemoglu et. al. (2001, 2002 and 2005), and Rodrik et al. (2004).

cal constraint of being landlocked along with its implications for internal and external trade, as well as its history of social divisions and the institutional needs this brings.

## The Social Division Constraint and Its Institutional Implications

On the one hand there is a growing empirical literature pointing to the negative growth effects of ethnic fractionalisation, arguing that when sectional interests dominate national interests, efficiency will tend to be compromised. In line with this, the AERC growth project put forward ethno-regional redistribution and political instability in connection with civil conflict as growth impeding political conditions. On the other hand there is a voluminous empirical literature stressing the importance of institutional development for economic progress. Institutions could be thought of as the formal and informal rules in society (North 1990), but economists usually interpret the concept more narrowly, with the quality of institutions taken to refer to how conducive these rules are to desirable economic behaviour (Rodrik et al. 2004). In practice this often translates into studying property rights institutions. These two research strands, establishing the economic influence of fractionalisation and institutions respectively, are of course important in themselves. What is perhaps most interesting for our purpose, however, is the literature which combine insights from both fields, suggesting that social divisions will create institutional needs of a greater magnitude and of a certain type.

First of all, one could argue that Rwanda's post-conflict status and history of ethnic tension should increase its general needs for institutional development. Rodrik (1999) examines the relationship between social divisions and growth and finds that social divisions, as measured in terms of income inequality and ethnic fractionalisation, have the most harmful effects on growth where there are weak institutions of conflict management, as proxied by indicators of the quality of government, rule of law, democratic rights etc. Similarly, Collier (2000) finds that ethnic diversity has a negative effect on growth in contexts where there are limited political rights, but that it is not damaging in democracies.[15] Judging from studies such as these ones, Rwanda's history of social divisions makes calls for institutional development seem even more relevant.

Second, it appears reasonable to suggest that the history of conflict and social divisions could make certain institutional needs more profound. Kyriacou (2005) examines the link between institutions and ethnic tastes, arguing that the former affect both the formation and expression of the latter. For example it is suggested that the existence of transaction costs in markets and politics creates a demand for mechanisms to reduce these. Ethnic networks could provide one such means and act as a screening device in the market place. Second, institutions could contribute to ethnic preferences by creating incentives for ethnic identification, for example if there is structural redistribution from one ethnic group to another. Third, the institutional system could be perceived as unfair, for example if on some issue preferences are split along ethnic lines, and central majority rule makes the minority group unable to satisfy theirs. Against this background it is suggested that divided multi-ethnic states should aim for a competitive private sector supported by ethnically neutral institutions for effective property rights, and for a

[15] See also Ahlerup et al. (2007) who find that the growth-reducing effect of having weak social capital is smaller when formal institutions are strong. If one agrees that social capital is likely to be weakened during civil conflict this should be relevant for Rwanda, and again strengthen the case for a focus on institutional development.

public sector characterised by decentralised collective decision making, and with institutional restrictions on differential fiscal or regulatory treatment on the basis of ethnicity. Similarly, Ndulu and O'Connell (2006) point to the dangers of ethno-regional redistribution that favour sub-national political interests at the expense of efficiency. It is argued that in the absence of effective institutional restraints the policy choices of a government captured by sectional interests will tend to trade off growth for inefficient redistribution along ethno-regional dividing lines. Again, the need for institutional restrictions on differential treatment on the basis of ethnic divisions is thus suggested.

## The Geographical Constraint and Its Trade Implications

Given the small size of Rwanda's internal market, external trade should offer the best prospects for sustained growth. At present, however, the country is restricted by its very high trade costs, in turn being the result of its geographical position as well as of poor infrastructure. The vast majority of the Rwandan population resides in rural areas and live off agriculture. Many survive from subsistence farming and few grow commercial crops. This production structure is unfortunate, especially considering that Rwanda is very densely populated and would benefit from a greater division of labour. As it seems, Rwanda is stuck in a low-specialisation-low-trade trap, and is in great need of increased gains from trade.

Rwanda's geographical constraint of being landlocked appears central in this context. Gallup et al. (1998) compare the mean income of the non-European landlocked countries with that of non-European coastal countries and find a striking difference; the coastal economies have an average income more than three times that of the landlocked countries. Seemingly, being landlocked could, through a chain of reactions, affect the entire structure of the economy.

The transport costs involved in external trade are lower in coastal countries than in landlocked economies. Similarly, countries close to major markets generally have lower transport costs than economies more distant from the same. Considering that this does not only apply to trade in final goods but also to trade in intermediate products, these costs could be substantial. For a country like Rwanda, which is both landlocked and distant from major markets, transport costs should thus constitute a considerable trade constraint. In effect, the high transport costs could be said to represent an implicit tax on producing goods for export. Hence, Rwanda's trade costs, which are partly a consequence of its geographical location, provide a disincentive for export production and instead encourage producing for the domestic market. Moreover, poor infrastructure resulting in high transport costs domestically gives a similar disincentive for internal trade, restricting producers to the local market. In this sense high transport costs could be said to encourage the low-specialisation-low-trade economic structure seen in Rwanda.

This scenario is well in line with the new economic geography literature[16], according to which agglomeration forces are crucial, and thus also the size of, distance to, and costs of reaching markets. Transaction costs across space are seen as depending on physical geography, but also as being alterable by technological change and policy interventions. This argument is important since it reduces the deterministic element in the geographical growth constraint of being landlocked, and implies that there is room for policy intervention.

[16] See for example Crafts and Venables (2002)

## Addressing the Constraints

So how should Rwanda address these crucial constraints? To begin with, given the growth constraint inherent in Rwanda's history of social divisions, what institutional measures could be recommended? Here some key messages emerge. First of all, institutional quality, and then in particular a system of strong property rights, is identified as a central growth determinant in the empirical literature. Hence, measures to promote these should seemingly have an important role to play in any poverty reduction strategy. In addition, studies suggest that strong institutions of conflict management (measured in terms of rule of law, democratic rights etc.) could help alleviate problems associated with social divisions, thus suggesting that institutional needs should be greater where there is a tradition of marked social cleavages, as in Rwanda. Furthermore, social divisions could create needs for a certain type of institutional development. In particular, it was suggested that ethnic tastes could be mitigated by a competitive private sector supported by ethnically neutral institutions for effective property rights, and by a public sector characterised by decentralised collective decision making, and with institutional restrictions on differential fiscal or regulatory treatment on the basis of ethnicity. Importantly then, the redistributive system should be based on non-ethnic criteria such as income or merit, and not on ethnic dividing lines.

The geographical constraint of being landlocked also brings with it implications for policy. One hypothesis is that landlocked economies, if they lack major natural resources, will be dependent on the growth of their neighbours since these tend to constitute their major export markets (Collier and O'Connell 2006). To be able to benefit from neighbourhood growth spillovers there is again a need to reduce trade costs. Rwanda clearly needs to upgrade its infrastructure in order to be able to exploit regional markets. Reducing domestic transport costs should not only help reduce barriers to cross-border trade, but should also help promote internal trade, thus encouraging an increased division of labour. Increased internal as well as external trade requires farmers to move out of subsistence agriculture. Easing this shift is crucial and requires not only improved infrastructure but also measures to improve access to credit in rural areas, technical assistance on modern agricultural production techniques, and general human capital development. In order not to become too reliant on the export demand of its poor neighbours, there is also a need for improving the infrastructure connecting Rwanda to international ports. Programmes to support this will require the cooperation of neighbouring countries, as infrastructural problems generally exist on both sides of the border.

Moreover, Rwanda's landlockedness, and the high transport costs it implies, should be kept in mind when identifying strategic sectors for export production. Here it seems reasonable to argue that Rwanda, given its geographical location, would be best suited to export goods with a high value-to-weight ratio. Against this background, and considering the country's high population density, Rwanda should for instance be well suited for service export.

# 4. Performance

Applying insights from the development economics literature to the Rwandan development context, the previous section identified two major growth constraints; the social division constraint and its institutional implications, and the geographical constraint of being landlocked and its trade implications. To what extent the EDPRS addresses these issues will be the subject for evaluation. To better be able to evaluate the relevance of the EDPRS priorities in relation to these, however, we need a picture of trends in actual performance. We will start this section by briefly reviewing Rwanda's recent macroeconomic developments and sector performance, and then move on to focus on trade performance and institutional development.

## Macroeconomic Developments and Growth

The 1994 genocide brought with it a tremendous drop in output. Since then the Rwandan economy has seen a gradual recovery, which by now has virtually restored the pre-1994 per capita income level. Initially, the recovery in terms of economic growth was fast (see Table 1), but later it trended downwards. The growth pattern in recent years has been mixed. 2002 saw strong growth due to favourable rains and good harvests. In 2003, on the other hand, growth was very weak as a result of drought affecting agriculture seriously. This variability in economic growth – with movements from 9.4 percent in one year to 0.9 percent the next – demonstrates how sensitive the Rwandan economy is to weather-related external shocks. Since the drought in 2003, the annual GDP growth rate has fluctuated between 4 percent and 6 percent. Due to population growth, however, the projected 2007 real GDP growth rate of 4.5 percent translates into a real GDP per capita growth rate of only 2.7 percent (IMF 2007). This is far below the levels aimed for in Vision 2020. In order to achieve the Vision 2020 target of reaching middle income status and halving poverty within the next 15 years, it is estimated that real GDP per capita would have to grow at an average annual rate of around 8 percent. If population growth remains around 2 percent, this figure would instead end up in the region around 10 percent (Republic of Rwanda 2006b). Against this background, the focus on sustained economic growth in the EDPRS seems very reasonable.

**Table 1. Rwanda Macroeconomic Indicators**

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 proj. | 2007 proj. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Real GDP growth (%) | 35.2 | 12.7 | 13.8 | 8.9 | 7.6 | 6.0 | 6.7 | 9.4 | 0.9 | 4.0 | 6.0 | 4.2 | 4.5 |
| Gross Investments | | | | | | | | | | | | | |
| (% of GDP) | 13.4 | 14.4 | 13.8 | 14.8 | 17.2 | 17.5 | 18.4 | 16.9 | 18.4 | 20.5 | 22.6 | 21.3 | 23.0 |
| Of which: Private Investment (% of GDP) | 5.3 | 5.1 | 5.5 | 8.0 | 10.9 | 11.6 | 11.8 | 12.0 | 12.8 | 12.0 | 12.5 | 12.8 | 13.4 |
| Gross National Savings | | | | | | | | | | | | | |
| (% of GDP) | -5.7 | -4.9 | -3.7 | -2.2 | 0.5 | 1.2 | 2.5 | 0.3 | -0.8 | 2.3 | 3.2 | 2.2 | 2.0 |
| Inflation (%) | 48.2 | 13.4 | 11.7 | 6.8 | -2.4 | 3.9 | 3.4 | 2.0 | 7.4 | 12.0 | 9.2 | 8.8 | 5.0 |
| Money (M2) growth (%) | 73.7 | 8.2 | 47.5 | 4.8 | 6.8 | 14.5 | 9.2 | 11.4 | 15.2 | 12.1 | 17.2 | 31.5 | 4.5 |
| Total Government Revenue (% of GDP), excluding grants | 6.8 | 9.3 | 10.4 | 10.6 | 9.9 | 9.7 | 11.4 | 12.2 | 13.5 | 13.9 | 15.1 | 15.2 | 15.3 |
| Total Government Expenditure and net lending (% of GDP) | 20.5 | 22.5 | 19.6 | 18.9 | 19.6 | 18.7 | 21.0 | 21.3 | 23.9 | 26.1 | 28.5 | 28.6 | 29.7 |
| Overall Balance Before Grants (% of GDP) | -13.7 | -13.2 | -9.2 | -8.3 | -9.7 | -8.9 | -9.5 | -9.1 | -10.3 | -12.1 | -13.4 | -13.6 | -14.7 |
| Overall Balance After Grants (% of GDP) | -2.4 | -5.8 | -2.5 | -3.0 | -4.0 | 0.7 | -1.3 | -1.9 | -2.3 | -0.2 | 0.7 | -0.2 | -2.1 |

*Note: Private investments include public enterprises. Inflation is changes in the period averages of consumer prices.*
*Sources: IMF (2003, 2004d, 2007)*

Turning to investments and savings, the gross investment rate has in recent years been above 20 percent of GDP, which is a reasonably good level from an African perspective. Private investments have picked up gradually and now constitute roughly 12 percent of GDP. However, gross national savings are, in spite of some improvements, still extremely low at between 2 and 3 percent of GDP. This implies that the lion's share of domestic investments are foreign financed.

In 2003, we saw inflation trending upwards after a couple of years of reasonable control, supported by strong economic growth and tighter fiscal and monetary policy. Around 2003, slower GDP growth together with higher money growth and expansionary fiscal policies led to increases in inflation. In 2004 and 2005, inflation rose further, primarily driven by rising food and energy prices. With respect to recent developments, the IMF (2007) is expressing concerns that monetary policy may become too lax with rapid expansions in money supply and in credits to the private sector.

Government revue collection (excluding grants) has improved markedly since the immediate aftermath of the 1994 events, but now appears to have stabilised just above 15 percent of GDP. Improved revenue collection is due to an increase in the VAT rate from 15 to 18 percent, and to improvements in the revenue administration (World Bank 2007a). However, Rwanda's revenue collection is still below the SSA average[17] and in order to become less reliant on foreign assistance, there is a need to increase the revenue share further. Efforts to increase revenue collection should aim to improve the efficiency of existing taxes, for example by spreading the coverage of VAT. Given that the taxable income base is

[17] In 2005 the SSA average in term of government revenue collection was 22.5 percent of GDP (World Bank 2007a)

very small, however, there are limits as to how much of GDP that can be collected without having too large disincentive effects.

At the same time, total government expenditures have continued to increase, and the projection for 2007 is for them to approach 30 percent of GDP. This increase is due to the high costs of reconstruction and development programmes, and has enabled the expansion of a range of development initiatives. Domestic revenue collection obviously cannot sustain this level of public spending, but the large inflow of foreign assistance makes this high level of government expenditures possible (see Table 1). Taking aid flows into account, however, the budget is roughly in balance, although it should be noted that the projection of the IMF is for the overall budget including grants to be in deficit in 2007. In this context we should note that the point of aid to governments is to make it possible for them to have expenditure levels that are above revenue collection levels. In the very long term domestic revenues should cover expenditures, but in the short term it is appropriate for donors to fill the gap. The government needs to be somewhat cautious about pushing some types of taxation too high, for example taxation of the productive activities that are supposed to be the basis for the growth in Rwanda. Improved effectiveness in the application of existing rules is another matter.

With respect to general macro economic performance, the IMF is largely positive to recent Rwandan developments. Rwanda is currently under a Poverty Reduction and Growth Facility (PRGF) covering 2006–2009, and, so far, the IMF rates the programme implementation as satisfactory (IMF 2007). They note that the government is meeting macro targets, and that structural reforms are broadly on track, with the country living up to all but two performance indicators, namely the quantitative target for priority spending and the structural target for the improvements of the monitoring of projects accounts. The IMF concludes that these targets were only temporarily missed why the government is granted waivers.

However, the IMF still has some concerns. It is somewhat worried that monetary policy may become too lax with recent expansions in money supply and in credit to the private sector. Moreover, it expresses concerns about central bank foreign exchange policy. To keep money supply within the programme target, the NBR has chosen to sterilize large inflows of foreign exchange using domestic instruments. This build up of domestic government debt is seen as problematic in the longer run. Also, although the central bank is said to be committed to a flexible exchange rate, the exchange rate has in fact behaved as if it was pegged. This could be problematic, especially if aid is scaled up, putting an upward pressure on prices and the real exchange rate. The government is concerned that an appreciating currency will hinder the attempted export drive. But in effect, despite policies to sterilize the inflows of foreign exchange, the real exchange rate has been appreciating (5 percent during the first three quarters in 2006), and the IMF stance is that the nominal exchange rate should be made more flexible in order to manage such real appreciations. In spite of these concerns it seems clear that judging from the IMF macroeconomic criteria, Rwanda's performance has improved since our last evaluation (Bigsten & Yanagizawa 2005) two years ago.

### Sector Performance

The GDP estimates for Rwanda have recently been revised to take services better into account. Looking at Table 2 we can see that according to the revised GDP estimates, services constitute a greater share and agriculture a smaller fraction of GDP compared to in previous measures (see Bigsten & Yanagizawa 2005). According to the new estimates, agriculture as a share of GDP declined from 39.7 percent in 1995 to 34.2 percent in 2005. The shift in production structure over time, although modest, has been towards services, the share of which increased from 42.2 percent in 1995 to 45.6 percent in 2005. Over the same period, the share of industry actually decreased slightly from 15.9 to 14.7 percent. Looking at the preliminary figures for 2006, the drop in agriculture is more significant, the share of services has continued to grow, and industry has picked up. Still, the rate of structural transformation is relatively slow.

Evidence from other countries (see Collier & Hoeffler 1998) suggests that the biggest reductions in production in states struck by civil conflict occur in the transaction intensive sectors, such as industry and services, whereas production from less transaction intensive sectors, such as agriculture (and then in particular subsistence agriculture), shrink much less. The sectors showing the largest declines should also be the ones recovering the fastest once peace is restored. In Rwanda, compositional changes in GDP during the war followed this pattern – the relative importance of war-invulnerable activities such as subsistence agriculture increased significantly (Ansoms 2005). In the post-conflict period, however, the industrial sector has not picked up at the expected rate. In effect, it has not even kept pace with overall output growth. This partly reflects the fact that the people engaged in the sector were very severely affected by the genocide, but the slow recovery also points to the existence of severe constraints. Being landlocked and having poor infrastructure constitute major challenges in this context, and makes it very difficult to use Rwanda as a base for manufacturing export at this stage. In addition, shortage of skilled labour and high costs of energy are cited as major bottlenecks.

**Table 2. Sectoral Shares of GDP1 (%), 1995–2006, Based on 2001 Prices**

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 proj |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Agriculture** | **39.7** | **41.1** | **35.8** | **36.9** | **37.7** | **37.2** | **37.3** | **38.7** | **36.8** | **35.0** | **34.2** | **32.1** |
| Food crops | 33.2 | 33.9 | 30.4 | 31.3 | 32.1 | 31.9 | 32.0 | 33.8 | 32.0 | 29.8 | 29.6 | 27.4 |
| Export crops | 1.7 | 1.2 | 0.5 | 1.0 | 1.2 | 1.1 | 1.1 | 1.1 | 0.9 | 1.3 | 0.9 | 1.1 |
| Other | 4.8 | 6.0 | 4.9 | 4.6 | 4.4 | 4.2 | 4.2 | 3.8 | 3.9 | 3.9 | 3.7 | 3.6 |
| **Industry** | **15.9** | **16.3** | **15.6** | **15.3** | **14.5** | **13.6** | **14.2** | **13.4** | **13.8** | **14.7** | **14.7** | **16.3** |
| Mining | 0.2 | 0.2 | 0.3 | 0.3 | 0.2 | 0.3 | 0.8 | 0.5 | 0.4 | 0.6 | 0.7 | 0.8 |
| Manufacturing | 9.4 | 9.4 | 9.0 | 8.4 | 7.4 | 6.8 | 6.9 | 6.8 | 6.8 | 6.9 | 6.7 | 7.7 |
| Electricity, Gas and Water | 0.6 | 0.5 | 0.5 | 0.7 | 0.7 | 0.5 | 0.4 | 0.5 | 0.5 | 0.4 | 0.5 | 0.6 |
| Construction and Public Work | 5.7 | 6.3 | 5.8 | 5.8 | 6.2 | 6.0 | 6.0 | 5.6 | 6.0 | 6.8 | 6.9 | 7.1 |
| **Services** | **42.2** | **38.9** | **42.7** | **41.0** | **42.2** | **43.5** | **42.8** | **41.9** | **43.7** | **44.8** | **45.6** | **46.0** |
| Wholesale & retail, hotels & restaurants | 16.7 | 11.6 | 12.6 | 11.6 | 10.7 | 11.1 | 10.8 | 10.5 | 10.4 | 10.6 | 10.9 | 10.9 |
| Transportation & Communication | 4.5 | 4.3 | 4.4 | 4.6 | 5.1 | 5.5 | 5.8 | 5.8 | 5.8 | 6.1 | 6.3 | 6.2 |
| Finance & Insurance | 2.3 | 2.1 | 2.4 | 2.5 | 2.7 | 3.1 | 3.0 | 2.8 | 3.6 | 4.0 | 4.2 | 4.8 |
| Real estate & business services | 10.0 | 10.0 | 10.1 | 10.5 | 10.7 | 10.2 | 9.7 | 9.2 | 9.7 | 9.5 | 9.6 | 9.5 |
| Public Admin., Educ., Health | 8.6 | 10.8 | 13.1 | 12.6 | 12.7 | 12.7 | 12.6 | 12.8 | 13.3 | 13.6 | 13.6 | 13.5 |
| Other | 0.0 | 0.1 | 0.1 | 0.2 | 0.2 | 0.8 | 0.8 | 0.8 | 1.0 | 1.0 | 1.1 | 1.1 |
| **Adjustments**[2] | **2.3** | **3.7** | **5.8** | **5.9** | **5.7** | **5.7** | **5.7** | **6.0** | **5.7** | **5.5** | **5.5** | **5.6** |
| **GDP** | **100** | **100** | **100** | **100** | **100** | **100** | **100** | **100** | **100** | **100** | **100** | **100** |

*Notes:* [1]*Using revised GDP data;* [2]*Less imputed bank service charges plus VAT and other taxes on products*

*Source: World Bank (2007a); National Bank of Rwanda (2007) for the 2006 projections*

Looking more closely at the three major sectors; agriculture, industry and services, we can first of all note that within the primary sector the production of food crops, which make up around 30 percent of GDP, vastly dominate that of export crops. Still, the agricultural sector accounts for 71 percent of Rwanda's export revenues (World Bank 2007a), thus providing an indication of the country's extremely limited export base. Within the industrial sector the biggest posts are manufacturing and construction, each making up around 7 percent of GDP. The manufacturing sector is small and highly concentrated, with 20 firms contributing about 65 percent of total manufacturing output (World Bank 2007a). Products produced by the major firms in this sector include soft drinks, beer, food products, cement and tobacco. Hence the industrial sector is closely tied to processing of primary products from the agricultural sector. Turning to the tertiary sector we can see that the biggest post is public administration, education and health, followed by wholesale and retail trade, hotels and restaurants. Both the former and the latter have been relatively stable over the recent period, which is a bit disappointing considering the hopes for recovery of for instance the tourism sector. Considering tourism alone, this sub-sector made up only 0.9 percent of GDP in 2004, to be compared with Kenya's 3.4 percent, Uganda's 4.0 percent, and Tanzania's 9.6 percent (World Bank 2007a). Nevertheless the sector is identified as a potential growth catalyst for the future. Over the recent period, some positive developments can be seen with respect to transports and communications as well as with regard to finance and insurance. Considering that these are identified as key sectors by most commentators including in the PRSP evaluations, this is important. Moreover, considering Rwanda's ambition to become an ICT centre, it remains to be seen if this development will accelerate.

## External Trade

In 2006, Rwanda was ranked as the worst country in the world in terms of the costs and procedures involved in trading across borders (World Bank 2006). The measure, which is part of the Doing Business Economy Rankings of the World Bank, considers the time it takes, the costs involved, and the documents needed to import or export a standard shipment of goods. Rwanda's position illustrates the country's problem of being landlocked and of having poor infrastructure,[18] discussed in Section 3, but it should also point to procedural difficulties involved in trading. In addition to landlockedness, which coupled with the poor state of infrastructure gives very high transport costs, general export constraints often cited include capacity constraints in terms of skills, the lack of access to credit, and the costs of and access to energy.[19] Judging by these concerns one would expect Rwanda's export performance in the short run to be bleak.

**Table 3. Balance of Payments (in millions of US dollars unless otherwise indicated)**

| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Exports, f.o.b. | 50.4 | 62.0 | 93.0 | 64.1 | 62.0 | 89.8 | 93.6 | 67.4 | 63.3 | 98.1 | 125.0 | 142.7 |
| Of which: | | | | | | | | | | | | |
| -Coffee | 38.8 | 43.2 | 45.3 | 28.1 | 26.5 | 22.5 | 19.4 | 14.6 | 15.0 | 32.2 | 38.3 | 54.0 |
| -Tea | 3.8 | 9.3 | 20.6 | 22.8 | 17.5 | 24.3 | 22.7 | 22.0 | 22.5 | 21.6 | 24.4 | 32.1 |
| Exports f.o.b. (% change) | 56.8 | 22.9 | 50.0 | -31 | -3.3 | 44.8 | 4.2 | -28.0 | -6.1 | 55.0 | 27.7 | 14.2 |
| Imports, f.o.b. | 194.1 | 213.3 | 277.4 | 255.7 | 248.8 | 239.8 | 226.0 | 207.9 | 228.7 | 275.9 | 353.6 | 439.4 |
| Imports (% change) f.o.b. | -47.7 | 9.9 | 30.1 | -7.8 | -2.7 | -3.6 | -5.8 | -8.0 | 10.0 | 20.6 | 28.2 | 24.3 |
| Current account balance (% of GDP) | | | | -17.0 | -16.7 | -16.3 | -15.9 | 16.6 | -19.2 | -18.2 | -19.4 | proj. |
| – excl. official transfers | -19.1 | -19.3 | -17.5 | -9.6 | 7.6 | -5.0 | -5.9 | -6.7 | -7.8 | -3.0 | -3.1 | -16.7 |
| – incl. official transfers | -3.1 | -6.7 | -9.5 | | | | | | | | | -6.5 |
| Real Effective Exchange Rate (2000=100) | | – | – | – | 115.5 | 107.4 | 100.0 | 93.2 | 86.5 | 72.6 | 69.6 | 75.4 |
| Terms of Trade (% Change) | | 22.6 | -15.9 | 40.7 | -14.2 | 16.1 | 7.7 | -21.5 | -17.7 | 3.5 | 19.5 | 12.6 |

*Sources: IMF (2003, 2004c, 2004d, 2007) for terms of trade and current account data, and for exports and imports before 2001; National Bank of Rwanda (2007) for figures on export and import 2001–2006; World Bank (2007a) for REER.*

Considering Rwanda's export revenues 1995–2003 this prediction is confirmed – the country's export performance has in fact been dismal, even by African standards.[20] Export revenues fluctuated (see Table 3), with minor peaks in 1997, 2000 and 2001, around which they amounted to approximately 90 million dollars per year, followed by dips when Rwanda again went back to export revenues of around 60 million dollars. These fluctuations reflect, at least in part, movements in Rwanda's terms of trade, and thus demonstrate the extent to which the country is exposed to volatile world market prices. In addition, they of course reveal changes in actual export volumes, in turn affected by both external and

18 For instance, the cost per ton of transport from Kigali to Mombasa is estimated to be around 70 percent higher than between Kampala and Mombasa, and in addition the average transit time between Kigali and Mombasa is as long as four weeks and characterised by delays to do with administrational complications as well as lacking infrastructure (World Bank 2007a).

19 See for example Diop et al. (2005) or the World Bank (2007a).

20 If considering exports as a percentage of GDP, in 2005 the Rwandan share was 11 percent, to be compared with the SSA average of approximately 35 percent (calculation based on data from the World Bank 2007b).

internal forces, such as weather conditions and government initiatives.

During the last three years, however, exports have picked up quite markedly. In 2006 Rwanda exported to a value of 142.7 million dollars, which is more than double the yearly export revenue during the latest dip three years earlier. We can note that in 2004 and 2005 export revenues were helped by a terms of trade improvements. In 2006, on the other hand, Rwanda saw a slight decline in its terms of trade, but still managed to increase it export revenue by 14 percent, seemingly suggesting expanding export volumes. Considering the extent to which export revenues have fluctuated during the last decade it is difficult to assess to what extent this positive development represents a real trend or whether it is just a temporary upturn. In any case it is the most significant peak seen in the recent period, suggesting a step in the right direction.

With regard to Rwanda's limited export volumes, most commentators point to the need for restructuring agriculture and facilitating the transfer from subsistence farming into exportable crops (see for example Diop et al. 2005). In addition, however, there is a need to expand the scope of exports outside the primary sector. Considering the structure of Rwanda's exports we can see that more than half of its export revenues come from trade in coffee and tea. In fact, coffee, tea and minerals together make up around 90 percent of Rwandan exports, while the remaining share comprises at least 170 products, each representing an extremely small fraction of total exports (World Bank 2007a). The exports of Rwanda are far less diversified than the SSA average. One reason for this is the country's geographical location, since landlockedness is often taken as an important constraint for export diversification. Another potential explanation could lie in the events of 1994, which affected the productive sectors, eroded human capital and limited exports to war-invulnerable activities able to survive the shocks. In addition, the structure of exports probably reflects the country's comparative advantages, and it is not self-evident that the government should introduce policies that forces exports from sectors where the country at present lacks comparative advantages. But policy should be used to create an export friendly environment, where new and more diversified export patterns have a chance to emerge.

The narrow export base and heavy reliance on primary products help explain the vulnerability of Rwanda to terms-of-trade and weather-related external shocks. Diversification from products that are very vulnerable to terms-of-trade shocks to goods with more stable prices should decrease the volatility of export growth seen in the country. The World Bank (2007a) judges export diversification as necessary to meet employment targets as well as objectives for poverty reduction. They argue that it is not enough to simply scale up Rwanda's leading exports, and thus that policymakers must promote export diversification to be able to reap the benefits of more trade.

In terms of export diversification, there are modest signs of progress. Considering that Rwanda is landlocked one could, as already noted, argue that the country should export products with a high value-to-weight ratio. In this context, the World Bank (2007a) makes a useful distinction between a number of product types: processed or unprocessed products with a high value-to-weight ratio are referred to as high value products (HV), raw (unprocessed) products are called primary products (PP), minerals and metals are called resource based goods (RB), simple manufactures are referred to as low tech products (LT), and processed minerals and wood are called medium tech goods (MT). Although primary products make up most of Rwanda's exports there have been some developments in terms of the other export categories. Most notable would be the increase in resource based exports (minerals), but recent years have also seen the emergence of a number of high value, low tech and medium tech products in the Rwandan export basket, albeit in very small volumes. In the HV class we see for instance fruits, vegetables and flowers. Among LT products one could mention processed animal skins and leather, and as examples of MT goods in this context one could point to pulp, chemicals and fertilizers. These new exports, which may have potential, are in spite of their small scale important in relative terms considering the very limited size of Rwanda's total exports.

Out of the 90 percent of exports coming from agriculture and mining in 2000–2004, 46 percent went to the EU, 26 percent to East Asia and the Pacific, and only around 5 percent to COMESA (World Bank 2007a). The limited penetration of regional markets is somewhat surprising considering that Rwanda is landlocked. So far, however, export to regional markets has proved difficult, since exporters in the neighbouring countries produce many of the same products, and do so in more developed markets benefiting from scale advantages. Still, one should note that significant unrecorded trade across borders is likely to exist. It remains to be seen if membership in COMESA and EAC will help to develop regional trade. Another point worth mentioning in this context is that before 2000, exports to China (including Hong Kong) were practically non-existent. Because of this rapidly growing demand, exports of minerals have expanded dramatically, to become Rwanda's second export product. The emergence of mineral exports, in turn, has helped export diversification in Rwanda, reducing the vulnerability to coffee price shocks.

Imports have recently expanded rapidly (see Table 3), and in 2006 the value of the country's imports amounted to 439 million dollars. In spite of growing export revenues, exports cannot sustain the current levels of imports, and consequently we see a sizeable current account deficit. Over the longer terms there is clearly a need to expand exports so as to be able to sustain the current account without large aid inflows.

## Institutional Developments

There is by now a very large literature linking institutional quality to economic development, but this has often been of a very general nature without looking enough into the role of specific institutions. So there is less solid information on which specific institutions matter most for growth, or what aspects of the institutions it is that make a difference. There is even less research on how one successfully creates well functioning and impartial institutions. To assess institutional development in Rwanda in a systematic way, we would require a research effort of different magnitudes than this one. What we do in this small section on institutions is therefore mainly to introduce the discussion.

Governance in Rwanda certainly improved during the PRSP period. It is noted in the EDPRS (Rwanda, 2007d, p. 21) that "the new Constitution has provided a framework for representation and participation of citizens, bringing into existence key institutions including the two chambers of Parliament, an independent judiciary, the National Electoral Commission, the office of the Ombudsman and the Auditor General's office." So the institutions that can improve transparency and accountability are being put in place. We do not have enough detailed information to be able to say much about impacts and the speed of change, but in the EDPRS it is noted that people appreciated the Gacaca process and security improvements. As we have argued above, it is particularly important to create high-quality and impartial institutions when there is a history of impartial institutions and where the institutions were actually used to commit crimes against humanity. Rwanda has managed to move from a very bad state towards something more stable and impartial, but very much remains to be done.

In the areas of accountability and transparency there has been development of new public organisations such as the Ombudsman and the Auditor General, that can perform a watchdog function for the electorate. The Auditor General already produces reports that are debated with in Parliament, but it is too early to say whether they are effectively acted upon. To get a proper response from most African Parliaments seems to be a larger problem than it is for the Auditor General to reveal irregularities. This is due to the fact that there generally is a severe power imbalance between the rulers on the one hand and the Parliament and electorate on the other. The Principal have a hard time to steer his Agent. This, in turn, depends on the lack of an effective public debate. The media situation in Rwanda does not permit a very effective scrutiny of the rulers. The political space for the opposition has increased somewhat, but a free and open debate is still far away.

Corruption is perceived to be under control according to some observers, but some transparency watchdogs have given the country a low ranking. Attempts to make evaluations local are interesting, but for these to be effective the government must allow serious critique.

Effective control of government is probably even harder at the local level than at the centre, since the lack of human skills is more severe, information provision is poorer, and the imbalance in power between the government and their electorate is even larger. This needs to be taken into account as the decentralisation process is rolled out.

There are some interesting ideas around in Rwanda with regard to Social Protection. "It is estimated that between 7 and 10 percent of the national budget has been allocated to social protection related programmes over the period (e.g. funds for genocide survivors, people with disabilities) which specifically target the most vulnerable groups in Rwandan society (Social Protection Public Expenditure Review, 2006). The adoption of a Social Protection Policy at the end of 2005 was an important step, but rapid development of a Strategic Plan is now needed. Transfers to vulnerable groups should be mapped and resources must be better targeted" (Rwanda, 2007d, p. 21).

The citizens of Rwanda face different types of risks. Those related to droughts leads to a discussion of safety nets via transfers in cash or kind or employment generation, i.e. some form of social insurance. These types of insurance solutions are generally not discussed when we deal with institutional risks, where the focus mostly has been on peace building, development of legal institutions and property rights. There is an emerging discussion and rapidly expanding experimentation in Africa with social protection policies, including cash transfers to the poor in the countryside. Whether a comprehensive income guarantee systems can work in as poor a country as Rwanda remains to be seen, but the fact that people live close to each other may make implementation easier than in larger countries. There also seems to be relatively good information about economic status available at the village level. The challenge is to be able to allocate resources effectively and fairly. So far such interventions have been considered to be unrealistic in poor countries. It would therefore be extremely valuable if the introduction of the system is done in such a way that serious impact evaluations can be undertaken.

# 5. Poverty and Inequality

So far, we have introduced the main EDPRS priorities, identified major growth constraints, and looked at actual trends in economic performance in terms of growth and economic structure. What we are ultimately interested in, however, and what is the overriding objective of the EDPRS, is poverty reduction. After a decade of rapid economic growth, Rwanda is in fact still one of the poorest countries in Africa, with the majority of people living below the poverty line (World Food Programme 2006). To get a picture of to what extent the poor have been able to benefit from recent growth, and to better be able to evaluate the priorities of the EDPRS, this section will consider the latest developments in Rwanda in terms of poverty, consumption growth and inequality.

## Poverty Measures

Two recent household surveys[21] allow us to measure the changes in poverty in Rwanda during the five year period between 2001 and 2006. The analyses of poverty and inequality are based on figures of total consumption expenditure per household, expressed on a per adult equivalent[22] basis and in comparable prices.[23] The household consumption expenditure includes food purchases, the value of food consumed from own production, non-food expenditures, and the rental value of housing. The poverty measures give a threshold level of consumption, constructed using a cost of basic needs method, below which individuals are considered to be poor. For the standard poverty line it considers the cost of buying food commodities sufficient to provide 2500 calories per adult per day, and basic non-food requirements.[24] In addition, an extreme poverty line is constructed, representing the level of expenditure needed to be able to purchase the basic food basket only. In 2006 prices, the standard poverty line translates into 250 FRw per adult and day

[21] The first of these, EICV1 (the Enquete Intégrale sur le Conditions de Vie des Ménages) was conducted in 2000/01, covering a nationally representative sample of 6420 households. The second, EICV2, was carried out in 2005/06, this time considering a nationally representative sample of 6900 households.

[22] The adult equivalent concept takes account of the calorie needs of one adult aged 20-39. People outside this age span are assigned a coefficient of the ratio of the personSection 1 s estimated needs to the 20-39 year oldSection 1 s needs (here defined as 1). For details see Republic of Rwanda (2002a) page 15.

[23] The consumption figures are adjusted for price differences between the EICV1 and EICV2 period, regional price differences, and price differences between different months of the year, and are calculated at the average national prices applying in Rwanda in January 2006. See Republic of Rwanda (2006).

[24] Food purchases are estimated to account for roughly 70 percent, and the non-food expenditure for the remaining 30 percent of total expenditure. For details see Republic of Rwanda (2002a) and Republic of Rwanda (2006).

(approximately 0.50 USD), and the extreme poverty line to 175 FRw (roughly 0.35 USD).

Looking at the first two columns of Table 4, we can see that at the national level the share of the Rwandan population identified as being poor fell from 60.4 percent to 56.9 from 2001 to 2006, a reduction of 3.5 percentage points. Although a move in the right direction, the majority of the population is still poor. Moreover, although the poverty share has decreased, due to population growth the total number of Rwandans living in poverty is estimated to have increased from around 4.8 million to 5.4 million (Republic of Rwanda 2006).

Furthermore, there are significant regional differences in poverty rates. First of all, the level of poverty varies between rural and urban areas. In 2006, 13 percent of the people living in the capital Kigali were classified as being poor, whereas in rural areas the corresponding figure was as high as 63 percent. In fact, an estimated 92 percent of the total number of the poor in Rwanda live in rural areas (Republic of Rwanda 2006), showing that in Rwanda poverty is mainly a rural phenomenon. Over the period, however, poverty fell in both rural and urban areas. At the provincial level, poverty is again considerably lower in the Kigali area. In 2006 around 20 percent of the people living in the Kigali province were estimated to be poor. In the Eastern province, which had the second best performance, the poverty share was over 50 percent, and in the remaining provinces the corresponding figure was over 60 percent. The highest poverty share, 67 percent, was observed in the Southern province, which is the only region where the proportion of people in poverty actually increased somewhat from 2001 to 2006. The greatest reduction in poverty share over the period is observed in the Eastern province, where it fell by over ten percentage points.

**Table 4. Poverty in Rwanda, Disaggregated by Region**

| | Share of population below the poverty line (%) | | Share of population below extreme poverty line (%) | | Consumption level of the average poor person (% below poverty line) | |
|---|---|---|---|---|---|---|
| | 2001 | 2006 | 2001 | 2006 | 2001 | 2006 |
| **National** | 60.4 | 56.9 | 41.3 | 36.9 | 41.5 | 40.0 |
| **by stratum** | | | | | | |
| Kigali | 16.1 | 13.0 | 8.4 | 6.3 | 34.4 | 29.3 |
| Other urban | 46.5 | 41.5 | 28.5 | 25.3 | 36.0 | 37.3 |
| Rural | 66.1 | 62.5 | 45.7 | 40.9 | 42.1 | 40.4 |
| **by province** | | | | | | |
| City of Kigali | 24.4 | 20.2 | 15.4 | 11.1 | 39.9 | 32.1 |
| Southern province | 65.8 | 67.3 | 45.9 | 47.2 | 42.5 | 42.7 |
| Western province | 63.1 | 62.0 | 41.8 | 40.9 | 40.0 | 41.0 |
| Northern province | 66.9 | 62.7 | 47.2 | 40.8 | 42.4 | 40.1 |
| Eastern Province | 61.8 | 50.4 | 41.7 | 28.7 | 41.5 | 36.1 |

*Source: Republic of Rwanda (2006)*

We now know that a majority of the Rwandan population is classified as being poor, but so far we have no information on the depth of poverty within this group. The share of the population in extreme poverty offers some insights on this matter. From the mid columns of Table 4 we can see that nationally more than one third of the population cannot even afford the minimum food basket. Fortunately, just as the standard poverty shares, at the national level the extreme poverty shares have decreased over the period, from 41 percent in 2001 to 37 percent in 2006. Due to population growth, however, the estimated number of people in extreme poverty has still increased by around 200 000 (Republic of Rwanda 2006). In terms of regional variation, the patterns displayed are very similar to those for the standard poverty measure. To get a better understanding of the depth of poverty, consider the last two columns of table 4, showing how many percent below the standard poverty line the consumption level of the average poor person is estimated to be. At the national level, the average poor person had a consumption level 40 percent below the poverty line in 2006, to be compared with 41.5 percent in 2001, thus suggesting a marginal decline in the depth of poverty during the period. At the province level, the depth of poverty among the poor fell quite considerably in the Kigali and Eastern provinces, and less so in the Northern province. In the Southern and Western provinces, on the other hand, the depth of poverty increased somewhat.

An alternative indicator, that could be taken to capture the extent of poverty, is the food security profile of the World Food Programme (2006). Based on their 2005/2006 survey, covering 2786 rural households they identify households with different food security status. People with poor or borderline food consumption and very weak food access are identified as being 'food-insecure'. 28 percent of the surveyed households fall into this category. Moreover, 24 percent of the households are classified as 'highly vulnerable to food insecurity', meaning that they have limited food access and poor consumption profiles. In addition, 26 percent of the households are identified as being 'moderately vulnerable to food-insecurity' and 22 percent are classified as 'food-secure'.[25]

From their findings some particularly vulnerable groups stand out. First of all, and not very surprisingly, low income households are more likely to be food-insecure. Second, households headed by women are more often food-insecure than households headed by men. Third, households headed by widowed, separated or divorced people are more likely to be food-insecure, just as households with a chronically ill member and households less educated. In addition, the survey suggests a correlation between exposure to shock and food security status. 58 percent of the food-insecure, reported having experienced drought, compared with 38 percent of the food-secure households. Similarly, serious illness or accident was reported by 10 percent of the food-insecure households, compared with 5 percent of the food-secure. Furthermore, land ownership is significantly correlated with food security; the more land the household cultivates the more food-secure it is. For instance, 41 percent of those cultivating less than 0.1 hectares are found to be food-insecure, compared with 21 percent of those cultivating 0.5 hectares or more. Moreover, the higher the dependency ratio (the number of dependents to active members in a household), the more likely the household is to be food-insecure. Also, food security status varies substantially between regions and different livelihood groups. With respect to the latter, agriculturalists with no alternative source of income, agro-labourers whose work opportunities are related to on-farm employment, and those with marginal livelihoods (who are dependent on aid, money transfers or hunting/

[25] They stress that their results should be interpreted cautiously, however, given the seasonal variability of food security patterns, and the particularly poor harvest prior to the survey in 2005/2006.

gathering) are on average more prone to be food-insecure. 83 percent of all the food-insecure households belonged to these three livelihood profiles. Less affected are those who do not only rely on agriculture for their livelihood (but also on e.g. livestock, handicraft, petty trade activity etc.) and the more established agricultural traders and agricultural employees.

## Consumption Growth, Inequality and Their Implications for Poverty

The extent to which growth translates into poverty reduction naturally depends on the degree of inequality. Hence, in this section we will consider the structure of consumption growth and inequality (based on the EICV1 and EICV2 data) to see if this generates additional insights about the poverty patterns displayed above. First consider the trends in consumption growth, presented in the first column of Table 5. At the national level, consumption per adult grew at an estimated annualised rate of 3 percent during the period. Consumption growth rates were positive in both urban and rural areas, but higher in the latter. Also, consumption growth was positive in all provinces, with the highest rate in the Eastern province, followed by the Southern. Based on the changes in poverty shares discussed above, the relatively high consumption growth in the Southern province appears, at first sight, somewhat surprising. Between 2001 and 2006 the Southern province was the only region that saw a slight increase in poverty share, and still its consumption growth rate is the second highest among the five provinces. Considering the region's development in terms of inequality, however, this comes as no surprise. The Southern province experienced the largest increase in inequality out of the five regions, with the Gini coefficient going from 0.39 in 2001 to 0.51 in 2006. Hence, in the Southern province the poor did seemingly not share in on the overall consumption growth.

**Table 5 Consumption Growth Rates and Inequality 2001–2006, Disaggregated by Region**

| | Annualised consumption growth rate 2001–2006 (%) | Gini coefficient | |
|---|---|---|---|
| | | **2001** | **2006** |
| **National** | 3.0 | 0.47 | 0.51 |
| **by stratum** | | | |
| Kigali | 2.1 | 0.49 | 0.47 |
| Other urban | 1.5 | 0.52 | 0.52 |
| Rural | 3.7 | 0.37 | 0.44 |
| **by province** | | | |
| City of Kigali | 1.7 | 0.52 | 0.50 |
| Southern province | 4.3 | 0.39 | 0.51 |
| Western province | 2.0 | 0.42 | 0.47 |
| Northern province | 1.2 | 0.42 | 0.41 |
| Eastern Province | 6.1 | 0.38 | 0.43 |

*Source: Republic of Rwanda (2006)*

This observation highlights that when being interested in poverty outcomes, national growth patterns is not enough. In terms of poverty impact, the national annual consumption growth rate of 3 percent in the period is partly counteracted by an increase in inequality, which (measured in terms of the Gini coefficient) rose from 0.47 in 2001 to 0.51 in 2006. Considering that these are high inequality levels with global as well as Sub-Saharan African standards,[26] an upward trend is particularly worrying.

Taking a closer look at the regional variation in inequality, we can first of all note that it is higher in urban than in rural areas. However, between 2001 and 2006 this rural-urban differential in terms of inequality got smaller; while urban inequality stayed constant (in Kigali it actually fell slightly), albeit at a high level, the period saw a marked increase in rural inequality. Thus the increase in overall inequality would be due to rising rural inequality. The level of overall inequality depends also on the urban rural income gap, but that actually narrowed during the five years, thereby reducing inequality. At the province level, the Southern province and the city of Kigali display the highest levels of inequality. The lowest level of inequality can be found in the Northern province. In terms of changes, inequality increased most considerably in the Southern province, followed by the Eastern and Western provinces, whereas in the Northern province and in the city of Kigali it decreased marginally. Based on this regional variation, it is easy to see the extent to which the inequality patterns affect the poverty reducing impact of consumption growth. For instance, the Northern province and the city of Kigali, where the level of inequality fell during the period, were the provinces with the lowest consumption growth, and still poverty reduction in these provinces was relatively significant. Conversely, the Southern province, which experienced the most considerable increase in inequality out of the five regions, saw a slight increase in poverty share despite its relatively strong consumption growth. The substantial consumption growth rate in the Eastern province was high enough to compensate for the increase in inequality seen in the region, and thus poverty could be significantly reduced.

To further illustrate the unequal gains from growth, and thus that national consumption growth does not necessarily imply corresponding levels of poverty reduction, consider the growth incidence curve in Figure 1.[27] By displaying the individual consumption growth rates for each separate consumption decile, this figure illustrates the extent to which the consumption growth experienced has been pro-poor. As Figure 1 clearly demonstrates, Rwanda's recent consumption growth pattern is far from neutral. Rather, it is skewed in favour of the higher consumption deciles; the poorest consumption decile had an annualised consumption growth rate of just over 1 percent in the period while the consumption of the richest decile grew by nearly 5 percent per year. Except for the fifth decile, which for some reason shows relatively strong consumption growth (nearly 3 percent), it is only the two highest consumption deciles that have had annual consumption growth rates of over 2 percent. Clearly, one can draw very limited conclusions on poverty reduction based on Rwanda's overall consumption growth rate of 3 percent alone; the incidence of growth needs to be taken into account.

[26] In a worldwide sample of 123 countries the mean gini level is approximately 0.40, and in a Sub-Saharan African sample of 29 countries the corresponding average is about 0.49 (calculations based on data from United Nations Development Programme 2006).

[27] Derived from own calculations based on EICV1 and EICV2 data.

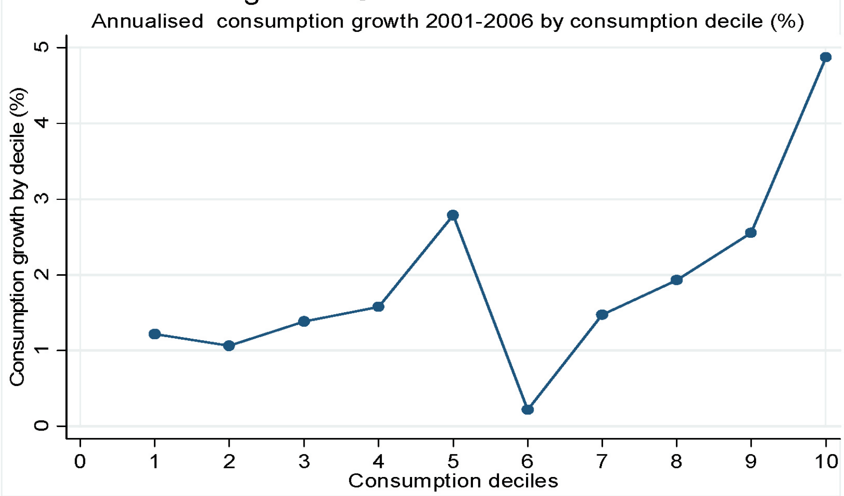

Figure 1: Growth incidence curve

Figure 1 indicates that during the concerned period the poorer majority of Rwanda's population has experienced less consumption growth than the richer minority. Still, whether the growth pattern displayed should be viewed as pro-poor or not depends on how one defines the concept of pro-poor growth. Interpreted in a weak sense, pro-poor growth could simply be taken to mean positive growth among the poor. None of our consumption deciles have experienced negative growth in the period, and hence this weaker criterion for pro-poor growth is fulfilled. More common, however, is to think of pro-poor growth in the sense that the poor should gain proportionately more than the non-poor from the country's growth.[28] In graphical terms, for this to be true the growth incidence curve should be downward sloping, with relatively higher growth rates among the poorer deciles. Looking at Figure 1, showing considerably higher consumption growth rates in the highest consumption deciles, Rwanda's recent consumption growth clearly is not pro-poor according to this criterion.

To better understand the poverty implications of growth and inequality, let us consider a simulation exercise. Using the parameters of the Lorenz function, one can decompose changes in poverty into growth and redistribution components. The Lorenz curve $L = L(p,\pi)$ gives the share of the bottom p percent of the population in aggregate consumption. $\pi$ is a vector of the Lorenz curve parameters. For any two dates, say 0 and 1, the growth component of a change in the poverty measure is defined as the change in poverty due to a change in mean consumption from $\mu_0$ to $\mu_1$ while holding the Lorenz curve constant at $L_0 = L(p,\pi_0)$. Analogously, the redistribution component is defined as the change in poverty due to a change in the Lorenz curve from $L_0 = L(p,\pi_0)$ to $L_1 = L(p,\pi_1)$ while holding mean consumption constant at $\mu_0$. Hence the decomposition Change in poverty = Growth component + Redistribution component + Residual takes the form:

$$P(\mu_1/z,\pi_1) - P(\mu_0/z,\pi_0) = \left[P(\mu_1/z,\pi_0) - P(\mu_0/z,\pi_0)\right] + \left[P(\mu_0/z,\pi_1) - P(\mu_0/z,\pi_0)\right] + R$$

Using this setup, we decompose Rwanda's change in poverty between 2001 and 2006 into a growth component and a distribution component

[28] Some even argue that for growth to be pro-poor the poor should gain more than the non-poor in absolute terms. See Nissanke and Thorbecke (2007) for reasoning on alternative pro-poor growth definitions.

and a residual term.[29] Calculations are based on the EICV1 and EICV2 data and poverty lines, and are carried out using POVCAL.[30] The estimated poverty shares are derived from Beta Lorenz curves based on the mean expenditures of each consumption decile, hence they could differ slightly from thee ones estimated utilising the information of the entire population.[31]

The estimated share of the Rwandan population falling below the poverty line is 60.4 for 2001 and 56.2 for 2006, thus suggesting a reduction in poverty of 4.2 percentage points. How much of this change in poverty is due to growth, and how much is due to changes in the distribution? According to our simulations, had inequality remained constant rather than increased between 2001 and 2006, the observed consumption growth would have reduced the poverty share to 52.3, a reduction of 8.1 percentage points, instead of the observed of 4.2. If instead the only change that occurred between 2001 and 2006 had been the change in distribution (the increase in inequality), and there had been no growth in consumption, then the poverty share would have increased to 63.9, that is by 3.5 percentage points. Summing up we thus have the observed change in poverty , its growth component (the change in poverty the observed growth would have achieved had the distribution remained unchanged) of , its distributional component (the increase in poverty the increase in inequality would have generated if there had been no growth) of, and what it left unexplained, that is the residual term which here amounts to 0.4. That is:

| **Change in poverty** | **= Growth component** | **+ Redistribution component** | **+ Residual** |
|---|---|---|---|
| –4.2 | = –8.1 | +3.5 | +0.4 |

Furthermore, utilizing the parameters of the Lorenz function and the estimated elasticity of poverty with respect to consumption growth[32] it is possible to estimate the amount of consumption growth required to reach a certain poverty target provided that the distribution remains constant. Consider for example the Vision 2020 target of reducing poverty to 30 percent (half the poverty level seen at the vision formulation) by 2020. Judging from the estimated 2006 poverty share of 56.2, Rwanda would have to decrease poverty by 26.2 percentage points over a 14 year period to reach this target. Provided that the distribution remains unchanged, our calculations[33] suggest that per capita consumption would have to grow by 3.5 percent per year for this to materialise. So, even if the increase in inequality would come to a halt, and even if assuming no population growth,[34] current levels of consumption growth are not enough to meet the Vision 2020 poverty target. Hence, for the purpose of poverty reduction, to tackle the rising inequality and stimulate growth appears crucial. The challenge is, however, to identify income distribution policies that do not have negative growth effects. Ideally, one should seek policies that reduce constraints on the poor to

[29] For a detailed account of the methods involved see Bigsten and Shimeles (2007) or Datt (1998).

[30] Available at: http://www.worldbank.org/html/prdph/lsms/tools/povcal/

[31] Our estimated poverty share for 2001 corresponds with that given in the poverty report of Republic of Rwanda (2006), whereas our share for 2006 differ from that presented in the report by 0.7 percentage points.

[32] The POVCAL estimations based on the 2006 distribution identify the elasticity of poverty with respect to consumption growth to be -0.95.

[33] Which allow the elasticity of poverty with respect to consumption growth to vary with the level of poverty, along the lines of Bigsten and Shimeles (2007) and Datt (1998).

[34] Taking account of population growth these figures would have to be adjusted upwards.

participate in the economy and realize their full potential. This is of course the essence of pro-poor strategies. The old mantra (World Bank, 1990) of building up the poors' asset base, seek to improve their returns on these assets plus a safety net for those that cannot make it in the market still seems valid.

## Key Messages

From this analysis some key messages stand out. First of all, poverty in Rwanda is still widespread. Even though the share of people identified as being poor has decreased slightly at the national level, due to population growth the actual number of people living in poverty has in fact increased between 2001 and 2006. Second, there is significant variation in poverty, both regionally and between different groups. We saw considerably higher poverty rates in rural areas and in some disadvantaged provinces, and the food security data revealed some particularly vulnerable groups, including households headed by women, households that had been exposed to shocks, and land-poor households. Third, consumption has been growing over the period, but its poverty reducing impact has been hampered by rising inequality. Considering the incidence of growth we saw that recent Rwandan consumption growth has been skewed in favour of the richer section of the population. In line with this, a simulation exercise suggested that had inequality remained constant rather than increased between 2001 and 2006, the poverty reduction resulting from the observed consumption growth had been almost twice the size of that which actually took place. Moreover, the data revealed significant regional differences in consumption growth and in levels of, as well as changes in, inequality. As it seems, most of the increase in inequality is due to rising rural inequality. Over time changes in inequality and consumption growth in the different provinces revealed the extent to which inequality patterns affect the poverty reducing impact of growth.

These observations motivate the decision to give high priority to poverty reduction in the EDPRS, highlight the need to contain rising inequality, and underline the importance of attacking both poverty and inequality at the regional level, particularly in rural areas. Moreover it points to the importance of targeting assistance to particularly vulnerable groups.

# 6. The EDPRS Revisited

Relating insights from the development economics literature to the Rwandan development context, we identified two main growth constraints as well as ways to address these. In particular, we emphasised Rwanda's geographical constraint of being landlocked along with its implications for internal and external trade, as well as its history of social divisions and the institutional needs this brings. The implications of these constraints appear important with regard to identifying central EDPRS priorities. Next, looking at actual performance, particularly with regard to trade and institutional development, as well as outcomes in terms of poverty and inequality, allowed us to get a closer view of what needs focus in the EDPRS. In this section we seek to bring the picture together by evaluating the relevance of the EDPRS priorities against the key messages emerging from the above analysis.

## Key Messages for the EDPRS

### Implications for Institutional Development

We have identified institutional development as being central, especially considering Rwanda's history of social divisions and conflict. We noted that empirical studies indicate that social divisions have more harmful economic effects in weak democratic systems or where the institutions of conflict management are not well developed. In addition, it was suggested that ethnic divisions could be mitigated by a competitive private sector, supported by ethnically neutral institutions for effective property rights, and by a public sector characterised by decentralised collective decision making, with institutional restrictions on differential fiscal or regulatory treatment on the basis of ethnicity.

Considering actual institutional development, or performance if you wish, the picture that emerged pointed to some progress made, but very much remains to be done before one can speak of effective political control from the citizens. Effective public spending depends on both the level of skills of the civil servants and the structure of incentives. And we have argued that there must be pressure on both the government and the public sector institutions to be accountable. This normally requires that they are accountable to the citizens of the country, and this in turn requires checks and balances and good opportunities for the citizens to scrutinize what the government does and how it handles government money. There are many problems associated with efforts to implement effective controls. First, government scrutiny is a public good, the benefits accrue to all citizens, and this means that there is a free rider problem. It is really not in anyone's individual interest to exert the control for everyone's benefit. Preferably the citizens should organise themselves to exert control, but that is not easy in situations when the power imbalance is huge.

One of the flagship programmes of the EDPRS is focused on promoting good governance, which is recognised as being particularly important in light of Rwanda's history of conflict. Good governance and institutional development, in the sense the latter notion has been used here, could be seen as parallel concepts, both contributing to stronger property rights, rule of law, democratization etc. The section on good governance in the EDPRS puts forward a number of key categories for governance reform, including defence, peace and security, unity and reconciliation, the criminal justice system, human rights and Gacaca, and democratisation, transparency and accountability.

Some of these priority fields are directly related to the recommendations put forward above, in light of Rwanda's social division constraint. With regard to promoting accountability, for example, the EDPRS is stressing the merits of decentralisation, a process which is now well under way in Rwanda. Reform in this direction is well in line with the above analysis, which suggested that decentralised collective decision making could help mitigate tensions that could arise between groups if one group perceives itself at disadvantaged at the central decision level. Hence, from the perspective of this analysis, a focus on decentralisation in the EDPRS seems motivated. Our concern in this context rather has to do with capacity constraints with regard to the availability of skilled personnel, and thus with to what extent decentralised rule can be effectively implemented.

Similarly a focus on defence, peace and security, as well as unity and reconciliation, would naturally seem indispensable against the background of Rwanda's history of social divisions. As would that on the criminal justice system, human rights and Gacaca – as noted, institutions for conflict management that could help unify people are important. Of course, judging from these listed priority fields alone, we cannot say much about the direction actual policy formulation will take. If putting 'defence, peace and security' at the forefront implies diverting a lot of valuable resources to military spending, rather than working for 'unity and reconciliation' via channels like the criminal justice system, information, and not the least by reducing discontent by alleviating poverty, this should not be a desirable development.

With regard to strengthening property rights the section on good governance in the EDPRS is not very explicit.[35] Arguably, property rights are indirectly promoted via a focus on improved rule of law, peace and security. On top of that, however, explicit consideration should be given to the issue, especially considering the existence of sensitive resettlements, land disputes and land appropriations. Carefully evaluating property right consequences of the new land law, along with potential compensation schemes, appear central in this context.

Institutions supporting a competitive private sector, also called for given Rwanda's background of social divisions, fall under the ministries working for private sector development and employment rather than those concerned with governance issues. An explicit goal in the EDPRS is to promote private sector development and to develop the commercial

[35] The need to improve the land rights of women is mentioned in short, however.

and business legal and institutional framework. At this early stage it is difficult to evaluate actual policy prescription or implementation, but judging from privatisation schemes and support for organisations such as the Rwanda Private Sector Federation, one can at least note that with regard to private sector development there seems to be political will.

#### Implications for Trade Policy

We have argued that the geographical constraint of being landlocked and distant from major markets could affect the entire structure of Rwanda's economy. The high trade costs resulting from this constraint could be said to represent an implicit tax on producing goods for export, providing a disincentive for export production. Moreover, poor infrastructure resulting in high transport costs domestically, should give a similar disincentive for internal trade, restricting producers to the local market. In this sense high transport costs could be said to encourage the low-specialisation-low-trade economic structure seen in Rwanda, and hence the central argument that in order to expand internal and external trade and be able to break out of this trap, Rwanda needs to compensate for its geographical disadvantage by reducing its trade costs, and then in particular its transport costs.

Looking at actual trade performance confirmed this picture, and raised a few additional concerns. Export performance over the recent period has been bleak, although showing some signs of improvement in the last two or three years. Furthermore, exports have been concentrated to very few products, highly vulnerable to unstable world market prices, making export revenues very volatile. In terms of export diversification there have been some modest signs of improvement with the introduction of some high value-to-weight products in the export basket, albeit in very small volumes. In terms of export destinations there is, somewhat surprisingly considering the landlockedness constraint, limited recorded trade with neighbouring countries.

Some key messages emerge from this analysis. First of all, Rwanda clearly needs to upgrade its infrastructure in order to reduce trade costs. This is necessary in order to be able to exploit regional markets and to benefit from potential neighbourhood growth spillovers. Reducing transport costs domestically should not only help to reduce barriers to cross-border trade, but should also help promote internal trade. For this purpose, developing rural roads to link agricultural areas to local markets appears important. With respect to external trade, there is also a need to improve infrastructure connecting Rwanda to international ports. Programmes aimed at building corridor routes to international ports, however, require the cooperation of neighbouring countries. For the purpose of reducing trade costs, one must also tackle the energy issue, making the supply of electricity more reliable. In addition, the high Rwandan trade costs cited in the Doing Business Economy Rankings of the World Bank suggest a need to not only improve infrastructure but also to reduce the procedural difficulties involved in trading.

To increase both internal and external trade, it is necessary for labour to move out of subsistence farming. Several measures, in addition to improved infrastructure, could facilitate this shift. For instance, there is a need for greater availability of credits in the rural sector. This should make larger farms viable, enable farmers to take advantage of economies of scale, and thus help Rwanda to move away from today's fragmented farming with very small land plots. Cooperatives could also have a role to play here. In this context there is also a need to address capacity constraints in terms of skills. This calls for a focus on human capital development in general, and on technical assistance for private entrepreneurs (for example farmers wanting to shift to export production) in particular.

We also noted the need for export diversification. Export diversification should decrease the vulnerability to terms-of-trade shocks and thus decrease the volatility of export revenues. Moreover, it is judged as necessary to be able to expand exports at a scale sufficient to reach employment and poverty reduction targets. In terms of strategic sectors, the high transport costs implied by Rwanda's landlockedness make it suitable to focus on export goods, or services, with a high value-to-weight ratio. A considerable challenge lies in being able to make high value-to-weight newcomers in the export basket expand from the very low base they start from. To promote export diversification towards strategic sectors, there seems to be a need for sector specific export strategies, identifying and tackling export constraints specific to that particular area.

The EDPRS recognises that in order to promote sustainable growth and reduce poverty there is a need to increase both internal and external trade. To do so it points to the need to increase agricultural production and productivity, as well as to create non-farm employment. In the short term, reinforcing the production and export potential of the traditional sector is identified as central for poverty reduction, considering that the lion's share of Rwanda's poor live in rural areas and are engaged in traditional agricultural activities. For sustained growth over the longer term, however, the EDPRS notes that there is a need to diversify the economy by promoting non-traditional agricultural activities and the non-farm sector. This dual challenge could be seen as parallel to that given by the need to promote primary exports, while at the same time seeking to encourage export diversification. In general, measures to promote external trade are closely related to those for internal trade, and in the EDPRS they are discussed as part of the growth for jobs and exports flagship.

The EDPRS directly addresses the need to upgrade infrastructure in order to reduce trade costs. With regard to transport costs, improving rural roads so as to link households to local markets as well as reducing the cost of using international corridor routes is emphasized. With respect to procedural difficulties involved in trading, the EDPRS points to the need of improving customs clearance, and to improve access to market information.

The high priority given to infrastructural development is not only important for more established trade and export production, but is also central in order to be able to ease the shift out of subsistence farming. The EDPRS ambition to focus on skill development in general and on training in agricultural production techniques in particular, and to improve access to credit in agriculture, is also important in this context. In general, judging from its discussion of priority fields, the EDPRS seems to recognise that increasing internal and external trade requires greater involvement of the poor in commercial activities. The draft for the EDPRS growth and employment strategy adds to this picture by pointing to the importance of pro-poor growth, and of asset building policies to include the poor in the growth process. The realisation that the poor could act as drivers of growth appears important, and we hope this will translate into actual policy.

With regard to export diversification, and identifying strategic sectors, the EDPRS, as noted, points to the need to increase agricultural production as well as to create non-farm employment, and to promote primary exports as well as export diversification. In line with the above analysis it puts forward that Rwanda has a comparative advantage in its relative abundance of labour, but that the country's landlockedness gives it a disadvantage when it comes to low value added production. Therefore the EDPRS identifies Rwanda's long term growth potential to lie in services and high value added products, with a focus on ICT and skill based production. Aiming to develop these sectors would, however, require substantial investment in both human capital and ICT infrastructure. Over the shorter term, boosting agricultural productivity is central. Strengthening traditional exports is in fact seen as complementary to export diversification as this should increase the flow of cash to rural areas, which in turn should expand other market activities and increase specialization. The EDPRS diagnosis of factors constraining trade and their implications for policy appears well in line with that put forward in this report. Prioritising and linking the suggested reforms to the budget seemingly remains a challenge, however.

### Poverty and Income Inequality – Implications for the EDPRS

Considering Rwanda's recent developments with regard to poverty and inequality, and thus the extent to which the poor have been able to share in on the benefits of recent growth, a few key messages emerge. First of all, the fact that poverty is still widespread motivates a high priority to poverty reduction in the EDPRS. Second, the significant regional differences in poverty shares, with considerably higher poverty rates in rural areas and in some disadvantaged provinces, highlight the need to tackle rising inequality, and the importance of attacking both poverty and inequality at the regional level, and particularly in rural areas. Moreover, the fact that food-security status varied significantly between regions and livelihood groups, points to the importance of targeting assistance to particularly vulnerable groups. In general, over time regional changes in inequality and consumption growth revealed the great extent to which inequality patterns affect the poverty reducing impact of growth, thus highlighting the importance of reversing the trend of increasing inequality in Rwanda.

The EDPRS, being closely linked to the long term goals of Vision 2020 and the MDGs, seems to keep poverty reduction at the forefront. Via its flagship programmes, in particular 'Growth for jobs and export' and 'Vision 2020 Umurenge', it aims to find a balance between promoting the productive and social sectors of the economy. With regard to the former, the suggested measures to promote broad based growth, for example through a focus on agricultural development, appear in line with keeping poverty reduction at the forefront. Similarly, the priority given to promoting social development, established in 'Vision 2020 Umurenge', is clearly geared towards poverty reduction. Social protection, which is identified as a central element of 'Vision 2020 Umurenge' in the EDPRS, appears particularly important, both since it is identified as a field yet lacking a coordinated government strategy, and considering the discussed need to target assistance to vulnerable groups. The vulnerable groups pointed to in the EDPRS are the same as those pointed to in the food security survey, seemingly suggesting informed judgements in the EDPRS. Hopefully 'Vision 2020 Umurenge' can help when it comes to effectively targeting assistance to regions and households in particular need. Reducing inequality is expressed as a goal when discussing social inclusion – one of the EDPRS cross-cutting issues. Means to achieve this goal are not brought up in this context, but could perhaps be said to be implicitly addressed when discussing ways to achieve equitable growth and poverty reduction in general. In sum, there seems to be a clear poverty reduction focus in the EDPRS. The question, again, becomes one of prioritising between important issues when faced with a budget constraint.

# 7. Conclusions

The purpose of this paper has been to evaluate the forthcoming EDPRS for Rwanda covering the period 2008–2012. We first identified the binding constraints on the development of Rwanda, and then discussed how the plan addresses them. Many growth constraints apply to all countries, but we have tried to advance the discussion somewhat by trying to identify the constraints that are particularly pertinent to Rwanda. It is particularly two sets of constraints that we discuss in this report. The first is the social divisions and the extra requirements that this implies for the institutions of the country. The second set of constraints is the geographic ones. Rwanda is a small country and would need access to the world market to be achieving economic take-off, at the same time as its isolation in the African inland and poor infrastructure makes it extremely hard to be competitive in the export markets. This two sets of constraints are therefore crucial in the case of Rwanda and require special attention. This does of course not mean that the standard issues of investment and macroeconomics are unimportant, but the two particularly severe constraints discussed means that the policy makers meet unusually tough challenges in Rwanda.

The economic performance in terms of economic growth has been reasonably good, but we may note that economic growth in Rwanda has been below the Sub-Saharan average in the last three years. The increase in African growth is partly driven by the resource boom, but also to some extent by improvements in policies and institutions. So Rwanda does at least not stand out in terms of economic performance, and it is certainly way below what is required if the goals of Vision 2020 is to be reached, that is to make Rwanda a middle-income country by 2020.

With regard to the key constraints for Rwanda identified, there has been some progress. With regard to the geographical limitations, one can see a modest improvement in infrastructure facilities and some expansion of exports, but the structure of trade is still essentially limited to agricultural commodities and natural resources. Serious diversification requires economic integration with the world of a different order. With regard to institutional development, it is clear that the government has the right formal institutional ingredients in its plans. The challenge is to make them work in a setting of very uneven information, power, and influence. The actual functioning of on paper sensible formal institutions is a most interesting area for future research.

We noted from our analysis of poverty, that there has been some reduction, but that this is less than what would have been achieved if inequality had remained constant. It is particularly the upper deciles in the income distribution that have seen positive development, while the majority of the population have seen income grow by a more modest rate in the range 1–2 percent. So growth has not been pro-poor in the strict sense.

The new EDPRS has some interesting elements that seem relevant in light of the variation in growth across income deciles. The experiment with social protection policies is directly aimed at the problem of the pattern of growth that we have identified. However, we have also noted that there is wide-spread scepticism with regard to the ability of African governments in general to implement a policy with such a high element of discretionary government work. We have also noted that institutions in Rwanda still are weak, and in particular the local institutions that would be the key players in the social protection policy implementation are very weak. Still, this is an exciting challenge. The implementation of this programme should be studied carefully.

Even so, the other areas of government policy making identified in the EDPRS are of course overall more important for the development of the country. We have found that the thinking on policy in Rwanda is mostly sensible, but we have raised concern about the ability to prioritize. This may lead the government spread itself to thinly across too many activities. The key challenge is as usual to get the basic policies right and make sure that these are implemented consistently. The real challenge for the period 2008–2012 is to make the system work well in the day-to-day implementation of the generally sensible policies.

# Interviewed Persons

Mr Emmanuel Hategeka, Rwanda Private Sector Federation

Mr André Habirmana, Director of Planning, MINECOFIN

Mr Tembo Maburuki, Economist, World Bank

Mr Obadiah R. Biraro, Deputy Auditor General, Office of the Auditor General

Mr Alexis Kanamugire, Director of Quality Assurance, Office of the Auditor General

Mr Duncan Overfield, Economic Advisor, DFID, Kigali.

Mr Arif Ghauri, Governance Advisor, DFID, Kigali

Mr Epimaque Nsanzabaganwa, Agricultural Policies Officer, Ministry of Agriculture

Mr Innocent Kabenga, Economics Department, National University of Rwanda, Butare

Mr Herman Musahara, Dean, National University of Rwanda, Butare

Mr Jose Ariyappillil Mathal, Associate Professor, National University of Rwanda, Butare

Ms Mary Baine, Commissioner General, Rwanda Revenue Authority

Mr Charles L. Wanga Gakwaya, Director of Planning and Research, Rwanda Revenue Authority

Mr Louis Munyakazi, Director General, National Institute of Statistics

Mr Emmanuel Gatera, Management Information Systems Director, National Institute of Statistics

Mr John Kayemba, Economist, IMF

Mr Joseph. Nzabonikuza, Deputy Director, department of research, National Bank of Rwanda.

Mr Verdon S. Staines, Senior Economist, World Bank

Mr Paul Kananurah, Director, Transparency Rwanda

Mr Jean Barbé, Head of Economic/Governance Section, Delegation of the European Commission

Mr Arne Ström, Head of Development Co-operation, Swedish Embassy, Kigali

Ms Marianne Kronberg, First Secretary, Swedish Embassy, Kigali

Ms Malin Ericsson, Second Secretary, Swedish Embassy, Kigali

Mr Janvier Ntalindwa, Programme Officer, Swedish Embassy, Kigali

# References


Acemoglu, D., S. Johnson and J. A. Robinson (2001) "The colonial origins of comparative development: an empirical investigation", *American Economic Review*, 91(5), pp. 1369-1401.

Acemoglu, D., S. Johnson and J. A. Robinson (2002) "Reversal of fortune: Geography and institutions in the making of the modern world income distribution", *The Quarterly Journal of Economics*, 117(4), pp. 1231-1293.

Acemoglu, D. and S. Johnson (2005) "Unbundling institutions", *Journal of Political Economy*, 113(5), pp. 949-995.

Ahlerup, P., O. Olsson and D. Yanagizawa (2007) "Social capital vs. institutions in the growth process", Working Papers in Economics, No. 248, Göteborg University.

Alesina, A., Devleeschaauwer, A., Easterly, W., Kurlat, S., and R. Wacziarg (2003) "Fractionalization", *Journal of Economic Growth*, 8(2), pp. 155-194.

Ansoms, A. (2005) "Resurrection after civil war and genocide: Growth, poverty and inequality in post-conflict Rwanda", The European Journal of Development Research, 17(3), pp. 495-508.

Bigsten, A. and D. Yanagizawa (2005), "Growth and Poverty Reduction: Evaluating Rwanda's First PRS", Country Economic Report 2005:9, Sida, Stockholm, 2005.

Bigsten, A. and A. Shimeles (2007) "Can Africa reduce poverty by half by 2015?", *Development Policy Review*, 25(2), pp. 147-166.

Collier, P. (2000) "Ethnicity, politics, and economic performance", *Economics and Politics*, 12(3), pp. 225-245.

Collier, P. and A. Hoeffler (1998), "On Economic Causes of Civil War", *Oxford Economic Papers*, 50(4), pp. 563-73.

Collier, P. and S. O'Connell (2006) "Opportunities and choices: Chapter 2 of volume 1" in Ndulu, B., S. O'Connell, R. Bates, P. Collier and C. Soludo (eds.) *The Political Economy of Economic Growth in Africa 1 960–2000*, mimeo, Cambridge University Press.

Crafts, N. and A. Venables (2002) "Globalization in History: A Geographical Perspective", Centre for Economic Policy Research, Discussion Paper 3079.

Datt, G. (1998) "Computational tools for poverty measurement and analysis", FCND Discussion paper, No 50.

Diop, N., Brenton, P., Asarkaya, Y. (2005), "Trade Costs, Export Development and Poverty in Rwanda", Policy Working Paper No 3784, World Bank, Washington DC.

Dollar, D. and A. Kraay (2003) "Institutions, trade, and growth", *Journal of Monetary Economics*, vol. 50, pp. 133-162.

Easterly, W. and R. Levine (1997) "Africa's growth tragedy: policies and ethnic divisions", *Quarterly Journal of Economics*, 112(4), pp. 1203-1250.

Evans, A., Piron, L-H., Curran, Z., Driscoll, R. (2006) "Independent Evaluation of Rwanda's Poverty Reduction strategy 2002–2005 (PRSP1)", ODI and IDS.

Frankel, J. A. and D. Romer (1999) "Does trade cause growth", *American Economic Review*, 89(3), pp. 379-399.

Gallup, J. L., J. D. Sachs and A. D. Mellinger (1998) "Geography and economic development", National Bureau of Economic Research Working Paper, No. w6849.

Hall, R. E., and C. I. Jones (1999) "Why do some countries produce so much more output per worker than others?" *The Quarterly Journal of Economics*, 114(1), pp. 83-116.

Human Development Report (2006) available at http://hdr.undp.org/statistics/data/

IMF (2003), Rwanda: First Review Under the Three-Year Arrangement Under the Poverty Reduction and Growth Facility and Request for Waiver of Performance Criteria – Staff Report; Staff Statement; Press Release of the Executive Board Discussions; and Statement by the Executive Director for Rwanda, IMF, Washington DC.

IMF (2004c), "Rwanda: Selected Issues and Statistical Appendix", Washington DC, December.

IMF (2004d), "2004 Article IV Consultation – Staff Report: Public Information Notice on the Executive Board Discussion; and Statement by the Executive director For Rwanda", Washington DC, December.

IMF (2007), Rwanda: 2006 Article IV Consultation, First Review Under the Three Year Arrangement Under the Poverty Reduction and Growth Facility (PRGF), Requests for Waivers of Nonobservance of Performance Criteria, February, Washington DC.

Knack, S. and P. Keefer (1995) "Institutions and Economic Performance: Cross-country tests using alternative institutional measures", *Economics and Politics*, 7(3), pp. 207-227.

Kyriacou, A. P. (2005) "Rationality, ethnicity and institutions: a survey of issues and results", *Journal of Economic Surveys*, 19(1), pp. 23-42.

National Bank of Rwanda (2007) "2006 Annual Report (statistical appendix)", mimeo, Kigali.

Nissanke, M. and E. Thorbecke (2007) "How can globalization become more pro-poor?", Presentation based on the UNU-WIDER program of research on 'The impact of Globalization on the World's Poor' prepared for the Brookings Institution Book Launch, May 16, 2007.

Ndulu, B. and S. O'Connell (2006) "Policy Plus: African Growth performance 1960–2000: Chapter 1 of the Synthesis Volume", in Ndulu, B., S. O'Connell, R. Bates, P. Collier and C. Soludo (eds.) *The Political Economy of Economic Growth in Africa 1960-2000*, mimeo, Cambridge University Press.

North, D. (1990) *Institutions, Institutional Change and Economic Performance*, Cambridge University Press

North, D. C. (1994) "Economic performance through time", *The American Economic Review*, vol. 84, pp. 359-368.

Republic of Rwanda (2000) "Rwanda Vision 2020", Ministry of Finance and Economic Planning, Kigali.

Republic of Rwanda (2002a), "Integrated household living conditions survey in Rwanda (2000–2001)", Ministry of Finance and Economic Planning, Statistics Department.

Republic of Rwanda (2002b), "Poverty Reduction Strategy Paper", National Poverty Reduction Programme, Ministry of Finance and Economic Planning, Kigali.

Republic of Rwanda (2006a) "Preliminary poverty update report: integrated living conditions survey 2005/06", National Institute of Statistics Rwanda, Republic of Rwanda.

Republic of Rwanda (2006b), Rwanda Economic Development and Poverty Reduction Strategy – Outline draft, mimeo, Kigali.

Republic of Rwanda (2006c) "Rwanda Poverty Reduction Strategy: Evaluation Report (2002–2005)", available at: http://www.devpartners.gov.rw/docs/EDPRS/

Republic of Rwanda (2006d) "Producing the Economic Development and Poverty Reduction Strategy: A user guide", available at: http://www.devpartners.gov.rw/docs/EDPRS/.

Republic of Rwanda (2007a) "Economic Performance Indicators: 2006 and outlook for 2007", Ministry of Finance and Economic Planning, Kigali. Available at: http://www.minecofin.gov.rw/en/inno-read_article.php?articleId=27.

Republic of Rwanda (2007b) "EDPRS Process Launch Workshop 2nd-3rd February Kigali: Key Issues and Recommendations", mimeo, Kigali, available at: http://www.devpartners.gov.rw/docs/EDPRS/.

Republic of Rwanda (2007c) "Growth and Employment Strategy for EDPRS", Draft for discussion, mimeo, Kigali.

Republic of Rwanda (2007d), "Economic Development and Poverty Reduction Strategy, 2008–2012", draft 090707.

Republic of Rwanda (2007e), "Economic Development and Poverty Reduction Strategy, 2008–2012", draft 310807, Ministry of Finance and Economic Planning, Kigali.

Rodrik, D. (1999) "Where did all the growth go? External shocks, social conflict, and growth collapses", *Journal of Economic Growth*, vol. 4, pp. 385-412.

Rodrik, D., A. Subramanian and F. Trebbi (2004) "Institutions rule: the primacy of institutions over geography and integration in economic development", *Journal of Economic Growth*, vol. 9, pp. 131-165.

Sachs, J. D., (2003) "Institutions Don't Rule: Direct Effects of Geography on Per Capita Income", *NBER Working Paper*, no. 9490, NBER.

Sachs, J. D. and A. M. Warner (1995) "Economic reform and the process of global integration", *Brooking Papers on Economic Activity*, vol. 1. p. 1-118.

Sida (2006) *Integrated Economic Analysis for Pro-Poor Growth*, Methods Document, Stockholm.

United Nations & Republic of Rwanda (2003) “Millennium Development Goals: Status Report 2003”, United Nations System in Rwanda & Ministry of Finance and Economic Planning, Kigali.

World Bank (1990), *World Development Report: Poverty*, Washington DC.

World Bank (2006) “Doing Business – Explore Economies: Rwanda”, The World Bank Group, Washington DC, available at: http://www.doingbusiness.org.

World Bank (2007a) *Rwanda: Toward Sustained Growth and Competitiveness*, Country Economic Memorandum, Vol. 2, Main Report, draft

World Bank (2007b) “WDI Online: World Development Indicators”, The World Bank Group, Washington DC, available at: http://devdata.worldbank.org/dataonline/

World Bank (2007c) POVCAL: A program for calculating poverty measures from grouped data , http://www.worldbank.org/html/prdph/lsms/tools/povcal/.

World Food Programme (2006) Rwanda: Comprehensive food security and vulnerability analysis , World Food Programme, Vulnerability Analysis and Mapping Branch.

# Appendix 1
## Vision 2020

**The pillars of Vision 2020**

1. Good governance and a capable state
2. Human resource development and a knowledge based economy
3. A private sector led economy
4. Infrastructure development
5. Productive and market oriented agriculture
6. Regional and international economic integration

*Source: Republic of Rwanda (2000)*

**Cross-cutting issues in Vision 2020**

- Gender equality
- Protection of the environment and sustainable natural resource management
- Science and technology, including ICT

# Appendix 2
## The Millennium Development Goals

| **No** | **MDG** | **Target** |
|---|---|---|
| 1 | Eradicate extreme poverty and hunger | – Halve the proportion of people living in poverty between 1990 and 2015<br>– Halve by 2015 the proportion of people who suffer from hunger |
| 2 | Achieve universal primary education | – Ensure the by 2015 all children will be able to complete primary education |
| 3 | Promote gender equality and | – Eliminate gender disparity in primary and empower women secondary education by 2005 and at all levels of education by 2015 |
| 4 | Reduce child mortality | – Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate |
| 5 | Improve maternal health | – Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio |
| 6 | Combat HIV/AIDS, malaria, and | – Have halted by 2015 and begun to reverse the other diseases spread of HIV/AIDS<br>– Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases |
| 7 | Ensure environmental sustainability | – Integrate the principles of sustainable development into country policies and programmes, and reverse the loss of environmental resources |
| 8 | Develop a global partnership | – Formulate and apply strategies to provide the for development youth with decent employment<br>– Make essential drugs available and affordable to all who need them<br>– Ensure that the advantages of Information and Communication Technologies are available to all |

*Source: United Nations & Republic of Rwanda (2003)*

# Country Economic Reports

| | |
|---|---|
| Nicaragua 1995: A New Door Might be Opened | 1996:1 |
| Tanzania 1995: Ten Years of Economic Reform | 1996:2 |
| Laos 1995: Labour Market Adjustment and Human Resource Mobilization | 1996:3 |
| Lesotho 1995; Lesotho's Strategic Economic Options:Towards Closer Integration | 1996:4 |
| Guinea Bissau 1995: Missing the Beat | 1996:5 |
| Vietnam 1995: Sustainable Growth and the Issue of Capital | 1996:6 |
| Kenya 1995: Hesitant but Back on Track | 1996:7 |
| Zimbabwe 1995: Domestic and External Debt in Zimbabwe | 1996:8 |
| Vietnam 1996: Approaching The Next Stage of Reforms | 1996:9 |
| Tanzania 1996: The Impact of Balance of Payment Support | 1996:10 |
| Angola 1996: Hyper-Inflation, Confusion and Political Crisis | 1996:11 |
| Eritrea 1996: A Peaceful Struggle for Sustained Independence | 1996:12 |
| Laos 1996: One Step Back or One Step to the Side? | 1996:13 |
| Kenya 1996: Economic Reforms and Impediments to Growth | 1996:14 |
| Uganda 1996: Security, Credibility and Market Development | 1997:1 |
| Guinea-Bissau 1996: Looking for New Development Paths | 1997:2 |
| The South African Economy in 1996: From Reconstruction and Development to Growth, Employment and Redistribution | 1997:3 |

*Halving poverty by 2015 is one of the greatest challenges of our time, requiring cooperation and sustainability. The partner countries are responsible for their own development. Sida provides resources and develops knowledge and expertise, making the world a richer place.*

Sida

SWEDISH INTERNATIONAL
DEVELOPMENT COOPERATION AGENCY

SE-105 25 Stockholm Sweden
Phone: +46 (0)8 698 50 00
Fax: +46 (0)8 20 88 64
sida@sida.se, www.sida.se