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EXPLAINING GROWTH IN BURUNDI: 1960-2000 [a]

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Abstract:

This study analyses Burundi's economic performance over the period 1960-2000 and finds that it has been catastrophic. The usual economic factors explaining growth are endogenous to political decisions, suggesting that it is politics not economics that explains the dismal performance. This picture particularly limits the relevance of textbook models that rely on the assumption of a competitive resource allocation rule. When cronies rather than qualified managers are running the economy, when priority is given to investment projects in function of their location rather than the objective needs of the economy, the economic model loses its explanatory power. Economic performance has been shaped by the occurrence of violent conflicts caused by factions fighting for the control of the state and its rents. The capture of rents by a small group have become the overarching objective of the successive governments that have ruled the country since shortly after its independence. Therefore, the economic system will not change unless the political system is modernised from a dictatorial regime playing a zero-sum game to a more democratic and accountable regime. Therefore, it would be naïve to propose that economic reforms will boost the country's economy if they are not preceded or at least accompanied by political reforms. One central message of this study is that Burundi's poor economic performance is the result of specific identifiable factors evolving around governance. There is nothing fundamentally wrong with Burundi: Development failure may be reversed if the issues identified in the study are properly addressed.

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INTRODUCTION

Burundi is landlocked between Tanzania to the East, the Democratic Republic of Congo to the West and Rwanda to the North. Over the last decades, the country's economic growth performance has been affected by its natural, human and institutional environment. Burundi has a population of about 6 million people spread over 27,834 km^2. With an urbanisation rate of 7 percent, Burundi's economy is essentially rural. Despite having one of the highest population densities in Africa, the country has been able to feed its people in peaceful periods in spite of its archaic production techniques. However, population pressure and poor ecological management, especially during the current civil war, have affected Burundi's self-sufficiency. The country's population is divided into three ethnic groups, though these are hardly distinguishable based on language, physiological features, cultural characteristics or geographical settlement. According to a 1956 colonial census, the Hutu represent 85 percent of the population, the Tutsi 14 percent and the Twa 1 percent[1].

Since independence in 1962, ethnic-political feuds and a number of factors have led to five bloody wars involving the two main ethnic groups. It is estimated that over the last four decades, more than 500,000 lives have been lost and hundreds of thousands of Burundians uprooted by the violence, fleeing to neighbouring countries. These conflicts have resulted from a complex web of factors among which poor governance is prominent. Most of post-colonial Burundi's history has been dominated by military dictatorships, with three Tutsi presidents from the same province of Bururi and the same commune of Rutovu at the helm of the country for 32 years out of 40 covered by this study (1960-2000)[2]. They have all shared the same style of predatory leadership, where the prerogatives of individuals and interest groups have been put before national interests. This has resulted in a highly centralised state, imposing its controls in all domains of the country's social, political and economic life.

Relative to other African countries Burundi's growth performance has been dismal. Even in absolute terms, GDP per capita fell from about 620 dollars to 370

[1] Ngaruko and Nkurunziza (2000) provide a discussion of the confusion surrounding the concept of ethnic group in Burundi and the caution needed for its interpretation.
[2] Lack of information for the period before 1960 did not allow us to start the analysis from 1950. Even for the period 1960 to 1970, statistical information is sketchy.

dollars between 1960 and 1998. The objective of this paper is to explain the reasons behind this catastrophic performance, by highlighting the salient features of the growth process and by showing which and how different factors contributed to this process. It should be stated from the outset that Burundi's economic performance has been narrowly associated with political factors. Poor governance has suffocated individual expression in all forms, frustrating private initiative and leaving economic activity to a state machinery ill equipped or unwilling to organise an efficient system of production. Throughout the paper, it is argued that the usual economic factors that explain growth have been endogenous to political decisions. Politics has shaped economic outcomes as decision-making over economic variables that explain growth such as investment, infrastructure, education, trade and employment have been made on the basis of political considerations.

The study comprises five sections. The first section presents a general picture of the macroeconomic and sectoral performance of the economy. The aim is to define the time pattern of growth in Burundi, by dividing the sample period into three sub-periods, which correspond to two periods of decline and one period of growth. Using Penn World Tables data on per capita GDP, this periodisation is data driven. The three sub-periods fit well predictions based on political economy. Sectoral growth is also reviewed in light of the three sub-periods. The second section discusses in more details the political economic dimension of growth. As already mentioned, political economy is at the core of Burundi's economic growth process. Sections three and four analyse the microeconomic factors of growth in Burundi. Section three focuses on the role of goods and factors markets in explaining Burundi's disappointing growth performance. Section 4 centres the discussion on firms and households, two agents whose potentially high contribution to growth has been frustrated by government misguided policies against private initiative. Section 5 concludes.

1. MACRO AND SECTORAL GROWTH

This section aims to provide an overview of the process of economic growth. The first sub-section identifies the relevant periods of this process. The second sub-section decomposes actual growth into growth of the main factors of production. The third sub-section addresses the sectoral contribution to growth, and the fourth sub-section compares Burundi' growth experience to other countries.

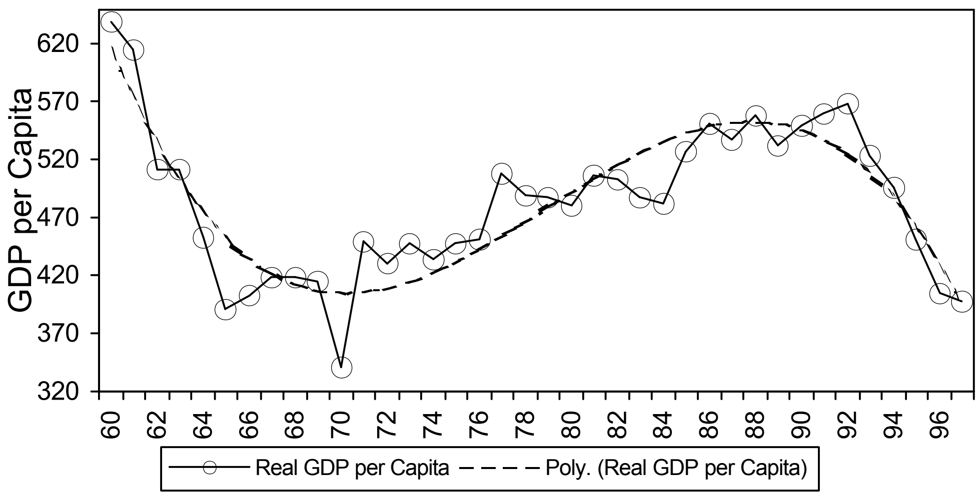
1.1. Periodization

The period of study, which covers four decades from 1960 to 2000, can be divided in three sub-periods. These are suggested by Burundi's political history as well as the evolution of the country's economic performance. Figure 1 shows that the trend estimated from a third order polynomial adjusts well to the evolution of GDP per capita. The parameters of this function are given in equation 1:

$$\begin{aligned} &GDP_{CAP} = -0.0545t^3 + 3.2788t^2 - 53.095t + 665.35 \\ &R^2 = 0.8135 \end{aligned} \tag{1}$$

where GDP_{CAP} represents real GDP per capita in year t. As figure 1 shows, the process of Burundi's economic growth unfolded along atypical patterns in comparison with the rest of Africa where economic growth was relatively strong between 1960 and 1973. Most countries experienced two decades of stagnation or decline since then, while this was a period of growth in Burundi. From 1994, many African countries have enjoyed a modest recovery, while Burundi has slid into an unprecedented crisis. This points to the fact that constraints such as those associated with international markets only play a modest role in explaining economic growth and stagnation in Burundi, thus suggesting that specific and internal factors are more important. The periodization proposed aims to emphasize these factors.

Figure 1: Evolution of GDP per Capita (1960-1997)



As figure 1 shows, the first sub-period (1960 –1972) is characterised by a steady decline in per capita GDP. The second sub-period (1972-1988), corresponds to a steady increase in per capita GDP, and the third sub-period (1988-to date) is characterised by a deepening economic crisis.

1960-1972**:** The decline during this period is due to a number of shocks that hit Burundi's economy. First, in 1960, when Congo became independent, Burundi lost half of its Eastern Congolese export market, resulting in large trade deficits. Second, in 1962, Burundi and Rwanda gained independence from Belgium. As a result, Burundi lost progressively its Rwandan export market for industrial products as Rwanda developed its own industrial sector compounding the poor performance of the country's external sector. Third, the colonial power left a legacy of high ethnic tensions, especially at a time of stiff competition for the control of state institutions and some assets left by Belgians. These tensions paralysed institutions culminating in the first political violent conflict in 1965. Fourth, decolonisation also resulted in scarcity of qualified manpower and capital stock. As a result, industrial production plummeted, with firm capacity utilisation dropping to about 25 percent in 1962-63. This was worsened by ferocious fights for influence among different political, regional and ethnic groups that did not care about the economy. During this period, Burundi's economic growth was lower than the African average and much lower than Asian highly performing countries.

1972-1988**:** On the political front, this period was characterised by a relative calm warranted by a highly repressive regime. The period followed the 1972 massacres in which thousands of Tutsi were killed by a group of Hutu rebels, triggering a horrendous repression by the Tutsi-dominated army throughout the country. Most Hutu able to exercise any political, administrative, or economic power were targeted and physically eliminated. The massacres were followed by a long period of political repression until the fall of the Bagaza regime in 1987. From 1975, in addition to an increase in coffee export earnings following severe frosts in Brazil, the country embarked on a massive programme of investment, financed mostly through foreign resources. A number of public corporations were created without any concerns regarding their economic viability. Used as political instruments for rent collection and distribution among the political elite, the management of these corporations involved massive transfers of subsidies, crowding out resources for productive investment. These policies were consistent with the efforts to embark on government-led growth based on large-scale public projects and companies mostly financed by aid and debt. This period experienced positive rates of economic growth. However, the widening budget deficits and the costs of servicing the debts contracted in the 1970s became unsustainable. In 1986, Burundi adopted a structural adjustment programme. To economic difficulties was added the 1988 civil war, a result of political tensions that had been brewing during the preceding long period of repression.

1988 to date: Despite the fact that the war in 1988 was shorter and less costly in terms of human loss relative to 1972, it opened the way for increasing grievances from a new generation of Hutu who had been excluded from political and economic participation in the country since 1972 (Lemarchand, 1994). Facing an international community that conditioned more and more of its external aid to political inclusion of the Hutu, Burundi experienced a volatile political environment with a drastic decline in investment (Reyntjens: 1994). In 1993, another civil war erupted after the killing of the first democratically elected president. In August 1996, the crisis was deepened when Burundi's neighbouring countries imposed an economic embargo in reaction to a new military coup. The international community followed suit by suspending its cooperation with the country. As a consequence, export and import smuggling increased, criminalizing economic activity as economic agents, including the government, attempted to import and export illegally some strategic products. Transactions costs increased manifolds as speculation and corruption became rampant. The Burundi franc plummeted and inflation reached levels never seen before. As a result, Burundi recorded its highest levels in poverty across the country. To date, although the embargo has been suspended, war is still ravaging the country and the economy is in shambles, as shown by the negative rates of economic growth over the last few years[3].

[3] In order to have an idea on what Burundi would have become if it had not experienced all the civil wars discussed, we have assumed that the country would have had the mean growth rate of African countries, including those that have experienced war. It turns out that by 1997, GDP per capita would have been $ 667 an amount that is 68 percent higher than the actual figure of $ 397. Taking the mean

1.2. Growth Accounting for the 1960 to 1997 Period

Collins and Bosworth (1996) provide a decomposition of actual growth in GDP per capita per worker into growth in physical capital per worker, education per worker, and total factor productivity (TFP) residual, set out in equation (2):

$$\frac{q}{l} = a\frac{k}{l} + (1-a)h + a \qquad (2)$$

where $\frac{q}{l}$, $\frac{k}{l}$, *h* and *a* represent the growth of output per worker, the growth of physical capital per worker, the growth of education per worker, and the growth of the total factor productivity, respectively. We attempted to decompose Burundi's economic growth along the same lines over the period 1960-1997. Human capital is proxied by the secondary school enrolment ratio, in spite of the inherent limits of this indicator (Gemmell, 1996), due to the lack of data on alternative proxies[4]. Concerning labour workforce and physical capital per capita, we made three assumptions. The first assumption concerned the definition of a worker. Burundi has a pre-industrial economy dominated by subsistence agriculture that involves over 90 percent of the population. Everybody is potentially a landowner who has the choice to farm his land for a living. Even urban dwellers are landowners who are often immigrants from rural areas. In such an economy, full unemployment is potentially rare except for a very small proportion of the urban population. Therefore, we assume that the population over 15 years constitutes the group of workers.

The second assumption concerns physical capital per worker. As data for physical capital per worker are difficult to find, we estimated them assuming that Burundi had the same physical capital per worker as the average of sub-Saharan Africa, that is, US $ 1069 in 1990. Likewise, following Collins and Bosworth (1996), we assumed that the annual rate of geometric depreciation of physical capital amounts to 0.04. As the authors argue, even though estimated physical capital might differ from actual data for the benchmark year, this does not have an important impact when they are adjusted by long time series of investment. Thus, k/l_t, the

growth rate of countries that have experienced no war would increase the figure even further. This simple figure gives an idea on the cost of Burundi policies over the years post-1960.

[4] Gemmell (1996) argues that school enrolment rates conflate the level effects of this factor and blurs the distinction between human capital and the growth in labour force.

amount of physical capital per worker for year t, was determined based on equation (3):

$$k/l_t = k/l_{t-1}(1-0.04)+i\,y_{t-1} \qquad (3)$$

where i is the ratio of investment over GDP per capita y. The third assumption concerns data on workers. Assuming that a amounts to 0.35 as generally assumed (Ndulu and O'Connel, 2000; Collins and Bosworth: 1996), we found that while between 1960 and 1997, GDP per capita decreased by more than 40 percent, physical capital per capita had been multiplied by 58 and the human capital by 5; TFP had been divided by 25.

Overall, these figures conform to Burundi case. While investment had been made in line with relative scarcity before independence in 1962 to cater for the Belgian colonial needs, thus having a positive impact on economic growth, the pattern changed after independence. In the post-independence period investment has been generally allocated based mostly on non-economic needs. Decision-making has evolved around rent seeking through regionalism, clientelism, nepotism and patronage. This picture particularly limits the relevance of the Collins-Bosworth model, which relies on the assumption of an investment allocation rule based on a competitive environment. When cronies rather than qualified managers are running the economy, when priority is given to investment projects in function of their location rather than the objective needs of the economy, it is not surprising that TFP decreases (Easterly, 2001). As a consequence, despite an apparent large increase in investment, which became predominantly public since the 1970s, jumping from 5.6 percent of total investment in the early 1970s to 42.8 percent in 1980, effective increase in relevant physical capital was modest. As a result, GDP per capita decreased, thus reducing TFP. This picture, however, suffers from an important limitation: it does not distinguish between periods of peace and periods of war.

Table 1: Decomposition of the contribution to Growth: Period average (%)

Period	$\frac{q}{l}$	$\frac{k}{l}$	H	A
1960-72	-2.5	105.8	15.4	-49.5
1973-88	1.56	13.4	3.3	-5.27
1989-97	-2.8	2.1	2.7	-5.25
1960-97	-0.74	40.56	7.01	-19.47

Interpretation of these results calls for a number of remarks. Firstly, the enormous rates of increase of physical capital per capita and human capital per capita between 1960 and 1972 are due to the particularly low initial conditions rather than to high additional capital; they contribute to the large value of TFP as the value of the parameter a shows. Secondly, the variations during the 1973-88 period relate to a 16-year period which is longer that the first. The third remark points to the most critical feature of the accounting exercise in the case of Burundi. The specification of capital depreciation seems to be not appropriate for economies like Burundi, which experienced massive destructions of capital due to repetitive wars. This has been the case with human, physical and land capital.

The first war-related destruction of capital refers back to the 1965 conflict. Though Burundi could hardly total a few dozens of people with university degree, the Tutsi-dominated army executed more than three hundred Hutu elites among the most educated. This was a consequence of a foiled coup by Hutu elements in Bujumbura and the massacre of Tutsi peasants in the central province of Muramvya by Hutu (Lemarchand, 1994). Seven years later, during the army repression of the Hutu in 1972, between 200,000 and 300,000 people were killed, especially Hutu with post-primary education. A similar number of Hutus fled to neighbouring countries, creating the first wave of long-term refugees the country has produced over the years. As a consequence, from a year to another, for comparable secondary school enrolment ratios, the human capital was cut by a large fraction. Similarly, the next conflicts, particularly the latest one that started in 1993 have followed the same pattern. Far from being limited to human capital, these conflicts have also caused an important loss of physical capital. Arsons, looting and displacement of populations that accompany these massacres have caused the destruction of much of the accumulated capital. For instance, during the current civil war, the killing and looting of livestock –a particularly prized capital asset for rural households– have caused a decline from 2.6 million heads to 1.8 million from 1993 to 1999, implying a fall of 31 percent.

HIV/AIDS is another source of human capital destruction that is gaining prominence. Recent figures suggest that HIV prevalence has increased rapidly since the early 1980s, accelerating during the current civil war due to population displacements, army and rebel movements and promiscuity in displacement camps. The prevalence rate in cities has increased from 1% in 1983 to 15.1% in 1993, and to 21% in 1997, against 0.73% in 1989 to 5.9% in 1997 in rural areas (The World Bank, 1999). According to UNAIDS statistics, Burundi is the 13th most severely affected country in Africa in terms of AIDS prevalence. No doubt that by its ravages within educated urban elites, HIV has had a severe impact on the stock of human capital weakening the relevance of the estimation of human capital productivity along Collins and Bosworth model[5].

Thus, the rates of growth of physical and human capital in Burundi are likely to be over-estimated, at least in two respects. First, the figures estimated by the Collins-Bosworth model do not take into account the shocks just discussed. Secondly, with time, the actual path of capital accumulation has diverged from that suggested by the Collins-Bosworth model due to the persistence effect of these shocks. Therefore, today, 35 years after the country experienced the first shocks, the figures suggested by the parameters of Table 1 have little to do with reality. As a result, the values of k/l, h and a are over-estimated, implying that productivity is likely much higher than suggested in Table 1.

1.3 Sectoral Contribution to Growth

An important part of the economic literature emphasizes that there is a transformation of sectoral shares of labour and output in the course of economic development (Chenery and Syrquin: 1975). According to this literature, productivity increases in the traditional sector (agriculture) underpin the movement of labour towards modern sectors (industry, services), thus rising overall per capita incomes. However, other economists argue that in Africa, over-taxation of agriculture has

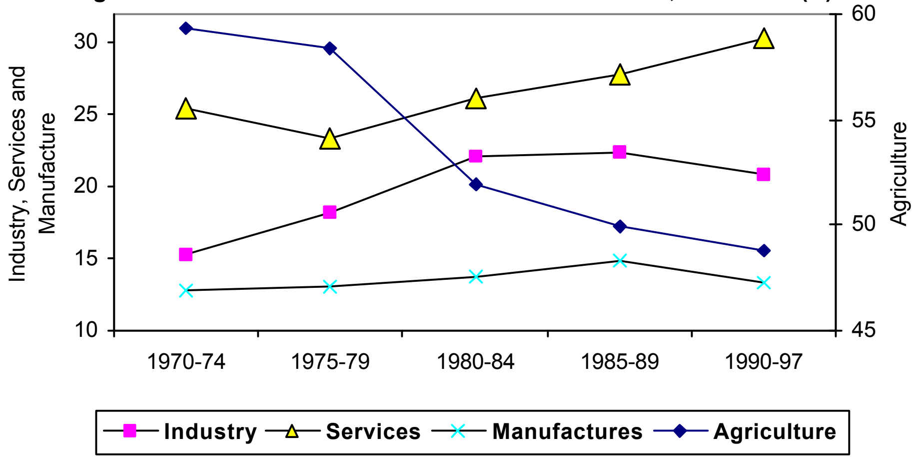
[5] Easterly (2001) provides a detailed critique of the growth accounting exercise based on the Solow growth model.

impeded its structural transformation, thus limiting its contribution to long-term growth (Bates: 1981). On the other hand, approaches emphasizing governance and civil strife suggest that the bias has been against the manufacturing sector in Africa. Regarding the first hypothesis, Burundian figures illustrate a rather paradoxical situation.

During the 5 half-decades from 1965 to 1990, Burundi's growth rates were higher than African averages, though lower than those of developing countries as a whole. Burundi's rates amounted respectively to 2.1%, 3.8%, 2.1%, 0.46% and 2.5%, against respectively 1.6%, 2.1%, 0.93%, -0.85% and 0.9% for Sub-Saharan African countries. Yet, this performance does not show any significant sectoral transformation of Burundi's economy. Agriculture represents the largest contribution to aggregate GDP in Burundi. Its share in GDP has fallen from 60 percent in the 1970s to about 50 percent in the 1990s. Over the same period, the average for Sub-Sahara African countries decreased from 35% to 30%, against rates of 27% to 21% for developing countries as a group. Industry benefited more than services from this relative decline of agriculture in Burundi, while it was the converse in the rest of Africa. Thus, while industry's share in GDP increased from 15.3% to 20.8% in Burundi, services went from 25.4% to 30.3%. For sub-Saharan Africa, these shares grew respectively from 23.6% to 25.8% for industry, and from 41.2% to 44.2% for services.

To some extent, this evolution of African economies consisted in a convergence towards the expected sectoral structure, given the continent's income and population patterns. Estimation of fixed effects by O'Connel and Ndulu (2000) based on Chenery and Syrquin model shows that given its income and population level, Sub-Sahara Africa service sector is smaller, but industry and manufacturing sector are larger than would be expected based on cross country norms. Furthermore, this estimation shows that the share of labour force in agriculture is larger, and that labour productivity differential in favour of non-agricultural sectors tends to be much higher in Africa than in other regions. In this line, the case of Burundi seems atypical by its lack of convergence. Actual data on agriculture's share in labour force and the ratio of agriculture versus non-agriculture labour productivity and fitted values of these two variables produce large and increasing residuals over time (Ndulu and O'Connel, 2000), thus illustrating that Burundi diverges from the rest of the continent.

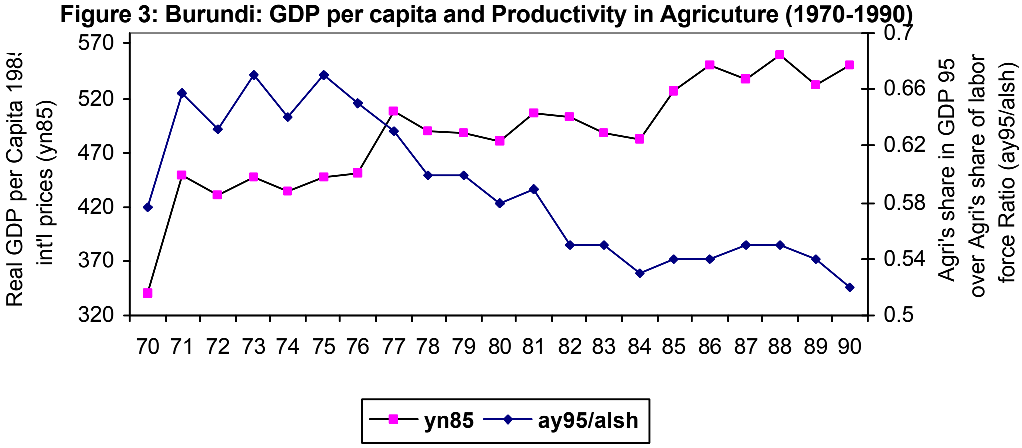
Figure 2: Burundi: Evolution of Sectoral Share of GDP, 1970-1997 (%)



In Burundi, agriculture share in labour force fell from 95 percent in the 1960s to 91 percent in the 1990s. Such an evolution is not distinctive from the one in other African and developing countries. What is distinctive is that this decrease was more important in other parts of the world, suggesting that sectoral transformation was relatively marginal in Burundi, where the share remained one of the highest. The share remained over the mean of these groups of countries, as well as over the one-standard deviation margin of developing countries. Thus, while this share went from 73% to 68% for sub-Saharan Africa between 1975-79 and 1985-89 periods, and from 54% to 49% for the group of developing countries, it remained almost unchanged in Burundi from 93% to 92% over the period. This evolution can also be illustrated by productivity pattern in agriculture. Between 1975 and 1989, non-agriculture versus agriculture average labour productivity ratio decreased from 9.5 to 8.7 in sub-Saharan Africa, and from 6.6 to 5.9 for developing countries as a whole. Over the same period, the ratio rather increased in Burundi from 9.8 to 11.6, illustrating a relative decline in agriculture labour productivity. These figures show that Burundi's relatively strong economic growth was not accompanied by notable sectoral transformation.

Productivity differentials in agriculture show an atypical evolution of Burundi relative to the rest of African countries and even much more relative to highly performing Asian countries. This implies two suggestions. First, in Burundi, investment and growth took place at the expense of agriculture. The second suggestion is that through this allocation, Burundi diverged from a competitive equilibrium, since the productivity gap across sectors tended to widen as Figure 3 shows.

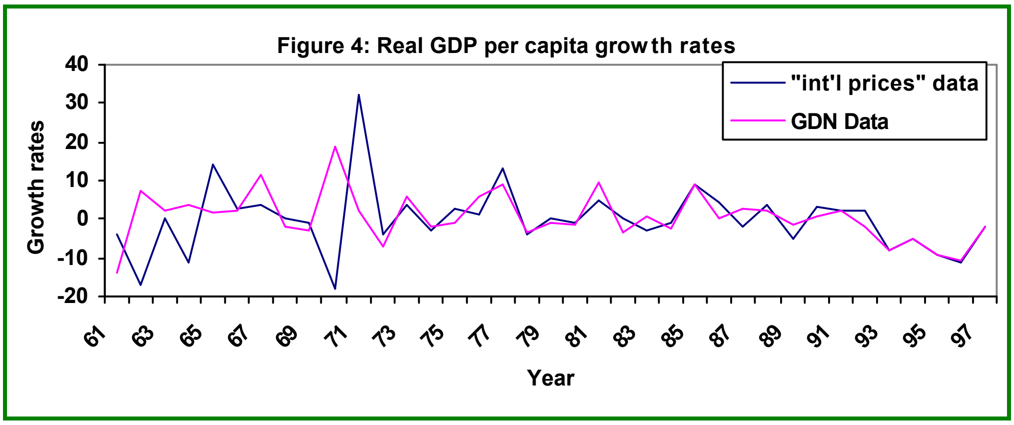
Figure 3: Burundi: GDP per capita and Productivity in Agricuture (1970-1990)



These suggestions point to heavy policy distortions, and this question will be addressed from a distribution standpoint. More specifically, four hypotheses are explored to explain the patterns of economic growth in Burundi. First, farmers have been over-taxed through several channels, including cash crop producer prices and exchange rate policy, preventing accumulation in agriculture and the transformation of the sector. Secondly, while the industrial sector has benefited from the massive external borrowing that took place from the mid-70s, the process disconnected economic growth captured by the evolution of GDP per capita, from productivity in agriculture (Figure 3). Thirdly, the creation of state-owned enterprises resulted in bureaucratic expansion and predation to the benefit of the elite. Fourthly, the ensuing public deficits increased taxation on private manufactures to secure massive subsidies for poorly managed public enterprises. This pressure was transmitted to agriculture through manufactures relying on agriculture inputs.

1.4. Growth Regression Evidence

The limits highlighted in the growth accounting exercise of the second sub-section are also relevant for the cross-country comparison, inasmuch as this comparison relies on data that does not account for losses caused by political instability. Moreover, comparing Burundi to other countries and groups of countries raises an additional serious problem of data comparability. The 1985 international prices based data on economic growth on which the previous analysis relied, and which are the reference for the analysis in the next sections are so divergent with the GDN data, on which the cross-country comparison rests that it is difficult to develop a coherent explanation articulated on both sources over the 1960-2000 period. Figure 4 plots per capita GDP growth rates based on these two sources to show their inconsistency.



As figure 4 shows, the most important divergences relate to the 1960-1974 period. We suggest an intermediary solution, consisting in the comparison of Burundi to other countries and regions for the period 1975-1997 only. In this line, given the features already outlined concerning growth in Burundi, we chose some variables covering many aspects, to show the position of Burundi relative to different groups of countries. These variables cover the aspects including initial conditions (initial income), structural endowments ("landlocked" variable), exogenous shocks (terms of trade), and a proxy of policy quality, institutions and political instability (black market premium). Table 2 provides the results on the position of Burundi relative to different groups of countries.

Table 2: Factors of Growth: Burundi Compared to Africa and Asia

Explanatory Factors of Growth	Expl. Power *	Position of Burundi Relative to SSA and HPAE							
		75-79		80-84		85-89		90-97	
		SSA	HPAE	SSA	HPAE	SSA	HPAE	SSA	HPAE
Real GDP per Capita Growth Rate	-	c	A	c	a	c	b	a	a
Initial Income (expressed in log)	High	a	A	a	a	b	a	b	a
Landlocked	High	d	D	d	d	c	d	d	d
Cumulative Terms of Trade Shocks	None	c	D	c	c	b	c	c	b
Black Market Premium	High	b	D	b	d	b	d	d	d
Initial Life Expectancy	High	b	A	b	a	b	a	a	a
Age Dependency Ratio	High	c	D	c	d	c	d	c	d
Growth in Potential Labour Force	High	d	A	c	a	a	a	b	a
Trade-wt Growth Rate of GDP per Capita, Trading Partners	High	b	A	b	a	b	a	b	a
Political Instability	High	b	A	b	b	b	d	c	d
Inflation	Low	c	D	b	b	c	c	d	d
Extended Barro-Lee Gov't Spending (% GDP)	High	b	D	b	d	n.a.	n.a.	n.a.	n.a.
Ln Ratio of Investment to GDP (%)		b	A	c	a	c	a	n.a.	n.a.

Notes: * High, low and none explanatory power respectively apply to 1%, 25% and more than 50% of error, these parameters resulting from OLS multivariate regression of different factors over economic growth of real GDP per capita; blanks mean that the variables are not included in the regression: they are included in Table 2 just for comparative purposes of Burundi's position relative to SSA and HPAE groups of countries; **(a):** Burundi falls below the mean of the group of countries and below the one-standard deviation margin; **(b)**: Burundi falls below the mean of the group of countries but within the one-standard deviation margin; **(c):** Burundi falls over the mean of the group of countries but within the one-standard deviation margin; **(d):** Burundi falls over the mean of the group of countries and over the one-standard deviation margin; (**n.a.):** Not available; SSA: Sub-Saharan Africa; HPAE: Highly Performing Asian Economies.

As Table 2 shows, Burundi's particularly low initial income confirms the weak initial conditions. Coupled with the relatively high growth rate, at least relative to sub-Saharan African countries from 1975 to 1989, this suggests that up to the onset of the current civil war in 1993, the dynamics of Burundi's economy seems to support the conditional convergence hypothesis emphasized by O'Connel and Ndulu (2000, p. 11). This is so despite the structural factors discussed earlier and those highlighted in Table 2, including the geographical constraints imposed by the lack of access to the sea.

In the 1990s, the civil war reversed the gains of the previous periods. For most of the variables, Africa was worse off relative to the groups of developing countries. Table 2 also shows that foreign exchange policy worsened during the

1990-97 period, when most other countries' official and informal markets tended rather towards convergence (Nkurunziza, 2000b). The data on some key explanatory factors such as age dependency ratio as a proxy for health conditions, black market premium as a proxy for government controls over the economy and inflation from 1990 to 1997 are consistent with a war economy. Cukierman et al. (1992) have noted that inflation increases in periods of political instability, which is the case in Burundi. The impact of growth of the ratio of people between 15 to 65 years of age (potential labour force) is more difficult to explain. Given the evolution of the position of Burundi relative to the rest of Africa, one could hypothesize that this growth was important as a demographic response to the toll caused by the 1972 civil war, which had particularly hit this segment of the population.

Table 3: Burundi: Fits and Residuals From Pooled Conditional Model

	Fits and Residuals			Actual and Predicted Growth Deviation				Breakdown of Policy Contribution by Variable		
					Contribution to Predicted Growth Deviation					
Period	Actual Growth	Fitted Growth	Residual	Actual Growth Deviation from Sample Mean	Base Variables	Political Instability	Policy	Inflation (>500%)	Black Market Premium (>500%)	B/L Gov't spending / GDP
1970-74	3.80			1.60	0.11	0.00		0.04		-0.70
1975-79	2.07	2.06	0.01	-0.13	-0.05	0.13	-0.43	-0.01	0.01	-0.44
1980-84	0.46	0.29	0.17	-1.74	-0.95	0.20	-0.45	0.03	-0.01	-0.47
1985-89	2.50			0.30	-0.69	0.13		0.04	0.01	
1990-97	-4.18			-6.37	-1.16	-0.13		0.00	-0.09	
Total	**0.93**	**1.18**	**0.09**	**-1.27**	**-0.55**	**0.07**	**0.14**	**0.03**	**0.00**	**-0.06**

Source: Based on Ndulu and O'Connel (2000).

Though the lack of data on initial educational attainment does not allow comparing Burundi with other countries on the basis of fixed effects, or the contribution of different variables to growth in line with Hoeffler (2000) on the basis of the augmented Solow model and sys-GMM, some key observations can be made. Firstly, whether or not the 1960-73 period is taken into account in view of the divergences in data already observed, it is clear that Burundi's economic performance is dependent on whether or not war occurred during the period under consideration. This is consistent with the typology of African economies proposed by Hugon (1993), who suggests that Burundi's economic dynamics is essentially explained by war versus peace logic. As Table 3 shows, the deviation in Burundi's actual economic growth from the sample mean is a function of war, implying that a model that fails to take in account the latter variable fails to capture a key feature of Burundi's economic growth. On the other hand, while Table 3 confirms the importance of basic economic variables (life expectancy at birth, initial conditions, age dependency ratio, growth in potential labour force participation, terms of trade shocks, trade partner growth rates and the country's landlocked status), it highlights the role of policies. Among the latter, government spending has a particularly important impact.

In summary, developments and evidence in this section have shown that observed economic growth in Burundi was not rooted within the economic structure. It was due to massive government spending owing to foreign borrowing and favourable international prices of coffee, the country's main export, but achieved little structural transformation of the economy. This was emphasized both by data on sectoral transformation and the absence of a demographic transition captured by the unfavourable evolution of the age dependency ratio. As discussed in detail in the following section, these failures stem from a lopsided distributive policy that has culminated in five episodes of civil war, destroying the gains achieved during the previous periods. Thus, in the remaining part of the paper, the problem of governance will remain a central feature in explaining Burundi's economic growth.

2. POLITICAL ECONOMY

This section provides a review of Burundi's political evolution over the period 1960-2000 with special emphasis on how political factors impacted on economic growth.

2.1. Political and Economic Evolution

Post-colonial political history corresponds to the three-period trajectory delineated in the previous section. However, the political evolution within each period is non-linear, particularly during the first and the third periods, which are characterized by unstable political equilibria. In this section, we focus on four elements: the duration of different forms of governments, the duration of different political regimes, the dates of major policy changes and the periods of the signing of particular international agreements.

2.1.1. The Forms of Governments Between 1960 and 2000

When Burundi became independent from Belgium on 1 July 1962, it was a monarchy. The struggle for independence had assembled politicians from the two major ethnic groups, namely the Hutu, and the Tutsi in UPRONA party, which won legislative elections in September 1961. As this party was largely built on democratic values, expectations were that Burundi would evolve towards a parliamentarian monarchic political regime. However, the assassination in October 1961of Prince Louis Rwagasore, the leader of UPRONA, and the political crisis that followed his death changed the political atmosphere in the country. King Mwambutsa IV, a weak leader, succumbed to intrigues and political games, sometimes making partial interventions. Burundi experienced a crisis fuelled by a merciless political competition along ethnic lines, prompting Hutu leaders to stage a coup. The coup failed and was bloodily repressed by killing most senior Hutu politicians, resulting in a *de facto* elimination of the Hutus from the political scene. These events led to the country's first civil war in 1965. In its aftermath, Captain Michel Micombero staged a military coup in 1966, deposing the centuries-old monarchy and replacing it with a republican regime.

Military rule put an end to the shaky democratic institutions that had prevailed before but did not manage to restore political stability. On the contrary, its policies exacerbated the crisis. The Micombero government dissolved parliament and established a single-party repressive system. The Tutsi ethnic group, specifically those from the Southern province of Bururi dominated this regime. The president, key ministers and their advisors, as well as the army commanders were all from Bururi. By the early 1970s, Hutu and non-Bururi Tutsi had been sidelined in the control of the country's political institutions. As a result, opponents to Bururi regime were not only the Hutu but also the Tutsi from the rest of the country. Tutsi from Bururi colluded to marginalize the traditionally influential Tutsi from Muramvya, as the latter region had been the cradle of pre-colonial monarchic institutions.

In this context, Tutsi leaders from Muramvya were imprisoned en masse in 1971 after being accused of plotting to overthrow the military regime. Afterwards, in a coup attempt in April 1972, Hutu rebels massacred a large number of Tutsi families, particularly in the South of the country. In the repression that followed, about 18 percent of the Hutu population perished; almost all educated Hutus with secondary or university education were physically eliminated. The 16-year period that followed the events was relatively calm, but it is during the same period that two bloodless palace coups led by officers from the same commune of Rutovu in the province of Bururi arranged for the replacement of Micombero by Colonel Jean-Baptiste Bagaza in 1976, and the latter by Major Pierre Buyoya in 1987.

Despite the elimination of Hutu and the non-Southern Tutsi threats, political fights went on this time within a narrow intra-ethnic and intra-regional space among the ruling élite. Fights opposed political leaders from Matana commune to those from Rutovu commune, both in the same Bururi province. In the late 1980s, in-fights were between the Bayanzi and the Bashingo clans of Bururi Tutsi. The period 1972-88 was an era of drastic discrimination against the Hutus and non-Bururi Tutsi. Its main manifestation was through the privileges enjoyed by Bururi Tutsi in accessing primary, secondary and university education, including access to overseas scholarships, relative to Burundians from other regions. Illustrating the extreme concentration of high education among people from Bururi, Jackson (2001) notes that just one commune of Bururi province, Mugamba, accounts for 15 percent of the 6000 students of the University of Burundi. The fact that the latter was the country's single institution of higher education until the creation of the new private University of Ngozi which numbered less than 500 students in 2000, shows clearly how state institutions have been captured by the ruling élite. Through these barriers to education, non-Bururi Burundians were prevented from assuming any substantial administrative, economic or political power[6].

[6] Pritchett and Filmer (1999) have shown, in a detailed multi-country study, that access to education increases wealth and that wealth increases the level of education. The implication is that lack of access to education perpetuates poverty, especially in countries like Burundi where access to the civil service is the best and almost only opportunity of escaping poverty.

2.1.2. Economic Underpinnings of Political Competition

Economic Interests at the Core of Political Competition: The political evolution described above was underpinned by economic motives. Up to independence, there were few Burundians who had accumulated economic wealth through business activities. A large share of investment and infrastructure were owned by the colonial state, while private business was in the hands of Belgians. The capital left by Belgians after independence was in the hands of the post-colonial Burundi new state. This included a few factories, cars and houses. In the absence of any clear rules or credible authority to assign property rights on those assets, especially after the assassination of UPRONA party leader, it was left to the greed of political leaders to share these rents. Thus, the merciless political fight for leadership was mainly a struggle for the control and appropriation of this capital.

From Individual interests to collective action: Individual interests were better served when aggregated along ethnic and regional lines, giving rise to the patterns of competition evoked earlier. Though UPRONA, the victorious party in legislative elections leading to independence, included leaders from both Hutu and Tutsi ethnic groups, political struggles broke out along ethnic lines. Two major factors explain this: the lopsided Belgian colonial polity and the so-called "social revolution" in neighbouring Rwanda, a country with the same ethnic configuration.

The Hutu versus Tutsi distinction existed before colonisation, and to a large extent, the Tutsi ethnic group enjoyed relatively more economic privileges and political power. However, this state of play was institutionally regulated through sophisticated rules that tempered the exclusion of Hutus. To divide the population in order to control it more effectively, the colonial power institutionalised the domination of Hutu by Tutsi through extremely rigid rules. At the same time, it implemented policies clearly biased against the Hutus. For instance, in the 1930s, there were 27 Hutu chiefs governing Hutus as well as Tutsis in their constituencies; in 1945, after the colonial administrative reform, there were no more Hutu chiefs (Reyntjens: 1994; Nkurunziza and Ngaruko, 2002). Belgian social scientists carried out a large program of research to "demonstrate" that Tutsis were a superior race similar to Europeans and that they were born to rule while Hutus were seen as inferior (de Lespinay, 2000). The irony of the matter is that many Hutu and Tutsi were made to believe in this colonial propaganda. The colonial education policy reflected the objectives of the colonisers. For every Hutu student admitted by the colonial university, there were 5 Tutsi students in 1932, 15 in 1945, 3 in 1954 and 2 in 1959 (Lemarchand, 1970). Not surprisingly, at independence in1962, a number of Tutsi leaders believed they had special prerogatives to rule the country.

The second factor relates to the impact of the Rwandan 1959 bloody social revolution, which eliminated Tutsis from political leadership. While this revolution, carried out with the help of Belgians, was considered by radical Hutu leaders in Burundi as the model to replicate, most Tutsi leaders viewed it as the scenario to avoid by all means. In the early 1960s, suspicion mounted between Rwanda and Burundi as the leaders in the two countries were from different ethnic groups. For instance, the decision to end the monetary integration between Rwanda and Burundi in 1964 and the subsequent loss of the Rwandan market by Burundian industry was a result of this mistrust. To some extent, even the loss of the East-Congolese market resulted from the suspicion between Burundi and Congo, with Burundi accusing Congo of hosting Paul Mirerekano, a key Hutu opponent, while the Congo accused Burundi of involvement with its southern secessionists such as Gaston Soumialot. While the interests of political actors aggregated along ethnic lines soon after independence, this changed from the early 1970 when interests opposed Tutsis from Bururi and Tutsis from the rest of the country, creating a second though less severe fracture. This regional fracture was consolidated after the 1972 massacres.

2.1.3: Patterns of Rent-Sharing from the 1970s

Given Burundi’s limited natural resources, political factions fighting for the control of the state seek to control public institutions, including the public administration, which have become the centre of a system of rent sharing. In this regard, the rationale for major policies in the country rests on the role of the public sector. This is illustrated from three perspectives: First, the role of public employment and wages; secondly, the role of state-owned enterprises; and thirdly the role of the army.

Unlike most of African bureaucracies, Burundi’s public sector is relatively small. Since independence, while many African governments used public employment to leverage populist policies aimed at providing revenue to a maximum number of people, Burundi's public sector has remained elitist. This was the result of the choice by successive governments to reserve the relatively high paying jobs for their political clients. In Burundi, the mean income of the mean civil servant falls among the richest 6% of the population[7], against an average of 13% in sub-Saharan Africa, 30% in the Middle East and North Africa region, 33% for Asia, 40% in Latin America and the Caribbean, 76% for Eastern Europe and the former USSR and 63% for OECD countries. Hence, in Burundi, individuals at the highest levels of office stand among the richest in country[8]. This result justifies why ethnic politicking has a high payoff in Burundi. The following table shows its result by providing information on the ethnic identity of those in the highest public jobs.

Table 4: Ethnic Disparities in Public Senior Civil Service Posts in 1987

	Hutu*	Tutsi*	Twa*
Office of the President	1	98	0
Central Committee of Single Party (UPRONA)	2	50	0
Administration of Single Party	3	52	0
Ministers	5	13	0
Ministerial Cabinet Directors	1	17	0
Ministry Permanent Secretaries	0	40	0
Province Governors	2	13	0
Ambassadors	1	21	0
Embassy Diplomats	0	88	0
Army Barrack Commanders	0	20	0
Army High Ranking Officers	2	398	0
Army Sergeant and Privates	30	11970	0
State Owned Company Directors	5	252	0
Hospital Directors	1	19	0
University Lecturers	10	80	0
Secondary Schools Directors and Inspectors	6	89	0
Justice Prosecutors	0	66	0
Magistrates	5	92	0
Court Presidents	1	7	0
Judiciary Police Officers and Inspectors	0	400	0

Source: Ntibazonkiza, R. (1993).

* Even though it is difficult to ascertain the accuracy of these statistics, they carry the simple message that the Tutsi have dominated all government institutions.

The reality is that more disaggregated data on some of these positions, with names of the incumbents provided, not only confirms this pattern but also unveils the regional pattern, confirming Bururi's dominance. Hence, while it is accurate to say

[7] This share is even smaller if illegally acquired income through corruption is taken into account.
[8] In Burundi's tiny private sector, it has also been noted that a significant fraction of large private businesses are owned by former senior civil servants and politicians.

that the Tutsi dominated the civil service in 1987, it would be more accurate to say that the Tutsi from Bururi dominated state institutions. For instance, the data in table 5 on the ethnic and regional origin of managers of public enterprises illustrates this important distinction.

Table 5: Ethnic and Regional Distribution of Public Corporations' Managers (%)

Ethnic Group **Region of Origin**	**Tutsis**	**Hutus**	**Twa**	**TOTAL**
Bururi Province	60	3	0	**63**
Remaining 14 Provinces	29	8	0	**37**
TOTAL	**89**	**11**	**0**	**100**

Source: Based on data from "La Lumière", a Burundian weekly, and reported in International Crisis Group (2001).

The country's resources have been captured and redistributed through the public sector, dominated by Southern Tutsis. More specifically, employment policies in the public sector rest on three pillars. First, high public wages and other related advantages relative to the country's resources. Secondly, a relatively small bureaucracy, which is part of the country's élite. Thirdly, important barriers to entry into the main public professions applied selectively. The dominance of Bururi Tutsi has its origin in the country's history, as already discussed. This is explicit especially in two sectors: the state owned corporations and the army.

From independence to the mid-1970s, political leaders in Burundi paid little attention to the economy. The two kings that ruled the country until 1966 and Micombero adopted multi-year plans of economic development, but these plans were hardly followed. The country's leadership invested its energies in political and ethnic intrigues to reinforce their grip on assets left by the colonial power. Until the mid-1960s, these assets were shared among the ruling elites, from both the Hutu and Tutsi groups. Even though the massacres of Hutus and the elimination from public office of Tutsis openly opposed to the country's domination by the military from the South had resulted in new redistributions to the benefit of Southern Tutsis, by the early 1970s, there were little assets left for further distribution to the new generations of southern Tutsi elites. There was a need to innovate.

The policies adopted by the country's political class in the mid-1970s responded to this need. They included heavy interventionism. The government embarked on an active economic policy programme, which raised the share of public investment in total investment from 5.6 percent to 42.8 percent between 1971 and 1980. To implement this programme, the country borrowed massively from both the domestic financial market and from external sources. As a result, coupled with sustained economic in the 1970s was an increase in the country's indebtedness. The funds served mainly to extend the bureaucracy, notably by creating more state corporations. As Nyamoya (1998) notes, from 1977 to 1982, about 100 State-owned companies were created. Managed by cronies with no managerial skills whose main motive was to cater for the needs of their friends and relatives, most of the corporations experienced cash flow problems accommodated by massive injections of subsidies. As a result, the country's budget recorded huge deficits, especially when the revenues from coffee exports declined in the 1980s.

Although they produced only 9 percent of the country's GDP in 1990, state firms accounted for 31 percent of formal sector employment, 25 percent of outstanding domestic credit, and benefited from 3.4 percent of GDP in financial flows from the government (World Bank, 1998). By 1995, equity capital for thirty-six such firms with majority state participation represented 20 percent of the country's GDP, but overall, these corporations posted a net loss equivalent to 6 percent of GDP or 14 percent of government revenue, excluding grants (IMF, 1997). These losses and subsequent government transfers are just illustrations of the ways used to transfer resources from taxpayers, including farmers, to bail out firms that served group rather than national interests. The corporations' privileged access to government resources, including foreign currency, and their ethnically and regionally biased employment policies are additional avenues for rent sharing.

The army is at the core of Burundi's politics. In Burundi, he who controls the army controls the country. The army plays a prominent role as both an actor and guarantor of the mechanism of rent collection and distribution within the elite group. Public expenditures allocated to the army rose by more than 100% between the mid-1970s and the mid-1980s, reflecting a reinforcement of the institution that protects the predatory system. The army also acts as a distributive machinery, given that from the early 1970s, it has been overwhelmingly dominated by Southern Tutsis at all levels. According to the International Crisis Group (2001), out of 37 highest command positions within the army all of them are Tutsi, with 27 or 73 percent from Bururi province.

These figures imply that policies that give prominence to the interests of public servants, the army and state-owned enterprises over the rest of the population are not coincidental. An illustration of this view is provided by the assassination of the first democratically elected President, Melchior Ndadaye, a non-Bururi Hutu, by Bururi dominated military. In June 1993, democratic elections unsurprisingly changed Burundi's traditional political landscape. They brought in office a Hutu dominated government, with relatively few members from Bururi. While attempts by the new government to reform the system of rent seeking were also, at least partially, motivated by self-interest, they precipitated the country into chaos within four months in power.

Among the factors that led to the October 1993 coup and the subsequent civil war, four are worth noting (Reyntjens, 1994): Firstly, the reduction of the bid bonds of 80%, to allow small businessmen, including many Hutu, to benefit from privatisations of state-owned enterprises threatened some traditionally well established interests. Secondly, the attempt to reconsider the conditions under which the Belgian firm Affimet had been authorized to refine and export gold under an export processing zone licence a few weeks before the June 1993 elections annoyed influential people both from the firm itself since it was going to lose its privilege, but also those from the previous government who had been involved in the deal. Thirdly, the attempt by returning Hutu refugees to recover their property including houses and land, some of them in powerful hands, which they had left in 1972 was obviously too sensitive. Fourthly, the intention of the President to reform the army did not please those who felt threatened in view of their privileges. These few examples show the role of special interests in the country's political discourse. The following sub-section discusses the way in which special interests led to resource misallocation and to a divergence from an efficient equilibrium as evoked earlier, thus affecting economic growth.

2.2. Government Economic Policy Choices

The process of rent collection and sharing illustrates how this system has been politically and economically organized to benefit some individuals while harming others.

2.2.1. Education Policy

Education policy has been used to filter the access to public employment through unequal access by instituting skewed regional distribution of educational infrastructure, the quality of teachers, the types of schools and the distribution of students into different disciplines. According to Jackson (2001, p. 31-35), Bururi alone had 15 percent of all primary school teachers, more than those in four provinces taken together: Cankuzo, Muyinga, Rutana and Ruyigi. With 19 percent of the country's students in secondary schools and distributed in 36 schools, Bururi boasts the highest rate of educational infrastructure in the country. Together with Bujumbura, the capital city, the two provinces host 11 percent of the country's population but they account for 32 percent of all secondary school students. In contrast, the five least endowed provinces account for only 10 percent of secondary school students, almost half of the number for Bururi. Jackson notes that in the late 1980s, the government allocated about 60 percent of donor aid to education to Bururi (p. 35)[9].

Hence, before the 1993 crisis, Bururi had attained a rate of primary school enrolment ratio of 99 percent, compared with the country's average of 70 percent. This contrasts with the achievements in other provinces, especially those in the North such as Kayanza, Kirundo and Muyinga that have never reached a rate of more than 60 percent. This information is confirmed by a 1998 household survey (hereafter EP1998)[10]. Thus, given that the modern labour market is dominated by public employment, and since access to public employment generally depends on

[9] These statistics are so shameful that, according to Jackson (2001), the Belgian minister for development cooperation asked for statistics on the number of colleges in Bururi in 2000 in order to send the required aid but he never got a response from the government.

[10] These figures are computed from the results of "Enquête Prioritaire 1998: Etude Nationale sur les Conditions de Vie des Populations" carried out by ISTEEBU (Institut de Statistiques et des Etudes Economiques du Burundi). This source will be subsequently referred to as EP1998.

the level of education[11], by government design, those who are denied education in early age are denied access to most opportunities offered by the economic system.

Unequal allocation of resources to different regions by the successive governments has also been noted. Guichaoua (1991) reports that the Fifth Five-Year Plan allocated 66% of gross fixed capital formation to a geographical area comprising Bujumbura, the capital city and its surrounding areas, and the southern province of Bururi out of the 15 provinces of the country. Although Bururi was one of the poorest provinces in terms of infrastructure at independence, it has now become among the most endowed in education infrastructure (Nyamoya, 2001, p. 36), hospitals and other infrastructure. The point is that rather than preparing future entrepreneurs, the education system has been shaped to prepare rent-seekers from public institutions. Even though reliable data on the contribution of education to economic growth is not available (we mentioned that the proxy of education by enrolment ratios is abusive), one can hypothesize that the politicisation of Burundi's education system has had a negative impact on growth. Burundi is probably the only country where education plays a negative role on the economy, as suggested by the results of recent research on Africa by Orivel (1995).

2.2.2. Monetary and financial policy

In the financial sector, the lending and borrowing rates were fixed by the government, and the large spreads translate the desire of a government that was interested in collecting resources from its economic agents in order to re-distribute them to private sector agents associated with the political elite. On average, the interest rate spread was 8.7 percent for the period 1975 to 1998, for average lending and borrowing rates of 12.5 and 3.8 respectively. The average spread to lending rate was 0.70, a value that is higher than in most African countries including Kenya (0.4); Ghana (0.5); Malawi (0.6); Nigeria (0.65) and Tanzania (0.70)[12]. The lending rate is 2.5 points lower than the mean for Africa or 83 percent of the latter while the deposit rate is 4.5 percentage points lower or only 46 percent of the African average. Seen from a different perspective, the negative real interest rates characteristic of the

[11] For instance, every job in the public sector, up to district level, requires knowledge of French. Since the language is only taught in the formal education sector, those who do not attend school or those who do not go far enough are automatically excluded from job opportunities in the public sector.
[12] These comparative data are computed in Nkurunziza, J. D. (2001).

period were a way of extracting rents from depositors most of whom were not able to borrow from the same market. Between 1970 and 1998, the average real interest rate was –6.19 percent per annum. The impact of the policy has been an underdeveloped financial sector, which will be discussed in the next section.

2.2.3. External Trade Policy

External trade contributed to the policy of patronage inaugurated in the 1970s as illustrated by government controls is the management of imports. Only officially licensed agents can import and/or export goods. Importers who have access to foreign currency from the overvalued official reserves have an advantage over those who have to buy hard currency in the parallel market. Since imported products are sold at the same retail price once they reach the country, it is obvious that the profit margins are wider for the first group of importers, given that prices reflect more the parallel rather than the official rate (Nkurunziza, 2000a). This is in stark contradiction with the official motive for controlling the allocation of foreign currency, which is to guarantee low prices for strategic imports. Given that the central bank determines discretionarily the list of these products and the people who can import them, it can be easily inferred that the policy has been maintained to ensure that this source of rents remains under the control of those in power who benefit from it.

Greenaway and Milner (1990) have estimated the amount of rents associated with the distribution of quota import licences, based on a sample of 33 imported commodities. They found that in 1984, discretionary allocation of import licenses represented rent transfers of about 2 billion Burundi francs, the equivalent of 17 percent of government revenue. As these resources are diverted from use on public goods and services, these controls negatively affect society at large while benefiting a small circle of individuals. This circle includes a pool of former high-ranking civil servants turned businessmen who capitalise on their links with the government. In this light, any relaxation in government controls erodes these privileges. For instance, following the adoption of a structural adjustment programme in 1986, the country put in place trade liberalisation measures, which culminated in the adoption of a system of Open General Licence (OGL) for both imports and exports in 1992. Control measures on international trade were relaxed and, not surprisingly, the number of licensed importers grew from 145 in 1985 to 400 in 1991 (Nkurunziza, 1997). This increase by almost 200 percent in just six years could be interpreted as a measure of potential rents that had been captured by protected importers during the control regime[13].

Likewise, the country's export sector has also been a victim of the lopsided policy. Burundi's exports are essentially cash crops, namely coffee, tea and cotton. Coffee accounts for more than 80 percent of total exports, and it provides a good example of how trade policy has served government policy at the expense of coffee producers. Although producer price stability has been the main justification for the government's intervention in the coffee sector through OCIBU[14], one of its major parastatals, the government did not isolate peasants from fluctuating international prices. This is suggested by the high correlation coefficient between producer and world prices, which stands at 0.90. This finding is in conformity with Bates (1981), who notes that "what was stabilized is the off-take of the marketing boards rather than the incomes of farmers". Other motives behind government intervention are discussed in the section on markets.

3. MARKETS AND GROWTH

Markets play a central role in the process of economic development: They foster specialisation and exchange at low cost. In Africa, it is assumed that markets are even more important relative to developed economies given the weaknesses of large hierarchical organisations such as firms, government agencies, banks and parastatals (Fafchamps, 1999). Governments' obsession for total control over politics, economics and social life of their citizens has transformed markets into political institutions. As a result, politicisation of the economy has undermined market efficiency and their development as a basis for economic growth. Judging from the five institutional pillars of free and efficient markets identified in Afeikhena and Olawale (1999, p.4), Burundi fares poorly. The country's currency is unstable; the legal system is not credible; the financial market is rudimentary and poor at enforcing repayment; market integration is low as a result, among others, of poor market infrastructure; and, there is little market information on prices and quantities available

[13] Some of these liberalisation measures have been reversed as a result of the current crisis facing the country.
[14] OCIBU is Office des cultures industrielles du Burundi.

to market participants. This section aims to provide insights into these effects by focusing on the functioning of product, financial and labour markets. Given that available information relates mostly to the third sub-period, we present the discussions along the list of issues instead of the time periods delineated in the first section of the paper.

3.1. Goods Markets

Goods markets are underdeveloped in Burundi. As discussions in the previous sections have detailed, politicians have structured economic institutions in such a way that they respond to their political goals, with no importance given to efficiency or equity. As the economy is expected to serve a narrow partisan political agenda, the discussion in this sub-section focuses on direct and indirect government intervention in the goods market to achieve its objective of capturing and redistributing rents.

3.1.1. Government Direct Involvement in Goods Markets

Traditionally, the government has controlled the marketing of a range of products through the establishment of a number of marketing boards. Prominent among them are three that control the marketing of export cash crops, namely OCIBU for coffee, OTB for tea and COGERCO for cotton[15]. These three parastatals control almost 100 percent of Burundi's exports. The parastatals provide some extension services to producers and they are responsible for the marketing of the produce, including their processing before export. One important aspect of the policy is the decision, by government decree, on the amount to be paid to producers each season. As the example of coffee shows, the way coffee prices are structured and distributed among the different agents involved provides a picture of the predatory character of the government.

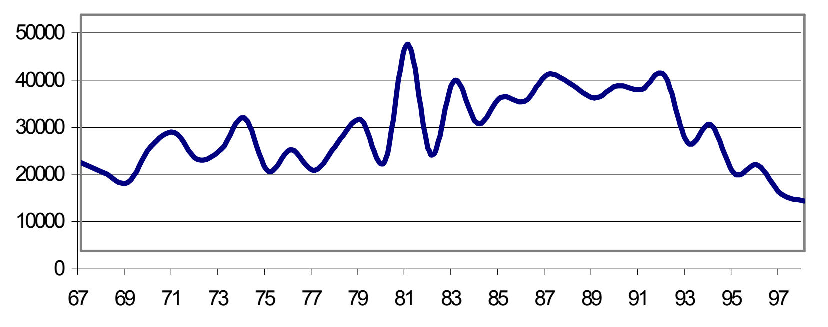
Though controls on coffee were relaxed in the early 1990s, producer prices are still determined by the government. During the 15 years preceding the adoption of a structural adjustment programme in 1986, coffee farmers were given, on average, 40 percent of the world price, the difference being appropriated by the

[15] OCIBU is Office des cultures industrielles du Burundi; OTB is Office du thé du Burundi and COGERCO is Compagnie de gérance du coton.

government and agents involved in processing and export. The ratio of farmer price to international price is far lower than the ratio in Kenya (about 85 percent) and Cameroon (50 percent) but almost the same as in Tanzania (about 43 percent). Recent data shows that, while other countries in the region, namely Rwanda, Uganda and Tanzania, have increased producer prices in the 1990s, those in Burundi have remained relatively low. The difference in prices cannot be just explained by the cost of international transport, given that Rwanda, a country under similar conditions, has been paying its farmers at least 50 percent more than in Burundi over the recent years.

In addition, taxes on coffee have accounted for almost all export duties; the amount represented about 14 percent of total government tax revenue in the mid-1990s. Since 1991, the government has instituted a coffee export tax, which was set at 9 percent at the beginning. This rate has been changing according to economic conditions both in the international market and at home. For instance, following coffee international price hike in 1994, the tax was increased to 31 percent; by 1997, it had been reduced to 15 percent (IMF, 1997). Taxation and inappropriate pricing policies, coupled with the effects of war, have resulted in output decline. While production had stabilized between 30,000 and 40,000 tons between the early 1980s and early 1990s, output plummeted to 11,000 tons, its lowest level since the 1960s despite favourable international prices in the mid-1990s.

Figure 5: Fully washed Coffee Production in tons



In addition to export cash crops, the government established parastatals to manufacture and/or market a range of other products including hides and skins, basic pharmaceutical products, food products such as rice, beans, sorghum, sugar, salt; the production and processing of fish, etc. starting from the mid-1970s. Moreover, during the same period, the government created the Office National de

Commerce (ONC), a general trading company tasked with the import and marketing of all consumer goods not produced in the country. It was involved in both retail and served as a warehouse for retail traders. It sold a wide range of consumer goods from cement to notebooks to needles. Since most of these products were subsidized, speculators used to collude with the company's managers to create shortages and resell the products in parallel channels at higher prices. ONC's unfair competition with the private sector affected the economy in three ways. First, its policy distorted the market price mechanism, creating shortages that forced buyers to pay higher than equilibrium prices in the parallel channels. Second, ONC's monopoly over the importation of an array of goods delayed the learning process of private importers by suppressing their link with external markets. Third, the system created a structure of incentives encouraging rent seeking benefiting a small group involved in the management of the system. Bad management, nepotism and corruption eventually killed the parastatals by the late 1980s as connected traders bought goods on credit and never paid.

The marketing of locally produced food produce, especially staple produce such as beans and sorghum, was in the hands of a different state corporation, SOBECOV (Société Burundaise d'Entreposage et de Commercialisation des produits Vivriers). Unlike the marketing boards for coffee, tea and cotton, SOBECOV was never involved in the production process. Its role was to buy the produce from farmers, store and resell it to consumers through its branches throughout the country. Similar to export cash crops, these marketing boards did not offer prices based on economic fundamentals. They acted to extract rents from farmers and distribute them to urban elites known to be politically more powerful than the millions of farmers (Bates, 1981). This biased incentive structure may have played a role in the observed steady decline in food production over the years. The production of staple crops such as maize, sorghum, millet, bananas and cassava declined or stagnated in the 1970s through the 1980s. In the 1990s, production of all these food crops declined (World Bank, 1998). Although more than one factor may have contributed to this trend it should be noted that the introduction of marketing boards in the second half of the 1970s coincided with a decline in the per capita food production. From 117 to 120 between 1970 and 1975, the food production index dropped to 105 in 1980 and to 82 in 1997. The dramatic decline in the 1990s was no doubt precipitated by civil war (Nkurunziza, 2002). Obviously, in a poor country dominated by a labour-intensive agricultural sector, there is no doubt that a reduction in the availability of food has hampered the growth process.

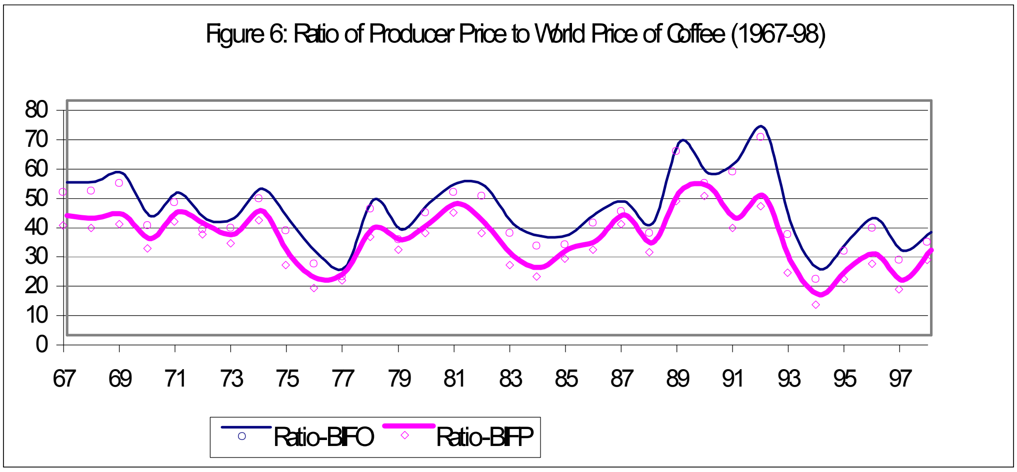
3.1.2. Government Indirect Intervention: Direct and Indirect Taxation

The system of taxation in Burundi lacks all three characteristics of an efficient tax system: certainty, simplicity and transparency. Lack of certainty is illustrated by the ad hoc use of quantitative import restrictions. Complexity is shown by the variety of taxes forming the system of border taxation: these are entry taxes and fiscal taxes, with considerable variations between and within these two broad categories. For instance, within the category of fiscal taxes, section XVI relating to machinery has 15 different rates. Lack of transparency of the system is illustrated by the fact that there are a number of non-tariff forms of protection, among which are quotas. The characteristics of the tax system in Burundi provide a leeway for abuses that increase the potential for corruption. For instance, in 1993, import duty exemptions represented 50 percent of potential import duty revenue. The undefined category of "other exemptions" represented 3.3 billion Burundi francs in 1996, accounting for as much as 42 percent of total exemptions. Most officials controlling these decisions do not hesitate to monetise them. It is known in Burundi that customs and Inland Revenue officials are the richest civil servants, despite their wages which are similar to those of other civil servants[16].

The extent of indirect taxation is usually proxied by the exchange rate premium. It is defined as the relative difference between the official and the parallel rates of exchange. Burundi's premium stood at an average of 21.2 percent for the period 1970-1989 (Nkurunziza, 1997). For comparison, the average premium for the same period was 437 percent in Ghana, 199.93 in Algeria, 150.65 in Tanzania, 99.54 in Sudan, 96.77 in Egypt, 95.14 in Zaire, 93.9 in Nigeria, 92.66 in Zambia, 83.36 in Ethiopia and 52.47 in Malawi (Ghei and Kiguel, 1992). However, the main difference with these countries is that the latter have managed, during the 1990s, to unify their foreign exchange markets, while Burundi's has been surging. Between

[16] The public always wonders how an officer with a monthly wage of $40 can afford to buy real estate worth 1000 to 5000 times his monthly wage, which cannot even cover the monthly cost of petrol for his fleet of cars. More amazing is the fact that the country leadership does not seem to be disturbed by facts like these. These indirect benefits are the most dominant form of rent extraction.

1990 and 1999, the average level of the premium has doubled to 43 percent, placing Burundi from the group of moderate to that of high premium economies. The consequence of a high premium for farmers is that it reduces their real purchasing power. If the ratio of producer price to world price is evaluated at the parallel exchange rate, it falls from 40 to 34 percent of the world price for the period 1967-1998. At this level, Burundi pays the lowest price in the region, relative to international prices[17]. The next figure shows the extent of taxation coffee growers have been subjected to through exchange rate misalignments by comparing the shares in the world price when the prices are evaluated at both the official (BIFO) and the parallel market (BIFP) rates.



3.2. Financial Markets

The country's financial market also reflects Burundian political environment. It has a limited coverage and effectiveness in fostering growth. Burundi's low financial deepening is characteristic of a weak financial system.

3.2.1. Infrastructure and Coverage

For most of the period after independence, the sector was dominated by just two commercial banks, a savings bank, a development bank and a few specialised non banking financial institutions. With financial liberalisation in the 1980s and 1990s, Burundi's financial sector has become relatively more diversified. However,

[17] Estimates for 1997/98 season show the following allocation of the average green coffee selling price: producers were paid 43 percent; intermediaries and wholesalers took 18 percent; export costs and charges were 23 percent, the parastatal levy was 13percent, and transport cost 2 percent. Restructuring the cost could allow an increase of producer prices by reducing for instance the portion going to intermediaries and wholesalers, as well as OCIBU levies (13 percent) and export taxes.

given that the country has no stock exchange and no dynamic informal financial market, most of Burundi's financial transactions are carried out only through banks and other non-banking financial institutions. Currently, the country has 8 mainly private commercial banks, one development bank, two leasing companies, two investment banks, one mortgage bank, a rural development fund and a rural credit and savings cooperative. There are also two specialized funds that were established to help private investors raise the required guarantees to access lending. The post office network also provides financial services. In addition, the country has five insurance companies, of which four are privately owned.

In terms of the density of the banking network, most of the institutions are still concentrated in Bujumbura except for the two oldest banks, the Banque de Crédit de Bujumbura (BCB) and the Banque Commerciale du Burundi (BANCOBU) that have a wider coverage, with branches in half the country's provinces. However, these branches have no penetration beyond the provincial capitals. Rural credit and savings have been catered for by COOPEC (Coopérative d'Epargne et de Crédit) starting from the second half of the 1980s. However, their reach is also limited. For instance, EP1998 data show that on average, rural households need to walk for two hours to half a day to reach the nearest COOPEC office; yet these are the closest financial structures available in rural areas. Some areas are so badly covered that an important proportion of the households in the sample need more than half a day to walk to the nearest facility and about 13 percent of the households do not have access to the services of COOPEC at all. Coverage is unequal across the country's provinces but we do not have information to determine whether this inequality is based on economic or political factors.

Table 5: Average Time Needed to Walk to the Nearest COOPEC Facility[18]

Time Required	Provinces
1-2 hours	Bururi, Gitega, Kayanza, Muramvya, Muyinga, Ngozi
2 hours-half a day	Cankuzo, Kirundo, Rutana, Ruyigi
More than half a day	Cibitoke
No access to COOPEC	Bubanza, Bujumbura Rural, Karuzi,

Source: Computed by the authors on the basis on EP1998

3.2.2. Efficiency

Despite the increasing diversity of the financial infrastructure, the country is still characterised by weak financial deepening. The thinness of the financial sector is illustrated by the low ratio of money demand over GDP. The average ratio of M2 to GDP is only 15 percent for the period 1965-98, which is 7 percentage points lower than the African average and less than half that of other LDCs. In the same connection, the level of $M2/M_1$, which stands at 1.35 is almost half Africa's as well as LDC means. These simple statistics show that the economy is less monetised even relative to other poor economies, suggesting both a lack of openness and a high level of financial repression. Until the early 1990s, repression policies included the following (Nkurunziza, 1997): (i) only the central bank could authorise capital transfers and commercial banks could not purchase or sell foreign assets; (ii) residents were prohibited from holding foreign currency accounts either in the country or abroad; (iii) imports and exports were controlled through a strict licensing system; (iv) the rate of exchange of the Burundi franc was fixed by the government; (v) the central bank imposed exchange fees, administration fees for imports of some products, etc.; (vi) fixing the lending and borrowing interest rates at levels that did not reflect market conditions; (vii) high reserve requirements of the order of 10 percent and 5 percent for short and long term deposits, respectively; (viii) restrictions on market entry which resulted in the dominance of only two commercial banks for most of the country's post-independence period. Although some of these measures,

[18] The time reported is the mode of the responses given by 3908 households interviewed. Bujumbura city is not included since COOPEC was specifically designed for rural areas. The last row (no access to COOPEC) simply means that the modes of distributions fall in this category. In Bubanza and Karuzi respectively, 50 percent and 34 percent of households interviewed have no access to this facility. For Bujumbura rural, lack of access to COOPEC facilities may be due to the fact that households are supposed to use the financial institutions in Bujumbura city.

particularly the restrictions on market entry, have been relaxed, most of them remain in place and the financial sector is still repressed.

The large spreads evoked in the previous section, between lending and borrowing rates is usually a symptom of an inefficient and oligopolistic financial sector. In the case of Burundi, however, the spreads were largest in the 1990s translating lenders' internalisation of the costs associated with high market uncertainty and the resulting high lending costs during this period of civil war. It should also be noted that money demand has become unstable starting from the early 1990s; this is certainly another consequence of the civil war and the ensuing macroeconomic instability. Moreover, the particularly low ratio of $M2/M_0$ is characteristic of a subsistence economy, deriving from high taxation of economic activity, especially the agriculture sector, as already discussed.

The high level of uncertainty has induced financial institutions to ration credit and lend short to the private sector. Long-term and medium term lending, which represented 16 percent each of total credit to the economy in 1992 just before the crisis declined to 11 percent each in 1998. During the same period, short term lending, especially in the form of working capital, increased from 62 to 78 percent (IMF, 1997; 1999), due to high inflation and the decline in firms' self-financing capacity. Credit to the government from the banking sector expanded tremendously as a result of the need for additional resources to fund the war, the drop in fiscal revenues and the drop in international aid. The ratio of credit to the government over credit to the economy jumped from 5 percent in 1992 to 29 percent in 1998, suggesting serious crowding out of resources from productive to unproductive uses.

Moreover, sectoral allocation of credit appears inefficient, as it does not reflect the sectors' contribution to the economy. In 1995, credit to agricultural activities represented only 1.7 percent of total credit, in comparison with 35 percent for trade; 14 percent for civil engineering and other services and 10.5 percent for industrial activities. This was in spite of the fact that during the same year, the primary sector contributed about 50 percent to GDP against a lower contribution of 6 percent, 3 percent and 9 percent for trade, other services and manufacturing, respectively. These figures show an absence of integration of the financial sector into the economy. It is interesting to note that the high proportion of credit to the trading sector is in line with the rent sharing model: since trade itself is controlled by the government through, among others, the issuance of import licenses, the financing of trade activities implies that banks are either part of the game, or they are more interested in speculative activities, or both. Either way, the financial sector will not be able to contribute optimally to the process of economic growth without being more integrated in the country's economic structure.

3.3. The Labour Markets

Similar to product and financial markets, the labour market does not function as a competitive market. This sub-section aims to briefly discuss the main features of the labour market, to highlight the determinants of wages in the modern private sector and to draw the implications for growth.

3.3.1. The Main Features

Burundi's economy is essentially agriculture based. Out of 3 million active people, 84 percent work in the agriculture and livestock sector, with only 4.6 percent active in the modern public and private sector. The informal labour market in rural areas is limited, given that only 24 percent of households employ paid labour, often without a clear wage contract. Even in the modern sector, given the way recruitments are carried out both in public and private institutions, one wonders whether there exists a labour market in Burundi. Despite the fact that there are legal texts that outline how the market "should" operate, very few in Burundi abide by these rules. The matching of demand and supply is done more informally than through the allocative function of an open and competitive market.

Information on Burundi's manufacturing sector illustrates the informality of the labour market. In 1992, survey information covering 500 workers in 120 manufacturing firms[19] shows that recruitments are normally done through informal channels that privilege direct relations between prospective employees and firm owners as well as their workers. The data show that firms recruited only about 20 percent of employees through formal channels, namely job advertisement and recruitment agencies. About 75 percent of workers were recruited as follows: 26 percent through owners' family members and friends; 20 percent through door-to-door searches; 15 percent through workers' family members and friends; and 14 percent through word-of-mouth. The remaining 5 percent were recruited through

[19] Private firms account for 92.5 percent of the sample.

other channels. Therefore, instead of promoting efficiency through a transparent and competitive recruitment process, these practices privilege non-economic factors such as friendship and kin group connections. As in the public sector, securing a job in the private sector depends not only on what you know but also whom you know.

Thus, skills allocation among sectors is not necessarily determined by relative wages and there are no transparent information systems that guarantee an optimal allocation of labour. Moreover, in a context where employment is dominated by the public sector with its fixed wage rates, the concept of market equilibrium can be misleading. Given that economic opportunities are limited and public employment is a major source of accumulation through indirect benefits such as subsidised credit and housing, free transportation, frequent international travels and other rents extracted through corruption and patronage, the conditions in the labour market reflect largely political rather than economic fundamentals, and these choices have important economic and social consequences. For instance, previous discussions have shown that large parts of the population are excluded from participation in public employment by direct ethnic and regional selection, or indirectly by discriminatory access to education.

Education is very expensive for most households that are unable to send their children to school without assistance from the state. Household data show that one child in secondary school costs a poor household 12 percent of its poverty line per year or the equivalent of the household expenditure on health care, agriculture inputs, housing, clothing and transport. Therefore, there is a high cost barrier to education of children from poor households. As a result, child labour is relatively high in regions with few state sponsored schools. EP1998 data show that 30.6 percent of children between 7 and 14 years of age are active; this rate is lowest in the regions where school infrastructure is highest, with the lowest rate in Bujumbura at just 1.7 percent. Therefore, economic fundamentals alone cannot explain the labour market in Burundi[20].

3.3.2. The Determinants of Wages in the Modern Private Sector

Although recruitments do not appear to be based on economic considerations, wages seem to be determined by economic factors. However, in

[20] This issue is covered in detail in Ngaruko and Nkurunziza (2000).

addition to wages, private sector employment also entitles workers to a number of additional benefits. For example, 55 percent of workers in the sample can borrow from their firms, interest free. Moreover, most workers receive allowances for housing, transportation, food, health care, etc. The following table presents the results of an earnings regression which uses worker-level information as well as the characteristics of the firms they work for. Given that worker-level information on non-wage additional benefits is not available, the following results may be biased as such allowances could be more important in determining the relationship between an employee and his firm or his employer. For instance, it is known that most firms prefer to give low wages but high allowances to their workers to evade taxation. Allowances are also usually determined by firm management and can vary across workers within the same category and at the same level of competence whereas an external authority, usually the government, usually fixes wages. Nevertheless, we estimate a wage equation to get a general idea of the main determinants.

Table 6: Earnings function for Workers in Burundi's manufacturing Sector

Dependent variable is log of monthly wage in Burundi francs

Variables	Model 1		Model 2		Model 3	
	Coefficient	t-test	Coefficient	t-test	Coefficient	t-test
Constant	4.833	12.71***	7.241	45.63***	5.061	11.66***
Age	0.761	6.99***	…	…	0.694	5.36***
School	0.841	16.59***	0.821	15.01***	0.823	15.58***
Tenure	…	…	0.164	4.06***	0.055	1.23
Size	0.114	3.96***	0.142	4.73***	0.109	3.72***
Firmage	-0.082	-2.59***	-0.151	-3.91***	-0.111	-2.92***
Formal	0.147	1.49	0.241	2.27**	0.178	1.72*
Bujumbura	0.151	1.91*	0.168	1.99**	0.167	2.06**
Metal	0.236	2.49**	0.198	1.92*	0.218	2.18**
Textiles	0.125	1.31	0.098	0.96	0.101	1.02
Food	0.153	1.74*	0.132	1.41	0.143	1.57
Foreigner	0.000	0.70	0.000	0.67	0.001	1.08
Public	0.003	2.91***	0.003	2.73***	0.003	2.98***
Recruit	0.014	0.18	-0.034	-0.43	0.025	0.33
Adjusted R-sq.	0.561		0.547		0.577	
Number of observations	426		400		399	
Cook-Weisberg heter. Test	Chi2 (1) = 8.87		Chi2 (1) = 3.86		Chi2 (1) = 8.87	
Ramsey O.V. test	F (3, 410) = 16.76		F (3, 384) = 8.59		F (3,382) = 13.90	

***, **, * show significance at 1, 5 and 10 percent probability level, respectively. The variables are the log of wage (dependent variable) and, following the order in the table: log age of the worker (Age), log of the number of years of schooling (School), log of the number of years the worker has worked for the current firm (tenure), log of firm size, proxied by the number of permanent employees (size), log of the age of the firm (Firmage) and a number of dummies: a formal/informal sector dummy with value 1 when the sector is formal and zero otherwise; a location dummy with value 1 for firms located in Bujumbura and zero otherwise; three sectoral dummies: metal, textiles and food if the firm is in these sectors (wood work is the omitted category of firms), and two ownership dummies (foreigner and Public) which represent the majority ownership of the firm (Burundi private ownership is the omitted category). We have also added a dummy variable (Recruit) to test whether the way a worker is recruited has a significant impact on his wage. It takes value 1 if he was recruited through job advertisement or through a recruitment agency and zero otherwise.

The coefficients should be interpreted with caution: they appear to be much higher than results on other African countries. One problem with the data is that the dependent variable is wages, which does not include many other benefits as already remarked. A second factor is that the sample is dominated by bigger firms in the formal sector in the capital city, Bujumbura, where workers are more educated and earn relatively more. Despite these limitations, the main message of the findings is that workers' wages are driven by the same factors that drive wages elsewhere. The main factors are workers' education, age or tenure[21], the size and the age of the firm. Different dummies are also included to control for firm characteristics. For instance, firms in Bujumbura appear to offer better wages than those in the interior, and formal firms offer higher wages than informal firms, even after controlling for firm size. One interesting finding is the fact that workers hired through informal and formal channels do not seem to earn different wages. The reason may be that once a worker is recruited, the formal wage is the one provided for by government labour laws. However, differences may be noticeable once allowances are taken into account, especially those at the discretion of the employer.

These results have some implications for economic growth. Notwithstanding our caution regarding the interpretation of the coefficients, we can note that, firstly, the results confirm the argument of a dual economy: rural versus urban and formal versus informal. Since Burundi is essentially rural, policies that marginalize the rural economy can only have a detrimental impact on growth. Secondly, given that schooling is the most important variable explaining the level of wages and that the latter is an important source of monetary income in an environment where formal employment is limited, unequal access to education has a strong effect on social inequality. Thirdly, the fact that workers recruited through informal channels do not seem to earn more than those recruited through more formal channels should not be

[21] Models 1 and 2 show the substitutability of age and tenure variables, suggesting that age usually captures the worker's experience or his tenure. The influence of tenure disappears once both variables are included in the same model (model 3).

misleading. Although workers in both categories may earn the same wages, the fact is that those recruited informally take places that should have been taken by others who might remain unemployed or opt for lower paid jobs. In addition, the fact that employees recruited informally tend to pledge their loyalty to individuals who recruited them rather than to the firms that employ them creates an incentive problem that may penalise the firm's performance. In the end, individuals may benefit from informality but on the whole, the economy at large loses.

4. MICROECONOMIC CONSTRAINTS TO GROWTH

The microeconomic constraints that firms and households face in Burundi largely follow from the discussions in the previous sections. The contribution of the manufacturing sector in the process of the country's economic growth depends in a large measure on the determinants of firm growth and how the environment in Burundi facilitates or hampers this process. On the other hand, as households in developing economies are also units of production, the same analysis will be carried out at household level.

4.1. Firm Growth and Constraints to Firm Performance

After a brief presentation of the determinants of firm growth in Burundi, this section discusses the size of Burundi's external markets, the legal framework supporting firms activity, and the risks associated with Burundi's geographic and political environment. Due to the lack of statistical data it will not be possible to present a discussion by sub-periods. The limited microeconomic information available covers only the last of the three sub-periods of the study. Therefore, the following discussion follows issues rather than the time periods.

4.1.1. The Determinants of Firm Growth

Among the main factors explaining firm growth in Burundi are firm age, its size, its location and whether the firm is formal or informal[22]. The elasticity of firm size with respect to age is –1.39, consistent with the models of learning. Size and growth have a negative and significant relationship, with an elasticity of 0.04. This

[22] Empirical results in this paragraph are based on Sleuwaegen and Goedhuys (1998)

goes against Gibrat's law, which stipulates that firms grow following a random drawing from a distribution of growth rates. In Burundi, it appears that smaller firms grow faster than larger ones. Formal firms also appear to be able to grow faster than informal ones. The formal status of firms increases their annual growth rate by 0.31, implying that visibility and legitimisation help in an environment where firms compete over the distribution of scarce resources. Firms located in Bujumbura grow faster relative to other firms. This is due to the fact that resources and markets are unequally distributed, with a high concentration in the capital city, Bujumbura. Firms in Bujumbura enjoy the best infrastructure, a larger output markets and cheaper and higher quality inputs. Being located in Bujumbura increases the expected growth rate by 0.13. The main result from these findings is that firm growth is a learning process that is spread over time. In this light, the environment within which firms evolve is a crucial determinant of the quality and the extent of the growth process. Hence, institutional factors already discussed and others discussed below show the way in which inappropriate institutions have limited the process of firm growth in Burundi and hence their potential contribution to the country's economic growth.

4.1.2. The Size of Burundi's External Markets

Under colonial rule, Burundi's manufacturing sector was designed to serve Burundi, Rwanda and the Kivu region in Eastern Congo. The provision of European imported goods became difficult during the Second World War, so Belgium decided to establish import substitution manufacturing firms in Bujumbura, the administrative and economic capital of Rwanda and Burundi[23]. The emphasis was put on the processing of agricultural products within the region. In this regard, firms established during the time were tailored to meet the demand of this relatively large market. When Congo and Rwanda became independent in the early 1960s, Burundi lost half of its Eastern Congolese export market and some of its Rwandan market leaving Burundi's manufacturing sector with excess capacity. By 1962-63, capacity utilisation in the manufacturing sector had been reduced to 25-50 percent (Ngaruko, 1993).

The oldest firm in Burundi's 1993 RPED sample was created in 1947 and 13 firms or 11 percent of the sample were established before 1960. In support of the idea that pre-1960 firms were established to serve a larger market, we find that firms

[23] It was then called Ruanda-Urundi

created before 1960 had an average production capacity of 240 kilowatts per firm relative to 98.5 kilowatts for firms created after 1960[24]. Therefore, market size has been a determinant of firm size, other things being equal. However, it also appears that these firms are still among the biggest in Burundi, suggesting that the collapse of the economic union had a limited impact on them. In fact, by 1993, these firms were, on average, more active than the group of firms created after 1960. The average use of production capacity was 87 percent as compared to 66 percent for the post-1960 firms. In addition, 33 percent of firms in the first group were exporting relative to 13 percent in the second group[25].

These figures suggest that it will be difficult for Burundi to develop its manufacturing sector if it relies on its narrow national market. Given that the country is landlocked, transportation costs increase production costs, especially in function of the level of imported inputs used in the production process; this constraint limits firm competitiveness in international markets. One possible avenue for the country to increase its exports could be to devise a strategy targeting regional markets. Since Burundi is signatory to a number of regional trading blocks, firms should strive to take advantage of the preferential provisions of such bodies to increase their businesses across the region[26]. However, recent experience with governance failure in the region does not bode well for a quick achievement of this objective. Mistrust, nationalist short sightedness and egoistic interests of the leaders have undermined attempts to establish regional markets. Paradoxically, political crises have sometimes allowed bypass political barriers and succeed where political voluntarism had failed. For instance, during the refugee crisis in Eastern Congo in 1994-1996, some factories in Burundi were operating at full capacity 24 hours a day to meet the increased demand for products such as blankets and other basic commodities.

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[24] It has not been possible to compute firm size in terms of the number of workers or the amount of start-up capital because these data were systematically missing for firms established before 1960.

[25] These findings suggest persistence of the management culture on which the firms were built. By contrast, those created after independence relied relatively much more on political connections. In fact, as argued in Ngaruko and Nkurunziza (2000), a number of the post-independence economic operators who temporarily and rapidly prospered were not necessarily the best "businessmen" but rather a group of former politicians or high ranking bureaucrats who used their connections in the country's political and bureaucratic structure to make a fortune. This is illustrated by the fact that a change in government in Burundi is always accompanied by changes in the configuration of the business sector: new faces in politics bring new faces in business.

[26] Attempts to create regional institutions include the Communauté Economique des Pays des Grands Lacs (CEPGL), Communaute Economique des Pays d'Afrique Centrale (CEAC), and the Common Market for Eastern and Southern African States (COMESA).

4.1.3. The Regulatory Framework Supporting Firm Activity

As a consequence of the policies pursued by different governments, an inappropriate regulatory framework has hampered firm efficiency, affecting the process of growth. This is illustrated by the weak legal system that fails to enforce commercial contracts and property rights, and the high macroeconomic instability that increases uncertainty.

4.1.3.1. The Legal Framework

Burundi's does not offer a properly functioning legal system that can credibly enforce commercial contracts. Although a lack of data on this subject does not allow make any strong statements, discussions held with commercial bank officials in Burundi point out the weakness of the legal system. For instance, it appears that when borrowers default and they are taken to courts, cases can take up to ten years to be settled. It was reported that that judges tend to sympathize with the plight of defaulting borrowers[27]. Given the high cost and unreliability of the legal system, 86 percent of firms interviewed in 1992 preferred to settle their conflicts with clients through direct negotiations while only 15 percent of the conflicts were taken to courts. This pattern is not particular to Burundi: It is reported that in Kenya similar cases take between 4 and 10 years to be resolved (Adeola and Olugboyega, 1999, p.46). In a study covering Burundi, Cameroon, Côte d'Ivoire, Kenya, Zambia and Zimbabwe, Bigsten et al. (20000) found that 80 percent of firms settle their disputes through direct negotiations. The same result was also found in the case of Madagascar (Fafchamps and Minten, 1999). The high cost associated with the resolution of conflicts arising from business disputes is one of the factors that limit market transactions in these economies. As a result, the lack of strong legal institutions discourages risk taking, which curtails economic activity. For instance, by 1992, only 56 percent of firms had ever applied for a loan and 44 percent had ever been successful.

In addition to legal institutions, firms also need government business support services. If well administered, these services can be used to foster the development

[27] Personal discussions with Burundi bank managers.

of the manufacturing sector. Experience shows that government discretionary measures have often not been used in a transparent way and have tended to favour some firms. For example, there are tax and duty exemptions provided for in the Investment Code. By 1993, 31 percent of firms in the RPED sample had applied for the benefits. Successful firms represented 60 percent of the applicants or 19 percent of the total sample. What is striking is that, as for credit, smaller firms not only applied less, but they were also less successful than bigger ones. This suggests a different treatment of small relative to big firms, even by government institutions.

4.1.3.2. Macroeconomic Instability

The stability of a country's currency is one of the key institutional foundations of free and efficient markets (Afeikhena and Olawale,1999). Burundi's currency fares poorly. In the last 15 years, the official exchange rate has lost 400 percent of its value relative to the American dollar. The loss has been even more pronounced in the parallel market, where the Burundi franc has lost 550 percent of its value relative to the dollar during the same period. The parallel market exchange rate is a better indicator of instability given that it is more linked to economic and political factors and considering that important amounts of international trade have been traditionally mediated through the parallel market[28].

Among others, instability in the macroeconomic environment has been due to frequent devaluations, which have increased the cost of doing business in Burundi. In the period 1990 to 1993, for instance, successive devaluations amounted to 60 percent loss in the currency's value. This increased the cost of imported inputs and other capital goods, which was not compensated by an equal rise in the prices of manufactured output. These problems spilled into the marketing chain: on average, 53 percent of firms failed to pay their loans in time, while 40 percent did not pay at all. Among the firms reporting conflicts with their clients, there were, on average, 6.5 cases of late repayment and about 4 cases of non-payment. It is believed that very few of these cases were opportunistic. Genuine or opportunistic, late or non-repayment of debts disrupt the smooth functioning of firms and impede their development, especially given the problems they face to access financial resources.

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[28] Detailed analysis of the parallel market for foreign currency in Burundi and the determinants of the premium may be found in Nkurunziza (2000b).

4.1.4. Risky Environment

Economic risk is particularly high in Burundi. It is narrowly associated with the small size of the private manufacturing sector. It is also associated with political risk, which in turn is due to recurring wars since the 1960s. Although the impact of risk on the manufacturing sector in Burundi has never been investigated, some statistics suggest a negative correlation between manufacturing production and conflict. For instance, after the killings of more than 200,000 people in 1972, manufacturing production recorded a negative growth rate of -2.3 percent. Moreover, after the 1988 Ntega and Marangara political crisis in the second half of the year, data on manufacturing production shows a decline of -2 percent in 1989. The most dramatic decline in manufacturing has been recorded over the 1990s. On average, manufacturing production has declined by 13 percent per annum between 1993 and 1997 (World Bank, 2000). In 1994, one year into the current political crisis, a sample of 84 firms surveyed shows that 45 percent had kept their pre-crisis size or had reduced it by less than 10 percent; 15 percent shrank by 10 to 25 percent whereas 21 declined by more than 25 percent (MPDR, 2001). In addition, the fact that short-term lending in the form of working capital increased from 62 to 78 percent of total lending to the private sector after the beginning of the crisis is another illustration of the environment facing firms.

Rather than war itself, some other risks are associated with uncertainty about war occurrence. Whereas the onset of war increases risk, its recurrence increases uncertainty about the future, resulting in low investment rates. The rate of gross investment has declined from 17.5 percent in 1990 to a mere 5.6 percent in 1998 (Burundi, MPDR, 2001). The extent of uncertainty is suggested by the fact that over 120 manufacturing firms interviewed in the first half of 1993 about 30 percent had made recent additional investment in plant and equipment in 1992-1993. This rate of firms that invest is equal to the one for Kenya in the same period. The fact that a normal number of firms invested just a few months before a war of unprecedented proportion erupted suggests that firm managers failed to anticipate the crisis. It will be interesting to study how uncertainty will affect firms' investment decisions in the future when the crisis is over.

In addition to war-related risk, Burundi also faces risk associated with geography. Due to its geographical isolation, Burundi pays a high cost on international trade transactions. The country is fully dependent on its neighbours' inefficient transport infrastructure for the importation of raw materials and other consumer goods, as well as for its export of primary products. As a result, firms in Burundi have to invest in large stocks of raw materials to minimise the cost resulting from supply interruptions. At the same time, by minimising this cost, firms incur opportunity costs when resources are tied up in unproductive assets. On average, firms held inventories of raw material worth 39 percent of their yearly production or the equivalent of 87 percent of the total cost of their raw material for a full year. This is equivalent to about 10 months of raw material production needs[29]. If we consider only firms that imported inputs in any proportion, the percentages are 61 and 122, respectively[30]. Therefore, Burundi's geography and poor infrastructure in neighbouring countries impose additional constraints to the country's manufacturing sector and its economic performance.

4.2. Constraints Facing Households

While the previous sections have provided a review of the constraints facing manufacturing firms and the economy in general, the aim of this sub-section is the analysis of the environment constraining households, the latter's responses and their preferences over policies. Since households act also as firms, their activity has a direct impact on growth. In this light, constraints to the production side of households are also constraints to economic growth.

4.2.1. Environment Facing Households

As agriculture dominates household activity and income, their welfare is affected by exogenous factors such as weather conditions, but also by government policy that shapes the structure of incentives within the economy. Burundi is

[29] Although this figure might appear too high, it is consistent with the fact that under circumstances prevailing in the early 1990s, it took 1.5 to 6 months to ship cargo just from Dar-es-Salaam to Bujumbura (Nkurunziza, 1997, p. 29). This huge time cost has been largely attributed to Tanzania's wrecked infrastructure and long administrative delays.

[30] These high values are explained by the fact that out of 27 firms that imported raw materials, 22 percent kept inventories that were far more in excess of 100 percent of their annual raw material cost. So long as these observations are genuine and not the result of data entry errors, we felt they should be included in the calculation.

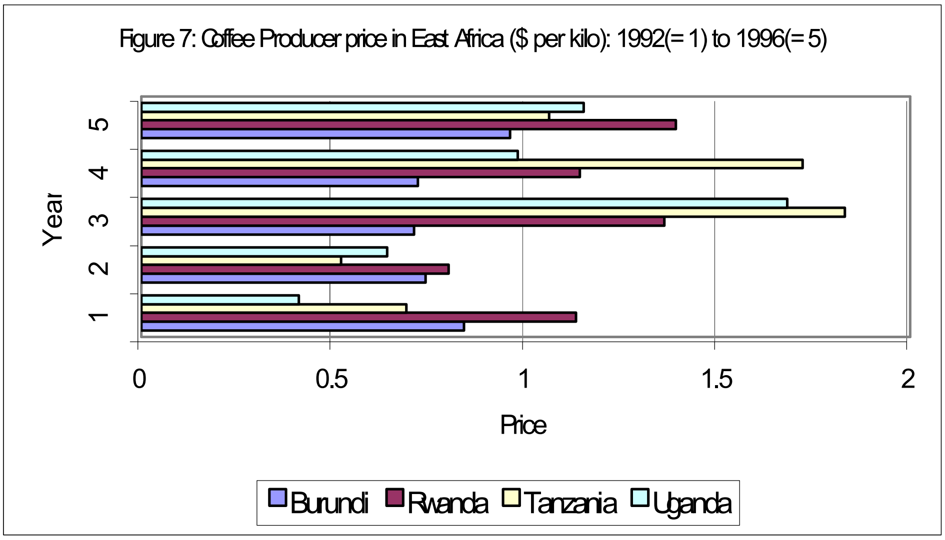
endowed with generous weather that allows three production seasons in a year: twice in highlands during the rainy season (October to May) and once in marshlands during the dry season (June to September). As a result, although land pressure has been increasing owing to population growth, soil fertility and good weather have, in general, limited food shortages. Soil is naturally fertile; its conservation has been due to traditional but efficient production technology associating farming with cattle breeding. Consequently, until the 1980s, Burundi farmers were able to produce enough food to feed the population, unlike many countries in Africa that have been dependent on food aid. For a country like Burundi, this is a notable performance given the production technologies used by rural households.

However, the lack of appropriate incentives and a support environment in addition to government policies skewed against the rural sector have hampered the development of a rural economy, failing to take advantage of the country's agricultural potential. Rural households have been the agents most affected by governments' predatory policies. The negligence of the agriculture sector is illustrated by a few statistics. The rate of fertilizer use in Burundi is among the lowest in Africa, at a mere 3.7 kg/ha compared with an average 14.9 kg/ha for Sub-Sahara Africa. Moreover, the weaker linkage from industry to agriculture relative to the stronger linkage from agriculture to industry is an illustration of the persistence of a discriminatory policy against the agriculture sector. In Burundi, the agriculture sector provides 11 percent of its production to industry but the rate from industry to agriculture is only 0.4 percent (Ngaruko and Nkurunziza, 2000). These figures are consistent with predatory policies pursued by the different regimes that have ruled the country since independence.

The lack of incentives to farmers is also illustrated by low producer prices. Taking coffee as an example, prices in Burundi are the lowest in the region, as the following figure shows. In addition, since the government undermined cooperative associations in the 1970s that had been formed to coordinate action in order to rationalise the marketing of cash crops[31], a large portion of the 60% margin on the price of coffee that does not go to producers is reserved for redistribution to agents

[31] The same attitude was observed in other African countries in the mid-1970s (Afeikhena and Olawale, 1999).

who largely include supporters of the political system, and to the state machinery used to perpetuate the system of patronage and rent seeking.



The lack of a basic market infrastructure in rural Burundi has been a major cause of market failure and probably the single most important factor that has affected production in rural areas. As de Janvry et al. (1991, p. 1401) remark, “a market fails when the cost of a transaction through market exchange creates disutility greater than the utility gain that it produces, with the result that the market is not used for the transaction”. The low density of market networks in rural Burundi in addition to the distortions introduced by the government in the marketing of agricultural products, have resulted in market failures and a retreat into subsistence production. According to the EP1998, farmers in rural areas need to walk an average of one hour to get to the nearest market while it takes them 30 minutes to reach the nearest grocery. Twenty percent of households in the sample require more than an hour to walk to the nearest market and 12 percent to the nearest grocery. Adding the fact that there is only one market day per week in many rural areas, and that there are no storage facilities, especially for perishable agriculture produce, farmers have no incentive to produce marketable surpluses, inducing them into a subsistence economy.

While more access to communication infrastructure could help integrate markets in different parts of the country, infrastructure is either inexistent or poor, especially during times of insecurity. For instance, with 3 mainlines per 1000 persons, Burundi has not only the lowest telephone density in Africa but it is also highly concentrated in urban areas. A wider network of telecommunication across the country could help integrate markets by allowing information exchange on prices, supply and demand in different parts of the country. Electricity is concentrated in cities and all households in rural areas and most in the cities depend on fuel wood for their energy needs. During the war period, electricity infrastructure, a symbol of urban privileges, has been a target of rebels' sabotage. Security is precarious in many places, and roads have not been maintained due to insecurity and shortage of resources. Infrastructure problems are not limited to war-torn Burundi, however. Even relatively peaceful countries including Nigeria, Kenya and Uganda report that infrastructure is a major factor hindering economic activity, especially manufacturing (Collier and Gunning, 1999; Reinikka and Svensson, 1999).

The lack of a physical market infrastructure in rural Burundi is accompanied by a lack of financial and insurance markets, as discussed in the previous sections. Government policy has also affected production through a number of channels. They include monetary policy, which is another form of taxation through seignorage. This form of taxation has particularly increased during the current period of war. Moreover, financial repression has also impoverished households through negative real deposit rates as a result of the government's policy of establishing nominal interest rates at very low levels. To these difficulties were added additional burdens brought by the many civil wars that have devastated the country over the last four decades.

The impact of the first four wars (1965, 1972, 1988, 1991) on the economy was relatively limited by the fact that the massacres were carried out in a period of just a few months. However, the war that broke out in 1993 has had a unprecedented impact. It has been the longest, the deadliest and the most destructive in economic terms[32]. Not only has production been disrupted but infrastructure has been extensively damaged or completely destroyed. For instance, the Ministry of Agriculture has estimated that the stock of livestock, amounting to 2.6 million heads in 1990, fell to 1.8 million by the late 1990s, translating a decline of 31 percent in just ten years (World Bank, 1999). Given the central importance of

[32] See Nkurunziza and Ngaruko (2002) for details on war duration and why the last episode has been different from the previous four.

livestock on land productivity through its supply of organic fertiliser, it is clear that such a loss represented an important destruction of household capital. In addition, looting and killing of livestock has deprived rural households of an important source of food especially at a time when many of them have been forced to leave their houses and live in displacement camps due to rebel activity.

War has had a devastating impact on economic growth. In addition to its sectoral impact discussed in the previous sections, GDP has declined since the early 1990s, recording four consecutive years of negative growth between 1993 and 1996. Generally, all macroeconomic indicators have worsened as a result of war. At household level, there has been a dramatic increase in poverty. In 1993, just before the war, 40 percent of the population lived below the monetary poverty line; by 1998, this proportion had increased to 60 percent, a rise of 50 percent in just five years. Although these figures are quite informative, they are unable to translate the level of rural populations' agony, and the long-term impact of war on the populations. For instance, as a result of the crisis, 22.5 percent of household heads countrywide have become widowed. Seventy-seven percent of household heads admit to have been directly affected by the crisis, of which 57 percent have been strongly affected. Twenty-eight percent have lost close relatives while another 23 percent have been displaced due to fighting. Therefore, in addition to the more direct economic impact of the crisis on households, its psychological impact may be the most important long-term factor that will have to be overcome to rebuild the Burundi society and its economy. It is irrelevant to talk about the contribution of households to economic growth when they are fighting for physical survival. Only when the war is over and Burundians believe in a better future will they move on and refocus on their economic security[33].

4.2.2. Household Response

The picture depicted above shows that households face an adverse environment. Households have responded to the environment in the expected way. They have reduced their agriculture production, as the decline in the contribution of

[33] For instance, the fact that many Burundians, among them many of the most highly trained professionals, have preferred to leave the country and live abroad as refugees is an important dimension of Burundi's economic future. Whether or not they will choose to go back to the country once the war is over cannot be known now.

agriculture to GDP has shown in figure 2. In line with de Janvry et al. (1991), households have also responded by shying from market exchange. Survey data show that at the national level producers consume on average 64 percent of their own food production. In regions where climatic conditions permit diversified production, this average is as high as 80 percent, suggesting that market transactions are higher in regions where specific staple foods cannot be grown. Farmers' preference for self-sufficiency is also consistent with Cukierman et al., (1992) finding that the risk of fiscal and monetary taxation tends to increase in countries like Burundi experiencing political instability. In addition, the fear of market exposure and ensuing taxation has induced most households to transform their surpluses into in-kind savings as suggested by Gosh (1986).

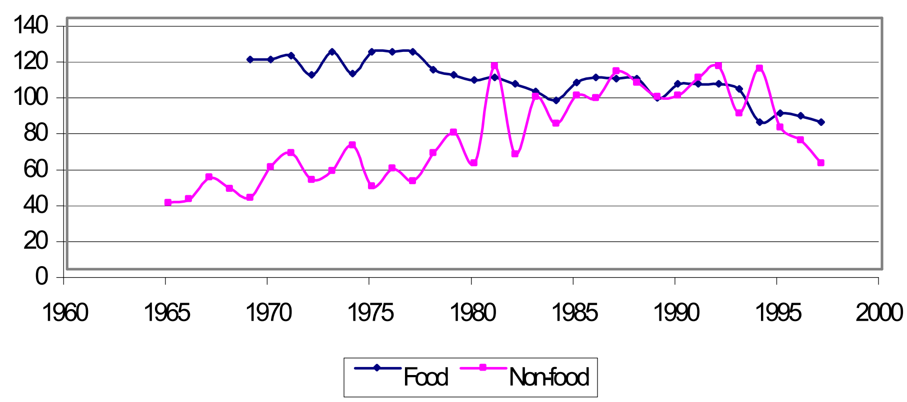
More specifically, a general tendency towards diversification is illustrated by the following figures. According to household survey data, 80 percent of households in Burundi produce beans, 72 % produce sweet potatoes, 64 % produce banana, 58 % produce maize, and 52 % produce cassava, despite the fact that different ecological zones are far more conducive for the production of different products[34]. The only factor that tends to limit the portfolio of households production is their ecological zone. Hence, within the same ecological zone, the level of diversification is even higher. For instance, in the Western Plateaus ecological zone, the rates are: 93 percent for beans; 91 for sweet potatoes; 86 for banana; 71 for cassava; 66 for coffee; and 56 for maize. Every household tends to produce a bit of everything. The result of excessive diversification and political instability has been a drop in productivity of the agriculture sector as a whole shown in figure 3, and a drop in the total production of food.

Figure 8 summarises the performance of the agriculture sector by comparing food and non-food production indices over a period of 35 years. The index of food production per capita declined from 120 in 1970 to about 100 in 1990 and 80 in 1997. From the early 1970s until 1993, per capita food production index remained consistently higher, despite a steady growth in population of about 3 percent, than the average for Africa. During the 1970s and the 1980s the average annual percentage growth for the non-food production index was at least twice Africa's

[34] The North and East are more productive in beans and sorghum; the West in cassava; the South in peas and maize, etc.

average (World Bank, 1998). This picture changed in the 1990s as the country plunged into civil war. Per capita food production index declined from 103 in 1990 to 85 in 1996 while the African average declined from 99 to 96 over the same period. Non-food production index declined from 107 in 1991 to 72 in 1996, against an increase in the African average from 101 to 108 over the same period. Several other indicators of welfare followed the same pattern in Burundi in the 1990s, translating an increasing pressure on rural households and deterioration in their standard of living (World Bank, 1998).

Figure 8: Food and Non-food Production Indexes (1989-91= 100)



Government predatory policies encouraged the production of cash crops at the expense of food crops. This is reflected in figure 8 showing their increase relative to food production. However, this policy was in a way based on coercion so monitoring by government agents was essential to its success. In figure 8, the collapse of government in the mid-1990s due to political instability resulted in a more pronounced decline of cash crop production. A study undertaken in the Rusizi plains where most of the country's cotton is produced showed that farmers were forced to plant cotton on their prime land although they preferred to grow tomatoes which generated three times more income than cotton. As a result, farmers were growing tomatoes under the cover of cotton, but this combination reduced the yields of both cotton and tomatoes (Nkurunziza, 1987).

In his discussion of coffee production in Burundi, Kaburahe (2001) notes that extension agents in Burundi behaved as policemen: in many cases the same individual was the representative of the single party, the administrator of the area and the extension agent. Such individuals tended to confuse their role as extension agents with their political roles, using their power to impose their choices on farmers instead of pursuing a participatory approach to the provision of extension services. Forced specialization by government agencies has failed because it has been ill advised, ignored the basic cost-benefit economic principle, has been incentive incompatible and, above all, it has been biased against the food sector that is of more interest to farmers. In a recent survey in one of Burundi coffee producing regions, Kaburahe (2001) reports that in monetary terms, one hectare devoted to growing potatoes was yielding revenue six times higher than that yielded by a hectare of coffee, despite the fact that coffee required two to three times more labour than potatoes (Kaburahe, 2001).

Table 7 provides more empirical data on the relative profitability of food and industrial cash crops. Generally speaking, for comparable land quality and even taking into account the different levels of taxation for the different products, food crops are much more productive than industrial crops. Despite the fact that banana is many times more productive than coffee in the central plateaux region, banana cultivation has been fought by government agents on the grounds that it harms coffee production, especially when the two were planted on the same plots. Government agents would simply cut down all banana trees to clear space for coffee trees. Cash crops such as coffee and tea are not only less profitable but they also degrade the soil and imply a high opportunity cost as the land where they are planted is foreclosed for a number of years in comparison to food crops which free up the land after just a few months. More generally, as Table 7 suggests, growing export and industrial crops under the prevailing conditions is clearly a sub-optimal allocation of factors (labour and land), especially in a country where land is so scarce. This is a clear instance where, by privileging the production of export crops that generate more public revenue through predatory taxation, the priorities of the state have been set in opposition to farmers' interests as well as economic growth. To some extent, an appropriate policy to encourage growing export crops could potentially increase market transactions as specialisation in the production of cash crops would imply that food produce would be purchased in the market.

Table 7: Land and Labour Returns for Main Crops (1985)

Crops	Average Yield (kg/ha) [1]	Price 1985 (Fbu/kg) [2]	Income (000Fbu/ha) [3=1*2]	Work Days [4]	Daily Income [5=3/4]
Food Crops					
Corn	800	41.9	33.5	232	144.5
Sorghum	780	33.4	26.1	177	147.2
Rice	1,410	30.0	42.3	590	71.7
Wheat	410	40.0	16.8	274	61.2
Beans	800	46.5	37.2	210	177.1
Peas	550	82.6	45.4	210	216.3
Sweet Potatoes	5,240	10.1	52.9	372	142.3
Cassava	6,370	21.1	134.4	342	393
Potatoes	5,750	18.9	108.7	435	249.8
Palm Oil	2,520	7.9	19.9	244	81.6
Groundnuts	790	74.5	58.9	240	245.2
Bananas	11,240	11.0	128.6	253	488.7
Industrial Crops					
Coffee	240	160	38.4	500	76.8
Dry Tea	731	17	12.4	526	23.6
Cotton	1,185	35	41.5	255	162.6

Source: World Bank (1988)

Despite this data in table 7, the government continues to force farmers to grow coffee, tea and cotton rather than banana, cassava, potatoes, groundnuts, etc. This is an example of how dictatorial regimes in Burundi have directly contributed to the continued economic decline observed over the years. In the end, neither cash crops nor food have ended up being optimally produced, frustrating the potentially important contribution of the agriculture sector to the process of economic growth. One of the results of these policies has been a deep government alienation of farmers in Burundi. After the first democratically elections in post-independence Burundi in 1993, farmers in some regions manifested their displeasure with previous governments by destroying their coffee stands, an offence that had been punishable by a long jail sentence under the previous regimes.

Outside the agriculture sector, housing modernisation has traditionally been an important activity with a positive impact on economic growth. It involves job creation through masonry work, provides a monetary source of income and hence constitutes a basis for activity diversification. However, housing modernization has also been seen as a form of investment in rural areas. Together with livestock accumulation and land, housing investments have been households' indirect ways of preserving wealth from the vagaries of government policy and other forms of extortion. The current war has changed this picture. Rural households have particularly suffered frequent raids by rebels who destroy houses and steal livestock, resulting in population displacements which in turn, has acted as an enormous disincentive for investment in land, housing or livestock. For instance, 77 percent of households interviewed in the 1998 admitted to have been affected by the crisis, of which 16 percent totally lost their capital and household durable goods. As a result, there has been a shift of preferences towards monetary assets, in spite of an increase in inflationary taxation. The continuation of war has, therefore, curtailed rural investments, another way in which the environment facing households has had a detrimental impact on economic growth.

4.2.3. Preferences Over Policies

Rural Burundians mistrust their governments for many reasons. First, over the years, rural Burundians have carried the brunt of the country's tragic experiences in which the government has been a main actor. Hence, questions regarding rural Burundians' perceptions of anything involving the government are usually treated with suspicion. Secondly, government predation and the coercive nature of policies have implied that rural households attempt, as much as possible, to conceal their wealth as well as their preferences. They do not believe anyone would be interested to know about their preferences because they have only known authoritarian regimes, including under the monarchic regime. This traumatic experience has made rural populations very suspicious especially vis-à-vis strangers. Therefore, it is difficult to know household preferences over different policies because they have rarely been asked to voice their opinions. Even in the cities, the picture is similar albeit with the added confusion arising from ethno-economic politicking.

The first time Burundians were given a genuine chance to express their preferences was when they overwhelmingly voted for the country's self-determination in 1961, showing the importance they attached to freedom. Also, until the first half of the 1980s, the Catholic Church had successfully established parallel institutions of education and social emancipation outside the realm of government controls. Discussion and prayer meetings, literacy programmes and recreational activities were regularly organized and used as avenues for information exchange. These programmes were successful because they constituted the only space for free expression left for many in rural Burundi. In the cities, the government controlled all the media in a typical one-party political system. The government finally closed down these structures in rural areas causing a row with the Catholic Church that led to the expulsion of a large number of missionaries from the country and the nationalisation of almost all church-run schools. The government's extreme suspicion of its own citizens did not leave room for free expression and preference revelation.

The second opportunity when Burundians expressed freely their preferences was in 1993 when they voted in a truly democratic and multiparty election. They showed their displeasure with past policies by overwhelmingly voting out the ruling party that had dominated Burundian politics since the early 1960s. FRODEBU, a young party with a new breed of politicians, was seen by many as an opportunity to force change in a peaceful transition in a country where regime changes had always been carried out through the barrel of the gun. As soon as they took power, FRODEBU leaders engaged in a witch hunt filling government posts with their own clients to reward their loyalty. After only four months in power, the democratically elected regime was deposed in a bloody military coup in which the leadership of the new party was decapitated through the killing of its members and forcing most of the survivors into exile. To date, the population is still paying the price of ethno-economic politicking between government representatives, a constellation of opposition parties, and the armed rebels, each driven by individual interests.

In a nutshell, therefore, although it is difficult to tell for sure the population's preferences over policies since they have been given very few opportunities to voice their desiderata, we can make inferences based only on the 1993 elections[35]. In 1993, Burundians rejected past government policies that viewed the rural sector only as a source of rents. Some reactions also such as the burning of cash crops and the growing of tomatoes under the cover of cotton were methods of expression of peasants' disapproval of government measures. The gulf separating Burundians and

[35] The 1961 elections were held in a particular context and for a particular reason: accession of the country to self-determination.

their political leaders has been revealed by events in the 1990s, which have shown the level of politicians' greed and their total lack of interest in the plight of the populations they all claim to be fighting for. As a result, more and more Burundians are voicing openly that they feel cheated by those who should have represented them. The populations have been begging for no more than security from their politicians, the minimum condition that will allow them to work hard and earn their living as they have done throughout their long history.

4. CONCLUSION

This study has analysed the process of economic growth in Burundi over the period 1960-2000. The pattern of economic growth followed closely the country's political trajectory represented in three sub-periods: 1960-1972; 1972-1988, and 1988 to date. Economic decline during the first sub-period was largely due to two main factors: First, decolonisation resulted in the loss of Burundi's export markets in neighbouring Rwanda and Congo which, together with Burundi, had formed an economic union under Belgian rule. The second factor is political instability, resulting from a legacy of high ethnic tensions left by the colonial power at a time when different groups in the country were competing to control state institutions and some assets left by departing Belgians. These tensions resulted in two civil wars in 1965 and 1972, respectively. During the period 1972-1988, economic growth was fuelled by an increase in coffee export revenues in the second half of the 1970s and massive foreign borrowing. Most investment was undertaken by the state mostly in inefficient projects. During the third sub-period, economic decline was a result of three civil wars, a total economic blockade, the freezing of aid from international donors and the collapse in investment and production infrastructure.

More specifically, the study explored four main economic factors to explain the patterns of economic growth in Burundi. First, farmers have been over-taxed through several means, including cash crop producer prices and exchange rate policy. This policy has prevented accumulation in agriculture and its transformation into a more productive sector. In a system where returns to investment have been appropriated by other groups, producers faced disincentives to domestic accumulation leading to stagnation (Benhabib and Rustichini, 1996). Secondly, while the industrial sector has benefited from the massive external borrowing that took place from the mid-70s, the process disconnected economic growth from an increase in productivity in agriculture (Figure 3). Thirdly, the creation of state-owned enterprises resulted in bureaucratic expansion and predation that benefited mostly a small elite of people from the Southern province of Bururi. Fourthly, the ensuing public deficits increased the fiscal pressure on private manufacturers to secure massive subsidies to be transferred to poorly managed public enterprises. This pressure was transmitted to agriculture through the marketing board for export crops.

As Hugon (1993) has remarked, an economic approach cannot, alone, explain the performance of a war economy such as Burundi's. Therefore, the study blended traditional macroeconomic growth analysis with microeconomic and institutional approaches to understand the process of economic growth in Burundi. This approach was necessary since in Burundi, more than economic factors, political factors generate macroeconomic variables used to analyse economic performance. For instance, the tragic events of 1972 saw the country losing more than 200000 of its most active labour force, wiping part of its best human capital stock in just about four months. From an economist standpoint, this was a disaster but political imperatives prevailed over economic considerations. In the 1990s, in the war opposing rebels and the government, destruction of physical capital including health centres, administrative buildings, private residences and other non-military infrastructure has become the norm within the rebellion. Given this picture, it would be too naïve to assume that economic growth in Burundi might just be predicted by values of physical and human capital which are themselves endogenous to political variables. In this light, political economy appeared as a more powerful tool in explaining Burundi's economic performance.

The study has argued that Burundi's dismal economic performance is mainly a direct result of a failure in the country's governance. Ruled by dictators obsessed with controls, the country's economy has remained highly centralised with a myriad of economic controls. Monetary, exchange rate and other financial policies were put in place to control the allocation of the country's resources. Even more directly, the creation of state corporations to oversee the marketing of agricultural and imported products was another way of ensuring that the government was in charge of the allocation of strategic products, including domestically produced food. The overarching objective of the policies was the government's desire to hold its grip over the different sources of economic rents. Different methods were used to distribute these rents among the ruling elite. For instance, by creating a big number of state corporations and putting their management into the hands of those close to power, rent sharing was one of the functions of state enterprises. As a result, the rent sharing system has not been concerned with efficiency and most of those firms have rarely been profitable.

Using discriminatory education policies, the country chose to limit its stock of human capital by filtering access to education to ensure that the system of rent seeking was stable. Through concentrations in the allocation of education infrastructure in the country and through other complex mechanisms, the country leaders favoured those identifiable with their group, aware that education was the conduit through which Burundians could improve their standards of livings, as the earnings equation has suggested. Other policies included predation over farmers by offering them the lowest prices in the region, different forms of taxation, as well as a complete negligence of the agriculture sector despite it being the backbone of the economy. Lack of a basic market infrastructure in rural areas and the inappropriate interventions in the agriculture sector have locked farmers into subsistence agriculture. On the whole, economic efficiency has been sacrificed in order to fulfil individual and group interests.

As a result, given that economic principles have been systematically violated in the management of the country's economy, it is not surprising that Burundi has performed so poorly. The policies pursued have led to recurrent wars and a generalised decline in the standards of living of the majority of Burundians. Currently, Burundi's per capita income is almost half its 1960 level. In addition to the huge number of lives lost due to five episodes of an endless civil war, the country has been caught in a cycle of construction, destruction and re-construction, both in terms of physical and human capital, with an incalculable cost on the economy. The recurrence of war with its accompanying destructions have created extreme uncertainty which in turn, has affected economic activity through an extremely low level of private investment and high credit costs. Burundi's dismal economic performance has led to the conclusion that it will take 225 years to cut the country's poverty level by half, given Burundi's track record (Ali Ali, 2001).

The natural question following these discussions is how will Burundi recover from these long years of economic decline? What is shown in the study is that economic decline has been due to identifiable factors that could have been avoided. Most of the current economic crisis is the consequence of poor governance. Therefore, without pretending to have a miracle solution to the deeply rooted problems facing the country, it is not appropriate to advocate economic measures in Burundi without deep political reforms. When the current war broke out in 1993, the country was 7 years into a structural adjustment programme that had been hailed as a success in Africa. However, as the war raged, most of the gains made in terms of economic reforms were lost. Radical political changes are needed to lay the basis for a stable and equitable system in which the fruits of economic activities will benefit first and foremost those who undertake them, namely Burundian farmers. If the leadership transforms its zero-sum political system into one based on reputation and predictability, politicians will become more accountable to the population. This change will loosen government controls over the economy, changing the priorities from patronage to targeting the rural populations where more than 90 percent of their constituencies live.

To achieve this objective, there will be a need for confidence building between Burundi leaders and their populations. Burundians feel alienated from their leaders who, through their biased policies, have privileged their own interests at the expense of the population as a whole. Policies ignoring farmers' needs, such as forcing them into the production of crops that are not profitable to them has been a mistake that will need to be redressed. In Burundi as elsewhere, economic agents such as households and firms respond to incentives so their contribution to the process of economic growth will in large depend on the structure of incentives within the economy (Easterly, 2001), such as the price structure of agriculture production. Obviously, any effort at boosting the country's economy will be futile unless the root causes of the long cycle of violence are addressed. In all the crises that have rocked the country since its independence, the major players have been politicians although the population they claim to represent is the one that has been paying the price. Therefore, more importantly than any economic considerations, the protection of human life and socio-economic integration of all Burundians without any distinction based on regional or ethnic background should be the basic principle guiding Burundi's political and economic reforms. It remains to be seen whether the current political “reforms” and the installation of a new “inclusive” interim government on 1 November 2001 will bring about such changes.

REFERENCES

Adeola, F. A. and Olugboyega, O. (1999), “Characteristics and Behaviour of African Factor Markets and Market Institutions and their Consequences for Economic Growth”, background paper prepared for the AERC Collaborative Project on *“Explaining Africa’s Economic Growth Performance”*, Nairobi, Kenya.

Afeikheana, J. and Olawale, O. (1999), Characteristics and Behaviour of African Commodity/Product Markets and Market Institutions and their Consequences for Economic Growth”, background paper prepared for the AERC Collaborative Project on *“Explaining Africa’s Economic Growth Performance”*, Nairobi, Kenya.

Ali, A. G. Ali (2001), “Can Africa cut its poverty level by half by 2015?”, United Nations Economic Commission for Africa, Economic Report on Africa 2000, Addis Ababa, Ethiopia.

Ali, A. G. A. and Elbadawi, I. (1999), “Inequality and the Dynamics of Poverty and Growth”, Revised version of the background paper prepared for the AERC Collaborative Project on *“Explaining Africa’s Economic Growth Performance”*, Nairobi, Kenya.

Aryeetey, E. and Udry, C. (1999), “Saving in Sub-Saharan Africa”, background paper prepared for the AERC Collaborative Project on *“Explaining Africa’s Economic Growth Performance”*, Nairobi, Kenya.

Bates, R. (1983), *Essays on the Political Economy of Rural Africa*, Cambridge: Cambridge University Press, United Kingdom.

Benhabib, J. and Rustichini, A. (1996), “Social Conflict and Growth”, *Journal of Economic Growth*, 1 (March), 125-142

BIGSTEN, A., P. COLLIER, S. DERCON, M. FAFCHAMPS, B. GAUTHIER, J. W. GUNNING, M. SODERBOM, A. ODURO, R. OOSTENDORP, C. PATTILLO, F. TEAL, and A. ZEUFACK (2000): “Contract Flexibility and Dispute Resolution in African Manufacturing," *Journal of Development Studies*, 36, 1-37.

Burundi, Ministère de la Planification du Développement et de la Reconstruction-MPDR (2001), *Programme National d’Action pour le Développement du Burundi 2001 – 2010*, Troisième Conférence des Nations Unies sur les Pays les Moins Avancés, Bruxelles, 13 – 20 mai

Chretien, J. P. (2001), “Le Burundi Après la Signature de l’Accord d‘Arusha”, *Politique Africaine*, 80 Décembre, 136-51.

Collier, P. and Gunning, J. (1999), "Explaining African Economic Performance", *Journal of Economic Literature*, Vol. XXXVII (March), 64-111.

Collins, S. M. and Bosworth, B. P. (1996), "Economic Growth in East Asia: Accumulation versus Assimilation", *Brookings Papers on Economic Activity*, 2.

Cukierman, A., Edwards, S. and Tabellini, G. (1992), "Seignorage and Political Instability", *The American Economic Review*, vol. 82.

De Janvry, A., Fafchamps, M. and Sadoulet, M. (1991), "Peasant Household Behaviour with Missing Markets: Some Paradoxes Explained", *The Economic Journal*, 101(409), 1400-1417

De Lespinay, C. (2000), "Les Eglises et le genocide dans la région des Grands Lacs est-africains", http://www.u-paris10.fr/gdr1178/lesp-egl.htm

Easterly, William (2001), *The Elusive Quest for Growth*. The MIT Press, Cambridge, Massachusetts.

Fafchamps, M. (1999), "Networks, Communities, and Markets in Sub-Saharan Africa: Implications for Firm Growth and Investment", *Journal of African Economies*, forthcoming

FAFCHAMPS, M., and B. MINTEN (1999): "Relationships and Traders in Madagascar," *Journal of Development Studies*, 35, 1-35.

Gemmell, N. (1996), Evaluating the impacts of Human Capital Stocks and Accumulation on Economic Growth: Some New Evidence, Oxford Bulletin of Economics and Statistics, 58, 9-28.

Ghei, N. and Kiguel, M. A. (1992), "Dual and Multiple Exchange Rate Systems in Developing Countries: Some Empirical Evidence", *World Bank Working Paper Series*, WPS No. 881 (April)

Ghosh, D. (1986), "Savings Behaviour in the Non-Monetized Sector and Its Implications", Savings and Development, 2.

Greenaway, D. and Milner, C. R. (1990), "Policy Appraisal and the Structure of Protection in a Low-Income Developing Country: Problems of Measurement and Evaluation in Burundi", *The Journal of Development Studies*, Volume 27, 22-42

Hugon, P. (1993), *L'Economie de l'Afrique*, Repères – La Découverte, Paris.

IMF (1997), "Burundi: Recent Economic Developments", *IMF Staff Country Report* No. 97/114, November 17.

IMF (1999), "Burundi: Statistical Annex", *IMF Staff Country Report No. 99/8* (February), International Monetary Fund, Washington, D. C.

International Crisis Group (2001), Burundi: *Breaking the Deadlock: The Urgent Need for a New Negotiating Framework*, Africa Report No. 29, May 14, Brussels/Nairobi.

ISTEEBU (2001), "Enquête Prioritaire 1998: Etude Nationale sur les Conditions de Vie des Populations", Bujumbura, Burundi.

Jackson, T. (2001), "L'Egalite d'accès à l'éducation: un impératif pour la paix au Burundi", International Alert, manuscript.

Kaburahe, C. (2001), "Plaidoyer pour le caféiculteur Burundais", In-burundi.com/presse1411analyse.htm

Lemarchand, René (1994). *Burundi : Ethnic Conflict and Genocide*. Cambridge University Press.

Ndulu, B. J. and O'Connel, A. O. (2000), Background Information on Economic Growth, AERC Explaining African Economic Growth Project, Nairobi, Kenya.

Ngaruko, F. (1993), "L'Industrie et l'Accumulation au Burundi", Mondes En Développement Vol. 21 No. 2.

Ngaruko, F. and Nkurunziza, J. D. (2000), "An Economic Interpretation of Conflict in Burundi", *Journal of African Economies,* Volume 9, No.3, 370-409

Nkurunziza, Janvier D. and Floribert Ngaruko (2002), *War and Its Duration in Burundi*, presented at the World Bank/Yale University conference on "The Economics of Political and Common Violence", University of Yale, (April).

Nkurunziza, Janvier D. (1987), *L'Economie Cotonnière au Burundi*, University of Burundi, Licence Thesis

------------------------ (1997), *Determination of Efficiency, Exchange Rate and the Premium of the Parallel Market for Foreign Currency in Burundi*, M.Sc. Thesis

------------------------ (2000a), "Devaluation, Inflation and Money Supply in a War-torn Economy: An Empirical Test of the Vicious Cycle Hypothesis for Burundi", research project proposal, African Economic Research Consortium (AERC), Nairobi, Kenya.

------------------------ (2000b), "The Parallel Market for Foreign Currency in Burundi", *AERC Research Paper*, Nairobi, Kenya (forthcoming)

------------------------ (2001), "Contract Enforcement and Credit Markets in Africa", D. Phil Thesis, University of Oxford, work in progress

------------------------ (2002), *Policy, War and Food Security in Burundi*, Report prepared for the Food and Agriculture Organization (FAO), Manuscript.

Ntibazonkiza, R. (1993), “Au Royaume des Seigneurs de la Lance. Une Approche Historique de la Question Ethnique au Burundi. Tome 2 – De l’independence à Nos Jours (1962-1992)”, La Louvière: Centre d’Animation en Langues.

Nyamoya, P. (1998), “Pour un Modèle Original de Privatisation des Entreprises Publiques au Burundi”, RIDEC, Vol. 2 No. 2, Septembre, Bujumbura, Burundi.

Nyamoya, P. (2001), Analyse Economique Appliquée au Système Educatif Burundais 1980-2000, Rapport Provisoire, IDEC, Juin, Bujumbura, Burundi.

O’Connel, S.A. and Ndulu, B. J. (2000), Africa’s Growth Experience: A Focus on Sources of Growth, AERC, Nairobi, Kenya.

Orivel, F. (1995), “Education Primaire et Croissance Economique en Afrique sub-Saharienne: Les Conditions d’une Relation Efficace”, *Revue d’Economie du Développement*, No. 1.

Oyejide, T. A. (1999), “Markets and Economic Growth in Africa”, background paper prepared for the AERC Collaborative Project on *“Explaining Africa’s Economic Growth Performance”*, Nairobi, Kenya.

Pritchett, Lant and Deon Filmer (1999), “What Educational Production Functions Really Show: A Positive Theory of Education Spending”, *Economics of Education Review* 18, no. 2 (April): 223-239.

Reinikka, R. and Svensson, J. (1999), “How Inadequate Provision of Public Infrastructure and Services Affects Private Investment”, *Policy Research Working Paper 2262*, The World Bank, Washington, D. C.

Reyntjens, P. (1994), *L’Afrique des Grands Lacs en Crise*, Karthala, Paris: Summers

Sleuwaegen, L. and Goedhuys, M. (1998), “Barriers to Growth of Firms in Developing Countries: Evidence from Burundi”, *RPED Discussion Paper No. 91*, The World Bank, Washington, D. C.

World Bank (1992), Regional Program on Enterprise Development (RPED): Burundi, original data set.

World Bank (1998), *African Development Indicators 1998/1999*, Washington D.C.

World Bank (1999), Burundi. Poverty Note. Prospects for Social Protection in a Crisis Economy, Report No. 17909-Bu, Washington, D.C., February 23.

World Bank (2000), *World Development Indicators 2000*, CD-ROM database.