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EXPLAINING AFRICAN ECONOMIC GROWTH PERFORMANCE: THE CASE OF KENYA[1]

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Contents

1. INTRODUCTION

The objective of this study is to explain Kenya's economic growth performance from the 1960s to the 1990s, drawing on growth accounting decompositions and cross-country endogenous growth literature. The analysis provides guidance on what factors are important in explaining aggregate growth in Kenya over time. The study explains why the good economic performance in the 1960s and early 1970s was not sustained in the subsequent periods. The years between the late 1970s and late 1990s were characterized by persistently low growth and limited economic transformation, despite the maintenance of maintained a large measure of political stability over that time, and a fairly consistent development strategy. But in the 1990s, the introduction of competitive politics evoked ethnic tensions revolving around land ownership and control of the state. This has tended to create uncertainty and to add to the poor growth performance. The Kenya case thus seems to fit in the category of countries suffering from regime shifts. Regime shifts geared towards some form of re-distribution for political expediency destroy the policy environment and the incentive structure for economic agents and thus help explain the poor growth performance and rising poverty in the 1990s.

The cross-country endogenous growth literature has been useful in identifying uniformities across countries and over time and has helped to detect important associations in growth performance of countries. Nevertheless, studies on the robustness of these results typically find they have limited predictive power (Serquin and Kenny, 1999). Serquin and Kenny attribute this lack of robustness partly to the assumption that growth processes across countries and over time are similar. Growth processes differ across countries, however. To contribute to a better understanding of differences in growth processes across countries, we supplement the cross-country endogenous growth methodology with Kenya-specific analysis.

For each selected economic growth episode in Kenya, the study analyses the following: (a) the macro-growth performance; (b) the role of markets; (c) the role of private agents; and (d) the political economy of policies implemented in the study period.

The analysis of macro-growth performance sheds light on how much of Kenya's experience is explicable in terms of growth regressions and the extent to which the variables in these regressions can be used to explain the country's economic growth over the last 40 years or so. In this component of the study, we look at the relative importance of factor accumulation and productivity, external shocks, and domestic policies, among other factors, in explaining Kenya's growth experience. A basic premise of our analysis is that economic performance over the period analysed is, to a large extent, a function of the initial conditions – resource endowments and economic structure; economic policy; national political institutions; forms of economic organization; and above all a changing policy regime driven by political developments. We postulate that success or failure of economies depends on initial conditions and on whether a country subsequently adopts suitable development policies. It is therefore important to assess initial conditions or structural characteristics in order to understand economic performance.

Research studies on growth determinants in SSA economies have confirmed various channels through which growth is mediated. A conclusion that seems to emerge from these studies is that markets are crucial in the development process so that in situations where private agents have been excluded from the market mechanism, poverty has set in. The role of markets in economic performance is one aspect that has been utilized in the recent efforts to draw poverty eradication plans in most countries. In addition, where markets have failed to allocate resources efficiently because of distortions and administration constraints, the outcome has been a growth pause. Despite the recognition that markets are good for growth, economic reforms have set broader development goals, some of which directly and indirectly focus on helping markets work better.

This has been the preoccupation of economic reform policies, dubbed in the 1980s as structural adjustment policies (SAPs). The essential idea is that markets are key elements of the institutions that provide the incentive structure of the economy and shape the direction of economic change towards growth, stagnation or decline (Oyejide, 2000). Oyejide further argues that a growing economy must have a well functioning system of markets that can generate correct price signals that determine the flow of resources.

These arguments point to the onset of SAPs, proposed in the early 1980s for most of the SSA economies. The SAPs mainly advocated changes in macroeconomic policies in order to make an

economy adaptable to changing economic realities. In the narrowest sense, SAPs involve setting the prices right. When correctly determined, these prices – the rate of interest, the exchange rate, domestic goods prices and wages – are crucial signals for efficient resource allocation in an economy. The arguments supporting SAPs point to the fact that relative price movements in the economy do induce changes both in the level of real income and in the productive structure of the economy. The SAPs do this by changing relative sectoral profitabilities. In this regard, effective changes in relative price structures lead to resource flows into the profitable and expanding sectors of the economy and this leads to economic growth.

From these arguments, the question that comes to mind is why SSA countries have not witnessed these changes, and whether had the changes occurred, the deceleration of growth in most SSA economies since the 1980s would have been halted. In order to demonstrate that inappropriate market structures and market impediments have led to the growth decline in Kenya, we trace the performance of key markets over several decades since the 1960s.

The component on private agents analyses the microeconomics of economic growth. It focuses specifically on the incentives and constraints facing rural households and manufacturing firms and their likely impact on economic growth in Kenya over time. In the political economy analyses, we look at the development role of the state, which is the main executor of public policies, and given the nature of the state, the factors that determined public resources allocation, taking into account regionalism and ethnicity, all important dimensions given the multi-ethnic nature of the Kenyan society. We also look at the kind of policies (infrastructure, macro polices, market controls, etc.) that were implemented, particularly as they relate to the agricultural sector and rural areas where the bulk of Kenya's population is based.

2. PERIODIZATION OF KENYA'S ECONOMIC PERFORMANCE

Kenya's growth performance has varied considerably over time and it is interesting to delineate the various episodes of economic performance. We base our analysis mainly on Ndulu and O'Connell (2000), henceforth N&O, who simulate Kenya's growth performance (among other countries in Africa) from the cross-country growth literature based on half-decadal data to control for short-term influences. The periodization of Kenya's growth performance is based on residuals from cross-country equations reported in N&O.

Table 1 shows the residuals from equations that we estimated using data from Collins and Bosworth (1996), henceforth C&B, cited in N&O (2000). In this paper, the contribution of physical capital per worker to growth was estimated using the formula 0.35*growth of physical capital per worker; while the contribution of education per worker was estimated using 0.65*growth in labour quality index.[1] The fourth column of Table 1 shows the residuals from estimating an equation with these coefficients. The sixth (last) column shows the residuals from estimating a regression equation with the restriction that the two coefficients sum to unity. The estimation gave a growth in capital per worker coefficient of 0.854 and a growth in education per worker coefficient of 0.146.

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[1] The stock of capital was derived by applying the perpetual inventory method using initial 1950 capital stocks from Nehru and Dhareshwar (1993).The labour quality index imputes a rate of return of 7% to an additional year of average schooling attainment in the adult population.

Table 1: Residuals from C&B (1996) per worker economic growth decomposition in Kenya

Period	Growth in real GDP per worker	Predicted growth in real GDP per worker 1	Residual 1	Predicted growth in real GDP per worker 2	Residual 2
1960–64	0.38	0.31	0.07	-0.53	1.43
1965–69	3.67	1.37	2.31	1.73	3.67
1970–74	4.85	2.46	2.39	4.40	3.76
1975–79	1.62	2.21	-0.58	2.40	0.78
1980–84	-0.76	1.45	-2.22	0.94	-0.85
1985–89	1.99	1.18	0.81	0.49	2.17
1990–94	-1.83	0.92	-2.76	0.29	-1.39
Total	1.46	1.41	0.003	1.39	1.37

The results suggests the existence of the following four episodes: (a) 1960–1974 – a period of improving economic performance, with actual growth per worker exceeding predicted growth; (b) 1975–1984 – a period of declining economic performance, with growth per worker below the predicted level in the later part of the period; (c) 1985–1989 – a period characterized by some recovery of economic performance; and (d) 1990–1997 – a period of declining performance. The 1960s and 1970s therefore stand out as a period of relatively good performance (except for 1975–1979) and the 1980s and 1990s stand out as a period of relatively poor performance (except for 1985–1989).

We also utilize results from Hoeffler (1999, also cited in N&O, 2000), who used an augmented Solow model to explain the factors that account for growth performance in 85 countries, where growth was measured by the difference between the log of real GDP per capita in the initial and final years of the half-decade (e.g., 1960 and 1965). Hoeffler found the Africa dummy to be insignificant in her model.

Lastly, N&O estimate their own endogenous growth model. Among the variables they use to explain actual growth rate of real GDP per capita are initial income, life expectancy, age dependency ratio, terms of trade shocks, trading partner growth rates, whether a country is landlocked or not, government consumption expenditures as a proportion of GDP, inflation, the black market premium, and political instability, as measured from the average number of assassinations, revolutions and strikes.

Table 2 shows the residuals from the two more comprehensive models as applied to Kenya.

Table 2: Selected panel model residuals reported in N&O (2000)

Period	Hoeffler's augmented Solow model: System-GMM results applied to Kenya			N&O's pooled conditional growth model results for Kenya		
	Actual growth per capita	Predicted growth per capita	Residual	Actual growth per capita	Predicted growth per capita	Residual
1960–64	-1.41	5.59	-7.01	0.71	0.307	-2.36
1965–69	-0.93	6.36	-7.29	3.82	2.05	1.77
1970–74	7.13	5.85	1.28	5.23	2.58	2.65
1975–79	1.69	3.64	-1.94	1.63	1.29	0.33
1980–84	-2.75	1.18	-3.93	-0.88	-0.70	-0.19
1985–89	2.75	2.75	0.0	2.14	1.28	0.86
1990–97	0.08	2.53	-2.46	-0.52	2.29	-2.81
Total	0.94	3.99	-3.05	1.73	1.31	1.14

In Table 2, Hoeffler's augmented Solow model shows an episode of generally improving economic performance in 1960–1974 (although economic performance is very poor in the 1960s, perhaps reflecting the way growth per capita was measured); declining performance in 1975–1984; improved performance in 1985–1989; and poor performance in the 1990s. The endogenous growth model results show a similar pattern.

We can therefore identify four fairly distinct growth episodes from these growth regressions (which conform to prior expectations): (a) 1960–1974, a period of improving economic performance;

(b) 1975–1984, a period of poor performance; (c) 1985–1989, a period of economic recovery; and (d) the 1990s, a period of poor performance. For convenience, we follow Takahashi (1997) and Azam and Daubreé (1997) and combine those episodes that fall in the 1960s and 1970s (with improving economic performance except for 1975–1979 when growth deteriorated), and the 1980s and 1990s (a period of poor performance except in 1985–1989 when there was a growth turn-round).[2]

The following narrative provides a stylized account of Kenya's actual economic performance before we proceed to a detailed discussion of the country's growth decompositions in the next two sections of the paper.

The Kenya growth story is familiar. Up to the mid 1970s, respectable levels of GDP growth per capita were obtained. Thereafter, there was a persistent downward trend in the per capita growth rate, with the rate turning negative over the 1990s. In the first decade of independence (1964–1973), the economy performed relatively well with an average growth rate of about 6%. Then came the oil shocks of 1973 and 1979 compounded by bad policies (especially the mismanagement of the 1976/77 coffee boom), which led to balance of payments problems, with the average growth rate declining to 5.2% in 1974–1979.

Balance of payment problems induced the country to seek conditionality finances from the Bretton Woods institutions, so that substantial donor-driven reforms were implemented in the 1980s and 1990s. The reforms covered nearly all sectors of the economy, including the liberalization of the foreign exchange market; trade and payments system; domestic financial and capital markets; and privatization and commercialization of public corporations. These reforms did not improve economic performance, however.

The first half of the 1980s, for example, was characterized by slow economic growth (averaging 3.2%) that reflected the impact of the second oil price (1979) shock, a military coup attempt in 1982 and a severe drought in 1983/84. In the second half of the 1980s, growth rebounded (averaging 5% per annum). This period is associated with a mini coffee boom in 1986, a decrease in oil prices and good weather.

In the first half of 1990s, there was a worsening of the economic environment, with an average growth rate of 2.5%. There was a drought in 1991/92, the oil price increased due to the Gulf War, compounded by the aid embargo of 1991–1993 and "'ethnic clashes'" in 1992. These exogenous shocks were accompanied by an increase in the budget deficit and money supply with the rate of inflation rising rapidly alongside large exchange rate depreciations, as the foreign exchange market was liberalized in the context of large macroeconomic imbalances in the run-up to the 1992 elections.

In the second half of the 1990s, economic growth declined further to an average 1.9%, with the period characterized by an aid embargo in 1997–2000, "'ethnic clashes'" in the run-up to and after the 1997 elections and bad weather conditions (*El Nino* rains in 1997/98 followed by a major drought leading to power rationing in 2000).

One broad observation regarding the Kenyan case is that the downward shift in the growth trajectory is a widely shared experience including the world economy as a whole (save for HPAES). Data for SSA as a whole suggest a similar average experience – sharp downward shift after 1978 and stays there except for the 1984-86 blip. This may point to a big influence of growth in trading partners' economies in the overall shift and within it the half-decadal analysis.

3. THE 1960S AND 1970S

3.1 The Macro-Growth Performance during the 1960s and 1970s

The C&B Model
In the 1960–1964 half-decade, the growth in capital per worker and education per worker were negative (-2.9% and -0.03%, respectively) leading to a relatively slow growth rate per worker (0.38%). In the period before independence in 1963, dominated by a Mau Mau War for much of the

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[2] These two broad episodes roughly coincide with the Kenyatta and Moi political regimes, respectively. Multiparty politics were introduced in 1991, but the impact is yet to be seen in view of the unchanged presidency and the fact that the democratization process is far from being completed.

1950s, the investment rate in Kenya was low, partly because of uncertainties about the country's future and fears of non-citizens about their role in a newly independent state. The C&B results therefore give a more prominent role to the TFPG, more than is usually found in the literature. The combined contributions of physical capital per worker and education per worker are negative, so that total factor productivity growth (TFPG) exceeds the total growth per worker. (Refer to Appendix Table A1.)

There was a substantial improvement in the growth of physical capital and education per worker in the following decade (1965–1974) at average rates of 1.22% and 1.33%, respectively, accelerating the growth per worker to an average of 4.26%. After independence and as uncertainties in the transition to independence diminished, the government began to increase its own development spending while private investment quickly recovered. Total investment increased, for example, from 16.05% in 1960–1964, to 18.31% in 1969–1974 and to 19.26% in 1970–1974. Investment in education also increased substantially, raising the initial average years of schooling for the population aged at least 15 years from 1.53 in 1960–1964 to 1.67 in 1965–1969 and to 2.17 in 1970–1974. In the 1965–1974 decade, the combined contribution of the two variables now accounted for 74.9% to 87.2% of growth per worker and TFPG the balance.

In the 1975–1979 half-decade, there is a decline in the growth of physical capital per worker (though its growth is positive), while that of education per workers accelerates to 1.14%, accompanied by reduced economic performance (to an average 1.62%). Both factors jointly accounted for 25.3% to 51.9% to growth per worker, the TFPG the balance.

In the 1960s and 1970s (as well as the 1980s and 90s), therefore, growth per worker roughly tracked both growth in physical capital per worker and education per worker, although only the first variable is significant.[3] This conclusion is supported by a number of studies on the Kenyan growth process (e.g., Azam and Daubreé, 1997). Glenday and Ryan, for example, conclude that private investment has been the "strongest and the most significant contributor to growth" in Kenya. Azam and Daubreé highlight the predominant role of insufficient private investment and its failure to match the progress of human capital accumulation as an important factor in slowing growth in Kenya during this period. Private investment lagged behind accumulation of human capital, slowed by excessive competition from public investment in a context of financial repression.

There is some evidence that the efficiency of capital use worsened over time, especially in the public sector activities, reducing the growth effects of investment. The three-year moving average incremental capital–output ratio (ICOR) for example increased from 2.4 in 1966 to 3.2 in 1972, owing to the existence of excess capacity, the encouragement of capital-intensive production due to distortions in factor prices; and the possibility that the efficiency of investment fell as the "'easier"' opportunities were taken up (World Bank, 1975). This study also argued that the various price distortions in the factor and product markets resulted in inefficient allocation of resources (with the ICOR increasing to about 6 by the 1990s).

In their study on Kenya, Martin and Wasow (1993) found the flow of real bank credit to the private sector (to capture credit rationing in a repressed financial system); availability of foreign exchange reserves; and real public sector infrastructure capital stock to be the main factors driving the private investment rate in the period at least to the 1980s.[4] The real exchange rate (RER) depreciation

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[3] The estimated growth equation using C&B data is (where the t-values are in brackets): growth per worker = 1.992 (1.97)+ 0.854 (2.03)* growth in capital per worker + 0.146 (0.35)* growth in education per worker, R^2 =0.10.

Empirical micro evidence shows a large decline in returns to education in Kenya. Manda (1997), for example, shows that rates of return declined from 18.2% for primary education and 55.7% for secondary education in 1977/78 to 4.7% for primary education and 12.5% for secondary education in 1993–1995 (based on Regional Programme for Enterprise Development – RPED – data).

There are several other reasons why the contribution of educational to growth may be relatively weak in much of the macro-growth regression literature. In some developing countries, there is massive under-utilization and unemployment of educated labour, so that its social productivity may be minimal at the margin. The findings could also be attributed to measurement errors and possible non-linearities in the data, especially when micro evidence suggest high returns to education.

[4] The results were from OLS and 2SLS (RER instrumented) and covered the period 1968–1988.

also significantly reduced private investment, reflecting the supply side shock from the increased price of imports. The real interest rate (as an alternative variable to the flow of real bank credit to the private sector) and lagged growth of GDP were insignificant determinants.

These findings are supported by Fielding (1993), who found the availability of finance (savings plus foreign aid) as well as the availability of foreign exchange were significant determinants of private investment in Kenya both in the short run and long run. He also found the price of capital goods and the terms of trade to have adverse effects on private investment at least in the short run.

According to the Martin and Wasow, reduced availability of credit and foreign exchange to the private sector (in the years following the coffee boom of 1976/77) and falling public infrastructure had reduced private investment in the 1980s[5] relative to the 1970s. Simulations showed that the private investment rate would have been 23% higher in the 1980s if these variables had remained at their 1978 level.

The Hoeffler Model
Appendix Table A2, on the other hand, shows the results from the Hoeffler model. This model extends the C&B model by adding initial income (to capture convergence) and population growth as determinants of per capita economic growth. In addition to these two variables, the model shows the investment rate to be one of the most important variables in contributing to the absolute growth per capita, but least so educational attainments.[6] As in the case above, there is a close correlation between the investment rate and growth per capita, with the half-decadal Hoeffler data showing both increasing to a peak in 1970–1974, and declining systematically thereafter. In all episodes, the negative contribution of initial income in explaining absolute per capita income is compensated by the positive role of the investment ratio; population growth, in this case, the variable's negative coefficient is offset by a negative variable, $\ln(n+0.05)$; and educational attainments $(\ln(t15))$.

In the 1960–1964 half-decade, the model predicts Kenya slightly out-performing the high-performing Asia economies (HPAEs)[7] by about 0.10% points. This gap is accounted for by the combined contributions of initial income and the investment ratio (+0.12%) partially offset by population growth and educational attainment (-0.014%).

It is clear from Table A3 that while Kenya had a higher investment rate than highly performing Asian economies (HPAEs) in the early 1960s, it was disadvantaged by a more rapid population growth throughout the study period. Up to the 1980s, Kenya had one of the most rapid population growth rates in the world. The Hoeffler data show the population growth rate increasing from 3% in the 1960s to 4% in the 1970s and 1980s whereas that of HPAEs declined from 3% in early 1960s to 2% the rest of the study period.

It is also clear from Table A3 that Kenya lagged behind HPAEs with respect to educational attainments throughout the study period. The average years of schooling increased from 1.53 in early 1960s to 3.7 in the 1990s, while those of HPAEs increased from 4.11 in the early 1960s to 5.17 in the 1990s. Hence, while Kenya closed some of the gap with the HPAEs, it had not attained the level of education attainments prevailing in the HPAEs in the early 1960s.[8]

In the 1960–1964 episode, there is a relative large negative gap (-0.39%), which this model is not able to explain. This offsets the favourable Kenya-HPAE gap, so that, overall, HPAEs out-performed Kenya. The Kenyan negative dummy in this period is most likely explained by the uncertainties preceding the period before independence, undermining economic growth.

In the following decade (1965–1974), the Hoeffler analysis predicts a positive growth per capita (of 0.804%). Despite improved performance, the Hoeffler model predicts a slightly narrowed Kenya-HPAEs gap, which the model can explain (+0.075%). This is accounted for by initial income (+0.181%) partially offset by the investment ratio, population growth and educational attainment (-

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[5] Real investment real GDP ratio fell by 6.4% in the 1980s, from 17.4% of GDP in the 1970s to an average of 11.0% in the 1980s. Private investment ratio fell by 4.2% in the 1980s relative to the 1970s, as compared with a fall of 2.2% for the public investment ratio (Martin and Wasow, 1993).

[6] Indeed, educational attainments, measured by the average total years of schooling in the population of age 15 or higher, in the initial year of the period, was insignificant at the 5% level in the GMM regression equation.

[7] Hong Kong, Indonesia, Korea, Singapore, Taiwan, Thailand.

[8] Kenya did better than SSA with respect to the investment rate and education attainments throughout the study period, but was disadvantaged with respect to population growth.

0.106%), much of the latter accounted by the role of the relative educational attainments. In this period, the relatively low investment rate starts to disadvantage Kenya (at 18.8%) relative to HPAEs (at 20.8%). There is a relatively large negative unexplained gap (-0.238%), however, offsetting the favourable Kenya-HPAE gap.

In the 1975–1979 half-decade, the model for the first time predicts HPAEs outperforming Kenya, with the predicted Kenya-HPAE performance slightly negative (-0.01%), as the positive role of initial income is offset by the other fundamentals. In this case, there is a relatively large unexplained gap (-0.28%), widening the Kenya-HPAE gap.

The N&O Model

The N&O' endogenous growth model (Table A4) extends the other two models above by incorporating a whole range of range of variables. These are divided into (a) base variables (initial income, initial life expectancy, terms of trade shocks, landlockedness, dependency ratio, labour-force growth, and trading partner growth); (bi) policy variables (inflation, the black market premium, and the government expenditure ratio); and (c) political instability.

In general, the model shows Kenya benefiting from the positive convergence effects of a low income throughout the study period, with the Kenya-HPAEs gap increasing from 0.63% in 1960–1964 to 1.33% in 1975–1979 (the proportion of Kenya's initial per capita income declines from about 70% in the early 1960s to 23% in the 1990s). Owing to a relatively low initial life expectancy relative to HPAEs (the gap increased from about 8 years in the early 1960s to 10.6 years in the 1990s), this caused a relative per capita growth loss of 0.7% in the 1960s to 1970s.

The high age dependency ratio relative to HPAEs also caused a growth per capita loss that increased from 0.44% in 1960–1964 to 1.53% in 1975–1979. Similarly, the country suffered from a relatively low growth in potential labour force participation, given by the difference between growth of population of working age (15–65 years) and growth of total population, resulting in a loss in per capita growth relative to HPAEs of 0.05% in 1960–1964, this increasing to 0.98% in 1975–1979.

The N&O results show terms of trade shocks had a relatively small differential impact on growth. This variable, given by initial share of exports to GDP, multiplied by the average per cent difference between the terms of trade in each year of the half-decade and the terms of trade in the initial year of the half-decade, was insignificant at the 5% level in the estimation model. The largest variable effects in the 1960s and 1970s are in 1975–1979 when the country benefited by 0.016% per capita growth effect relative to HPAEs, but this was offset by a loss of 0.013% in 1980–1984.

The country was also disadvantaged by the poor performance of trading partners, even when compared with SSA (except in 1975–1979). Relative to HPAEs, Kenya experienced a growth per capita loss of about 1% in 1960–1974, this decreasing to 0.34% in 1975–1979. Lastly, the country per capita growth does not benefit from access to sea compared to HPAEs. Overall, the combined effects of the base variables have disadvantaged Kenya vis-a-vis HPAEs by a margin of 1.53% in 1960–1964, this increasing to 2.18% in 1975–1979.

Among the policy variables, both inflation and the black market premium were relatively unimportant in explaining per capita growth in Kenya vis-a-vis the HPAEs. When compared with the HPAEs in the 1960s and 1970s, the largest inflation effect was a per capita growth loss of 0.014% in 1975–1979. Similarly, the largest black premium effect in the 1960s and 1970s was in 1965–1974, resulting in a loss of 0.131%.

The Achilles heel of the economy has been the country's fiscal policy. Inadequate control of expenditures (and inability to target them to achieve policy objectives) has been an important part of the budgetary problem in Kenya, for total government spending has risen relative to economic activity, with serious budget financing difficulties emerging from the late-1970s. While Kenya did better than SSA in 1960–1974, the relatively large government expenditure ratio vis-a-vis HPAEs' resulted in a per capita growth loss that increased from 0.344% in 1960–1964 to about 1% in 1975–1979.

In the 1960s and 1970s, the government was able to respond to pent-up frustrations from the colonial period by rapidly increasing its expenditures. The data in Table 3 show government spending as percent of GDP (exclusive of defence and education). Despite this increased participation by the state in the economy, inflation remained low, averaging only 1.8% in the 1960s. During this period, monetary policy was very conservative and the rate of expansion of money supply was low. This is

because the public sector was also pre-empting an increased share of the total resources to finance its activities. Inflation accelerated in the 1970s following an experiment in expansionary fiscal policy, the two OPEC price increased of 1973 and 1979, and the coffee boom of 1976–1977.

Table 3: Government expenditure ratio and inflation in Kenya versus HPAEs

	1960–64	1965–69	1970–74	1975–79
Kenya				
Government expenditure as per cent of GDP	9.8	12.7	14.4	15.1
Inflation	1.5	2.1	7.8	14.1
HPAEs				
Government expenditure as per cent of GDP	6.8	6.5	5.4	5.3
Inflation	2.6	4.8	12.2	10.7

Last, political instability was relatively unimportant in explaining differential growth. Compared with HPAEs, the largest effects are a per capita growth loss of 0.108% in 1960–1964, offset by a gain of 0.130% in 1975–1979.

In 1960–1964 half-decade, the N&O' endogenous growth model predicts HPAEs out-performing Kenya by a large margin (-1.98%). This is accounted for by disadvantageous contributions of base variables (-1.53%), policy variables (-0.34%) and political instability (-0.11%). Among the base variables, the positive impact of initial income (+0.63%) is offset by that of other variables, particularly the growth of trading partners, life expectancy and the dependency ratio. Among policy variables, the most important is the government expenditure ratio (-0.34%). There is a relatively large negative gap (-1.17%) that this model is not able to explain, widening further the Kenya-HPAE gap.

In the decade of 1965–1974, actual growth per capita improves to 4.52%. The predicted under-performance of Kenya relative to HPAEs is now reduced (to -2.758%), which is mainly accounted for by the role of base variables (-1.47%) and policy variables (-1.14%). There is a large unexplained positive gap (2.39%), to a large extent offsetting the negative Kenya-HPAE gap. Among policy variables, the most important negative factor remains the government expenditure ratio (-0.854%). There is a relatively smaller gap (-1.675%) that this model is not able to explain, widening the Kenya-HPAE gap.

In 1975–1979 half-decade, the predicted Kenya-HPAE performance gap widens further (to -3.20%), accounted for mainly by base variables (-2.17%) and policy variables (-1.16%), the latter dominated by the influence of the government expenditure ratio. There is relatively a small gap (-0.77%) that is not explained by the model, further widening the Kenya-HPAE gap.

To capitulate, the Kenya economic performance was quite poor in the 1960–1964 half-decade, with the country trailing HPAEs. In the Hoeffler and N&O analyses, this is caused by relatively large negative unexplained gaps, offsetting the relatively good Kenyan performance predicted by the models. In the 1965-69 half-decade, both models show Kenya under-performing HPAEs. In the 1970–1974 half-decade, Kenya is shown to be almost at par with the HPAEs performance, while in 1975–1979 , HPAEs are shown again to out-perform Kenya.

3.2 Markets and the Growth Process during the 1960s and 1970s

After independence, Kenya like most African countries tended to emulate the development strategies of the western industrialized countries. The policy outturns stressed the role of the major agents of change: entrepreneurship and capital accumulation. In a sense, the role of the market mechanism was believed to work in order to transfer entrepreneurial talent or attributes from the developed countries to the Kenyan entrepreneurs. Second, the emphasis was on massive injection of capital into the economy to accelerate the formation of strong market links both in the product and financial markets and would then accelerate the pace of economic development.

The pre-colonial Kenya economy was almost a wholly subsistence one. Trade with the outside world was non-existent except for a few Arab and European traders who managed to venture into the interior introducing new commodities, which they exchanged with the local people for slaves, ivory

and other goods. This pattern of production was changed with the advent of the colonial administration and the arrival of immigrant communities. The indigenous community began to be transformed and new dimensions were added as the cash economy began to spread. Government institutions played an important role in transformation and the development of markets in the post-colonial period. We review available information to support the development of key markets in this period.

The Financial Market   At independence in 1963, Kenya inherited a financial system that lacked monetary and financial independence (Nasibi, 1992). This robbed the authorities of the ability to impose and generate inflation tax revenue. Central Bank of Kenya was established in 1966, allowing the country to formulate and operate an independent monetary policy. The Central Bank was given supervisory powers over commercial banks and financial institutions, while a low interest rate policy was adopted where the government set maximums and minimums for lending and savings deposit rates. The aim was to encourage investment and protect the small borrowers. Interest rates were too low to attract savings with negative real returns, however. The low interest rates enabled the government to finance its expenditure cheaply. So the basic constraints in the financial market were laid. The influences on the interest rate structure did not encourage savings, but they were meant to encourage capital since the interest structure subsidized capital indirectly. The pattern of investment through the import substitution industrialization strategy was therefore to encourage capital-intensive production.

There are three important outcomes stemming from the financial sector policies: First, the firms invested in huge capacities in the hope that future demand for their goods would not constraint production. Second, even though labour was abundant, this pattern of investment did not encourage absorption of the abundant labour, and thus the labour market, even though it had its own regulation, did not benefit as the capital market did from these policies. The conclusion that seemed to emerge then was that the manufacturing sector was capital intensive in a labour abundant economy. Finally, these heavy investment capacities led to low capacity utilization constrained by the size of the market. The average capacity utilization in some subsectors were below 50% in most cases, and under the blanket of protection, the production costs pushed prices high and thus the product market suffered. From a pure theoretical viewpoint, the production process could then not have been efficient or optimal. With these factors, even though growth accelerated in this decade, it did not have a firm base and thus slowed down in the later decade in a way that it has not been reversed to-date.

In this period also, the government invested heavily in the financial sector, by establishing a commercial bank and owning majority share holding in another bank. It also established development finance institutions (DFIs) to alleviate perceived market failures in the provision of long-term capital investment. The DFIs provided equity and term loans to industrial enterprises and long-term agricultural investment loans. Their position was weak, however, as they concentrated on funding state enterprises, which were often unable to service their loans because of poor management, lacked effective statutory powers to raise funds independently, failed to sell out the equities and were vulnerable to political patronage and abuse.

The Production Process and the Product market
The agricultural policies were based on policies outlined in the *Sessional Paper No. 10* (Kenya, 1965) which emphasized political equality, social justice and human dignity. These principles were based on the state control of the economy. Thus, agricultural policies were founded on the principle of equitable income distribution, employment and self-sufficiency. In this period, therefore, much of the agricultural policy decision making depended entirely on the state. Although farmers had their own institutions such as the national Kenya Farmers Association (KFA), Kenya National Farmers Union (KNFU) and farmers' cooperative societies for various commodities, in reality, the state controlled what was to be grown and the way it was marketed. For example, agricultural production in major crops like maize and wheat depended on preset prices before the planting season. This served as guaranteed prices for the farmers and would lead to less land being cultivated if the preset prices were not conducive. In order to ensure these prices remained, there were controls on the marketing channels and inter-district cereals movements between the surplus and deficit regions.

In addition to the emphasis on state control and the market development through the cooperative

movement, the nature of production exhibited dualism, where the subsistence production dominated (see Table 4); even by 1973, subsistence production was still higher than marketed agricultural production. The presence and strength of this sector reflected a large component in the economy that was not integrated into the market system and so the product market was weak. Thus from the onset, production and pricing policies were controlled and did not evolve as envisaged because market developments were constrained by the policies in place as well as by regulations.

Table 4: Share of Agricultural Production in GDP at Current prices (%)

Sector	1958	1963	1970	1973
Non monetary agriculture	24.0	22.3	17.7	15.8
Monetary agriculture	15.9	16.1	13.9	14.2
Total agriculture production	39.9	38.4	31.6	30.0
Total GDP	100.0	100.0	100.0	100.0

Source: Kenya economic surveys, various issues.

The manufacturing sector had a rapid growth in this period (Table 5). The policy prescription at this time was the import substitution strategy. This was meant to improve and increase the domestic economy capacity in production of those goods that could be produced with the locally available resources and reduce the importation of such commodities. But the manufacturing production was skewed toward consumer goods: beverages, electrical appliances, machinery, paper products, printing, confectionery and petroleum products. Helped by high import protection, import substitution manufacturing was initially successful. The scope for such substitution was eventually exhausted, however. This policy reflected government attempt to introduce and develop a product market based on domestic production of hitherto imported goods while at the same time attempt to use as much of the local resources available.

Table 5: Structure of manufacturing sector (share of manufacturing output)

Industry	1963	1967	1972
Food, beverage and tobacco.	46.7	40.6	41.5
Textile product	5.4	7.1	8.3
Leather and rubber product	3.4	2.6	3.8
Forest products	3.0	3.5	3.9
Paper and printing	6.9	5.8	6.3
Cement, clay and glass.			
Chemical and petroleum products.	14.2	16.1	17.1
Metal products	15.9	17.2	14.9
Miscellaneous manufactures	1.0	1.2	1.5
Total	100.0	100.0	100.0

Source: Kenya Economic survey, various issues.

The structuralists would have advocated that at the initial stages of economic development, the share of agriculture in GDP should be more than the share of manufacturing to GDP. But as the country continues to develop, it becomes outward-oriented and the share of manufacturing in GDP becomes more important in economic growth. The essence of this argument is that demand conditions would bid resources towards the market for manufactured goods and the profitability of this market would attract resources. (Refer to Table 6.)

Table 6: Real GDP growth: 1964–1973 (1964 prices)

Sector	1964–73	1971/72	1972/73
Non-monetary GDP	3.7	3.4	3.0
Monetary economy	7.1	6.1	8.0
Private household	3.5	-1.3	5.3
Total general government	9.6	12.8	5.5
Total monetary economy	7.5	7.4	7.5
GDP at factor cost	6.6	6.5	6.5

Source: Kenya *Economic Survey*, various.

There was a rising demand for manufactured goods within the domestic market, and a significant increase in the value of exports of manufactured to the other partner states of the East Africa Community, especially Uganda. In addition to those factors, substantial new capacity for certain types of manufactured goods was brought on stream. The output of food processing increased by 12% in 1973, the highest rate of growth reached for a number of years. Notable increases took place in the production of sugar, canning of fruit and vegetables, coffee milling, and dairy industries. Output in dairy production significantly increased by 11% in 1972. The production of canned fruits and vegetables increased significantly by 32% during 1973. After a relatively modest expansion in 1972, the growth of real industrial production recovered sharply in 1973, and the volume of production went up by 9.7%. Thus, overall growth in real terms over the period 1969–1973 was 8.8% per annum, above the planned rate of 8.4%. Several factors contributed to this growth, particularly increased activity in the processing of agricultural commodities. The output of many of these industries rose during the year following increased crop production. This was particularly true of coffee milling, fruit and vegetables canning and sugar production in 1973. The food and beverage processing, however, witnessed a decline to 40.6% from 46.7% in 1963.

But then what slowed the growth of this sector in later years? Part of the problem was the policy of import substitution, which failed to proceed beyond the first phase. But more importantly, the system of controls did not allow the development of a product market. Final goods prices were controlled so that the price system that emerged did not reflect production efficiency and sectoral profitabilities. Thus the sector's growth soon went out of steam.

The second decade after independence began with escalating price increases and falling growth rates as witnessed in most world economies. The inflationary trends in the developed world in 1973 were significantly accelerated by the action of the OPEC states in drastically multiplying the price of crude oil. In Kenya, these prices were translated into domestic price patterns to an already inefficient sector.

There was a slowdown in the rate of growth as expected in 1974, but the extent of the decline in the rate of growth was more than anticipated. There was a poor agricultural season in 1973/74, and also numerous indications of the impact of the rise in petroleum prices on various sectors of the economy. Higher import prices, owing mainly though not entirely to the rise in oil prices, were a major factor in reducing the rate of growth. Consequently, the value of Kenya's exports of goods and services, in terms of the volume of imports of goods and services they can be exchanged for, was markedly lower. Indeed, the GDP in real terms is estimated to have declined by approximately 2.2%, after allowing for the deterioration in terms of trade. Since the population increased by 3.3% a year, real per capita income is estimated to have fallen by 5.5% in 1974 in constant prices. This is the first time since independence that a decline in per capita income had been recorded. It is difficult to map out specific policies for each of the markets but the general trend was that major controls were introduced in this period. The controls introduced in this period included: (a) selective controls on bank lending; (b) licensing of foreign exchange transactions; (c) quota restrictions on most imports; (d) direct price controls on goods; and (e) control on interest rates.

These controls transcended all markets and acted as an easier response in controlling balance of payments and inflationary pressures as far as the policy makers were concerned. But these administrative controls produced major distortions and the discretionary powers gave room to pervasive rent-seeking activities in the public sector that has been difficult to reverse and has formed a basis of painful adjustment process in the 1990s. In a sense, these controls prevented the development of markets; they constrained resource movements and efficient allocations and thus growth.

Researchers and most policy makers regard the 1980s as a lost decade for growth. This is because the easy reaction to the crises in the early 1970s prevented the policy makers from formulating and adopting stabilization and adjustment measures and policies in the financial sector, money market and foreign exchange transactions that could reorient the economy in the phase of severe internal and external shocks.

3.3 Private Agents and the Growth Performance during the 1960s and 1970s

In discussing the incentives and constraints facing key agents in the economy, we focus on two types of agents that are very important in Kenya. These are rural households, mostly composed of smallholder peasants, and firms, which are mainly in manufacturing but most could be in commerce too. These agents by being in Africa face a distinctive environment: adverse climatic and geographical conditions, high risk, high transport costs, trade barriers, poor infrastructure, low levels of education, limited financial market and high regulatory environment. The question to ask is, how do these agents adapt themselves to this environment? How have the conditions they face constrained growth in Kenya?

The Smallholders
Kenya gained independence in 1963, but already in the 1950s the peasants had been allowed to grow cash crops, the "'white highlands'" had been opened up and extension services had been extended to the peasant smallholders. This commercialization of smallholder agriculture led to a rapid increase of agricultural production. After independence, agricultural growth expanded more rapidly. Most of the remaining restrictions on smallholder agriculture were lifted. Substantial amounts of previously European lands were transferred to Kenyan farmers and large resources were devoted to land registration and adjudication. High yielding cereals were introduced and there was a push to increase the shares of high-value crops also in smallholder production, but the smallholder population has some peculiar characteristic in Kenya.

Over 80% of the population in Kenya live in rural areas and almost 70% are to be found on smallholdings. There is a female dominance among the smallholders. The Integrated Rural Survey of 1974–1979 showed that about half of the smallholder population was less than 15 years old, while about 6% was over 60. This high dependency ratio has serious implications for family welfare and for the national economy. The average household size for smallholders at the time was about seven persons. The distribution of heads of households by main occupation shows that 71% were occupied in agriculture, while the rest were employed in a range of activities. Apart from land, the major asset of smallholders is livestock

The structure of incomes by 1976 shows that income from self-employment dominated, but wages were a very major source of income in most parts of rural Kenya. Estimation of the labour usage pattern in the 1970s shows that about 15% of the male labour force worked outside agriculture compared with only 3% of women. The demand for agricultural labour fluctuates seasonally particularly in smallholder areas and this determines its price. This implies that the rural labour market is important to the livelihood of the smallholder population. In the rural labour market, work activities include wage work, work on the family farm and work on non-farm business. The rural labour force survey showed a participation rate for the 15–64 age group as 91.8% and 77% for children aged 8–14. Practically no open unemployment was reported, which may suggest that the traditional concept of unemployment is not so relevant in the rural areas.

Access to Land
At independence, there were considerable areas of unused agricultural land in Kenya. The impressive performance of agricultural production since then has been largely based on an increase in the hectarage and making land access easier through the cooperative movement to purchase the former "'white highlands'". But soon the land abundance was not there and so the future for agricultural production would have to rely on increased production of existing land. This can only be achieved through investment in productivity, specialization and public investment to support smallholder production.

There is a strong correlation between holding size and household income as shown in Table 7 using the 1988 data, which may not be radically different from that of the 1960s and 1970s.

Table 7: Average net household monthly incomes by source and size of holding (Ksh) 1988

Size of holding (acres)	Farm enterprise	Non-farm enterprise	Salary & wages	Other sources	Total
No holding	305	63	359	6	733
0.1–0.9	171	88	298	76	634
1.0–1.9	255	89	145	101	590
2.0–2.9	295	102	118	101	616
3.0–3.9	341	149	129	123	742
4.0–4.9	371	162	128	156	817
5.0–6.9	416	174	126	147	861
7.0–9.9	462	195	152	158	966
10.0–19.9	633	202	185	142	1162
20 and over	1,100	265	219	185	1770
Average income	399	140	177	114	829

Source: Bigsten and Ndung'u (1991) Table 2.10.

The group with no holding at all is seen on average to be worse off than those with little land; it also comprises people with good jobs in the rural areas. This table shows that in rural Kenya, land is a major differentiating factor, but that on average, income from non-farm enterprises and remittances follows the same pattern. This implies that households with larger holdings diversify their activities and thus are able to minimize risk and raise household incomes. Access to productive assets vary very much with the household's location in relation to major towns and with the level of agricultural development. For example, the purchase and use of agricultural inputs, which are highly correlated with productivity, are heavily dependent on the potential of the area. In high potential areas like Central and Rift Valley Provinces, large quantities of inputs go into agricultural production.

Consumption Patterns

Smallholder consumption varies much less over time compared with incomes. Of course, it is income from agriculture in particular that is unstable. In the Integrated Rural Survey (IRS) of 1974/75, data show that although incomes varied from negative (owing to livestock losses) to over Ksh8,000, the total outlays varied only from Ksh1,611 to Ksh6,505. This implies that smallholders were obviously able to consume more than their income streams by running down assets or borrowing to smooth consumption, while those with higher than average incomes saved for investment or to smooth consumption in future periods of negative shocks.

From the household surveys, it is clear that the household's consumption expenditure pattern is influenced by the relative prices of goods and services it consumes and its income levels. There are price differentials across regions because of transport costs, size of markets and marketing regulations for different commodities. There are also inter-regional differences in costs of production owing to differences in rainfall, soil type and altitude.

The Rural Institutional Structure: Agricultural Prices

Price regulation was a central ingredient in the agricultural policy. The Ministry of Agriculture undertook annual price reviews for major agricultural products and on this basis the government fixed prices at all points in the marketing chain. The Fourth Development Plan of 1979–1984 was the first government document to explicitly recognize the importance of agricultural prices as incentives. The need to use the parity pricing principle was argued in the document, as well as the importance of considering the long-run development of world market prices. The role of prices even in subsequent government policy papers was never argued to be a means of bringing about efficient resource allocation. But in the 1984–1989 development plan, the need for prices to guide resource allocation in the appropriate direction and the use of export or import parity-pricing principles were explicitly recognized.

This recognition improved the government's methods of setting prices to reflect export and import parity levels. Thus, official producer prices were set at export or import parity (mostly closer to import parity prices) plus transport costs. This was a drastic change, since previously producer prices were kept low and so production was held back. For example, in 1980, weighted producer prices (except for sugar) were 24% below import parity price, and this means that farm incomes were 7% below what they would have been with import parity prices. This income loss accrued to consumers in form of low prices and to the government in form of reduced subsidies to agricultural parastatals.By 1986, however, weighted produce prices (with exception of sugar) were only 7% below import parity prices, which implies that there was a real shift in policy to benefit farmers.

Studies on agricultural production in this period, especially in the 1970s and early 1980s show that agriculture had a modest growth of 3.1% per year on average, but the main driving factors were land expansion which contributed to 2.4% and increases in producer prices accounting for an increase of 1%. Estimates also show that the price distortions in this period reduced farmers share in GDP by 2.4% in 1980, but by 1986 this loss was down to 0.5% so that there was a drastic effort to reduce price distortions. These figures seem to suggest that price setting was a major fact that checked the growth of smallholder agriculture and that were it not for smallholder land expansion, little growth would have been registered.

Price incentives are an important signal for production in the smallholder economy and most of the agricultural production growth has been driven more by price signals. This was even more important when prices for agricultural cereals were set before the planting season. For example, in 1975–1977 coffee boom, coffee estates produced more coffee than the smallholders, but ten years later, the supply response from smallholders was such that smallholders were producing two-thirds of the coffee output. Smallholders thus reacted to the boom (the price incentive) by increased planting, which in turn raised their production drastically by 1980/81. But coffee prices came down drastically and so since then there has been no trend towards increased output.

Marketing

There are formal and informal marketing channels. Where food crops are concerned, the most important market outlets for smallholder output has been the local markets or small-scale traders. For major cash crops, only the official marketing channels are available. Some 15 parastatals have been involved in the marketing of agricultural output. There are also cooperatives and private traders. The systems of control that existed in the 1970s and 1980s were criticized for its operational inefficiency and its distortions in resource allocation. Efficiency problems were particularly acute with regard to internal food marketing system and the distribution of inputs. The distribution for export produce, especially through the cooperatives, was easier to operate and was more efficient than that of food crops under the parastatals.

The marketing boards had different roles for different crops. In some markets – for example, coffee, tea, cotton, pyrethrum, tobacco and wheat – the marketing boards acted (and in some cases still act today) as monopolies in processing and/or resale. Others like dairy products, sugar cane and maize were in monopoly positions. The typical pattern where boards were involved was to take delivery from traders, cooperatives or large farms, and then deliver to processors and wholesalers.

One major element in the government's strategy to improve smallholder agriculture was the development of the cooperative system for marketing and provision of credit and inputs. In the 1960s and early 1970s, cooperatives were concentrated in more productive areas. Cooperatives in poorer regions had considerable problems. It was only in those regions with good agro-ecological environment and a developed infrastructure that they survived. In addition, cooperatives with a monopsony standard, such as the coffee unions, performed much better than those that faced competition. Coffee made up as much as 75% of smallholder production delivered through the cooperatives.

Cooperatives were successful only in regions where the environment favoured high productivity and where the rural economy was sufficiently differentiated to keep transaction costs low, especially where road networks were on average good. Organization of cooperatives did not generate agricultural development, however. The cooperatives cannot be substituted for other measures such as land re-distribution, investment in rural infrastructure and more efficient markets. These are the main factors that have checked smallholder production in the 1990s.

There are several constraints that can be elaborated to explain the difficulties the smallholder activities face in Kenya. The most important relate to volatile prices, income and consumption.

Table 8 shows how prices directly relevant to smallholders changed between 1979 and 1989 as an example. The first column shows the general price index for agricultural production. After 1982, producer prices increased more rapidly than the cost of purchased inputs. When we take into account the prices paid by smallholders for the consumer goods they buy, the picture worsens. Using an aggregate of inputs and good prices we see that the terms of trade for agriculture declined rapidly until 1985, then fluctuated up to 1989. The picture portrayed by this table shows volatility in prices, production and hence rural smallholder incomes. Between 1979 and 1989, aggregated agricultural smallholder production grew by over 35%, but the smallholder share in marketed production did not increase over the same period. The population over the same period grew by 47% so that smallholder per capita production must have declined by 10% in real terms. In terms of purchasing power and owing to declines in agricultural terms of trade over the same period, the decline must have been larger than 10%. This pattern was more accelerated in the 1990s and the smallholders accounted for most of the poor in the country.

Table 8: Indexes of agricultural prices

Year	Agricultural output	Purchased inputs	Rural consumption	Prices paid	Agricultural TOT
1979	100	100	100	100	100
1980	108	111	112	112	97
1981	118	123	131	129	92
1982	130	146	158	155	84
1983	147	152	180	172	85
1984	168	183	212	204	84
1985	177	177	245	226	79
1986	195	180	253	233	83
1987	192	190	265	246	78
1988	215	213	282	264	81
1989	225	229	291	280	80

Source: Bigsten and Ndung'u (1991), Table 2.6.

This pattern is consistent with the Collier and Gunning assessment that rural households face volatile incomes emanating from volatile prices, weather cycles that condition production and volatile export prices and falling terms of trade. But diversification of the sources of income has been a reaction due to this volatility, but also as was shown above, reaction to favourable prices is swift as in the case of coffee prices after the 1975–1977 boom. Thus the conclusion that rural households are exposed to large risks and that their response is diversification within agricultural production and non-agricultural activities seems to support the Kenya case.

The Firms
The modern manufacturing sector in Kenya has its beginning in the colonial period when an economic infrastructure linking Kenya to the world market emerged. Import-export houses were established in Kenya as early as 1905. But these were mainly export of primary commodities and import of consumer goods for the settler population (Bigsten, 2002).

Before the Second World War, only basic manufacturing firms had been established but basically for producing consumer goods for the small domestic market. Most of these firms were agro-industries in nature. But there were others that were processing primary products like soda and cement and producing power as subsidiaries of multinational corporations. This was also the impetus for the Asian community, excluded from farming, to move into the urban centres to establish small-scale industries and trading companies. These firms did not have direct support from the state. After the Second World War, the colonial government introduced tariffs in Kenya to protect colonial markets from foreign competition. This marked the beginning of British firms investing in the East Africa. But the market was limited so that enterprise development was severely limited.

Import Substitution Policy

The introduction of tariffs was a slow start to the deliberate policy of import substitution as a strategy for industrialization. But during the struggle for independence in the 1950s and early 1960s, there was a slow down in industrial investment and substantial capital flight took place. In order to halt capital flight and establish confidence in the independent Kenya in the early 1960s, the government passed the Foreign Investment Protection Act in 1964. On the basis of this Act, foreign firms were given the right to repatriate profits, loans and interest on their loans and part of the proceeds from sale of assets. The government also gave guarantee against any form of nationalization.

In 1965, the government published the *Sessional Paper No. 10 on African socialism and its application to planning in Kenya*. In this sessional paper, the government spelt out its ambition to develop a free market economy where foreign investors were welcome. This was a major deviation from its partners in the East African Community, who were more inclined to socialism. This had the effects of making Kenya a more attractive location for multinationals wishing to invest in Kenya and to take advantage of the EAC market. This paper marked the roots of an effort to deepen the import substitution industrialization policy, which was the industrialization strategy that was being popularized in most developing countries at the time. An International Industrial Protection Committee was set up to consider application from potential investors. This committee considered applications from firms seeking modifications of the structure of tariffs, quotas, duty drawbacks and import licensing. A Foreign Exchange Allocation Committee was also set up to consider all foreign exchange allocation applications and to administer quotas on imports for which limited quotas had been established. The quotas were typically set equal to the difference between predicted local production and local demand. The pattern of quotas was made more restrictive in 1970s when foreign exchange squeeze was more formidable. This was during the first balance of payments crisis in 1970/71 and oil price shocks of 1974 and 1979 compounded the problems.

The balance of payments crisis in 1970/71 led the government to tighten administrative controls in the economy. In 1971, the Capital Issues Committee was set up to vet stock issues in order to cut down on capital outflows and encourage local ownership. This committee also controlled the amount of loans firms would borrow from the commercial banks. In this period also, tariffs went up and import licensing became more restrictive. But this had to spill over to domestic prices and so the government also had to tighten price controls. In 1972, the government also set up a sales tax, but domestic producers did not pay their dues and so the tax fell heavily on imports and became an implicit form of protection. During these years, as well, the government introduced a highly protective policy for domestic producers in the form of No-Objection Certificates. The idea was to ensure that importers would not face competition since they would only import those goods not produced in Kenya, and likewise, domestic producers would not face competition from imports. This also implied that a firm wishing to enter the Kenyan market had to seek "'a no-objection certificate"' from its potential competitor(s) already established in Kenya! These sequences of policy interventions in the 1970s had the undesirable outcome of reducing domestic competition and competitiveness and shifted incentives against export production. The system also ensured a large subsidy to manufacturing at the expense of the rest of the economy, and more so against agriculture.

There were other policies in the regulatory environment that made the operations of firms expensive and checked their growth. These included price controls on final products, interest rate controls, and regulations regarding foreign and domestic loans, foreign exchange transactions and work permits for expatriates, to mention just the major ones. The system of foreign exchange control was so pervasive that firms had to apply for foreign exchange from the foreign exchange allocation committee of the Ministry of Commerce and Industry (including Ministry of Finance and Central Bank) for their imports and travel. Firms had to lodge multiple applications to cushion themselves against future shortfalls and at the same time were forced to keep large stocks of finished goods as well as inputs. They also had to apply for price adjustments, detailing the reasons prices should be adjusted at the factory level, and this would have to be followed through the supply chain to the retail level. Importing firms had to surrender their foreign exchange earnings to the Central Bank within 90 days of the export shipment. This encouraged transfer pricing, and domestic production was very unattractive to local entrepreneurs without international networks and support like the multinationals.

By the end of the 1970s, it was clear that the scope for further import substitution based on simple

assembly – the easy phase – had been exhausted. Demand had slowed down, competitiveness of Kenya exports to regional markets had been severely eroded and the break-up of the East African Community reduced the remaining larger East African market. There was thus a presence of firms in Kenya that were originally established to take advantage of the wider EAC market that was now not accessible. The outcome was low capacity utilization and high unit costs, which compounded the erosion of competitiveness. In the RPED surveys of 1993–1995 it was common to find firms with below 50% operating capacity and yet positive profits. Even the Export Compensation Scheme introduced in 1975 was too weak to reverse the trend of the incentive structure for non-traditional exports. So the decade ended with serious disequilibrium in the economy, but also firms relatively weak in competitiveness and a reduced demand for their products. An outcome of this was the proliferation of an informal sector that catered for basic needs of the low-income households at perhaps more affordable prices.

3.4 The Political Economy of the Growth Performance in the 1960s and 1970s

Kenya was a colony of Britain between 1895 and 1963, and the country therefore inherited an economy whose structure and direction of development were shaped by British colonialism. During this period, social and economic policies heavily favoured British interests, with the country mainly managed as a source of raw materials for British industries and a market for their products (Brett, 1973). After independence, the African elites took over the large farms owned by European settlers. Also, the post-independence government implemented schemes of settlement and registration (initiated during the colonial period) for the smallholders.

As argued above, the Kenya economy performed relatively well in the 1960s and 1970s, although there were large fluctuations owing to changes in climatic conditions, political situations, etc., partly seen in large unexplained residuals. To explain Kenya's relatively good performance, some analysts emphasize the role of the new Kenyan landed elites in securing policy conditions favourable to agriculture, in the context of strong linkages between urban and rural areas, the so-called "'economy of affection"' (Bates, 1989). Urban and rural areas in Kenya were well connected with "affective networks", with resources flowing from urban areas for investment in agriculture.

Among the policies cited for the good performance of agriculture are the expansion of the area under cultivation; lifting bans on African farmers' participation in cash crop production under the Sywnnerton Plan; rise in yields of various products because of the introduction of new technologies; land policy including introduction of private ownership; good exchange rate management; and support by agricultural parastatals, in the context of a relatively favourable international economic system in the 1960s and 1970s (Lofchie, 1989).

During the Kenyatta regime, resources for rural development projects were allocated through competition among different groups that were internally knitted with tight patron–client relationships, so the system was to a large extent meritocratic (Barkan, 1984). Through this political competition for resources, ethnic groups and their coalitions evolved as interest groups. With the ascension of Moi to the presidency in 1978, the competitive resource allocation game became more regulated to ensure the ruling groups won in the public resources allocation game.[9]

The Kenyan agricultural sector did not experience much discrimination in resource allocation in the 1960s and 1970s. In this period, smallholders played a substantive role in agricultural growth. Their marketed production grew rapidly and surpassed that of large farmers in the 1970s in all but a few major crops. While small and large farmers had different marketing arrangements, there is no evidence that the small farms were discriminated against in terms of pricing. Except for cotton and sugarcane, private traders sold all major cash crops through auctions where state intervention was limited. As a result, policy-based regional discrimination through pricing was largely non-existent for most cash crops.[10] Food crops were more regulated on the basis of justification of protection of

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[9] The arguments in much of this section are influenced by Takahashi (1997).

[10] Sugar, on the other hand, was mainly produced by parastatals, with the government setting the prices of raw materials and final output. Similarly, cotton was mainly utilized as input into parastatal textile firms. Both crops were therefore adversely affected by the politics of the time, as they were mainly produced in Nyanza Province. With the fall of Oginga Odinga and the assassination of Tom Mboya in the 1960s, Nyanza Province became

farmers and provision of food security, but farmers were better remunerated than in the typical SSA country.

Agriculture was thus a leading growth sector, accounting for 25.5% of total annual growth between 1966 and 1979 compared with 17.5% for manufacturing, although both sectors were dominated by government services, which accounted for 33.1% of total growth in this period. The relatively good performance of agriculture seems to have had favourable knock-on effects on the industrial sector; it discouraged rural–urban migration and urbanization, and it contributed directly and indirectly to tax revenues and enhancement of food security, hence ensuring macroeconomic stability.

Kenya's manufacturing sector also grew rapidly (Table 9) – at over 9% per annum in the first decade of independence, reflecting the availability of a large market within the East African Community (which collapsed in 1977). The sector was not much protected, however, and therefore did not unduly tax agriculture. Use of tariffs for protective purposes or to raise revenue was constrained by membership to the East African Community. There was therefore no tendency to escalate the tariffs in the 1970s. Kenya also did not depend unduly on import revenues, and hence had less need to depend on import duties. In the 1970s, the import-weighted tariff rate was quite low by African standards (at 16.5%). Politically, this was facilitated by the fact that private firms were largely dominated by non-Africans, with limited political power, even though it is possible that the Kenyatta administration was more urban or industry-biased than its successor.

Table 9: Average annual growth rates of real GDP, 1964–1979(%)

Sector	1964–73	1974–79
Agriculture	4.6	3.9
Manufacturing	9.1	10.0
Finance, real estate, etc	9.8	12.4
Government services	16.9	6.5
GDP	6.6	5.2

Source: Kenya, National Development Plan, 1997–2001

'   Non-bank financial institutions were quite active in the industrial sector, with the proliferation of parastatals in the later years increasing the government's interest in the sector. In 1975, for example, government loans to and investment in commercial and industrial corporations accounted for 7.0% of the central government's development (capital) expenditure.

Another policy instrument pertinent to agriculture and rural areas was the exchange rate. In general, Kenya's exchange rate was relatively well managed . This was partly because of the relatively low inflation rates, before the first oil shock. That shock, however, led the government to introduce regulatory measures to control macroeconomic imbalances, which rendered its response to economic shocks inflexible and encouraged distortions and rampant rent-seeking behaviour from then on.

In the late 1970s, the coffee boom kept inflation high, causing an appreciation of the Kenyan shilling.The commodity boom led to a boom in the financial sector, which also had Dutch disease symptoms and compounded the appreciation of the exchange rate. Notwithstanding this development, over-valuation in Kenya was rather limited compared with other anglophone African countries in the 1970s. In Kenya, the black market premium was kept around 20% and never exceeded 40% before 1990, except in 1972/73 during the forced exodus of Asians from Uganda; and in 1982 (Azam and Daubreé, 1997). The premiums were quite low when compared with those of other anglophone SSA countries about the same period (1975–1979): Tanzania, 224%; Uganda, 853%; Ghana, 335%; Nigeria, 161%; and Zambia, 226%. Taking 1970 as an year when Kenya had both internal and external balances, Mwega (2002) shows that the country registered average misalignment of 7.2% in the 1970s, 6.8% in the 1980s and 8.9% in the first half of the 1990s, supporting the contention that Kenya has on average maintained a fairly good foreign exchange rate policy. On the other hand, Ndung'u (1999) argues that during the crawling peg regime in the 1980s, the Central Bank, in

antagonistic towards the Kenyatta regime, leading to an undermining of the producer margins paid for these products.

determining the crawl, took into account the parallel market rate, an indication of backward indexation. This seems to explain why the premium was low and misalignment was checked.

Kenya's tax base was also comparatively broad by African standards owing to the relatively large industrial sector. Direct taxes accounted for 33.0% of the central government's total recurrent revenue in the 1970s, unlike a typical SSA country that is more dependent on other revenue sources. Direct taxes were therefore far less discriminatory against agriculture. On aggregate, income raised from agricultural activities accounted for 3.4% of the total in 1975. It was also likely that the direct taxation of small farmers was very limited owing to the difficulties in tax collections and the low level of their incomes. The smallholders were subject to agricultural cess, a tax levied on marketed agricultural commodities. This was at the minimal rate of 3% until 1987, and was earmarked for infrastructure investments, for example, rural roads.

The agricultural sector received minimal explicit government subsidies, with subsidies and transfers to entities outside the public administration accounting for less than 2% in 1975. Government loans to and investment in agricultural enterprises were only 2.5% of development (capital) budget in 1975, compared with 7% in the commercial and industrial enterprises.

According to data on government development expenditures, it seems that public investment was quite favourable to the rural sector in the 1960s and 1970s. Public expenditure for capital formation directed to the agricultural sector was far larger than that for the industrial sector. The government and public marketing agencies also supported agricultural production through research and extension, as well as construction of roads and other facilities. This was in addition to a *Harambee* (self-help) system through which many public projects (rural roads, schools, etc.) were implemented.

However, much of the benefit of the good agricultural performance accrued to Central Province. Farmers in the province not only gained from close vicinity to the market (Nairobi) and suitability of natural conditions, they also benefited from better socio-economic infrastructure. The last factor, especially public investment in the 1960s and 1970s, was no doubt due to political power held by people from the province, even though the province was endowed with better socio-economic infrastructure at independence. On the other hand, regional disparities widened, with Nyanza and Western provinces largely discriminated against and most disadvantaged areas neglected.

To conclude, the government in 1965 published a Sessional Paper, *African Socialism and Its Application to Planning in Kenya*, which was to chart the development strategy of the new regime. Although the paper described the development ideology as African Socialism, it was in practice managed capitalism that intended to yield rapid economic growth . The priority was the attainment of rapid growth, with the achievement of social justice through a reduction in unemployment, income inequities and poverty anticipated to be achieved in ways that did not jeopardize this objective.

It is probably true that the government succeeded in materializing its desire in the 1960s and 1970s of achieving relatively rapid economic growth, but this was achieved at the expense of increased income and regional inequalities. As seen in Table 10, income inequality increased to a peak in 1971, but declined the rest of the 1970s, while the poverty levels remained fairly constant over the period.

Table 10: Evolution of income inequality and poverty in Kenya[11]

	Gini coefficient	% Population below poverty line
1964	63.00	38
1967	66.00	40
1969	68.00	40
1971	70.00	42
1974	69.00	40
1976	68.00	40
1977	59.00	n.a.

 Source: Bigsten (1986) and van Ginneken and Park (1984).

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[11] There were no nationally representative surveys before the 1980s and the observations in Table 10 pre-dating 1977 as compiled by Bigsten (1986) were based on tax accounts and poverty rates on wage data, with a poverty line of Ksh1,000 per worker per month. The Gini coefficient for 1977 was derived from a social accounting matrix by van Ginneken and Park (1984).

4. THE 1980S AND 1990S

4.1 The Macro-Growth Performance during the 1980s and 1990s

The C&B Model

In the 1980–1984 half-decade, the growth in physical capital per worker was negative (at -1.3%) while that of education per worker decelerated (to 0.87%), producing a negative growth per worker for the first time, at -0.76%. In the 1985–1989 half-decade, the growth of physical capital per worker as well as education per worker worsened (at -1.9% and 0.73%, respectively), although they are accompanied by some economic recovery. On average, the negative contribution of capital per worker dominated the positive contribution of education, so that TFPG exceeds actual growth in the 1980s.

In the 1990s, the growth in physical capital per worker and growth in education per worker worsened further (-2.06% and 0.43%, respectively), leading to a negative growth per worker (-1.83%). The combined contribution of these factors to growth per worker is negative, so that TFPG exceeds actual growth.

According to Martin and Wasow (1993), the failure to implement adjustment policies following the collapse of the coffee boom and the East African Community in 1977 undermined private investment. Though Kenya experienced greater macroeconomic stability than other SSA countries, her fiscal performance both during and after the 1970s left a lot to be desired. The failure to control current expenditure adversely affected public investment in infrastructure.

Similarly, in the 1980s, the low interest rate policy was changed and the rates were frequently adjusted upwards in an effort to maintain them positive in real terms. They were fully liberalized in July 1991 to allow them to vary with the demand and availability of loanable funds. A major concern through the 1990s was the high level of interest rates, which have been pegged on the treasury bill rate, which has remained high as the authorities have implemented a tight monetary policy. This also reflects the oligopolistic nature of the banking system, which is dominated by four banks that control four-fifths of total deposits. These banks focus on short-term lending to finance commerce, mainly foreign trade. As argued by the 1997–2001 Development Plan:

> the short-term nature of their own corporate interests are *[sic]* in conflict with national interests which require longer term commitments and a better appreciation of the needs of the Kenya economy. Their policies of concentrating on a small corporate clientele have implied indifference or even hostility to small savers and borrowers...

The high interest rates crowded out the flow of real credit to the private sector and imposed pressures on balance of payments and the availability of foreign exchange.

Overall during the 1980s and 1990s, growth of physical capital per worker was negative while human capital accumulation slowed, dragging down the performance of the economy. There was also a substantial decline in TFPG during this period (except in 1985–1989), attributable to a slowdown in accumulation of human capital and a turning inward of the Kenyan economy (Azam and Daubreé, 1997).

The Hoeffler Model

As in the case above, there is a close correlation between the investment rate and growth per capita, with the half-decadal Hoeffler data showing both decreasing in the 1980s, per capita growth to 0.137% in 1980–1984 and -1.37% in 1985–1989 (so that the 1980s was a lost decade in per capita growth terms), and investment to 15.08% in 1980–1984 and to 13.65% in 1985–1989. As in the other episodes (and in relative importance), the negative contribution of initial income in explaining absolute per capita income (-1.031%) is compensated by the contribution of population growth (1.011% – in this case, the variable's negative coefficient is offset by a negative variable, ln(n+0.05)); the contribution of the investment ratio (0.650%); and the contribution of educational attainments (0.014%).

In the Hoeffler model, the predicted Kenya-HPAEs economic performance gap is still negative, but small (-0.04%), with the positive impact of initial income (which is substantially larger at 0.24%) largely offset by that of the investment ratio (also substantially larger at -0.16%). The Kenya-HPAE

gap from educational attainments is substantially reduced, however, as educational attainments increase significantly in the 1980s (from about 2.2 years in the 1970s to 3.4 years in the 1980s). There remains a relatively large negative unexplained gap (-0.23%), further widening the Kenya-HPAE gap.

The 1985–1989 half-decade finds the predicted differential between Kenya and the HPAEs'' economic performance remaining small (-0.02%), explained by the same factors as in 1980–1984. There is a relatively large negative unexplained gap (-0.18%), so that Kenya under-performs HPAEs.

The N&O Model

In general, the model shows Kenya benefiting from the positive convergence effects of a low income throughout the study period, with the Kenya-HPAEs gap increasing in the 1980s and 1990s to 2.3% and 2.6%, respectively. Owing to a relatively low initial life expectancy relative to HPAEs, this caused a relative per capita growth loss of 0.7–0.9% in the 1980s and 1990s.

The high dependency ratio relative to HPAEs also caused a growth per capita loss that increased to 2.30% in the 1980s and 1990s. Similarly, the country suffered from relatively low growth in potential labour force participation, resulting in a loss in per capita growth, which declined from the 1970s to about 0.39% in the 1980s and 1990s as population growth declined.

The N&O results show terms of trade shocks had relatively small differential impact on growth. This accounted for a loss of 0.013% in 1980–1984, a gain of 0.004% in 1985–1989 and a gain of 0.031% in the 1990s. The country was also disadvantaged by the poor performance of trading partners. In the 1980s, the loss was about 0.9%, this decreasing to 0.7% in the 1990s. Last, the country's per capita growth benefited from access to the sea compared with SSA in general (by a margin of 0.3–0.5%) in the 1980s and 1990s, but this was not the case with HPAEs. Overall, the combined base variables disadvantaged Kenya vis-a-vis HPAEs by a margin of about 2.35% in the 1980s, this declining to 0.89% in the 1990s.

Among the policy variables, both inflation and the black market premium were relatively unimportant in explaining the per capita growth in Kenya vis-a-vis SSA and HPAEs. When compared with the HPAEs, the per capita growth loss from inflation increased to 0.020% in the 1980s and to 0.060% in the 1990s. Similarly, the black market premium effect averaged 0.098% in the 1980s and 0.120% in the 1990s.

With respect to fiscal policy, while Kenya did better that SSA in 1980–1984, the relatively large government expenditure ratio vis-a-vis HPAEs' resulted in a per capita growth loss of about 1% in the 1980s and 1990s. Finally, political instability was relatively unimportant in explaining differential growth. Compared with HPAEs, while the differential loss averaged zero in the 1980s, it was 0.041% in the 1990s.

In 1980–1984 half-decade, the predicted differential between Kenya and HPAEs gets wider (to -3.82%). There is a relatively large negative unexplained gap (-1.35%), further widening the Kenya-HPAE gap. In the 1985–1989 half-decade, the differential between Kenya and HPAEs is reduced (to -3.06%). There is a relatively small negative unexplained gap (-0.19%), further widening the Kenya-HPAE gap. For the first time, labour growth is an advantage for Kenya compared with the sample of developing countries, while policy variables are now a disadvantage Kenya.

The period 1980–1984 was characterized by various adverse external and internal shocks, global recession, and reduced external capital inflows following the 1982 debt crisis. It was also marked by the inability to satisfy IMF credit ceilings and government borrowing conditionalities, leading to the cancellation of a number of programmes until 1983 when for the first time an IMF programme was fully disbursed. This seriously affected both development and investment expenditures, which relied more on external financing. On the domestic front, the weather failed twice. In 1980, failure of the long that in some parts of the country led to serious shortage of food that required large imports. The 1984 drought was worse: it caused a drastic reduction in incomes, and hence government revenues, and entailed large food imports. Overall, real government expenditure in 1980–1984 grew by 3.0%.

In 1985–1990, economic growth was relatively rapid, explained at least partly by the windfall in income resulting from an increase in coffee and tea prices and a decline in petroleum prices. As with the 1976/77 beverage exports boom, the government adopted a pro-cyclical policy and increased public expenditure more than the increase in revenues despite the promises to the contrary by the Finance Minister in the 1986/87 Budget Speech: "By not spending our windfall incomes right away, we will stabilize the economy, keeping it close to a gradually rising trend of economic growth".

Efforts by the government to keep down the growth of its spending in 1985–1990 were not very successful. In fact, there was continued growth in government expenditure. Current expenditure increased by about 30.3% compared with 23.2% increase in current revenue, leading to a substantial widening of the current account deficit. The growth in recurrent expenditures was aggravated by a large increase in capital expenditure (development expenditure and net lending) of 70% in this period. During the period, major development activities were undertaken in education, health and defence.

In the 1990s, terms of trade shocks and labour force growth advantage Kenya relative to HPAEs, resulting in a reduced predicted differential between Kenya and HPAEs (at -2.20%). For the first time, policy variable account for the bulk of this predicted performance differential, mainly government expenditure ratio (-1.09%) and to a lesser extent, the black market premium (-0.12%). There is a large negative unexplained gap (-4.35%), however, further widening the Kenya-HPAE gap, with Kenya under-performing HPAEs. Overall, in the 1980s and 1990s, Kenya's performance was quite poor, so that the country under-performed both SSA and HPAEs.[12]

4.2 Markets and the Growth Process during the 1980s and 1990s

The 1980s are characterized by economic reforms to help markets to work better, the structural adjustment policies. But the controversy surrounding these policies has tended to mask the broad goals and benefits, mostly due to the conditionalities that were attached to them. In the end, their slow implementation and at times reversals, meant that they did not achieve their intended goals and they do not seem to have worked well, especially for the key markets in Kenya, at least in this decade.

To place Kenya's entry into structural adjustment programmes (SAPs), we start with the history of controls in the early 1970s that were an easier response to deal with the repercussions of expansionary policies as argued earlier. To put the policy environment intended to help markets and market developments in Kenya into perspective, we review the broad spectrum of structural adjustment policies and their intended effects on key markets. These are policies geared towards enhancing competition in the economy and others that were aimed at institutional reforms. Whereas the market reforms started in the 1980s with a slow pace and then accelerated in the 1990s, institutional reforms were a phenomenon of the 1990s.

Competition-Enhancing Policy Reforms
This category of reform measures was intended to enhance the competitiveness of Kenyan products in both domestic and external markets. examples of the reforms in this category include trade liberalization and exchange rate reforms.

The reforms related to foreign exchange in the early 1990s included introduction of foreign exchange bearer Certificates (Forex-Cs) in October 1991, introduction of export earnings retention schemes for exporters in 1992, merging of the official exchange rate with the inter-bank foreign exchange rate, removal of exchange controls on current account transactions and capital account transactions in 1993. These reforms had the overall effect of making the foreign exchange market freer than in the first and second phases of the reform programme. The 1994 Budget Speech suspended all regulations pertaining to the Exchange Control Act, before parliament finally repealed the Foreign Exchange Act in December 1995. An important reform in the foreign exchange market was the move to allow legislation of foreign exchange bureaux in 1995 and in the later years individuals were allowed to hold foreign exchange accounts.

Removal of foreign exchange controls and liberalization of the exchange rate have considerably eased the constraints hitherto imposed on the country's productive sectors, especially manufacturing and agriculture, by acute shortages of imported inputs due to non-availability of foreign exchange when required. This had resulted not only in highly frequent interruptions in many firms' production

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[12] The three models utilized in the growth analysis did not incorporate the impact of income inequality on economic growth. Ali and Elbadawi (1999), for example, estimated an endogenous growth model that controlled for feedback Kuznets effects and found income inequality to be negatively and robustly associated with per capita real economic growth. The estimated Gini coefficient parameters was stable at -0.075, consistent with other estimates in the literature. From their estimates, Ali and Elbadawi postulate that about 22% of the decline in economic growth in Kenya between 1975–1996 and 1965–1974 was caused by increased inequality during that period.

schedules but also to chronic under-utilization of installed capacity. One of the beliefs in Kenya was that industrial growth was hampered by foreign exchange availability (see Mwega, 1993). In so far as controls in foreign exchange persisted, available imported inputs were a function of available foreign exchange allocations. But once this constraint was removed through liberalization, the determination of import demand reverts to its fundamentals, with foreign exchange availability no longer being a significant determinant although it may help to improve transaction costs – which were hitherto quite prohibitive. In addition, as we have argued earlier, in order to hedge against future foreign exchange allocation shortfalls and their own supplies of inputs, firms engaged in two forms of mechanisms First, they had multiple applications for foreign exchange and large inventories of inputs as well as finished goods with unit cost implications, secondly, for exporting firms transfer pricing was pervasive.

External Trade Liberalization. Liberalization of Kenya's external trade was one of the areas that received greater attention in Kenya's three phases of reform programme. Trade liberalization included removing quantitative restrictions (QRs), reducing tariff levels and adopting a more flexible exchange rate regime. Import liberalization made considerable progress. Between 1980 and 1985 the share of items that could be imported without any restrictions rose from 24% to 48% of total value of imported items. The average tariff rate was also reduced by about 8% over the same period. An improved import licensing system that had restricted and unrestricted schedules was established. In 1988, import liberalization was taken a step further when the import licensing system underwent significant improvements. The new system created five schedules in order to increase strictness in licensing requirements. By July 1991, imports requiring licensing were restricted largely on health, security and environmental grounds.

Foreign Exchange Transactions and Exchange Rate Policy Reforms. The market for foreign exchange was severely constrained prior to this period. The aim was to control foreign exchange movements and thus support a fixed exchange rate regime. The removal of foreign exchange controls and liberalization of foreign exchange transactions led to a floating exchange rate regime in the 1990s, but in the 1980s, the exchange rate regime was made flexible by adopting a crawling peg regime. Of course this led to a change in the inflation profile since a nominal anchor that could tie prices down, the fixed exchange rate, was lost. But one disadvantage with this new regime was that the market was thin and could be shaken by a dominant player. Nervous about a volatile exchange rate and a volatile interest rate structure, the Central Bank in the early years chose a high interest regime to stabilize the exchange rate but kept shifting this policy regime also. It appears that the exchange rate was mostly a "managed" float (see Ndung'u, 1998, on the policy dilemma).

Domestic Trade Liberalization. Price controls had extended to most of the manufactured and agricultural products by the end of the 1970s. But from 1986 until the beginning of 1995, domestic price controls for virtually all commodities were. Between 1983 and 1991, the number of commodities whose prices were controlled under the general order dropped from 56 to 6, while those controlled under specific order fell from 87 to 29.

By September 1993, only petroleum products and some pharmaceutical products remained under price controls under the general order, while in the specific order only three items remained. By July 1995, the maize market, hitherto the most resisted reform and the central focus of donors, and the petroleum/oil sector, had been completely liberalized.

Financial Sector Reforms
Kenya's financial sector reform programme came in the 1980s, but in the 1990s it had focused on both market and institutional reforms in an attempt to remove distortions in the credit market. Positive real interest rates, the target of the market reforms, were aimed at enhancing efficient utilization of available credit resources. Institutional reforms related to the financial sector focused on strengthening the Central Bank to enable it to undertake its inspection and regulatory roles more effectively.

The Banking Act was amended in 1989 to facilitate this. In addition to strengthening the Central Bank's regulatory and supervisory roles, other areas affected by the amendments included: introduction of stricter licensing requirements on financial institutions, raising of the minimum capital

requirements, the establishment of the Deposit Insurance Fund, new guidelines for granting of loans and minimum disclosure requirements, and increasing penalties for non-compliance. Enforcement of the banking regulations even after the amendment of the Banking Act continued to be hampered by political forces, leading to a new banking crisis in 1986 when 2 banks and 20 non-bank financial institutions (NBFIs) were in liquidity problems. Financial sector reforms in the country in the latter part of 1980s and early 1990s emphasized tight credit control to suppress inflationary tendencies, especially through adjustments of cash ratio requirements for the commercial banks and raising of interest rates. The political factors seem to have persisted. In 1998, several banks and financial institutions were in financial crisis and placed under statutory management, while others were liquidated.

A series of reform measures were implemented in the 1990s, aimed at converting the sector to a dynamic and growing mode. For example, with economic liberalization, the Central Bank is moving away from using direct instruments of monetary control such as credit ceilings and guidelines, interest controls and ceilings on lending rates, and fixed exchange rates to more indirect instruments like open market operations, flexible exchange rates and market-determined interest rates.

There have been complaints from the business community that the tight monetary policy had contractionary effects in their operations because of reduced lending by commercial banks. For example, the cash ratio was increased from 10% in October 1993 to 20% in March 1994 and subsequently reduced, following successful reduction of money supply through limits on CBK credit and open market operations, to 18% in September 1994 and further to 13% in 1998. The problem was aggravated by the high interest rate on treasury bills that the government had used to mop up excess liquidity. This has deprived the private sector of credit facilities as resources for investment were being increasingly put in government treasury bills at a time when there was no secondary market for government securities. One of the disadvantages of government floating a commercial paper is that it hampers the development of the financial sector and the intermediation process. Commercial banks will opt for a default free commercial paper, sometimes with a higher interest rate, and relegate their financial screening role to the background. These factors had contractionary effects in the economy's production and employment creation. In addition, the usual crowding-out effects have been used to explain the developments in the credit market. This is because the central government domestic borrowing has tended to compete for credit with the private sector and with low demand on long term loans has skewed the market to one where government commercial paper dominates and leave the private sector passive to these credit competition developments and investment choices.

Financial sector reforms, and in particular the amendment of the Capital Markets Authority (CMA) Act, have further eased restraints on foreign ownership. Established in 1990, the CMA attempted to liberalize the financial and capital markets in the country. As a result of these efforts, trading in the Nairobi Stock Exchange (NSE) opened up on a limited scale to foreign investors in January 1995. In June 1995, the limit on portfolio investment in Kenyan companies quoted on the NSE by foreigners was raised from 20% to 40% for the corporate group of investors and from 2.5% to 5% for individual portfolio holdings. The investment environment has thus undergone significant changes aimed at encouraging local and foreign investments.

Labour Market Reforms
Kenya's labour market was for many years highly regulated, with wage guidelines, approval mechanisms for redundancies by the Ministry for Labour and the government's involvement in the elections within trade unions. There has been widespread belief by the Kenya authorities for most of the post--independence periods that regulation of the labour market was indispensable for rapid economic development and improvement of the welfare of the workers. It was, for example, argued that wage guidelines were essential to ensure that labour costs remained low not only to attract foreign investments but also to encourage firms to use labour-intensive technologies to help create more employment opportunities. Government intervention in fixing minimum wages was in the same way regarded as an important way of protecting the interests of the workers. It was argued that high levels of unemployment created a conducive environment for employers to exploit unskilled workers through underpayment. As we argued earlier, however, the rate of interest was maintained low and incentives for investors made capital even cheaper than labour so that this goal of labour-intensive technologies was never achieved

The labour market has undergone considerable liberalization in the 1990s. By July 1994, the Industrial Court had allowed trade unions to seek full compensation for price increases without hindrance through wage guidelines. As a result of this liberalization, various laws have been amended to allow firms to discharge redundant workers more easily when necessary. Thus, owing to relaxation of the redundancy declaration procedures in 1994, enterprises can declare workers redundant without having to seek the approval of the Minister for Labour and Manpower Development. The enterprises are required to simply notify regional or district labour officers of their intention. The removal of wage guidelines makes it possible now for firms to negotiate and change the level of wages on the basis of productivity and performance rather than on the basis of cost of living indexes as was the case before.

Reducing Barriers to Foreign Ownership and Investments
A free exchange regime in the 1990s has facilitated repatriation of dividends by foreign investors. This, together with the removal of barriers to foreign commercial private borrowing, have provided a more enabling environment for foreign investors. Furthermore, the establishment of export processing zones (EPZs) allowed unrestricted foreign ownership and employment of expatriates as well as control over foreign exchange earnings in addition to extensive tax advantages.

Institutional Change Oriented Policy Reforms
Institutional reforms are important for the performance of markets because they improve the environment in which markets operate in and, in addition, define the reward and the incentive system. There has been a heavy presence of government in the market through the presence of parastatals that have been involved in production and distribution, on the one hand, and in commercial and banking operations, on the other hand.

Parastatal Reform Programme. Very limited parastatal sector reforms had been implemented before the 1990s. By 1990, the Kenya government owned equity in about 250 commercially oriented enterprises, 60% of them in manufacturing and mining, 18% in distribution, 15% in finance, and the rest in transport, electricity and other services. While the parastatal enterprises accounted for a large share of public sector employment, they also became a major source of budgetary deficits, as the majority of them depended on subsidy by the central government. Many of them were overstaffed and mismanaged.

These factors provided the rationale for the parastatal reform programme, whose broad objectives were to reduce the financial burden on the Treasury, and improve the efficiency of service delivery and enhance opportunities for private sector investment. The reform programme had two main components: restructuring strategic enterprises to raise their productivity and efficiency, and privatizing the non-strategic parastatals.

While the parastatal reform programme has been generally slow, some considerable progress has been made especially after 1994. The main developments in this area are the following: First, in late 1991, government identified 207 enterprises for divestiture, 10 of which were listed for privatization by 1995, and 33 strategic enterprises whose ownership the government intended to retain. Second, the Executive Secretariat and Technical Unit (ESTU) was established in May 1992 to implement the sale of parastatal enterprises. Third, by 1997 several of the non-strategic parastatals had been privatized or liquidated.

Public Sector Reform Programme. Control and reduction of public expenditures has been a major objective of most of the reform measures adopted under the SAPs, such as budget rationalization, civil service reform, parastatal sector reforms and introduction of user charges. But this was slow until the late 1990s. By 1995, expenditure on most recurrent items had been reduced sharply; allocations for operations and maintenance expenditure had risen, while core projects received about 75% of the development resources. Civil service reform was a crucial area for reducing government spending especially in the third phase of the reform programme. The programme was instituted in April 1992 with the objectives of improving the quality of public service, reducing government spending, raising the productivity of the work force and rationalizing the staffing levels. The programme had the target of reducing the 272,000 civil servants at an annual rate of 6% for five years, with emphasis on

unskilled and semi-skilled categories of civil servants.

By October 1994, the number of civil servants had been reduced from 272,000 to 248,057 mainly through the voluntary early retirement scheme (VERS). Staff reductions constituted the first stage of the civil service reform programme, while the second stage emphasized improvement of the performance of the service through increased training and incentives to the remaining work force. Since the initial voluntary retirement, no other significant developments have taken place in the civil service reform programme.

Social Sector Reforms. Reforms in this area concerned curtailment of government subsidies in the social sectors, both to improve performance and to raise revenue to finance more equitable efficient intra-sectoral investments there. Health and education were the sectors most affected by the cost-sharing reforms implemented. The reforms involved raising or introducing fees at government health and education facilities. In the case of the health sector, the fees were first introduced at government hospitals and health centres in December 1989. The fees were suspended by the government within a period of nine months, however, because they engendered a substantial fall in attendance at government health facilities.

The expected quality, efficiency and budgetary effects of fees did not materialize, but because of stringent budgetary constraints in the early 1990s, the government was unable to continue offering free medical care to the population. The fees were reintroduced in the public health system in April 1992. In this second phase of the cost-sharing reform the fees were for treatment, and not for registration as in the first phase. During the first phase, the fees were paid irrespective of whether medical care was received. Moreover, in the second phase, the re-introduction of fees was gradual, with fees being first requested in government hospitals before being imposed in government health centres. Both in 1989 and in 1992, patients were exempted from paying fees at government dispensaries.

Following the introduction of fees in government health facilities in 1989, attendance at government clinics fell by 40%. The HIV/AIDS pandemic, whose effects began to show up strongly in the 1990s in the form of AIDS related deaths and morbidity, must have adversely affected the human capital of the population and hence the productivity of both labour and capital. Since the productivity effects of human capital in the economy are felt after a substantial time lag, any growth reductions owing to decreases in human capital in the 1990s will probably be fully felt in the next half-decade (2001–2006).

The education financing reforms involved increasing fees in secondary schools and requiring pupils in primary schools to buy books. At both primary and secondary school levels, pupils contributed substantially to the construction of classrooms and school equipment. The effects of cost-sharing reforms in the social sector on human capital accumulation in the country (and hence on growth) have not been assessed, but cost-sharing in education was also associated with declines in school enrolment, especially among girls.

The Growth Performance: What Lessons Can Be Drawn from these Market Reforms?
Although the country has been in a deep recession since the late 1990s and a turn-around may not be possible with the investment pause and widespread poverty, there are several important stylized facts about Kenya's economic performance and market reforms since the 1980s.

First, economic recovery has been disappointing, as real per capita GDP growth has only marginally improved. Second, economic management has tended to be extremely short term with conflicting goals and outcomes characteristic of a policy dilemma. For example, in the liberalization period, 1993–1997, a phenomenon that arose was short-run speculative capital flows responding to interest rate differentials. In this period, the authorities encountered a policy dilemma due to the pursuance of conflicting goals and objectives in exchange rate management and accompanying policies. The policy dilemma relates to targeting a competitive exchange rate and low inflation in a floating exchange rate regime, with a high interest rate regime and open capital account. In order to pursue these goals, the authorities on occasions intervened in the foreign exchange market to stabilize (and sometimes defend) the exchange rate because of volatile capital flows and then had to follow this action with sterilization of the capital flows in the money market, thereby raising domestic interest rates. The result has been that the exchange rate has been stabilized in the short run but at high interest

rates, thus jeopardizing the goals of increased domestic investment and chances of economic recovery.

Third, in 1998, the government realized that its own borrowing kept interest rates artificially high. The government, through the Central Bank, decided to sell fewer Treasury bills than demanded by the financial sector (the main dealers in T-bills) at auction. Owing to excess liquidity in the financial sector and low investment, the weaker banks started suffering with their profit margins squeezed. The result was a banking crisis, which further depressed private investment.

Fourth, one of the key factors behind this rather poor performance or precarious recovery is the slow response of private investment to macroeconomic stabilization and realignment of prices. This has been worsened by high domestic interest rates and a shift into trading in lucrative financial instruments, the government commercial paper. Even when interest rates on commercial paper have come down, the alternative investments – with uncertainty in the social-political environment – have been lacking. Investors have tended to hold back investment plans in fixed irreversible assets.

Fifth, related to the above is the existence of pervasive risks, which are both policy and politically induced. In this case, a coordination problem has emerged where the would-be investors exercise a waiting option until the front-loading of investment returns is sufficient to compensate them from the risk of investing or repatriating capital. Where investments have come they have tended to be short term in nature, and mainly in financial instruments and commercial activities rather than irreversible fixed investment. This ensures that the recession gripping the economy lingers on.

Sixth, the existence of a large external and domestic debt has given rise to a debt overhang problem that has adverse effects on investment and growth. This is because investors expect current and future taxes to be increased to effect the transfer of resources abroad or to pay for domestic debt. In addition, there are the usual crowding-out and liquidity arguments. The problem is that private investors exercise a waiting option in their investment decisions just as in the risky environment argued above.

Finally, domestic debt has affected the domestic interest rate structure, enlarged the fiscal deficit, and thus affected financial development, investment and savings responses – and hence negatively affected output growth

Assessing the Impact of Financial Liberalization Process. Financial liberalization is expected to achieve positive real interest rates to stimulate saving and investment. Consequently, this would result in high economic growth. The financial sector is expected to develop, deepen and achieve efficiency in the intermediation process as the system attains competitiveness. Financial deepening, proxied by the extent of monetization in relation to economic activity, the ratio of broad money supply (M2) to GDP, shows an increase. This reflects an increased accumulation of financial assets and liabilities in the economy, reflecting growth of the financial sector or increase in the monetization in the economy. The ratio of M2/GDP increased from 31.6% in 1989 to an average of 37.7% in the reform period (1990–1995). In M2, there are the liabilities of the commercial banks. Thus, its growth reflects the growth of commercial bank liabilities from either the increased accumulations in the economy, or shifted liabilities from other institutions. If the latter is substantial, then an increased M2/GDP ratio will not necessarily reflect financial deepening. During the 1990s, the sector experienced shifts in liabilities as the NBFIs converted to commercial banks, reducing the ratio of NBFI deposits to commercial bank deposits from 54% in 1990 to 16% in 1996. Thus, the observed M2/GDP ratio reflects only a marginal change (if any) in financial deepening.

Mobilization of Savings and Investments. Gross domestic saving has improved marginally. This is because in the liberalization period, the economy was in a recession. Savings increased from 13.1% of GDP in 1989 to 17.95% in 1990–1995. This resulted from the prevailing negative real deposit rates that discouraged savers and the high inflationary pressure that captured more of the consumer surplus. Per capita GDP declined; gross investment declined from 23.4% of GDP in 1985–1989 to 20.5% in 1990–1995, with a peak in 1995 of 22%, the year the country was edging out of a recession before plunging back in 1996.

Decline in investment was associated with a decline in demand for credit and the decreasing share of domestic credit to the private sector. This is somewhat explained by the high lending rates discouraging borrowing and the increasing share of government deficit financing from the banking

sector. In addition, economic and political uncertainty forced economic agents to hold back investments in irreversible fixed assets and shift to commerce and short-term financial assets. High interest rates also resulted in distressed borrowing, so that bank portfolios were dominated by high incidence of non-performing loans. Banks have also shown a shift for quality assets with an increased holding of short-term government papers, which are default-free instruments. This also shows a movement towards less and less intermediation hampering financial development.

Interest Rates. Interest rate liberalization was implemented when the financial system was still under-regulated and under-supervised. This created over-competition in the system and encouraged weak financial institutions to invest in riskier assets, adding to their already severe financial difficulties (World Bank, 1992). After the liberalization, the country experienced modest increases in the levels of interest rates and positive real interest rates in 1991. However, the rates turned negative in real terms immediately after, with increasing inflationary pressure in 1992. As such, interest rates in the formal sector failed to reflect the returns offered in the informal financial sector and especially those obtained by speculation in the foreign exchange market. Thus the interest rates were said to be non-market determined (World Bank, 1992). This was attributed to the government failure at the time to liberalize foreign exchange transactions and the bond market. There were also conflicts of this policy with parallel and competing reforms like trade liberalization, shocks hitting the economy, and secondary financial constraints (repression) that prevented adjustment and linked directly to the behaviour of the Central Bank and lack of fiscal adjustment.

The massive sale of T-bills in 1993 was achieved by offering high interest rates. As a result, other short-term interest rates increased. The real interest rate differential increased and this resulted in inflows of short-term capital. Although further efforts in tightening the monetary policy achieved low inflation, short-term interest rates remained at high levels. The interest rate was thus used as an instrument to stabilize the exchange rate and contain domestic inflation and was also influenced by domestic public debt. The outcome of tight money on interest rates has not at all been clear. It may well reflect the tight monetary policy paradox, which instead achieves low inflation, high interest rates and a protracted recession in the economy; this seems to have been the experience in Kenya since the late 1990s.

4.3   Private Agents and the Growth Performance during the 1980s and 90s

Risk and Uncertainty Facing Smallholders in the 1990s
Post-independence Kenya has been marked by relative political stability and peace. Unlike most countries in sub-Saharan Africa, Kenya has neither been under military dictatorship nor experienced any major internal strife that could be classified as a civil war. Until the early 1990s, internal conflict was virtually non-existent, save for the banditry activities in the North-Eastern Province and near the Somali border. During the 1990s, Kenya experienced a number of what has come to be referred to as "ethnic clashes". These clashes have neither translated into civil wars nor lasted for extended lengths of time. Our interest in the clashes stems from their impact on smallholder farmers and small businesses, as well as their contribution to the growth of the informal sector in urban centres.

To a large extent, the ethnic clashes were localized in limited geographical areas and did not have significant impact on life in other parts of the country. Furthermore, the clashes never involved rebel groups fighting to dislodge the government (see Kimenyi and Ndung'u, 2002). Thus conflicts are a recent phenomenon in Kenya. During last decade and coinciding with the introduction of competitive politics, sporadic incidences of violence have been experienced that targeted certain ethnic groups. Starting September 1991, organized bands of arsonists calling themselves ""'Kalenjin warriors"' unleashed terror on Luo, Luhyia, Kikuyu and Kisii in the Rift Valley region. They targeted farms populated by these ethnic communities, looted and destroyed homes, drove the occupants away, and killed indiscriminately. The violence resulted in displacement of thousands of people from their farms. Similar incidents erupted in Mombasa and Kwale districts in Coast Province in August 1997. The violence in the Rift Valley and Coast is of particular significance because it was widely viewed as constituting a serious threat to the existence of a united Kenyan nation, the rule of law, and the institutions of private property, contract and the market economy. The violence appeared senseless and to date continues to defy explanation. But as far as this study is concerned, we look at the factors

that were behind these clashes in terms of how they affected economic agents and the overall growth.
What were the causes of the violence?

Ethnicity. The most commonly cited cause of the violence in Kenya is ethnic cleavage. The country is ethnically quite diverse, with at least 42 distinct tribal groups. It has been established that ethnic identification in Africa is very strong (Kimenyi and Ndung'u, 2002). Collier (2001) for example, observes that the tribe and kin groups are the most powerful levels of social identity. Tribal identification has been demonstrated to be an important way of solving collective action problems. In particular, ethnic based institutions have a comparative advantage in solving prisoner's' dilemma problems (Kimenyi, 1998). On the other hand, however, ethnic groups can be notorious for imposing costs on non-members. The implication is that ethnic clashes in Kenya were purely the result of "ethnic hatred". But this "'hatred"' must be qualified. It has its origin in fear of the outcome of a voting pattern when some of the ethnic groups dominate a particular geographical area out of migration and land ownership rather than being natives of the region. Thus, the outcome was to distort the smallholder production and pattern of settlement. The smallholder production boom in the 1970s and the 1980s was mostly spearheaded by settlement schemes in the Rift Valley. An important aspect here, besides distributing production, is to create uncertainty in smallholder production that is beyond the markets, thus political uncertainty

Land. Kenya has a "land question", which is perhaps the most controversial issue in the country. There is consensus that this land question lies at the heart of the ethnic clashes (Kimenyi and Ndung'u, 2002). It has been observed that the violence resulted from the elite's appropriation of the land issue to fight those opposed to them by reactivating demands for territorial land claims in the Rift Valley and the Coast.

Land reform policies in Kenya have been based on free market models emphasizing individualized freehold rights over customary tenure in the belief that this would encourage investments in farm productivity, encourage the emergence of land markets that would transfer land to more efficient farmers and provide farmers with collateral for raising credit (Kimenyi and Ndung'u, 2002). There is mounting evidence that the economic and social benefits of such programmes are doubtful; they may also stir up dormant conflicts.

The dynamics of land ownership in Kenya, as investigated under a theory of conflict based on grievances arising from land alienation, show that Kenya's land is categorized as government land, freehold land and trust land. Government land refers to all land that was vested in the crown during the colonial period (Kimenyi and Ndung'u, 2002). On independence, the land became vested in the government of Kenya. The Government Lands Act (cap 280) spells out how the government can dispose of this land and empowers the President to make grants of un-alienated government land to any person. . One of the three ways in which this can happen is through offering land for agricultural purposes. The act says that the Commissioner of Lands may under the direction of the President cause land available for alienation for agricultural purposes to be surveyed and divided into farms and that the leases of such farms shall be sold by auction. It has been observed that local communities are often disadvantaged by such sales, as most cannot afford the purchase price. The disposal therefore dispossesses some communities of land that was previously under their occupation or use. This historically has given rise to strong resentment.

Given such resentments, a theory of conflict based on land grievances would find support in a positive correlation between instances of violence and the amount of government and trust land that has been alienated. The most important contribution to this discussion is to show the risk and uncertainty revolving around the main (and mostly the only) productive asset for the smallholders and the loss of productive means by smallholders in the 1990s and the current. But one major factor to explain the orgy of violence and to compound the uncertainty remains; this is related to competitive politics and political cycles.

State Capture. It is doubtful that land and inter-ethnic hostilities alone or together could have led to the kind of atrocities visited on the smallholders in the Rift Valley. The central dynamic of the violence appears to have been to maintain the political and economic status quo (Kimenyi and Ndung'u, 2002). It is the political space that was and continues to be the object of the contest in the

various areas rocked by violence. This explains the outbreak of violence in the run up to the general elections in 1992 and 1997.

Public choice scholars have attributed ethnic conflicts in Africa to the failure of political institutions to accommodate diverse interests. They argue that the lack of political models to effectively deal with diversity in centralized states where competition for resources and power is prevalent leads to conflicts (Kimenyi and Ndung'u, 2002). Kimenyi and Ndung'u (2002) further argue that the violence was part of a struggle for the capture of the state. The political elite mobilized to maintain a comparative advantage in the control of the structures of government and in the competition for resources. Whether these explanations offered by Kimenyi and Ndung'u (2002) are adequate or not, the outcome of the political and ethnic violence affected the smallholders negatively and scared existing and potential investors and this explains the outcome of the growth process and profile in the 1990s to the current period. The immediate effect was on food security, since most of the smallholders were in food surplus regions. The second and most pervasive aspect was to destroy the investment in land and perhaps the land market. This would destroy the basis of competitive production in smallholder agriculture, which has been responsible for agricultural growth in Kenya.

In summary, the analysis of the emergence of ethnic violence and its explanation has been provided to explain the breakdown of government trust in the smallholder economy in the potential agricultural areas in Kenya. This explains some part of the observed recession in the country and an increasing number of the poor below the poverty line and compounds other factors analysed at the micro level. One direct outcome of the ethnic clashes was to push the displaced youth to the informal sector in the urban areas. This, as well, partly explains the rising poverty in both urban and rural areas, currently standing at 56% of the population below the poverty line. The proportion of the rural population below the poverty line is certainly higher than the national average.

Firms in the 1980s and 1990s: The Structural Adjustment Phase
This phase presents a turning point for industrial policy in Kenya as well as economic management. There were several policy out-turns, focusing on tariff reforms, dismantling price controls, privatization and reform of parastatals, stepping up export promotion measures, improving the environment for investors, and focusing on the informal sector. But there were also tensions with donors that produced the undesirable outcome of policy reversals, which increased risk for domestic firms. The situation continued in the 1990s and the results were a decline in investments and, in the middle of the 1990s, massive capital flights. In order to paint the picture appropriately, we look at the survey evidence from RPED forhow firms responded to adjustment and the impact of adjustment policies on manufacturing firms (Levin and Ndung'u, 2002).

Export opportunities improved for domestic firms with structural adjustment and liberalization. But the firms were so uncompetitive that many could not take advantage of this environment and most small and medium-size firms closed down and turned into trading. Access to foreign exchange had improved with the liberalization of foreign exchange transactions, but the cost of foreign exchange was a handicap and, in addition, the exchange rate was unstable, introducing a risk dimension. This has been further complicated by the lack of a futures market and the fact that firms use the spot rate and not a forward rate in the foreign exchange market.

Competition from imports was a serious problem to most firms, but the biggest problem was unfair competition from local firms and imports that were mostly coming through without duties. The economy was becoming more commercialized, rather than production-oriented, which was compounded by corruption in the way duties were applied on commercial imports that compete with domestic firms.

A majority of the firms in the survey indicated that escalating utility prices had increased their costs of operations. The conclusion drawn from survey evidence argues that utility prices did not support enterprise growth in Kenya, but rather hindered it. The problem cited by most firms was a combination of high utility prices and poor service, which did not encourage competitive production. Access to credit was by far the most severe problem in the 1990s, as firms' responses indicated. This was mainly emanating from policies implemented to stabilize the economy. These had a negative impact on the operations of the private sector, but the evidence also shows that the effects of such policies trickled down quite fast to the firm level.

These and other factors as discussed above, and the lingering effects of a control regime, it

appears, have had negative consequences on firm growth. They seem to add to the factors that led to the contraction of the manufacturing sector, in line with the declining growth and protracted recession in Kenya in recent years. It is no wonder that these frustrations are being translated by politicians as a call for price controls. The interest rate and petroleum prices have been key targets.

4.4 The Political Economy of the Growth Performance during the 1980s and 1990s

Kenya's economic performance worsened in the 1980s and 1990s. Some analysts have attributed this partly to changes in political balances in the context of regions and ethnic groups in Kenya, alongside escalating urbanization leading to a distortion of government policies and widened macroeconomic imbalances.[13]

By the second half of the 1970s, the balanced growth path discussed above had begun to unravel, following the two oil shocks of 1973 and 1979 and the collapse of the East African Community in 1977, which substantially reduced Kenya's industrial exports. Meanwhile the Dutch disease effects of the 1976/77 coffee boom began to be felt. There were further disruptions in the early 1980s, including a coup attempt in 1982 and a severe drought in 1984. In the first half of the 1980s, the growth of all sectors declined. These shocks caused an acute balance of payments problem. To finance the balance of payments, conditional finances were sought mainly from the Bretton Woods institutions. The financing involved substantial reforms that were implemented in the 1980s and 1990s, but the record of implementation was patchy and marked by many episodes of policy reversal. Economic performance did not improve, however,. Although there was some recovery in the late 1980s following a mini-boom in coffee and tea prices.

Government expenditure expanded significantly after the mid 1980s, causing large macroeconomic imbalances. This was partly caused by an expansion in public employment for both civil servants and teachers, although their numbers declined after 1991. The recurrent budget fell dramatically into deficit, aggravating other macroeconomic indicators.

Foreign donors, frustrated by the off-track movement of the economic reform programme, as well as the government''s anti-democratization posture (which was overlooked during the Cold War), cut off programme aid in 1991, leading to a major economic and political crisis in the early 1990s. Compounded by drought, the growth rates fell to almost zero percent in 1992 and 1993. Inflation skyrocketed as the government printed money to finance the 1992 multiparty election, reaching all-time high level of 46% in 1993, reflected also in an increase in the black market premium. In rural areas, ethnic conflicts broke out in 1991/92, centred on land problems in Rift Valley and burst into serious violence (this was repeated prior to and after the multi-party elections of 1997).

Kenya in the early 1990s was therefore caught in the same stagnation-instability trap that many other African countries had already fallen into. This situation is attributed at least partly to disappointing performance of the agricultural sector, the mainstay of the Kenyan economy, leading to a deceleration in the performance of the manufacturing sector, urban unemployment and the macroeconomic imbalances in the 1980s. We have also argued that greed and grievance literature can be supported when land is looked at as a "lootable" resource. But the most powerful explanation of these sporadic conflicts is ethnic dominance in some specific areas and the control of state resources (see Kimenyi and Ndung'u, 2002).

In terms of policies, while not much progress was made in trade liberalization in the 1980s, there is no evidence that the effective rate of protection of the agricultural sector was substantially changed. The good record in the management of the exchange rate was also maintained. By adopting a crawling exchange rate in 1982 and a floating rate in 1993, the Moi regime was able to insulate the policy from political interference, even though the regime could not insulate institutions and bureaucrats from political capture.

There is also no reason to believe that the Kenya pricing system was rendered more distortionary or discriminatory in the 1980s, with structural adjustment programmes focused on making prices right, with the throughput system of major export commodities remaining unchanged. Returns to export crop producers seemed to remain quite satisfactory in the 1980s, again with the notable exception of sugarcane. Cess was even reduced from 3% to 1% in 1987. Terms of trade of agriculture

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[13] The arguments in much of this section are influenced by Takahashi (1997).

versus industry remained constant through the 1980s.

On the other hand, the maize marketing system emerged as one of the most controversial economic reform measures. In 1979, the Wheat Board and the Maize and Produce Board were merged into the National Cereals and Produce Board (NCPB). This new institution was given monopolistic power to engage in both inter-district and international trade in maize and was closely attached to the public administration system.

NCPB expanded in a hasty manner in 1980s, for example, increasing the number of its employees by seven times by 1987. In response to the food crisis on 1980 and 1984, the producer prices increased, causing a stockpile of surplus maize. This caused a massive deficit (which accounted for 25% of the public sector's budget deficits in 1987). The government had to step in to take over the massive debt of the NCPB (about 5% of GDP) in the latter half of the 1980s.

In terms of region/ethnic-based resource allocation, there was a change in the rules of the game, with the focus shifting from growth to regional and ethnic redistribution. Moi's attempts to address the imbalances in Kenyan society marked a significant and fundamental change in policy, involving a trade-off between equity and productivity. This policy of redistribution led to complaints that Moi had merely switched resources from Central Province to the Rift Valley, which was a significant if not central contribution to the social upheavals of the 1990s centred on multi-partyism It would seem that the distribution policies did not reach out to higher potential smallholders, the driving force of Kenya's previous agricultural growth.

The creation of NCPB, for example, mainly benefited the Rift Valley, the political base of Moi's administration. As with NCPB, there was also increased intervention by the state in the management of parastatals. In addition, ethnic-based quotas were introduced for higher official posts in the public sector, as well as for secondary school places. The latter policy made it a requirement that 85% of local secondary school places should be allocated to the local community. As a result of the redistribution policies, the advantages that Central Province had previously enjoyed in roads and education before the 1980s were reduced by the 1990s. This obviously led the Central region to opt for opposition politics in the competitive environment of the 1990s.

Rural infrastructure was generally neglected in this period. While new roads and pavements were constructed, repair and maintenance of existing paved roads were largely neglected. The infrastructural projects, which are more politically appealing, were also mainly concentrated in the relatively underdeveloped areas, and therefore had lower rates of return than repair and maintenance of the existing infrastructure. The government tried to introduce export crops to the marginal areas, for example, the Nyayo Tea Zones, but the trials generally were not successful.

According to Morton (1998:):

The thinking was that these zones would protect the forests from destruction by local people, preserve the environment, stop soil erosion, earn much needed foreign currency and create jobs. By the end of the 1980s there were zones in fifteen districts, administered by the Nyayo Tea Development, a parastatal which Moi founded in 1987.

Unfortunately... the reality did not match the dream. These narrow strips of tea skirting the forests created problems with grazing...and, most important, undercut the prices of local tea farmers, who burnt their tea crops in protest at the government sponsored newcomer. It was a similar story at the Nyayo Bus Corporation, which foundered on the rocks of nepotism, vandalism, corruption and inefficiency.

Discrimination against Nyanza and Western provinces continued, with, for example, the lack of significant correlation between agricultural potential and the paved proportion of total roads remaining unchanged between the 1970s and 1990s. The returns to sugarcane production also continued to be low. As seen in Table 11, these are the areas (together with Coast Province) that are generally the most afflicted by poverty in the country.
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Table 11: Trends and regional differences in poverty rates in Kenya in the 1980s and 1990s

	Percentage of overall poverty

34

	1982	1992	1994	1997
Rural areas: Province				
Central	25.69	35.89	31.93	31.39
Coast	54.55	43.50	55.63	62.10
Eastern	47.73	42.16	57.75	58.56
Nyanza	57.88	47.41	42.21	63.05
Rift Valley	51.05	51.51	42.87	50.10
Western	53.79	54.81	53.83	58.75
North Eastern	-	-	58.00	-
Total Rural	47.89	46.33	46.75	52.93
Total Urban	-	29.29	28.95	49.20

"-" indicates areas not covered in the survey.
Source: Kenya, Central Bureau of Statistics, welfare monitoring surveys.

Urbanization intensified, as well, with migrants mainly from Nyanza, Western and even Central Provinces, and the urban unemployment situation worsened. The rate of unemployment in Kenya's urban areas was about 16% in 1980s, increasing to 17–23% in the 1990s (Manda, 1997). The increase in unemployment reflected the low level of economic activities and the public sector's restrictive employment policies including civil service reforms, which caused urban poverty to increase faster than rural poverty (see Table 11). The urbanization and unemployment problems eventually became impossible to ignore. The informal housing areas and the informal sector in Nairobi expanded rapidly because of the inflow of immigrants, which was a source of social and political instability. This induced the expansion in employment in the lower strata of the public sector, undermining the government's goals of improving the efficiency in the public sector and reducing fiscal imbalances.

It is difficult to determine whether these policies improved incomes and regional equity. Household surveys suggest that the Rift Valley surpassed Central Province in per capita income through the 1980s. There has been an apparently sharp decline in inequality as measured by the Gini coefficient in the 1980s and 1990s, though the incidence of poverty appeared to increase over the 1990s (see Table 12).

Table 12: Evolution of income inequality and poverty in Kenya

Year	Gini coefficient	% Population below poverty line
1981	57.30	48
1992	54.39	45
1994	44.50	40
1997	n.a.	52
2000	n.a.	56*

* Central Bureau of Statistics. It is the poverty level incorporated into the poverty reduction strategy paper (PRSP).
Source: The data are from Kenya, Central Bureau of Statistics, welfare monitoring surveys. The data for 1981 are reported in Milanovic (1994). The rest are reported in various Kenya Economic Surveys and World Bank publications.

5. CONCLUSIONS

Explaining growth performance in Kenya has been the main objective in this paper. The paper covered the period 1960 to 2000 and has drawn some empirical evidence from growth accounting decompositions and cross-country endogenous growth literature. In addition, the paper divided development episodes into the 1960s and 1970s, 1980s, and 1990s in order to trace the policy out-turns in these periods. This helps the study to explain why there was a strong economic performance in the 1960s and early 1970s and why this performance was not continued or replicated in the later periods. In each period, the paper attempted to trace the growth performance, the role of markets, the role of private agents and the role of policies in the context of political economy issues.

In the 1960s and 1970s, for example, the empirical analysis of the macroeconomic data shows a mixed picture, especially when the decades are divided into five-year periods. In the phase 1960–1964, economic performance was quite poor and the country under-performed the average of SSA and HPAE countries. In the phase 1965–1969, the economy still under-performed the HPAE countries. During 1970–1974, however, the country out-performed SSA countries in growth and was almost at par with the performance of HPAEs. But 1975–1979 were years of under-performance. The same analysis is carried out in the 1980s and 1990s, but in these later decades the economy significantly under-performs the stellar performance of HPAEs and even the average of SSA countries.

The performance of markets in the 1980s and 1990s was mainly driven by the public sector, the major investor and employer. The policy out-turns stressed the role of entrepreneurship and capital accumulation, where the markets mechanism would work effectively. In addition, there was greater emphasis on capital injection into the economy in order to form strong linkages in both the product and financial markets in the hope that these would accelerate the pace of development. But these ambitions were checked by various factors: first, in the financial market, the regulated interest rate structure did not encourage savings, but encouraged capital intensive production. Second, this further induced firms to invest in large capacities to cater for a perceived future demand, but was relatively capital intensive in a labour abundant economy. The outcome was low capacity utilization checked by the size of the market and high prices, which thus constrained the growth of the firms and the product market. These factors continued to be important even in the later decades.

Third, even though the manufacturing sector grew rapidly – the driving force being the import substitution policy – it was still constrained in the easy phase and the growth process was not sustainable. Finally, the decade also witnessed some policy backlash in the form of controls, which at first worked to control the balance of payments and inflationary pressures, but later created distortions in the economy and thus checked production expansion of both firms and smallholder farms and overall economic growth.

The system of controls continued into the 1980s and was gradually eliminated in the early 1990s. The growth performance, the reaction of private agents (smallholder farmers and firms), the growth of markets and the political economy issues analysed in this paper in the decades up to 1990s seem to revolve around the constraints of the control regime and the response to liberalization in the 1990s. The system of controls prevented and checked the growth of product markets and financial markets and created room for a rent-seeking environment. It is argued in the paper that the slow process of adjustment, the emergence of policy reversals and the reluctance in the liberalization process had serious consequences on the development of markets, as well as agents' responses and reactions, and explains the protracted recession in the 1990s to the current period.

One interesting outcome to the legacies of the control regime is its use as an avenue to control and capture the state. Control of the structures of government implies controlling resources and resource flows from the state. This explanation has been used in the paper to explain the sporadic ethnic conflicts and tensions in the 1990s. It strengthens the political economy issues and argues that political cycles have created risk and uncertainty and destroyed the investment base in the country and hence dashed hopes for future sustained growth.

The overall question in this paper has been to explain growth. This has been done using periodization. It appears that initial conditions and regime changes have been important but have changed roles. Initial conditions promoted growth in the initial phases enhanced by regime changes, but in the later decades regime change has taken over and explained most of growth failures in the country. This allows us to synthesize the factors that seem to explain growth in Kenya.

The first phase is where favourable initial conditions are seen during the period of 1960s and 1970s and in policy continuity soon after independence. These initial conditions relate to resource endowments, economic structure, economic policy and national political institutions. The forms of economic organizations and above all the changing policy regime were driven by political developments. These dimensions of initial conditions are arguably supported by two important developments: First was Sessional Paper No. 10 on *African Socialism and Its Application to Planning in Kenya,* which laid the foundations of a market economy and this enhanced the flow of foreign direct investments supported by the import substitution policy started before independence. The sessional paper thus deepened the import substitution policy of industrialization.

Second, as Bates (1989) argues, by annexing the white highlands, the colonial government

indirectly increased access to land even though they limited access to land rights. This is because when independence was won, power was seized by the conservative' faction of Kenya rural society who had a commitment to accumulation, investment and private property. Thus, these two factors combined to enhance productive capacity in agriculture as well as produce a class of entrepreneurs in the industrial sector via joint ventures with foreign investors. But even though this was a vibrant period, and also coincided with the Kenyatta regime, one particular outcome was that even though high and perhaps satisfactory economic growth was achieved in the 1960s and 1970s, it was at the expense of increased regional inequality.

The second phase thus starts in the late 1970s and opens with a change over of the political regime to the Moi era and also with the policy to address the regional disparities. Therefore, the policy of redistribution seems to have started in the 1980s. It is thus coincidence that the power of initial conditions is displayed by a change of regime and by a new ruling class. Even though such a policy should have enhanced the growth performance instead of destroying it, it was combined with a weaker budget management since the budget was used as one of the re-distribution tools. These factors thus produced a lower growth performance and have lingered on even to the present, save for a few episodes of temporary recovery. It does therefore appear that the role of initial conditions was dislodged by a changing regime, which is associated with lower growth trajectory. But what explains this lower growth performance? There seems to be a combination of factors, but the most compelling ones come from political economy issues and those that quickly destroyed the incentive structure.

First, there was the political capture of both the institutions and bureaucrats. Second, risk and uncertainty took centre stage and policies became extremely short term. Third, there were policy-induced risks and policy reversals were more prevalent in the 1980s and 1990s, thus compounding the problem of short-term response rather than long-term planning. Fourth, the collapse of the East African Community in 1977 substantially reduced Kenya's market, and firms established under the import substitution policy with large installed capacity began to suffer. Fifth, the Dutch disease effect had two contributions: expanded fiscal expenditures and appreciation of the exchange rate. The former reduced long-run growth, while the latter is a disincentive to exporters and hence checks growth. Finally, and in summary, to all these factors were added governance problems. Moreover, weak economic management led to severe tensions with donors, which compounded the problem of policy credibility, leading to capital flight and a declining investment base. These and other intermediate factors are thus responsible for the poor performance in the period 1980s and 1990s.

Even though these two phases do seem to explain broadly the growth experience with initial conditions and regime shifts, there also appear to have been intermediating factors coming through internal and external shocks. First, the commodity boom of 1976/77 ushered in the familiar Dutch disease symptoms, but above all triggered an unsustainable fiscal position. In addition, this boom may have been the one single factor that led to a switch in regime towards redistribution. Third, the "aid embargo" in the 1990s has been both a strong impetus to speed up reforms, and a negative signal of the non-credibility of government policies. Finally, ethnic tensions coming with competitive politics seem to have driven poverty and growth far from their targets in the 1990s. These intermediating factors seem to explain also some of the surprises in this paper.

References

Ali, A.A. and I.E. Elbadawi. 1999. "Inequality and the Dynamics of Poverty and Growth". August. Mimeo.

Bates, R.H. 1989. *Beyond the Miracle of the Markets: The Political Economy of Agrarian Development in Kenya*. Cambridge: Cambridge University Press.

Barkan, J.D. 1984. "Legislators, elections and political linkage". In Barkan, ed., *Politics and Public Policy in Kenya and Tanzania*. New York: Praeger.

Bigsten, A. 2002. "History and policy of manufacturing in Kenya". In A. Bigsten and P. Kimuyu, eds., *Structure and Performance of Manufacturing in Kenya*. New York: Palgrave.

Bigsten, A. and N.S. Ndung'u. 1991. "Structural adjustment and the African farmer: Kenya case Study". In Alex Duncan and John Howell, *Structural Adjustment and the African Farmer*. London: Overseas Development Institute.

Brett, E.A. 1973. *Colonialism and Underdevelopment in East Africa*. New York: NOK Publishers.

Collins S. and B. Bosworth. 1996. "Economic growth in East Asia: Accumulation versus assimilation". *Brookings Papers on Economic Activity*, 2: 135–203.

Hoeffler, A.E 1999. "The augmented Solow model and the African growth debate". Mimeo. Centre for the Study of African Economies (CSAE), University of Oxford.

Kenya.1965. *Sessional Paper No. 10 on African Socialism and Its Application to Planning in Kenya.*

Kimenyi, M. and N.S. Ndung'u. 2002. "Sporadic ethnic violence: Why has Kenya not experienced a full blown civil war?". Paper presented at a World Bank Conference on Economics of Political and Criminal Violence, Yale University, 12–14 April.

Levin, J. and N.S. Ndung'u. 2002. "The impact of structural adjustment policies on manufacturing". In A. Bigsten and P. Kimuyu, eds., *Structure and Performance of Manufacturing in Kenya.* New York: Palgrave.

Lofchie M.F. 1989. *The Policy Factor*. London: Lynne Rienner.

Manda, D.K. 1997. "Labour supply, returns to education, and the effect of firm size on wages: The case of Kenya". Ekonomiska Studier Utgivna av Nationalekonomiska Institutionen Handlshögskolan vid Göteborg Universitet 75.

Milanovic, Branko. 1994. "Determinants of cross-country income inequality". Policy Research Working Paper, No 1246. The World Bank, January.

Mwega, F.M. 2002. "Promotion of non-traditional exports in Kenya, 1980–96". In G.K. Helleiner, ed., *Non-Traditional Export Promotion in Africa: Experience and Issues*. London: Palgrave.

Nasibi, R.I. 1992. "Financial institutions and monetary policy in post-independent Kenya". In W.R. Ochieng and R.M. Maxon, eds., *An Economic History of Kenya.* Nairobi: East African Educational Publishers Ltd.

Ndulu, B.J. and Stephen A. O'Connell. 2000. "AERC Explaining Economic Growth Project: Background Information on Economic Growth". Mimeo. April.

Ndung'u N.S. 1998. "The exchange rate and the interest rate differential in Kenya: The policy dilemma". *African Journal of Economic Policy*,5(2): 73–98, December.

Ndung'u, N.S. 1999. *Monetary and Exchange Rate Policy in Kenya*. Research Paper No. 94. African Economic Research Consortium, Nairobi.

Oyejide, A. 2000. "Markets and Economic Growth in Africa". Framework Paper for the AERC Collaborative Research Project, Explaining Africa's Growth Performance.

Serquin, M. and Charles Kenny, 1999. "Growth and transformation in East Africa". Mimeo.

Swamy, G. 1984. "Kenya: Structural adjustment in the 1980s". World Bank Policy Research Working Paper 1238, January.

Takahashi, M. 1997. "Changing rules of the game in a multi-ethnic Sub-Saharan African country: Economic resource mechanism in Kenya". Paper presented at a World Bank Workshop on the Political Economy of Rural Development Strategy, 5–6 May.

World Bank. 1975. *Kenya into the Second Decade*. Baltimore: John Hopkins University Press.

APPENDIX

Table A1: The Collins–Bosworth (C&B) decomposition of sources of economic growth in Kenya

Period	Growth in real GDP per worker	Contribution of:			Contribution of:		
		Physical capital per worker	Education per worker	TFP	Physical capital per worker	Education per worker	TFP
1960–64	0.38	-1.03	-0.02	1.43	-2.52	-0.01	2.90
1965n69	3.67	-0.12	0.12	3.67	-0.29	0.03	3.94
1970–74	4.85	0.98	0.12	3.76	2.38	0.03	2.44
1975n79	1.62	0.10	0.74	0.78	0.24	0.17	1.21
1980–84	-0.76	-0.48	0.57	-0.85	-1.18	0.13	0.27
1985–89	1.99	-0.66	0.48	2.17	-1.61	0.11	3.49
1990n97	-1.83	-0.72	0.28	-1.39	-1.76	0.06	-0.14
Total	1.42	-0.28	0.33	1.37			

Table A2: Hoeffler (1999) model growth decomposition: Kenya versus other regions

	Kenya	Ken-SSA	Ken-HPAEs	Ken-dev	Ken-all
			1960–64		
ln(ynin)	-0.982	0.016	0.109	0.094	0.150
ln(hi6)	0.690	0.170	0.011	0.092	0.040
ln(ty15)	0.005	0.003	-0.011	-0.002	-0.006
rpah	1.050	-0.029	-0.004	-0.030	-0.052
Constant	-0.483				
Explained	0.279	0.161	0.104	0.153	0.133
Unexplained	-0.350	-0.300	-0.387	-0.351	-0.349
Total - gyso	-0.071	-0.139	-0.284	-0.197	-0.217
			1965–74		
ln(ynin)	-0.968	0.051	0.182	0.136	0.196
ln(hi6)	0.729	0.193	-0.031	0.106	0.058
ln(ty15)	0.007	0.004	-0.010	-0.001	-0.005
rpah	1.035	-0.039	-0.065	-0.051	-0.075
Constant	-0.483				
Explained	0.321	0.209	0.075	0.189	0.174
Unexplained	-0.166	-0.133	-0.238	-0.160	-0.152
Total - gyso	0.155	0.076	-0.163	0.029	0.022
			1975–79		
ln(ynin)	-1.019	0.016	0.201	0.109	0.168
ln(hi6)	0.675	0.154	-0.120	0.043	0.003
ln(ty15)	0.009	0.004	-0.010	-0.002	-0.005
rpah	1.016	-0.051	-0.080	-0.069	-0.098
Constant	-0.483				
Explained	0.198	0.123	-0.010	0.081	0.069
Unexplained	-0.114	-0.066	-0.228	-0.111	-0.099
Total - gyso	0.085	0.057	-0.238	-0.030	-0.031
			1980–84		
ln(ynin)	-1.031	0.007	0.237	0.114	0.173
ln(hi6)	0.650	0.163	-0.160	0.038	-0.001
ln(ty15)	0.014	0.007	-0.006	0.001	-0.001
rpah	1.011	-0.054	-0.111	-0.079	-0.107
Constant	-0.483				
Explained	0.161	0.123	-0.041	0.074	0.063
Unexplained	-0.298	-0.203	-0.280	-0.186	-0.197
Total - gyso	-0.137	-0.080	-0.321	-0.111	-0.134
			1985–89		
ln(ynin)	-1.011	0.029	0.285	0.152	0.217
ln(hi6)	0.615	0.155	-0.183	0.020	-0.031
ln(ty15)	0.014	0.005	-0.008	-0.001	-0.004
rpah	1.030	-0.036	-0.112	-0.071	-0.100
Constant	-0.483				
Explained	0.165	0.153	-0.018	0.099	0.083
Unexplained	-0.028	-0.010	-0.182	0.000	-0.005
Total - gyso	0.137	0.143	-0.200	0.100	0.078

where:
gyso is five-year growth in real GDP per capita, between initial year of current and subsequent half-decade, e.g., ln(ynin[1965]) - ln(ynin[1960]).
lynin is log of real GDP per capita in the initial year of the half-decade, 1985 international prices.
ln(hi) is log of ratio of investment to GDP (%), 1985 international prices.
ln(ty15) is ln(0.05+n) where n is the average log difference in population for the period (this is the replacement investment term used in Hoeffler 1999, with 0.05 a measure of the sum of technological progress and depreciation).
ln(ty15) is log of ty15, average total years of schooling in the population of age 15 or higher, in the initial year

of the period (only this variable was insignificant at the 5% level, although it was significant in OLS and IV level estimations. Hoeffler 1999 finds that although insignificant, adding it to the instrument set strengthened it significantly).

HPAEs: Hong Kong, Indonesia, Korea, Singapore, Taiwan and Thailand

Table A3: Hoeffler (1999) half-decadal data for Kenya vs HPAEs

	Initial real GDP per capita, 1985 int'l prices	Initial average yrs of education attained, popula. >=15 yrs	(0.05+n), from Hoeffler (1999)	Ratio of investment to GDP(%), current int'l prices
Kenya				
	ynin	ty15	rpah	hi6
1960–64	659	1.53	0.08	16.05
1965–69	614	1.67	0.08	18.31
1970–74	586	2.17	0.09	19.26
1975–79	837	2.2	0.09	15.08
1980–84	911	3.44	0.09	13.65
1985–89	794	3.35	0.09	11.88
1990–97	911	3.7		
HPAEs				
1960–64	1351.55	4.11	0.08	15.37
1965–69	1672.14	4.53	0.07	19.79
1970–74	2371.47	4.79	0.07	22.84
1975–79	3156.88	5.36	0.07	24.43
1980–84	4359.03	6.01	0.07	25.97
1985–89	5235.20	6.64	0.07	24.85
Total	2698.47	5.17	0.07	21.87

Table A4: Ndulu–O'Connell pooled model: Kenya growth decompositions

		Kenya	Ken-SSA	Ken-HPAE	Ken-Dev	Ken-all
				1960–64		
ln(ynin)	-1.765	-11.459	0.296	0.633	1.169	2.120
lxin	0.089	4.077	0.525	-0.710	-0.463	-1.086
adep	-0.052	-5.104	-0.716	-0.443	-0.587	-1.096
dlfp	0.728	-0.554	-0.335	-0.046	-0.347	-0.451
ttc1	0.004	-0.001	0.003	0.000	0.001	0.000
dynt	0.540	1.993	-0.018	-0.966	0.016	0.048
lloc	-0.912	0.000	0.249	0.000	0.118	0.114
Total - base variables		-11.047	0.004	-1.533	-0.094	-0.351
infL	-0.004	-0.006	0.007	0.004	0.020	0.016
bmpL	-0.007	-0.011	0.052	0.005	0.106	0.066
gxbx	-0.113	-1.106	0.855	-0.344	0.229	-0.005
Total - Policy variables		-1.123	0.914	-0.335	0.354	0.076
pin	-0.975	-0.108	-0.049	-0.108	-0.016	-0.031
Constant	15.347	15.347				
Explained		3.068	0.869	-1.977	0.244	-0.306
unexplained		-2.363	-2.405	-1.173	-2.388	-2.363
Total		0.705	-1.536	-3.150	-2.144	-2.669
				1965–74		
ln(ynin)	-1.765	-11.293	0.602	1.411	1.559	2.315
lxin	0.089	4.310	0.499	-0.721	-0.368	-0.793
adep	-0.052	-5.563	-0.972	-0.848	-0.957	-1.353
dlfp	0.728	-0.203	-0.085	-0.586	-0.262	-0.261
ttc1	0.004	-0.005	-0.001	-0.004	-0.004	-0.004
dynt	0.540	1.694	-0.274	-1.045	-0.223	-0.185
lloc	-0.912	0.000	0.338	0.000	0.136	0.129
Total - Base variables		-11.060	0.106	-1.793	-0.119	-0.154
infL	-0.004	-0.021	0.008	0.015	0.026	0.021
bmpL	-0.007	-0.190	-0.028	-0.131	-0.009	-0.054
gxbx	-0.113	-1.523	0.240	-0.854	-0.361	-0.512
Total - Policy variables		-1.734	0.220	-0.970	-0.343	-0.544
pin	-0.975	-0.054	0.024	0.005	0.103	0.096
Constant	15.347	15.347				
Explained		2.499	0.349	-2.758	-0.359	-0.603
Unexplained		2.027	2.364	1.675	2.159	2.211
Total		4.526	2.713	-1.083	1.801	1.608
				1975–79		
ln(ynin)	-1.765	-11.881	0.435	1.327	1.413	2.020
lxin	0.089	4.632	0.514	-0.670	-0.319	-0.633
adep	-0.052	-5.783	-1.114	-1.531	-1.292	-1.597
dlfp	0.728	-0.213	-0.113	-0.977	-0.451	-0.461
ttc1	0.004	0.018	0.013	0.016	0.015	0.015
dynt	0.540	1.361	0.160	-0.341	0.093	0.098
lloc	-0.912	0.000	0.261	0.000	0.103	0.105
Total - Base variables		-11.866	0.155	-2.176	-0.440	-0.453
infL	-0.004	-0.059	0.019	-0.014	0.034	0.024
bmpL	-0.007	-0.065	0.278	-0.044	0.145	0.103
gxbx	-0.113	-1.700	-0.052	-1.097	-0.498	-0.626
Total - Policy variables		-1.824	0.245	-1.156	-0.318	-0.499
pin	-0.975	-0.065	0.009	0.130	0.162	0.189
Constant	15.347	15.347				
Explained		1.592	0.409	-3.201	-0.595	-0.762
unexplained		0.033	0.291	-0.772	0.127	0.332
Total		1.625	0.700	-3.974	-0.469	-0.431

				1980-84		
ln(ynin)	-1.765	-12.031	0.092	1.705	1.301	1.938
lxin	0.089	4.865	0.629	-0.728	-0.235	-0.544
adep	-0.052	-5.939	-1.150	-2.155	-1.580	-1.894
dlfp	0.728	0.105	0.160	-0.539	-0.113	-0.139
ttc1	0.004	-0.017	-0.010	-0.013	-0.010	-0.011
dynt	0.540	0.088	-0.250	-0.867	-0.316	-0.344
lloc	-0.912	0.000	0.397	0.000	0.180	0.165
Total - Base variables		-12.929	-0.132	-2.597	-0.773	-0.830
infL	-0.004	-0.057	0.017	-0.016	0.073	0.055
bmpL	-0.007	-0.157	0.218	-0.152	0.197	0.125
gxbx	-0.113	-1.614	0.074	-1.041	-0.320	-0.460
Total - Policy variables		-1.828	0.310	-1.209	-0.050	-0.280
pin	-0.975	-0.065	0.025	-0.016	0.197	0.182
Constant	15.347	15.347				
Explained		0.525	0.203	-3.822	-0.625	-0.927
Unexplained		-1.409	-0.238	-1.357	-0.160	-0.186
Total		-0.884	-0.035	-5.179	-0.785	-1.113
				1985–89		
ln(ynin)	-1.765	-11.788	0.258	2.289	1.829	2.834
lxin	0.089	5.027	0.446	-0.780	-0.573	-0.939
adep	-0.052	-5.862	-1.234	-2.453	-1.963	-2.384
dlfp	0.728	0.350	0.218	-0.238	0.058	0.133
Ttc1	0.004	-0.007	-0.014	0.004	-0.008	-0.008
dynt	0.540	0.904	-0.459	-0.896	-0.432	-0.486
lloc	-0.912	0.000	0.456	0.000	0.135	0.111
Total - Base variables		-11.377	-0.329	-2.073	-0.953	-0.739
infL	-0.004	-0.041	-0.022	-0.025	0.039	0.018
bmpL	-0.007	-0.073	0.208	-0.044	0.218	0.119
gxbx	-0.113	-1.614	-0.402	-0.938	-0.640	-0.744
Total - Policy variables		-1.729	-0.216	-1.007	-0.384	-0.607
pin	-0.975	0.000	0.097	0.016	0.226	0.178
Constant	15.347	15.347				
Explained		2.242	-0.447	-3.065	-1.111	-1.169
Unexplained		-0.102	1.691	-0.198	0.946	0.859
Total		2.139	1.244	-3.262	-0.164	-0.310
				1990–97		
ln(ynin)	-1.765	-12.031	0.928	2.587	2.167	3.160
lxin	0.089	5.067	0.063	-0.942	-0.891	-1.195
adep	-0.052	-5.176	-0.990	-2.272	-1.745	-2.053
dlfp	0.728	0.894	0.680	0.397	0.489	0.626
ttc1	0.004	0.035	0.039	0.031	0.033	0.034
dynt	0.540	0.839	-0.029	-0.692	-0.189	-0.141
lloc	-0.912	0.000	0.304	0.000	0.079	0.099
Total - Base variables		-10.371	0.994	-0.891	-0.056	0.530
infL	-0.004	-0.084	-0.057	-0.060	0.038	-0.004
bmpL	-0.007	-0.141	-0.112	-0.120	0.007	-0.047
gxbx	-0.113	-1.614	-0.435	-1.091	-0.864	-0.888
Total - Policy variables		-1.839	-0.604	-1.271	-0.820	-0.939
pin	-0.975	-0.081	0.027	-0.041	0.360	0.233
Constant	15.347	15.347				
Explained		3.056	0.417	-2.203	-0.516	-0.176
Unexplained		-3.574	-1.484	-4.350	-2.952	-2.813
Total		-0.519	-1.066	-6.553	-3.468	-2.989

where:

ln(ynin) = log of real GDP per capita in the initial year of the half-decade.

lxin = life expectancy at birth, interpolated to the initial year of the half-decade.

adep = age dependency ratio, given by ratio of population not aged 15–65 years to population aged 15–65.

dlfp = growth in potential labour force participation, given by the difference between growth of population of working age (15–65 years) and growth of total population.

ttc1 = terms of trade shock, given by initial share of exports to GDP, multiplied by the average % difference between the terms of trade in each year of the half-decade and the terms of trade in the initial year of the half-decade (only this variable was insignificant at the 5% level).

dynt = trading partner growth rate, given by the average growth rate of real GDP per capita among trading, weighted by shares in total trade.

lloc = Dummy equal to 1 for landlocked countries and 0 for otherwise.

pin = Political instability index (Pin = (rev+stri+assa)/3; i.e., average of revolutions, strikes and assassinations).

infL = CPI inflation rate, if under 500% (otherwise entered as missing).

bmpL = Black market premium, if under 500% (otherwise entered as missing).

gxbx = Government spending exclusive of defence and education. This is a Barro–Lee variable extended to later periods using a proxy based on nominal data (the difference between current spending and total spending on defence and education, all as shares of GDP). The extension was done only if overlapping data existed for 1980.

Table A5: N&O (2000) Half-decadal data for Kenya

	1960–64	1965–69	1970–74	1975–79	1980–84	1985–89	1990–97
Kenya							
ynin	659	614	586	837	911	794	911
lxin	45.95	47.2	49.95	52.2	54.83	56.65	57.11
adep	98.83	106.32	109.11	111.96	114.98	113.49	100.21
dlfp	-0.76	-0.27	-0.28	-0.29	0.14	0.48	1.22
ttc1	-0.14	-0.43	-1.97	4.40	-4.16	-1.77	8.47
dynt	3.69	3.13	3.13	2.52	0.16	1.67	1.55
lloc	0	0	0	0	0	0	0
infL	1.54	2.11	7.77	14.06	13.56	9.91	20.17
bmpL	1.44	17.97	34.14	8.97	21.56	10.06	19.39
gxbx	9.81	12.67	14.35	15.07	14.31		
pin		0.11	0	0.06	0.06	0	0.08
HPAEs							
dyn	3.85	5.85	5.36	5.59	4.29	5.40	6.03
ynin	943	1261	1409	1774	2392	2903	3942
lxin	53.95	56.43	56.95	59.74	63.03	65.44	67.72
adep	90.24	93.77	88.81	82.32	73.25	66.00	56.22
dlfp	-0.69	0.32	0.72	1.04	0.88	0.80	0.68
ttc1	-0.03	-0.90	0.27	0.58	-0.92	-2.71	0.90
dynt	5.47	5.87	4.26	3.15	1.76	3.33	2.83
lloc	0	0	0	0	0	0	0
pin	0	0.02	0.10	0.2	0.05	0.01	0.04
infL	2.57	4.79	12.15	10.65	9.84	3.90	5.87
bmpL	2.06	2.43	13.67	2.90	0.67	3.97	2.90
gxbx	6.75	6.52	5.35	5.34	5.07	5.99	4.63