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ANALYSING GROWTH IN BURKINA FASO OVER THE LAST FOUR DECADES

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1. INTRODUCTION

The objective of this paper is to provide a detailed analysis of the growth factors that have shaped growth in Burkina Faso since the early 1960s. The approach tries to tie together macro, micro, markets and institutional/political factors to explain outcomes.

Following a section that presents the major growth patterns and global factors explaining the observed patterns, we proceed as follows. In each of the subsequent sections representing a period with specific features for the economy, we use knowledge on agents' behaviour, markets and political economy to understand the performance over the period. This is done in a "wrapping up" subsection in each of the period sections. Three periods are analysed for the Burkina case.

2. MACRO GROWTH

This section provides an account of the macro growth observed in Burkina Faso over the last four decades. Because of the lack of data, the Burkina study cannot follow strictly the methodological path proposed for the case studies in this project. In particular, the growth accounting as well as the cross-country regression exercises failed to produce results for the country because of the many missing data. We use a modified approach to document growth in Burkina. In particular, we rely on alternative sources to arrive at growth decomposition by factor and sector. To be consistent with the other case studies, we use wherever possible the growth data provided by the present project. This section first

describes the structure of the economy, then analyses the determinants of growth, and finally proposes a period breakdown to study growth and the key markets, agents and political economy actors that are relevant in explaining the aggregate outcomes that are observed.

2.1 Structure of the Economy and Main Performance

Real per capita growth rate was modest over the 1960–1997 period, judging by the half-decadal data in Table 1. Three break points are worth considering. The two lowest points are the 1970–1974 and 1980–1984 half-decades, when real per capita GDP grew at 0.60 and 0.16%, respectively, at annual averages. These are the major contemporary drought periods in Burkina, with the proportion of drought years reaching 0.80 and 1, respectively. The highest point was the 1985–1989 period with a growth rate of 2.18% per year. This was also the Revolutionary period with the National Revolutionary Council (CNR) of Thomas Sankara in power and a period of below normal rainfall years. One notes the near doubling of the population over the entire period, which amounts to taxing growth, as most of the population increase translated into higher dependency ratios (from 81 to 99%, see top of Table 1).

Additionally, some key features of the economy make it very sensitive to external shocks. The economy is heavily dominated by rain-fed agriculture. As Table 1 suggests, the agricultural sector (broadly defined) currently accounts for over one-third of GDP, down from more than 40% during the early periods after independence. Most of this share is accounted for by rain-fed crops, including the food crops (cereals, tubers and leguminous crops) and cash crops (mainly cotton). Low and irregular rainfall together with poor soils and low use of fertilizer (9 kg per ha) combine to produce a highly vulnerable situation where aggregate growth rates can swing from positive to negative from one year to the next. The export earnings of the economy are highly dependent on a single product, cotton, which accounts for nearly 40% of the value of exports. Exports are thus highly vulnerable to swings in cotton production (which is very sensitive to rainfall and predators) and the international prices of cotton (highly uncertain owing to worldwide subsidies and other trade distortions, the existence of substitutes, and the ensuing slackening demand for cotton). Overall, terms of trade are volatile, as evidenced by Table 1. The decade of the 1970s was marked by negative terms of trade shocks, which combined with the bad climate to produce the observed low growth rates. During these periods cotton contributed only little to GDP, however. Negative shocks in more recent periods (such as over 1990–1997) are more detrimental as cotton is the dominant export product.

Table 1: Basic economic and environmental indicators, 1960–1997

	1960–64	1965–69	1970–74	1975–79	1980–84	1985–89	1990–97
Population at start period, 1000s	4,630	5,103	5,633	6,202	6,962	7,881	8,880
Age dependence ratio ^a	81.67	84.90	92.07	98.41	100.75	100.99	99.65
Growth real per cap. GDP	0.84	1.64	0.60	1.76	0.16	2.18	0.88
GDP structure							
Agri's share			41.42	36.82	33.01	31.99	33.47
Industry's share			33.29	32.79	28.88	29.13	26.59
Services' share			25.29	30.39	38.11	38.88	39.95
Manufacturing's share			25.24	25.21	24.57	22.28	20.17
Ratio of investment to GDP	10.00	9.61	19.99	22.62	17.71	21.66	21.79
Money							
Ratio of M2 to GDP		6.90	8.05	11.72	13.77	14.48	20.44
Trade and exchange rate							
Change in terms of trade		0.02	-4.20	-6.19	10.62	6.96	-0.73

Std Dev of Chge terms trade		3.76	16.39	20.21	11.45	5.43	7.36
Ratio of trade to GDP	21.19	20.53	29.33	39.38	42.43	40.23	39.48
Overvaluation index	213.95	199.93	181.47	217.86	170.30	152.82	127.27
Aid dependence							
Ratio of aid to GDP	0.68	2.60	6.14	7.35	8.72	8.50	13.57
Climate							
Proportion of dry years ^b	0.00	0.20	0.80	0.60	1.00	1.00	0.71
Instability							
Number of coups half decade	0	1	0	0	3	1	0
Number regional conflicts ^c	0	0	1	0	0	1	0

Source. Growth Project data.

a. Ratio of population not aged 15–65 to population aged 15–65.

b. Calculated as the mean of a dummy indicating years in which total rainfall was more than 1 standard deviation below the country mean for 1940–1969.

c. From the authors.

Another feature of the economy that increases its fragility in the face of external shock is the significant contribution of migrant incomes to GDP. Out-migrants' remittances contributed to nearly 6% of GDP throughout the 1980s to 1990/91, before dwindling down to 4% following the severe downturn of the Côte d'Ivoire's economy in 1992, which eventually prompted the currency devaluation of 1994. The recent crisis faced by Burkinabé workers in Côte d'Ivoire is thought to have had even more profound effects on workers' remittances.

2.2 Macro Growth Profile

Against this background on the structure of the economy, we examine the analytics of growth over the period of the study (1960–1997). The analysis of the data has revealed that growth over the entire period has been slow and sporadic. The question is, Why we observe such an outcome? We propose three potential determinants of the growth outcome: the role of conventional factors, the role of technical innovation and the structure of the economy.

The Conventional Growth Determinants Have Worked Poorly

We use growth accounting results of a study by Sacerdoti et al. (1998) and adapted to Burkina Faso (Burkina Faso/World Bank, 2001) to assess the role of physical and human capital in growth. The study was designed with the objective to test the impact of human capital on growth in selected countries of sub-Saharan Africa (data covered 1970–1996). The following equation was estimated for Burkina (a star means 10% significance):

$$ygr = 0.456 + 0.322^* kgr + 0.033 hgr$$

where the dependent variable is the growth of real GDP per worker, kgr is the growth rate of physical capital per worker and hgr is the growth rate of the stock of human capital. The regression results show that the coefficient of kgr is significant at 10%, while the coefficient of hgr is non-significant.

Physical Capital Has Contributed Most to Growth, but Not Enough

Using the equation above as a yardstick, the contribution of physical capital to per capita GDP growth is 0.32, close to the Collins–Bosworth benchmark of 0.35. This is ten times as much as human capital, at identical growth rates. Given the difference in the coefficients, physical capital appears to have

contributed to growth more than human capital over the period 1960–1997. However, we argue that the realized impact of physical capital is under its potential for two reasons.

First is the problem of *low capital productivity*. When relating the rate of investment to the rate of growth of real GDP (5%), it is apparent that capital is characterized by a fairly low productivity. The estimated incremental capital–output ratio (ICOR, the amount of capital needed to produce one additional unit of output) remains high with a value of 5 in 1997, although decreasing from 7 in 1994. The implied average productivity of capital (20% in 1997) is quite low and cannot generate growth levels that can push the economy up rapidly. For example, the fast growing Asian or Latin American economies (Thailand, Korea, Malaysia, or Chili) have attained much lower capital-output ratios of the order of 3.5 to 4 needed to reach two-digit growth figures. This low productivity of investment can be explained, in part, by a large public component deemed to have lower productivity. Public investment grew progressively from 22% of gross domestic investment in 1990 to 43% in 1997. (Data are being sought for earlier periods.) Public investment is largely foreign aid-dependent, and evidence suggests that concessional resources are not managed with the same rigor as private funds (e.g., see Savadogo, 1999).

Second is a problem of *insufficient capital accumulation*. Data show the rate of investment has increased over time, from 9% in the 1960s to 25% in the mid 1990s. This effort to invest ranks higher than many SSA countries, but is well below that recorded in the fast growing Asian countries, mostly because of large differences in domestic saving rates. In the Burkina case, most of the public component of investment is financed through foreign aid. In fact, aid financed 60 to 80% of gross domestic investment over the 1980s and 1990s (Savadogo, 1999). Available figures suggest that the gross domestic saving rates have ranged between 1% in the 1960s-1970s and 9% of GDP in the 1990s (Table *). These rates are depressingly low, compared with the 33–36% rates in Thailand and Korea, which, combined with higher factor productivity, have spurred double-digit growth in these countries over the last three decades compared to the near stagnation in SSA. Agents' behaviour and institutional factors are major determinants in explaining the macro figures. Before analysing the macro factors that may have produced the low investment/saving rates, it is worth noting that the acceptable performance of investment on SSA standards is largely due to foreign intervention (foreign aid). Indeed, data show that over 70% of public investment (which is 43% of total investment) is financed by foreign sources. One may wonder whether higher domestic saving rates under such circumstances would have translated into higher investment rates. The answer depends on the substitutability between the two sources of funds, on which not much evidence is available for Burkina.

The low investment rates may be explained by four macroeconomic factors, besides the role played by external aid.¹ First, the size of the government deficit and the “passive” mode of financing it could have also limited the investment rate and growth. Burkina has had ups and downs in managing its public finances. The young nation started with large deficits, cumulating at some 2 billion CFA francs by 1966 (or close to 20% of GDP) (see Ediafric, 1971). This was followed by a period of expenditure compression lasting until 1975, then another episode of lax management. With the advent of the Revolution in 1983, an expenditure compression/revenue raising program was adopted. Over the latest period (1992–1997), data suggest a sizable budget deficit of 10% of GDP (Table 1). This recent deficit ratio exceeds the average of 8.7 to 9.8% for the adjusting Sub-Saharan economies over 1981-93 (Aron 1997), and places Burkina among countries with a poor financial stance, judging by the standard threshold of 7% of GDP. Although current government revenue has slightly improved to 13% of GDP, helped by an improved tax recovery from 9 to 12% over the period, this was not enough to offset capital and current expenditure increases. It is worth noting that the highest revenue to GDP ratio of 13% is well below the 18% average for the adjusting SSA countries. Capital expenditure gained 3 points, while current expenditure lost 1.5 points over the period. The monetary arrangement within the UEMOA precludes the inflationary financing of the deficit through money printing. The government also fails to use other internal instruments to finance

¹ International aid plays an important role in Burkina's economy but is volatile, although less so in the case of Burkina than in worldwide trends. Aid accounts for up to 18% of GDP over recent periods (1991-96), up from 12% over 1970-82 and 13% over 1983-90. Aid was unstable over the Revolution period of 1983–1989 but significantly picked up as the country embarked on a liberalization course in 1991. See Savadogo (1999).

the deficit, such as attractive government bonds, which would mobilize household savings. This has ambiguous macroeconomic effects. In the short run it reduces pressure on prices and avoids crowding out the private sector as government and private investors would compete for domestic resources. At the same time, in the medium term, the government misses a golden opportunity of increasing the financial depth and growth through bond financing of the deficit.

Second, investment has partly been deterred because of *inappropriate monetary policy*. The monetary policy was characterized by financial repression over the 1970s to the mid 1980s, with ensuing negative real deposit rates. The real deposit rate was estimated at -2.33% over the 1970–1982 period (Burkina Faso/World Bank, 2001). Starting with the mid 1980s, and following a central bank reform of monetary policy, real rates became positive, averaging $+5.62\%$ over the 1982–95 period.² These favourable rates, coupled with the devaluation of the currency in 1994, significantly increased the liquidity of the banking system. Paradoxically, bank financing of the economy did not improve, with total credit to the economy decreasing during the first years of the 1990s. The private sector was the most affected during this period, as credit dropped by nearly 15% between 1990 and 1992. The volume of credit picked up in 1996, with a growth rate of 8%, and in 1997, with a two-digit growth rate, owing to a post-devaluation high liquidity rate of the banking sector. The recent growth is mostly due to credit to the public sector, which increased by almost 10% in 1997.

Because policy is the resort of the Union, usual instruments such as the exchange rate, inflationary financing of the deficit, and even the interest rate, cannot be freely used by Burkina Faso. The Central Bank (BCEAO) has the mandate to define the monetary stand of each UEMOA member country, and even BCEAO cannot set some monetary instruments, such as interest rates, independently of Paris. Indeed, because of the fixed exchange rate between the CFAF and the French franc, interest rates in UEMOA cannot depart significantly from those of France. In particular, they could not be significantly lower, as this would imply capital flight to France.

Third, *exchange rate misalignment* is a potential deterrent of physical investment. Exchange rate adjustment is normally part of the policy packages adopted by countries to foster growth and build competitive economies. In the case of Burkina, the exchange rate policy pertains to UEMOA, and nominal exchange rate adjustments occur rarely, in fact only once (1994) under the initiative of the Union. Real exchange rate misalignment can cause severe drawbacks to competitiveness, the problems suffered by the main CFA zone economies prior to the 1994 devaluation. The deterioration of the terms of trade of the major export products of the CFA zone in the mid 1980s has caused an important depreciation of the equilibrium real exchange rate in the zone. Because of the fixed parity of the CFA franc against the French franc, the appreciation of the latter against the dollar in the 1980s has resulted in a nominal overvaluation of the CFA franc by 52% (for the zone) and 13% for Burkina. Several events, including declining inflation rates in France, a depreciation of the currencies of trade partners, combined to produce a real exchange rate over-valued by 31% for the CFA zone, and 9% for Burkina.³ The devaluation of the currency in 1994 restored competitiveness of the zone and the economy picked up in the post devaluation years, but the gains have started to erode with the recent Asian and Brazilian crises, which led to a massive depreciation of the currencies in these countries. Estimations (Burkina Faso, 1999) suggest that the real exchange rate in some CFA countries (e.g., Côte d'Ivoire) appreciated by almost 14 points between June 1997 and September 1998. The fixed exchange rate regime acts as a “monetary trap”, which leaves devaluation as the only adjustment mechanism available to the countries.

Fourth, *failure to attract foreign direct investment* may have limited the investment rate. It has also been limited with the worsening of the country's external accounts. Direct foreign investment

² These high real interest rates have two roots. First, nominal interest rates were significantly increased, reaching a high 8.5% in 1992. Second, Burkina's economy is characterized by low inflation rates. Thus in 1993, one year prior to the devaluation, the inflation rate was only 0.5%. The immediate impact of the 1994 devaluation was to raise the inflation rate to 25%. However, in 1997, three years following the shock, prices resumed their usual progression, with inflation settling at 2.3% (Burkina Faso/World Bank, 2001: 30).

³ Although an overvaluation of 9% appears rather small and is not likely to produce notable impacts on investment, note that the economy is highly dependent on Côte d'Ivoire (both because of labour income and trade) and the real exchange rate misalignment was much more pronounced in that country. The overall overvaluation of the major CFA economies was therefore likely to be detrimental to Burkina.

made up less than half of a percentage point of GDP over the period, oscillating between 1 and 9 million \$ per year. Portfolio investment is nearly null. The weakness of these private operations is the sign of a “non-attractive” economy, due to risks, low profitability or social capital deficit. Collier and Gunning (1997) found that sub-Saharan Africa is the part of the world with the lowest social capital, in terms of low trust, bureaucratic red tape and a weakly enforced judiciary system. Burkina runs a structural deficit in both its trade and current account balances. The trade balance deficit has worsened in the 1990s, from 9% of GDP in 1992 to 12% in 1997 (Table 1). Over the same period, the current account balance worsened by four points, with the deficit reaching 10% in 1997. The worsening of the current account has been attenuated by the positive net private transfers, in particular in the form of workers’ remittances. The latter made up close to 6% of GDP in 1990/91, before falling to about 4% when Côte d’Ivoire (the destination of most Burkinabé migrants) experienced the severe crisis leading to the 1994 devaluation.⁴

The Impact of Human Capital Is Very Small and Not Significant

The regression shows that human capital contributes 0.03 to growth and that this contribution is not statistically significant. The negligible contribution of human capital may be associated with random measurement error in the growth of human capital (which tends to bias the coefficient towards zero) and/or with a tendency to systematically overestimate human capital accumulation. The low contribution can also be associated with the possibility that human capital is badly misallocated (e.g., it is concentrated in the civil service and state enterprise sector where its productivity is very low).

Other hypotheses are also relevant next to these statistical and selection problems. One notes that while in the newly industrialized economies and in the developed world, human capital has played an important role in economic progress, such is not the case for most of SSA just as in the case of Burkina. The stock of human capital proxied by the number of years of education is particularly low for Burkina. A randomly selected individual from the active population had 0.18 years of primary schooling in 1970, and 0.39 years in 1997 (Burkina Faso/World Bank, 2001). By adding up the different levels of education, the total stock of education was estimated at 0.45 years in 1997, meaning that the average active individual had less than six months of schooling. This compares with 3 years in Ghana and in Cameroon, and 0.76 years in Mali (Sacerdoti et al., 1998). At such low levels, it may not be surprising that the impact of the variable on growth is insignificant both economically and statistically.

The labour force, the main asset of Burkina (also known as the “land of people” – *terre des hommes*), is fraught with problems. The population faces very low per capita incomes, with annual progression rates of 0.8% over 1975–1996 and 3% over 1995–1998 (Burkina Faso, 1999). At this rhythm, a quarter century is needed to double per capita income to the 1996 level for SSA (\$490). Data show that up to 50% of this population live below the national poverty line defined at \$75 per year (1995 exchange rate). Under such extreme poverty, it is not surprising that factor productivity is at dismal levels.

Other components of human capital did not fare better. The health status of the population is a major preoccupation. Life expectancy at birth is estimated at 46 years, and progress seems to be eroded by the advent of the AIDS epidemic. The child mortality rate is estimated at 184 per thousand in 1993, well above the average for the less developed countries of 94 per 1,000. The percentage of children immunized against DPT was 47% in 1995, compared with 87% in Benin and an average 60% for the LDCs (Savadogo, 1999). These outcomes in the health sector are in part the reflection of an

⁴ The influence of the Ivorian economy on Burkina is indeed strong. It is estimated that close to 2 million Burkinabé work in Côte d’Ivoire. Some estimates even put these numbers to above the 3 million mark. This has tremendous impacts through releasing constraints on employment and agricultural land for Burkina, while the incomes earned and repatriated by these workers contribute to investment and changing life styles for relatives in Burkina. In the mid to the end of the 1980s, workers remittances made up 10% of GDP. In 1986, \$191 million were received by Burkinabé working abroad. The fluctuations in remittances are heavily tied to the behaviour of the Ivorian economy. When cocoa does well, remittances increase, as most Burkinabé are rural farmers in Côte d’Ivoire. Most Burkinabé migrate to escape from the hardship in the land scarce and densely populated parts of the country (the Central Plateau). A review of the Burkina economy (Burkina Faso/World Bank) suggests that remittances could be higher if migrants had more education training. For example, although fewer, workers in Europe (in particular Italy), repatriate sizable amounts of money and know-how.

insufficient health delivery system: a doctor for 24,000 people, one hospital bed for 5,000 people. One also notes that only 35% of the population had access to safe drinking water, thus leaving much room for water borne diseases.

Innovation did not occur: Total factor productivity grew negatively

Nehru and Dhareshwar (1994) provide a framework to compute total factor productivity for Burkina. Using the same approach, the Burkina Faso/World Bank report (2001) estimated the growth rate of TFP at -0.20 over the period of analysis (1970–1997). Countries such as Kenya or Mauritius have experienced TFP increases of close to 2. In other terms, keeping everything constant, Burkina missed the opportunity to add an extra 2 points to its observed growth rate, had the country taken the appropriate steps to achieve a better use of the stocks of the tangible factors. Several factors combine to explain the negative TFP growth. These factors prevent efficiency gains at the firm level and also act negatively on the accumulation of physical inputs.

The first is the low financial depth. The monetary ratios point to a rather low financial depth, which has not improved significantly over time. In the 1960s, the ratio of M2 to GDP was 6.9%, increasing to 14% in the 1980s and then 20% in the 1990s (Table 1). This low financial depth is the consequence of a weakly functioning credit system (see more below), as total credit has evolved only slowly over time partly due to policy.

A second group of factors include inappropriate fiscal policy, the fixed exchange rate regime with the ensuing frequent overvaluation of the currency and the need for nominal depreciation, a legal and regulatory environment not conducive to business development (Collier and Gunning, 1997), and pervasive state interventionism (dominance of monopolies, oligopolies in the production sector). Likewise, the predominance of foreign concessional resources in public investment may limit the search for innovative management.

There Has Been Little Qualitative Structural Transformation of the Economy

The data do suggest changes in the sectoral origins of GDP, but on the surface: services become predominant over time. Agriculture declined from 43% over the 1970–1974 half-decade to 33% over 1990–1997, industry decreased from 33 to 27% while the services increased from 25 to 41% (Table 1). However, there appears to have been no significant qualitative transformation of the economy. An estimated two-thirds of GDP pertains to the informal sector (including agriculture), which is characterized by low productivity owing to the low skill of labour and the low use of productive technologies (Burkina Faso/World Bank, 2001). Agriculture employs 80-85% of the active population, yet contributes only one third to GDP, implying a rather low average labour productivity in that sector. The available data suggest that labour productivity in agriculture was 15 to 27 times less than in the non-agricultural sector over the 1970–1990 period (see Table 3, annual data for BF).

The weak agriculture together with the stagnation or regression of industry is a key sign of the lack of a qualitative structural transformation of the economy over time, probably the result of severe structural and institutional factors that impeded the birth of a formal modern sector. One potential explanatory factor of the weak industry is the predominance of parastatal monopolies or oligopolies, characterized by rent-seeking behaviour as well as little interest in cost-cutting or productivity-enhancing measures (Table 1).

Overall, despite the lack of a notable progress, agriculture still remains the main driving force of economic growth not for its own production per se, but because of the forward and backward linkages it entertains with other sectors (tillage equipment, agro-processing, tertiary activities such as transport). Even the devaluation of the currency in 1994 did not lead to any significant change in the sectoral composition of growth.

2.3 Organization of the Case Study: Time periods, markets, agents and political dimension

The macro evidence reviewed above suggests mixed results in the growth performance of Burkina Faso. During the most recent period, the economy appears to have performed well relative to other SSA countries. Yet, the appraisal of growth factors suggests large deficits (social capital deficit,

physical capital deficit, overall policy deficits) that may have prevented higher realized growth rates. The objective of the rest of the paper is to use micro evidence to explain these facts. The micro evidence draws on the behaviour of markets and agents and on agents' interaction through the political economy dimension. This micro evidence is analysed over three subperiods that we now define.

Periodization

We use a combination of political and economic data to define three periods during which the main drivers of growth are likely to have differed in a marked way. On political grounds, Burkina is characterized by three major turning points since independence. The first is the year 1966, when the first democratically elected government was overthrown in a military coup. The incoming power ruled 14 years, eventually becoming a democratic regime. Two other coups without major or durable political changes occurred in 1980 and 1982, leading to the second major turning point in 1983, with the onset of the National Revolutionary Council (CNR). This had profound effect on the country, leading among others to the change in name (from Upper Volta to Burkina Faso). Although the CNR was overthrown in 1987, the revolutionary mood continued until 1989. In 1990, a transition period was observed, leading to the third major turning point in 1991 with the advent of a democratically elected regime. A constitution was adopted in June 1991, elections were held, and since then the country has been in an era of political liberalization.

One can map the major economic paradigms that the country experimented onto this political space. Corresponding to the 1960–1982 period, despite the three changes in political regime, was a typical state interventionism. In the 1960s and 1970s were created both the Organismes Regionaux de Développement (ORDs) and the Office National des Céréales (OFNACER), two instruments of the state's presence in the agricultural sector. This period is also characterized by an absence of a vision for the private sector. Most modern firms were under state control.⁵ On the macroeconomic side, the period was characterized by a tight fiscal policy from 1966 to 1974. This balanced budget policy was characterized by an “expenditure repression”, however, and the annual national expense budget averaged a little less than 10 billion CFA francs between 1964 and 1971. On environmental grounds, the period is featured by the 1968-74 drought years, culminating with the large food deficit of 120,000 MT in 1974. The drought further increased the government's commitment to more expenditure reduction and rigor (Garango, 1975: Programme d'Action du Département des Finances, Ouagadougou). Little progress in education was realized in this time; the primary school gross enrolment rate averaged 8% over the period. The modern components of agriculture were dominated by a half dozen post-colonial firms. In terms of economic performance, the period can be characterized as one of slow and erratic growth with an average 1.2% annual rate over the period. Annual data show 2% in 1961, -3% in 1963, 6% in 1967 and -1.5% in 1980, suggesting ample year-to-year swings. The half-decadal data show that the growth rate of real GDP per capita varied between 0.8% at the start of the period and 1.7% at the end, with a low of 0.6% during the 1970–1974 half-decade.

During the 1983–1990 period, central planning was increased, while the private sector was seen as exploitive and untrustworthy. The period featured the institution of a non-orthodox adjustment policy. Following the Garango period of the 1970s, government fiscal policy had become lax, and one axis of the CNR's work was to contain public expenditure. The programme included freezing civil service wages at 1982 levels and other measures to reduce the public service wage bill. Other stabilization measures included instatement of the one-year national service (SNP) to provide low cost labour in the public sector, and the lowering of retirement age. The CNR government also worked to reduce general expenses by putting off the importation of luxury cars for official use and, on World Bank advice, eliminating the fertilizer subsidy. On the revenue side, the CNR attempted to foster a self-reliance economic policy, emphasizing revenue from domestic taxation on production and distribution rather than the usual reliance on foreign trade tax revenue (Savado and Wetta, 1992).

⁵ There were 35 manufacturing firms in 1965 and 61 in 1976, almost evenly distributed between food processing (14), metal work (13), chemicals/polypropylene (13), textile and leather (9), and other diverse (12). See Zagré (1994: 87).

Between 1983 and 1987, the government raised car registration fees and taxes on cola nuts and tobacco products. Together with an increased effort to increase the effectiveness of tax collection, the tax revenue to GDP ratio increased from 13.5 to 16.3% between 1983 and 1987 (Savadogo and Wetta). Government policy also emphasized the social sectors (health and education) and equity in income distribution in favour of rural areas and low-income groups. The Five-year Popular Development Plan emphasized agriculture and rural water, and agricultural price policies were shifted in favour of rural areas. In terms of economic performance, the eight-year period began with a very low growth of real per capita GDP (0,16% for the first half-decade), which progressively became stronger (2.17% at the end of the period). Substantial progress was recorded in agriculture, and the gains in basic education during the period exceeded those over the 22 years since independence that preceded the Revolution era (Savadogo and Wetta).

The coup that overthrew the CNR in 1987 was followed four years later by a dramatic change, from a revolutionary era that lasted until 1990, to a democratic and liberalized economy era. The latest years of the CNR regime were marked by population fatigue from the various contributions asked by the regime for its social and self-reliance policies. Following the 1987 toppling of the CNR, the National Front that came to power was somewhat forced to bow down to popular requests of the release of the political and economic pressure (Zagr , 1994). For example, salaries were increased by 4 to 8% in 1988, and some civil servants fired for incompetence or ideological reasons under the CNR were reinstated. The various measures entailed a 14.5% increase in the wage bill in 1988. There was a further 11% increase of the wage bill in 1989, when advances of civil servants (whose advancement was frozen since 1983) and decided in 1988 were implemented. Together with other government expenses (scholarships, transfers), the budget deficit increased. The government also accumulated external arrears in debt repayment, which culminated to CFAF94 billion in 1990, at parity with total government revenue. These events took place as the contribution of remittances from Burkinab  workers decreased from CFAF66 billion in 1986 (when they amounted to 1.28 times the value of total exports) to CFAF45 billion in 1990, following the severe crisis that settled in C te d'Ivoire (Zagr ).

Anticipating problems, the Popular Front initiated negotiations with the World Bank and the IMF in 1988, leading to the first structural adjustment programme in March 1991. Ten years following the first African states, Burkina accepted this orthodox adjustment in place of the home-grown adjustment that marked the CNR as well as the Garango periods. The period started with strong growth (7% in 1991), immediately followed by a bottom of -3% one year prior to the devaluation of 1994. Positive growth rates resumed in 1995, becoming stronger the last two years of the period (3.5 and 2.3%). A new vision emerged of the private sector as a key development player.

For the remainder of the analysis, we therefore adopt the following three-period subdivision:

- 1960–1982: Independence and state control.
- 1983–1990: Revolution and self-imposed adjustment
- 1991–2000: Democracy and economic liberalization

Markets

We examine the impact of two categories of markets: products and factors. The main agricultural products markets we look at are the cereal market, the cotton market and the livestock market. Cereals are the staple foods and also important domestic trade components through urban rural interchanges. Cotton is the major export crop and livestock is both a major food component and a major source of foreign exchange through intra-regional trade.

As for the factor markets, we address three important markets: the fertilizer market, where we distinguish the formal official market (well organized) for cotton producers from the informal, less organized market for other farmers outside of the cotton zone; the credit market, where we distinguish between informal and formal credit, as credit plays a role in productivity gains, in consumption smoothing for rural households; and the labour market, where we concentrate on labour legislation and the implied rigidities that limit surplus labour absorption and on the role of migrant labour to C te d'Ivoire.

Agents

Farm households are the most numerous production units in Burkina, making up 80% of the active population. We sub-classify farm households into (a) small-scale cereal and livestock farmers and (b)

cotton farmers. We also address, but in less detail, the role of the emerging modern farmers in rural or peri-urban settings. Farmers operate under rain-fed conditions, and irrigation is minimal (17,000 ha out of a total potential of 160,000 ha). Small farmers predominate, operating an average of 0.4 ha per active farmer. More than half of farms (52%) operate on 3 ha or less and 76% on 5 ha or less (DSAP/MARA, 1994: Enquête Nationale des Statistiques Agricoles, 1992/93).

Manufacturing firms appear as a weak link in the economy of Burkina. They have been shown to lack competitiveness and dynamism (Burkina Faso/World Bank, 2001). One other feature of Burkina's manufacturing is the coexistence of a few very large enterprises and numerous very small firms; the category generally referred to as small and medium enterprises (SMEs) is weakly represented. Moreover, the manufacturing firm landscape is dominated by informal practices. Most firms in Burkina are in the agro-industry area and have in the past been publicly owned. We choose to address textiles and cotton ginning firms; cotton related food and feed manufacturers (oil, by-products from oil production); and other food manufacturers (sugar, flour mills, soft drink processing from local agricultural production). In each case we will analyse the specific features of state-controlled vs. private enterprises.

The informal sector serves as a regulatory mechanism: it provides employment, houses underground activities escaping control, and is a refuge for unfair competition. Firms in the informal sector pay little tax and thus can offer lower prices than formal businesses, causing unfair competition.

Political Economy Dimension

We will look at the role of interest groups and their interaction with markets and agents to yield economic outcome.

The Urban Elite. Four categories of groups play or played a significant role in Burkina: (a) labour unions (for example, labour unions contributed to the overthrow of the first elected president of the republic in 1966); (b) business leaders with vested interests; (c) politicians, whose behaviour at times falsifies rational allocation of resources by orienting resources to where they are not necessarily the most productive; and (d) students, who have large impacts on government budget allocation, are vocal and have contributed to the development of ideological concepts that affect the political process.

Cotton Producers. Recently, cotton farmers are acquiring voice in decision making regarding cotton production and pricing, through their associations and by taking equity shares in the cotton parastatal.

Donor Community. They affect policies through aid and their own tendency to explicitly intervene in national priority setting. Aid coordination or the lack thereof is key to the growth process in Burkina.

3. 1960–1982: INDEPENDENCE AND STATE CONTROL

This section takes on the issue of growth during the first period, 1960–1982. These years were marked by the lack of a coherent growth strategy. Following a period characterized by a lack of fiscal discipline (1960–1966), the incoming government following the military takeover in 1966 emphasized a stringent balanced budget policy that severely constrained growth by limiting investment in social and economic infrastructure.

3.1 The Salient Facts

This subsection catalogues the main facts characterizing the period in the following areas: the policy environment and exogenous shocks.

Policy and Institutional Environment

This first period is marked by the general mood of planning that was adopted by most developing countries. The state played an important role in economic orientation, at least on paper, as the different plans of Burkina (Plan cadre 1967–1970, Interim plan 1971–1975 and Five-Year Plan 1972–1976) were a mere compilation of various projects lacking a coherent linkage (Zagré, 1994).

The new state created institutions that were intended to be instruments of a rapid development: rural regional development organizations (ORDs, 1966); marketing boards (OFNACER for cereal policy in 1970, CSSPA for export crops in 1964); and the Caisse Nationale des Dépôts et des Investissements (CNDI) in January 1975 to transform savings deposited in the public financial institutions (state treasury, postal service). The government also embarked on a massive programme to eradicate river blindness in the fertile river valleys of the country, with a World Health Organization led initiative.

Early on, as in many African governments, the government espoused an import-substitution orientation and created industrial zones (Zagré). Agricultural policy revolved around price control, with more aggressive intervention in ways of extension and direct investment (Oncho programme) starting in the middle of the period.

The key features of macroeconomic policies during this period is the fixed exchange rate regime associated with a total convertibility of the currency, tied to the French franc. Monetary policy was characterized by financial repression. But what really distinguished this period from others and Burkina from similar countries was the tight fiscal policy that marked the period 1966-76. During these ten years, the then Minister of Finance, General Garango, applied an expenditure reduction and control recipe that did indeed produce a balanced budget, but unfortunately had negative impact on investment in human capital formation and infrastructure build-up (Zagré, 1994; Garango, 1975).

Finally, another feature of the orientation taken is the establishment of state monopolies in the utilities and commerce sectors. The most prominent of these were the electric company (VOLTELEC, now SONABEL), the water company (now ONEA), the telephone company (OPT, now ONATEL), and a general commerce store (SOVOLCOM, then FASO YAAR). These monopolies were to have negative impacts in the future with excessive costs that hinder industrial development and competitiveness (Burkina Faso/World bank, 2001).

Exogenous Shocks

The major exogenous shock during the period was the 1968–1974 drought that persisted throughout the Sahel region, culminating with the 1972/73 drought that drew world attention.

3.2 Markets

Against this general background, we try to assess the behaviour of the main markets during this period. The market is where supply and demand meet and interact to yield outcomes for the different agents. When markets function correctly and generate meaningful price signals, they become a good mechanism for allocating resources. A market cannot function well without the appropriate institutional and legal foundations, which lay the ground for the enforcement of property rights and contracts. Added to these, a well functioning market also requires good infrastructure (roads, communications) and a reliable and readily available information system on prices and quantities. When some of these components are missing, markets are unlikely to play their role of efficient resource allocation that promotes growth. One fact that is likely to become stylized is that African product markets are constrained by a variety of transaction costs, with the consequence of promoting long-term rather than spot trade relationships (Fafchamps, 1999, cited in Oyejide, 2000).

For this early period of Burkina's growth history, several questions are of interest. Were markets functional and effective in meeting transaction needs? What was the geographic extent of markets? Were markets efficient in the sense of meeting goals at the lowest cost? A third question relates to equity. Traders have usually been described as exploitative in SSA. What can be said about profit sharing over the market channel among the various agents involved?

Cereal Markets

The cereal markets, as they currently function, assumed their present main traits during the colonial period, following the Second World War. They were progressively shaped and modified by various

events, the most significant of which were political independence in 1960 and the severe drought of 1972/73 (Sherman et al., 1987). Following the drought, long distance trading of cereals between surplus and deficit zones was developed in an unprecedented way.

During this first period, three types of actors intervened in the cereal market: private traders; cereal banks or village associations buying at harvest and stocking to resell during the shortage period at prices lower than the ongoing private market prices; and the state. The period is a succession of subperiods of free and restricted trade.

1960–1970: Liberal Trade. The early part of this period was marked by liberal trade of agricultural products, probably reflecting the point of view of the colonial power regarding the role of the private sector in economic development. Prices appear to have been free, and traders were not taxed specifically. However, a description of the trade conditions during the early era following independence indicates major shortcomings in what makes markets work effectively and efficiently (Chamber of Commerce, 1961):

- Traders: A large portion of the country (the East) lacked professional traders and the movement of grains was limited; there was a tendency of the few potential traders to assemble in the then major towns (Chambre de Commerce).
- Road infrastructure: Roads at this time mostly radiated from the main towns (Ouagadougou, Bobo-Dioulasso, Koudougou, Ouahigouya) towards secondary towns: Ouagadougou–Kaya–Dori, Koudougou–Tougan, Koudougou–Dédougou–Nouna, Koudougou–Léo, Bobo-Diébougou–Gaoua–Batié, Ouahigouya–Kongoussi–Kaya–Sapaga–Koupéla. The eastern part of the country around Fada-N'Gourma was quite isolated and had little road infrastructure. These roads also served interstate trade purposes (to Mali, Côte d'Ivoire, Ghana, Niger, Benin). The total road length was estimated at 17,000 km (including 9,000 km of major roads and 8,000 km of feeder rural roads). The implied road density of 1–2 km per 30 square kilometres of land was quite low. Moreover, it was estimated that two-thirds of the road network was unusable during the rainy season (Ediafric, 1971: 129).

According to available information, trade of the major food crops (sorghum, millet, maize) was carried by the traditional traders, without state intervention. Traders were free to carry their product anywhere within the national borders (Ediafric, p.41). However, there seems to have been a regulatory mechanism limiting the official trading period; thus for the agricultural year 1970/71, the trading period was from December 15 (1970) to April 30 (1971) (Ediafric, 1971: 40).

The data on trade volumes suggest that about 85,000 MT of sorghum was traded on average each year during the late 1960s, out of a total production of 600,000 MT, suggesting a market surplus rate of 14%. For millet, 13% of total production was traded, i.e. a total of 40,000 MT. Finally, 30% of all the maize produced was traded, for a volume of 30,000 sold. On average for all cereals, the market surplus was thus estimated at 15% of total production. These numbers are surprisingly robust, as even in more recent periods traded surplus was estimated at around 10–15%.

1971–1982: State Interventionism and Emergence of Cereal Banks. In 1971, in the midst of the Sahel drought years, the government instituted the Office National des Céréales (OFNACER). OFNACER was to regulate cereal trade for the next 20 years, in the form of price stabilization (from year to year and intra-annual fluctuations) and emergency stock constitution. A tandem was instituted between OFNACER and the Organismes Régionaux de Développement (ORDs, created in 1968 to carry agricultural extension services). Right after its inception, and until 1974, OFNACER assumed the monopoly of cereal resale to consumers, while the ORDs had the monopoly of cereal purchase from the producers. This double setting transformed private trading into an illegal activity.

During this subperiod, cereal banks emerged as a scheme to protect poor farmers in deficit areas. This alternative to private or public markets received support from donors (NGOs) and appeared an attractive, efficient way of transferring grain in time at low cost, using villagers' labour. The cereal bank concept was a response to the view that private trade was exploitative and particularly hurt the poor farmer forced to sell low at harvest time and purchase back high during the lean season. (Refer to Table 2 for an illustration of the cereal markets in this period.)

What was the share of each of the three actors in total trade volume? In summary, this period after independence is characterized by a government's hesitation on the appropriate marketing system to handle the staple food product. Mistrust of the private system led to the institution of a state agency aimed to substitute for or control the private sector. Switching and re-switching between the two systems were signs that none was satisfactory to the government. What can be noted about the outcome of the system is that the set up of the system has likely depressed prices received by the producer, defeating the primary purpose of OFNACER to support farm prices.

First, OFNACER used private traders as intermediaries to buy the grain from the producers, due to insufficient manpower or trucks. The procurement price from these traders was the official producer price, plus an allocation for transport cost (Sherman et al., 1987). This suggests that the traders were forced to procure grain at much less than the official producer price. Second, OFNACER also handled food aid, resold at the ongoing OFNACER price for domestic cereals (except for lower quality food aid that was sold with a discount). In this way, foreign grain contributed to displace national production and with large quantities flowing in, the official handling of cereal trade has likely depressed prices and negatively affected the producers. To sum up, the existence of an official market may have benefited consumers and hurt producers, thus creating disincentives to produce beyond subsistence needs.

Table 2: Official set up of the cereal markets, 1960–1982

Period	Actors
1960–70	Free trade: absence of state intervention
1970–74	State intervention: OFNACER handles food aid Private traders handle regular trade
1974–78	Private trade illegal. State monopoly/monopsony on the cereal market: <ul style="list-style-type: none"> ▪ OFNACER vested with monopoly rights on cereal sale to consumers ▪ ORDs vested with monopoly rights on cereal purchase from producers, but use services of private traders to do the buying because of staff shortage
1978-82	Dual market system: Private and public actors coexist <ul style="list-style-type: none"> ▪ Monopoly rights of ORDs relinquished ▪ Private traders allowed to operate, but needed official licences

Source: Constructed from Bassole (2000) and Lecaillon and Morrisson (1985).

Financial Market

Sustained growth cannot be achieved without the support of a developed and effective financial system. A sound financial system in particular is essential for the emergence and development of small and medium-size enterprises, often shown to be the most dynamic and competitive units in developing countries (Burkina Faso/World Bank, 2001). The financial system in Burkina is made up of two major components, the formal and informal subsystems. Broadly, this division corresponds to an urban–rural divide. In general, it is agreed that the informal financial component is the response to the inadequacy of the formal system, at least for some segments of the population (Oyejide, 2000). The formal system includes the commercial banks and other modern financial institutions under the supervision of the Central Bank (BCEAO). This component is the primary channel of funds and caters to the needs of the modern sector commerce and manufacture enterprises. The informal component includes the more or less formalized decentralized microfinance system and the purely informal sector (rotating credit or tontines, individual loan givers). The microfinance system emerged in the 1970s to cater to the needs of small and medium enterprises, microenterprises and individuals operating in the urban or rural informal sector.

The Formal Financial Market. The banking and modern financial institutions system is in an oligopolistic situation. During the first period analysed here, there were only three commercial banks (BICIA-B and BIB created in 1974, CNCA in 1981). Only 2% of the population is affiliated to the

modern banking system. Prior to 1974, the financial arena was populated with development banks (BND). Only one non-banking financial institution existed during this period, SOBCA (since 1972). During the period, the indicators of performance of this system were weak: the indicator of long-term savings measured by the ratio of time deposits to the money supply was only 6% over 1960–1974, increasing to 18% over 1975–1979 (the averages for UEMOA were 14% and 20% for the two subperiods).

These low savings ratios placed a major constraint on the medium- and long-term credit needs of the economy. To explain the low savings ratios, one notes that for Burkina, the real deposit rates were negative throughout most of the 1970s (-2% in 1973, worsening to -24% in 1977, and on average -2.38 over 1970–1982), largely due to the inflationary pressure that followed both the food and the oil crises (BCEAO, 2000, Table 10.22 and Burkina Faso/World Bank, 2001: 124). (The same observation was true for the other union members.)

Econometric tests suggested a positive and weakly significant (10%) relation between the real interest rate and savings for Burkina, supporting the hypothesis of the presence of financial repression throughout the 1970s (BCEAO, 2000: 68). The low interest rate (plus other factors such as risk) must have also played a role in the observed capital flight (up to 1982, a cumulated CFAF222 billion for Burkina and CFAF4,812 billion for Côte d'Ivoire, BCEAO, p. 73). Given this constraint in the supply of long-term savings, there was a predominance of short-term credit. Thus, the modern banking system did not meet the needs of long-term investors.

Microfinance and the Informal Financial Market. Most of the economic operators in Burkina are small farmers or earning their living in the urban small-scale informal sector. The formal banking system has little interest in serving this segment of the population, leaving the informal financial system to cater to the needs of these operators. The informal microfinance system usually has a savings and a loan component. Usually, only depositors are entitled to loans. Three of the major savings and loans unions were created during this early period: Réseau des Caisses Populaires du Burkina Faso (1972), Union des Coopératives d'Épargne et Crédit (1973), and Six "S" (Sananikome, 1996).

Cotton Farmers Credit System. Cotton farmers face an effective financial market managed by the cotton development company (SOFITEX). The cotton credit system is developed around the concept of group loan. SOFITEX provided loans in the form of inputs (NPK and urea) and purchased the cotton from the farmers who contracted the loans.

Overall, the credit system during this first period was weak and was not apt to meet the financing needs of the economy.

Labour Market

The functioning of the labour market is important in understanding unemployment. A labour market is efficient if it ensures (a) an allocative function; (b) a reallocative function of workers between sectors and (c) a dynamic or inter-temporal allocation. An efficient labour market should lead to low unemployment. Unemployment is related to growth through the demand compression that high unemployment rates may cause. Segmented labour markets or sticky wages are often the causes of unemployment. The dualistic nature of labour in Burkina (between rural informal labour as opposed to the urban modern labour) introduces a major segmentation that prevents mobility.

The Urban Formal Sector. The main demand for such labour originates from public entities and the modern segment of the private sector. Wages are administered and are rigid because of labour legislation and union actions. During the first period under analysis, the formal labour market was inadequate in resource allocation. Because the government embarked on the so-called "voltatisation of cadres" (the country was then known as Upper Volta), the supply of qualified labour fell short of the demand (only very few Burkinabé graduated from the university or high school then), a situation that led to salary levels that were sometimes not related to the productivity of the workers. The situation was to change under the Garango management (see above), which effectively reduced both the nominal and real salary rates. The labour unions, which played a major role in the downfall of the first

president of the republic in 1996, initially went along with the freezing of salaries but were soon to turn their coat and strike for salary increases following restructuring of the finances.

The Urban Informal Labour Market. The informal urban market became an issue only toward the end of the period as a consequence of the increased urbanization rate. We will analyse this market mostly in the second and third periods.

3.3 Agents

Agents' behaviour is primarily conditioned by their own objectives and motives. Outcomes are highly dependent on the surrounding infrastructure, policy and institutional settings. In most SSA countries, these environmental factors weigh heavily in a distinctive way as constraints on economic actors (Collier and Gunning, 1997). In Burkina, rural farm households are the key agents to growth, making up 80% of the labour force. Manufacturing firms, although not particularly dynamic in Burkina's experience, are the channels through which rapid innovation could occur. A special feature of Burkina is the presence of a strong extraterritorial sector that sends back important remittances each year. The present work will look at these three types of agents and document their contribution to growth or stagnation through their interaction with the prevailing environment.

Farm Households

Agriculture makes up onethird of GDP and therefore growth in the agriculture sector adds roughly 0.33 times that growth rate to overall GDP growth. Rural households, who are the major agricultural producers, therefore play a key role in explaining growth in Burkina. Growth in the agricultural sector is the result of area expansion and productivity gains. Given that over time land expansion is bound to face constraints due to population pressure, productivity gains are the most dynamic sources of growth. In looking at households' behaviour, we will be mostly interested in the components of this behaviour that are related to productivity gains.

The period under analysis witnessed the emergence of cotton as a significant cash crop provider to the rural population, with total production increasing from 4,900 MT in 1960–1963 to 30,000 MT in 1968–1971 and to 65,000 MT in 1980–1982 (Lecaillon and Morrisson). Cotton farmers appear thus as agents to reckon with in explaining growth in Burkina. Cereals (sorghum, millet) increased from 797,000 MT in the early 1960s to 1 million MT over 1977–1981 and accounted for the bulk of agricultural production during the period. In the following, we will concentrate on cereal and cotton farmers.

We begin with key characteristics of rural farmers in a Sahelian setting. Rural farmers operate under a high-risk situation. Rainfall appears as the most pervasive risk in the arid areas of the country (centre to north), but in general can affect most parts of the country. Farmers also face many other types of risks including natural disasters (flooding, locust invasion, other predators), price risk (typical of which is an occasionally large harvest time price collapse). Field data do indeed suggest sizable levels of production/income risk in Burkina. For example, Reardon et al (1992) report a coefficient of variation of crop income of 67% for the Sahelian and 52% for the Sudanian zones.

One consequence of climatic variability and other sources of risk is that innovation is slow to occur. In particular, soil fertility management such as the use of fertilizer becomes less profitable than potential. Interviews with farmers in field surveys show that a substantive investment in fertilizer in the central-northern part of the country can be wiped out by just two or three missing rains towards the end of the growing season.

Faced with that, the alternatives of farmers are not numerous. Insurance is precluded because of (a) high geographic covariance of risk; (b) high moral hazard; and (c) high geographic dispersion of production – i.e., a given area accounts for only a very small part of total production in most parts of the country with some possible exceptions for the cotton zones. Credit is limited because of the lack of collateral (land has little value; livestock is an uncertain stock, as it can be either stolen or exterminated by disease); and the paucity of lending institutions more or less suited to the type of situation. Starting mostly in the second period of analysis, there has been emergence of rural savings and loan institutions and this so-called decentralized financing system may be the proper response to the geographic dispersion and risk associated with rural farming. Because of the failure of these

common mechanisms to combat risk, farmers rely on agent level mechanisms, diversification and asset accumulation for consumption smoothing, and on society based insurance arrangements.

Income diversification in rural areas is an important phenomenon in Burkina. ICRISAT's studies over 1981–1985 suggest that 26–57% of total household income originates from non-farm sources in three agroclimatic zones of Burkina (Reardon et al. , 1992). Recent studies by the University of Ouagadougou and JIRCAS (Japan International Research Centre for Agricultural Sciences) over the period 1999–2000 suggest that non-farm income is 22–40% of total household income (Zahonogo, and Savadogo et al.

Social networks also play a big role in responding to risk. In Burkina, transfers of income from urban or the exterior to rural are important (up to 22% of household income in the drought prone zones of Burkina. Assets accumulation in the form of livestock or other for consumption smoothing is also reported in field studies.

The risk management or response mechanisms put into place may have detrimental impacts on growth. Diversification by spreading the household thin may lead to lower mean income and thus savings, as experiences such as learning by doing in such cases do not fully work. Consumption smoothing can limit growth by keeping assets in a highly liquid form.

Of utmost importance to farm productivity gains is the issue of technology. The determinants of adoption of new technology have been traditionally thought to be individual dependent. Recent findings (see Collier and Gunning, 1997) seem to suggest that adoption is due less to factor endowment than to information access through social learning mechanisms. Social learning was seen as more important than extension services or household's education endowment, as it enhances the capacity for collective action (thus promoting collective infrastructure such as schools, roads).

We will analyse the behaviour and performance of rural households throughout the three period breakdowns following the threads of thoughts developed above.

Environment Faced by Rural Households

The country carries over the negative impact of balkanization (an autonomous colonial entity in 1919, but dismantled in 1932 and shared between Mali, Côte d'Ivoire and Niger for the ensuing 15 years). This caused hindrances to early efforts to modernize agriculture (Chambre de Commerce 1961). Added to that, the physical environment presents challenges to agricultural development.

Soils. They are in majority lateritic and shallow, lacking the major macro nutrients (phosphorous and nitrogen chiefly). Only a small portion of the area has good volcanic soils. Erosion is important, following planting or at the end of the growing season. Over the 1960–1980 period, on average 1.9 million ha were cultivated and 7 million ha fallowed annually, out of the total of 27.4 million ha of land area.

Climate. It is characterized by a short growing season. Rainfall varies from 1,300 mm in the southwest to 500 mm in the northeast, distributed over 83 days in the southwest, 69 days in the centre and 42 days in the northeast. As a consequence, wide fluctuations of cereal yield are recorded from one year to the next (up to 50%). Intense evaporation tends to compound the insufficient and irregular rainfall, and also increases the cost of irrigation. (Ediafric, 1971).

Land Reclamation: The Onchocerciasis Programme. River blindness control was one of the principal development concepts that emerged from the 1968–1973 drought (McMillan and Savadogo, 1996). Endemic river blindness prevented the cultivation of the very fertile valleys of the river basins in south-central and south-western Burkina. Since there was no available drug treatment for the disease, the Onchocerciasis Control Programme (OCP) initially focused on eliminating the black-fly, vector of the disease, by spraying along the affected river basins with insecticides to kill the fly larvae. When activity started in 1974, OCP concentrated on a sphere of 764,000 square kilometres, in seven countries (Benin, Burkina, Côte d'Ivoire, Ghana, Mali, Niger and Togo).

The OCP activities fuelled the Burkina government's own programme to introduce planned settlement in the rich valleys by relocating families from the overpopulated Central Plateau. The Volta River Authority (AVV, or Autorité de l'Aménagement des Vallées des Voltas) set also to address the problem of spontaneous settlement to prevent uncontrolled forest clearance. In 1973, the first pilot planned settlements were created in the White Volta (Nakambé) River Basin, each farm being

allocated six 1.5-ha bush fields and a home site of 1 ha. The OCP freed a total of 47,400 square kilometres that became available for cropping. The AVV programme contributed to augment land resources and to increase average yields of cropped land, through a thorough education and provision to farmers (on a seven-year credit scheme) of complete chain of animal traction. The effects of AVV were to be really felt during the next subperiod (1982–1990) and beyond.

Population. Burkina's people are concentrated on the least fertile soils, up to 80 persons per square km on the Central Plateau, which houses half of the population for about one-quarter of total land area. The population was/is also characterized by a high dependency ratio (48% of the resident population was dependent, according to Ediafric, 1971), which worked against growth by emphasizing consumption over investment (in 1968, consumption accounted for 84% of GDP, or CFAF76.9 billion out of 90.9 billion; capital accumulation was only 6.7 billion, or 7% of GDP [Ediafric, p. 31]).

Neighbourhood. The end of the period (from the end of the 1960s) was characterized by the beginning of what became to be known as the Ivorian miracle. The mid 1960s to the early 1980s also marked the downfall of Ghana. These two coastal neighbours are key to Burkina's economic performance. Another international context is the oil crisis of 1973, which was to affect manufacturing.

Agricultural Policies. One may say that early on, the basic elements related to agricultural development were cornered by the authorities. The official orientation was based on a firm tenet as to the role of agriculture and the appropriate sequences towards development: the first priority was to produce enough staple foods to cover national needs; effort should thereafter be placed on export crops to raise farm income (Chambre de Commerce, 1961: 32). Early on, the authorities pinpointed the need to secure water by building small dams on as many sites as possible. Also, soil conservation work was seen as essential. The role of agricultural research to produce improved varieties and to introduce better cultivation practices was recognized. Early results on agronomic trials showed large prospects for groundnuts (with value cost ratio – VCR, or the ratio of net earnings over the cost of additional inputs – reaching 7.2. For sorghum, highest VCRs ran around 2.0, and for cotton well below 2, the minimum norm usually considered as conducive to adoption). There was general optimism in policy circles that doubling the production over a short time horizon was feasible given the existing technologies, as long as they were fully adopted by farmers (Chambre de Commerce, 1961: 39). To back its vision, the government allocated around 20% of total budget to agriculture from 1976 to 1982, of which 5–6% went to equipment (Lecaillon and Morrisson, 1985).

Government also initiated actions targeted to specific crops. For food crops and up to 1970, the state's role was limited to setting a minimum producer price and a maximum consumer price but the government had no mechanism to enforce its official producer price; market forces regulated prices. In 1970, OFNACER was created, with the objective to stabilize consumer prices, to protect the consumer against what was deemed as traders' exploitive behaviour. From 1970/71 to 1972/74, OFNACER handled only 1% of total trade of local production (i.e., 2,000 MT per year); OFNACER mainly handled imported cereals (under title food aid or other concessional imports). In 1974, ORDs were granted monopsony rights to purchase from farmers, and OFNACER monopoly rights to sell to consumers. ORDs could buy only half of anticipated purchases in 1975/76, ORDs involvement in trade lasted until 1978. In 1978, the monopoly right of OFNACER was relinquished.

For cotton, development started in 1951/52 when the French textile company, CFDT, settled in the then Upper Volta. From 123 MT in 1951/52, the quantity exported was multiplied by 20 ten years later (2,769 MT in 1960/61).

In a global assessment, government policy was deemed to have had a negative impact on agriculture during the early years (from 1960 to 1973). From 1973 to 1982, policy became more favourable, with an increase in real price levels, an increase in the investment rate in agriculture and greater financial depth in rural areas (Lecaillon and Morrisson, 1985).

Responses of Households to This Environment .

The environment presented opportunities that could have been taken up by the households for improving productivity. Among these were:

- **Fertilizer:** Farmers are often aware of the benefits of mineral fertilizers, but do not use them because of risk aversion regarding returns, as well as lack of information on which fertilizer and at what rates to apply (Voortman et al., 2000). Use of fertilizer in Burkina over this early period of agricultural development was depressingly low, on only 5% of all farms (Ediafric, 1971: 36). In 1970, 3,270 MT of fertilizer were used on 129,000 ha or 25 kg per ha, mostly in the cotton zone.
- **Equipment (animal traction):** In 1970, there were 2,280 pairs of draught oxen concentrated in the Yatenga province and the cotton zone of Volta Noire (actual Mouhoun).⁶ There were 8,100 donkeys and donkey equipments. The number of farms was estimated at 530,000 (Ediafric, 1971: 36), hence an equipment rate of 2% in either donkey or oxen traction. This low rate of animal traction utilization explains the small farm size (4 ha per farm, or 0.4 ha per active family member). This raises the issue of how growth could occur at such a low scale.
- **Soil conservation and water retention techniques:** Towards the end of the first period (1979–1982) farmers in the drought prone zones were introduced to water conservation devices and started to adopt water retention techniques such as dikes, tied ridging and zai (shallow catchment basins dug out in level areas).

Output/Productivity. Cotton yield increased from 154 kg/ha in 1960–1963 to 532 kg in 1971–1975 to 920 kg/ha in 1980–1982. Gains for sorghum and millet were small: 440 kg/ha in the early 1960s to 537 in 1968–1971 to 550 kg in 1980/81. Gains in labour productivity during the period were minimal. With 1970 as base year (=100), production per active was 113 in 1982, but with important swings (98 in 1977, 92 in 1980). There was therefore no trend in labour productivity over the first period of analysis, an indicator of the sluggishness of the agricultural sector in spite of the official image of agriculture as the engine of growth. Why did farmers choose not to or fail to invest in animal traction, or to adopt high yielding inputs such as fertilizers or new varieties? What did not work? Markets? Extension? Or farmer's information and knowledge? Did profitability matter at that point? These factors may have all converged to the lack of innovation. But other possible explanations include the mere fact that farmers may have not thought that these investments were needed given their mode of operating. In the early 1960s and prior to the drought, shifting cultivation was still feasible in many places, and was cheaper than investing in fertilizer, at least on private calculation. One observed that the drought (and some accompanying policies) have triggered adoption of animal traction in the more difficult areas in terms of soil fertility and water, the Yatenga region. Added to this, another likely explanation of these dismal levels is that fertilizer in the 1960s was a totally new technology and lack of utilization was not solely related to economic considerations (profit maximization or risk minimization). Rather, lack of knowledge and lack of users to imitate may have been determinant factors at this stage.

Manufacturing Firms

Research on manufacturing firms in the African setting has established a few hypotheses regarding the operation of these firms. Five environmental conditions of firms particularly limit growth. First, most firms operate under lack of external finance. As shown above, financial markets were limited and were not highly effective. Although the relationship between credit and investment is not firmly established, fragmentary results suggest that for firms that lack internal funds, the lack of credit restricts investment (Collier and Gunning, 1997). It is likely that this applied to the Burkina situation during this early period, but data to firmly establish this are lacking.

Second, firms, just like rural farm households, operate under a high-risk environment, even though in Burkina Faso, a member of the CFA franc zone, firms did not face the uncertainty related to

⁶ The regional differences are significant. Animal traction programmes started early in the Yatenga region, where less than 8% of farms had equipment in 1965. By 1973, the rate increased to 13% and to 20% by 1980 (Dugué, 1985: 33.)

a volatile exchange rate that firms in other countries faced. Another factor that compounds risk is the irreversibility of investment (second hand capital markets are undeveloped). The small size of the second hand market is not only due to the small size of the manufacture sector, but also to market structure (oligopolistic structure limiting the number of potential customers of product-specific machinery). Irreversibility implies investment is highly illiquid, while risk stemming from changing climate puts a high premium on liquidity. Consequence: investment has been discouraged.

Third, firms face an environment marked by restrictions on international trade resulting in a lack of openness. Aggregate level analysis has identified lack of openness as a key cause for slow growth.

Fourth, firms face a situation of severe lack of social capital. Establishing parallels between countries of the developed world, showed that social capital (summarized by the level of trust between individuals in a society) was closely related to firm size: in countries with higher levels of social capital (the US, Japan, Germany) firms tended to be larger in size than in countries with lower level of social capital (France).⁷ In the case of Burkina, the low level of social capital will tend to produce numerous small-scale firms operating in isolation. This will be shown more convincingly for the second and third periods of the analysis.

Finally, firms face inadequate public services and poor infrastructure, which raises operating costs and hampers competitiveness (Burkina Faso/World Bank, 2001).

Environment and Characteristics of Manufacturing Firms

The industries operating during this period were characterized by the pervasiveness of the state: in 1976, the state controlled 45.6% of the capital shares of the main enterprises, against 11.6% for the national private and 42.7% for foreign investors.

By the middle of our period of consideration (1969, see Ediafric), Burkina's industrial sector comprised 50 units. One-third of these were agro-food industries; the remaining two-thirds were operating in textiles and leather, wood and construction, metal work, and other miscellaneous. This is an increase from 38 firms operating in 1965. The industrial landscape was largely shaped over 1967–1970 (first four-year plan cadre) and 1971–1976 (Interim Plan) with medium size firms: SOSUCO (SOSUHV) for sugar; MABUCIG (MAVOCI) for cigarettes; FASO FANI (VOLTEX) for textiles; Bata for shoes; GMB (GMV) for flour milling; VOLBRICERAM for construction bricks; SONICO for matches; IVOLCI for assembly of bikes and motorbikes; and fabrication of roofing metal sheets. To these new firms, one can add the rehabilitation of colonial time units, including CITEC for oil and soap; SOBBRA (BRAVOLTA, SOVOBRA) for brewery; and rice milling by Sisalia (near Bobo-Dioulasso). Under the state's intervention, manufacturing output increased at 12% per year from 1968 to 1972, and its share of GDP rose from 15% to 17% (Zagré, 1994: 86)

Policy. The general orientation of industrial policy was based on the import substitution thesis, with the option to add value to agricultural production and hence the choice of agro-industries. During this period, the state also espoused the concept of strategic sectors, the same concept that prevailed in some European countries during reconstruction following the Second World War.⁸ The state was to intervene heavily in these strategic sectors and this led to the establishment of state monopolies. Another principle that prevailed during the period is the so-called “voltaisation”⁹ of enterprises and capital, which was materialized through the investment code and the conventions for business establishment.

⁷ In Fukuyama's sense, social capital was taken to mean trust between individuals. In countries with large levels of social capital, contract enforcement without having to resort to courts is high. Social capital is independent of the type of society: individualistic (US, France) or more community based (Japan).

⁸ The concept of strategic positions originated from Lenin and made its way to the socialist parties in the rest of Europe; the Labour party in Great Britain adopted this concept in the middle of the 1930s, leading to their policy of nationalization of key sectors (petroleum, telecommunications). The same wave for the role of the state rippled through the rest of Europe: France, Germany and Italy (see Yergin and Stanislaw, 2000).

⁹ Burkina was known as Upper Volta then. Voltaisation was a move to give priority to Voltaics when hiring or giving authorization for enterprise creation.

To carry out its missions, the government created two industrial zones to attract national investors, one in Ouagadougou (Kossodo zone) and the other in Bobo-Dioulasso (Industrial zone). The incentives provided were tax holidays (exonerations) resulting from either the investment code or from a special convention to establish the business. To benefit from a special convention, firms had to operate in (defined) priority sectors, be of high importance for the development objectives of the country and contribute to the realization of the development plan (Ediafric, 1971: 124). Four criteria defined importance: an initial investment of at least CFAF100 million, the use of local raw materials, the creation of 50 permanent jobs for nationals and the hiring of national cadres. Conventions could not last more than 25 years. Investors were required to reinvest at least 20% of profits in the country. Investors benefited from special advantages defined by the Convention. In particular, the stable fiscal regime could cover the period of the Convention. The problem with conventions is that they carried a moral hazard element: At the end of the period, the firm could mutate into another firm to benefit from another special convention.

Responses of Manufacturing Firms. Data are lacking to understand firms' behaviour in response to the environment. Given that the state was the major economic actor, an analysis of its behaviour is warranted. The state intervened through its plans. The first plan (1967–1970) anticipated a total investment of CFAF33 billion, of which 35% was in infrastructure build-up, 29% in rural development, 18% in industry, 14% in the social sector, and the remainder in research and information (Ediafric, 1971: 168). About 60% of what was planned was effectively achieved by 1970. In the modern sector (industry), the government concentrated on agro-processing, investing CFAF2.26 billion over three years.

3.4 Political Economy

This subsection analyses the interests of the different key actors and how they interact to influence the outcome of decision making. The period is marked by several social and political conflicts leading to a military takeover of power three times: in 1966, 1980 and 1982. In each of these three major events, the key players have been labour union and students (for the first), political parties and the military.

The 1966 Coup: Power Abuse and Social Discontent

When the then Upper Volta acceded to independence in 1960, the major political players were the party in power, UDV-RDA, a branch of the West African Francophone political party founded in Bamako in 1947. The opposition parties (MLN, PRA and PAI) either were forced to operate underground or their leaders were forced to exile. The first president of the republic failed to foster unity among the different players, but rather eventually caused turmoil on the political scene by frequent government turnover; lack of consultation with the ruling party's constituencies; and an orientation of foreign relations against the mood of the intellectuals, e.g. the "too close ties" with Côte d'Ivoire. In addition, the government's economic mismanagement led to the need to substantially decrease salaries (by 20%) and levy additional taxes on salaries and business earnings, the latter leading in turn to substantial price increases (Lamizana, 1999).

Dissatisfaction with this situation came to a head in the last week of December 1965, eventually leading to bloodless takeover by the army under the impulse of the ten labour unions. Crying for democracy and bread and water, hordes of students converged on 3 January 1966 toward the major public place of Ouagadougou. Joined by various elements of the urban society, they were requesting that the president resign, and the latter was wise enough to accede to this popular demand. The joint chief of staff of the army, Lieutenant-Colonel Lamizana, assumed power.

As truly as the labour unions and the high school student body were the architects of the change in power, it was also true that they punctuated the entire ruling of the new regime, which lasted till 1980.

The 1980 Coup

The labour unions again were at the root of the overthrow of General Lamizana from power in 1980. This time, there were strong alliances between the unions and political parties, as each major union

was backed by one of the major political parties.¹⁰ This interplay between labour unions and political parties, punctuated by frequent strikes starting in 1979 and accelerating in 1980, was effective in destabilizing the regime of General Lamizana, who was eventually overthrown on the morning of 25 November 1980. The making of the fall of this regime is a perfect illustration of the political games that can be played by interested parties and all the waste that ensues to arrive at one goal: power.

The 1982 Coup

Rumours before the 1980 coup had it that young officers and leftist politicians were about to assume power, with the aim of installing a leftist power. This rumour was partly fed by what had recently happened in neighbouring Ghana (Flight Lieutenant Rawlings had just taken over) and in Liberia (Samuel Doe had just toppled Tolbert). The CMRPN (Comité Militaire de Redressement pour le Progrès National) regime was led by a colonel of the army, Saye Zerbo. It was not the anticipated young soldier change, but this was to come later. Just like its predecessor regime, the CMRPN was soon to face the ire of the labour unions, in particular the leftist CSV. The latter was eventually banned and its leader went underground. The remaining union federations (OVSL, USTV and CNTV) carried on the fight, demanding more freedom and democracy. Eventually, on 7 November 1982, the CMRPN was overthrown and the CSP (Conseil du Salut du Peuple) led by Commandant Jean Baptiste Ouédraogo took over. But the CSP was only a transition to the next period, the era of the Conseil National de la Révolution.

Wrapping up

This 1960–1982 period was dominated by political and ideological debates, which heavily taxed the efforts at development. Three coups over a period of 22 years did not leave room for a vision. Each one took more than a year of dysfunction of the key services to produce the necessary civil discontent that would eventually lead to a military action. Although the freedom of speech and organization that characterized most of the post 1966 period undoubtedly favoured the emergence of strong political and labour organizations, these strengths were negatively exploited, used as instability vehicles rather than developmental engines.

4. 1983-1990: REVOLUTION AND SELF-IMPOSED ADJUSTMENT

The second subperiod considered is known in Burkina as the Revolution period . This subsection catalogues the main facts characterizing the period in the areas of policy environment and exogenous shocks. It first goes quickly over the main growth features of the period.

The *policy environment* placed predominant emphasis in official speeches on nationalism and self-reliance. It included a non-orthodox, self-imposed adjustment programme, but also a negative view of the private sector: cereal traders were treated as “affameurs du peuple”, landlords as “Marchands de sommeil”. State interventionism was common, from public investment, price and trade controls, and operation of profit making activities, to public enterprises and sectoral policies such as in agriculture, and the social sectors)

Urban development (SOCOGIB) gained impetus through housing for the middle-income civil servants, while public expenditure programmes faced reallocation to finance priority sectors. Carrying over from previous periods and at times reinforced were a tight fiscal policy, fixed exchange and price controls.

¹⁰ There were three major labour unions at the time: CSV (Confédération Syndicale Voltaïque), CNTV (Confédération Nationale des Travailleurs Voltaïques) and OVSL (Organisation Voltaïque des Syndicats Libres). There were several major political parties: two clandestine parties (PCR – Parti Communiste Révolutionnaire Voltaïque – and PAI – Parti Africain de l’Indépendance) backed the major union, CSV. CNTV was backed by a dissident of the old party, RDA. And OVSL was backed by UNDD, a dissident segment of the RDA. It is worth noting that CSV, the most powerful and radical of the confederations, had two important labour unions as its affiliates, the high school and university teachers union, SUVESS, and the primary teachers union, SNEAHV. SUVESS and SNEAHV were ultimately the executioners of the regime.

Exogenous shocks included the drought of 1984, international relations marked by low levels of foreign aid, the international debt crisis and the emergence of adjustment policies.

4.1 Markets under State Control

Cereal Markets Cereal markets gained an impetus following the severe drought of the previous subperiod. The current subperiod also started with drought in 1983/84, which was to have consequences on the new government's self-imposed view on private trade and traders. The production shocks have shaped the nature of cereal trade as trade between deficit and surplus regions of the country, whereby the southwest and the east supply grain to the centre and north.

The actors of the markets defined in the foregoing section continued to play a role during the current subperiod. The role of the state was heightened, however, and the regulatory mode of the cereal market assumed the following form over the 1984–1988 period (Bassolé, 2000):

- Private trade was allowed but under licensing; Licences were issued by the CDRs, or revolutionary defence committees.
- Private traders were obligated to belong to a cooperative like structure known as GIE-Faso Koodo (groupement d'intérêt économique).
- Cereal trade between different regions within the country was subject to restriction.
- The CDRs exerted severe controls on traders, and the so-called "commerçants véreux" (or exploitive traders) could see their stock of trade confiscated if suspected of selling above or buying below the official prices. The official mood regarding private traders can be appraised from this excerpt of the state newspaper *Sidwaya* of 22 August 1984:

Those who bring hunger to the people are at your doorsteps. You have guessed whom we mean. They are the exploitive traders. A trader should not be allowed to buy grain at the normal price from OFNACER and then resell it at a price only function of his level of cupidity. The revolution is here to fight such a system that was imposed on the popular masses for so many years, with the collusion of the ruling authority...

Analyses of the performance of the marketing system during this era are usually tempted to indicate that the presence of the official pricing mechanism did not affect the ongoing trade, basing the conclusions on the coexistence of a private market price and the official price, and noting that transactions through the private system far exceed volumes through OFNACER. As we will see below, the effect of the public sector is not so neutral. Nevertheless, microeconomic studies during the period conclude that markets functioned well in surplus regions of the country, and less so in deficit areas. The thinness of the market in the latter regions because of the limited number of traders is the major element of dysfunction (Sherman et al., 1987). Sociological attributes are some of the major forces limiting the emergence of traders in poor, deficit areas. During times of grain shortage, family and kin relationships put pressure on traders to sell on credit to needy people. It is basically to avoid this that traders would prefer to settle in the next major town rather than in the village (Savadogo, 1989, report on cereal banks, University of Ouagadougou).

The outcome of the market set up during this period is largely attributable to the presence of the state. With the advantage of hindsight, it appears obvious that the pricing and mode of operation of the public agency, OFNACER, highly distorted the cereal markets, with farmers being the greatest losers, and large traders, civil servants and some of the most successful cereal banks the winners (Sherman et al., 1987). First, the management of food aid continued to exert downward pressure on domestic producer prices, being an addition to local production and thus shifting up the supply curve at given demand conditions. Second, OFNACER set official prices for both consumers and producers, but the modus operandi did not guarantee that the official producer price reflected production conditions. In fact, this price was generally lower than what private traders offered, leading to a parallel market where traders would procure grain from OFNACER's stocks (intended for consumers) and resell it at the prevailing market price to consumers. Traders would procure cereal through two channels: (a) From urban civil servants often entitled to credit purchases from OFNACER and who resold for cash to a trader with a discount, and (b) directly from OFNACER's shops, a corruptive

behaviour. Third, OFNACER's buying price set a ceiling reference price to private traders, who would impose the low price to small producers in deficit zones when supply and demand conditions obviously warranted a higher price. Fourth, the pan-territorial pricing mode of OFNACER took away from the market system one of its key roles of moving goods from where they were cheapest to where they acquired more worth. Indeed, with this regulation the cereal market lost one of its dynamic components. Fifth and last, it now appears obvious that OFNACER could not succeed in a contradictory mission of supporting farm prices and keeping down consumer prices.

4.2 Agents

This subsection analyses the role of agents – farm households and manufacturing firms – in the growth process during the period. This role is assessed through their production choices and reactions given the policy and market environments.

Farm Households

Over the 1983–1988 period, agriculture was undoubtedly the main engine of growth of Burkina's economy, with total production growing at an average of 14% per year, compared with 5.8% for the overall economy (real GDP; see Savadogo and Wetta, 1992). This departs from the previous subperiod, when the agricultural sector grew at less than 2% each year.

Environment Faced by Farm Households. The *natural environment* faced by farm households during this period remains fairly the same as the preceding period. Soils suffer from many problems, including crusting, low organic matter content, and lack of phosphorous and nitrogen. Moreover, continuous cultivation without the adequate restitution leads to nutrient mining and further deterioration. The traditional bush-fallow system that used to restore soil fertility, and available in the previous period, is now disappearing, in particular in the highly populated Central Plateau (Sanders et al., 1996).

Agricultural policy over the 1983–1990 period was rather aggressive, in particular during the revolutionary period of 1983–1989. Important efforts were put into improving water conservation in drought prone regions, by providing incentives to village level organizations (Savadogo and Wetta, 1992). Official producer prices for both cash crops (especially cotton) and food crops were raised above the free market price. For cotton, the government succeeded in realigning producer price with the international price, an outcome not achieved in the past or in the subsequent periods.¹¹

The Responses of Farm Households. Farm households emerged from a period of high climatic volatility that made everybody become aware of the risk associated with rain-fed agriculture. As is well known, under risk agents' behaviour is curved away from the usual maximization predictions. The following responses can be cited:

- *Cotton farmers* increased utilization of fertilizers and animal traction, in response to a favourable price policy.
- *Cereal farmers* faced control of commercialization and possible impact on market integration (see Bassolé, 2000: 11)
- *Soil conservation and water management techniques increased, including greater use of diguettes and introduction of zai* (small depressions in the soil to catch water) on large surfaces (see Sanders et al., 1996).

Manufacturing Firms

Much of what describes the industrial sector over 1983–1990 is the result of decisions made or policies initiated during the first period. By the beginning of the present period, the Kossodo industrial zone in Ouagadougou had become an industry graveyard (Savadogo and Wetta, 1992). So this period witnessed, among other things, an attempt to resurrect the industrial infrastructure that had become

¹¹ As shown in Burkina Faso/World Bank (2001: 78), producers received only 35% of the FOB price for cotton in recent periods (1990s). In comparison with other countries, Burkina is the least performing in terms of agricultural policy that provides incentives. In particular, producer prices of export crops are sticky and do not closely follow the movement of international prices.

obsolete during the previous period. By the beginning of this period, the manufacturing sector had expanded to a point where many questions are worth raising. Was there any private effort to increase capacity through new investment? Was there a conscious effort by government to create a favourable business environment? Capital flight was observed during the period. Was the stated official policy a cause of the capital flight? Was education level an impediment to private sector development? Was family structure a hindrance factor to private initiative? See Savadogo and Wetta (1991), EU document. As during the first period, the low level of social capital continued to be a hindrance to industrial development. An emerging new feature was the pervasiveness of the informal sector.

Characteristics and Environment. At the beginning of the 1980s, there were 117 firms making up the industrial sector, which housed the most significant part of the modern sector. The sector was characterized by a concentration of production on a few large units: Out of the 117 firms, 10 firms accounted for 80% of sector value added and 9 for 66% of total employment. A feature of the system was the poor development of SMEs. This is sign of a weak industrial integration (lack of networking, again to be related to the lack of social capital). The public sector continued to play an important role: The state was a major actor in the five most important firms (SOFITEX, SOSUCO, SHSB-CITEC, FASO FANI, GMB, respectively cotton, sugar, oil, textiles and flour); these five firms accounted for 58% of value added of the industrial sector (32% of value added of the manufacturing sector). Firms continued to be concentrated in or around the capital city (74 out of 117 or 63%). Many manufacturing units operated below capacity. Reasons included too much capacity installed, narrow domestic market, or the segmented domestic market between urban modern and rural traditional and seasonal. Other reasons were the limited export potential due to lack of competitiveness and the competition from imported products despite customs protection (World Bank 1989, vol. 2.).

Policy Environment. The most significant policy element that determined or undermined firm behaviour was the pricing system. The state had set a price control mechanism, consuming time and limiting competitiveness. The homologation system allowed the price of a new product to be fixed on the basis of the different cost items estimated by the producer. The information went through the ministerial system after which a price structure was adopted for the product, including a ceiling price for the national market. The price was free at export. Following the first agreed upon cost structure, any subsequent change in the cost of the item required the producer to repeat the same steps to revise the price. Operators found this system constraining and inefficient. A change in cost of production could not be incorporated immediately in the pricing system, as the procedure could take several months.

The system had other severe drawbacks. First, it implied the incorporation of all production costs in the consumer price and therefore the firm was assured of a positive margin irrespective of the cost, and operators had no incentive to cut costs. In fact, firms had all interest in overstating their cost to get higher margins. Second, the margins on imported products were usually higher than the accepted margins on locally produced products, therefore giving a preference to imported products and sapping the domestic production sector. This was compounded by another regulation that prevented industrial units from directly marketing their own products. The set-up had them work in tandem with distributors who would rather sell similar imported products with the higher margins associated. It was as if everything was designed to produce the least competitive system!

This system was slightly altered in 1988 to allow manufacturers to (a) implement the price submitted for homologation in case of no response within 60 days; and (b) adjust prices following cost changes as long as the price increase did not exceed 5%. Such adjustment could be done once a year. These changes unfortunately (but expectedly) created moral hazard elements that acted against firm competitiveness: a firm could sit back and increase its price by 5% regularly each year, without any cost change to justify this increase. This policy rent did not entice firms to develop cost-cutting measures.

The fiscal set-up provided protection for domestic firms but was significantly complex. Each firm more or less underwent a different treatment, multiplying the cases for tax officers. The fiscal mechanism had drawbacks in the area of incentives to innovate, however. The turnover tax (TCA), which was levied on sales, constituted a severe tax on consumption (the tax was entirely passed over to the consumer), limiting the competitiveness of products compared with products not subject to

TCA. For example, because the informal sector escaped taxation, formal firms complain of unfair competition.

Structure. The prevailing firms showed little integration, as production was highly diversified and independent from one another: Sector level synergies were not exploited. This is related to another structural and organizational problem. Firms were often alone in their sector of activity and enjoyed a de facto monopolistic situation. There was therefore little competition internally. Competition came chiefly from imported products. Indeed, despite protection, imported products had edges in the area of quality, or brand loyalty and were often much cheaper than local products (given the exchange rate, or following dumping exercises).¹² Moreover, control could not be not that effective in catching all the imports, so an unfair competition also came into play.

Firm Level Constraints. Besides the non-conducive policy environment, firms faced other, internal, constraints. One common problem for agro-processing firms (e.g., breweries) was the the quality and reliability – or lack thereof – of domestic inputs. The problem was crucial for units operating under licence, with the requirement to comply with norms, as the licence agreement could be discontinued if gaps were large.

Responses of Manufacturing Firms

The policies initiated by the government during this period were intended to create a dynamic industrial sector, using local resources. However, the perverse measures that the stated policy entailed were detrimental to achieving goals. We observe a drop in investment in the modern sector in 1983 and 1984, followed by an upturn in 1985. There was a tendency towards a stabilization of investment after 1986 (World Bank, 1989, vol. 2). The share of manufacturing in investment remained low: a maximum of 5.4% in 1982, a minimum of 2.3% in 1983.

4.3 Political economy

This subsection analyses the interests of the different key actors and how they interact to influence the outcome of decision making. As the preceding period, the 1983–1990 period was fraught with instability, with two coups (1983 and 1987) in an interval of four years.

1983: The Advent of the CNR

The CSP regime was a transition to a more radical regime where young officers assumed control of the state. On 4 August 1983, Captain Thomas Sankara, a charismatic young military officer, toppled Commandant Jean-Baptiste Ouédraogo and instated the Conseil National de la Révolution, CNR. Unlike its predecessors, the CNR was a military solution to a crisis that undermined the CSP. The CSP was wanted by the people and the political organizations just to oust the CMRPN, but otherwise it had no political project. Through the Political Orientation Speech (DOP) on 2 October 1983, the CNR announced the type of society it intended to build, free from outside influence and geared toward social development and equity. The regime endeavoured to build in a moral element in public affairs.¹³

¹² Among Burkinabé customers, the concept of “originality” (i.e., a branded product) and “adaptability” (i.e., a substitute, non branded product) plays a key role in behaviour. The collective thought had it that “adaptable” products are of lesser quality. This has backfired on sellers’ behaviour: to repackage the so-called adaptable products in the so-called original packages. This moral hazard element is a plague in today’s trade for the country.

¹³ Some key features of the CNR were the following. Sanctions were taken. The People’s Tribunals (TPRs) were installed to judge past misconduct. Public officials were requested to disclose their personal possessions before assuming their functions. There was keenness to promote solidarity through resource transfer in favour of the vulnerable segments of society. The period was marked by the predominance of a nationwide vision for development, with regional goals: every region was to be developed according to its potential, contrary to some of the preceding regimes where regional favouritism was at times a factor.

The Popular and Democratic Revolution was proclaimed as the dominant ideology and the country changed its name, from (colonial) Upper Volta to Burkina Faso, or “the land of the upright people”. To promote the Revolution, Committees for the Defence of the Revolution (CDRs) were created all over the country, with the task of educating, sensitizing and mobilizing the population. All aspects of government were reorganized and new organizational structures were created.¹⁴

The role of the labour unions was minimal under revolution. In fact, they almost went underground after a stringent reaction of the CNR against the primary teachers’ union, SNEAHV: all teachers who took part in a general strike in 1984 were fired. This sealed the fate of labour under the revolution. The regime favoured direct people’s rule, through the CDR structures.

The 1987 Coup

On 15 October 1987, the CNR was toppled by the Front Populaire (FP) in a bloodshed coup that brought Captain Blaise Compaoré to power. The FP announced that it was departing from some of the practices of the CNR, but the revolutionary nature of the state was kept. The Front Populaire was in fact a transition instrument to the liberalization period that came in 1991.

During the revolutionary era, and despite the commitment of the government to promote stabilization and structural reforms leading to social changes, the donor community stayed away from the process, in part because of the rhetoric of the speeches. Only some bilateral and some multilateral donors (the European Development Fund, the African Development Bank) maintained their assistance to the regime.

5. 1991–2001: ECONOMIC LIBERALIZATION

This section takes on the issue of growth during the third and last period, 1991–2001. The section begins with a catalogue of the main facts characterizing the period in the areas of the policy environment and exogenous shocks. It first goes quickly over the main growth features of the period.

5.1 Salient facts

Policy Environment/Performance

The policy environment was marked by liberalization, privatization, devaluation of the currency and adoption of an orthodox adjustment package with the World Bank and the International Monetary Fund. Public expenditure was reoriented towards the priority sectors (health, education, transport infrastructure, urban development). Decentralization came into its own as a key concept for local development, while commitment to regional integration was renewed (beginning 1994, with effects starting in 1996 and full customs union in 2000).

There seems to be a contradiction between official speech, which opts clearly for liberalization and privatization, and a reality fraught with a very slow implementation of the various measures. Why is this? (Vested interests of high level public servants occupying high level positions in enterprises supposed to be privatized...?) A genuine problem is the liberalization of the agricultural sector, which has involved discontinuation of extension services and veterinarian services as these are supposed to be taken over by the private sector. But little has materialized. Why?

Growth performance can be roughly divided into two sub-periods; before devaluation growth was slow and after devaluation there was an upturn by as much as 5% rate of growth.

The country realized two surveys of household living conditions (1994 and 1998), which showed that in spite of growth, poverty did not decline. This poses the question of whether economic growth was broad-based. If not, which sectors benefited from growth/investment and why?

¹⁴ Among the most notable are the Women’s Union (Union des Femmes du Burkina – UFB), the youth union (Union Nationale des Jeunes du Burkina – UNJB), the farmers union (Union Nationale des Paysans du Burkina – UNPB), and the union of the elderly (Union Nationale des Anciens du Burkina), as well as the CDRs at each work place.

Exogenous Shocks

5.2 Markets under Liberalization

Cereal markets

In 1991, the government of Burkina Faso adopted its first structural adjustment programme with the IMF and the World Bank. Following this, the institutional environment of trade underwent profound changes. The state withdrew from direct intervention in markets and the handling of products. Its role became limited to regulating the overall system and to providing information on prices to the various private actors. An important development was the institution of the market information system (SIM), which collects weekly price data on several urban and rural markets.

An expected consequence of liberalization is that markets will assume their expected role and prices reflect the opportunity cost of resources. The new legal environment in the context of a democratic state is expected to safeguard property rights and allow actors to take advantage of more transparent dealings. Research results indeed indicate that competition among traders has increased since the country liberalized trade (Bassolé, 2000).

Market Structure. The number of traders has significantly increased based on interview data (Bassolé, 2000). The resulting increased competition has pushed up producer prices, in particular in surplus areas. Data provided by SIM gave long distance traders the opportunity to choose their marketplaces and avoid sticking to a single or a few markets. Notwithstanding this progress, traders still face many structural constraints, including weak access to bank loans, pervasive taxation and poor road infrastructure, that inflate operating costs.

Market Behaviour. According to recent data (Bassolé), both traders and cereal producers are vying to take advantage of the liberalized market conditions. Producers appear to act more aggressively rather than play the passive end of the exchange system. This is particularly true in the surplus zones, where producers now learn to take advantage of time variation of prices and also to choose their clients. They are helped in this by non-government organizations that try to disseminate new management ideas, in particular the notions of arbitrage and market power (whereby farmers can be empowered by ganging together against traders). The consequence is that farmers in surplus zones have benefited from higher prices during this liberalization period. The liberalization did not significantly modify traders' behaviour regarding stockpiling, however.

In a liberalized system and under the hypothesis of speculative traders involved in temporal price arbitrage, it would be expected that stocks would accumulate at harvest waiting for the lean season to be resold at high margins. Such a behaviour does not seem to be implied by available data. Reasons are that inventory accumulation is financially costly and traders (wholesalers) usually lack the rolling funds to do that. Another factor that limits speculation is the possibility that the state food security agency, SONAGESS (what became of OFNACER during the liberalization period), might release its stocks during the lean season, thus depressing prices and annihilating any speculative advantage.

Market Integration. Spatial integration of markets improved following liberalization, as reflected by lower price differences between markets. Typically, spatial gross margins varied between 9 and 13%, which are not excessive. Formal tests of cointegration reinforced the presumption that prices were much more closely related during the period of liberalized trade than the previous period. These tests also indicated that the correlation between prices is more temporally stable than was the case prior to the liberalization of trade (Bassolé, 2000).

Credit Market

Labour Market

5.3 Agents

This subsection analyses the role of agents in the growth process during the period. This role is assessed through their production choices and reactions given the policy and market environments.

Farm Households

Agents (producers of fruits and vegetables) are increasingly aware that lack of insurance and credit, lack of information on prices (international), and non enforced contracts are impediments to growth in the sector.

Cotton producers saw a pick-up in investment in inputs and animal traction, with the consequence of boosting cotton production and also cereals in the cotton zones. Cotton had high performance, reaching for the first time 400,000 MT in the 2001 agricultural season.

Manufacturing Firms

The manufacturing sector continues to contribute little to total income, about 14% of GDP and 10% of export (Burkina Faso/World Bank, 2001). Several questions are worth raising. Why were most manufacturing firms still state-owned or monopolies? Does the state have no choice? Was there an alternative? Was there a private sector ready to invest? Did the state favour state enterprise for ease of fiscal recovery reasons? Why do firms tend to be of small size?

Characteristics and Environment

At the beginning of the period (1992) there were 61 functioning manufacturing firms in Burkina, almost entirely concentrated in two cities: 52% in Ouagadougou and 33% in Bobo-Dioulasso; two other cities, Banfora and Koudougou, each shared 3%. The sector contributed 14% to GDP and was dominated by agro-processing industries, which made up 53% of the value added of the modern sector (Burkina Faso/World Bank, 2001). Formal exporting enterprises were generally large in size (SOFITEX for cotton, Aliz Group for hides and leather, MABUCIG for tobacco products, SAP for tires and inner tubes, and a few large trading companies).

One characteristic of the manufacturing sector is that industries add little value to raw material (Table 3). Intermediate consumption makes up the largest part for most products, the exception being energy and textiles in the wake of the devaluation (1995). This is indicative of the little transformation involved in most processes and hence the low value added (9% for textiles and 11% for mining in 1993). The impact of the devaluation on the cost structure was overall ambiguous, increasing the value added for some sectors and decreasing it for others. Gross margin was higher in sectors with stronger state intervention, i.e., those with higher protection and in a monopolistic situation: energy, textiles and agro-processing industries.

Table 3: Cost structure per industrial subsector (in % of production)

	Intermed consump	Value added	Subsidy	Wages	Indirect taxes	Gross margin
1993						
Mining	89.35	10.65	0	24.77	1.50	-15.62
Agro-process.	67.58	32.42	.03	10.98	5.63	15.84
Textile	91.16	8.84	17.82	13.77	1.06	11.83
Wood & metal	82.40	17.60	0	9.51	1.78	6.30
Energy	50.75	49.25	0.07	19.78	0.93	28.61
Paper	69.54	30.46	0	17.61	2.08	10.78
Chemicals	72.88	27.12	0.02	15.75	3.18	8.21
BTP	80.32	19.68	0	12.49	1.17	6.03
1995						
Mining	75.39	24.61	0	21.75	1.62	1.25
Agro-process.	70.82	29.18	0.23	9.78	4.54	15.09
Textile	58.05	41.95	1.51	7.28	0.74	35.45
Wood & metal	81.73	18.27	0	7.33	1.36	9.58
Energy	43.60	56.40	0.80	16.01	0.75	40.45

Paper	72.52	27.48	0	13.83	16.51	-2.86
Chemicals	74.16	25.84	0	11.46	2.33	12.05
BTP	81.04	18.96	0	11.50	1.39	6.07

Source: CEFTE (1997).

Domestic production cost exceeds the international price for most products, meaning lack of competitiveness. A decomposition of cost (Table 4) shows that intermediate consumption usually accounts for the greatest share, and in some cases even exceeds the world price (e.g., pasta, wheat flour, processed green beans, plastic bags, cement).

Table 4: Components of the cost of production as percent of world price, different items

Item	Labour	Financial	Interm. consumption	Transport	Other costs
Pasta	0.24	0.02	1.87	0.00	0.03
Wheat flour	0.05	0.01	1.38	0.07	0.08
Cotton oil	0.24	0.03	0.62	0.00	0.21
Processed green beans	0.02	0.00	1.22	0.03	0.10
Cigarettes	0.05	0.02	0.50	0.01	0.08
Sugar	0.36	0.03	0.30	0.09	0.16
Soft drinks	0.06	0.00	0.87	0.04	0.03
Alcoholic drinks	0.17	0.02	0.40	0.02	0.35
Cloth material	0.16	0.03	0.81	0.00	
Cartons	0.03	0.02	0.83	0.05	0.05
Batteries	0.10	0.01	0.85	0.03	0.10
Matches	0.08	0.11	0.72	0.03	0.16
Bike inner tubes	0.13	0.02	0.54	0.01	0.18
Bike tires	0.16	0.03	0.67	0.01	0.22
Plastic bags	0.19	0.03		0.02	0.13
Soap	0.07	0.01	0.68	0.00	0.14
Household Aluminium products	0.57	0.17	1.20	0.08	0.13
Tomato paste	0.20	0.03	0.72	0.04	0.19
Cotton thread	0.10	0.01	0.76	0.00	0.01
Motorcycles	0.02	0.00	0.50	0.00	0.01
Cement	0.12	0.18	1.98	0.03	0.25

The manufacturing sector continued to be weakly integrated (i.e., firms operated independently, without synergies) and confronted with a narrow market owing to the inability to penetrate foreign markets. In terms of the policy environment, the general orientation of government policy still favoured import substitution, with few competitive advantages. Even following the mega devaluation, performance continued to be sluggish in the sector.

Constraints. Firms face a number of constraints, including lack of integration, high production costs (electric power, transport, labour cost), under utilization of capacity inflexible labour laws and unfair competition from fraud on imports (including dumping from Asian countries). It is difficult for them to get access to credit, which is detrimental to the development of SMEs (small and medium enterprises). The result is a high number of very small-scale enterprises, rather than SMEs, which produce articles of inferior quality at high cost (face low total factor productivity). The narrow domestic market and tax policies offer few incentives, and there are delays in receiving credit from export proceeds.

The constraints are attributed, at least partly, to the presence of government monopolies on electric power, hydrocarbons, water and telecommunications. Although the telecommunication sector has recently been liberalized, with the installation of private cellular phone companies, the impact on costs to the consumer is slow to materialize.

Other constraints are:

- A non-conducive legal environment
- Prevalence of unfair competition and corruption.
- Lack of a general framework for conquering new markets, including foreign markets.
- Poor set-up to support private enterprise development; dialogue between government and private sector needs to be strengthened.

We look at the price structure of petroleum products, handled by the state monopoly SONABHY (Table 5). Petroleum products are major input elements into transport and/or power generation, and SONABHY is the sole importer by law. What is to be noted is the large difference between the cif price and the consumer price: the latter is three to four times the former. Taxes (items 4–6) contribute to 51% of the consumer price for ordinary gasoline. By accounting for the operators' margins and the transport cost, the retail price of gasoline could vary anywhere between CFAF195 per litre and its actual value of 390, depending on government's intervention. Of course, the various forms of interventions form an important source of government revenue, and trade-offs are necessary when contemplating a reduction in taxes.

Table 5: Price structure of gas at the retail level (CFAF per litre)

Items	Gasoline (Ordinary)		Diesel	
	Cost (CFAF/litre)	%	Cost (CFAF/litre)	%
(1) Cif price at coastal depot (port)	83.32	21.36	94.64	32.30
(2) Storage cost at port	9.97	2.56	9.72	3.32
(3) Transport and handling	33.54	8.60	33.54	11.45
(4) Customs duty	72.76	18.66	70.91	24.20
(5) Excise tax on petroleum products	96.76	24.81	9.78	3.34
(6) Subsidy to electric company (SONABEL)	28.44	7.29	9.54	3.26
(7) Importer's gross margin	24.94	6.39	29.55	10.09
(8) Wholesale price at Burkina's main depot	349.73	89.67	257.67	87.94
(9) Major distributor's gross margin	27.01	6.93	24.47	8.35
(10) Retailer's gross margin	13.26	3.40	10.86	3.71
(11) Retail price (pump price)	390	100.00	293	100.00

Source: CEFTE (997) and authors' calculations.

Responses. The urban informal sector has grown rapidly in response to the liberalized environment, which generated various activities in a number of sectors, notably trade and transport. For example, lifting monopoly of the state urban and inter-urban transportation company has spawned tens of private transportation companies. Lifting the monopoly on cars, mopeds and bicycles has spurred the import of such items by numerous actors. There are many other examples. This must have contributed to the increase of the share of the services in GDP

5.2 Political Economy

This subsection analyses the interests of the different key actors and how they interact to influence the outcome of decision making.

New data: democratization; political instability related to assassinations not conducive to a serene climate for investors (both national and mainly international); Does the emergence of new communication media (radio stations, newspapers... contribute to the increase in awareness of the population and better control of public action?) –Re-emergence of the labour unions and students

unions, the latter being very vocal and active in the areas of strikes also contributes to peoples awareness.

6. CONCLUSION

The main findings of the study are not a surprise: Growth over the period has been low and erratic. Conventional factors of growth, such as human capital, did not play a role. Total factor productivity growth is negative, showing that efficiency gains are possible. Poverty is a major preoccupation. Poverty was not reduced even when there were acceptable levels of growth over some periods.

The major constraint to growth seems to have been the diversity of the political process, characterized by a propensity toward contestation rather than consensus building. One consequence of this is lack of continuity in public action. Also, there is a general lack of long-term vision, as government turnover rate is so high that there is no opportunity for building up.

The prospects hinge on: increased democratization and the respect for the rule of law, increased judiciary rigor and decentralization of the political process and economic policy implementation.

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