Rural-Urban Migration in West Africa: Toward a Reversal?

Migration Trends and Economic Conjuncture in Burkina Faso and Côte d'Ivoire[1]

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Introduction

Since the seventies, most developed countries have experienced a reversal in their urbanization trend resulting from the increasing significance of urban-to-rural migration (Champion 1991; Boyle and Halfacree 1998a). In developing countries, especially in the less urbanized African countries, rural out-migration is still supposed to feed a rapid urban growth and these countries are usually not expected to experience such a turnaround. Nonetheless, recent data show a clear slowdown in the rhythm of urban growth in this region and the proportion of urban growth through internal migration appears to have fallen (Chen, Valente et al. 1998). In Côte d'Ivoire, there is even a clear pattern of "counter-urbanization" in the sense that the proportion of the population living in urban areas is falling (Zanou 2001). To our knowledge, Côte d'Ivoire is an exception in West Africa since no other country has experienced a negative urbanization trend, but it draws attention to the existence of potential new internal migration patterns in this region.

The first objective of this contribution is to put the Ivorian case into perspective by comparing its migration trends with those observed in a neighbouring country, namely Burkina Faso. In other terms, we want to identify recent and emerging trends in Ivorian and Burkinabè population movements. Our hypothesis is that urban-to-rural migration is on the increase while, on the contrary, rural-to-urban is declining. Studying the long-term evolution of rural-urban migration (and its counter-stream) in both countries, the objective is to determine whether the Ivorian reversal is a temporary anomaly or if it results from a long-term trend which could also characterize neighbouring countries, such as Burkina Faso.

The second objective of the contribution is to explain the potential renewal of migratory trends. As migration between urban and rural areas is one of the demographic behaviours that is the most sensitive to economic conjuncture (Berry 1988), the key question is determining whether the evolution of the rural-urban flow (and its counter-stream) is due to economic changes, and especially to the economic decline observed in almost all the African countries since the late seventies (Simon 1997). A subsequent key issue is to assess the idea often set out in the African context (Antoine 1991; Guillaumont and Lefort 1993; Becker, Hamer et al. 1994; Potts 1995) that changes in macro-economic policies, brought about by Structural Adjustment Programmes, have had an impact on the slowdown of urban growth by influencing migratory flows between urban and rural regions.

The paper is divided in two main sections. After this introduction, the first part is devoted to the first objective and attempts to identify new trends in migrations between urban and rural areas in West Africa and especially in Côte d'Ivoire and Burkina Faso. The second part is devoted to the second objective, that is the search of an explanation for the new

trends observed. Each part contains a review of literature, elements of method (including data discussion) and a presentation of our results.

1. Migration and urbanization in West Africa: a history essay

Although historically West Africa developed large urban centres for capital cities of great empires, commercial and religious centres (Chandler 1994), urbanization in this region of the world is mostly a recent phenomenon: one estimates that the urbanization level of Africa as a whole was 5% in 1900, 12% in 1950, and 28% in 1980 (Bairoch 1985). Despite its recent nature, the history of migration and urbanization in sub-Saharan Africa remains controversial. On one side, the conventional view perceives urbanization as an "explosive" process, for which migration is mainly responsible, and which has a negative impact (excess demand for urban services, increasing unemployment, etc.). The opinion of governments, reported by the United Nations, in matter of migration and urbanization reflects fairly well this viewpoint (United Nations 1998). On the other side, especially since the mid 1980s, others insist on the fact that the pace of urban growth is now slowing down, that migration is no more the main factor of urban growth and, finally, that urbanization should be seen as a factor of socioeconomic development rather than as a bridle (Amis 1989; Becker and Morrison 1995; Bilsborrow 1998; Chen, Valente et al. 1998). Leaving aside the discussion about relationships between urbanization and development, this part is an attempt to describe trends in migration and urbanization in Africa, and especially in Burkina Faso and Côte d'Ivoire. For this purpose, two methods are proposed. The first one consists in a review of literature: after drawing the general picture of trends in Africa, we move to the cases of Burkina Faso and Côte d'Ivoire where all the older demographic sources about migration are examined. The second one, using recent retrospective data, consists in an *a posteriori* construction of a rural-urban migration history in each country.

1.1. Literature review

1.1.1. Unexpected trends in sub-Saharan Africa

With an aggregate urbanization level of only 31% in 1991, sub-Saharan Africa remains the least urbanized region of the world. Still, regarding to the last thirty years, this vast sub-continent is undoubtedly the region of the world where the urban growth has been the most rapid: between 1960 and 1991, urban areas have grown by 5.2% per year against only 4.0% for all developing countries (Simon 1997). In this context, rural-to-urban migration was deemed to be the major component of towns' and cities' growth, so that it has absorbed a great deal of attention from policymakers as well as scholars, leaving aside other population streams like, for instance, urban out-migration (Bilsborrow 1998).

Recent studies on urban dynamics in Africa draw attention to a slightly different –and maybe more complex— picture. Indeed, in contrast with the common view of an uninterrupted "urban explosion", the pace of urban growth has slowed down in Africa since the mid 1970s, after the accelerating period of the 1950s and 1960s (Arnaud 1998; Chen, Valente et al. 1998). This trend is largely due to the downward evolution of rural out-migration rates: within three decades, it has been divided by two, going from 1.1% per year in the 1960s to 0.8% in the 1970s and finally to 0.5% in the 1980s. As a consequence, while internal migration (and reclassification) accounted for 41% of African urban growth in the 1960s, it was the source of only 25% of urban growth in the 1980s, so that Africa was in this last decade the continent where the contribution of migration to urbanization was the lightest (Chen, Valente et al. 1998). As authors of these results point out, it is worth knowing that this continental picture relies in fact upon the few countries for which data are available. As a consequence, it may not be representative of the continent as a whole. Still, these results are consistent with other findings drawn from a sample of 14 African countries (Makannah 1990) and they remain the most complete picture available to date.

In fact, as it has often been noticed (Bilsborrow 1998; Oucho 1998), migration studies in Africa suffer from a lack of data. Few specific surveys have been carried out on this topic, especially at national scale, so that migration analysis are often inferred from census data, as it is the case for the above mentioned studies[5]. The subsequent difficulty stems from the fact that census data are not always available so that, in matter of urbanization (and, consequently, of migration), shown results are often estimates or projections, from the World Bank or the United Nations, based on assumptions derived from periods of previous rapid growth. However, these available data have proved to be often misleading since large gaps can be observed between projections and census results, when the latter are available (Becker and Morrison 1995; White, Montgomery et al. 2003). This explains the existence of some contradictions in the picture of urban and migratory dynamics in Africa. Much depends on the particular data source. Using World Bank data, certain authors, contend that migration from rural to urban areas has hardly abated in Africa in the 1980s (Jamal and Weeks 1988), while, at the same time, others reckon that the evidence is unclear (Amis 1989) or, years later, that censuses data show opposite results (Potts 1995).

As a matter of fact, several recent African sources seem to indicate that rural out-migration has not only abated but that its counter-stream (i.e. urban out-migration) has progressed and even, in some cases, outnumbered the rural-to-urban flow of people. Using census data series on urbanization, Potts (1995) confirms the decreasing role of

[5] Census data on the different places of residence, when available, are rarely used.

migration in urban growth in Africa and points out cases of reversals: in Ghana and Zambia, for instance, a number of major towns and cities have experienced a negative migratory balance between the 1970s et 1980s. Furthermore, the last Zambian census has also revealed a counter-urbanization movement: population of urban areas has decreased between 1990 and 2000 (Central Statistical Office of Zambia 2004). In Francophone West Africa, results of the NESMUWA (Network of surveys on migration and urbanization in West Africa) show similar patterns. In all countries of the network (Burkina Faso, Guinea, Côte d'Ivoire, Mali, Mauritania, Niger, Senegal), secondary towns registered negative net loss of migrants between 1988 and 1992. Besides, the net migration rates of rural areas of Burkina Faso, Guinea and Niger were very close to zero, albeit negative, suggesting that rural-to-urban migration is not as important as expected or that the reverse movement has increased. Finally, in Côte d'Ivoire, there was a clear reversal, internal migrations being in favour of rural areas between 1988 and 1992.

To conclude this section, it is worth noting that a general declining trend affects urban growth in Africa because of the lesser role of migration. In several countries, recent results suggest that urban-to-rural migration is on the increase, while rural-to-urban migration tends to decline. In certain countries, these patterns conduce to a migration reversal and to a "counter-urbanization" process (Zambie, Côte d'Ivoire). Such results may surprise since they were not really expected according to various predictions or projections on urbanization (Rondinelli 1994; United Nations 1998; United Nations 2001). Still, they are based on true national data (as opposed to largely hypothetical data).

1.1.2. What do we know about migration and urbanization in Burkina Faso and Côte d'Ivoire?

As far as Burkina Faso and Côte d'Ivoire are concerned, the above picture of migration and urbanization in Africa only provided some clues of potential reversals. The aim of the current section is identifying trends from as way back as possible by re-examining the published results of all data sources of these countries. Although sources are fairly abundant[6], few analyses have been carried out on internal migration between urban and rural areas: rural-to-rural and international migrations have absorbed the bulk of the studies. Trying to establish a picture of the evolution of migration and urbanization, one

[6] Three census rounds are available (1975, 1988, 1998 in Côte d'Ivoire; 1975, 1985, 1996 in Burkina Faso) and several surveys have been dedicated to migration. In Côte d'Ivoire: Regional survey of rural migrations, 1978; Panel Survey, 1978-1979; Ivorian Survey on migrations and Urbanization (EIMU, part of the NESMUWA), 1993. In Burkina Faso: Clairin Survey, 1960-1961; ORSTOM Survey, 1972-1973; National Migration Survey, 1974-1975, Survey on migrations and urbanization (EMUBF, part of the NESMUWA), 1992 ; Migration dynamics, urban integration and environment survey (EMIUB), 2000.

comes up against another difficulty: data are often not truly comparable from one source to another since surveyed populations, measure methods and definitions of migration and urban areas often differ. Still, the comparison of all data sources allows us to draw a general picture and constitute a reference framework for the retrospective analysis proposed in the next section.

Burkina Faso

In the 1970s, different sources reported a limited rural out-migration in Burkina Faso (former Upper Volta). According to the 1975 census, the volume of urban immigrants represented only a third of the number of international emigrants (INSD 1978). Besides, excepted for Ouagadougou (capital city), the towns of the Mossi Plateau (a very densely populated region located in the center of the country) have experienced a negative balance (Cordell, Gregory et al. 1996). Though, at that time and on a national scale, migratory flows were unquestionably in favour of the urban milieu: between 1969 and 1973, rural out-migration represented 6% of all the male flows (internal and international), against 3.7% for urban out-migration, rural-to-rural and urban-to-urban flows absorbing respectively 2.8% and 2,6% (Cordell, Gregory et al. 1996).

The 1985 census introduces a new breach in the common picture of an "explosive" urbanization process. According to it, provinces of the two cities of the country (Ouagadougou and Bobo-Dioulasso) would have experienced a deficit in their migratory balance. *A priori* surprising, this result could be explained by the decentralization of thousands of civil servants and by the weak development of the industrial sector in the cities (INSD 1989; Ouedraogo 1993). The NESMUWA (1993) results present a different picture: the two cities would have registered a positive migratory balance, while secondary towns would have lost migrants (Bocquier and Traoré 1998). This last result is confirmed by a national survey carried out in 1991, according to which Ouagadougou would have notably grown since 1985, while towns of several regions would have diminished in size (INSD 1994). However, the results of these two above mentionned surveys could be marred by sample mystakes (INSD 1994; Antoine, Bocquier et al. 1997). Besides, it is worth noting that 1996 census results partially contradict them since they show the rapid growth of Burkinabe secondary towns (INSD 2000). Finally, the migratory picture of the 1980s-1990s is quite confusing. However, one can keep in mind that urban areas are not so unanimously attractive as is usually said.

Côte d'Ivoire

In Côte d'Ivoire, as well as in Burkina Faso, first sources report a moderate rural out-migration (Roussel 1967). In the 1970s, a panel survey has provided data for several analyses in matter of migration. One of them has shown that internal migrations were

globally in favour of urban areas between 1978 and 1979 (Dureau 1987). But, using an alternative measure (a comparison of places of residence of 1975 and 1978), another study has brought to the fore that urban areas, with the exception of Abidjan, presented a negative migratory balance (Direction de la statistique, CIRES et al. 1982). Furthermore, at the end of the 1970s, a survey on migration carried out in several rural regions, has estimated that, depending on the area, between a quarter and a third of former emigrants had come back in their village (Duchemin, Pescay et al. 1979). Finally, even though no clear picture emerges from the reading of older demographic sources, it seems however that urban out-migration was not completely marginal.

Results of the 1988 census have confirmed this assumption. By comparison with places of residence at the time of the census and one year earlier, and excluding international migration, it has been shown that the whole urban sector was in migratory deficit, a result also true for Abidjan alone (Zanou 1992; Beauchemin 2002). These results were confirmed in 1993 by the NESMUWA (Bocquier and Traoré 1998) and more recently by the 1998 census: the same migratory patterns were observed in the year preceding the census for Abidjan and the rest of urban areas. Furthermore, the last census shows a clear turnaround in the spatial distribution of population: for the first time in the 20th century, the level of urbanization has decreased between 1988 and 1998, going from 46% to 43%, urban settlements being defined as places with at least 5,000 dwellers (Zanou 2001).

Finally, in Burkina Faso as well as in Côte d'Ivoire, it seems that rural exodus has never been clearly overwhelming. Since the 1970s, rural-to-urban migration have been at least partly compensated by urban out-migration. This last stream has been sufficiently large to provoke a reversal in Côte d'Ivoire in the 1980s, and a migratory decline in some towns and cities at the same time in Burkina Faso. However, this picture of the evolution of migration and urbanization relies on sources that are not strictly comparable and, furthermore, that sometimes show discrepancies. It offers a first insight which needs to be completed by a reliable study of trends. The next section is an attempt in this direction.

1.2. Thirty years of migration in Burkina Faso (1970-1999) and Côte d'Ivoire (1960-1989): an a posteriori *analysis*

1.2.1. Data and method

Successive older sources are obviously not sufficient to draw a clear evolution of migratory trends. An alternative method for this purpose is to use, in each country, a single source including national retrospective data (Piché, Gregory et al. 1984). The Ivorian survey (EIMU) is part of the NESMUWA (Bocquier and Traoré 1998) and was conducted in 1993 by the National Institute of Statistics of Côte d'Ivoire. Residential histories were collected on a sample of 18,000 individuals aged 6 and over. The

Burkinabè survey (EMIUB) was conducted in 2000 by the University of Montreal (Canada), the University of Ouagadougou (Burkina Faso) and the CERPOD (Mali). Migration histories were collected on a sample of about 9,000 individuals aged 15-64 (Poirier, Dabiré et al. 2001). Both of the surveys were designed to be representative of national population.

The use of residential histories to draw a picture of migration trends brings up a selection bias since dead people and international emigrants who have not returned at the time of the surveys could not have been interviewed. Two precautionary measures are then necessary to make credible analysis. First, it is essential to control for age when doing retrospective analysis. Second, one must admit the assumption that absent people who were not surveyed had the same migratory behaviour as those of surveyed people, as far as domestic migration is concerned. This assumption is classic in event history analysis. In this particular case, the hypothesis seems likely for dead people at the time of the surveys and acceptable in the case of international emigrants. Indeed, Côte d'Ivoire is not a country of international emigration. On the contrary, international emigration is very important in Burkina Faso, but it is included in a circular mobility system so that absent emigrants are in fact largely represented by return migrants (Cordell, Gregory et al. 1996).

The main advantage of the use of single retrospective data is that it solves the problem of definition vagaries from a source to another: comparisons in time and space become truly feasible since it is possible to apply identical definitions for all the periods and for both countries. In the following text, we will then define migration as a move from an administrative area to another ("sous-préfecture" in Côte d'Ivoire and "département" in Burkina Faso) for a duration of at least 6 months, whatever the period. Urban places are henceforth defined as settlements with at least 10,000 inhabitants, anytime. Using these definitions, our objective is to assess the evolution of internal migration trends between urban and rural areas, whatever the direction of the flow.

For the purpose of the analysis, data of each country have been organized in two sets. One is restricted to the spells of residence in rural areas, the other to the spells of residence in urban areas. In the first data set, each individual is "followed" as long as he/she resides in rural areas, that is from the age of 6 (if he/she lives in rural areas at that age) or from the time she/he arrives in rural areas, until she/he migrates to urban areas or until the time of censoring[7]. If the individual comes back to rural areas, he is “followed”

[7] The three sources of censoring are (1) the end of observation (date of the survey), (2) migration to foreign countries, (3) reclassification of rural areas into urban areas.

again[8]. Conversely, in the second data set, people are "followed" from the time they enter, or come back to urban areas until they leave it or until censoring. For the purpose of the analysis, the samples are organized as person-period data files in which each line represents a six-month period; a variable indicates if a migration (urban out-migration in the urban data set, rural out-migration in the rural data set) occurs during each six-month interval. The samples comprise people, males and females, aged 6 and above (Table 1).

Two methods are used to assess migration trends. The first one aims at providing a synthetic insight on migration trends, leaving aside gender or age nuances. Binary logistic regression is used to estimate discrete-time event history models (Allison 1995). In each country, one model estimates the probability that an urbanite experiences a migration toward a rural area, and another model estimates the probability for a rural dweller to move to a town or a city. Both statistical models are specified as follows:

$$\text{Log}\ (p_{ti} / 1\text{-}p_{ti}) = \alpha_t + \beta.\text{IND}_{ti} + \gamma.\text{PER}_{ti}$$

where p_{ti} is the conditional probability that individual i experiences the event (migration) at duration t, given that the event has not already occurred. Duration is defined as the duration of stay in the current place of residence; it is modelled by a function of the time since arrival in the place of residence and of its logarithm. This function forms the baseline hazard of migration (α_t)[9]. IND_{ti} is a vector of individual covariates, i.e. gender and age, taken as control variables. A quinquennial period variable (PER_{ti}) is also introduced: the variations of its odds ratio are interpreted as an indicator for trends in migration. Both models take into account the fact that data are clustered, and the standard errors of the regression coefficients are adjusted accordingly using Huber-White standard errors[10].

The second method provides a more complete picture of migration trends than the first one: gender and age specificities are observed. This method consists in computing annual rates of migration for each of the three decades preceding the surveys, distinguishing gender and quinquennial age groups. For each decade, *rural out-migration rate* is defined as a ratio of the volume of rural-to-urban migrations with the years lived in rural areas.

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[8] Whenever two or more observations come from the same person, they tend to be more alike than two randomly chosen observations. Pooling these observations without taking the dependence into account can lead to standard error estimates that are biased downward and test statistics that are biased upward. To deal with this problem, exploratory models have been estimated to test the dependence among multiple observations, according to the method proposed by Allison (1995, p.241). It has proved that the duration of the second observation is not significantly dependent on the first one.

[9] This clock is reset to zero each time an individual moves to another locality.

[10] Clustering is taken into account at the sample cluster level. Clustering due to repeated observations from the same individual is not accounted for because of the small number of individuals represented more than once in the data files.

Conversely, urban out-migration rate is defined as a ratio of the volume of urban-to-rural migrations with the years lived in urban areas. Finally to give an insight on the evolution of the balance and the intensity of movements between urban and rural sectors, two other indicators have computed: 1) the *net migratory growth rates of urban areas* (migratory balance reported to the years residing in the urban sector); 2) the *relative intensity rates of mobility* (ratio of the total number of migrations between towns or cities and countryside with the years lived throughout the country).

1.2.2. Comparative descriptive results

Rural out-migration: between stagnation and decline

At first glance, variations of odds ratios show that rural out-migration has not continuously expanded since the mid 1960s neither in Burkina Faso nor in Côte d'Ivoire (Figure 1). In fact, three phases can be distinguished: 1) a period of growing probability of leaving the rural milieu limited to the 1970s in Côte d'Ivoire and to the mid 1980s in Burkina Faso); 2) a period of stagnation in the 1970s and early 1980s in Côte d'Ivoire and since the mid 1980s in Burkina Faso (although odds ratio are not significant in the 1990s); 3) at last, a period of decline only in Côte d'Ivoire in the 1980s.

Migration rates show similar results. In Côte d'Ivoire, rural out-migration decline appears clearly: whatever the age, the probability of migrating from a village to a town or a city is always lower in the 1980s than in the 1970s (Figure 2). It's true for males as well as for females (Figure 3 and Figure 4). In Burkina Faso, the picture is more complex: the rates of the older (more than 40) and of the younger (less than 15) have diminished between the 1980s and the 1990s; but rates have progressed for all the other age groups from the 1970s onwards (Figure 2).

To sum up, recent periods are characterized by an abating trend in rural out-migration. This evolution is more acute in Côte d'Ivoire, where rural areas are less and less repulsive. However, Ivorian countryside seems to remain more repulsive than the Burkinabè one: whatever the age, rural out-migration rates are always much lower in Burkina Faso (Figure 2). One can draw two assumptions to explain this result. First, rural-to-urban migration rates do not correspond to the whole departure movement from Burkinabè villages since the rates exclude numerous international emigrations, whereas international emigration is negligible in Côte d'Ivoire. Second, there have always been more towns in Côte d'Ivoire than in Burkina Faso; the probability of moving toward Ivorian urban areas is then logically higher. Despite the rates gap, Burkina Faso and Côte d'Ivoire present similarities in the composition of rural out-migration.

The first similarity is related to gender differences. Whatever the period and the country, men are always more likely than women to move from rural to urban areas. However,

opposite gender evolutions are at play. It is especially obvious in Côte d'Ivoire: while rural out-migration rates of males have never been so low than in the 1980s (Figure 3), on the contrary, at the same time, the involvement of females in migration has never been so high (Figure 4). Several hypotheses could explain the rise of female migrations. First, it could be linked to the progress of girls schooling that may, on one side, increase the departure of girls going to towns to attend school. On the other hand, it could encourage the departure of young educated women who have very few career prospects in rural areas. Girls schooling could thus induce autonomous migration (Gugler and Ludwar-Ene 1995; Findley 1997). Second, Adepoju suggests that the increasing involvement in migration is linked to the feminization of rural poverty (Adepoju 2000).

The second similarity is related to age differences. Throughout the decades, the age composition of rural-to-urban migration has remained fairly unchanged in Burkina Faso, and in Côte d'Ivoire alike: migrants are primarily young people (15-34 years old). But children (6-14) follow a distinct trend: their rural out-migration rates have decreased in both countries in the last observed decade. Considering that child migrations are largely related to education, two complementary assumptions can be drawn to explain this evolution. Firstly, it could be linked to the spread of schools in rural areas (Beauchemin, Schoumaker et al. 2003): children could then stay in their village to attend school instead of migrating. Secondly, it could result from a diminishing interest in "modern" education, as suggests the decline of the schooling rates in almost all the sub-Saharan countries (Lloyd and Hewett 2003). The slightest decrease of female rates could be explained by the fact that young women's migrations are usually less motivated by education than young men's (Kaboré, Lairez et al. 1999). Whatever the explanation, it remains that last decades have smoothed the gender migration gap among children.

Urban out-migration in progress?

The previous section has shown that rural out-migration trends do not confirm the conventional view that movements towards towns and cities remain unabated. Considering the reverse movement, the present section aims at demonstrating that urban out-migration trends also challenge the picture of an "explosive" urbanization process. As a matter of fact, the probability of migrating from a village to an urban settlement has notably increased over 30 years in Côte d'Ivoire (Figure 5 and Figure 6). Although results are not so clear in Burkina Faso (most odds ratios are hardly significant), a similar trend seems to appear between 1970-74 and 1980-84.

Another common trend involves the rejuvenation of urban-to-rural migration. In the 1960s, the urban out-migration rates were at their maximum for the oldest, in line with the classical picture of retired return migrant (Zachariah and Condé 1980). But, progressively, rates have diminished for the oldest, while they have become higher for

young people (Figure 6). So that, in the last decades (1980s in Côte d'Ivoire and 1990s in Burkina Faso), young adults are the most likely to move from towns and cities to the countryside. Even children show high rates, especially in Burkina Faso. This trend is consistent with the rural-urban one and involves similar interpretations. Again, it could be linked to the evolution of the education offer: the overcrowding of urban classes and the spread of schools in rural areas could encourage a schooling migration toward villages. And again, on the other side, the surge of urban out-migration among children could be interpreted as an indicator of a decreasing interest in education, especially for girls (they have higher urban out-migration rates than boys in both countries, see Figure 7 and Figure 8).

Balance and intensity of rural-urban flows

Studying successively rural and urban out-migrations, it finally seems that urban-rural migratory flows play a role less and less important in the process of urbanization. Trends of net migration rates in urban areas confirm this idea (Figure 9). Rates are lower and lower as decades goes by. In other words, urban growth is apparently less and less due to migration (if one admits the assumption that natural growth has not diminished more rapidly than migratory growth in urban areas). Finally, almost all age groups contributed to a migratory deficit in Ivorian urban areas in the 1980s and Burkinabè urban areas registered almost no migratory gain in the 1990s.

This decline of net migration rates is the result of the diffusion in all age groups of migratory behaviours that used to be the apanage of the oldest. The Ivorian case is emblematic: in the 1960s, the rate was negative only for the people above 40; in the 1970s, the rate became negative for all the groups above 30; and in the 1980s, only people under 20 kept a positive rate. In Burkina Faso as well, only one group (15-19 years old) still fed moderately urban growth in the last decade (1990s), while all people younger than 30 fed largely urban growth in the first observed decade (1970s). Finally, in both countries, there is a trend of undifferenciation of rates according to the age: although sharp in the first decade, differences between age groups have become smoother and almost vanished.

Even though urban-rural streams (in both directions) contribute less and less to urban growth, they still play an important role in migratory dynamics: in both countries, relative intensity rates of mobility have continuously progressed throughout the decades (Figure 10). Thus, the slight migratory growth of urban areas should not be interpreted as a process of people stabilization. However, all groups are not concerned at the same degree by this mobility intensification. Firstly, mobility progresses much more among women, so that they reached masculine rates in the last decade (results not shown). Secondly, mobility increases unequally among age groups: young people have always

been the most mobile (particularly the 15-24) and are increasingly so as time goes by. In Côte d'Ivoire as well as in Burkina Faso, the mobility intensification concern younger and younger people: mobility gains were limited to people less than 40 in the first inter-decade, and to people less than 30 in the last inter-decade.

The increasing mobility can be interpreted in two distinct ways. First interpretation: there is an increasing domestic mobility because more and more young people are involved in national migratory flows (maybe at the expense of international streams, especially in Burkina Faso). Second interpretation: without an increasing number of migrants, the increasing mobility could reflect the fact that people are moving more often, that they are engaged in a system of comings and goings between urban and rural areas (Faussey-Domalain and Vimard 1991). These assumptions remain to be verified.

To conclude the first part, it is worth noting that there are convergences between our retrospective results and the review of older demographic sources. In both cases, the main conclusion is that migration plays a less and less significant role in urban growth because of changes in the distribution of migratory flows. In Côte d'Ivoire, counter-urbanization stems from both long and short term changes: there has been a long period of stagnation and decline of rural out-migration (from the 1970s) coupled with a recent increase of urban out-migration (since the mid 1980s). Although Burkina Faso has not experienced a pattern of counter-urbanization, preliminary results show common features with Côte d'Ivoire. First, in both countries, rural-to-urban migration is no longer on the rise: it has stagnated in Burkina Faso since the mid 1980s, as it did in Côte d'Ivoire during the 1970s. Secondly, there is in both countries a structural change in the age composition of urban out-migration: the probabilities of migration were traditionally higher among older people and they are now at their maximum for young adults. At the end, these results draw attention to the 1980s as the period 1) when rural out-migration stopped its progress in Burkina Faso and began its decline in Côte d'Ivoire and 2) when the population profile of urban out-migrants started to change. These two phenomena occurred in coincidence with the beginning of economic difficulties. Whether these coincidences have a causal dimension is the key question of the next section.

2. The search for an explanation

2.1. Empirical literature review

Our search for an explanation of new migratory trends in West Africa is mostly based on empirical literature. To avoid redundancy with other studies, we do not present the underlying explanatory models, references are however provided for who wishes more details on the theoretical framework.

2.1.1. The role of the economic conjuncture

The reference to the economic decline constitutes a pervasive explanation for the slowing down of urban growth in Africa (Simon 1997; Chen, Valente et al. 1998). Of all the components of urban growth, migration is probably the most responsive to economic fluctuations. This link between mobility and economic results has already been established in developed countries, where migratory reversals occurred during periods of great recession, i.e. during the 1930s and the 1970s (Berry 1988; Hugo and Bell 1998)[11]. It has recently seemed true as well in developing countries. In Asia for instance, and especially in Thailand, the 1990s financial crisis –which rapidly spread to the real economy— has provoked the return of millions of urban dwellers to their rural homes (Parnwell 2002). Several African examples, partly presented below, illustrate the same idea. Accra, capital city of Ghana, was reputed to be experiencing significant net out-migration during the worst period of hardship in the early mid 1980s (Simon 1997). In Zambia, Copperbelt towns have experienced a counter-urbanization pattern since the collapse of the world market price of copper (Potts 1995; Bruneau 2002). In Cameroon, the increased number of return migrants in villages has been interpreted as a response of individuals and households to the crisis (Gubry, Lamlenn et al. 1996). At last, in Nigeria, a study showed that desire of urbanites to return to their villages was greater in 1987 than in 1961; and this difference has been attributed to the deteriorating economic fortunes of many urban dwellers (Gugler 1991).

In what extent does the assumption of a link between economic crisis and migration reversal fit with the Ivorian and Burkinabè contexts? As far as Côte d'Ivoire is concerned, the idea has already been set twice out. Historical studies have shown that the 1930s Great Depression stopped brutally the recent urbanization process because of the decline of urban activities (Kipré 1976). More recently, qualitative researches have analysed urban out-migration in terms of survival strategy to face the 1980s crisis (Chauveau 1997; Beauchemin 1999; Chaléard and Dubresson 1999). After a period of "economic miracle", Côte d'Ivoire entered in a great recession in the late 1970s, when the world market prices of cocoa and coffee collapsed. So that, in the 1980s, the Ivorian per capita GNP recorded the most serious fall of the whole Africa: -4.6% per year against -1.2% for the sub-Saharan Africa (Simon 1997). As for Burkina Faso, the country entered in a stagnation period in the mid 1980s (Chambas, Combes et al. 1999). All these economic

[11] In the context of developed countries, the reference to the economic conjuncture is one of the very diverse explanations formulated to explain the process of counter-urbanization (Champion 1998). Some authors advanced the idea that the migratory reversal is a manifestation of the transition from the industrial era to a post-modern age (Boyle and Halfacree 1998b). Such an interpretation is obviously non applicable to the African context.

fluctuations coincide with the time when migratory changes occurred in both of the countries.

2.1.2. The role of the narrowing rural-urban gap

Economic crisis in Africa has been having differential impacts into rural and urban areas, as it has been well shown for a wide range of countries by an ILO study (Jamal and Weeks 1988). Urban-rural wage differentials have greatly changed since the Independences. While urban wages, especially in the formal sector, increased in real terms in the immediate post-independence era in most countries, rural-urban income gap narrowed rapidly in the 1970s. Real urban incomes continued to fall drastically in the 1980s, so that Jamal and Weeks (1988) calculated that, during the 1970s and 1980s, the rural-income gap in many countries either vanished or shifted in favour of the farmers. Migration is often viewed as a behavioural response to spatial differences in incomes (or standards of living)[12], therefore these economic trends could explain the diminishing contribution of migration in urban growth[13].

In a large number of African countries, the fall in real urban incomes has generated a "new urban poor" forced to adjust their behaviours to the new economic context. Several studies have analysed how poor urban households respond when incomes decline, jobs are increasingly scarce and spending on food and services increases (Moser 1996; Potts 1997; Rakodi and Lloyd-Jones 2002). One of the household coping strategies involves the strengthening and adaptation of rural-urban linkages, among which figures the return to rural home. It often involves changes in household composition. Some people are sent in rural areas to diminish urban expenditure and to diversify incomes in order to better face economic hazards[14]. For instance, household members are sent to the home village to grow food, so as to supplement urban sources, as pointed out for Uganda or for Zambia (Potts 1997). Some children are returned to rural areas where schools are cheaper (Eloundou-Enyegue 1992; Gado and Guitart 1996; Pilon and Vignikin 1996). And some urban households get rid of fostered young people they are no more able to shelter (Gubry, Lamlenn et al. 1996).

What about Côte d'Ivoire and Burkina Faso in this context? In 1990, average income in urban areas is still more than two fold higher than in countryside in Côte d'Ivoire, and

[12] This intuitive interpretation of migration refers in fact to different economic models, among which the famous Harris-Todaro model. For more details on economic theories applied to Africa, see : Becker, Hamer et al. (1994), chapter 4.

[13] Jamal and Weeks (1988) contended the contrary, but their findings were based on World Bank estimates and projections that lately proved to be misleading (Potts 1995).

[14] Such a strategy is well explained by the new economics of labour migration (Stark 1991)

more than four fold in Burkina Faso (Naudet 1993). Comparison with 1960 shows that these two countries have experienced opposite trends: while the urban-rural gap has continuously decreased in Côte d'Ivoire, it has globally progressed in Burkina Faso. However, looking at details, the 1980s appear as a turning decade for both countries : the gap narrowed faster than before in Côte d'Ivoire, and it began to decrease in Burkina Faso whereas it has continuously widened since the 1960s (Naudet 1993). In both countries, even though poverty remains largely a rural phenomenon, one assists to the urbanization of poverty, in the sense that incidence of poverty increases faster in urban areas than in their rural counterparts since the early 1980s (Grootaert 1996; Fofack, Monga et al. 2001; Grimm, Guenard et al. 2001; Lachaud 2003). Poverty itself has been the subject of many analyses in Burkina Faso but, to our knowledge, no study has tackled the effects of rising urban poverty in terms of migration. On the contrary, Fofack (2001) suggests that the rapid increase of poverty in urban areas is largely the result of massive internal migration. On the other hand, in Côte d'Ivoire, several case studies contend that the rise of urban poverty, through increasing unemployment and decreasing real incomes, has caused a movement towards rural areas of fostered children (Guillaume, Fassassi et al. 1997), of young people who failed in their studies, of young educated people who cannot find a formal job in the urban economy, or of fired employees from the modern sector (Chaléard 1997; Chauveau 1997; Beauchemin 2001). However, if the relationship between the migration reversal and the hardship inflicted on urban families seems highly plausible, it remains that it has never been clearly established in these countries.

2.1.3. The role of structural adjustments

Another key question, in direct line with the debate on migratory effects of growing urban poverty, is about the effects of structural adjustment programmes (SAPs) launched in African countries since the early 1980s. Among other objectives, these programmes aimed at reducing the supposed gap between urban and rural areas in order to counter the "urban bias", perceived as an obstacle to economic development (Lipton 1977). SAPs have fulfilled this objective: the gap narrowed everywhere and where it was already on the decrease, it decreased faster (Potts 1995). That is the reason why several scholars suggest that SAPs, through their differential effects on urban and rural areas, are disguised migration policies (Antoine 1991; Guillaumont and Lefort 1993)[15]. Below the reducing rural-urban gap, Becker and al. (1994) enumerate four other reasons why SAPs may influence migration trends especially in the medium term: 1) the reducing spending for education (included in the package of decreasing public expenditure) may prevent

[15] This assumption revives the Marxist theory according to which migration in developing countries is the result of structural changes imposed from outside by dominant institutions (Amin 1974).

many rural individuals from migrating to urban areas, since it is recognized that education is a fundamental determinant of migration to towns and cities; 2) the tightening of parastatal enterprises' budgets, through the drop of real wages and employment possibilities, may reduce the attractiveness of this sector on potential migrants; 3) trade liberalization may reduce output and employment in import-substituting industries, and may thus discourage potential urbanward migrants (because of lower wages and lower employment probabilities); and 4) devaluation may increase migration to areas in which export production takes place (i.e. in rural areas since African countries export agricultural and mineral goods). Albeit challenged by rare regional case studies (Meagher 1997), the link between the SAPs' implementation and the reducing contribution of migration to urban growth is largely admitted (Oucho and Gould 1993; Potts 1995; Gubry, Lamlenn et al. 1996; Oucho 1998; Cohen, White et al. 2003). But again, this relationship has not been clearly established and remains to be proved.

Although SAPs usually comprises the same kind of measures, nuances exist in their implementation. In the Ivorian and Burkinabè cases especially[16], what may be the expected migratory effects of SAPs measures? Let us examine the different aspects evoked by Becker and al. (1994). 1) As far as education is concerned, opposite trends are at play. In Côte d'Ivoire, the public spending has indeed sharply declined throughout the 1980s (Cogneau and Mesplé-Somps 2002), a deterrent effect on rural out-migration may occur. On the contrary, in Burkina Faso, the education spending kept rising during the SAP's implementation, education –especially in rural areas– having been identified as a priority in the development agenda (Diabré 1998). From this viewpoint, in the short term, adjustment policy could have increased the risk of urban out-migration, and all the more so since a redeployment of personal has been ordered as a way of solving the problem of lack of personal in rural areas. In the long term however, the education progress in rural areas could favour urbanward migrations. 2) In both countries, the public sector has been affected by PAS implementation: governments restricted hiring (and even fired daily workers in Côte d'Ivoire), froze salaries (despite the 50% devaluation of CFA franc in 1994) and privatized parastatal enterprises (Fauré 1992; Diabré 1998). 3) Downsizing and bankruptcies occurred in the private sector. Import-substituting industries have suffered from trade liberalization and increasing competition (Diabré 1998). And, in Côte d'Ivoire especially, enterprises depending on public demand suffered from the State's ouststanding

[16] Adjustments in Côte d'Ivoire and Burkina Faso have been implemented in very different contexts. Côte d'Ivoire has been one of the pioneer countries in matter of SAPs implementation: the first one occurred in 1981, when the national economy collapsed, and others followed in 1983, 1986 and 1990. In Burkina Faso, the first SAP has been implemented ten years after the first Ivorian one (1991), while the national economy was fairly on its rise. Furthermore, this plan included a "social dimension" that missed in Côte d'Ivoire until the late 1980s.

payments (Fauré 1992). In sum, in Côte d'Ivoire, between 1980 and 1985, the number of parastatal employees dropped by 42%, while employment in the private sector has decreased by 36% (Schneider and Tinh 1991). We found no comparable data for Burkina Faso, but the impact of the SAP on the modern sector seems to have been less pronounced. Anyway, such an employment crisis in the modern (public as well as private) sector may indeed have diminished the attractiveness of urban areas, and might also have favoured urban out-migration. 4) Burkina Faso and Côte d'Ivoire have both undergone a 50% devaluation of their currency (CFA Franc) in 1994. As expected, it has boosted agricultural exportations in both countries (Diabré 1998; Cogneau and Mesplé-Somps 2002) and may have had an impact on the attractiveness and the retention capacity of rural regions.

2.2. Method and data

Our objective is to test the relationships between rural-urban migration (in both directions) and the macro-economic context. Assuming that the national context can have an impact on the migration decision process, we propose to estimate the effects of macro-economic factors on the individual risk of moving from an area (either rural or urban) to the opposite one. Discrete-time event history models are used to serve this purpose. The statistical model is an extension of the previous one (see section 1.2.1), by including an economic variable (ECO_{ti}) in addition to the other variables (IND_{ti}, a vector of individual variables; PER_{ti}, a quinquennial period variable). It is specified as follows:

$$\text{Log}\,(p_{ti} / 1\text{-}p_{ti}) = \alpha_t + \beta.IND_{ti} + \gamma.PER_{ti} + \delta.ECO_{ti}$$

The economic variable (ECO_{ti}) is represented by four variables that are independently introduced in the analyses, in order to avoid problems of high correlation and overlap. As a result, for the two countries, there are four models, each including a different economic variable.

It is worth noting that the choice of the variables is heavily constrained : event history analysis needs continuous annual series to merge with the individual biographies, in a context where economic data are known to be largely unreliable and incomplete (Becker and Morrison 1995; Naudet 1996; Simon 1997). However, international institutions (World Bank, FAO, OECD, etc.) provide, online, a large set of time series data, in which proxy variables, available for Côte d'Ivoire and Burkina Faso, can be found to test our assumptions. Despite their limits, which need to be specified, these variables allow us to perform our analyses. Following the three successive sections of the previous literature review, we now detail the chosen variables.

a) The role of the economic conjuncture on migration could be measured by the per capita gross domestic product (GDP), for which time-series are available (World

Development Indicators, 2003), and which is usually taken as an indicator for economic development or population standard of living. However, this variable is not totally satisfying since it doesn't take into account the whole real economy: it omits the "informal" sector (including the food production for domestic consumption), which plays a very significant role in the African context, especially during economic hardship. As a matter of fact, GDP variations tend to artificially exaggerate the impact of recession periods since it doesn't take into consideration the shock absorber role of the "informal" sector (Naudet 1996; Cogneau and Mesplé-Somps 2002). The per capita calorie intake (PC-CI), provided by the United States Department of Agriculture (which extracted the data from the Food Balance Sheet of the FAO), is an alternative proxy measure for the general economic context and the standard of living. Even though it may have been artificially augmented during the most severe drought periods in Burkina Faso (early 1970s, mid 1980s and early 1990s) when the country received international food aid, this variable is likely to be more respondent to real incomes and welfare levels than the per capita GDP. Finally, according to the review of literature, a period of PC-CI decline is expected to encourage urban out-migration and discourage rural-to-urban migration. Conversely, a period of economic growth is expected to be an incentive to move from rural to urban areas and to have a deterrent effect on ruralward migration.

b) The role of the narrowing rural-urban gap is much less easy to tackle since, to our knowledge, no annual series is available on earnings neither in rural areas nor in urban settlements in the countries we are interested in. We found no proxy data for urban earnings, nor did we find any data on urban unemployment (time series are almost inexistent, besides such data are known to be especially unreliable). As for rural earnings, we propose to take into account the annual agricultural production per agricultural worker (AP-PAW), provided by the United States Department of Agriculture (which extracted the data from the Production Yearbook of the FAO). It represents the annual total value of agricultural output divided by the agricultural labour force. It obviously doesn't encompass values of non-agricultural (but still rural) products; but their contribution to total earnings of rural population is assumed to be negligible in Côte d'Ivoire and Burkina Faso. In sum, to put simply, we hypothesize that the higher is the agricultural production per worker, the higher are the rural earnings. Therefore, in line with axioms of rational behaviour and previous empirical findings in Africa (Becker, Hamer et al. 1994), we expect that increase in agricultural production (i.e. rural earnings) has a deterrent effect on rural out-migration, while it could contribute to elevate the risk of moving from an urban settlement to a village. However the interpretation of this variable may be more complex because agricultural production is also an indicator for governement earnings since the commercialization of main cash crops is controlled through stabilization offices, that are in charge to purchase cash crops at fixed price and to sell them on the world

market (CAISTAB, until the late 1990s, in Côte d'Ivoire for coffee and cocoa; SOFITEX, still operating in Burkina Faso for cotton).

c) This later comment introduces the question of the urban bias, according which consumers and producers in urban areas are advantaged through government policies (subsidization of basic products, construction of infrastructures, creation of publically owned firms, etc.), a pattern that PAS have been supposed to counter (Becker, Hamer et al. 1994). Again, to our knowledge, no series data are available on the rural-urban distribution of governments expenditures. We are therefore forced to take into account a proxy variable: the global level of public expenditures. Expected results are based on the fact that urban areas take advantage of the increases of public expenditures (Chambas, Combes et al. 1999). Thus, on one hand, we expect that a public expenditure progress favour rural-to-urban migration and deter the reverse movement. And, on the other hand, a fall in public expenditures is likely to encourage urban out-migration and to curtail rural out-migration. Since continuous annual series of government expenditures are not available in Burkina Faso, we use another proxy in this country. Its choice is based on the fact that African governments invest in towns and cities the funds collected through export taxes on agricultural products (including gains of the stabilization offices). Therefore, the general level of exports (compared to the level of imports) informs us indirectly on the government's earnings, and finally on urban investments. In short, terms of trade provide us a proxy for measuring the effects of the urban bias. We expect the following mechanism: when terms of trade progress (i.e. when export prices increase faster than import prices), government earnings also progress, as well as expenditures in towns and cities. In these conditions, an increase in exchange terms may be an incitement, for rural settlers, to move to urban areas and, for urbanites, to stay in towns or cities. Conversely, when exchange terms decrease, investments in urban areas are also supposed to diminish, making these settlements less attractive or even repulsive. Data were primarily provided by the CNUCED and were extracted from an OECD document (Chambas, Combes et al. 1999).

All these variables are introduced in our models as variation rates since we are interested in the effects of macro-economic changes. Then, the problem is to determine the time lapse upon which individuals assess the evolution of the economic context and respond to it through migration. A basic method is to use annual variation rates which provide a comparison of the current situation with the situation of the previous year (Figures 11 to 13). In our case, merging economic indicators with the biographic datasets described in the first part of the paper, we have attributed to each semester-line the rates of the previous year since the economic results of the current year are supposed to be unknown until the year is completed. However, annual variation rates may be insufficient: one year is a restrictive length of time for people to assess the evolution of their economic context.

It may be then preferable to evaluate the economic change on a longer period. That is the reason why, in our models, we pay attention to the influence of annual variation rates but also to multi-annual indicators, calculated as means of the variation rates of *n* previous years ($2 \leq n \leq 5$). As a result, the effect of each economic variable on the risk of moving from an area (urban or rural) to the opposite one is estimated through five models. In total, 40 models are estimated in each country. For the sake of parsimony, next section will only presents the results (odds ratios) of the economic variables. These economic variables are discrete and divided in three categories. One is for negative variation rates, another for positive variation rates, and the last –which is always the reference category in the models— for a variation next to zero (this category includes all values encompassed within the interval of the standard deviation of the variable centered on zero).

2.3. Results

2.3.1. The role of the economic conjuncture

At first glance, results about effects of economic growth on migration are consistent with previous empirical findings (Berry 1988; Zhang and Song 2003). As a matter of fact, a growth of the per capita calorie intake (PC-CI) increases the risk of migrating from rural to urban areas in both countries (Table 2 and Table 4). Furthermore, odds ratios are higher when taking into consideration the time-lag. In other words, a long-term growth of the standard of leaving is a more powerful incentive to leave villages than a short-term one. As for urban out-migration, results are more nuanced. In Côte d'Ivoire, ratios are hardly ever significant, suggesting that economic growth has no effect, nor positive neither negative, on urban-to-rural movements (Table 3). However, in Burkina Faso, as expected, a deterrent effect is mostly at play (Table 5). These differential results according to the country suggest that Burkinabè towns and cities have a more retention power in prosperous times than Ivorian ones, or more probably that Burkinabè countryside is less attractive.

Decreasing economic trends, measured through PC-CI, have mixed effects. On one hand, as expected, they mostly encourage urban out-migration. And, whatever the country, a long-term decline of PC-CI has higher effects than a short one: the longer is the decreasing trend, the higher is the risk for an urban dweller to leave his city or town (Table 3 and Table 5). While, the effect is always positive in Côte d'Ivoire, in Burkina Faso, a decline of only one year tends to deter urban out-migration. Except for the latter, these results confirm the relationship suggested by the time coincidence between the economic crisis and the surge of urban out-migration. However, on the other hand, decreasing economic trends have unexpected effects on rural-to-urban migration: they

tend to spur it on the long run (at least three years), a short decline having no effect (Table 2 and Table 4).

Finally, the economic recession seems to play an incentive role on migration, whatever the direction of the flow (rural-to-urban or urban-to-rural). In other terms, people search to cope with economic hardship by moving whatever their place of residence: rural settlers move toward towns and cities, while urbanites are more likely to move to villages. People probably move to seek alternatives to loss of jobs in the urban sector or loss of markets in the rural sector. Thus, in periods of crisis, mobility tends to increase because it plays a role of survival strategy (Skeldon 2003). This observation is consistent with our descriptive results on the growing intensity of rural-urban streams (section 1.2.2).

2.3.2. The role of rural incomes, for lack of rural-urban gap data

As explained above, the effect of the narrowing rural-urban gap on migration decisions cannot really be assessed in this study. Results are only relative to the supposed influence of rural earnings, measured through a proxy given by the agricultural production per agricultural worker (AP-PAW). Results are quite mixed and depend largely on the country. Let us summarize the clearest trends, first, in matter of rural out-migration and, second, in matter of urban out-migration.

In Côte d'Ivoire, a growth of the PA-PAW diminishes the risk of moving from a village to a town or a city (Table 2). The effect is slight but constant: the risk is almost always significantly reduced by about 10% (with only a contradictory exception when there is, on average, a three-year decline). It suggests, as expected, that increasing rural earnings confer to villages a slight retention power. But, on the contrary, in Burkina Faso, the only significant result shows that a one-year improvement in agricultural production (i.e. rural earnings) favours an urbanward migration (Table 4). These contradictory results may reflect the gap between rural opportunities in the two countries: Burkinabè rural regions may well be less attractive than Ivorian ones owing to the vagaries of their climate, to their lesser level of infrastructures and equipments, to their less valuable crops, etc. In this context, an earning gain in Burkina Faso may be taken as an opportunity to finance a migration to a city or a town more than an incentive to stay in countryside. This explanation may be reinforced by the fact that the rural-urban earning gap in Burkina Faso has always been deeper than in Côte d'Ivoire. Finally, all these arguments may also help to understand why a decreasing AP-PAW encourages rural out-migration much more in Burkina Faso than in Côte d'Ivoire (the risk is elevated by at least 42% in the former, while it can be reduced by 20% in the latter).

Comparing the impact of AP-PAW variations on urban out-migration in both countries, a striking result appears: the risk of leaving a city or a town for an urban dweller is never clearly augmented, nor in case of growth neither in case of decline (with one exception in Côte d'Ivoire). In Burkina Faso, results are in line with expectations (Table 5). Rural areas are logically less attractive with reduced earnings: a decline in the AP-PAW strongly diminishes (by about 50%) the risk of an urban-to-rural migration. However, results in Côte d'Ivoire challenge our expectations (Table 3): there, AP-PAW gains, *a priori* contributing to the attractiveness of rural areas, systematically diminish the risk for urbanites to move toward a village. Problems of access to agricultural land, especially critical in the southern Côte d'Ivoire, could have explained no risk elevation of ruralward migration. It is however insufficient to explain a decreasing risk. In fact, this result is probably due to the intermediary role of the Ivorian government in the distribution of the agricultural added value. When agricultural production is on the increase, government earnings also increase through diverse taxations on cash-crops. And, these government gains are invested into urban areas, making them more attractive. In short, the potential attractiveness of rural areas due to increasing earnings (inferred through AP-PAW growth) might be outmatched by various urban advantages due to public investments.

2.3.3. The role of public expenditures, and by extension of structural adjustments

Obviously, effects of structural adjustments on urban growth cannot be directly assessed. However, proxy variables can give an insight on the potential role of PAS in matter of migration. Due to lack of data, different variables were used in Côte d'Ivoire and Burkina Faso. In the latter, for the most, it happens that terms of trade (used as a proxy for public expenditures) do not provide significant results, with one exception however: a one-year decline in terms of trade diminishes the risk of rural out-migration by about 20% (Table 4). This result is consistent with our expectations: a decrease in terms of trade may generate a decrease in urban investments and then make urban areas less attractive for potential rural migrants.

In Côte d'Ivoire, measuring directly the impact of public expenditures variations (instead of a proxy measure), we found contradictory but more significant results: a decrease in public expenditures always augments the risk of rural-to-urban migration (Table 2). This result challenges PAS expectations according which reducing government expenditures should diminish rural-to-urban migration. However, it is rather in line with Becker and Morrison's findings (1995): in a comparison study of urban growth determinants in Africa, they showed that government current-expenditure have no significant effect on the growth of the whole urban realm (but only on the growth of capital cities). As for the effects of increasing public expenditures, supposed to make urban areas more attractive,

results are mixed (Table 2): a short-term increase indeed spurs urbanward migration, but a long-term one seems to have a curtailing effect.

Nuances according to the time-lag also need to be taken into account when considering urban out-migration (Table 3). Theoretically, and in line with the findings of the previous section, a growth in public expenditures should reinforce urban attractiveness and therefore reduce urban-to-rural migration. Here, empirical findings show this relationship is true only on the long-term (a mean growth of at least three years). At last, effects of declining expenditures on urban out-migration are totally in line with expectations: as a matter of fact, diminishing the urban retention power, they always augment the risk for an urbanite to move to a village.

Finally, it seems that decreasing public expenditures systematically favour movements between urban and rural areas, whatever their direction, just as it was the case about periods of economic decline. Periods of expenditures growth have more nuanced effects on migration: on the short run, they encourage movements in both directions and, on the long run, they deter them.

Conclusion

The objectives of this article were 1) to show the emergence of new migratory trends in West Africa, especially in Burkina Faso and Côte d'Ivoire, and 2) to explain them by searching the effects of macro-economic variables on the risks of moving from an area (urban or rural) to the other. What are the main findings?

There is, firstly, a methodological interest in matter of migration history. Due to problems of conservation, African old data sources can usually not be used very long after their collect. To draw the evolution of migration flows, we are therefore forced to use published results. Unfortunately, results are hardly ever comparable from a source to another. In these circumstances, it is very hard to have a good insight on how rural-to-urban migration and its counter-stream have evolved. Besides the use of estimations and projections on urban population to infer results on migration have often been misleading. In this context, national longitudinal data offer a real alternative to reconstitute domestic migration histories. The results are quite encouraging since they converge with the few indications given by old sources and with the trends recently brought to the fore by comparative studies on the contribution of migration to urban growth in Africa.

These results may nevertheless seem surprising since they belie the stereotype of African migrants rushing from rural areas to towns and cities. In Côte d'Ivoire as well as in Burkina Faso, the share of migration in urban growth has become less and less important through the decades. On one hand, urban out-migration has progressed and been transformed: it used to be a movement of old people; youth now forms the bulk of the

flow. On the other hand, rural out-migration abated in the 1980s. Beyond similar trends, it remains that a migratory reversal occurred in Côte d'Ivoire but not in Burkina Faso. How explain this difference? No steady explanation can be provided here, but a few assumptions can be drawn. It could have something to do with the attractiveness of rural areas: in Côte d'Ivoire, the countryside is undoubtedly better equipped in services and infrastructures and it offers better economic opportunities, especially in the forest areas where cocoa and coffee can grow up. Above all, the Ivorian turnaround could be due to the specificities of the national economic context: since the late 1970s, the model development of Côte d'Ivoire has had to face a real collapse. At the same time, Burkina Faso had modest economic results but it was still following an economic growth trend.

The reference to the economic context is, in the literature, a pervasive explanation for the renewal of migration trends between rural and urban areas. The slowing down of rural out-migration and the surge of urban out-migration are supposed to be linked with recessive economies, with narrowing rural-urban gap in terms of earnings and public investments, and eventually with structural adjustments that caused considerable social and economic stress to urban residents. These are credible assumptions. But the impacts of macro-economic variables on national migration flows have gone largely uninvestigated. The results presented here are a preliminary work on this issue. More appropriate data could lead to more substantial and less puzzling results. However, to date, it seems that the economic recession is not sufficient to explain the renewal of domestic migrations since it boosts movements in both directions (rural-to-urban as well as urban-to-rural).

If not totally linked to the economic conjuncture, the migratory renewal could also result from a structural evolution. Such an interpretation is enhanced by the long-term progress of urban out-migration in Côte d'Ivoire, which does not coincide with economic fluctuations. All in all, the diminishing urban growth in West Africa could eventually reflect the fact that these countries remain structurally dependant on agricultural economies. If the historical relationship between urbanization and development is true, current trends may be of ill omen for West Africa, that could remain marginal in a predominantly urbanized world.

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Table 1. Description of the samples

	Burkina Faso (EMIUB, 2000)		Côte d'Ivoire (EIMU, 1993)	
Gender	Urban dataset	Rural dataset	Urban dataset	Rural dataset
Males	2,236	3,034	11,132	8,734
Females	2,325	3,374	10,398	8,462

Table 2. Effects (odds ratio) of macro-economic variables on rural out-migration in Côte d'Ivoire

		Per capita calorie intake (PC-CI) 1966-1989	Agricultural production per agricultural worker (AP-PAW) 1966-1989	Public expenditures 1977-1989
AVR (annual variation rate)	negative	0.96	0.80^{**}	1.26^{***}
	positive	1.09^{+}	0.91^{*}	1.13^{+}
AVR mean of the 2 previous years	negative	1.09	0.81^{**}	1.60^{***}
	positive	1.09	0.92^{*}	1.47^{***}
AVR mean of the 3 previous years	negative	1.15^{**}	1.33^{**}	1.21^{**}
	positive	1.10^{+}	1.10^{*}	0.87^{+}
AVR mean of the 4 previous years	negative	1.21^{***}	-	1.08
	positive	1.09^{+}	0.90^{**}	0.68^{***}
AVR mean of the 5 previous years	negative	1.19^{**}	-	1.26^{***}
	positive	1.14^{**}	0.82^{+}	1.25^{**}

***: p<0.01; **: p<0.05; *: p<0.1; $^{+}$: p<0.2 (two-tailed tests)

Table 3. Effects (odds ratio) of macro-economic variables on urban out-migration in Côte d'Ivoire

		Per capita calorie intake (PC-CI) 1966-1989	Agricultural production per agricultural worker (AP-PAW) 1966-1989	Public expenditures 1977-1989
AVR (annual variation rate)	negative	1.08	0.84^{+}	1.27^{***}
	positive	0.97	0.76^{***}	1.37^{***}
AVR mean of the 2 previous years	negative	1.16^{*}	1.06	1.43^{***}
	positive	1.06	0.85^{***}	1.42^{***}
AVR mean of the 3 previous years	negative	1.14^{*}	1.33^{**}	1.03
	positive	1.04	1.03	0.69^{***}
AVR mean of the 4 previous years	negative	1.23^{***}	-	1.04
	positive	1.02	0.87^{**}	0.48^{***}
AVR mean of the 5 previous years	negative	1.23^{***}	-	1.21^{**}
	positive	1.04	0.72^{***}	0.87^{+}

***: p<0.01; **: p<0.05; *: p<0.1; $^{+}$: p<0.2 (two-tailed tests)

Table 4. Effects (odds ratio) of macro-economic variables on rural out-migration in Burkina Faso

		Per capita calorie intake (PC-CI) 1967-1991	Agricultural production per agricultural worker (AP-PAW) 1967-1992	Terms of trade 1966-1996
AVR (annual variation rate)	negative	0.88	1.08	0.81*
	positive	0.99	1.27***	0.94
AVR mean of the 2 previous years	negative	1.20	0.88	1.06
	positive	1.27**	1.14	0.83
AVR mean of the 3 previous years	negative	1.26**	1.42***	0.97
	positive	1.02	1.14	0.95
AVR mean of the 4 previous years	negative	1.52+	1.24	0.99
	positive	0.96	1.32	0.99
AVR mean of the 5 previous years	negative	0.86	1.62**	1.09
	positive	1.13	1.05	1.09

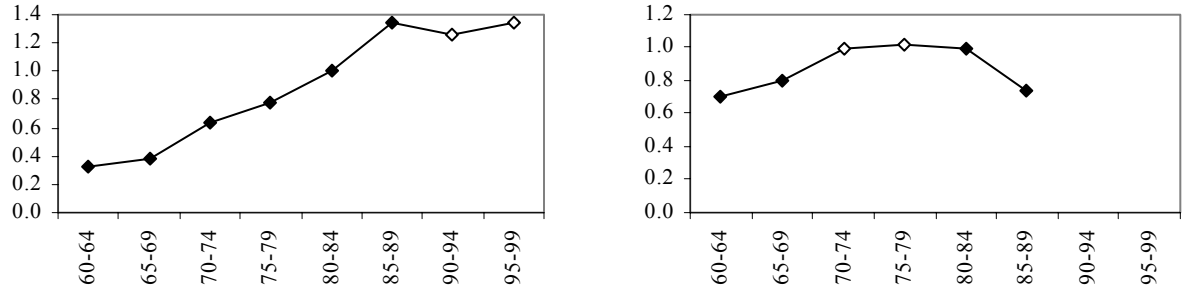
***: p<0.01; **: p<0.05; *: p<0.1; +: p<0.2 (two-tailed tests)

Table 5. Effects (odds ratio) of macro-economic variables on urban out-migration in Burkina Faso

		Per capita calorie intake (PC-CI) 1967-1991	Agricultural production per agricultural worker (AP-PAW) 1967-1992	Terms of trade 1966-1996
AVR (annual variation rate)	negative	0.71*	1.06	0.85
	positive	0.67**	1.22	0.86
AVR mean of the 2 previous years	negative	1.20	0.55+	0.91
	positive	1.10	1.04	1.14
AVR mean of the 3 previous years	negative	1.11	1.27	0.77
	positive	1.92**	1.34+	0.84
AVR mean of the 4 previous years	negative	1.52*	0.42**	0.77
	positive	0.65*	0.73+	1.21
AVR mean of the 5 previous years	negative	0.74	0.75	1.04
	positive	0.83+	1.04	1.11

***: p<0.01; **: p<0.05; *: p<0.1; +: p<0.2 (two-tailed tests)

Figure 1. Evolution of the risk (odds ratio) of rural out-migration for a rural dweller



NB : White symbols indicate non-significant values. 1980-84 is the reference period.

Figure 2. Rural out-migration rates (% per year) according to the period and the age (males and females)

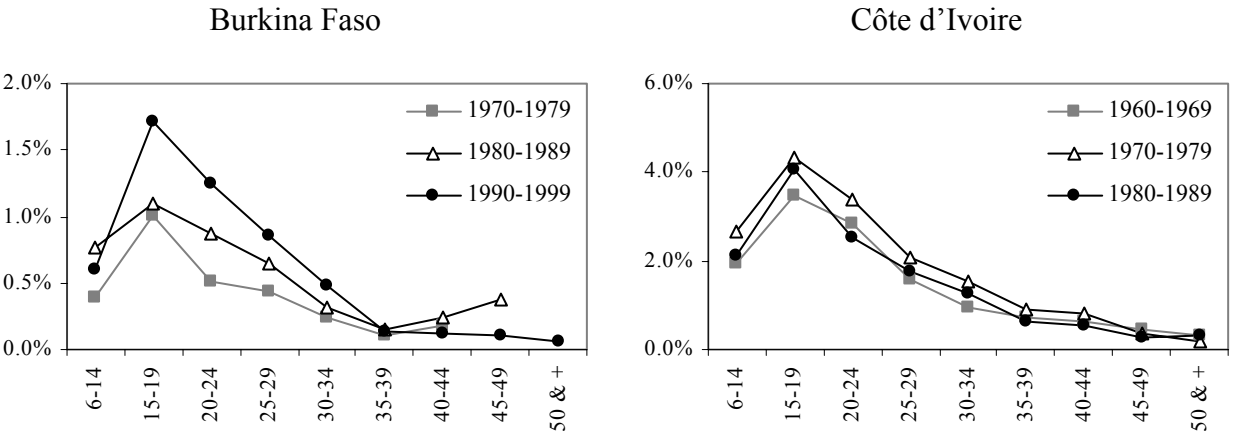


Figure 3. Rural out-migration rates (% per year) according to the period and the age (males)

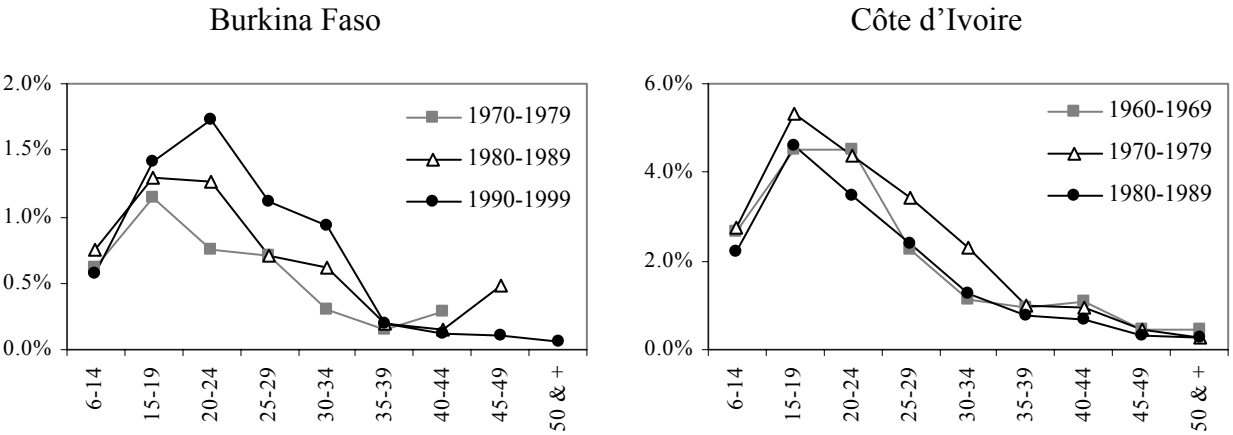
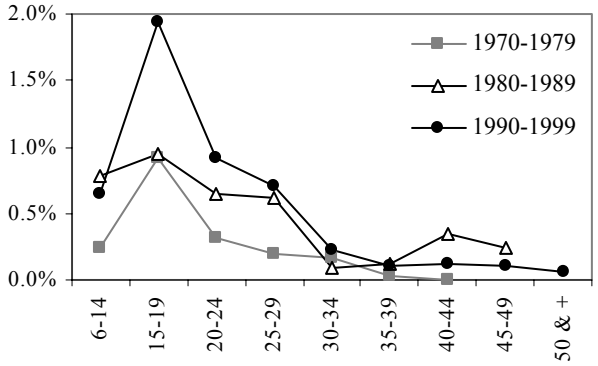


Figure 4. Rural out-migration rates (% per year) according to the period and the age (females)

Burkina Faso



Côte d'Ivoire

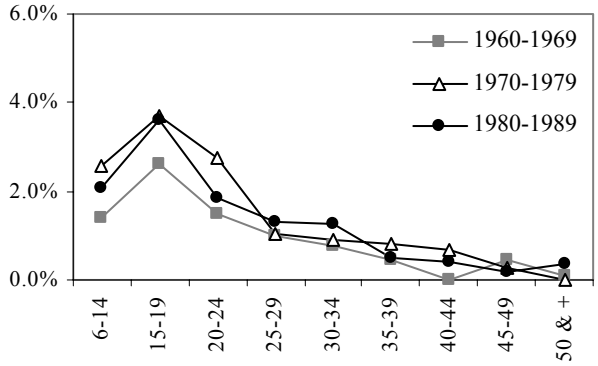
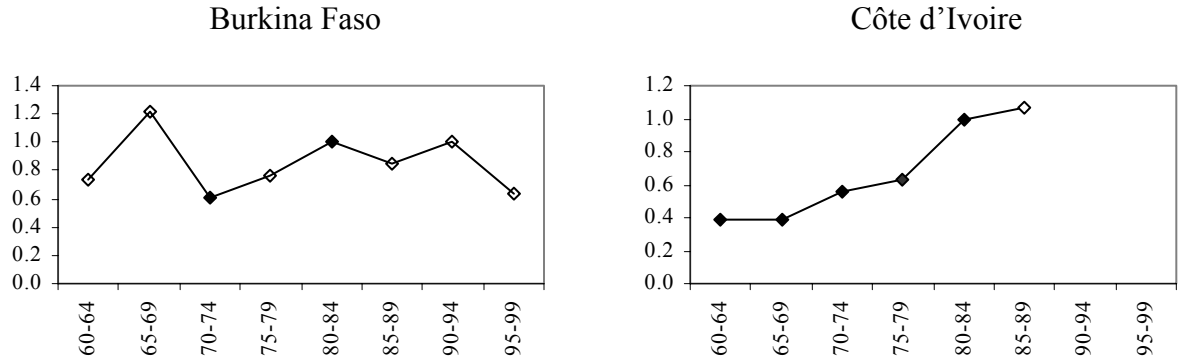


Figure 5. Evolution of the risk (odds ratio) of urban out-migration for an urban dweller



NB : White symbols indicate non-significant values. 1980-84 is the reference period.

Figure 6. Urban out-migration rates (% per year) according to the period and the age (males and females)

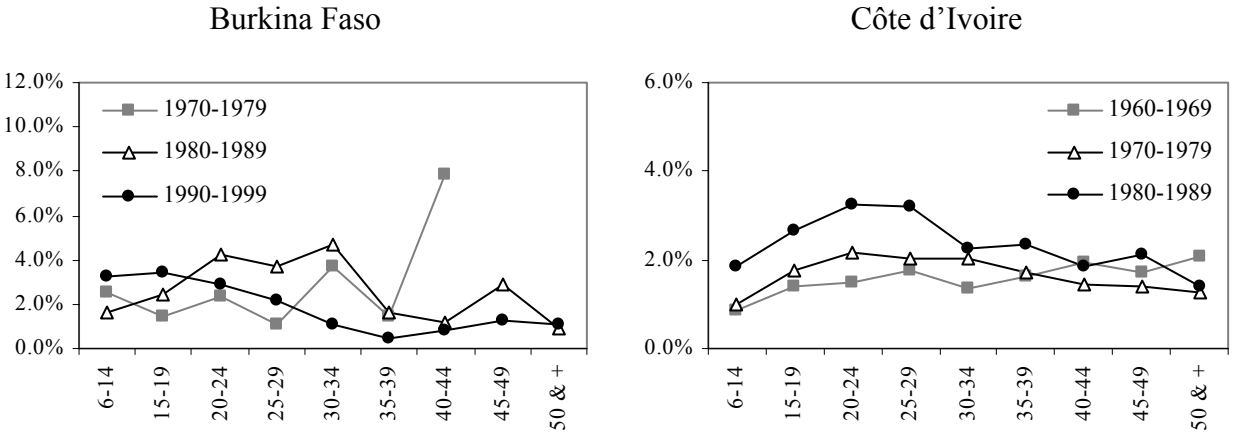


Figure 7. Urban out-migration rates (% per year) according to the period and the age (males)

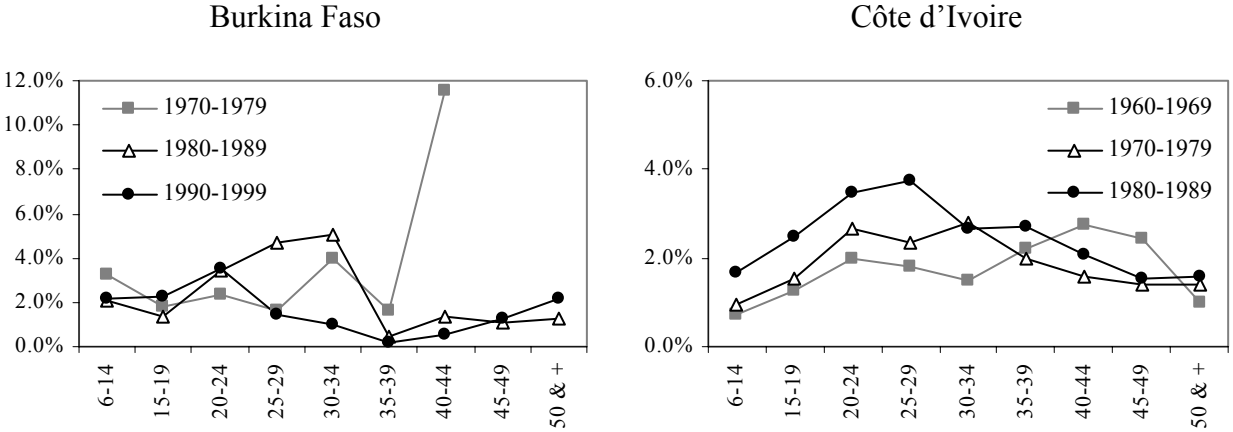


Figure 8. Urban out-migration rates (% per year) according to the period and the age (females)

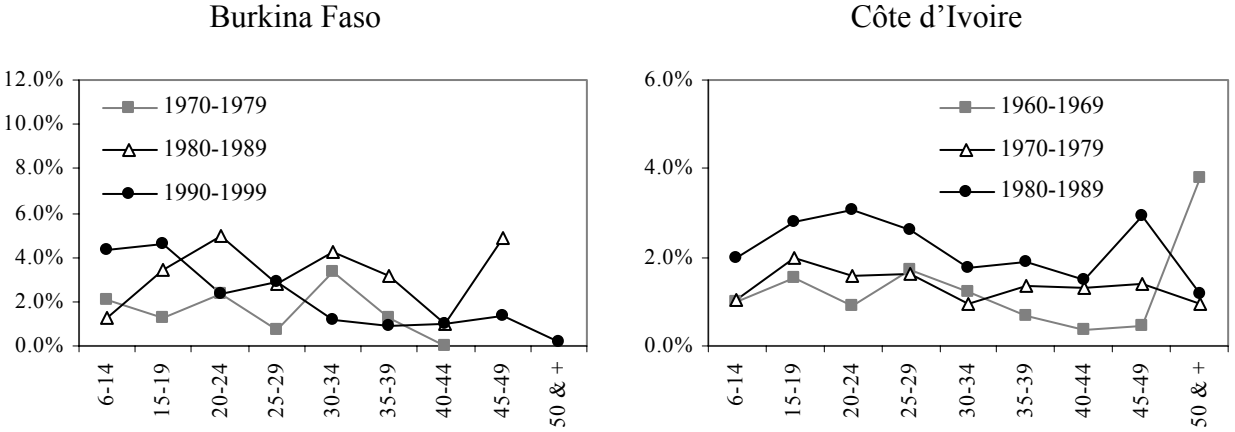
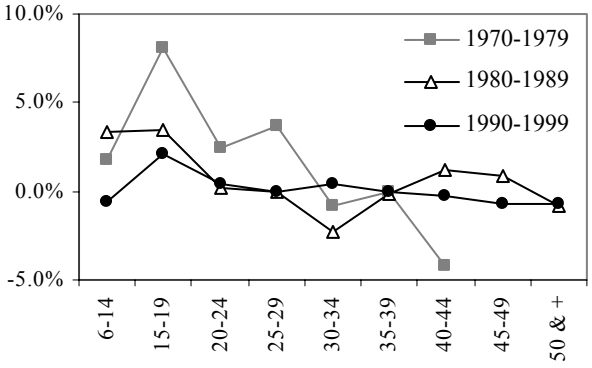


Figure 9. Net migration rates (% per year) of urban areas according to the period and the age (males and females)

Burkina Faso



Côte d'Ivoire

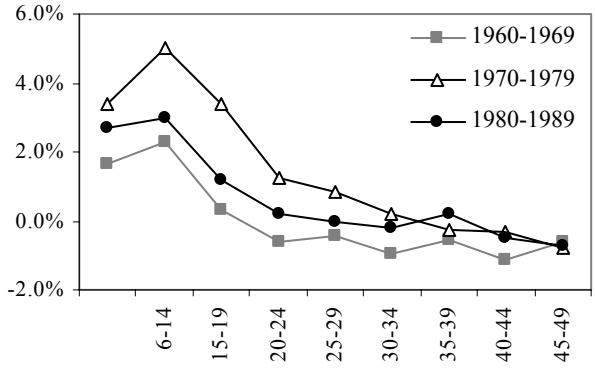
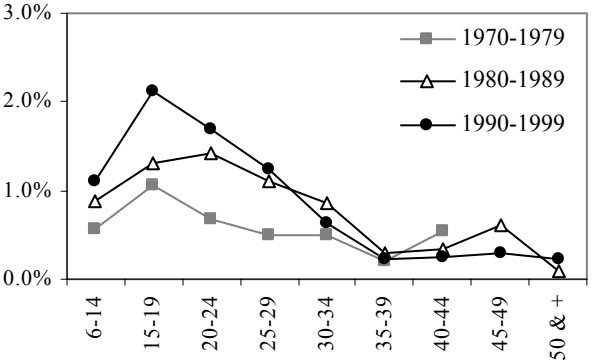


Figure 10. National relative intensity rates of mobility (% per year) according to the period and the age (males and females)

Burkina Faso



Côte d'Ivoire

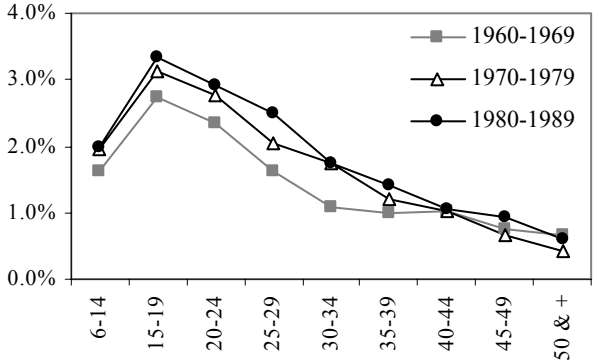
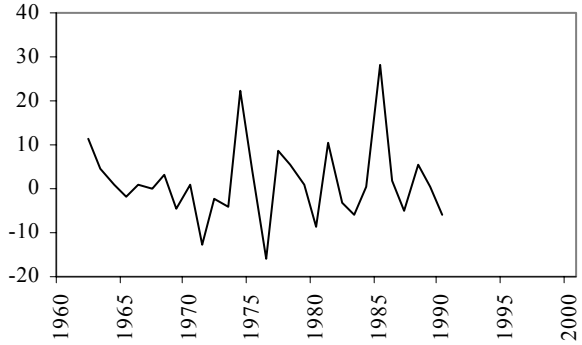


Figure 11. Annual variation rates of the per capita calorie intake (% per year)

Burkina Faso



Côte d'Ivoire

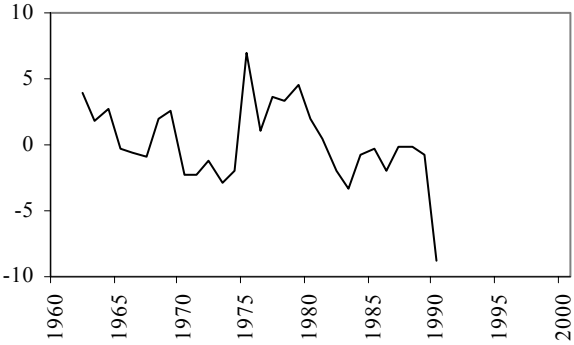
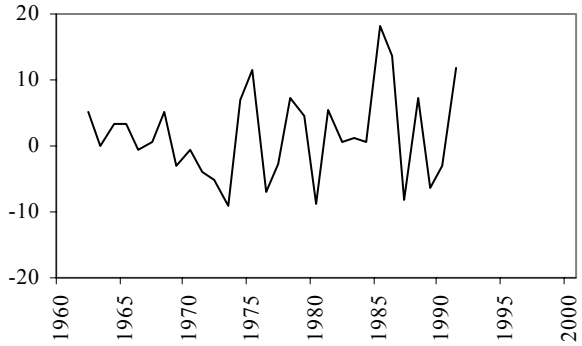


Figure 12. Annual variation rates of the agricultural production per agricultural worker (% per year)

Burkina Faso



Côte d'Ivoire

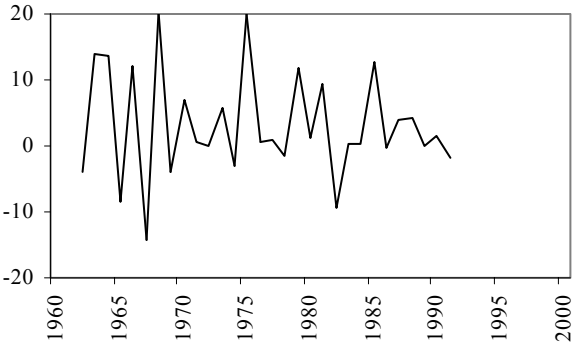
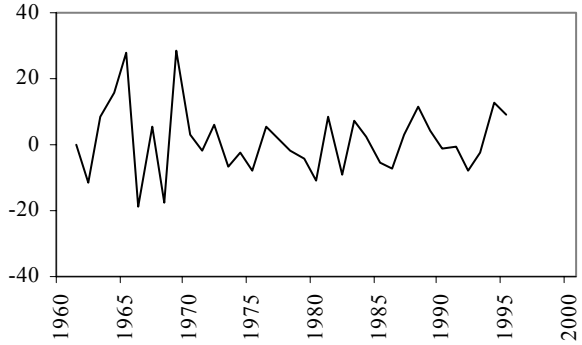


Figure 13. Annual variation rates of the public expenditures proxies (% per year)

Burkina Faso
(Terms of trade)



Côte d'Ivoire
(Public expenditures)