Urban Out-migration, Poverty and Structural Adjustment in Burkina Faso: An Event History Analysis (1980-1999)

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Introduction

An emerging trend in sub-Saharan Africa is urban out-migration (Potts, 1995; Beauchemin & Bocquier, 2004). Certainly, this observation does not apply to all countries in the subcontinent, but the fact remains that migration from towns to rural areas has become significant in many countries, to the extent in some cases of becoming the dominant movement. This is the case in Zambia (Potts, 2005) and Côte d'Ivoire (Beauchemin, 2002b). In explaining this trend, a broad consensus can be seen in the literature, blaming reduced economic opportunities in the towns and a rise in urban poverty, against a background of Structural Adjustment Programmes (SAPs). In fact, reducing the inequality between towns and rural areas is one of the aims of the SAPs (Oucho & Gould, 1993; Gubry, Lamlenn et al., 1996; Riddel, 1997; Ohagi & Isiugo-Abanihe, 1998; Cohen, White et al., 2003). The causative processes seem to be working at two levels. At the macro level, the various economic measures accompanying the SAPs are apparently responsible for starting a new migration trend (Guillaumont & Lefort, 1993). Meanwhile, at the micro level, urban out-migration seems to be part of a strategy to adjust to poverty, or simply to survive. The aim of this paper is to look into the evidence for this two-level theory. To do this, use has been made of longitudinal data from the national survey *Dynamique migratoire, insertion urbaine et environnement* [Migration Dynamics, Urban Integration and Environment] (EMIUB) carried out in Burkina Faso in 2000. This paper presents a study, using a event history analysis model, of the determinants of urban out-migration to establish whether: (1) indicators of poverty play a key role in movements of individuals from the towns to rural areas, and (2) application of the SAP in that country has altered the logic of migration. The paper starts by presenting a review of the literature; this first reveals the emergence of urban out-migration as a phenomenon in sub-Saharan Africa and then investigates the relationships between migration, poverty, recession and Structural Adjustment. The second part deals with questions of methods to be used (presenting the sources, specifying the models and examining the variables analysed). The third part then presents the results.

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Review of the literature

The emergence of urban out-migration in sub-Saharan Africa

Sub-Saharan Africa is, still today, the least urbanized region of the world. Starting from very low levels of urbanization in the middle of the 20th century, the countries in that subcontinent experienced record rates of urban growth from the 1950s to the 1980s. Since then, however, the urban population has grown less rapidly, notably because of migration making a smaller contribution to population increase in the towns. Although migration (both actual movement of people and reclassification[2]) accounted for 41% of urban growth in Africa in the 1960s, its contribution was only 25% in the 1980s (Chen, Valente et al., 1998). This finding, established on the basis of a limited number of countries for lack of comprehensive data, is nevertheless consistent with Makannah's analysis (Makannah, 1990) for 14 sub-Saharan countries. Migration's reduced contribution to urban growth results not only from the mechanics of demography (the proportion contributed by natural increase necessarily rising with growth of the urban population); it results from a change in population movements, namely reduced rural out-migration (moving from rural areas to the towns) *and* the emergence of urban out-migration (moving from urban to rural areas).

Basing her research on a fine analysis of censuses in a number of English-speaking African countries in the 1970s and 1980s, Potts (Potts, 1995) showed that there had been a decline in some of the towns in Ghana and Zambia, as result of migration. For French-speaking Africa, analyses by REMUAO (Survey Network for Migration and Urbanization in West Africa) have shown similar trends. In all the countries covered by REMUAO, the group of "secondary towns" lost more migrants than they gained from 1988 to 1992. In addition, in Guinea, Niger and Burkina Faso, rural areas experienced virtually zero growth from migration, suggesting that rural out-migration is not as massive as sometimes suggested or else that urban out-migration has become sufficiently great to offset people leaving the villages (Beauchemin & Bocquier, 2004). It should also be stressed that two sub-Saharan countries – Côte d'Ivoire and Zambia – despite having a reputation for strong urbanization, have seen the proportions of their population in urban areas decline. In Côte d'Ivoire, REMUAO's survey had already shown for 1988-1992 a reversed flow from the towns to rural areas (Beauchemin, 2002b). The 1998 census showed the urban fraction of the population had fallen to 43%, whereas it had reached 46% in 1988 (urban areas being defined as all areas with populations greater than 5 000). In Zambia, the urban proportion, calculated from census data and by using the same definition of urban areas, fell from 39 to 36% between 1990 and 2000 (Potts, 2005).

Burkina Faso does not present as dramatic an illustration of the emergence of urban out-migration as its neighbour, Côte d'Ivoire, or Zambia. However, despite the country's low urban population proportion[3], Burkina Faso does stand out in terms of its change in migration trends since the mid-1980s. This is confirmed by examining the findings from one demographic source after another, even if they are not always in agreement. For example, the power of the country's two large cities to attract migration is no longer as obvious as in the 1970s. The 1985 census showed that the provinces of Ouagadougou and Bobo-Dioulasso had

[2] Reclassification refers to cases of rural areas being redesignated as urban.

[3] A proportion of 20% in the 1996 census, based on the numbers in areas with populations exceeding 10 000.

apparently had a negative migration balance in the year preceding the census[4]. In addition, the growth of secondary towns through migration also seems to have turned down: according to REMUAO, the secondary towns as a whole lost population through movements involving rural areas between 1988 and 1993. This agrees with the 1991 demographic survey, which indicated that the urban populations in a number of Burkina Faso's provinces had fallen since the previous census (in 1985). However, this was not borne out by the 1996 census, which revealed very strong growth of the country's secondary towns (INSD, 2000). Overall, the picture of migration in Burkina Faso in the 1980s and 1990s is somewhat confused, and it is difficult to separate out transitory fluctuations in the trend from possible inconsistencies that cannot be avoided in demographic sources and hence in comparisons between them[5]. It nevertheless emerges from this brief review of sources that urban areas are no longer as attractive as they used to be, and that they can even be repellent. This is, finally, confirmed by a retrospective analysis of the data from the EMIUB, 2000 survey. This shows that (1) the probability of moving from a village to a town began to stagnate in the second half of the 1980s; (2) the probability for a town-dweller of returning to a country area increased somewhat between the 1970s and 1980s; (3) the towns apparently gained virtually no population from migration during the 1990s (Beauchemin, 2005).

Migration, poverty, recession and Structural Adjustment

Most authors who have dealt with the slowdown in urban population growth, the decline in rural out-migration and the emergence of urban out-migration in sub-Saharan Africa have interpreted these new trends as a result of the economic crisis, and even as a consequence of applying the Structural Adjustment Programmes, which would in particular have tended to increase urban poverty.

It can be seen that the recession experienced by African economies is the most widely shared explanation for the emergence of a new migration trend. It brings us back to the common idea that migration is the demographic variable that is most sensitive to changes in the country's economic situation. The link between recession and urban out-migration has already been established in the countries of the North, where a counter-urbanization process was produced at times of great crisis, notably in the 1930s and 1970s (Berry, 1988; Hugo & Bell, 1998). More recently, this link has been invoked in Asia – in relation to both Thailand (Parnwell, 2002) and Indonesia (Sylvey, 2001) – to explain the return of millions of town-dwellers to rural areas following the financial crash in the 1990s. In Africa, this link between economic recession and urban out-migration has been invoked to explain the flow of population out of Accra (Ghana) in the mid-1980s (Simon, 1997), the decline of towns in Zambia's Copperbelt (Potts, 1995; Bruneau, 2002), the negative migration balance in urban areas of Côte d'Ivoire since the mid-1980s (Beauchemin, 2001), and the rapid rise in numbers of people returning to rural areas in Cameroon (Gubry, Lamlenn et al., 1996) and Nigeria (Gugler, 1991).

The underlying causal relationship between deterioration in the economic situation and the emergence of urban out-migration is that the relative advantages of urban areas disappear in times of recession, making comparisons of attractiveness between urban and rural areas swing

[4] This outcome is not shown for the period 1988-1992 covered by the REMUAO surveys, or in subsequent surveys, even though it is obvious that population movements are contributing less and less to the growth of large towns (+++OUGA FOCUS+++). Is this the result of a measurement error or an indication that the negative migration balance of the provinces with large urban populations was a one-off "blip"? It is difficult to know.

[5] The results from REMUAO's survey (1992) and the 1991 demographic survey could be the results of sampling effects (Antoine *et al.*, 1997; INSD, 1994).

away from the former and towards the latter. In fact, in most African countries the economic crisis had different effects depending on which environment you look at (Razafindrakoto & Roubaud, 2001b). A study by the ILO showed that urban incomes fell dramatically in the 1980s, reducing the differentials between towns and rural areas, even sometimes making the rural areas the more attractive (Jamal & Weeks, 1988). The rise in unemployment and fall in urban incomes increased poverty in the towns and caused households to adjust to the new economic circumstances (Moser, 1996; Rakodi and Lloyd-Jones, 2002). Strengthening links between the towns and the country areas is one of the adjustment strategies, and can take the form of out-migration. Some households choose to make use of multi-residence, living partly in a town and partly in a rural area. They thus: (1) reduce expenditure on maintaining the family in an urban environment; (2) diversify their sources of income; (3) minimize the potential economic impact of unemployment and reduced work opportunities, etc. Typically, having a foothold in a village makes it possible for town-dwelling members of the family to obtain food at lower cost (Potts, 1997). More simply, some urban households try to reduce their expenditure by freeing themselves of unproductive members. These can include "unqualified" young people who leave secondary education, in many cases without formal qualifications, and who cannot find employment (Le Pape, 1986), children entrusted to the town-dwellers for educational purposes, and even the town-dwellers' own children, sent to a village for schooling at lower cost (Eloundou-Enyege, 1992; Pilon & Vignikin, 1996; Gado & Guitart, 1996; Guillaume, Fassassi et al., 1997; Beauchemin, 2000). Lastly, some young people who are economically active themselves decide to relocate, when the advantages and living conditions in town do not match, or no longer match, what they hoped for, and may even be below what they could obtain in a rural setting (Beauchemin, 2000).

The deteriorating economic situation is not the only reason for the reduced differentials between towns and rural areas. In many countries, there was a simultaneous application of Structural Adjustment Programmes, one of the aims of which was to reduce the "urban bias" (Lipton, 1977), which was perceived by international institutions as partly responsible for the rural exodus and as a fundamental brake on development. In fact, the aim was achieved: everywhere an SAP was applied, it accelerated closure of the gap between urban and rural living standards. A number of authors have therefore spoken of the SAPs as involving "disguised migration policies" (Antoine, 1991; Guillaumont & Lefort, 1993). Several measures that usually form part of an SAP are, in principle, liable to influence migration flows (Becker, Hamer et al., 1994; Riddel, 1997). (1) The reduction in educational expenditure (as part of the overall reduction in public-sector expenditure) may help limit the rural exodus, as education is known to be a powerful factor underlying the out-migration. (2) The squeezing of public-sector expenditure and the privatization of para-statal companies, leading to redundancies and reduced wages, can reduce the attractiveness of towns, and even precipitate the departure of workers laid off. (3) The liberalization of markets harms import-substitution industries, thus reducing the attractiveness of this essentially urban sector (because of the reduction in the total payroll). (4) Devaluation of the currency favours the regions that produce export goods which, in the African context, are essentially agricultural and mineral products produced in rural areas. (5) Eliminating government subsidies on consumer goods widely bought in towns – and for which the prices increase as a result of the devaluation (as they tend to be imported products) – contribute to reducing the town-dwellers' standard of living, without that of country people being directly affected. (6) The reduction in government expenditure on infrastructure and urban services leads to a deterioration in standards of living in the towns, to the extent that it can no longer be assumed that towns are preferable to rural areas. Going beyond theoretical arguments, several case studies have interpreted the reduced rates of urban growth and the start of a new migration trend as consequences of applying the SAPs (Oucho & Gould, 1993; Potts, 1995; Gubry, Lamlenn et

al., 1996; Ohagi & Isiugo-Abanihe, 1998; Oucho, 1998; Cohen, White et al., 2003)[6]. We should, however, acknowledge that this interpretation relies primarily on observing the coincidence in time between the emergence of a new migration trend and application of the SAPs; no causal relationship has yet been clearly established.

Are there similarly, in Burkina Faso, aspects of the way the economy changed that could explain the slowdown in urban growth and the start of a new migration trend? Although we cannot talk of a collapse in the economy, as happened in the neighbouring country of Côte d'Ivoire, Burkina Faso entered on a period of stagnation in the early 1980s (Chambas, Combes et al., 1999). That decade has come to be seen as a turning point in development of the urban-rural differential. Urban incomes were then four times as high as those in rural areas, but the gap – which until then had grown continuously – began to narrow (Naudet, 1993). This trend continued during the 1990s. A number of studies agree in showing poverty increasing rapidly in urban areas, while it was static in rural areas after the 1994 devaluation (Fofack, Monga et al., 2001; Lachaud, 2003). No doubt this development had some effect on population movements between the towns and rural areas, and it is not unconnected with implementation, from 1991 onwards, of the Structural Adjustment Programme. In fact, application of the SAP damaged urban employment. Wages and recruitment were frozen in the public sector. Privatization and the restructuring of para-statal companies resulted in staff reductions (Diabré, 1998). Meanwhile, the liberalization of markets increased competition in the private sector, harming the import-substitution firms (Diabré, 1998). All these measures contributed to the rise in unemployment and increasing activity in the informal sector of the economy. The developments also led to increased insecurity in the informal sector, which itself was subject to increased competition because of the fall in urban incomes (and hence consumption) and the increasing number of people working in the sector (Charmes, 1996). In this context, it may be imagined that the attractiveness of the urban setting became less certain. As for rural areas, they gained from the devaluation (1994), which encouraged export of the country's agricultural products (Diabré, 1998). It must be emphasized, however, that the Burkina Faso SAP, put together later than those of countries such as Côte d'Ivoire and Zambia, included sectoral programmes with social aims. Education, for example, was not sacrificed: public-sector expenditure in that area, which had been identified as a priority for the country's development, continued to increase, especially in rural areas. From this perspective, and contrary to what was seen in other countries, it is possible that the SAP did not impose a brake on the out-migration of trained young people from rural areas. On the other hand, it may have encouraged teachers to leave for rural areas.

In short, the thing to remember is that Burkina Faso embarked on a new pattern of population movements between the towns and rural areas, even if it did not look like one of the extreme cases of counter-urbanization, such as Zambia or Côte d'Ivoire. While the experience was less brutal than in those countries, the changing economic environment provides a tempting explanation for the emergence of urban out-migration. In particular, the rise in urban poverty could explain why individuals and households chose to relocate to rural areas where – even if living conditions were not necessarily any better – it was at least possible to obtain housing and food at lower cost.

[6] We can, however, mention one exception: Meagher (Meagher, 1997) considers that application of the SAP in northern Nigeria did not encourage the development of return migration, as the urban households were able to resort to other forms of adjustment (notably the development of urban agriculture).

Objectives, method and data

This paper has two objectives: (1) to test the theory that urban out-migration arises essentially as a strategy to adjust to poverty; (2) to find whether applying the Structural Adjustment Programme has changed the situation in relation to urban out-migration by altering its determinants. In order to achieve these objectives, we are presenting a study of factors that can explain urban out-migration during the last 20 years of the 20th century (1980-1999). In this analysis, we are interested especially in the influence of variables that serve as indicators of poverty, and we separate the period preceding application of the SAP (1980-1990) from the subsequent period (1991-1999). We can thus investigate whether implementation of the SAP increased the effect of poverty-related factors in determining urban out-migration.

Source of data, and specification in the models used

This study makes use of the data from the EMIUB survey, using representative sampling of the Burkina Faso population, carried out in 2000 by the University of Ouagadougou's Demography Unit (UERD), the University of Montreal's Demography Department and CERPOD (Poirier, Dabiré et al., 2001). The complete sample included nearly 9 000 people (men and women) aged from 15 to 64 when the survey was carried out. It used a questionnaire covering the respondents' migratory, occupational, marital and reproductive history from the time of their 6th birthdays.

The analysis presented in this paper does not make use of the whole population surveyed by EMIUB. Taking into account the specific features applying to each sex in the context of migration, it did not seen appropriate to merge the two groups into a single population for analysis purposes. As the migration of female members of the society is said to depend to a fair extent on the actions of others, female migration requires specific analysis methods that take into account not only the women's movements but also those of their fathers or husbands, as appropriate. Such analysis is problematical to carry out. Gaël Lejeune (Lejeune & Piché, 2005) has already undertaken such research, and confirms that movements of women in Burkina Faso depend to a great extent on others. In our case, we will confine ourselves to investigating movements of men. In order to study a homogeneous population, we have, moreover, decided to limit the analysis to individuals aged 15 to 44 during the period 1980-1999[7].

The data were analysed by time-series models in discrete time, to estimate the probability of making a first urban out-migration[8]. The results come from logistic regression, taking into account the time exposed to the risk (Allison, 1995). The statistical model is specified as:

$$\log\left(\frac{p_{ti}}{1-p_{ti}}\right) = \alpha_t + \beta'.\mathbf{X}_{\mathbf{ti}}$$

where p_{ti} is the conditional probability that individual i experiences the event (urban out-migration) at time t, given that the event has not yet occurred. α_t is the basic-stay function, i.e. in this case, the period for which the person lived in a town. The "meter" is "reset to zero"

[7] Excluding children, because of lack of data on individuals under the age of 15 at the time of the survey, can also be justified by the fact that movements of children are too specific (their being in the charge of other people, etc.) to be studied in the same way as those of adults. However, children play an important part in the emergence of urban out-migration, and a study should be devoted specifically to them.

[8] It should be stressed that a repetition of the move applies to only 8% of the population.

each time the person changes his place of residence. X_{ti} is a vector expressing individual covariates (see section on presentation of the explanatory variables). Three models, specified in the same terms, are used: one for the whole period 1980-1999, and the other two relating to the periods before and after the introduction of Structural Adjustment (1980-1990 and 1991-1999). All the models use a Huber-White-type variance estimator, in order to take account of the cluster effects associated with the sampling method.

All three models were applied to a single file of quarterly biographical data, where each person's life was divided up into as many three-month periods as occurred within the whole period of interest to us and within the specified age range (15-44). Each quarter in a person's life is represented by a line in the file, and the variables that change over time (marital status, occupation/economic status, age, etc.[9]) may be altered from one line to the next. Using logistic regression, the models examine whether, at any time (i.e. during each quarter), urban out-migration did or did not occur, in relation to certain independent variables discussed below. Urban out-migration is defined as a change of residence, for a period of at least six months, involving moving from an urban to a rural setting. The two environments are defined in terms of a demographic criterion, a location being considered as urban if at the relevant time it had a population of at least 10 000 (Beauchemin, Le Jeune et al., 2002)[10]. Given that we were interested in the probability of people leaving urban areas, the file included only the quarters when people lived in a town. There are a number of ways that the individuals in the survey could come under observation in the file (left cut-off point): (1) any male aged 15 to 44 living in a town at the beginning of the study period, in 1980; (2) when any young male living in a town during the period of interest to us reached his 15th birthday; (3) at the time of moving to a town, in the case of a male in the age range 15-44; (4) when a relevant person's place of residence went from rural to urban status. There are similarly a number of ways in which an individual could be removed from observation (right cut-off point): (1) by leaving the town and going (back) to a village (event studied); (2) by going abroad; (3) by reaching the age of 45; (4) through the end of the period of observation having been reached (at the end of the last quarter of 1999). Specifying those eligible in these terms resulted in the file including the urban residence periods of a total of 1 788 men (with a cumulative 81 408 man-quarters), of whom 199 participated in urban out-migration during the period 1980-1999.

Explanatory variables: presentation, and expected results

The main objective of this study was to find whether urban out-migration was a strategy for town-dwellers to adjust to poverty. In other words, we set out to find whether leaving an urban setting was encouraged by poverty. As a result, one methodological problem was to make this (often vague) concept of poverty operational by defining it in terms of one or more indicators. While there is obviously no single definition of poverty, or even a unifying theoretical "umbrella", there is at least now a consensus that "poverty" is a multi-aspect phenomenon (Razafindrakoto & Roubaud, 2001a). From that starting point, we searched among the variables offered by EMIUB not for a single indicator, but for a set of indicators that would approximate to the idea of poverty[11]. In total, seven variables were chosen,

[9] This actually applies to all the variables except those relating to the individual's origin.

[10] The place of residence is a variable that changes over time. A village which, at a given date, exceeds the threshold population of 10 000 is given the status of "town". Using this definition, the number of towns increased from 31 to 59 between the census of 1985 and that of 1996 (Beauchemin, Le Jeune et al., 2002).

[11] In absolute terms, there is no perfect indicator of poverty. There is even less chance of finding one in a survey not primarily concerned with that concept.

forming an eclectic collection in the sense that they derive from a number of schools of thought regarding poverty. In all cases, they reflect a non-monetary approach to poverty (data on the incomes of individuals or households not actually being available), but they are objective, in that we did not have access to any indicator of how the individuals themselves perceived poverty. We did not construct any variable aimed at establishing a poverty threshold below which an individual would be considered poor. All the indicators chosen varied over time. Poverty is thus a condition that an individual could encounter at any time in his life.

The first two variables derive from an approach to poverty in terms of "living conditions". At the household level, an index of housing discomfort was established, the variable being expressed as a score on a scale from 0 to 8; an increase reflected a deterioration in comfort of the accommodation[12]. This variable gives an approximation to the household's socio-economic level[13], but it is a very imperfect indicator for the situation of individual members of the household – even though our investigations relate to individuals. In fact, the index of housing discomfort does not have the same significance for someone living there free of charge (especially if he is not one of the household's own children) as it does for the person whose accommodation it is, whether the latter is the owner or a tenant. Our analysis therefore had to combine the index of housing discomfort with a variable expressing the person's residence status. In our models, the latter variable indicates whether the person is (1) living with his own parents (or at least one of them), (2) housed by someone else, or (3) himself the owner or tenant. We would expect this variable to have its own effect: the individuals housed by someone else (who is not a parent) are, in principle, in an insecure situation in that it can be seen from the literature that these are the very people that can enable a household to change its size. In difficult times, those designated as "dependent" are asked to leave the household if they do not supplement the household income.

The combined variable reflecting *both* the residence status *and* the housing discomfort index captures, within each category, the effect of living conditions. We would expect them to have no effect with individuals for whom the housing fails to reflect their own socio-economic situation (those who are housed by someone other than their parents). For people in the other categories, however, the higher the housing discomfort index, the more insecure are the housing conditions, and the higher is likely to be the probability that the person will out-migrate.

The next three variables take us back to an approach to poverty in terms of "lack of capabilities". Using this analysis framework, devised by Amartya Sen, the variables that indicate poverty should not be sought in terms of levels of income or of goods possessed, but in terms of the resources that people are able to mobilize in order to realize their aspirations. While the "living conditions" approach stresses the results (the fruit of cumulative income), the approach in terms of "capabilities" gives emphasis to indicators of means. Typical

[12] Examples are walls made of materials other than concrete or stone (i.e. made of a non-hard material), roof made of straw or adobe, dirt floor, no electricity, no running water, no WC or latrine, and no refuse collection.

[13] There is generally a very strong correlation between poverty in living conditions and monetary poverty (Razafindrakoto & Roubaud, 2001a), but it must be emphasised that the quality of housing reflects accumulated wealth and not the current level of income, being the result of a whole history of income in the past (Bollen, Glanville et al., 2002). However, when it comes to infant mortality, fertility or education, the quality of housing emerges as both (1) a good proxy for the level of wealth, and (2) a good predictor of demographic experiences (Montgomery, 2000; Filmer & Pritchett, 2001; Bollen, Glanville et al., 2002).

candidates in this category are education, and social capital or wealth[14]. In order to take account of this approach, we chose three variables from EMIUB: (1) level of education; (2) capabilities for saving; and (3) time spent in the place of residence (one or other of Burkina Faso's towns), which is considered as a proxy for tangible and intangible capital that the person has accumulated there[15]. The longer a person spends in a particular location, the more time he has to consolidate his social network there and build up economic capital in the broad sense of the term. (In the case of shopkeepers, for example, constructing a network of customers can be considered as capital accumulation[16].) We can therefore expect those town-dwellers who, in contrast, have little experience of urban life, and whom we consequently consider to be the poorest, to be very likely to migrate to rural areas. For the other two variables, the results expected are not so clear-cut. We could expect that a low level of education, which is generally accepted to be an indicator of poverty, would encourage urban out-migration. However, a number of recent studies have shown that, at times of crisis, it is, strangely, those young people with most education who are the least successful in obtaining urban employment in sub-Saharan Africa (Antoine, Razafindrakoto et al., 2001; Calvès & Schoumaker, 2004). Those with most education could well thus show a high probability of out-migrating from the towns, as has in fact been observed in Côte d'Ivoire (Beauchemin, 2000). In relation to saving capabilities[17], a number of hypotheses need to be considered. Simply transposing our general theory to this variable would lead us to predict a maximum probability of urban out-migration for those individuals who seem, *a priori*, to be the poorest, that is those who do not have any form of saving available. In fact, however, the out-migration inevitably itself gives rise to costs (at least that of the move, and possibly of settling into the new location); meeting these costs requires means, and these may have been accumulated as savings. It is therefore possible that the poorest individuals, as seen from the perspective of saving, do not in fact have the means to out-migrate.

Two other variables have been considered as potential indicators, if not of poverty then at least of insecurity. One relates to the individual's occupation or economic status and the other to his marital status. The variable relating to economic activity first of all distinguishes between those who were working from those who were not, the latter including pupils and students, those who were economically inactive (whose role was in the home) and the unemployed[18]. The variable distinguishes those who were working into three groups: those working in the informal sector[19], those in the formal sector[20] and unpaid workers (said to be

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[14] It is sometimes difficult in practice to distinguish between what should be considered means and what should count as results. For example, wealth produces incomes that can allow the accumulation of capital. Because of the interlinking of chains of causation, we are dealing as much with means as with results.

[15] In addition, an individual's period of residence in an urban environment represents the "clock" in this model, i.e. the length of time he is exposed to the risk of out-migrating.

[16] DaVanzo (1981) talks about "location-specific capital".

[17] We distinguished three categories: individuals with no form of saving available to them, those who participated in communal saving systems (a tontine or pooled fund), and those who saved in specialist institutions (bank or savings institution).

[18] A person was considered to be unemployed if he said he was seeking work.

[19] A distinction is made between individuals working in the primary sector (essentially agriculture) and those engaged in one of the other sectors. The proportion of people engaged in the primary sector (one-fifth of the sample at the cut-off date, for towns as a whole) can be explained by the fact that the "universe" surveyed included the secondary towns (those with human populations of over 10 000, except the large cities of Bobo Dioulasso and Ouagadougou); in these areas, agriculture can be an important activity (Satterthwaite & Tacoli, 2003). In the country's two large cities, only 3% of the sample were engaged in agriculture at the cut-off date. In

"family help" in most cases). Taking these together, there seem to be a number of categories that, in principle, indicate insecure situations. These are: being unemployed or not being remunerated, and even working in the non-agricultural informal sector[21]. There are similarly certain marital-status categories that suggest insecure situations and could encourage urban out-migration. A number of recent studies on marital status have shown young people experiencing increasing difficulty in attaining marriage, in the sense that they have not got the means necessary to obtain the matrimonial services required. In many African towns, this situation has resulted in delaying the age of marriage and in the development of cohabitation[22]. While these changes no doubt reflect a change in social mores (Thiriat, 1999), they are widely interpreted as a result of the increasingly insecure economic situation of young people (Takouo, 1998; Antoine, Razafindrakoto et al., 2001). In such circumstances, marital status can come to be seen as at least a partial indicator of poverty. The individuals who cohabit, and even those who remain single till relatively late[23], are *a priori* in a socio-economic situation that is less advantageous than being married. We would therefore expect the former to be more likely to out-migrate than is the case with married individuals, and this was in fact observed to happen in Côte d'Ivoire (Beauchemin, 2002a). In the case of those who are unmarried, the hypothesis is strengthened by the fact that, being single, they are logically more free to move.

In addition to the variables associated with poverty, the model includes three collections of control variables: (1) time variables, namely (a) age, which is a determinant much used in analysing population movements, and (b) the period, with a distinction in the first model (covering the whole period 1980-1999) before and after introduction of Structural Adjustment; (2) variables describing the individuals' origins in terms of (a) ethnic group, and (b) first place of residence as a child; (3) variables describing an individual's residential experience according to whether (a) he had ever migrated, at least once, and regardless of the origin and the destination, and (b) he had ever lived in either a secondary town or a large city[24].

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our sample as a whole, half of those working in the non-agricultural informal sector were self-employed and the other half were employees (with 50% of those being paid apprentices).

[20] The supply or receipt of a pay slip by the individual (depending on whether he was an employer or an employee) means that the person can be classed as in the formal (modern) sector of the economy. A distinction is, moreover, made between individuals working in the public sector and those in the private sector.

[21] These are factors that increase the probability of being poor, as shown by quantitative studies carried out into poverty in Burkina Faso (Fofack, Monga et al., 2001; Lachaud, 2003).

[22] This relates to a couple who live together with no marriage ceremony (whether civil, religious or traditional) having taken place.

[23] The "single" category in the model includes those who were unmarried, those who were divorced, and widowers. It should, nevertheless, be stressed that the last two situations: (1) were very few in our sample (13 divorced men and five widowers at the cut-off date); (2) can also encourage urban out-migration (Beauchemin, 2000). Among those who were unmarried, it is useful to distinguish between (1) those for whom this was simply a reflection of being too young for marriage and (2) those who had reached the age where marriage is supposedly the norm. Our analysis therefore distinguishes between single men below and above the age of 30.

[24] Towns as a whole constitute a vast and fairly heterogeneous "universe". While all urban locations are distinguished from rural locations by the presence of non-agricultural activities and by specific types of residence, etc., they differ from each other in terms of the living conditions and economic environment they offer. Above all, Ouagadougou and Bobo-Dioulasso are distinct from the secondary towns in terms of their size, the length of time for which they have been urbanized, and the economic structure, including the relatively plentiful services and facilities of all types. They would have suffered more than most from the economic stagnation and the rise in poverty (Calvès & Schoumaker, 2004).

Results

1980-1999: Is poverty a factor in urban out-migration?

As a first approach, the control variables reveal results more or less in line with what was expected (column 4 of the table). As in most studies, the individuals were less likely to out-migrate the older they were, and if they had not yet experienced such a move. Here, we find again the conventional picture of a migrant, usually described in the African context as young, male and mobile. People's geographical origin was rarely decisive in explaining urban out-migration: this factor played a significant part only for individuals originating from the Sudanese rural area. That region, in the south-west of the country, is the most attractive part. It is the area that has the best rainfall conditions and the greatest economic opportunities (in cotton, sugarcane and plantations of trees producing nuts and fruit, such as cashews and mangoes, etc.). The findings relating to ethnic origin confirm this regional conclusion[25], as the territories of the Bobo, Dagara, Mande, Senufo and Lobi groups (all with a significantly high odds ratio) extend across the south-west. In contrast, the high propensity of the Peuls (whose territory extends across the country's driest regions) to out-migrate *a priori* goes against the idea that the best-endowed regions are better able to attract back their original residents. The tendency to out-migrate can be explained more by experience of migration, which in this ethnic group relates less to permanent establishment than to a temporary stay as part of a logic of constant movement (Hampshire & Randall, 1999; Henry, Schoumaker et al., 2004). What can we say about the variables that serve as indicators of poverty?

First, the living conditions, and in particular those relating to housing, are indeed found to be associated with urban out-migration. Property (which tends to be an indicator of wealth) emerges, in agreement with the results obtained from other sources, as a brake on urban out-migration (Datta, 1995). This finding also applies to tenants. In addition, dependent individuals who lived with their parents seemed not to be any more exposed to urban out-migration than those with whom they lived. Contrasting with the individuals able to house themselves from their own resources and those who were housed by their parents, there were those provided with accommodation by someone other than their mother or father. In principle, these were the poorest as measured by residence status. In 1980-1999, these individuals were almost five times as likely as the others to return to a rural setting. This finding is consistent with the hypothesis that individuals in insecure housing situations (i.e. those without their own accommodation and not having a direct family relationship with the person providing accommodation) were more exposed to urban out-migration than others. In addition, the influence of housing quality was fairly tenuous (the relationship barely being significant) and depended on the person's residence status. It can thus be seen that, with an individual housed by someone who was neither his father nor his mother, the probability of out-migrating decreased with increasing discomfort. In other words, the individuals provided with accommodation were less likely to leave the household, the more modest the accommodation was. On the other hand, for individuals housed by their parents, the probability of out-migrating was greater the greater the index of housing discomfort, that is the poorer the household. This difference according to whether or not the person providing accommodation was a close family member of the person provided with the accommodation could be explained by the fact that individuals who were housed but who were not directly

[25] An individual's ethnicity should not be confused with his geographical origin. (You can be Senufo without ever having lived on Senufo land.) The fact remains that the person's ethnicity serves to indicate the social and family networks on which the individual may be able to draw, to facilitate establishing himself in the new setting when out-migrating (possibility of accommodation, easy access to land, etc.).

related contributed to continuation of the household by bringing it supplementary income, unlike individuals housed by their parents and who were perhaps more likely to be economically inactive. In situations of economic difficulty, it would be easier to send those who were inactive, and more of a burden on the household income, back to the rural environment than those who contributed material assistance. Having said that, as the activity in which the individual was engaged is controlled in this model, this explanation is of little validity, and additional interpretations are needed. All things considered, with regard to living conditions it is the insecure residential status, more than the household's socio-economic level, which emerges as a factor determining urban out-migration for the period 1980-1999 as a whole.

Does "lack of capabilities" have a strong explanatory power for urban out-migration? The answer is "yes" in respect of capital specifically accumulated at the place of residence, as represented by the variable indicating length of stay. Consistently with the hypothesis put forward above, a relationship can be seen between the time spent in a particular location and the probability of participating in urban out-migration. The longer an individual had lived in the place of residence (and thus the higher his accumulated capital), the lower was the probability that he would leave the urban setting. In contrast, the poorest individuals in terms of location-specific capital were indeed those most likely to out-migrate. The findings are less clear for the other two variables relating to "capabilities". Some relationships are revealed by bivariate analysis (the propensity to out-migrate increasing with level of education, confirming the idea that those who are educated are, in times of crisis, the most affected by unemployment; and also the notion that "institutional" migrants out-migrate more than others). However, the relationships disappear, and are even reversed, when multivariate analyses is used. The lack of significant findings can be explained in two ways. First, it may be the result of effects working in opposite directions (and contradictory hypotheses in relation to the variables involved were mentioned above). Second, it could result from the effects of saving – and even more of education – having been swamped by other variables, notably those relating to economic activity (accounting for the relationships disappearing when you move from bivariate analysis to multivariate analysis).

Do the findings relating to the last indicators of insecurity agree better with our central theory? The marital categories indicating an insecure situation (cohabitation and remaining single) do not behave as expected: only the odds ratio relating to cohabitation operates in the direction expected, and even then it is not at all significant. In contrast, the ratios relating to economic activity reveal some of the most significant findings from the model. As expected, the most insecure situations encouraged urban out-migration. The individuals who were not working (pupils and students[26], and the economically inactive) show a very high probability of urban out-migration. The non-significant nature of the "unemployed" category can perhaps be explained by the small number of people in that category. In addition, the individuals who were working without remuneration also show a significantly high probability of urban out-migration. Lastly, among the individuals who had an occupation, those who were engaged in the informal sector do not show a much greater probability than those working in the private sector of the modern economy. In contrast, civil servants (those in the public sector of the modern economy) had a high propensity to out-migrate to rural areas. Obviously, this did not reflect an insecure situation (the public sector being protected from redundancies and being better-paid than the alternatives, despite the freeze on wages). It resulted from a policy

[26] The individuals who said they were pupils or students at the time when they out-migrated can be considered as not having found an occupational opportunity in the urban setting, and at risk of being sent away by the households that were seeking to reduce their urban expenditure.

introduced in the mid-1980s, of assigning civil servants to particular locations out of a concern to promote decentralization (Ouedraogo, 1993).

Finally, for the whole period 1980-1999, can we conclude that urban out-migration was associated with indicators of poverty? From all the variables that might serve as poverty indicators, two in particular emerge: residence status and type of economic activity. Effects produced by the other variables disappear in multivariate analysis, probably through being swamped by the two factors mentioned above. In both cases, there was a situation of dependence that encouraged out-migration to rural areas: economic dependence for those without employment and/or no income; residential dependence for those housed by someone else who was not the individual's father or mother. Did application of the Structural Adjustment Programme reinforce this situation?

Did Structural Adjustment affect urban out-migration?

Examination of the period variable in the first model (1980-1999) shows that the years when the Structural Adjustment Programme was being applied (1991-1999) did not have a separate effect on town-dwellers' probability of urban out-migration. However, the absence of a clear effect may be the result of the SAP's effect having been swamped by other variables, which were themselves affected by the SAP. The possible effect of the SAP is therefore to be sought later, when examining the variation from one period to another in effects of the independent variables, by comparing models that are exactly the same but apply separately to the periods 1980-1990 and 1991-1999. Such analysis is based on the hypothesis that the SAP was the only factor that could have significantly influenced the determinants of urban out-migration between those two periods. This limitation implies the need for a certain amount of care in analysing the results.

It is clear that living conditions played a greater part in determining town-dwellers' out-migration to rural areas during the adjustment period. While insecure residential status had a barely significant effect in 1980-1990, it was a major factor underlying out-migration in 1991-1999. The individuals housed by people other than their parents were nearly five times as likely to leave the urban environment as those living with their parents. The household's socio-economic level (approximated by the housing discomfort index) also clearly played a more significant part during the adjustment period. Whether the individuals were property-owners or tenants on the one hand, or sons housed by their parents on the other, the propensity to out-migrate increased with the household's poverty (probability increased by 20-25% for each point on the discomfort scale). It is therefore exactly as if application of the SAP increased recourse to urban out-migration as a way for households to adjust to poverty.

Other indicators of poverty emerged very clearly during the adjustment period. One example is those who remained single till relatively late; these were young men who had not attained economic and residential independence allowing them to construct a family. While this status can be seen to have had no effect in 1980-1990 (odds ratio of 1 and, moreover, not significant), it became a major determinant of urban out-migration during the adjustment period. The same is true of the length of stay variable, interpreted as a proxy for tangible and intangible capital accumulated specifically at the place of residence. The results for this variable were not significant during 1980-1990, but were during the following decade, when the less time an individual had spent in the location where he resided, the less capital he had accumulated, and the greater the probability of his out-migrating to rural areas. It is as if the possession of location-specific capital became especially relevant during the adjustment period.

The other variables relating to "capabilities" (education and saving) had neither more nor less effect in 1991-1999 than in 1980-1990. As for the results relating to economic activity, curiously these indicate that insecure situations (being economically inactive and unremunerated) acted as a stronger incentive to urban out-migration in the 1980s than in the adjustment decade. In addition, we can see an increasing probability of civil servants out-migrating. While this does not seem to be a reflection of poverty, it can nevertheless be interpreted as a result of the SAP's social dimension, which put the emphasis on education in rural settings and resulted in previously town-dwelling teachers being sent out to the villages.

Another effect of the SAP can be seen in the growing difference in probability of urban out-migration depending on the individual's origin. While the place of residence as a young child played no part during 1980-1990 (no significant finding and no outstanding value), it stands out as a determining factor during the adjustment period. Individuals originating in the south-west (the Sudanese rural area), which is the most prosperous agricultural region, were three times as likely as those originating from one of the two large cities to out-migrate to a rural setting. As observed for the whole period 1980-1999, this finding is consistent with the higher propensity of the Bobo, Dagara and other groups from the south-west to migrate. The emergence of this region (as the individuals' region of origin) as a determinant of urban out-migration (and consequently as a destination) probably results from devaluation of the CFA franc. Following introduction of the SAP, this particularly enhanced the value of agricultural-export regions, and the south-west was in the forefront. It can in addition be seen that, for the Peuls, the probability of urban out-migration was noticeably lower in the more-recent period. This change probably relates less to application of the SAP than to climate change, change of location for the Peuls being to a great extent associated with periods of drought (Henry, Schoumaker et al., 2004). That ethnic group's stronger propensity to out-migrate to rural areas in the 1980s actually corresponds to the return movements that followed their temporary move to the towns in the middle of the decade, when there was a lack of rainfall.

All in all, can we consider application of the Structural Adjustment Programme to have encouraged recourse to urban out-migration as a strategy for urban households to deal with insecurity? We can certainly see clear differences between the periods before and after introduction of the SAP, and the most striking feature is the emergence of variables indicating poverty in the period 1991-1999. In many cases, these variables became highly significant, and show odds ratios consistent with the central theory that urban out-migration was a strategy for responding to poverty. This is true in particular of the variables relating to marital status, duration of residence (locally accumulated capital) and living conditions. In particular, it is striking that the households' socio-economic level (approximated by the housing discomfort index) – which played hardly any part in the 1980s – became important during the adjustment period. In the case of the finding for property-owners and tenants, it can be seen that from 1991 onwards, urban out-migration became a possible response to insecurity for one layer (the most modest) of the more comfortably off (those whose means did at least give them access to their own housing). In addition, the findings show that the SAP encouraged urban out-migration not only negatively (with an increasingly insecure existence in the urban environment), but also by enhancing the value of rural areas, as evidenced by the increased chance of civil servants or individuals who had originated in the most prosperous rural regions out-migrating.

Conclusions

There are two ways to investigate to what extent urban out-migration depends on the economic situation and, more specifically, is a practice resulting from Structural Adjustment. The first tends to be qualitative, involving the study over time of changes in urban out-migration, in order to look for any sudden changes connected with the economic situation, or even implementation of the SAPs. Such an approach, carried out first in Côte d'Ivoire alone, showed that urban out-migration had increased spectacularly in times of crisis and adjustment, but that the out-migration resulted from a development that had begun before the economic recession (Beauchemin, 2000). Nor did the study of migratory trends in Burkina Faso produce a perfectly clear-cut conclusion. While the probability of engaging in urban out-migration increased between the 1970s and the 1980s, it did not subsequently change significantly, even though the country was subjected to adjustment measures (Beauchemin, 2005).

The second possibility involves using the approach adopted in this paper, and looking into the determinants of urban out-migration to find how far they can be considered a strategy to respond to poverty, which was increased in towns by a deteriorating economic situation and application of the SAPs. Up to now, this presumed link between urban out-migration, poverty, economic crisis and adjustment – although widely accepted in the literature as a working hypothesis – had never been demonstrated. By using retrospective data from a national survey on population movements, we have been able to contribute some original findings in this area. Measuring poverty is notorious for presenting methodological problems. The independent variables that we chose to represent poverty are therefore not entirely satisfactory, but they enable an approach to be made to investigating the existence of a possible relationship between poverty and urban out-migration. In fact, the variables that proved to have an influence in explaining urban out-migration from 1980 to 1999 are those providing evidence that the population movements were influenced by residential or economic factors, which in turn are indicators of poverty. The implementation of Structural Adjustment was itself not without effect on the determinants of urban out-migration. The SAP modified the variables indicating urban poverty (some of them decreasing while others, notably those relating to living conditions, increased). Implementation of the SAP also enhanced the value of rural areas. The theory that urban out-migration is a strategy for responding to poverty is therefore incomplete. The out-migration resulted not only from a deterioration in urban economic conditions, but also from improvements in some aspects of rural life (notably greater provision of educational services and higher prices for some agricultural products)[27].

[27] We should, nevertheless, not forget that rural poverty – while it increased less quickly than urban poverty – also grew during the period of interest (Lachaud, 2003).

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Sample Description and Determinants of Urban Out-migration in Burkina-Faso
Males aged 15-44 (1980-1999)

		SAMPLE 1980-1990		ODDS RATIOS		
		Weighted Percentage [1]	Non Weighted Number [1]	1980-1999	1980-1990	1991-1999
Time Variables	*Age*					
	15-19	26.30	372	1.00 [ref]	1.00 [ref]	1.00 [ref]
	20-24	25.40	371	1.35 [+]	1.74 **	1.12
	25-29	16.13	386	1.07	0.97	1.19
	30-34	14.32	271	0.92	1.18	0.65
	35-39	8.60	212	0.27 **	0.41 **	0.16 **
	40-44	9.25	176	0.43 [+]	0.31 [+]	0.46
	Period					
	1980-1990	6.34	104	1.00 [ref]	-	-
	1991-1999	93.66	1 684	1.01	-	-
Origin variables	*Place of origin*					
	A city (Ouaga or Bobo)	19.08	565	1.00 [ref]	1.00 [ref]	1.00 [ref]
	A town	7.07	218	0.87	0.99	0.73
	Soudanese village	11.73	200	2.00 **	1.38	3.07 ***
	Soudano-Sahelian village	48.19	449	1.25	1.15	1.41
	Sahelian village	7.57	179	0.95	0.90	0.94
	Another country	6.36	177	0.73	0.71	0.79
	Ethnic group					
	Mossi	63.97	1 040	1.00 [ref]	1.00 [ref]	1.00 [ref]
	Bobo, Dagara, Mandingue, Senoufo, Lobi	15.99	397	2.17 ***	1.50	3.28 ***
	Peuls	7.43	58	3.19 ***	4.06 ***	2.78 *
	Gourounsi, Bissa	7.57	128	1.88 *	1.25	2.69 *
	Gourmantche	1.71	35	1.88	1.88	1.91
	Autres	3.32	130	1.36	1.75	0.89
Residential Experience	*Place of residence*					
	A city (Ouaga or Bobo)	51.87	1 370	1.00 [ref]	1.00 [ref]	1.00 [ref]
	A town	48.13	418	1.15	1.39	0.96
	Migratory experience (has ever migrated)					
	no	34.44	558	1.00 [ref]	1.00 [ref]	1.00 [ref]
	yes	65.56	123	1.93 ***	3.03 ***	1.45
Living Conditions	*Housing status*					
	Renter or owner	26.23	639	1.00 [ref]	1.00 [ref]	1.00 [ref]
	Sheltered by a parent	49.42	670	1.19	0.81	2.24
	Sheltered by s.o. else	24.35	479	4.65 ***	2.57 [+]	10.54 ***
	Housing discomfort indicator for…					
	s.o. who is sheletered by a parent	6,29[m]	4,80[m]	1.15 [+]	1.09	1.20 *
	s.o. who is sheletered by s.o. else	4,27[m]	4,28[m]	0.92 [+]	0.86 [+]	0.96
	s.o. who rents / is owner	5,67[m]	4,59[m]	1.07	0.93	1.25 *
Capabilities	*Stay duration in urban area (proxy for local specific capital)*					
	0-4 ans	19.44	244	1.00 [ref]	1.00 [ref]	1.00 [ref]
	5-9 ans	36.96	292	0.75 [+]	0.84	0.63 *
	10-14 ans	21.40	463	0.58 **	0.65	0.50 ***
	15 ans et +	22.19	789	0.55 **	0.65	0.49 **
	Education level (years at school)					
	no education	50.50	516	1.00 [ref]	1.00 [ref]	1.00 [ref]
	less than 7 years	12.53	290	1.33	1.33	1.24
	7 years or more	36.96	982	1.22	1.23	1.15
	Savings					
	no savings	72.59	1 071	1.00 [ref]	1.00 [ref]	1.00 [ref]
	rotating credit	13.40	313	1.47 [+]	1.33	1.65 [+]
	savings in a bank	14.01	404	0.93	0.90	1.09
Other Indicators	*Type of activity*					
	Agriculture	21.28	108	1.98 [+]	2.66 *	1.77
	Informal sector	26.59	839	1.18	1.55	0.99
	Modern private sector	4.86	142	1.00 [ref]	1.00 [ref]	1.00 [ref]
	Modern public sector	6.47	155	4.75 ***	4.80 ***	5.58 ***
	travail non payé	24.81	174	2.38 **	2.69 [+]	2.42 [+]
	Unemployed	2.56	56	1.86	1.34	2.18
	Non working	1.17	16	9.09 ***	12.73 ***	7.92 ***
	Student	12.26	298	2.63 **	4.35 ***	1.88
	Matrimonial Status					
	Married	41.38	699	1.00 [ref]	1.00 [ref]	1.00 [ref]
	Consensual Union	4.01	83	1.40	1.11	1.76
	Single (ages 15-29)	51.97	920	0.98	0.65	1.52
	Single (aged 30-45)	2.64	86	1.00	0.26	2.65 **
	Total	100.00	1 788	199 [n]	96 [n]	103 [n]

[ref] : reference categorie ; [***] : p<0,01; [**] : p<0,05 ; [*] : p<0,10 ; [+] : p<0,20.
[1] : computed at the time of censoring.
[m] : mean value
[n] : number of events (non weighted).