POPULATION ASSOCIATION OF AMERICA 2009 ANNUAL MEETING

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Proposal submitted:

ORPHANS' MOBILITY AND SCHOOLING IN BURKINA FASO: AN EVENT HISTORY ANALYSIS[1]

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Background

Settings

In recent years, there has been increasing interest for the well-being of orphans in sub-Saharan Africa, as the AIDS pandemic dramatically raises the numbers of orphans in many parts of the continent. Recent Demographic and Health Surveys (DHS) have revealed that the highest levels of orphanhood in Africa now occur in Uganda, Malawi, Mozambique, Zambia, and Zimbabwe, which are all located in Eastern or Southern Africa, the most afflicted areas of the continent in terms of HIV (See Bicego *et al.* 2003; Case *et*

[1] This study is part of research funded by the Social Sciences and Humanities Research Council of Canada untitled "Le devenir des enfants orphelins dans les sociétés africaines" ["Orphans' Wellbeing in African Societies"]. Period 2005-2008. Principal Investigator: Prof. Richard Marcoux, Université Laval. Collaborators: Prof. Tukufu Zuberi, University of Pennsylvania, and Dr. Jean-François Kobiané, University of Ouagadougou.

al. 2004). Indeed, most of the current literature on the orphan topic is devoted to these countries. Far less is known about the living conditions of orphans in other parts of the continent, including West Africa Sahelian countries such as Burkina Faso. Notwithstanding the lower prevalence of HIV in these countries, they are characterized by high levels of adult mortality.

Burkina Faso is one of the poorest countries in the world. Its economy is largely subsistence, and is based on agriculture, which employs nearly 90 percent of the active population. Agricultural techniques are traditional and labor intensive. Epidemics are prevalent and infant mortality is among the highest in the continent. Unemployment is growing, especially in cities. In such a context, education is critically important as a prerequisite to meeting these challenges. The objective of *Education for All* (EFA) is therefore one of Burkina Faso's priorities as stated in the Ten-Year Plan for Basic Education Development (PDDEB), which formally started in 2002, and the Poverty Reduction Strategy Paper (PRSP), adopted in 2000. This improvement of access to school requires knowledge about the factors or the determinants of children's schooling. Adult mortality is one of these factors that could impede children's schooling and therefore their transition to adulthood.

Theoretical focus

There are policy implications to our understanding of the drop-out risks facing orphans. At the opposite of western industrialized countries, where there exist orphanages institutions taking care of orphans, in sub-Saharan Africa, the support to orphans is generally ensured by the extended family system and, at a few extent, to confessional institutions and some NGOs interested in that issue. As stated by Case *et al.* (2004:483), "if extended families insure each other, then governmental policies may not need to target orphans specifically…. On the other hand, if holding all else equal, orphans are at risk, then governments may be well advised to target orphans specifically when they design policies to improve such outcomes as school enrollment."

Results from the increasing studies on the orphan topic reveal no uniform pattern linking parental death and children's schooling. One of the main conclusions of a comparative study including 28 developing countries is that "… the extent to which orphans are under-enrolled relative to other children is country-specific, at least in part because the correlation between orphan status and poverty is not consistent across countries. Indeed, it cannot be assumed that enrollment differentials exist between orphans and non-orphans or, when they exist, why." (Ainsworth and Filmer, 2002:27).

Some research reveals that parental death has a negative impact on children's school attendance and that double orphans are those who suffer more (Wakam 2002; Ainsworth and Filmer 2002; Marcoux *et al.* 2003; Nyangara 2004; Kobiané *et al.* 2005). Most of theses studies also found that maternal death is more detrimental to children's schooling than paternal death. Case *et al.* (2004) offer three interpretations for the lower school enrollment for orphans relative to nonorphans. First, they noted that orphans are more likely to reside in poor household than nonorphans. Second, it is possible that orphans receive lower economic returns to education than nonorphans. Finally, there could be intra-household discrimination against orphans.

At the opposite, given the traditional solidarity networks through an extended family, some authors suggest that losing a parent may have little impact on orphans' schooling. As Lloyd and Blanc (1996:268) observed, "in an extended family system, parenting is a shared responsibility and children grow up with more than one 'mother' and/or more than one 'father'… This larger circle of relationships brings children both benefits (in terms of additional support and protection from loss in case of the death of either or both parents) and cost (in terms of additional future responsibilities)." One of the channels through which this support network may operate is the widespread practice of child "fostering" (See Ainsworth 1992; Akresh 2005; Antoine and Guillaume, 1986; Bledsoe 1990; Desai 1992; Eloundou-Enyegue and Shapiro 2004;

Goody 1973; Isiugo-Abanihe 1985; Lloyd and Blanc 1996; McDaniel and Zulu 1996; Vandermeersch 2002). Thus, some researchers find a buffering role of extended family systems. For example, Nyangara (2004:33) reports that "paternal orphans in Namibia and maternal orphans in Mozambique and Nigeria were more likely to enroll in school than non-orphans". Foster *et al.* (1995:3) observed that "the majority of orphaned children were being cared for satisfactorily within extended families, often under difficult circumstances… There was little evidence of discrimination or exploitation of orphaned children by the extended family caregivers." Likewise, in their study of rural Tanzania, Urassa *et al.* (1997:141) concluded that there was "… no evidence that orphans as a group are disadvantaged, although certain subgroups of orphans or orphan households may be more vulnerable and in need of support."

The extent to which orphans' are disadvantaged as compared to nonorphans depends on the support they can receive from the extended family: are orphans more likely to be sent to the wealthiest households within the extended family? Are there more likely to be sent to close relatives? Investing theses questions in a first step can help understand orphans' wellbeing, for instance their school trajectories.

Previous research on Burkina Faso

In a previous paper Kobiané *et al.* (2005) found that parental death is detrimental for children's chances of entering school when they lose both parents, especially in rural areas. For children who had the opportunity to receive support from an extended family, this negative effect is reduced. Double orphans in rural areas, after controlling for other covariates, remain less likely to enter school as compared to nonorphans. Their results have also revealed that parental death is more detrimental for girls. They concluded their paper as follow: "Success in entering school is an important prerequisite to future opportunities, but how long children remain in school is equally important. Future research must therefore investigate how orphans, once in school, persist to completion. Other investigations are needed to show how they perform once in school, comparing their achievement to nonorphans." (Kobiané *et al.* 2005:489)

Using the same data as Kobiané *et al.* (2005), the objective of the current study is to examine the fostering patterns of orphans in Burkina Faso and its impact on their schooling.

Data and Research Methods

The Data come from a national retrospective survey, the "Enquête Migration et Insertion Urbaine au Burkina (EMIUB)," or the Migration and Urban Integration Survey in Burkina. The survey was conducted in 2000 by the Demography Department of Université de Montréal in collaboration with CERPOD in Bamako and ISSP[2] in Ouagadougou. The objective of the survey was to record the different reproductive strategies used by individuals in Burkina Faso. For this purpose, the survey also recorded the history of such events as migration, fertility, nuptiality, economic and non-economic activities. The survey concerned 8,642 individuals and recorded the dates of significant events occurring from the time of the 6th birthday. These events included periods of schooling, and so for each individual entered school we have information about the age at school entry and the age at school interruption (or at the end of the observation). The survey recorded further information about the parents' survival status and (for fatherless or motherless children) it asked the child's age at the time of the parent's death. Individuals' residential itinerary was also recorded, and for each period of residence, the relationship with the head of household, and the characteristics of the dwelling were documented. Therefore, it was possible to construct a proxy of wealth index using Principal Components Analysis (Montgomery *et al.,* 2000; Filmer and Pritchett, 2001).

We constructed three synthetic cohorts representing 6,800 individuals. This includes information for the 1975-85 birth cohort (n=2336), the 1965-74 birth cohort (n=2594) and the 1955-64 birth cohort (n=1870).

[2] Unité d'Enseignement et de Recherche en Démographie (UERD) at the time of the survey.

These corresponded to individuals who were 15-24, 25-34 and 35-44 years of age at the time of the survey in 2000. The three cohorts are observed during the same comparable period of their life, that is, from age 6 to age 19. For our event history analysis one method we considered to deal with continuous time framework of our data is the semi-parametric proportional hazard model known as the "Cox model." One advantage of that method is that it assumes no specific parametric distribution to the shape of the transition rate.

Expected findings and preliminary results

Given the importance of child fostering in countries of West Africa, we expect the extended family to play a buffering role for orphans. Indeed, if orphans are cared for satisfactorily within the extended family, those of them who have succeeded to enter school would not see their schooling disturbed. In other words, there might not be a significant difference between orphans and nonorphans in term of school completion.

Table 1 presents the effects of orphan status and other covariates on the risk of interrupting school. Three models are presented: model 1 gives bivariate results, that is, the effect of each covariate on the dependent variable. Model 2 controls the effect of orphan status for wealth status and kinship with support, and finally model 3 controls for all the covariates.

Considering the results from model 3 we see that except the coefficient for maternal orphans in urban areas, the difference between single parent orphans (paternal or maternal orphans) and nonorphans is not statistically significant, meaning that there is probably a social support for orphan's schooling.

Nevertheless, the result observed for double orphans at the country level (models 1 and 2) and in rural areas (all the three models) is surprising: double orphans are less likely to stop school as compared to nonorphans and the coefficient is statistically very significant. This finding looks like a *paradox* since Kobiané *et al.* (2005) found that double orphans were less likely to enter school. Note that in model 3 at the country level, after controlling for all the covariates, the coefficient is no longer significant: this propensity for double orphans to stay longer in school comparatively to nonorphans probably depends in part on the *orphan status at school entry*. Table 2 presents the distribution of grade attainment according to orphan status when interrupting school and orphan status when entering school. Consider only the proportion in each group who has attained the first cycle or the second cycle of secondary school (figures in bold). When comparing the first column (nonorphans) and the last column (pupils who were nonorphans at the entry of school but have become double orphaned during their studies) we note that 66.7 % of those in the last group have attained the first or second cycle of secondary school relatively to only 37.0 % for the nonorphans. This figure for those who have become single parent orphan during their studies (third column) is 38.7 % which is almost identical to the figure for nonorphans: these results clearly show that there is probably a different pattern of support to orphans in term of schooling depending on whether parental death occurs before entering school or once in school.

We are exploring the plausible explanation of these results by examining the fostering and support patterns of orphans. We'll also compare different generations of people to see if there are changes over time.

Table 1: Cox proportional Hazards Estimates (Odds ratios) of the Effect of Orphan Status on School Interruption

Variable	All Country			Urban			Rural		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Orphan status during studies[a]									
Nonorphan	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Paternal orphan	0.85	0.84	1.35	0.91	0.91	1.35	0.78	0.81	1.58
Maternal orphan	0.85	0.85	1.04	1.61***	0.56***	1.76**	0.67**	0.67*	0.79
Double orphan	0.45***	0.45***	0.66	0.83	0.73	1.05	0.25***	0.27***	0.33***
Wealth index[a]									
Poor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Middle class	0.95	0.95	0.93	0.80**	0.80**	0.81*	1.07	1.06	1.04
Rich	1.14	1.12	1.11	0.66**	0.63***	0.66**	1.30*	1.26	1.16
Kinship with support[a]									
Father/Mother	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Father/Mother & other relative	0.86	0.87	0.86	0.80	0.79	0.85	0.92	0.90	0.86
Brother/Sister or uncle/aunt	0.98	1.12	1.11	1.28	1.37	1.36	0.83	1.00	0.96
Spouse & other relative	0.81	0.82	0.75	0.69	0.69	0.71	2.39	2.12	1.47
Other relative	0,66	0,70	0.78	0.87	0.88	1.16	0.59	0.62	0.75
No kinship	0.68*	0.74	0.84	0.89	0.92	0.90	0.57*	0.66	0.82
Others	0.74	0.78	0.92	0.59***	0.64**	0.47***	1.94	1.97	2.11
Gender									
Female	1.00		1.00	1.00		1.00	1.00		1.00
Male	0.85*		0.86*	0.94		0.90	0.72**		0.79
Birth cohort									
1975-1985 (15-24 years)	1.00		1.00	1.00		1.00	1.00		1.00
1965-1974 (25-34 years)	1.08		1.09	1.15		1.10	1.03		1.04
1955-1964 (35-44 years)	1.31**		1.37***	2.08***		1.95***	0.98		0.99
Birth order (with father)									
Eldest	1.00		1.00	1.00		1.00	1.00		1.00
Second	1.16		1.45*	1.04		1.41	1.20		1.49
Third	1.00		1.06	1.24		1.71**	0.82		0.78
Fourth	1.08		1.03	1.18		1.98*	1.02		0.69
Fifth/Sixth	0.99		0.92	1.14		1.76**	0.88		0.67
Seventh or over	1.05		1.15	0.99		1.68**	0.99		0.81
Birth order (with mother)									
Eldest	1.00		1.00	1.00		1.00	1.00		1.00
Second	0.98		0.84	0.90		0.72*	1.01		0.89
Third	1.05		1.05	0.96		0.65*	1.08		1.41
Fourth	1.08		1.07	0.89		0.53**	1.15		1.59
Fifth/Sixth	1.00		1.08	0.86		0.57**	1.06		1.41
Seventh or over	1.02		0.94	0.71		0.49**	1.41		1.75*
Orphan status at school entry									
Nonorphan	1.00		1.00	1.00		1.00	1.00		1.00
Paternal orphan	0.62***		0.51***	0.68*		0.53*	0.57***		0.42***
Maternal orphan	0.52***		0.61	1.32*		0.58*	0.39***		0.56
Double orphan	0.43*		0.64	0.57**		0.50	0.34		1.09

Notes: [a]: Time varying covariates; ***: p≤ .001; **: p≤ .01; *:p≤ .05. Data source: EMIUB

Table 2: Comparing grade attainment by orphan status at school interruption (or at the end of observation) and orphan status at school entry

Grade Attained	Orphans status at school interruption (or at the end of observation)				
	Nonorphans	Single parent orphans		Double orphans	
		Orphans at entry	Non orphan at entry	Orphans at entry	Non orphan at entry
Primary	54.8	64.5	54.5	61.1	28.4
Second. 1st	**26.2**	**20.1**	**29.0**	**16.7**	**61.7**
Second. 2e	**10.8**	**9.0**	**9.7**	**13.9**	**5.0**
Higher	5.1	2.7	4.0	0.0	1.2
Second. pro.	3.1	3.7	2.8	8.3	3.7
Total	100.0	100.0	100.0	100.0	100.0
n=	*2292*	*189*	*176*	*36*	*81*

Data source: EMIUB. Second. pro. = professional secondary school