DYNAMIC STUDY OF RURAL POVERTY IN SENEGAL

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ABSTRACT

This paper aims to identify the swinging factors of poverty in the rural area in Senegal by using transversal analysis, the biographical analysis with Kaplan-Meier estimator and logistic regression. Main findings reveal that the poverty in rural area is a phenomenon which is mainly chronic and less transitory.

Keywords: biographical, chronic, logistic, typology.

1. INTRODUCTION

For developing country and African country in particular, the 1980s mark the departure point of new orientation in matter of husbandry of economic strategy and institutional organization. For most African's countries which are victim of shock oil, the collapse of the exportation's products and are also affected by economic and social crisis without previous, threatening everyday life of their population. To control economic crisis, each of these countries had to have recourse to Bretton Wood institutions with which each country negotiated whole of programs named Structural adjustment (PAS). It is thus, for remedying the faults of the old politics, for some years, the fight against the poverty is became main aim of the development policy. This new orientation of the development policy sets a real challenge for the Scientific's community and for the economist in particular. The aim of this study is to contribute at this vast reflection across individual analysis of the poverty at Senegal with biographical data obtained in 2008. The problematical of poverty constitutes several real problems whose the most important establish real poor people and the knowledge of which expresses the poverty transition. There is the reason why the analysis of poverty in rural environment, with the biographical survey data «Chronic poverty at Senegal» made in 2010 by the LARTES, permits to approach the important questions still without answer in rural area. We need to know: who stay always poor? Who is never poor? What is the typology simplified of the trajectory of the poverty in rural area at Senegal that we can show? What are the factors of way out of the poverty? What are the real factors which drive in poverty situation? What are, particularly, the impacts of the education in the mileage of life from someone? At last, of what the way this longitudinal study of the poverty lead to reconsider the policies struggle against the poverty and to appreciate theirs efficacy?

2. PROBLEMATIC AND OBJECTIVE

In most countries of sub-Saharan of Africa, the struggle against the poverty doesn't give fast satisfactory results. During last decade, the proportion of the Senegalese's population living under level of poverty is passed third to more half. In rural area, this proportion establishes itself to 80 percent. Indeed, since 1980 the economic problems begin by showing itself through weak growth, a great interior demand and the chronic deficit of balance of payments. The whole constitutes the factors which have carried away grave deterioration of the quality of living of many Senegaleses. To face this situation, the government of Senegal has created in 1990 a vast economic reform program. This effort is considerated as scanty because the number of poor has increased. Thus, the poverty is a complex phenomenon and difficult to resolve. The boom of GDP doesn't drive systematically to improve the standard of living of the poor. With this situation, the specialists have to conceive news programs and patterns surveys to help to build appropriate economic policies. Then, it is necessary to create the news policies

to attenuate, to wear off the poverty and especially to understand the real causes of phenomenon of poverty. In front of this report, the news generations of surveys have realized not on the households but on the individuals for certain specifics aspects of people. This is the biographic surveys on people by regrouping theirs socio-demographic traits since theirs births to the moment of survey. It's the reason why LARTES has realized this biographic survey in 2008-2009 whose theme is: «Vulnerability and Chronic Poverty at Senegal»[1]. The specificity of this survey puts back on the fact that the poverty doesn't come not only from the shortness source of monetary income, but also from the accumulations of the handicaps (in social relations, in instructions, in health, migration, etc.). Across this survey, it is very important to give an account of dynamic of poverty by underlining the transitions in person daily mileage. For this reason this study has for theme: « the poverty in rural area». Thus, the general objective of this document is to give an account of dynamic way the state of poverty of people during their daily mileage in order to give a policy of the development more judicious which normally must struggle against the poverty in rural area. For Senegal, it's an opportunity which can help to have a clear vision on the future.

3.   REVIEW OF BIOGRAPHICAL APPROACH AND THE POVERTY

In this study, we focus our attention on quantitative approach for biographical approach. Thus, about the quantitative approach, for twenty years, the method « of the analysis of biographies » says « Analysis of transition » have proved their efficacy in the social changing and social mutation. The works of BIOMAD98 survey used the biographical analysis (Philippe BOCQUIER et al, 2000). In exhaustive analysis, the function of stay of Kaplan-Meier (Courgeau & Lelièvre, 1989; BOCQUIER, 1996) has used to study the transition of celibacy at first wedding for the men for example. One of the important assets of the biographical analysis is to give back possible dynamic analysis of the social phenomenon (Richard MARCOUX, Philippe BOCQUIER & Philippe ANTOINE, 2006). Thus the analysis can be purely descriptive by using the functions and the parameter of the survival. However, there is specified that in presence of biographical data, one of the econometric model used is the pattern at proportional risk of Cox (Aliounne DIAGNE, 2001). ([2])

Since the end of XIX century, with the studies of Booth and Rowntree on the poverty in the great British's cities, the monetary approach is staid the most current. However, its limits have leaded the certain authors to put back in cause its bases and to propose the alternative approaches as the «need of the base» (Streeten et al, 1981). In this approach we interest ourselves at the satisfaction of the needs which assure a minimum of standard of living. At this effect, an importance is particularly allowed to alimentation, the health and the education. In front of this infatuation and crescent difficulties of the poverty analysis, to be in watermark, the critic of monetary approaches and utilitarian expressed by Sen (1983, 1997). According to him, the poverty would not have to be apprehended by the level of consumption, but by the capacity of people to have access and therefore, these are the ways for there to reach which must be given preference.

In economy, someone talks often of the absolute poverty and the relative poverty when someone talks about the poverty. On the other hand, the absolute poverty is the situation of the people who don't dispose the minimum quantity of goods and services allowing

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[1] chronic poverty: Under intends a permanent state of poverty during the period of life

[2] Interest of the analysis of biographies: this method permits to apprehend the psychologies' realities in order to understand itself very well. For the ethno historians, through the biographical approach, we don't seek the objective truth but rather the cultural reality. Limit of the biographic approach: the historians expose the lack of the objectivity on the elements become from the past by the use of this method.

a normal life. Moreover, the relative poverty concerns the person who doesn't dispose the resources which would permit him to consume that which appears «normal» in the society at a moment given. According to the monetary approach, the poverty point out the statement of the people or households whose the income or expenses are inferior at the poverty line. On the other hand, about the no monetary approach, it is a vision from no utilitarian. This approach includes the approaches in term of human poverty or social (Amartya Sen, 1990) and the approaches in term of exclusion (Jean Bosco KI, Salimata Faye and Bocar Faye, 2005). About the multidimensional approach of poverty, most of debates for some years concern the multidimensional aspect of the poverty. Under this aspect, we can build a composite indicator of the poverty in order to point up that the forms of the poverty are linked at vulnerability of human existence, the lack of infrastructure and the comfort (Jean BOSCO KI, Salimata FAYE & Bocar FAYE, 2005). Different approaches of the poverty can be confront in order to highlight the nature and incidence of the poverty. In this case, an exploratory analysis can be done for being crowned by the econometric patterns (Logit and Probit bavaried) in order to identified the factors which favors the appearance probability of the poverty (Mireille RAZAFINDRAKOTO & François ROUBAUD, 2005). However, these models don't allow to apprehend the sense of causality between the explicative variables and the statement of the poverty of household.

At last, the dynamic approach of the poverty of the study on transition of poverty can be analyzed with a multinomial logit model (Javier HERRERA & François ROUBAUD, 2003) in order to measure the contribution at the poverty and transitions of the poverty (entry/exit) of three groups of the variables: demographic, human capital and physical. The results of this study show that these variables are not by one self the explicative variables of the forms of the transitions of the poverty but that the entry's mode on the labor market, the requisite of the public goods and the structure of the employment are also determinative for the analysis of the dynamic of the poverty. Thus, a dynamic analysis consists also to make a study of movements of entry and exit in the poverty. However, the econometric analysis of the forms of poverty could use a multinomial logit models and Tobit (Claire GONDARD-DELCROIX, 2006). This has permitted to underline the importance of geographic locality, the agriculture characteristic but also and mostly multi activities. Otherwise, the study of the transition poverty uses the duration's model of life to show the link between the rate of entry and the exit. But also, the logistic models at discrete times has helped to identified that the determinative characteristics of the entry in the poverty (Mathieu CLEMENT, 2004). In this same perspective, Philippe ANTOINE (2010) has made the dynamic analysis of the poverty (no-monetary) in Senegal with the analysis of the transitions (biographical approach). The curve of Kaplan-Meier is used as a descriptive analysis and exploratory analysis. To end the study, an explicative analysis of biographies has been used through the model at proportional risk of Cox. This allowed him to show that the women go out more quickly of the poverty at Senegal. Furthermore, he notices that the crucial factor of going out of the poverty is the schooling.

In the frame of this study, we will work on the indicator of the poverty which is built with no monetary approach (multidimensional). Indeed, it's the dynamic indicator.

4. DATA PRESENTATION AND RESEARCH METHODOLOGY

This survey has been realized in 2008 next to the 2400 persons but only 2048 persons have been kept back in the data. That permits to collect the relative's information of biographical residential, matrimonial, professional, etc. The data collected serves to retrace the life of people who have been enquired until the date of the survey. It is appeared that, in rural area, the majority of people enquired are men and the percentage of the men enquired settled to 59.6 percent against 40.4 percent for women. Afterwards, among men close to 72 percent are head of household against 11 percent only for women.

It is biographical data then the data analysis concerns individuals and not the households as the traditional surveys. We approach the phenomenon of the poverty (no monetary) grace at an indicator of the multidimensional poverty. So, we are brought to make a longitudinal analysis of the poverty in rural area in Senegal. As it is a question of retrospective biographical survey, we have chosen to make in the first times a traditional descriptive analysis at moment of the survey and to bring out the simplified typology of itinerary. In second time, we have used the biographical approach to analyze the way out of the chronic poverty at 15 years. At last, to apprehend the determinatives of the poverty in rural area, an econometric analysis with logistic regression at the moment of the survey had been done.

5. DESCRIPTIVE ANALYSIS AND TYPOLOGY

In the rural area, the family, sociocultural environment makes of attitudes and belief, is the frame by excellence of education of children. The main activity remains, the agriculture in the context where the level of instruction stays feeble; the koranic school being is a serious alternative. However, we would have to notice that the proportion of people who have been educated by no-educated people is 48 percent. On the other hand, the mains typical of professions of those who have educated the individuals when these individuals were 12 years old shows that in first times, the proportion of farmers is 67 percent. Afterwards, come the cattle-breeders (9 percent) and the sellers (8 percent). In the second time, the proportion of craftsmen is established with 3 percent, with fishermen with 2 percent and housewife with 3 percent. Furthermore, in rural area, the proportion of individuals who have not educated is 84 percent and this of those who have done at least the primary level is estimated at 16 percent.

The typology is the method of analysis whose the goal is to build the groups which are the most homogenous and the most different between themselves. The dynamic study of poverty on the biographic data in rural environment presents us 898 itineraries of mileage of poverty. Thus, we stand out five groups of itinerary by materializing each one, the trend of itinerary type of different situation of poverty. The first group is always no poor (8%) which represents the persons who are no poor in the infancy, in the adult age and the old age. The second group is always chronic poor (57%) which represents the persons who are chronic poor in the infancy, in the youth, in adult age and in the old age. The third group is positive rocking during the course of life (16%) which represents the persons who have known an improvement of their standard living since their birth until at moment of survey. However, the fourth group is negative rocking during the course of life (11%) which represents the persons who have not known an improvement of their standard living since their birth until at moment of survey. And the last is the group of unstable poverty which is vulnerable (8%); it concerns the persons who swing one state to another state of poverty.

6. RESULTS OF BIOGRAPHICAL ANALYSIS

Before having an idea on the flow of people who leave the situation of chronic poverty, it is important to analyze only the way out of poverty from fifteen years of poor individuals at 15 years. In this case, our liable population at risk is constituted of people who are in situation of poverty at 15 years; we measure the time which runs out between the age of 15 years and the moment where the person goes out of the poverty. However, we need to specify that the results presented are purely descriptive. So, in the first time, the way out of chronic poverty according to genus shows the move of way out of poverty according to the sex since of 15 years. At equal duration, during their way of life we notice that the age from 15 years to 22 years, women and men have the same rhythm of flow of way out of chronic poverty. However, at years of 22 years the men go out quick of the chronic poverty in relation to women. On the other hand, we precise that the rhythm of way out of poverty of men during their way of life is very slow because at the age of 50 years only 25 percent of men are gone out of the chronic poverty. Face to this, we need to research the factors which constrain those men and women to dwell in

the chronic poverty. Second time, the way out of the chronic poverty according to generation reveal that the generations from 15 years to 22 years have practically the same rhythm of way out of the chronic poverty. However, from 22 years the rhythm of way out is not the same. In the whole, the move of way out is slow and there are not different between the generations except of the old generation. And finally, the way out of poverty according to level of instruction shows that according to the level of instruction, we notice a difference between the groups of individuals. Those who have received the secondary study or more go out fast of the chronic poverty. Verse 20 years 25 percent of those who have done the secondary studies are gone out of chronic poverty. The rhythm of poverty is very slow for no educated people: only 10 percent are gone out of the chronic poverty at 40 years. No schooling of individuals seems to be a handicap to go out fast of chronic poverty in rural area.

The biographical analysis settled analysis of transition has permitted to give an account of rhythm of way out of chronic poverty according to the sex, the generation and the level of instruction during time since the age of 15 years. It appears that, on our sample of rural area the individuals who, at the age of 15 years, are chronic poor and have not been provided with schooling dwell practically always chronic poor. In the same way, the women go out least fast of chronic poor.

7. RESULTS OF MODEL-BUILDING

This analysis founded on a logistic estimation permits to encircle better the factors which explain situation of chronic poverty, of the transitory poverty and of the no poverty at the moment of the survey. First time, about the chronic poverty, the fact to know a sinister in his life gives significantly two (2) once more of chance to be chronic poor in relation to individuals who have not known the sinister in their life. The effect of level of instruction on the fact to be chronic poor appears clearly significant at level of 5 percent. People who have done the primary level dwindle 70 percent the risk to be chronic poor relation to individuals without instruction. In that which concerns the matrimonial status, it notices of one part that the singles have least of chance to be chronic poor relation to monogamous. Of other part, the widower has height (8) once more of chance to be chronic poor comparatively at monogamous. The lodger individuals of habitat have a feeble chance to be chronic poor relation to lodged individuals. In that which concerns the profession of father of individuals, it gives an account of itself that the persons whose the father is in informal have least chance to be chronic poor relation to persons whose father is farmer. In second time, about the transitory poverty, we notice that the generations before 1954 and from 1954 to 1968 have less of chance to be transitory poor relation to recent generation (generation after 1978). The effect of level of instruction on the fact to be transitory poor appears clearly significant at level of 1 percent. The individuals who have done the primary level have six once more of chance to be in a situation of transitory poverty relation to people without instructions. That confirms once of more the crucial role of instruction for getting way at poverty. Concerning the status of occupation, we notice that the roomers have three once more of chance to be transitory poor at level of significant of 10 percent relation to individuals which are lodged. In the same case, the results show that the singles have three once more of chance to be transitory poor comparatively at monogamous at level of significant of 5 percent. At last, about the no poverty, at level of significant of 1 percent, the individuals who know a sinister in their life dwindle of 60 percent their chance to be no poor comparatively at those who haven't known a sinister in their life. For the matrimonial statement, the fact to be widower dwindles at 85 percent the chance to be no poor relation at monogamous. In revenge, the fact to have a father who works in informal sector gives two once more of chance to be no poor relation to persons whose father is farmer. However, the main limit of this study resides in the fact that the econometric analysis doesn't take an account the dimension of time.

8. CONCLUSION AND RECOMMENDATIONS

The objective of this document is to make a dynamic study of poverty in rural area by using the biographic approach. The applications of different technics permitted to obtain remarkable results even if the limits have been noticed. At this effect, it appears three mains conclusions. In first time, the factor of rocking in the chronic poverty are done at sinister and widowhood. In second time, the level of primary instruction and the work in the informal sector constitute two factors which dwindle the chances to be chronic poor. At last, to be single, to be roomer favors the way out of the chronic poverty. Therefore, to struggle efficiently against the poverty, the decision makers must create a simple method. In instantly, the chronic poor must get social allocation by means of less two conditions to check: the children must go to the school every day and be up to date in matter of education and health. Afterwards, it will have to throw the basis of solid farm sector to give back profitable effort of the farmers in order to equip them the capacity to lead a decent life grace at the fruit of their labor. Another hand, to equip rural environment of infrastructure such that the roads, the means of irrigation and of installation of stocking, will constitute the cornerstone of boom of farm sector. Also, we need to create the cooperatives to prevent local farming to dead slowly. Furthermore, the installation of veritable projects of society will permit to face at natural unexpected event (sinister, loss of joint) and to limit the risk of swinging in the chronic poverty.

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