



University of Versailles Saint Quentin en Yvelines

**Center for Economics and Ethics for Environment and
Development (C3ED)**

**The triangle of inequality: Challenge for a socially sustainable development
Application to rural Madagascar**

Sahondra RAZAKATIANA¹
Sahondra.Razakatiana@c3ed.uvsq.fr

Madagascar and Ankilivalo rural common

At Ankilivalo, "poor" and "rich" seem to have the same living conditions (housing, clothing, etc.). The population of 14000 inhabitants (Municipal Development Plan, 2008) is composed of two dominant ethnic groups: the indigenous Sakalava are pastors, and the Betsileo are rice migrants (or descendants of migrants). For the Sakalava, wealth is relative to the ancestor worship. Indeed, the blessing of the ancestors is central to these rural families. If lineages are in unfortunate situations (bad harvest, agricultural production disaster, etc.), they accuse of not having enough to honour their ancestors. The blessing of the ancestors contributes to the aspiration of a life that is worthwhile to choose their lifestyle. The success of ceremonies depends on the number of zebus killed. Over zebus are killed, more we are pleased to ancestors. The zebu is not only the animal emblem of the Madagascar island; it is also the traditional symbol of prosperity. That we kill in ceremonies (Belleret, 2005). Thus, the influence of the Sakalava is related to the number of head zebus they own. Then there are the Betsileo. Their wealth is estimated by their accumulation of assets (land ownership, agricultural equipment including zebus having the same value as agricultural tools such as plows, etc..) and power (the current mayor is Betsileo).

Our study area is the rural commune of Ankilivalo, located in the region of Menabe in western Madagascar. The municipality has a basic health, primary and secondary public, a market, standpipes, and recently a one-stop land under secure tenure. The town is considered "rich" in terms of resources. For example, the possibility of two to three crops of rice annually without any fertilization and also the abundance of forest (Municipal Development Plan, p. 28, 2003). In this context, poverty is viewed from two angles. For the Sakalava, poverty is characterized by the capability to honour their ancestors through traditional ceremonies. While for the Betsileo, it corresponds to the loss comes from the exclusion of methods of access to sources of income but also access to education, health, etc. Poverty can be defined as a state of denial of a level of well-being considered adequate to lead a decent life in a given society (Undp, 2003). It actually refers to a state of

¹ I thank the Rural Observatories Network for their collaboration

deficiency, which can be approached in different ways by considering the available resources (poverty of resources) or by referring to the capabilities of people (poverty of capabilities).

Fight against poverty and inequality

The analysis of poverty arises from the different approach of Amartya Sen capabilities. The fight against poverty takes a new turn in articulating the strengthening of capabilities to increase the potential of individuals. This implies greater access to goods and social and economic services to increase the endowments, but also the establishment of standards of justice and ethics in the distribution of potentiality. The question of improving the capabilities of the current generation, while ensuring a fair transfer of these capabilities to the next generation raises the broader issue of social sustainability of development.

The triangle of inequality has become the scene of a socially sustainable development. Indeed, three sets of conditions must be met for such a development. We must fight against poverty while regulating various inequalities, which will raise the issue of equity. The link between poverty and inequality, inequality in capabilities and the link between inequalities and equity issues become a socially sustainable development which is the subject of this paper. To develop these issues, the first part of this paper will analyze poverty in its various forms and will then link with inequality. The second part will focus on the forms of inequality in order to address the last part the issue of equity in the fight against inequality and its impact on poverty reduction. The panel data collected from households by the Rural Observatories Network of Madagascar (ROR) will be used to illustrate these issues.

I. The triangle inequality: a serie of three conditions

I.1. Fighting against poverty

Poverty manifests itself in different ways taking forms sometimes economic and sometimes social, cultural, political, etc. Fight against poverty implies to analyze poverty in his multidimensionality.

The poverty of goods or resources

The first form of poverty is the poverty of goods or resources. It concerns the economic poverty of income or consumption, usually grouped under the monetary poverty. Poor households in monetary terms are those who have an income / consumption below a poverty line. In this approach, are considered poor, individuals who at one time, have no access to sufficient economic resources to acquire the quantity of goods and services necessary to meet their basic needs or to achieved a standard of living considered like a minimum socially acceptable (Fusco, 2007, p. 42). Poverty of goods or resources will also address the gaps in living conditions resulting from under-developed services (poor living conditions or of existence). It is manifested by difficult access to goods and services or to correct conditions of existence (entitlements). For example, the energy used by over 90% of the population in the rural commune of Ankilivalo is oil or candles. Indeed, the town not covered by the national electricity grid, this resource is not available involving poor living conditions. Thus, inadequate resources and / or means generate insufficient development of individual capacities (Herpin, Verger, 1998).

The poverty of capabilities

The poverty of capabilities corresponds to a poverty of functioning and freedom of choice (Sen, 1999). As space capabilities covering all the functionings actually achieved and potentially achievable functionings, the poverty of capability has two dimensions: a dimension of poverty by functioning (in the case of functioning actually achieved) and a dimension of potential poverty or poverty of choice (in the case of potentially achievable functionings).

The poverty of functioning includes the operations of accessibility to opportunities and the poverty of personal abilities. It reflects the fact that we did not have access to opportunities due to the characteristics or

lack of capacity. An individual may be unable to access opportunities due to lack of capacity (a delicate health, poor nutrition and calorie, malnutrition, lack of education, illiteracy, social capital, exclusion, etc.)

The poverty of potentiality here is linked to the lack of assets, taken in the broadest sense of the term as including active market (savings and form of capital) and non-market (access rights). Each individual has a stock of assets at its origins, his education, and his social network. These are the various capitals that individuals are likely to accumulate. There is the physical capital that corresponds to the accumulation of physical assets (land, machinery for agriculture). Then, human capital resulting from an investment in education, health, nutrition. Finally, the social capital that highlights the effects of social networks (participation in associations, invitation or organizing traditional ceremonies, etc.). The poverty of potentiality is considered in relation to deficit accumulation in terms of health, education, social relations, etc.

Poverty can be defined as the manifestation of a lack of well-being and lack of "capability" to achieve this well-being. Development that aims to reduce poverty will seek to strengthen these capabilities, ie to increase the real freedom to act and being of individuals and social groups. A farmer may have land, seeds, irrigation, tractors, etc. If he can not use the machines, can not practice cultivation methods adapted by lack of knowledge or information, the farmer can not transform, operate and use its resources to maximize its production. The description of the property of an individual is often insufficient to assess the level of welfare, since it must also know what the individual can make and be with the property and the features it has, what Sen refers to "functioning". In order to achieve satisfactory results, our farmers must "function" correctly, ie: using improved seeds, use of appropriate farming methods, use of appropriate irrigation systems, participate in decisions of farmers groups, etc. These achievements can only occur if it has good capacity for doing things and achieving states "to be" given.

Fight against poverty needs to be addressed in its various forms. However, there are poor because there are rich "relative" in a society. This situation raises the question of the gap between rich and poor is the issue of inequality.

I.2. Regulate inequalities

Fight against poverty can not be done without regulation inequality. There are as many forms of poverty, there are all forms of inequality. It is therefore the inequality in goods and resources and the inequality of capabilities.

Inequality in goods and resources

In a given society, inequality takes different forms: monetary (income, etc.), living conditions (education, health, etc.) and potential (access to work, other rights, etc.) for different categories of population: gender inequality, social inequalities, regional inequality, inter-generational inequality, etc.

Inequality in monetary terms and inequalities in living conditions are analyzed according to the redistribution of income / consumption between individuals, households or groups. Fight against poverty, has an impact on the redistribution of income and therefore affects inequality. While inequalities in living conditions are manifested by the inability (or ability) to meet the basic needs, often through lack of access to durable goods such as housing, social services like education or health, food insecurity and primary goods as the participation, rights, etc. These forms of inequality demonstrate the differences in access in terms of living standards and living conditions.

Inequalities in accessibility and describe the differences in access to goods and resources, while unequal capabilities affect the difference in the mechanism of development of elements of the equation of capability (Razakatiana, 2007). This disparity is the difference in potential, as discussed poverty in the form of capital accumulation.

Inequality of capability

The inequality of capability reflects the inequality in functioning and potentiality. Inequality in the functioning results from the difference in capacity in terms of health, education, food, time, etc. to catch opportunities. Inequalities in the people functioning create inequalities in the capabilities to lead the life they want.

The inequality of potentiality arises from the difference in the accumulation of various capitals human, financial, social and physical. A difference is found in the acquisition of such capital more than households or individuals have different circumstances and context from which to realize their capabilities. Inequality is seen as the result of an unequal distribution of these capabilities. When the inequality in access to goods and services increases, the capacity that results becomes even more unequal. Two consequences are deduced: the reduction of poverty becomes weaker and, on the other hand, social cohesion is fragile (Dubois, Mahieu, 2002).

Temporality of inequalities

The fact of considering the social dimension of development leads to address the unequal capabilities, within the same generation and between generations (Sen, 2000). It is essential to ensure equality of capabilities at both the inter and intra-generation (Sen, 2000a).

The transmission of capability intra and inter-generation implies that on the one hand, an increased capability within a given generation does not compromise the constitution of the capabilities of future generations. And secondly, it implicitly assumes that the generation that has, had as much freedom to act and to be the generation that precedes (Dubois, 2006). Yet, not only the development of capabilities of people is not being fairly within the same generation, but even if this were the case, it is not certain that this transmission from one generation to the other is done fairly. (Ballet, Dubois, Mahieu, 2006).

The inequality of capability both among the same generation and between generations is a considerable development that is sustainable in social terms. There has always been a strong human desire to correct these inequalities by regulating and establishing the rules of equity.

I.3. We can not reduce inequality as respecting the rules of equity

Numerous studies show that rising inequality hinders poverty reduction, slowing growth and destroying social cohesion. Indeed, in the short term, any increase in inequality hinders poverty reduction. In the longer term, it rubs social cohesion and increases the risk of conflict and social explosion. Some inequalities are considered relevant to economic growth and improved welfare. They can therefore be tolerated in a given society. But other inequalities are considered illegitimate. Of these, inequalities in capabilities are the most frequent and which pose a problem of equity and, more generally, justice. The concept of equity and the reference to justice implies, are involved in a given society at a given time, to differentiate acceptable inequalities or not by the community. The issue of equity is then the third and final condition for sustainable development. It aims to regulate the inequalities in the redistribution.

In the same generation, we must therefore ensure intragenerational equity against this inequality in all its forms as it is transmitted within the family in particular. For a transfer of capabilities through the generations, we must ensure intergenerational equity as it enables the fight against inequalities in the temporal dimension. A fair accumulation of capabilities of the current generation may facilitate their transfer fair to the next generation. Social sustainability of the development application and to ensure that there is equitable sharing of transmission capacity from one generation to another (Ballet, Dubois, Mahieu, 2004).

Equity comes in two forms: intragenerational and intergenerational. Intragenerational equity aims to reduce inequalities of access, potential or, more generally, of capabilities within a single generation. Equity demands that intergenerational transmission capabilities equitable between generations.

II. The time for empirical analysis

The analysis of poverty, then as a first step to define poverty in the study area, to identify the poor and vulnerable, and to determine the incidence of poverty in order to assess inequality between the poor and the non-poor.

II.1. The Monetary Poverty

Take here the poverty of income or consumption, usually regarded as poverty. But it will also address the gaps in living conditions resulting from under-developed services.

The sources of statistical data

The panel data from 2003 to 2007 are available from rural observatories currently operating in Madagascar. The Rural observatory of Ankilivalo, one of a network of rural observatories was established in 2003. The observation unit is the household.

The objectives of rural observatories are to monitor the dynamics of poverty through the entries and exits of households in the phenomenon, in order to track changes in the forms of poverty. In this context, some indicators are monitored, and it is interesting to keep the same number of households where followed by a panel. This panel allows the development of certain tests, particularly on poverty, with the possibility to identify the conditions for entry or exit from the poverty of any group (Dubois, Droy, 2002). These investigations include modules covering the cross in various aspects of the functioning of households.



Source: ROR

The calculation of gross disposable income (GDI)

The calculation of gross income is difficult due to the multiple activities of rural households generating income. The gross income will consist of monetary and non monetary. The monetary component includes the result of sales of agricultural production, wage income, the proceeds of rentals, cash donations. The non-

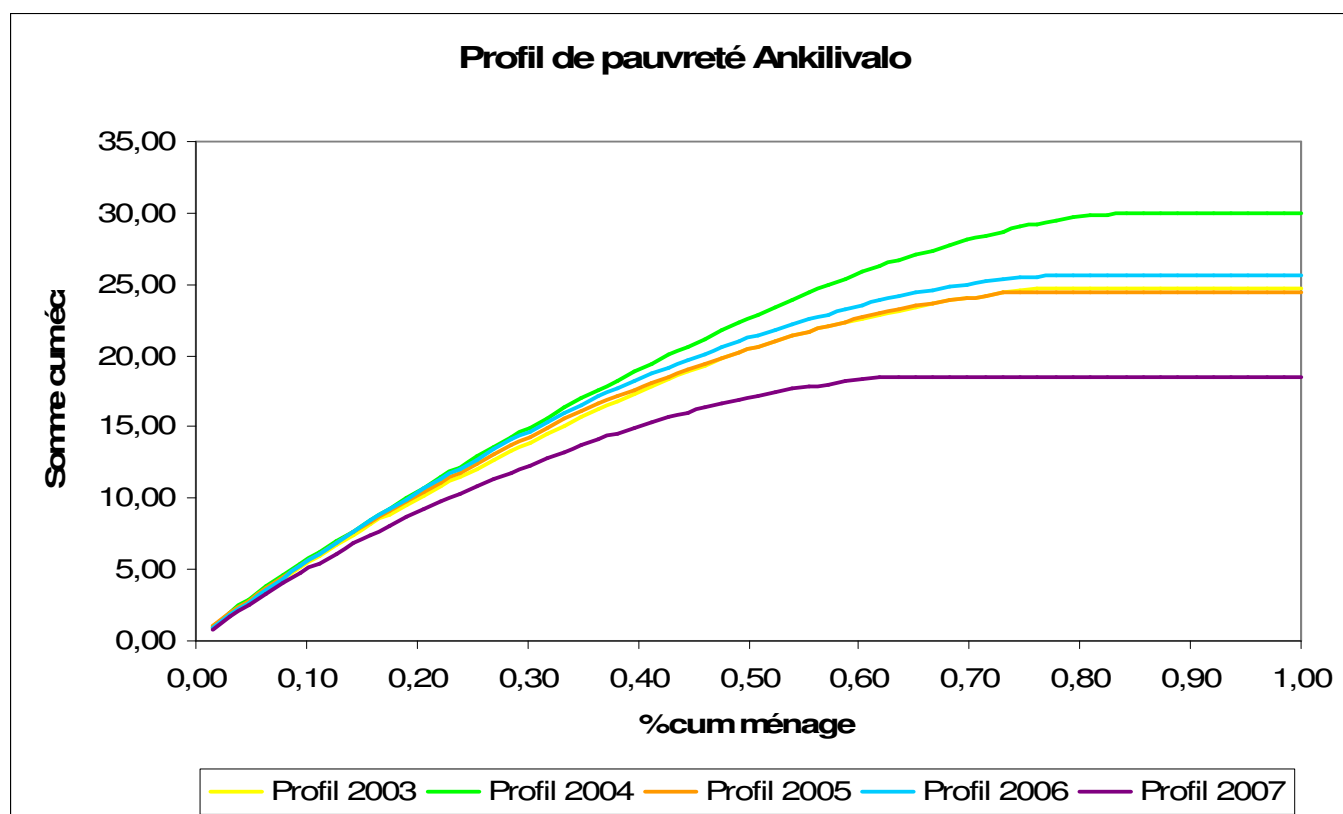
monetary includes own (valued at market prices observed at the observatory), income from sharecropping and donations in kind that the household received, which are also valued at market prices (Droy, Rasolofo, p. 214) that the balance of transfers (transfers received - transfers assigned) was added.

This gross disposable income per household is reduced per unit of consumption by applying the equivalence scale of oxford. Thus, it gives each household a number of units of consumption. Adult men (aged over 14 years) account for 1, then, women account for 0.7 adults while children accounted for 0.5.

To separate households considered "rich" for the households "poor" from a monetary point of view, we need a poverty line. The poverty line is a line below which a household is considered poor in monetary terms.

The poverty line

This line corresponds to a predetermined standard of living within the study population assumed to be the limit for a decent life. The poverty line used is that advocated by the World Bank, which is 1.25\$ / day (Chen, Ravallion, 2008, p.1). Thus, a household is identified as poor if its gross disposable income, included here as monetary indicator of economic well-being, is below the poverty line. Poor households are those who are less well ordered and the worst off. Income and poverty line are available, we able to establish poverty profiles of the rural commune of Ankilivalo from 2003 to 2007².



Source: ROR data, author's calculations

TIP Curves (TIP: three I poverty) can summarize a graphic on the three dimensions of poverty ie the intensity, incidence and inequality. For a given income and after all persons classified by increasing order of income, the corresponding TIP curve is based on a distribution of income over the poverty line (Nssah-Essam, 2000, p. 78). TIP curves are plotted along two axes: the cumulative percentage of the population abscissa and the cumulative sum of income ordered. They highlight the dominance of the distributions of household incomes

² See Annex 1 TIP curves by year

between 2003 and 2007. The greatest impact, greatest intensity, and inequality are the highest recorded at all in the same year 2004 and less low in 2007. Poverty seems to be deep and severe in 2004 compared to other years. Thus, for the non-dynamic analysis, we can mobilize the 2004 data.

After TIP curves, we measure poverty across different indicators.

Indicators of monetary poverty

As part of observatories, the poverty of resource is analogous to a distribution of consumption or gross disposable income of households, given that low income households leads to a reduction of their consumption. On a monetary basis, the most common method is to count the poor and non-poor from the poverty line. The population or sample is then divided into two, as income, in our case, is above (non-poor) or below (poor) of the poverty line. It is the head count ratio or incidence of poverty. It boils down to from a general formula:

$$P_{\alpha} = \frac{1}{N} \sum_{i=1}^n \left(\frac{Z - Y_i}{Z} \right)^{\alpha}$$

where Y_i is the income of household i

Z is the poverty line

N the total number of households

The parameter α is an indicator of aversion to inequality among the poor

	2003	2004	2005	2006	2007
Number of individuals	389	381	395	430	468
Number of households	63	63	63	63	63
Household Median Income	1 632 281	1 841 349	2 799 401	2 826 982	3 218 908
Household Average Income	2 940 773	2 803 644	4 190 322	3 930 671	3 890 425
Poverty Line	2 821 906	4 058 025	4 569 344	4 888 719	4 277 344
P0	0,78	0,84	0,74	0,78	0,68
P1	0,39	0,47	0,38	0,41	0,29
P2	0,24	0,31	0,24	0,26	0,16
Gini Index	0,55	0,46	0,49	0,45	0,36
Theil index	0,72	0,41	0,48	0,36	0,22
Sen index	1,92	2,13	1,86	1,94	1,64

Source : ROR data, author's calculations

When $\alpha = 0$, P_{α} becomes P_0 is the poverty incidence. It is the relative number of poor and rich contrast. In our case, this rate varies from 0.68 to 0.84. In 2004, over 80% of households live below 1, 25\$ per day. The years 2003, 2005, 2006 have an incidence rate of around 75%, which is also the national poverty rate. Throughout the national territory, 75% of the population of Madagascar is poor. In 2007, we note that the number of poor declined to 68%. This can be explained by the decrease in the poverty line due to the depreciation of the dollar, however, in 2007, rural household incomes have increased because the value of the total rice production for the observatory is 41.59 % as against 37.42% in 2004. However, the productions of income from other activities and other crops have declined³ by over 60% and 40% between those years. We may assume that households have focused on rice production in leaving the other side and other cultures.

³ Income from other activities represents 9.83% (2004) of gross disposable income against 3.33% (2007). Revenues from the production of other crops worth 23.43% in 2004 against 13.96% in 2007.

When $\alpha = 1$, P_1 inform on the gap of the poor over the poverty line. It can measure the amount of money he should give back to the "poor" at the poverty line. In 2004, it must be 70% of the total amount of GDI to bring all the poor to the poverty line, against only 32% in 2007. Poor households in 2004 are more distant from the line of poverty than poor households in 2007.

When $\alpha = 2$, P_2 is an indicator of inequality within the poor. It measures the sum of squared gap on the poverty line. This implies that the gap is raised to the square, and this gives proportionately more weight to the poorest.

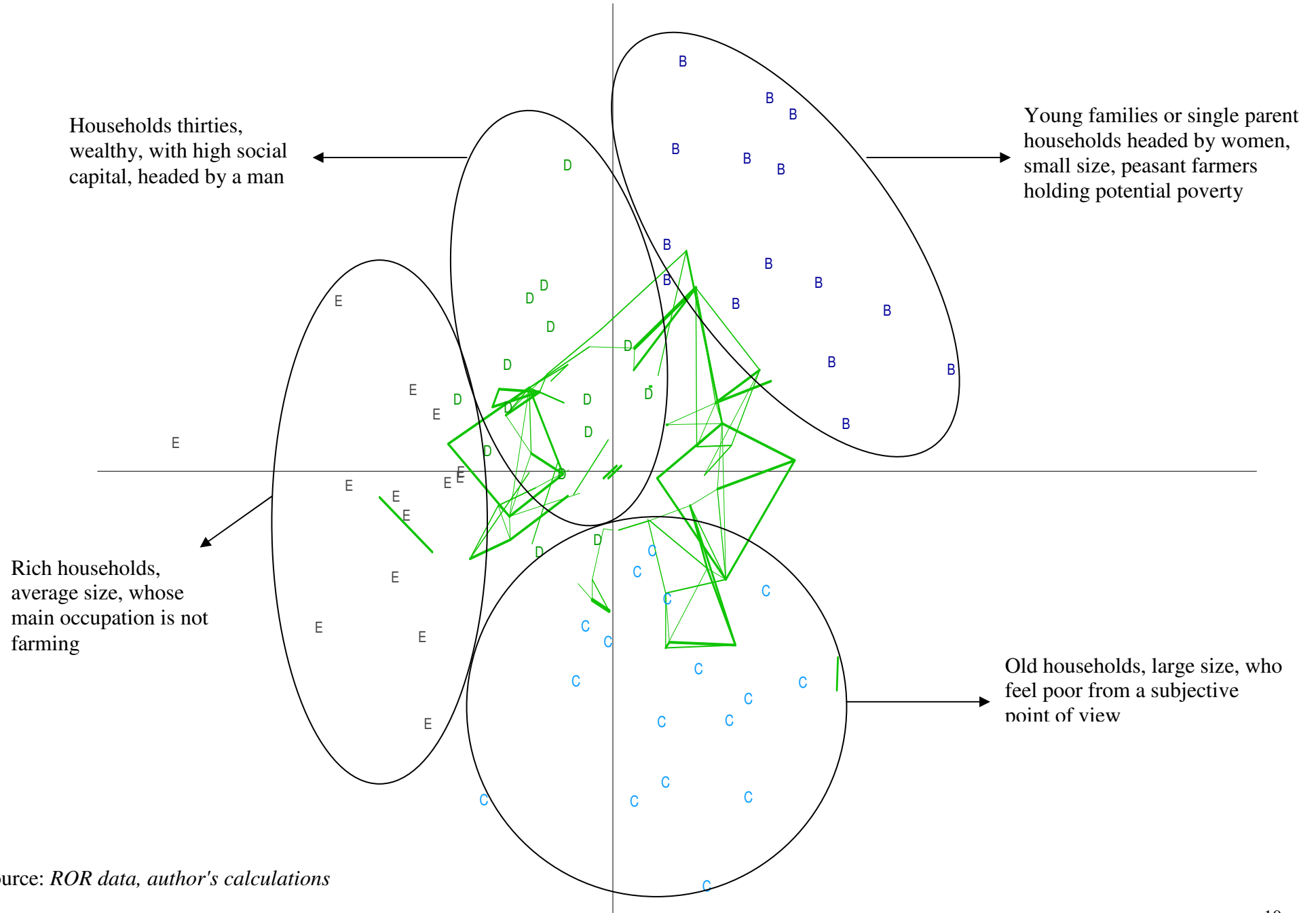
This method was popularized by Foster, Greer, Thorbecke hence the name FGT indicators.

II.2. The poverty of capabilities

In the rural commune of Ankilivalo, needs in terms of education, health, basic infrastructure, etc. are not satisfied. Rural households have access to resources (land, agricultural land, water, the existence of schools, basic health centers ...). Depending on their personal characteristics and / or their culture (peasants, farmers, ranchers, fishermen, indigenous, migrants, ...) and the opportunities, they can convert their operation (exploitation of rice fields, the occupation and exploitation of agricultural land, use of water sources for irrigation or consumption, go to school, follow the state of his health ...). Each household is characterized by its own capacity to function (food production on its own, have drinking water that influence health, being able to heal, to break the illiteracy and illiteracy, the graduation to gain access to employment, etc.)

To analyze the poverty of capabilities, we will conduct a factor analysis of correspondence (AFC). An AFC is a statistical technique for data analysis. It is used to determine, without a priori prioritization, attraction and distance information from the terms of the variables chosen. The AFC will also mobilize both quantitative and qualitative data. The graphical results can then move to a typology. To do so, we create a closed mode in which each represents a type. In our case, the terms are the types B, D, C/A and E. Then we do a profile of rules of the outcome of the typology, by crossing with other questionnaires. This then allows us to confirm the details of the selected variable through the gap to independence, the calculation of local khi2, the percentage of the maximum difference⁴ to analyze the most important attractions between terms of other variables and modalities of the variable on the outcome of the AFC. Thus, we can move four types of households according to different variables of poverty.

⁴ See Appendix 3 Profiles of procedures for each type



Source: ROR data, author's calculations

According to the graphic, four types of households were identified:

TYPE B: Young families or single parent households headed by women, small size, peasant farmers holding the poverty of capability

These households are poor in human capital. Household heads were not in school; often they can neither read nor write. They are also poor in social capital. They do not take part in associations or mutual aid network during farm work. These households are unable to put money aside, and can not borrow more because they have no guaranteed return for a loan. These are households who are poor from a subjective point of view. Indeed, they have a very unstable income and see their living standards deteriorated. These households live in poor living conditions because they have only very few elements of comfort, have a kind of comfort in nature, draw water into rivers.

TYPE A / C: Old households, large size, who feel poor from a subjective point of view

Households in this group feel poor (from a subjective point of view). They are not satisfied with their health or their children's education or their statements clothing or shelter. They see their food situation to deteriorate, and their standard of living deteriorate, they are forced to borrow. Similarly in terms of social capital, they are invited to traditional ceremonies, probably because they are elders of the village, due to their advanced ages, but themselves do not maintain social networks in terms of mutual participation in associations, or performing traditional ceremonial.

TYPE D: Households thirties, wealthy, with high social capital, headed by a man

This group consists of wealthy households, whose head of household, often a man who was educated and has at least one diploma. Households are with high social capital because they include households that have yielded most of the transfers and maintain networks of mutual assistance in agricultural work. These are affluent households as they arrive to save a little money, they buy basic foods less than 3 months/year and draw water from wells equipped. But on matters of subjective poverty, they feel rich: they are satisfied with their housing, their food, their clothes, etc. and that their standard of living "it is well".

TYPE E: Rich households, average size, whose main occupation is not farming

These households, average size, are the richest (last quartile). The head of household is retired or executive member of the legislature within the municipality or Fokontany⁵. As a result, agriculture and livestock are their secondary activities whose income from these activities in addition to the income of the business stable, that households in this group are considered as the richest. They are also rich in human capital: the household heads have a high level of education often graduate. Their living conditions are good: density per unit less than four persons / room, they have individual tanks, have at least a bike to get around. From a subjective point of view, they live well and see their living standards improve. They are satisfied with their food, their clothes. These are also the households with high social capital. Indeed, they have to offer guarantees which facilitate the acceptance of loan from their associations.

After presenting the results of data analysis of poverty according to indicators and poverty profiles, we turn to the empirical analysis of inequality.

I. The study of inequality: the forms of inequality

As in the first part, the inequality will be addressed in two phases: monetary inequality, then, inequality of potentiality.

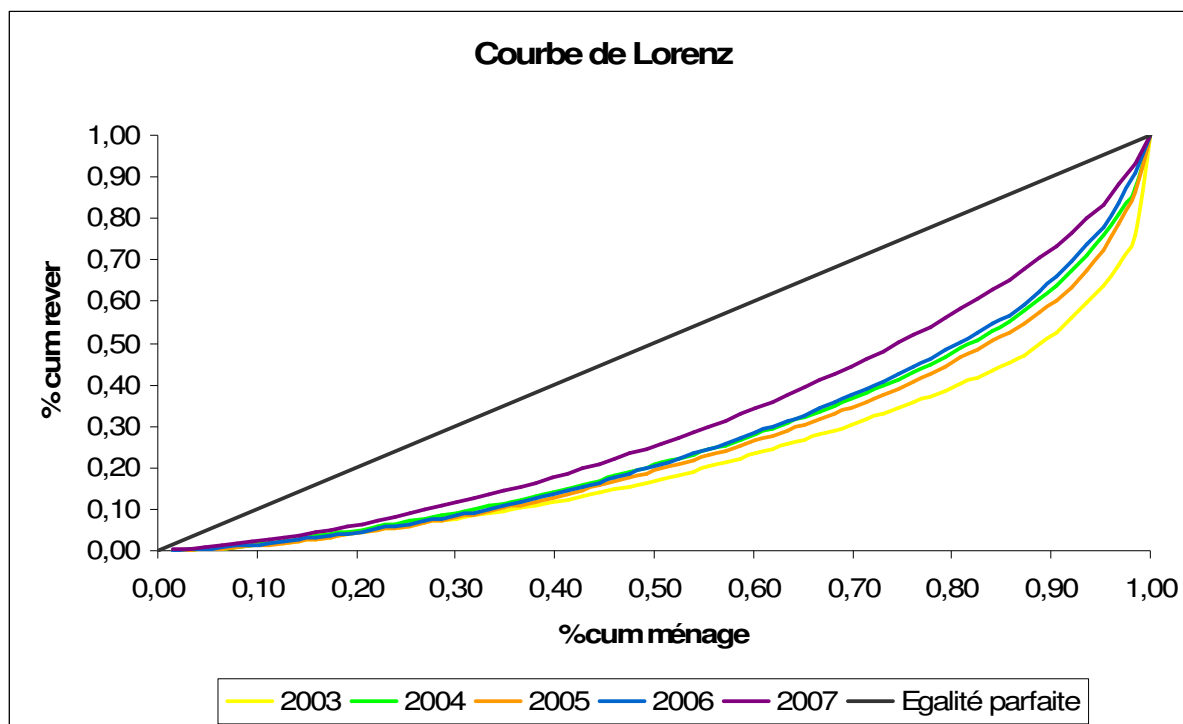
⁵ Equivalent area (our translation), the Rural Municipality Ankilivalo consists of 10 Fokontany

III.1. Monetary inequalities

We first analyze monetary inequality, then inequality in terms of living conditions later. Monetary inequalities will be assessed according to the Lorenz curve and Gini index.

The Lorenz curve

The Lorenz curve analysis of income distribution reflects the inequality between households in the observatory. The horizontal axis represents the share of households classified and accumulated, while the vertical axis represents the share of aggregate income. In a given society, there is perfect equality where all households have the same amount of income, represented here by the diagonal. The curve is more distant from the diagonal; more the distributions of incomes are uneven.



Source: ROR data, author's calculations (see Annex 2 for Lorenz curves by year)

The series shows the same trend for the curves. In 2003, 50% of the poor in a monetary hold only 17%⁶ of total income, while in 2007, half the population has a poor quarter of the total income. We can then forward that inequality is higher in 2003, and over time tends to decrease.

After the presentation of Lorenz curves, we calculate the Gini index which measures the area between the diagonal and each Lorenz curve.

The Gini index

The Gini index provides a measure of income inequality between households. It has a value between 0 and 1. The more, the greater inequality between households is important. The results confirm those of Lorenz curves. The concentration of income is higher in 2003 compared to other years. Inequality is very strong in 2003 with a Gini index of 0.55 while it is only 0.36 in 2007⁷. The distribution of income among households in 2003 is far from perfect equality with a high Gini index in 2007 and vice versa.

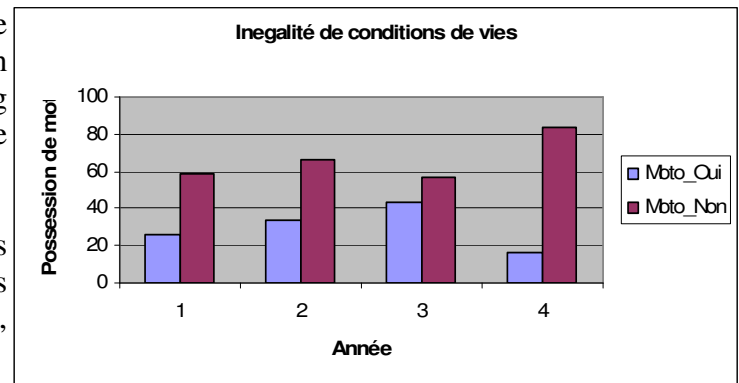
⁶ 50% of the poverty population owns 17% of total income in 2003, 21% in 2004, 20% in 2005 and 2006, 25% in 2007

⁷ Gini index in 2003 is 0.55, 0.46 2004, 0.49 in 2005, 0.45 in 2006, 0.36 in 2007

Inequalities in living conditions: food self-sufficiency, lean period and comfort criteria to examine the inequalities in living conditions

The comfort of the household is changing very little and inequalities remain. Apart from the possession of bike (or motorcycle) as a means of moving digging inequality in terms of living conditions, the other criteria do not progress.

Concerning unequal access to drinking water, it is found between households that draw from wells equipped and those that draw upon the sources, rivers or wells unimproved⁸.



Source : ROR data, author's calculations

On method of lighting, households mostly use oil or candles. In recent years, the use of a generator is becoming a criteria of inequality. Households who can afford to buy a generator, to find fuel (or purchase on-site rate high, moving in town) to make it work are seeing their living conditions improve. Not only do these households have televisions, radios, but also buy the cd and dvd.

For food security, vulnerable households are those who suffer a lean period in which the largest impacts are observed on the number of months of purchases of staple foods. In the west of Madagascar, the main dish is rice with fish, bread, meat (depending on cost and the season). The inequality is based on self-sufficiency in production for the consumption of rice, corn, cassava, sweet potato and potato.

Such as poverty, inequality of opportunities will be analyzed in their links with capabilities.

III.2. The inequality of potentiality in their relationship with the capabilities

In this section, we analyze the inequality of living conditions, the inequalities in the possession of physical capital, human capital and social capital, financial and inequalities in the perception of poverty.

Inequalities in physical capital, which tend to stagnate in time

On one hand, we can analyze the inequality of physical capital by gender. Indeed, households headed by women do that small parcel of land, because the household is single parent, but also small. The number of workers is very low, so that these households can not engage in major agricultural, even for livestock. These households do not livestock because they do not have enough assets for management.

On the other hand, the natural inequalities can be analyzed using land issues. These are households that have problems that landowners do not farm. These households do not cultivate the land, do not rice. Until 2005, there were 3.20% of the population who do not have rice fields, since all households in the observatory at least have a rice field. For other physical assets, inequality tends to stagnate. The percentage of households owning at least one plot of 12.70% in 2003 rose to 45% in 2004 and has remained around 50% until 2007. For the harvest of other crops or animal husbandry practice, inequality remains the same over the years.

⁸ The introduction of standpipes by Fokontany in 2005, all households in the observatory use them for drinking water supplies.

Inequality of human capital: young households, small size, low human capital versus household thirties and older, medium to large size with high human capital

Younger households are very small with low human capital. These are households whose head of household did not follow a school of which most of the time can neither read nor write: "this is not a choice, to be peasant farmers, but it's fate. We are obliged to work the land because we did not finish school "(Nantenaina Frederick, a young head of household)⁹. In contrast, households whose head of household has more than 30 years, medium size, household heads can read and write, even graduate. We can notice also that the net enrolment rate for children between 6 to 10 years in primary school tend to fall as from 90% in 2004 to 74% in 2007. The reasons for the shutdown of the school are referred to the cost of school too high, then the need for manpower for farm.

Households according to their unequal social and financial capital

Here are opposed the households with high and low social and financial capital. Indeed, households accumulate a series of assets in term social and financial. They are involved in a peasant association, who has loans through a combination of credit and participating in a network of mutual rice or other agricultural work. These are also the same households that carry out traditional ceremonies and often asked to turn in other traditional festivals. They regularly give or receive transfers.

Inequalities in the perception of poverty

In the perception of poverty, there are households who see their living standards deteriorate, hard living, who have unstable incomes and are satisfied or the education of their children or their health status, or their home, or their clothes. Then there are the households that have their same standard of living compared to last year: health, clothing, housing, education of children. Their incomes are roughly stable. They live even if their financial situation just happens to balance. Finally, there are households who see their situation improve. They are satisfied with their food, clothing, health, their housing and education of their children. Their incomes are stable and they manage to put money aside.

To fight against poverty, inequalities are useful. They are accepted and acceptable in a given society. But what criteria should take into account in the choice of these forms of inequality?

III. What criteria of equity?

According to the World Bank in 2006, "Equity and Development" to ensure equity is to reduce inequalities in opportunities. Then it is better to redistribute all levels and strengthen public services (education, health, drinking water, etc.). Among the Sakalava, it is "poor" when it is unable to honour his ancestors during traditional ceremonies. Telling ceremonies customary understood kill zebus. Over zebus are killed, the more one is "rich". The "poor" while those who remain do not have access to zebus (or do not lack the financial means to buy). So they enter a relationship of dependency Mpanarivo¹⁰ they "give" of the zebu, but in return they will have debt and a moral recognition to the Mpanarivo. These debts are passed on within the lineage from generation to generation because finally, people who have contracted the zebus often not afford to repay. This inequality between rich and poor is accepted in society Sakalava and moreover, if it does not exist, the community can meet any of social dysfunction.

The analysis of discourse, in semi-structured interviews with households of the observatory, provides elements of equity in local perceptions of inequality. Some households think that their standard of living is based on "their destiny". However, the stability of the standard of living is based on the number of assets in the household. As children participate in agricultural activities in the household, "children are our wealth." However, children from wealthy households are in school, which is not the case for poor households. "More effort is made, the better we live", this sentence sums up the sense of inequality and its manifestations. A head

⁹ In the semi-structured interviews

¹⁰ Rich owner zebus

of household refers to: "I have to make much effort to support my family ... we will make efforts to improve our lives" (Romain Gilbert), "we do a lot of effort for a good harvest and to have money "(Antoine Closterman), we have projects but these are the ways in which we lack. We will make efforts to improve our lives"(Botosakoa). According to the effort of each household, it can improve its incomes (increased agricultural production in order to convert them to monetary income), live in decent living conditions, accumulate a number of assets in order to save face shock. For example, depending on their savings (in monetary form or zebus), households choose their means of healing: "The more you can afford, the better it is cured" in order of preference to the hospital or health center, the traditional healer, self-medication. The inequality in travel then impacts on the choice of care: "When someone has the means to move, he has more choices for health care, go to the hospital or consult the healer of the village"¹¹. The same applies for loans to associations; the amount of loans is based on guaranteed. To cope with different shocks, when you have no savings, households borrow "on loan from the nuclear family, if not the means being used to the lineage or community."

Conclusion

The fight against poverty, inequality and regulation of equity research are three sets of conditions that are complementary in the preparation of a development policy that is sustainable in social terms. Take into account the social dimension of development application to focus on capabilities and to rethink the definition of poverty, vulnerability, and inequality within and between generations. In this study, poverty reflects deprivation or lack of capabilities.

For the Sakalava, the capability to perform traditional ceremonies is a "can do" to "be dignified", recognized and respected in society, while the Betsileo and other ethnic groups, being rich is an accumulation of potentiality through an increase in assets. Poverty is no longer viewed only in its monetary income or consumption, but extends to lack of capabilities in terms of self-esteem, health, education ... For example; live in dignity is as important as income. The rural population of Madagascar, particularly in the west, is more sensitive to the poverty of capabilities than the economic poverty of resources. Poverty is seen as a deterioration of ties to the ancestors and the community. The problem of poverty arises otherwise in accordance with the approach of Amartya Sen. Including through the mechanisms of the decentralization policy which is being implemented in Madagascar as in many countries. A lack of "opportunities" means that the poor will find it difficult to accumulate or to obtain basic resources necessary to develop their capabilities. Socially sustainable development becomes a priority in the implementation of this policy to avoid failures or social exclusion. Such a development "guarantees for present and future generations the improvement of welfare (social, economic or ecological) for all, through the pursuit of equity on the one hand, in the intragenerational distribution of these capacities and the other, in their transmission "(Ballet, Dubois, Mahieu, 2005).

¹¹ To go to the hospital, he must travel either on foot (1:30 to 2 hours walk) or by taxi-brousse (20 to 30 minutes) or cycling (less than one hour)

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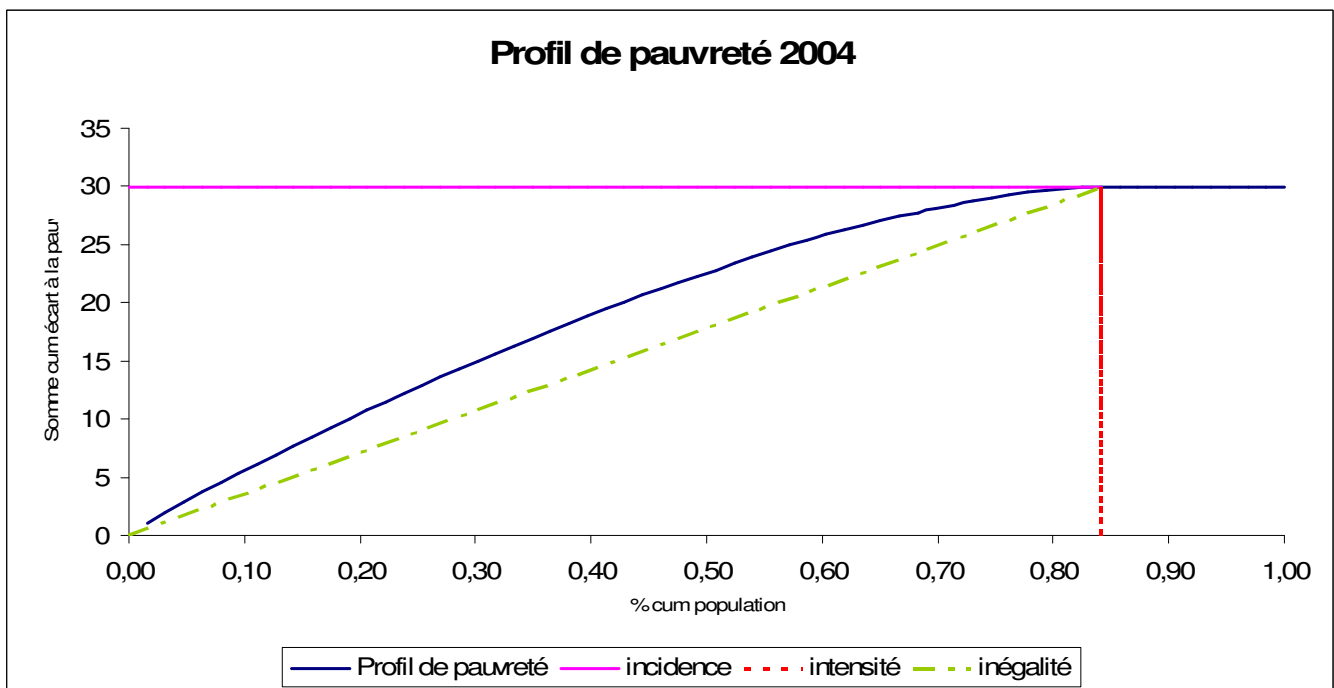
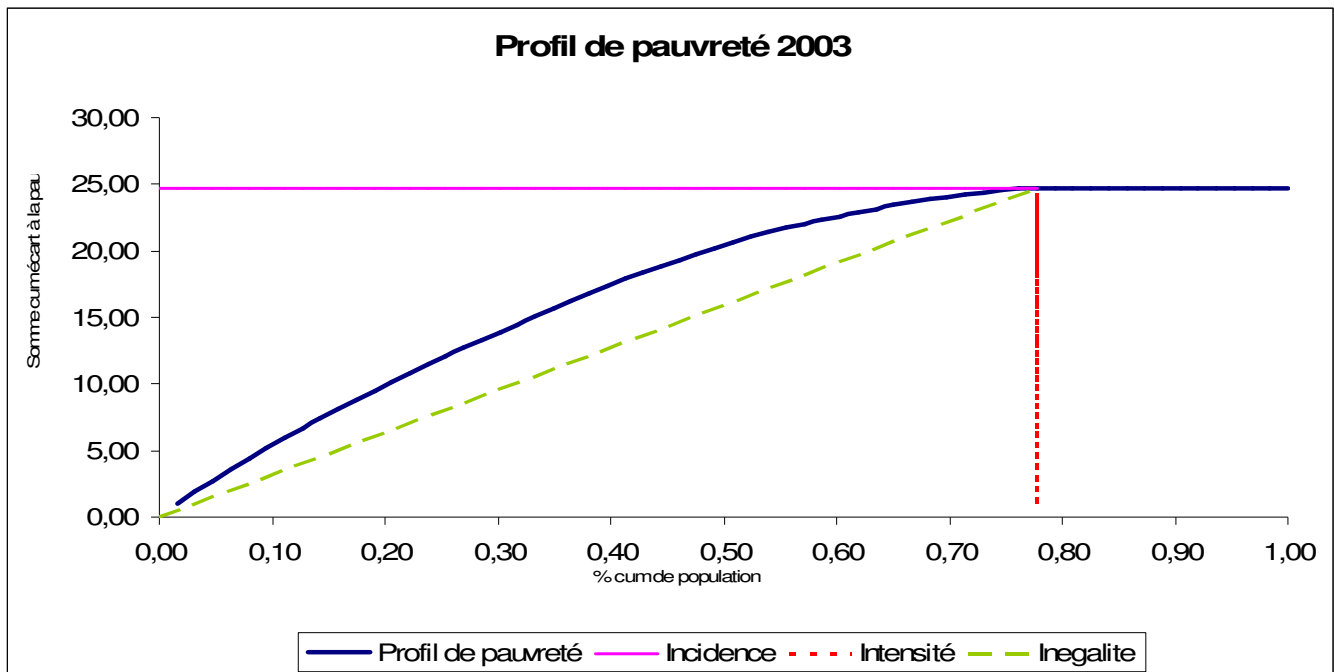
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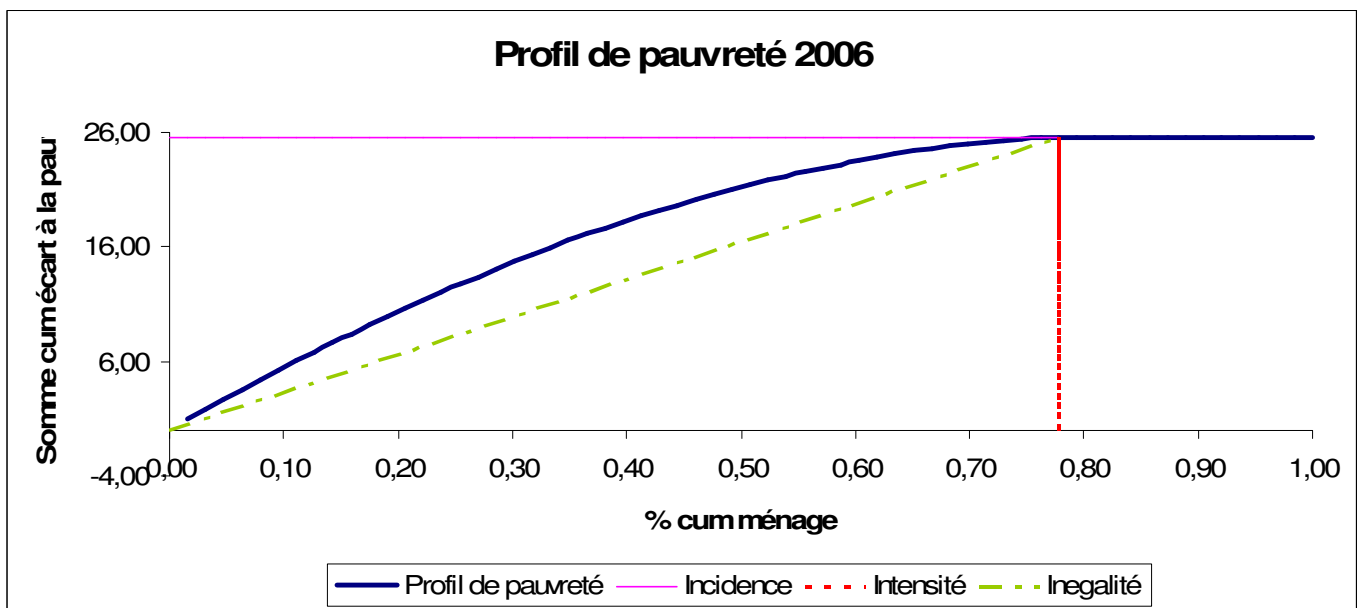
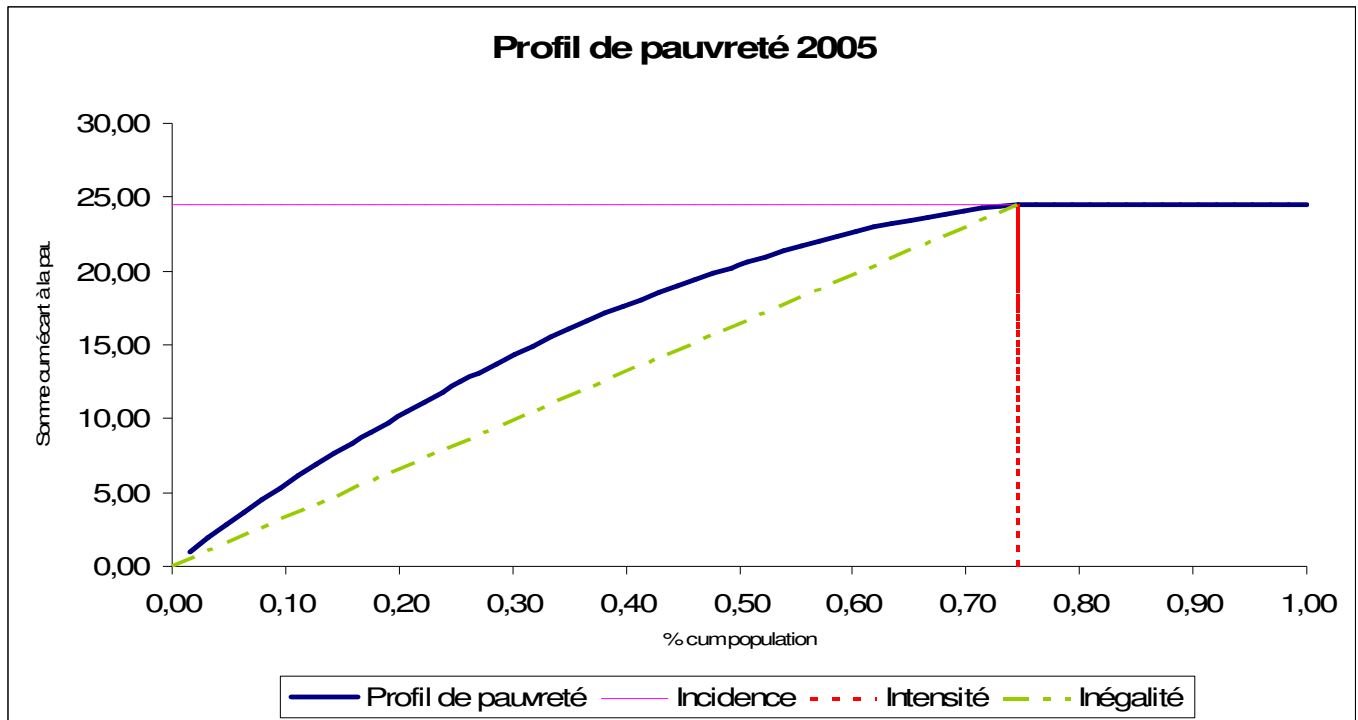
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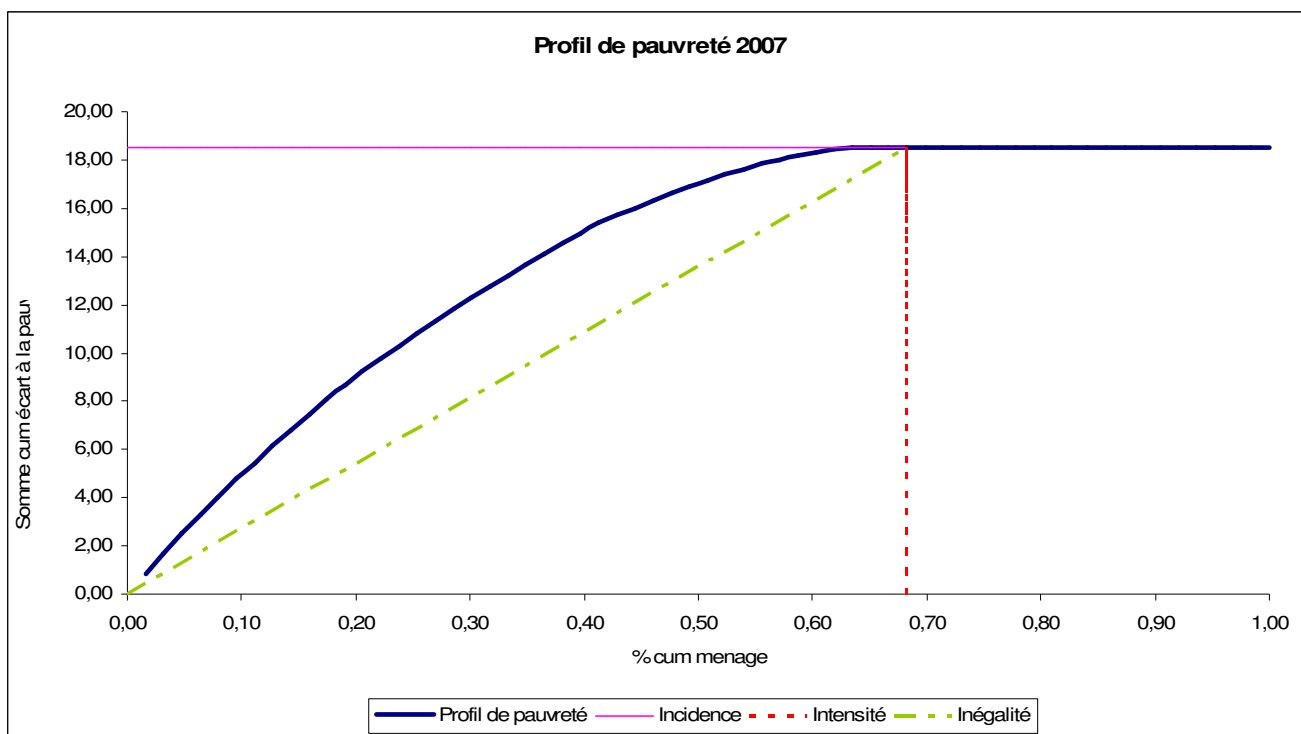
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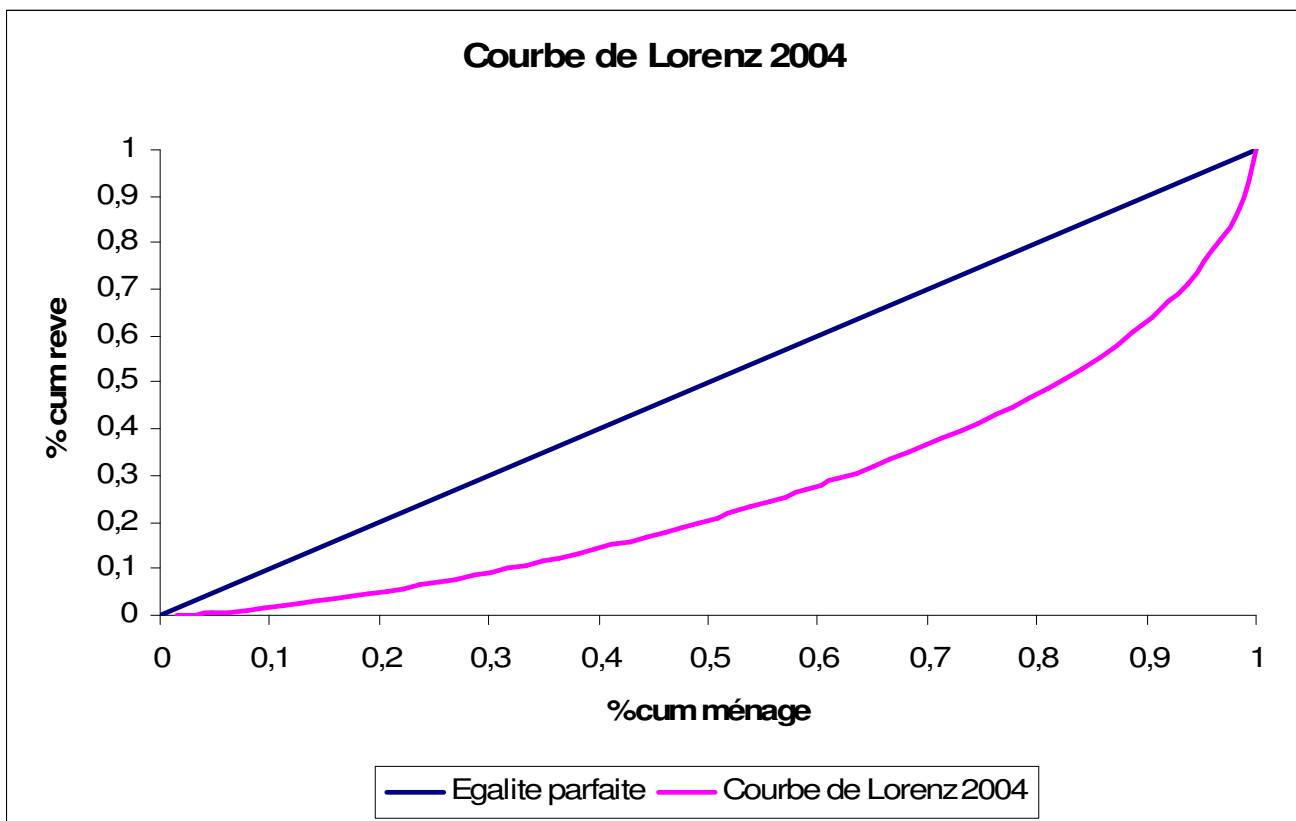
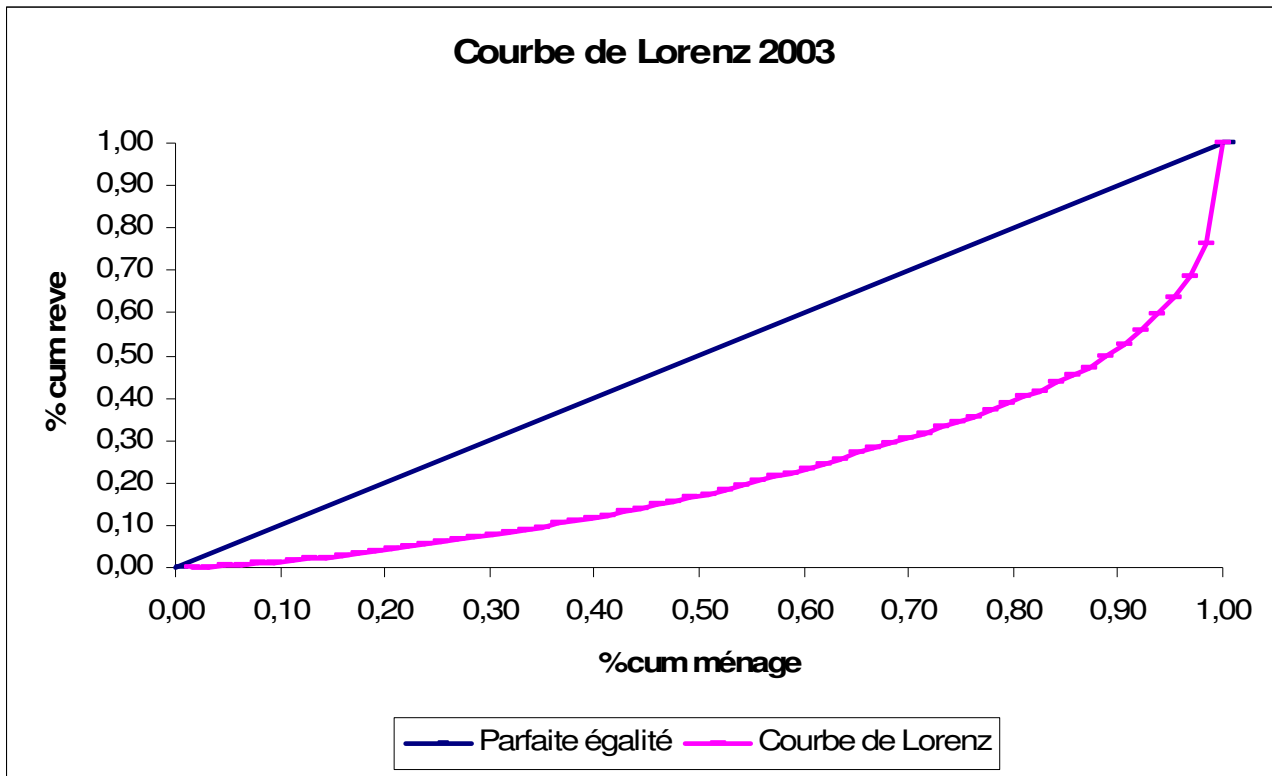
Annex 1: The profiles of poverty by year

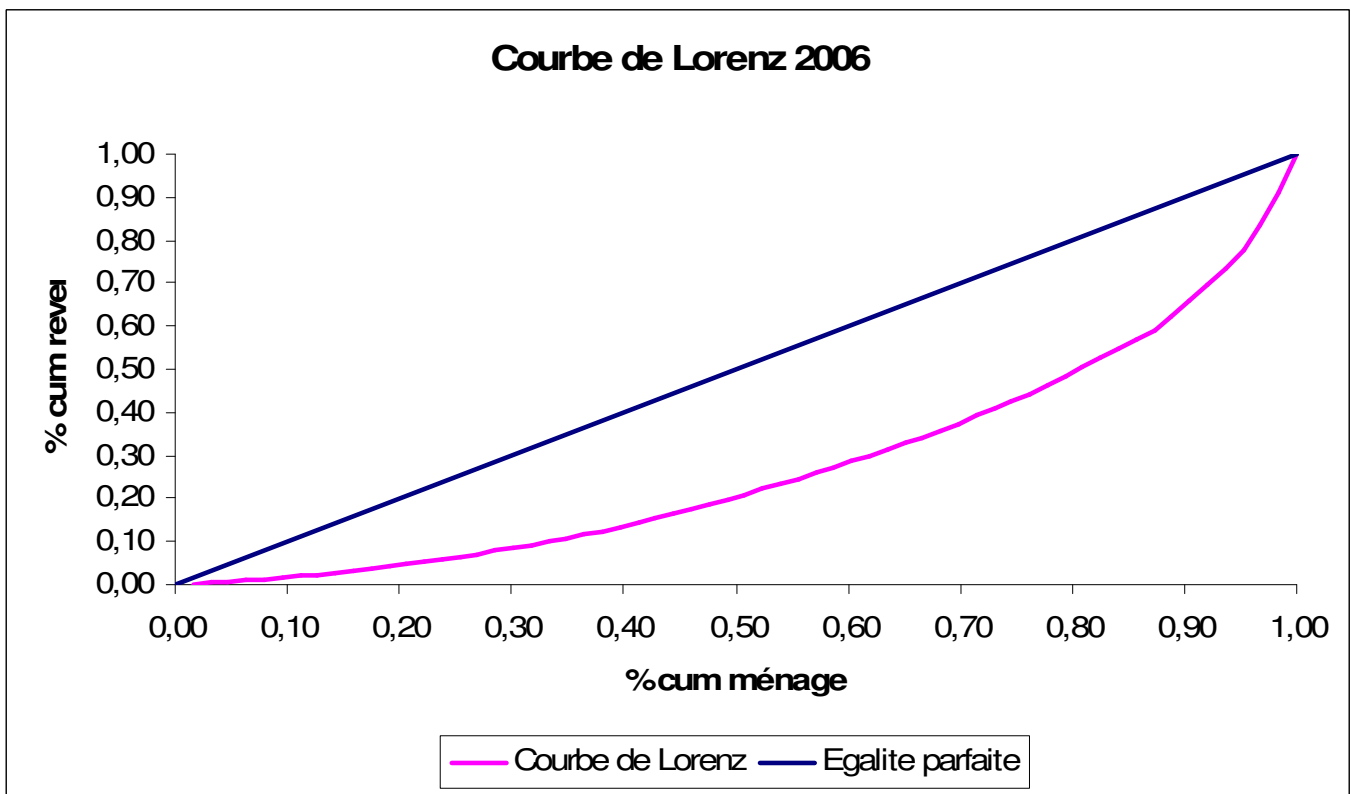
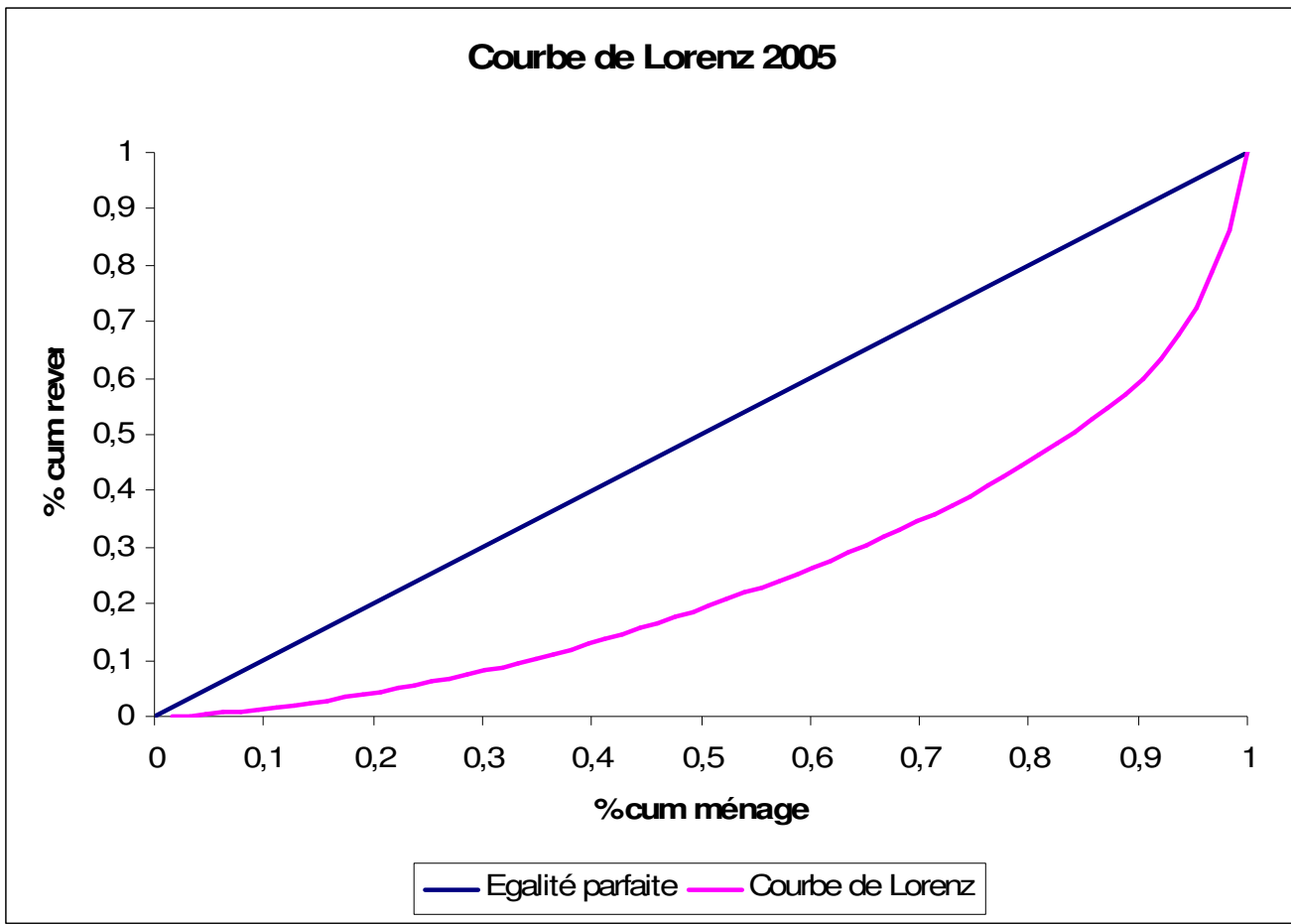


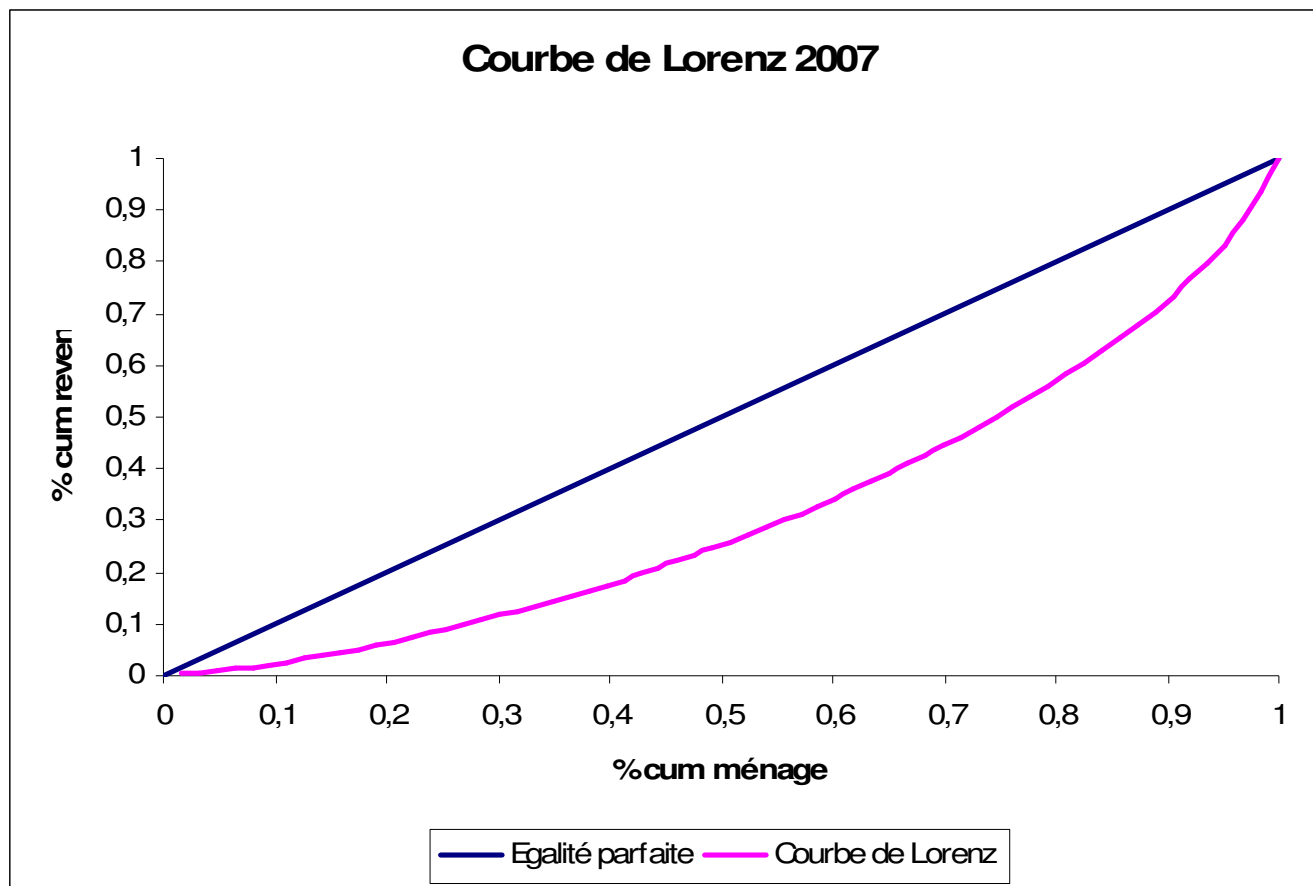




Annexe 2: Lorenz curves for years







Annex 3: Profile of modalities of the variable on the factor analysis based on the results of the typology

Modality 2 "Type B"

Question	N°	Modalité	Effectifs	Ecarts	Khi2	PEM	Test Khi2 local
15. CE7A_EVOLUTION NIVEAU DE VIE	2	EVOLUTION NIVEAU DE VIE_IDENTIQUE	12	6	4,829	65	...
16. CE7B_EVOLUTION MENAGES DU VILLAGE	2	EVOLUTION MENAGES DU VILLAGE_IDENTIQUE	9	5	9,438	57	...
24R1. Classes sur V1_CHAISE	1	PAS DE CHAISE	14	6	5,344	86	...
27R1. Classes sur V4_MACHINE A COUDRE	1	PAS DE MACHINE A COUDRE	15	6	4,35	100	...
55. PBA_PARTICIPATION ASSOCIATION PAYSANNE	2	PARTICIPATION ASSOCIATION PAYSANNE_NON	14	7	5,936	87	...
64. PP1_EPARGNE	2	EPARGNE_NON	11	5	4,28	56	...
66R1. Classes sur ACTIFS	1	au plus 2 actifs	14	6	4,803	86	...
67R1. Classes sur UC	1	UC_Moins de 3,4	14	9	13,267	90	...
68R1. Classes sur TAILLE	1	petite taille	14	6	5,344	86	...

Modalité 1 "Type A /Type C"

Question	N°	Modalité	Effectifs	Ecarts	Khi2	PEM	Test Khi2 local
7. CE1B_SITUATION ALIMENTAIRE	3	SITUATION ALIMENTAIRE_SE DEGRADE	11	6	5,817	48	...
8. CE2A_SATISFACTION ALIMENTS	2	SATISFACTION ALIMENTS_NON	14	6	5,497	68	...
18. CC1A2_CATACLYSME CULTURE	3	CATACLYSME CULTURE_BE AUCOUP DE DEGATS	13	5	3,236	56	...
36R1. Classes sur SA2A_AUTOSUFFISANCE RIZ 1	1	AUTOSUFFISANCE RIZ1_- 6 MOIS	15	7	6,578	78	...
42R1. Classes sur SA3_MOIS ACHATS ALIMENTS DE BASE	2	ACHATS ALIMENTS DE BASE_+3MOIS	16	9	10,423	90	...
67R1. Classes sur UC	3	UC_5,4 et plus	11	6	6,556	48	...
68R1. Classes sur TAILLE	2	grande taille	15	7	5,263	77	...

Modalité 4 "Type D"

Question	N°	Modalité	Effectifs	Ecarts	Khi2	PEM	Test Khi2 local
42R1. Classes sur SA3_MOIS ACHATS ALIMENTS DE BASE	1	ACHATS ALIMENTS DE BASE_-3MOIS	14	5	3,438	84	...

Modalité 5 "Type E"

Question	N°	Modalité	Effectifs	Ecarts	Khi2	PEM	Test Khi2 local
8. CE2A_SATISFACTION_ALIMENTAIRES	1	SATISFACTION_ALIMENTAIRES_OUI	13	5	3,506	84	...
9. CE2B_SATISFACTION_VESTIMENTAIRES	1	SATISFACTION_VESTIMENTAIRES_OUI	11	5	4,72	64	...
24R1. Classes sur V1_CHAISE	2	AU MOINS UNE CHAISE	13	6	5,421	86	...
27R1. Classes sur V4_MACHINE A COUDRE	2	AU MOINS UNE MACHINE A COUDRE	12	6	6,701	76	...
30R1. Classes sur V7_VELO	2	AU MOINS UN VELO	11	5	4,72	64	...
37R1. Classes sur SA2B_AUTOSUFFISANCE RIZ 2	2	AUTOSUFFISANCE RIZ2_4MOIS	13	5	3,506	84	...
42R1. Classes sur SA3_MOIS ACHATS ALIMENTS DE BASE	1	ACHATS ALIMENTS DE BASE_-3MOIS	13	5	3,125	83	...
53. S3A	3	DERNIERE CLASSE_SECONDAIRE2	8	5	11,44	84	...
55. PBA_PARTICIPATION ASSOCIATION PAYSANNE	1	PARTICIPATION ASSOCIATION PAYSANNE_OUI	13	6	4,877	85	...
71R1. Classes sur RDB_2004	4	QUARTILE 4	12	8	14,063	79	...