CAN ECONOMIC GROWTH BE PRO-POOR IN MOROCCO?
THE NO-MONETARY APPROACH
EL BOUHADI, Abdelhamid
ELKHIDER, Abdelkader
KCHIRID El Mustapha,

Abstract
This paper focuses the understanding for the poverty phenomenon in Morocco. Indeed, it is strongly based on the assessment and analysis of economic growth on the poorest people by using the calculation of poverty indexes as FGT, the decomposition of changes in the level of poverty, in the income and inequality factors, the construction of a pro-poor growth index and the growth incidence curves. The multidimensional approach was being adopted in order to assess and analyse the pro-poor growth in Morocco. It allows explaining the poverty by using the primary indicators of no-monetary aspects of households living conditions, which will give us the poverty measurement in Morocco during the period 1987-2004. This approach is based on the construction of well-being composite index (WCI), which is given by the statistical method of multiple correspondence analyses (MCA). The results obtained within the frame of multidimensional approach are not consistent with those obtained by the monetary approach, given in the literature. In addition, we have note that the poverty in Morocco is mainly a rural phenomenon and that the situation of the poor has deteriorated mainly because of greater inequalities in this area. In regard with the policy recommendations, it is necessary to target the most affected people by providing adequate economic and social policies, which should include a pro-poor growth strategy. This action seems very urgent. Also, a policy to fight against poverty must take into account the difference between areas and provides more resources to the rural poor people. Indeed, it seems that the bad living conditions in the Moroccan country-side led to the poverty exacerbation in the urban area, mainly due to the rural depopulation and the peasants land abandonment.

Keywords : Poverty; Pro-poor Growth; FGT Index of Poverty; Multidimensional Approach; well-being composite index ; Growth Incidence Curve; Social Development Policy; Morocco.

1. Introduction
The poverty phenomenon concerns in the world more than a billion persons. 95% of this population lives in the Third World Countries. In Morocco, 15% of the population is poor and 25% is considered to be economically vulnerable and living under precarious and fragile conditions. Almost 70% of this poorest population lives in the rural area. Some international organizations as the United Nations have often sounded the alarm to raise awareness among policy makers around the world to fight against poverty and try to save the future generations from the scourge of poverty. Under the Millennium Declaration of the United Nations, particularly within the “fundamental goal to eradicate extreme
poverty by 2015”, the UNESCO program (2002-2007), is considered as a big attempt to contribute in this effort. Similarly, the World Food Program (WFP) tries to feed at least 1 million poor people per day in the world.

Thus, within the framework of the fight against poverty, Morocco conceived and applied a participative, ascending and Multi-Sectoral-based approach taking as mark the human development, joining globally within the framework of “National Initiative of Human Development » program implemented in 2005. This last one is a “great exploit” in order to improve the life conditions of population, in particular in the rural area.

In the simple terms, poverty is not an inevitable phenomenon, but a regulator tool of socio-economic equilibrium. In the other words, poverty is more than the simple result of an insolvent demand that the market cannot theoretically take into account. When the food prices were highly increasing in the world, as we can observe it during the last decade\(^a\), the poorest population has become more and more fragile and the food equilibrium became increasingly precarious.

If we consider the past history of Morocco, we can observe a high rehabilitated tribal solidarity which has been transformed, under the French Protectorate Power, in a sort of national solidarity, based on the public labour programs named “National Solidarity”\(^b\). It was also partly responsible of the development of education and health systems, so far nonexistent. In addition, exogenous shocks, including bad climatic conditions (long period of drought in particular) have led the government in the 1960s to implement a type of popular labour, called national promotion works. It can therefore be regarded as a first post-independence fighting policy against poverty under its monetary dimension in Morocco. In the light of this first observation, all theories that have succeeded at that time were particularly monetary or one-dimensional. It has generally been initiated by international financial institutions (the World Bank and IMF). In Morocco, the phenomenon of poverty is driven by two factors: the first relates to the demographic factor, it is linked to the religious and socio-cultural factors (the baby boom of 1960 and 1970 decades) and the second is largely related to socio-economic policy\(^c\) and Structural Adjustment Program during the 1980 decade. The level of economic development and of democracy (in terms of economic and social equity and in terms of fundamental rights) determines those of poverty\(^d\).

The objective of this paper is to explain the poverty phenomenon in Morocco since 1987 until 2004 while emphasizing the analysis and the valuation of the economic growth impact on the poorest population. Our study focuses on determining the poverty extent by using the multidimensional approach, based on the Well-being Composite Index (WCI) construction.

\(\text{\footnotesize \(a\)}\) According to the World Bank statistics, the price of cereals has increased by 181% in three years ago. The all Food prices, meanwhile, rose by 83% over the same period. 
\(\text{\footnotesize \(b\)}\) This policy is a sort of “National Mutual Aid” which is based on the social public action. Considered, since its creation in 1957, as a unifying organization of social action in Morocco, the “National Solidarity” is sought today to support social policies, including the National Initiative for Human Development (NIHD).
\(\text{\footnotesize \(c\)}\) Such as unemployment, the lack of competitiveness of Moroccan economy has worsened the social inequalities.
\(\text{\footnotesize \(d\)}\) The additional exogenous factors such as the bad weather conditions or those related to the higher world food prices shouldn’t be neglected.
Indeed, the aim of this paper articulates around four key-points. In a first point, we will introduce a progressive and descriptive study of poverty in Morocco since 1985 up to 2004. In a second point, we will try to measure poverty in Morocco. This measurement will be made by using the Asselin (2002), and Ayadi and al. (2006) formulations. In a third point, we will try to assess the economic growth impact on the poorest people through the construction of pro-poor growth index between 1985 and 2004. Finally, in conclusion, we will show briefly the main found results, and we provide some of social and economic policy recommendations.

2. Poverty in Morocco: some reasons and the recent tendency
In order to measure the poverty, a most of theoretical and empirical works adopts the monetary approach by using income (GDP or GNP per capita), or household consumer expenditures. By referring to the different studies during the 2000 decade, this approach occasioned, henceforth, virulent reviewers. It has been sharply criticized. The monetary approach is subject to incomplete vision, because it cannot take into account the individual well-being. Nowadays, the concept of poverty is not absolute. The absolute poverty cares exclusively of discerning the inability of an individual or of a household to meet correctly its vital conditions, i.e., necessary needs. The relative poverty reflects the inequality degree between two levels or two life situations. As specified by drafters of OECD report (2006), “is considered poor the one without access to goods and services, consumed by the great majority of his fellow citizens.” Indeed, the objectivity of this review is timely stipulated that a strong economic growth does not automatically reduce the poverty and does not occasion a sustained level of social and human development in a country. Besides importance of monetary variables, the well-being depends on the other variables as housing or housing conditions, food, education and health, etc.

In Morocco, since the independence until the beginning of 1980 decade and since 2003, the government has been continued to take part in the some specific social policy in order to fight against poverty. Indeed, the emphasis is carried on:
- The policy of public education, particularly on the primary and secondary education in order to raise education level of young people\textsuperscript{e}. The first objective of that is to fight against illiteracy in rural area;
- The health policy through the creation of some hospitals and public clinics\textsuperscript{f};
- The subsidizing policy of some goods and public services through the set-off or compensation system\textsuperscript{g};
- The launching policy within the several programs in order to assist needy families in the context of the NIHD;
- The policy of economic development and social infrastructures, and voluntary organizations. The aim of that is to promote employment, creation of cooperatives and very small companies;
- The policy development of social security services: the National Social Security Fund (CNSS), the Mandatory Health Insurance (AMO), etc. have been created.

\textsuperscript{e} This policy will lead further by the establishment of several academic and professional centres, throughout the Moroccan Kingdom.
\textsuperscript{f} They are not, however, still conform to WHO standards.
\textsuperscript{g} This system weighs heavily on the Moroccan fiscal budgeting; it benefits more to the richest than the poorest population.
Based on the some official reports, published by the World Bank, the High Planning Commission (HCP) and the Directorate of Studies and Financial Forecasting, attached to the Finance Ministry, we briefly describe the phenomenon of poverty in Morocco since 1985 until today.

2.1. Poverty in Morocco: an overview

In the simple meanings, the poverty can be defined as a situation of the lack in well-being in both quantitative and qualitative sides. This requires that a person or group of persons should look for improving their living conditions, or at least survive. Among the causes of poverty in Morocco we can mention those linked to the existence of families with large number of children, in which just one member works, often in precarious conditions\(^h\).

In addition, to refer to the LSMS\(^i\) database, it should be noted that the increase of poverty in many countries, including Morocco, is intimately linked to mass unemployment\(^j\).

A simple observation of poverty mapping in Morocco suggests us some concentration of poor people in the Centre (Meknes-Tafilalet), North Centre Region (Taounate Fez-Taza-Al Hoceima) and Northwest Region (Kenitra-Sidi Kacem-Ksar El Kebir). In the urban area, the poor people occupy jobs in building and in sector of services, particularly in the informal sector\(^k\). In the rural area, the poor people work, in general, in the agriculture sector, in which the precarious and sensitivity depend largely on the random climatic conditions.

2.2. Poverty in Morocco: some official reports

It is clear that the phenomenon of poverty in the case of Morocco was in a rising trend during the 1990s. The effort made by the government to improve the population living conditions has benefited to the rich people at the expense of the poorest population.

The social progress was not sufficiently equitable across the country. Disparities between regions, genders and different groups in the society are increasingly evident. The few good segmented results (increase in life expectancy, reduced mortality, etc.) were made, but the poverty has not really decreased. Indeed, despite the magnitude of public expenditure, social infrastructure is less developed.

For example, the health plans are often subject to two different speeds: the poorest people use the public health while the rich people opt to the private health.

Regarding to the public grants, we can note the following observations:

- The rich people are considered as having a better access to the health services;
- In the rural area, both rich and poor populations use public health centres. In short, we can say that the social infrastructure is less developed in Morocco.

\(^h\) According to the World Bank Report (2001), in Morocco, the poverty rate passes from 3% for families which the head member is educated to 23% for families which the head member is not educated. This situation resulted at a high vulnerability level to sickness and to loss the employment.

\(^i\) Living Standards Measurement Study. There are surveys to measure living standards achieved by the World Bank since 1980.

\(^j\) It is caused by the lack of growth and the insufficient diversification of the all national economics.

Thus, the World Bank report in 2001 states that, despite progress in this field, the system health remains fragile. The performance of this system is largely below to the aspirations of poorest population. That is why the drafters of this report give the idea to reorient the social security system to the poorest population. The report recommends also strengthening the mechanisms for social assistance, to maintain the schedule of public works projects (“Promotion Nationale”) and the social assistance. Similarly, referring to the results of the consumption survey, carried out by the HCP in 2000/2001, we find that the increasing level of income inequality has been the main reason of the worsening level in poverty. Briefly and through a reading of the survey results, we can, indeed, put forward two important things:

- The level of education is closely linked to the poverty risk. The educational level of a head-family plays a major role in improving the living conditions of poor households. Despite the efforts provided over the past ten years, in the field of education (the fight against illiteracy, schooling for children in rural areas, particularly that of female gender, etc.), the illiteracy rate remains relatively high. According to the HCP survey (2000/2001), 45% of the population can neither read nor writem.

- The housing industry remains a major element in the socialization at work. The fight against poverty requires a policy of adequate public support for social housing. In the recent years, we see a substantial effort of government to increase the number of social housing. But the supply and sanitation of this sort of housing, security areas and environmental protection is still deplorable.

Furthermore, it is clear that two major problems remain. They stem from the fact that:

- The aggregate statistics mask glaring imbalances between, on the one hand, urban and rural areas and, secondly, between the male and female;

- The performance of the international Moroccan economy is overestimated. The only observation of the level of economic growth during the 1990s indicates a large shortfall competitive, compared to other countries with the same level of development.

With respect to the major findings, demonstrated in the World Bank Report of 2001, we note that the HDI is below the average of MENA countries (0,582 against 0,662). We also note that the human poverty index (HPI), in Morocco, is the highest in the region (39,2 against 25,3).

### 2.3. The recent evolution of poverty in Morocco

In the Moroccan context, poverty is intimately linked to the economic vulnerability, social inequality and job insecurity. Indeed, one of the main factors explaining the resurgence of poverty in Morocco, the last 20 years, is the weak performance of agricultural sector and its lack of diversification. It suffers from disadvantages associated with its narrow and two-tier structure. Its productivity is quite modest. It suffers from the random weather conditions etc.

The industry sector is also beset by several obstacles. Considered less diversified, it suffers from the lack of international competitiveness.

#### 2.3.1. The findings of the study on 50 years of human development in Morocco

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m See for the most details, the HCP Survey Report on the Moroccan Households’ Consumption, 2000/2001, P. 19.
According to the 50 years report of Human Development in 2005, the progresses in the social field are not homogeneous: “the performance in terms of access to the public services raise the social problem of equity, disparities, in particular those with “socio-space side” are large.”

The report raises faults in health system and social welfare system by mentioning that progress in this sector is mitigated. The sector remains incomplete, doesn’t benefit from the equal rights and chances. In fact, that situation leads, probably, to the problem of its long-term viability. According to that report, it is time to put the emphasis on subsidies with productive character to promote the autonomy of the poorest people. The report names, for instance, the successful policy of microfinance.

2.3.2. The findings of 2007 World Bank study

In the same way, in a recent study, prepared by the World Bank in 2007, Morocco recorded rather modest projections as for its capacity to fight against poverty: “the frequency of ascending mobility among the poor households (37%) is double among the no-poor households (19%), and 20% of the poorest people were withdrawn from poverty. In parallel, 52% of the studied households sample started in poor and remained poor, whereas 27% started and remained no-poor. 14% only of the households passed on a higher level and 7% than a lower level, which suggests a modest progress.”

In a pithy sentence, the study shows that poverty is a multidimensional phenomenon. As stated, this leads to various forms of exclusion in terms of “services, social networks, and power, and that the well-being depends not only on the income but also on the human dignity and feeling inclusion.”

3. The poverty measurement

It is about a measurement of poverty which gives us an overview of the multidimensional approach. Indeed, we will build the WCI, based on the primary indicators.

3.1. Multidimensional measure of poverty based on WCI

To build the WCI, we adopt the formulation which given by Asselin, L-M. (2002) and Ayadi, M. et al. (2006), which considers K primary indicators that reflect the living conditions of the household, based on the possession of consumer durable goods (radio, TV, refrigerator, stove, telephone ...), on the housing conditions (water, toilet, type of housing, soil quality, number of persons per room ...), and finally on the level of health and education (number of clinics, education of women,...). The information contained in these indicators is summarized in a single composite index, denoted by:

\[ A_i = \sum_{j=1}^{K} \lambda_j I_{ij} \]  
(1)

In equation (1), \( I_{ij} \) means the primary indicator \( j \) (\( j = 1 \ldots K \)) for household \( i \) (\( i = 1 \ldots n \)); and \( \gamma_j \) represents the weight assigned to indicator \( I_{ij} \) in the calculation of \( A_i \) WCI household \( i \).

It should be noted that most empirical work on the construction of WCI is based on household surveys. The primary indicators used to calculate the index are not encoded in an uniform way. This situation arises when some indicators are coded in binary (two procedures are coded 1 or 0 depending on whether the household has or has not considered certain property or goods). The other indicators are represented by several
terms (for example, the water source or type of toilet is represented by more than two terms). To solve the problem posed by coding these variables, it is necessary to transform all indicators of binary variables so that each of the terms will be represented by a binary dummy variable (you must create as many variables as modalities).

With this new reformulation, the WCI takes the following:

\[ A_i = \frac{\sum_{k=1}^{K} \sum_{j=1}^{J_k} W_{jk}^k I_{ijk}}{K} \]  

(2)

In equation (2), \( K \) denotes the number of primary indicators; \( J_k \) represents the number of modality indicator \( K \); \( W_{jk}^k \) represents the weight given to the modality \( jk \); \( I_{ijk}^k \) denotes a binary variable coded as 1 or 0 depending on whether the household has or not \( i \) type 1; and \( A_i \) : represents the \( i \) management average weight of the binary variables.

3.2. The Empirical study

The objective of this point is to conduct an empirical study to analyze the evolution of poverty between 1987 and 2004 in Morocco, both in urban and rural areas.

3.2.1. Description of Data

The used data, in this work, from to DHS (Demographic and Health Survey). Thus, in order to build the WCI and FGT indices in the Moroccan case, we have used survey data in 1987, 1992, 1995 and 2004. The attributes that we use here will be classified according to the three dimensions: possession of durable goods, housing conditions and human capital (literacy and education). This choice is especially justified by the availability of these elements in the databases of the four surveys. However, we could not include the educational and literacy for all studied years because of the lack of information on certain investigations.

3.2.2. Statistical methodology

As a reminder, the formulation to the calculation of the WCI is as follows:

\[ A_i = \sum_{j=1}^{K} \lambda_j I_{ij} \]  

(3)

In equation (3), \( A_i \) represents the WCI for the household, which we are trying to calculate; \( I_{ij} \) means the primary characteristics \( j (j = 1 \ldots K) \) for household \( i (i = 1 \ldots n) \) and \( \gamma_j \) represents the weight assigned to indicator \( I_{ij} \) in the calculation of \( A_i \) WCI household \( i \).

The statistical method seems to be appropriate to calculate the weights of the primary indicators, \( \gamma_j \) is the method of multiple correspondence analysis (MCA). Indeed, the basic idea behind the analysis of MCA is a powerful method for extracting factors when has only nominal variables or categories. In addition, it should be noted that a factor summarizing the composite multidimensional indicators is defined as a set of categories for the various elements of the population, given by:

- Calculating profiles of units in the population relative to their primary indicator;
The application to these profiles of weights given by the scores for each indicator represented by the first factor (major axis) obtained by the MCA.

Generally, the construction of the composite index of well-being is given through five steps:

*Step 1:* is to select from a survey or census variables directly linked to welfare;
*Step 2:* is to sort the binary variables (0/1) in ordinal or nominal response and multiple choices;
*Step 3:* is to determine the primary indicators in forming a $K$, said disjunctive table burst with the multiple-choice variables taking each modality as a binary variable (0/1);
*Step 4:* is to use coding optimal (optimal scaling) to extract the factors of standardized discrimination;
*Step 5:* is to use these as weights of the primary indicators. This results in a composite index of well-being for each household.

As we have stated before, we kept the same coding of binary variables. Whereas for ordinal variables in several ways, we have transformed into binary variables (each form is a binary variable: for example the level of education that accepts three types: primary, secondary and higher education. We have, for subsequently split into three variables (primary 0/1, secondary 0/1 and above 0/1). This enabled us to achieve ultimately a disjunctive matrix composed of 0 and 1 and whose number of lines is the number of households in the sample and the number of columns is the number of binary variables obtained.

### 3.2.3. Results of WCI calculation in the national level, urban and rural areas

Table 3 (see the Appendices) provides some indicators of position and dispersion for the WCI, calculated on the basis of the factorial method called optimal scaling, at the national level, urban and rural areas from 1987 to 2004.

Observation of these indicators allows us to show an improvement in the index, especially the period 1987-1992 and 1995-2004 reflects the evolution of living standards of households in Morocco, as measured here by WCI. However, it should be noted that these results can be interpreted with caution due to the problem of the number of terms, variables or attributes that we considered in the investigation. The error risk of interpretation between the 1987 survey and the others can exist. To minimize this risk, it seems useful to take the same indicators for all surveys.

### 3.2.4. Poverty measurement by FGT index

It is easy here to conduct an analysis of poverty during the period 1987-2004 by adopting a multidimensional approach, based on the previously WCI which is already calculated.

Like the majority of theoretical and empirical work devoted to the study of poverty, it is necessary first to define a threshold below in which any individual or household could be considered poor. Referring to this work, particularly Ayadi, M. et al. (2006), we selected a threshold of relative poverty which represents 40% of the median of WCI distribution:

$$Z = 0.4 \times \text{WCI}_{\text{average}}$$  \hspace{1cm} (4)

In equation (4), the WCI denotes the value of the composite index of well-being, previously calculated for each survey (1987, 1992, 1955 and 2004) using the factorial method; and $Z$ represents the selected poverty line for each period.
Based on the poverty line defined in the previous relationship, we will analyze the extent of poverty in Morocco from 1987 to 2004, nationally and in the urban and rural areas. Table 4 (see the appendices) summarizes our estimates of the poverty incidence according to the FGT family. In fact, we have found that:

- The values of three selected indices (FGT0, FGT1 and FGT2) for the four surveys are relatively high compared with those published officially by the Department of Statistics, by the Director of Studies of the Ministry of Finance, World Bank and especially with those obtained by Abdelkhalek Touhami (2005) and Mohammed Douidich (2008) on the basis of the monetary approach. It should be noted, moreover, that this is common to most work adopting a multidimensional approach not based on the monetary WCI. This difference in results found between the monetary approach and non monetary approach is due by Ayadi, M. et al. (2006) to:
  - The FGT poverty indices used by these two approaches which use different units of measurement and different poverty lines;
  - The period of surveys used by these approaches are different. The monetary approach is based, as we have said, on national survey carrying on the household’s living standards in 1984-85, 1990-91, 1998-99, 2000-01 and 2004 while the multi-dimensional approach is based on database 1987, 1992, 1995 and 2004.

To make a comparison of results obtained by these two approaches, these authors suggested standardization.

- At the national level and between 1987 and 2004, we find that the FGT0 poverty index has been fallen significantly since the impact of poverty is estimated at 17,42% in 2004 to rise to 18,6% in 1995 and to 21,26% in 1987. This decline in poverty appears to be explained in improving the living conditions of households throughout this period as welfare indicators used to calculate the WCI. However, there was a slight increase in the incidence of poverty at national level of 2,6% between 1992 and 1995 due mainly to poor economic climate and Morocco experienced between these two periods. Furthermore, it should be noted that this period coincides with the last stage of the SAP, very painful and burdensome social legislation. It justifies the increase in the incidence of poverty between 1992 and 1995, i.e., degradation of living conditions of households, measured by the WCI between these two periods;

- In mean, we find that the disparities between urban and rural areas are striking. The three indices have declined in both urban and rural areas and more remarkable in urban areas. However we find that the level of poverty is greater in the rural areas: 24% in 2004 instead of 30% in 1987. In the urban area, it is only 9% in 2004 and 16% in 1987. Poverty remains mainly a rural phenomenon (poor weather conditions and droughts recorded during this period).

4. Pro-poor growth in Morocco from 1987 to 2004

Our aim in this section is to understand the poverty phenomenon in Morocco, by assessment and analysis of economic growth impact on the poor people. Indeed, we will adopt a multidimensional approach based on the WCI already built in the previous section.

4.1. Evaluation and analysis of economic growth impact on the poor people through the construction of the growth incidence curve (GIC)

Our objective in this section is to understand the poverty phenomenon in Morocco by using the GIC analysis.
The GIC building, as proposed by Chen and Ravallion (2003) is aimed to measure the growth rate of income (consumption) per capita for each percentile along the curve of income distribution or any other indicator of individual’s well-being between two periods t and t-1:

\[ g_t(p) = \frac{y_t(p)}{y_{t-1}(p)} - 1 \]  

In equation (5), \( g_t(p) \) represents the growth rate of income (consumption) and \( y_t(p) \) is the \( p^{th} \) percentile between \( t-1 \) and \( t \).

It should be noted that the GIC should be on the x-axis, the percentiles of the population (ranked 1 to 100 by income) and the y-axis the rate of annual growth in income per person (or household) the corresponding percentile.

The GIC is estimated on the basis of the micro-data of households; it can indicate the extent to which growth is pro-poor or not Isabel Günther et al. (2007):

- There is a pro-poor growth in absolute terms if growth rate \( g_t(p) \) is positive to the poverty line \( z \);
- Also, there is pro-poor growth in relative terms if the slope is negative, i.e. where the growth rate of lower percentile (the poor) is higher than those of higher percentiles.

In order to further refine of poverty analysis in Morocco, especially those of relationship between economic growth and poverty in Morocco for the period from 1987 to 2004, we are going to focus on the GIC of Ravallion and Chen (2003).

4.2. Analysis of the pro-poor growth for the period 1987-1992 in national, urban and rural areas.

Graphs 5, 6 and 7 (see the appendices) show the CIG in Morocco 1987-1992, based on WCI at national level, in both urban and rural areas.

With the observation of these three curves implications of growth for the period 1987-92, we can draw the following conclusions:
- At the national level, economic growth is pro-poor in absolute terms throughout the study period because the growth rate \( g_t(p) \) are all positive, as evident from figure 5 \( (g_t(p)=+1,62\%) \). It was also found that growth was pro-poor in relative terms for quintiles between 20% and 70%. In other words, the situation of the middle class has deteriorated less than those of the poorest classes (whose quintiles are less than 20%) and richest (whose quintiles are greater than 70%);
- At the urban level, the shape of the curve to the growth impact is similar to the one given at the national level but with a significantly high level. Economic growth in urban and national level is pro-poor in absolute terms because growth rates \( g_t(p) \) are all positive, as evident from figure 6 \( (g_t(p)=2,40\%) \). However, it was found that the situation of the poor (whose quintiles are less than 35%) and the richest (whose quintiles are above 90%) had deteriorated further than the middle class (including the quintiles are between 35% and 90%);
- In rural areas, there is a reverse situation to that of urban and national levels. Economic growth in this environment is pro-poor in absolute terms but not in relative terms as shown in figure 7. As against the situation of the poorest quintiles which are between 5% and 15% had deteriorated less than the middle class and rich whose quintiles are greater than 15%. 

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4.3. Analysis of the pro-poor growth for the period 1987-1995 in national, urban and rural areas.
Graphs 8, 9 and 10 (see the appendices) show the GIC in Morocco 1987-1995 W based at the national level, in urban and rural areas.
By observing the curves of incidence to growth for the period 1987-95, we find that:
- At the national level, economic growth is pro-poor in absolute terms throughout the study period because the growth rates gt(p) are all positive, as evident from Figure 8 (gt(p)=+1.15%). It was also found that growth was pro-poor in relative terms for quintiles are between 15% and 55%. In other words, the situation of the middle class has been less deteriorated than the one of the poorest classes (whose quintiles are less than 15%) and richest (whose quintiles are greater than 85%);
- At the urban level, economic growth is pro-poor in absolute terms because growth rates gt (p) are all positive, as evident from Figure 9 (gt(p)=1.50%). However, it was found that the situation of the richest whose quintiles are greater than 90% had been deteriorated further than the class of poor and middle quintiles which are less than 90%;
- In rural economic growth in this environment is pro-poor in absolute terms and relative terms with the exception of a few percentiles of the population as evident from the few picks of the graph 10 (from the quintiles more than 20% to 42% to 75% and 90%). Furthermore, it should be noted that the slope of this curve begins with strong growth rates for the middle class whose quintiles are between 20% and 60%. However, it was found that the situation of the richest whose quintiles are greater than 95% was more deteriorated than other classes.

4.4. Analysis of the pro-poor growth for the period 1987-2004 in national, urban and rural areas.
Graphs 11, 12 and 13 (see the appendices) shows the GIC in Morocco 1987-2004, based on WCI, for national, urban and rural areas.
The observation of these three curves to affect growth for the whole period studied, we can draw the following observations:
- At the national level, economic growth is pro-poor in absolute terms throughout the study period because the growth rates gt (p) are all positive, as evident from Figure 11 (gt(p)= ≈+1%). It was also found that growth was pro-poor in relative terms for quintiles between 5% and 95%. In other words, the situation of the richest class has become more deteriorated than the one of other classes, whose quintiles are below 95%;
- At the urban level, the shape of curve impact growth much like that given at the national level. Economic growth in urban and national level is pro-poor in absolute terms because the growth rates gt(p) are all positive (gt(p)=1.50%). However, it was found that the situation of the richest whose quintiles are greater than 95% deteriorated relative to that of other classes whose quintiles are below 95%;
- In rural areas, the shape of the curve to the growth impact is very similar to the one given at national and city level. Economic growth in rural areas is pro-poor in absolute terms because the growth rates gt (p) are all positive (gt (p)=1.60%). However, it was found that the situation of the richest, whose quintiles are above 90%, has significantly deteriorated relative to that of other classes whose quintiles are below 90%.
5. Conclusion and recommendations

Compared to the aim of this study, we endeavoured to carry out an evaluation of the impact of economic growth on the poor people in Morocco, from 1987 to 2004 by adopting the multidimensional (no-monetary) approach.

The purpose of this study is to measure the impact of economic growth on the poor people in Morocco and to question growth benefits distribution throughout the post-structural adjustment program period. Indeed, the application of these pro-poor growth indicators has yielded some interesting findings. Among these, and within the framework of multidimensional approach, we can cite the following results:

- The poverty rate has increased dramatically at the national level but also by area (urban and rural). By area, we find that the social disparities between urban and rural areas are striking. This finding allows us to say that poverty in Morocco is mainly a rural phenomenon, but without forgetting that the degree of precarious living conditions of the urban population has grown because of rural exodus;
- The Growth Incidence Curves allow us to conclude that national economic growth is pro-poor in the relative terms, but not in the absolute terms. In the urban area, the economic growth is pro-poor in favour to both poorest and richest people. In other words, the situation of these two classes was less deteriorated than the middle class, which the quintiles are between 30% and 70%. For the rural area, the shape of the GIC shows us a high contrast in comparison with those of national and urban areas. In other words, the situation of the poorest population (including the quintiles below 30%) and the richest people (which the quintiles are above 70%) was more deteriorated;
- In referring to the study, based on the WCI, we can say that the level of poverty in relative terms increased between 1987 and 2003/2004. This is particularly resulted from the deterioration of purchasing power and low access of the population to basic social services, especially in rural area. Unlike the monetary approach, the level of poverty resulting from the use of non-monetary approach seems best, especially in rural area;

In general, we have found that the results obtained by using the multidimensional approach are not consistent with those obtained by using the monetary approach. This difference is shown by the decline in the incidence of poverty between 1987 and 2004, coupled with a little decline in rural area along the period 1987-1995.

Indeed, based on the main findings of the multidimensional approach, the following primary indicators should be considered in order to implement the efficient policy to fight against poverty. In fact, the objective to ensure better standards of living in Morocco should to include:

- The housing conditions, in particular, in terms of drinking water and habitat conditions (material floor, type of roof, type of toilet, electricity, etc.);
- The possession of durable goods which include refrigerator, television, radio, etc.

References


et l’approche non monétaire.” *Conférence MEEA*, MONACO, 18-20 Mars 2009, Monaco, France.


Appendices

Table 3. Indicators of position and dispersal for values calculated with the WCI in Morocco from 1987 to 2004 at national level, urban and rural areas

<table>
<thead>
<tr>
<th>Period</th>
<th>Area</th>
<th>Size of the sample</th>
<th>Average</th>
<th>Standard deviation</th>
<th>Median</th>
<th>Min</th>
<th>Max</th>
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<td>11.22</td>
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<td>1995</td>
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<td>31.66</td>
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<td>18.22</td>
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Table 4. Evolution of the indicators of poverty typifies FGT in Morocco, in national level, urban and rural areas from 1987 to 2004

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Annex on line at the journal Website: http://www.usc.es/economet/aeid.htm
Annex

Graph 1. GIC in Morocco at national level from 1987 to 1992

Graph 2. GIC in Morocco in urban area from 1987 to 1992

Graph 3. GIC in Morocco in rural area from 1987 to 1992
Graph 4. GIC in Morocco at national level from 1987 to 1995

![Graph 4. GIC in Morocco at national level from 1987 to 1995](image)

Graph 5. GIC in Morocco in urban area from 1987 to 1995

![Graph 5. GIC in Morocco in urban area from 1987 to 1995](image)

Graph 6. GIC in Morocco in rural area from 1987 to 1995

![Graph 6. GIC in Morocco in rural area from 1987 to 1995](image)
Can Economic Growth Be Pro-Poor in Morocco

Graph 7. GIC in Morocco at national level from 1987 to 2004

Graph 8. GIC in Morocco in urban area from 1987 to 2004

Graph 9. GIC in Morocco in rural area from 1987 to 2004