Poverty and inequality issues in Albania: trends and determinants

Myftaraj (Tomori) E. [1]

[1] *Faculty of Economy, Univ. of Tirana, Albania, elenatomori@yahoo.com*

Abstract. Poverty and inequality are complex and widespread phenomena. Poverty is an indicator and the main factor of inequality, so reduction of poverty is one of the biggest challenges for economic and social consolidation of a country. There are different concepts of poverty, in this paper we are focused on the concept of absolute poverty. The main objective of this paper is to conduct an analysis on the trends of poverty and inequality indicators, as well as an analysis on the reduction of poverty in Albania between 2002 and 2008.

Keywords: Poverty, Inequality, Reduction, Albania.

1   Introduction

Poverty and inequality, as complex phenomena and very related with each other, have been generally treated by different analysts and researchers of this field. Inequality is a manifestation of poverty and for this reason, reduction of inequality and poverty are the most important challenges of public policies.

The most intuitive concept on poverty is that of absolute poverty, which usually refers to an absolute idea of deprivation form the basic conditions for survival. Another concept is that of relative poverty, where poor people are considered those who lack an amount of income derived from the average or mean of the revenues in a certain society. Relative poverty and inequality of income show the way different divisions of social levels are done. In this paper attention is focused on the absolute concept of poverty.

Inequality is often studied as a part of analysis that covers poverty and wellbeing, even though these three concepts are different. Inequality is a wider concept than poverty in the meaning that it is defined in the distributions as a whole and not only in the distribution of individuals or families below a certain poverty line.

Poverty and inequality are very widespread phenomena in the world. Poverty is an indicator and the main factor of inequality, thus, poverty reduction is one of the biggest challenges for economic and social consolidation of a country. In this paper we have present the trends of indicators of poverty and inequality in Albania for the period 2002, 2005, 2008 seen in the aspect of their indicators change.

2   A brief overview on inequality and poverty indicators

There exist several indicators for poverty and inequality measurements.

The Head-count Index is estimated as a ratio of the number of persons that are below the poverty line compared to the total number of persons in the population of a country.

If there are M people below the poverty line and N people in the total population, then the head-count ratio P_0 is simply:

$$P_0 = \frac{M}{N}$$

This indicator has a simple and clear method, and it is the most commonly calculated poverty measure, but that is poses two problems: firstly, a reduction in the level of incomes of the poor people does not show how badly the poor people are; secondly, this indicator does not describe the distribution of income between the poor. The head-count ratio is an important descriptive tool, but, it can be misleading because it ignores the magnitude, severity, and depth of poverty.

The Poverty depth index, measures how far the income or the consumption from an individual are from the poverty line. The calculation of this index can be done through this formula:

$$P_1 = \frac{\sum_{i=l}^{G} \left(\frac{z - y_i}{z} \right)}{N}$$

Where;

$y_{P=}$ Consumption expenditure or income of the poor, z = Poverty line

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This is a measure that shows how "bad" the poor are. This index is better than the percentage of poverty, but it also has its own disadvantages, as it is insensitive by the number of persons under the poverty line and also by the way income is transferred to the poor.

Poverty Severity index, measures the severity of poverty by putting the gap in square and making it average between the income of the poor and the poverty line. This index is of a primary importance as it considers inequality between the poor. The poverty severity index gives more weight to very poor than to less poor, and is defined as:

$$P_2 = \frac{\sum_{i=l}^{G} \left(\frac{z - y_i}{z} \right)^2}{N}$$

y_i is income or consumption expenditure of household, z is the poverty line, N size of the population, and G is the number of the poor.

While this measure has clear advantages for some purposes, such as comparing policies which are aiming to reach the poorest, it is not easy to interpret. For poverty comparisons, however, the key point is that a ranking of dates, places, or policies in terms of this index should reflect well their ranking in terms of the severity of poverty.

Even inequality of income can be measured in different ways. A widespread method is the calculation of the Gini coeficient. This method includes a general evaluation of the Gini coeficient of the total

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income, which can be decomposed pursuant to the different sources of the income. Gini coefficient is a measure of inequality, defined as the mean of absolute differences between all pairs of individuals for some measure. The minimum value is 0 when all measurements are equal and the theoretical maximum is 1 for an infinitely large set of observations where all measurements but one has a value of 0, which is the ultimate inequality (Stuart and Ord, 1994). When Gini coefficient is based on the Lorenz curve of income distribution, it can be interpreted as the expected income gap between two individuals randomly selected from the population (Sen, 1973). The classical definition of Gini coefficient appears in the notation of the theory of relative mean difference:

$$Gini = \frac{1}{2\bar{y}n^2} \sum_{i=1}^{n} \sum_{j=1}^{n} \left| y_i - y_j \right|$$

Where y_i is an observed value, n is the number of values observed and $\bar{y}$ is the mean value. Gini's coefficient values are between 0 and 1, when is 0 has no inequality.

Cowell (1995) shows that any measure that satisfies all of axioms (The Pigou-Dalton Transfer Principle, Income Scale Independence, Population Independence, Anonymity, Decomposability) is a member of the Generalized Entropy (GE) class of inequality measures. The GE value is from zero to infinity, with zero corresponding to complete inequality.

The Theil indexes are part of this larger family of measures referred to as the General Entropy class. Two of Theil's measures of inequality (Theil, 1967), the mean log deviation and the Theil index respectively, as follows:

$$GE(0) = \frac{1}{n} \sum_{i=1}^{n} \log \frac{\bar{y}}{y_i}$$

$$GE(1) = \frac{1}{n} \sum_{i=1}^{n} \frac{y_i}{\bar{y}} \log \frac{y_i}{\bar{y}}$$

where n is the number of individuals in the sample, y_i is the income of individual i, $\bar{y}$

is the arithmetic mean of all incomes.

While less commonly used than the Gini coefficient, the Theil-index of inequality has the advantage of being additive across different subgroups or regions in the country.

Another index of this family about inequality measurement is also the coefficient of variation which is calculated as the square root of the variance with the below shown formula:

$$CV = \frac{1}{\bar{y}} \left[\frac{1}{n} \sum_{i=1}^{n} (y_i - \bar{y})^2 \right]^{1/2}$$

The Atkinson class of measures of inequality:

$$A_\varepsilon = 1 - \left[\frac{1}{n} \sum_{i=1}^{n} \left[\frac{y_i}{\bar{y}} \right]^{1-\varepsilon} \right]^{1/(1-\varepsilon)}$$

where ε is an inequality aversion parameter, $0 < ε < ∞$: the higher the value of ε the more society is concerned about inequality (Atkinson, 1970). The Atkinson class of measures range from 0 to 1, with zero representing no inequality.

Usually, all these indexes are reported by the national agencies of statistics and are used by state authorities as helpful instruments for monitoring changes in the poverty and inequality conditions with the passing of the time.

3   Trends of poverty and inequality in Albania

In the above paragraph we treated some general indicators of poverty and inequality measure. Before we study the trend of these indexes in Albania for the period 2002-2008, it would be appropriate to talk about the political, economical and social situation of Albania, as this would make clear the big influence of these factors in the poverty and inequality level in Albania.

Albania as well as many other countries of Central and Eastern Europe opened the way to free commerce in the early '90s. In June 2006 it signed the Stabilization and Association Agreement (SAA) with the European Union (BE), in attendance to become part of it in the future.

According to the last census conducted in 2001 the population of Albania resulted 3.063 million and for the year 2008 it is forecasted to be 3170 million inhabitants. The demographic profile of Albania during this period of time is characterized by large inner and outer migratory movements. It is estimated that approximately 27,5% of the general population are immigrants and that during the last seven years, that part of inhabitants that live in the rural areas has fallen with 13%, whereas the urban population is increased with 3,2% in the year 2002-2003 and with 2% in 2003-2004.

The Albanian economy has experienced a considerable real average growth of the GDP of 4,3% between 1990 and 2001 (although it is accompanied with strong blows as the crisis of the years 1996-1997 due to the fall of the pyramidal schemes and the large number of Kosovo refugees in the year 1999). From the year 2002 the real average growth of GDP is stabilized in roughly 5%. This can be clearly seen in the graphic representation of the GDP per capita for the period 1990 and 2008.
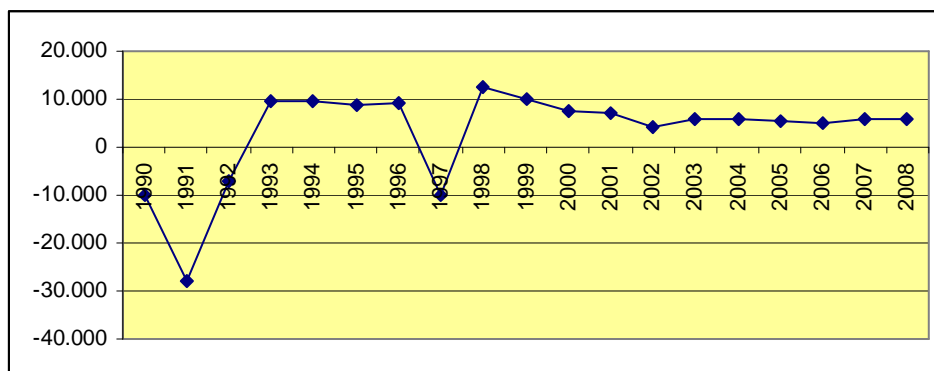

Figure 1. Annual percent change of GDP 1990-2008

Source: IMF World economic outlook

Before the political transition, the agricultural sector represented more than 35% of the GDP, employed more than 50% of the work force and constituted roughly 40% of its exports. In 2007, the

contribution of economic sectors to the real GDP growth is: Agriculture, Hunting and Forestry 1,2%, Industry 0,8%, Construction 1,5%, Services 6,8%.

The unemployment rate in 2006 was 13.8%, representing a decrease since 1999 of around

5%. The age group most affected by unemployment during the transition period is people under 34, who make up 60% of registered job seekers. In 2006, young people aged 15–25 made up 24% of the total number of registered job seekers. The unemployment rate is higher in the north-eastern part of the country, reaching around 24% compared with 13% in the central and southern area. The labor force participation rate in 2006 was 68.3% for men and 46.8% for women, while the unemployment rate for men in 2006 was 12% compared to 17.1% for women. Women's unemployment rate in the urban areas is particularly high, approaching 30%.

Poverty and inequality in Albania are calculated with the measurements based on consumption. There exists a large consensus regarding the advantages of the usage of measure based on consumption, especially for a rural economy and widely informal such as that of Albania.

As main resources of information in this part, serve the survey for measuring the living standards level for the years (LSMS) 2002, 2005 and 2008. During the years 2002, 2005 and 2008 in Albania there were organized a Living Standard Measurement Survey (LSMS) by INSTAT Albania with the assistance of World Bank.

The first LSMS was conducted in 2002 on a sample 3,600 households based in 2001 Population and Housing Census. In 2005 was the second survey following the same methodology and the third was in 2008. Regarding the data about the LSMS 2008, they are still in procession, and for this reason, some of the evaluations of inequality indicators are absent in this paper.

From the data processed for LSMS in the year 2002, the absolute poverty line was estimated equal to 4891 lek per capita per month; the food poverty line has been 3047 lek per capita per month. For 2005 and 2008 are the same absolute poverty line and the food poverty line.

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The percentage of population in Albania, the real consumption per capita per month of which it is under the poverty line, fell from 25.4% in the year 2002 to 18.5% in 2005 in 12.4% in 2008. The population with the highest percentage of poor people is concentrated more in the rural areas (Figure 2, Table 1).
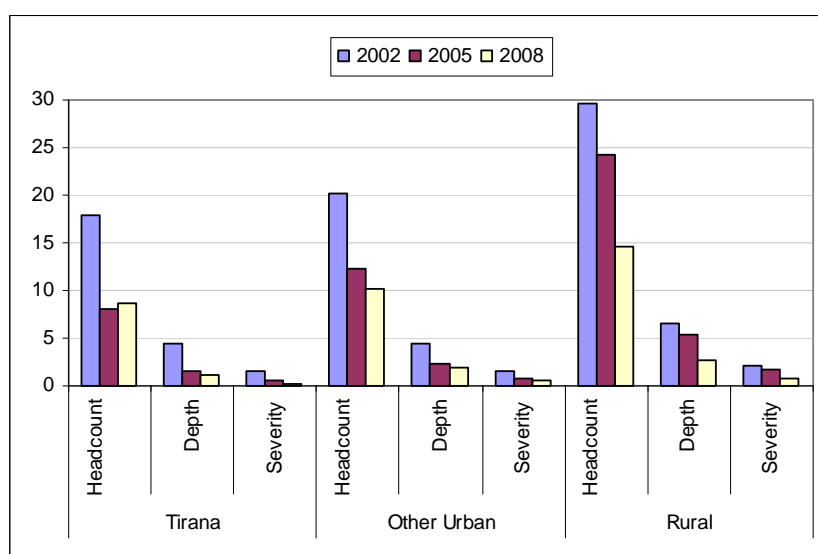

Figure 2: Trends in absolute poverty by area

Table1: Absolute and extreme poor by strata and area (%), 2002,2005,2008

	Absolute poverty, 2002	Absolute poverty, 2005	Absolute poverty, 2008	Extreme absolute poor	Extreme absolute poor	Extreme absolute poor
				2002	**2005**	**2008**
Tirana	17.8	8.1	8.7	2.3	1.0	0.2
Other Urban	20.2	12.4	10.2	4.8	2.7	1.6
Rural	29.6	24.2	14.6	5.2	4.5	1.2
Total	25.4	18.5	12.4	4.7	3.5	1.2

Source: INSTAT Albania, LSMS 2002, 2005 and 2008

Extremely poor population, decreased from about 5% in 2002 to 3.5% in 2005, to 1.2% in 2008 in urban areas, only 1.17% of the population can be considered extremely poor.

Table2. Some Descriptive Statistics of the poor, 2002-2005

	2002		2005	
	Non poor	poor	Non poor	Poor
Mean household(hh) size	4.0	5.7	4.0	5.5
% female headed hh	13.1	9.3	11.7	8.1
% people up to 60 years	19.7	10.2	14.7	9.8
People in a hh under 15 years	1.0	2.1	0.9	1.9
Dependency ratio	0.8	1.1	0.7	1.0
Unemployed (%)	5.0	8.7	3.4	4.8
Years of schooling hh head	7.9	6.2	9.8	8.0

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An important point of poverty trends is the share of poor comparing with the share of the population. The result shows that for Coastal the total of poor of 11% in 2005 reflects an important improvement from 21% of total poor in 2005 while the share of population in these strata was 11-12% in both years of reference the proportion of the poor that live in Central zone has not significant differences, 46% poor in 2002 and 48% poor in 2005 with an unchanged share of population (45-46%) living in this zone. For the Mountain that presents a decrease of poverty, results shows that the share of the poor in 2005 is 34% compared with 2002 when it was 25%, towards 31% of the share of population in both of years (Figure 3).
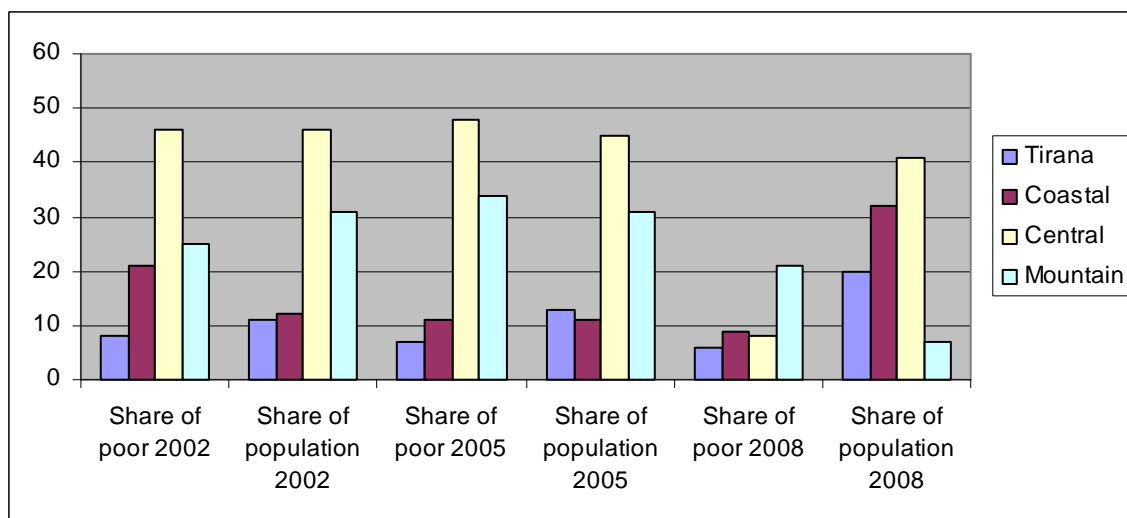
Figure 3: Share of poor and population by strata2002, 2005 ,2008

Source: INSTAT, Albania and elaborated by the author

Poverty reduction between years and areas

There is a reduction of poverty level according to the areas. In urban areas from 2002 to 2008 there is a reduction of 41.7%, which has been higher for the period 2002-2005 (41.1%) than for the period 2005- 2008 (1.2%). Even in rural areas for the same period of time there is a reduction of poverty level with 59.8%, but different from the reduction of poverty in urban areas, in rural areas this reduction has been higher for the period 2005-2008 (47.4%) than for the period 2002-2005 (23.7%) (Table 3).

Table 3: Poverty reduction 2002-2008

Poverty by rural/urban				%Change in poverty		
	2002	**2005**	**2008**	**2002-2005**	**2005-2008**	**2002-2008**
Total population in poverty	813196	575659	373137	-29,2	-35,12	-54,1
Urban	25769	151811	150052	-41,1	-1,2	-41,7
Rural	555506	423848	223085	-23,7	-47,4	-59,8

Source: INSTAT, Albania and elaborated by the author

Differences in poverty rates across broadly defined regions have narrowed substantially compared to what they were in 2005 and 2002.

If we speak in terms of reduction in the percentage of headcount index according to the strata for the period 2002-2008, then we can notice that there is a higher reduction in the central area (58.2%), after that comes Tirana (51%), Mountain (40%) and the lower reduction has been in the Coastal area (37%). In the meantime, for the period 2002-2005 this reduction has been in the value of 21.3% for the coastal area, for the central area it was 17.2%, for the mountain area it was 42,5% and for Tirana this reduction was 54.5%. As it can be noticed from the percentages of reduction, the highest for this period of headcount index has been for the area of Tirana. For the period 2005-2008 this index was reduced with 19.7% in the coastal area, with 49.5% in the central area, whereas for the mountain area and Tirana there has been a respective growth of 3.9% and 7.4%.

Although the poverty gap (depth of poverty) measure was reduced with 95.5% in the coastal area, with 66.7% in the central area, with 49.5% in the mountain area and Tirana 68.6% for the period from 2002 to 2008.

The substantial reduction in poverty across the board was accompanied by a faster decline of rural poverty rates. Despite the significant reduction of poverty in the rural areas, the poor are still concentrated in the rural Mountain areas. Other measures of poverty in the rural areas have also experienced a larger decline.

Between 2002 and 2005 there has been a reduction of the percentage of poverty respectively 38.6% in the urban areas and 18% in the rural areas. For the period 2005-2008 this reduction was higher in the rural areas than in the urban areas, respectively 39.7% rural area and 17.7% urban area.

These estimated reduction levels for the period from 2002 to 2008 show that the percentage of poverty was reduced with 50.7% in rural areas, and with 49.5% for urban areas.

Although the poverty gap (depth of poverty) measure for rural areas is 2.6% in 2008, compared to 1.9% in urban areas; for urban areas, this is a reduction of 57.8% from the 2002 level to 2008, while for rural areas it was a reduction of 60.6% (Table 4).

Table 4: Absolute poverty indicators reduction by area and strata

		2002	**2005**	**2008**
Tirana	**Headcount**	17,8	8,1	8,7
	Depth	4,5	1,6	1,2
	Severity	1,6	0,5	0,2
Other Urban	**Headcount**	20,2	12,4	10,2
	Depth	4,5	2,3	1,9
	Severity	1,6	0,8	0,6
Rural	**Headcount**	29,6	24,2	14,6
	Depth	6,6	5,3	2,6
	Severity	2,1	1,8	0,7

Source: INSTAT, Albania and elaborated by the author

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Per capita real consumption of food for period 2002-2005 is increased respectively with 17 % and 24 % in urban areas and 9 % in rural areas and for period 2002-2008 was increased with 7.62%. As a share of total per capita consumption, food shares have declined by 2.2% between 2005 and 2008 (Table 5 and Figure 4).

Education shares of real per capita consumption have the largest increase. Education expenditures and shares in 2008 have increased by about 144% and 57% respectively from 2002 and 2005.

Table 5: Consumption expenditures by the main group

	2002	**2005**	**2008**
Variable	**Mean**	**Mean**	**Mean**
Total consumption	7801	9105	9731
Food	4906	5159	5280
Nonfood	1655	2457	2519
Education	177	275	432
Utilities	958	1087	1447
Durables	105	128	56

*Mean values are presented in Albanian New Lek.

Table 5 presents the mean of household consumption per capita.
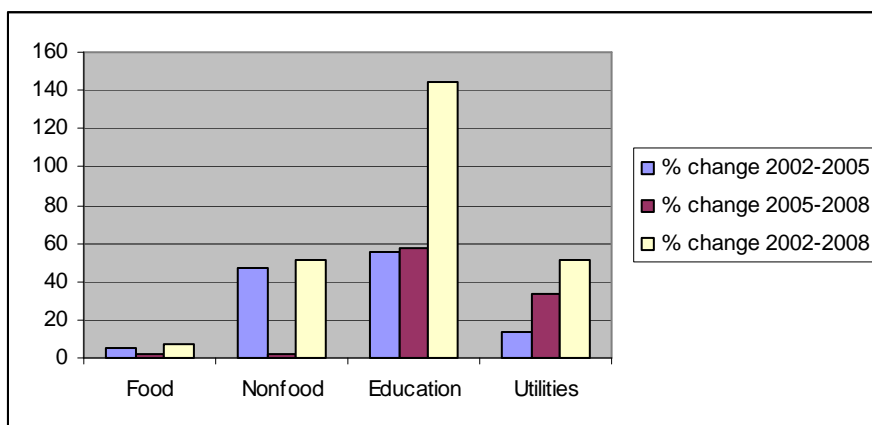
Figure 4. Percent change in consumption expenditure 2002-2008

Source: INSTAT, Albania and elaborated by the author

The increase in the education expenditures and shares of real per capita consumption in 2008 and the decrease in food shares of real per capita consumption indicate a higher quality of life in Albania.

Once certain satisfactory levels of consumption are reached, food shares of the per capita consumption are expected to decline, since once food requirements are satisfied, individuals will use the extra income for other activities.

In 2008, this seems to be going towards higher investments in education. Indeed, between 2005 and 2008, the number of students has known a significant increase in addition of a large number of private schools in the country, and an increase in the number of students studying abroad.

These factors comply with the increase of education expenditures and education shares of the real per capita consumption.

3.1 Inequality indicators

Inequality in Albania is considered low and several measures of inequality indicate that there was only a modest increase (Table 6), so that by the standard of the most commonly used measure, Gini, it remains low. Referring to the standard of the most commonly used measure, Gini coefficients, it is at the level of around 30%.

The Gini coefficient increased from 28 percent to about 30 percent overall during the period 2002-2005. Theil's entropy measures show also negligible increases. The gap between those at the top of the distribution to those at the bottom, measured as the 90th/10th percentile ratio increased by less than 1 percent.

Rural inequality remained unchanged, while a slight increase is observed in urban areas, as expected on the basis of the reported consumption changes.

Most inequality indicators show an increase in inequality over time, while comparing the inequality measures reveals a clear ranking with the measure GE(0) being lowest to the Gini coefficient being higher than the other measures and this reflects the properties of the inequality measures (see e.g. Sen, 1997).

Table 6: Inequality Measures

	National		Rural		Urban	
	2002	2005	2002	2005	2002	2005
Relative mean deviation	20.2	21.1	19.5	19.5	20.4	21.1
Coefficient of variation	55.9	62.3	53.0	53.8	56.9	63.4
Standard deviation of logs	50.0	52.7	47.7	48.8	51.6	53.3
Gini Coefficient	28.2	29.6	27.1	27.3	28.5	29.7
Mehran measure	38.4	40.2	37.0	37.5	39.0	40.3
Piesch measure	23.1	24.3	22.2	22.2	23.3	24.4
Kakwani measure	7.1	7.9	6.6	6.7	7.4	8.0
Theil entropi measure	13.2	15.1	12.1	12.4	13.7	15.4
Theil mean log deviation measure	12.9	14.4	11.8	12.1	13.4	14.7
Retio $90^{th}/10^{th}$ percentile (in logs)	1.155	1.159				

Source: INSTAT, Albania (LSMS 2002-2005)

A detailed analyze of the distribution of the expenditure level for the consumption shows that 90% of the Albanian families have 77% of the total value of the population consumption, expended in this way a monthly value of 60,000 lek. So, 10% of the families in Albania expended 23% of the total value, consuming in this way a monthly value of 153,000 lek per family.

These results in unit terms (monthly average person consume)   shows for a severe gap in Albania: The majority of the Albania which corresponds to 90% of the total of families, consume around 16,000 lek per month; while a minority which corresponds to 10% of the families have a monthly consumption of 52,000 lek or 3 times more.

4   Conclusion

In this paper we have represented some important indicators of inequality and poverty measurement, and we also presented some evidences regarding determiners of inequality and poverty with respect to consumption per capita in Albania.

Treatment of inequality and poverty indicators is of a special importance, as they are important indicators not only to understand the trends of these phenomena, but also to help the policy makers in designing policies. Taking the right decisions and designing adequate policies would influence in the reduction of the poverty level of a country. These policies should be able to have influence not only in the poverty and inequality level in the future, but also in the way that those who are poor will be treated in order to make possible their exit from this state, as well for the reduction of inequality rate.

The comparison of the resultants of poverty indicators for the period 2002-2005, 2002-2008 shows that for a general improvement of poverty indicators, a thing which implies an improvement in the living standards in Albania. Not only headcount index but also the other poverty measure indexes have suffered a considerable reduction.

Massive poverty reduction has been accompanied by significant regional convenience. Differences in poverty rates across broadly defined regions have narrowed substantially compared to what they were in 2002 (compared to 2005 and 2008). The continuous reduction of poverty is accompanied with considerable reductions of poverty according to regions. This has come as a result of the high poverty reduction in rural areas, Coastal and Central areas. In the same time, the norms of urban growth were further than the norms rural growth and this resulted in the widening of the gap of wellbeing between urban and rural areas.

This obvious reduction of the poverty level in Albania is as a result of the high rate of GDP growth, wage and pension increases. The steady economic growth in the last periods and also the economical

reforms are giving their own contribution in the general improvement of the living standards in Albania.

For a further reduction of poverty measures should be taken for it in the rural areas, as there is the largest number of the poor, attention ought to be focused in the development of key sectors of the Albanian economy, such as tourism, growth of the number qualified persons.

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