

STUDY OF POVERTY IN KOHKILLOYEH AND BOYERAHMAAD PROVINCE

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ABSTRACT

Kohkilloyeh and Boyerahmad province with the area of 1% of the country has about 0.9% of all the habitant of Iran country. Although this province has rich resources of gas and oil (about 20%), Water (11%), abundant mine, the approximation to petrochemical integrations of Asalloyeh and peculiar economic area of imam seaport in Khuzistan, but it is in privation. This province is near to some important export seaports such as Imam- Mahshahr, Khoramshahr, and Booshehr. This province is also a good area for enterprise in plans which are dependent to importing primary materials and also exporting generative products, transmission of global gas and electricity lines. Although the southern provinces especially those which are near the sea have the problem of lacking the sweat water, Kohkilloyeh and boyerahmad can supply the indispensable water of the big plans there. We should consider the matter that supplying the sweat water especially in huge bulk in industry has a great cost. So by having the knowledge of poverty in different parts of cities and villages, we can pave the way of short and long term plans in developing the province. According to the study of poverty in province, we can consider the development of this area on the years from 1380 to 1390. In addition, according to the rise of poverty by different criteria, it can be concluded that inequality in distribution of income in cities have increased in comparison to villages of the province.

Keywords: *Kohkilloyeh and Boyerahmad Province, Poverty, Absolute Poverty, Poverty Line*

INTRODUCTION

Statement of Problem

One group believes that the rudimentary needs of human beings are those needs which will ruin their existence if they are not supplied; and some explain the needs based on the average life of society. By the first criteria, the only poor people are those who are in face of hunger and death. But the second criteria have a more wide area of meaning. On the other hand, the least needs of people in different times and places may vastly differ.

Most of the stuffs that in developed countries are seen as the first needs will be treated as luxury in developing countries. As it is possible that in one part of the time, stuff is treated as a luxury but on the other time, it will be a main part of human being life. In the economic literature we have two different explanations of poverty:

1. Absolute Poverty:

If a person is not able to supply the first needs of him and his family, it means that he is in absolute poverty. This person does not enjoy of enough calorie and protein to continue his healthy life time.

2. Relative Poverty:

It can be possible that some of the people in a country have the power to fulfill their first needs, but their level of income is lower than the majority of people in society. So we can say that they are living in a relative poverty. It is also said that when the income of a society is lower than the average level of the other countries in the world, it means that they are living in the relative poverty. From the Marxists' point of view, poverty arises from contradiction between production tools and production relations. It means that when the production relations do not change with the development of tools, a lot of economic problems will raise which one of them is poverty. About the poverty phenomenon Marx says: if there is a personal ownership even in a limited level in the society, wily nily it will lead to poverty.

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The Importance of the Issue

Kohkiluyeh and Boyerahmad province with the area of 1% of the whole country has about 0.9% of all the habitants of Iran country (publication of statistics center and information guideline, fourth year, No. 10, Spring, 2012). Although this country has rich resources of gas and oil (about 20%), Water (11%), abundant mine, the approximation to petrochemical integrations of Asaluyeh and peculiar economic area of imam seaport in Khuzistan, but it is in great privation.

It is also near the important export seaports such as Imam- Mahshahr, Khoramshahr, and Booshehr (a distance about 180 kilometers from Lishter dasht to Imam Seaport. This province is also a good area for enterprise in plans which are dependent to importing primary materials and also exporting generative products, transmission of global gas and electricity lines.

Although the southern provinces especially those which are near the sea have the problem of sweat water, Kohkiluyeh and Boyerahmad can supply the indispensable water of the big plans there. We should consider the matter that supplying the sweat water especially in huge bulk in industry has a great cost. So by having the knowledge of poverty in different parts of cities and villages, we can pave the way of short and long term plans in developing the province. According to his study and the problem of poverty in province, we can consider the development of this area during 2001 to 2011. In addition, according to the rise of poverty by different criteria, it can be concluded that inequality in distribution of income in cities in comparison to villages of the province have increased.

History of the Study:

There have been a lot of studies about the poverty problem in and out of the country, but majority of the studies in the country were considered the macro level and the portion of the regional and provincial studies were lower in this case. In short we point to some of the accomplished studies:

Internal Studies:

Arshadi Karimi Studies:

His studies show that the average of change of poverty indexes in the overall period from 1986 to 1988 was not successful neither in city regions or the countryside in improvement of poverty indexes.

Rests of the conclusions are:

✓ Absolute poverty index in city regions from the beginning of the period (1988) was about 36.73% and at the end of the period (2009) was about 15.9%. This index in the villages at the beginning of the period was 45.5 % and at the end of the period was 27.33%. It means that absolute poverty index in villages has decreased about 40% at the end of the period in comparison to the beginning of the period and in the city regions we have had the improvement of about 57%.

✓ Absolute poverty index from 1385 in city regions and from 1384 in villages is rising.

✓ Mostly in all the years the portion of absolute villages' poverty was more than absolute city poverties. The average proportion of absolute poverty in villages (32.34%) was about 1.5 percent more than the proportion of city poverties (23.76).

✓ In all of the years the poverty gap index in cities at the beginning of the period was 40.7% and at the end of the period was 32.1%. This index in villages at the beginning of the period has been 43.5 and at the end of the period was 35.5%. In other words, the poverty gap index at the end of the period in comparison to the beginning of the period has improved about 18%.

✓ In all of those years the village poverty gap was more than the city poverty gap. The average of village poverty gap was about (43)%; that is to say that it was 1.2 more than the average of city poverty gap (33.4).

✓ According to the above issues, it is considered that in the studied period, removing poverty plans, have had more importance for decreasing the absolute poverty in city regions than the villages. (Arshadi, 2013)

The Jamshid Pejvian Studies:

In one study he works on the poverty and income distribution, and in another study he works on the poverty line. So there are three explanations on the index of determining the poverty line which are explained as a basket of basic needs, the total cost, and total income. In the next part first we will explain the poverty line, and then the poverty line for city, village, and some of the provinces at the year 1993 has

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extracted. And in addition to comparison of poverty lines, the reason of difference between the definitions is explained. Then according to the getting information from poverty gap and the suggested kokoani model, we will work on the needed help to poor people. The results show that the help should be in ways that guide the poor people from the low line of poverty to upper level of it. Briefly, at the end of the article, we will pay attention to subjects such as ways of recognizing the poor people and the way of transferring help to them (Pejvian, 1996).

Study of Arzroom Chiller:

The main goal of Chiller study was the explained report of the condition of available poverty and its different aspects in Iran which by the survey on the indexes of poverty and evolutions on the distribution of income, there get a picture of procedures about poverty and human being developments. So, determining the poverty regions and their age range and education and their jobs got possible. According to the given poverty indexes, absolute poverty in the village culture is more than the relative poverty and in the city culture, relative poverty is more than the absolute poverty. That is to say that it is because of the expanded income distribution in the city cultures and the least income distance in the village cultures. In addition poverty is also prevalent among the below groups:

Husbandman by the age of 46 and above which in this time he is in the retirement age and it is clear that he peoples' income will get lowered in this part of their life time.

The husbandman is not educated.

The husbandman is working in the agricultural or building part.

The family is living in one of the poverty provinces of Chaharmahal o bakhtiari, Kohkiluyeh o boyerahmad, Ilam, Sistan o Baluchistan (Arzroom, 2005).

Shooshtarian Survey:

He used the term expenditure disposability as the life standard index and by the use of this index poverty determiners were studied. The poverty analysis is in this study has done in the Tafhian area which is one of the villages of the Fars province. The available data in the Iran Statistics Center is related to family income rate plans in the year 1384. So the calculated poverty line is based on goods price index and the balanced disposability services of the villages and nutritious poverty line, non- nutritious. So in the year of 1386 the yearly overall poverty line for a mature person is respectively 2089789, 2867016, 4956806 rials. According to the poverty line data, FGT poverty index of two village of Tafhian and Ismailabad have been calculated. So in the year of 1386, according to this method of calculation, 30.5% of people in this area have an income which is under the poverty line. Also, the percentage of income gap and the poverty intensity in the studied area is respectively 0.116 and 0.085 (Shooshtarian, 2007).

Fetros and Colleges' Survey:

In this study according to the recognition of economic factors which effect on crimes against Iran issues, it is tried to study the scale of effect of each factor of poverty, joblessness, issuing the unprovided cheque, theft, embezzlement and receiving a bribe. The patterns in different study differ, which in this research an intact pattern (1968) has been used. The method of estimating the patterns is the way of estimating the least typical squares on the data board for 30 provinces of Iran country and the period of time which we worked on was from 2006 to 2008 (Fetros and colleges, 2009).

Foreign Researches:

Hadad and Ahmad:

In 2002 not only Hadad and Ahmad worked on the changes in poverty, welfare, and consumption of the Egypt, but also they studied the effective factors on these changes from 1997-1999. The results of these studies have shown that two third of poor people are under the consumption poverty line and about half of the people in each period are the poverty line. The effective factors on poverty include the level of education, the number of members of the family, the value of issues, the number of children in the family, and the husbandman job (Hadad and Ahmad, 2002).

John and Rey Carat:

In 2000 they studied the poverty changes among the city and village families in United States of America and also determined the poverty factors of a group of poor people. The countries that have been studied

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include Mexico, Columbia, Pro, Ilsalovador, Guatemala and Honduras. Their studies have shown that in the 1970-1995 poverty among the villagers have decreased, but in the city regions poverty is spreading. According to their believes the main factor of decreasing the poverty in the villages is nothing but immigration of villagers to cities (John and Carat, 2000).

Baeibi and Doclas:

Baeibi and Doclas (2007) considered the current system of purposely subsidies and also gave a new pattern in Tunis. In this survey, the current system of subsidies that is based on goods such as wheat, chicken meat, egg, milk and sugar, is in comparison with the system based on civil economic properties. The results of this study show that according to the current plans, the poverty gap reached from 9.08% to 7.2, but according to the purposely which is based on civil- economic properties, the poverty gap will decrease to 95.4%. Other results of this study showed that the plan based on civil-economic properties is more suitable in comparison to the current plan (Baeibi and Doclas, 2007).

Research Hypotheses:

1. The process of poverty indexes in the city regions shows the ascending process of poverty in this period of time.
2. The process of poverty indexes in the countryside regions shows the descending process of poverty in this period of time.

The Basic Purposes of Doing this Research:

A) Scientific goals:

According to the charges of families in cities or villages, we can define the absolute and relative poverty line for Kohkilloveh and Boyerahmad province.

B) Applicable goals:

- 1- According to the fact that in recent years more regions in Kohkilloveh and Boyerahmad has changed to cities, we will discuss about the issue that how much of this problem has effect on the poverty.
- 2- By considering the supportive politics such as giving subsidies in cash, and also Equity shares, we will work on the effect of these factors on the process of poverty line in this province.

MATERIALS AND METHODS

Research Method:

In this research study by considering the least costs of nutrition that a person needs to be alive with, and by the use of Eviews soft ware, will lead to some data from the central bank and statistics center. These data are from the time set which will be analyzed later.

System of Measurement of Poverty Line Based on Calories Needs:

Measurement of poverty line based on calorie is steady on the concept of absolute poverty and basic needs, in a way that (according to the nutritive experts) each person needs a definite amount of calorie per day.

System of Poverty Line Measurement Based on 50% or 66% of Average Costs:

To measure the poverty line based on the relative concept, we can proceed by the computation of average cost of families, and defining a percent of that as the poverty line. Of course in this system although the concept of poverty is highlighted, but there is not a rational viewpoint for determining the percentage of this hypothesis, and in fact determining 50% or 66% is optional and empirical percentage so that every researcher can determine this number by his own. To determine the poverty line by the above system, first arrange the family costs in 10 income family groups. Then we take the average of fifth and sixth family groups and this mean is considered as the mean of costs of the family. At the end, once the 50% and once the 66% of the mean of the costs computed, that in this way we have calculated two poverty line by the above criteria.

Findings:

The way of measuring poverty line according to the calorie needs:

In this survey, 2300 calories is the needed supposition. Then the under studied families will be categorized in ten under charged groups, based on their level of income. Then, after measuring the

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receiving nutritive values of every family group income we take and calculate the first family group who received energy that was more than the standard amount, which is 2179 or 2300 calorie. The difference of the family groups who received energy will be calculated by the standard amount. Then the price of every unit of receiving calorie is calculated by dividing the overall cost of the family on the amount of the receiving energy of the family. The product of the price of every unit of calorie multiply the minus of the receiving energy with standard amount equals the cost of receiving energy which is over the need of a person. The difference of these costs from the overall cost of the family will equal the poverty line.

- 1- Measuring the receiving energy of the city families during the years 2001-2011
- 2- Choosing the first family group which has more than 2300 calorie energy
- 3- Calculating the difference of receiving energy of forth family group from the standard amount of energy(2300)
- 4- Calculating the price of every unit of calorie:
 The price of every unit of calorie = receiving energy of that family/overall costs the concerned family
- 5- Calculating the costs of receiving energy which is over need the difference of receiving energy of the concerned family from the standard energy × the price of every unit of calorie
- 6- Calculating the poverty line: the costs of over need receiving energy of that family_ the overall costs of the concerned family = the annual capitation poverty line

Table 1: Calculating the receiving energy of the city families based on family groups during 2001-2011

	01	02	03	04	05	06	07	08	09	10	11
First family group	2638	32339	3353	4551	4555	5933	8259	8303	7747	1E+	2E+
	93.9	11	41.5	23	06.5	42.4	89.8	94.6	69.4	06	06
Second family group	3722	45612	4729	6419	6424	8094	1126	1132	1056	2E+	2E+
	08.6	63	81.7	27.3	68.1	15	784	793	911	06	06
Third family group	4608	56472	5855	7947	7954	9843	1370	1377	1285	2E+	2E+
	29.7	78	96.4	67.1	36.7	31	284	591	311	06	06
Forth family group	5760	70590	7319	9934	9942	1169	1628	1636	1527	2E+	3E+
	37.2	97	95.5	58.9	95.8	536	107	789	147	06	06
Fifth family group	6813	83502	8658	1175	1176	1399	1947	1958	1827	3E+	4E+
	97.8	48	81.8	168	158	328	999	387	202	06	06
Sixth family group	8202	10051	1042	1414	1415	1582	2203	2215	2066	3E+	4E+
	37.5	672	311	618	809	818	435	186	798	06	06
Seventh Family group	9846	12066	1251	1698	1699	1786	2487	2500	2333	3E+	5E+
	78.9	833	274	220	651	887	519	784	265	06	06
Eighth family group	1185	14528	1506	2044	2046	2054	2859	2875	2682	4E+	5E+
	553	467	534	657	380	405	930	181	583	06	06
Ninth family group	1541	18884	1958	2657	2659	2517	3504	3523	3287	5E+	6E+
	022	593	244	715	954	418	489	177	172	06	06
Tenth family group	2962	36309	3765	5109	5114	4252	5920	5951	5553	8E+	1E+
	899	100	084	945	250	859	390	962	260	07	07

Table 2: Calculating the poverty line of city cultures based on need of 2300 calorie during the years 2001-2011

	01	02	03	04	05	06	07	08	09	10	11
annual capitation	5793	5274.	6223	6475.	6576.	674.	7497.	8103.	8206.	8850.	82
poverty line	.35	915	.06	515	501	025	172	279	468	336	20

According to the first table, we suppose that every person just needs 2300 calorie per day which its poverty line has shown during the years 2001-2011.

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These results mean that poverty line in these years had a raising procedure so that its monthly amount from 5793.35 rials in 2001 rose to 8220 rials in 2011. This calculation says that this price towards 1380 has got about 1.2 rises that according to the two digit inflation in all these studying years is not unbelievable.

In the countryside culture the poverty line for every person in the year 2001 was calculated about 4617.311 that in the year 2011, decreased to 4271 rials. It means that it has gotten 0.9 times which is a still less than city culture; but the amount of absolute poverty line of cities in all those under study years is one or two times more than the countryside cultures.

Table 3: Calculating receiving energy of villagers based on family groups during the years 2001-2011

	01	02	03	04	05	06	07	08	09	10	11
First family group	1964	2250	2432	3423	3501	6420	8207	7087	7741	1E+	1E+
Second family group	2789	3195	3454	4861	4972	8370	1070	9240	1009	1E+	2E+
Third family group	3631	4159	4496	6328	6472	9646	1233	1064	1163	2E+	2E+
Forth family group	4514	5171	5590	7867	8047	1080	1380	1192	1302	2E+	2E+
Fifth family group	5373	6154	6653	9363	9577	1197	1530	1321	1443	2E+	3E+
Sixth family group	6751	7733	8360	1176	1203	1335	1706	1473	1609	2E+	3E+
Seventh Family group	8229	9425	1018	1434	1466	1509	1929	1665	1819	3E+	3E+
Eighth family group	1015	1162	1257	1769	1809	1771	2264	1955	2136	3E+	4E+
Ninth family group	1375	1575	1702	2396	2450	2170	2774	2396	2617	4E+	5E+
Tenth family group	2538	2908	3143	4424	4525	3495	4468	3858	4214	6E+	8E+
	959	136	787	306	208	367	353	511	586	06	06

Table 4: Calculating the poverty line of villagers based on 2300 calorie need per day during the years 2001-2011

	01	02	03	04	05	06	07	08	09	10	11
annual capitaton poerty line	4617.3	4518.4	4739.0	5450.4	5440.7	5489.6	518.9	5066.0	5251.0	5560.0	42
	11	47	28	83	95	35	92	49	35	68	71

System of Measuring the Poverty Line Based on 50% or 66% of Costs Average

As it was mentioned, calculating the poverty line based on average costs of families is related to the meaning of relative poverty. The results of calculating the poverty line based on 50% of average costs of city cultures during the years 2001-2012 is written in the (5) table. These results show that in 2011 a city habitant needs about 1408052 rials to supply the least of his needs. But this figure reached to 1185226.3 rials, which in comparison to 1380, it is 0.8 times more that according to the calorie needs has a less rise. In table (6), the results which are related to the calculation of poverty line based on 66% of average costs of city families has written during the years 2001-2011.

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Table 5: Determining the costs average of city families during 2001-2011

	01	02	03	04	05	06	07	08	09	10	11
First family group	75456 4.7	94771 1.7	10930 93	160347 3.5	16252 60	22831 65	2992827 .132	26928 49	31268 38	46893 00	479005 8.6
Second family group	10642 74	13366 98	15417 50	226161 5.7	22923 45	31146 06	4082700 .597	36734 82	42655 13	63969 64	653441 5.2
Third family group	13176 73	16549 59	19088 33	280009 5.6	28381 41	37876 78	4964979 .116	44673 28	51872 97	77793 59	794651 3.4
Fourth family group	16470 91	20686 99	23860 42	350011 9.5	35476 77	45003 42	5899156 .371	53078 70	61633 04	92430 71	326682
Fifth family group	19483 54	24470 76	28224 63	414031 2.3	41965 68	53845 74	7058228 .15	63507 65	73742 76	11059 159	533208 .28
Sixth family group	23453 45	29456 86	33975 60	498393 0.8	50516 49	60906 39	7983755 .616	71835 25	83412 46	12509 318	733463 .19
Seventh Family group	28155 40	35362 38	40787 04	598311 0.2	60644 05	68758 89	9013080 .555	81096 78	94166 61	14122 112	34040. 264
Eighth family group	33899 10	42576 30	49107 59	720366 4.7	73015 43	79052 93	1036244 7.7	93237 95	10826 449	16236 363	63878. 352
Ninth family group	44063 20	55342 12	63831 71	936356 7.5	94907 93	96869 53	1269789 0.84	11425 151	13266 467	19895 643	107672 .4
Tenth family group	84719 60	10640 539	12272 820	180031 79	18247 794	16364 880	2145147 7.71	19301 345	22412 015	33611 169	844109 855

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family
 group

Table 6: Defining the poverty line of villagers based on 50 or 66% average of family costs

	01	02	03	04	05	06	07	08	09	10	11
The average of family costs	281 610 3	353 694 5	407 952 0	5984 306.8	606 561 8	659 940 2	86506 54.37	778 357 9	903 800 7	1355 4246	2370 452.6
Poverty line based on 50% of average costs	140 805 2	176 847 2	203 976 0	. 2992 153.4	303 280 9	329 970 1	43253 27.189	389 178 9	451 900 3	6777 123	1185 226.3
Poverty line based on 66% of average costs	185 862 8	233 438 4	269 248 3	3949 642.5	400 330 8	435 560 5	57094 31.89	513 716 2	596 508 4	8945 802	1564 498.7

Table 7: Determining the average costs of villagers during 2001-2011

	01	02	03	04	05	06	07	08	09	10	11
First family group	394373.3 542	442045 .1	501193 .2	811228. 1	828254. 2	15324 85	185211 .6	15611 66	17675 02	2748 235	2915 915
Second family group	560076.4 442	627778 .4	711778 .6	115208 0	117626 0	19979 60	241467 .4	20353 52	23043 60	3582 979	3977 780
Third family group	729093.5 96	817226 .3	926575 .7	149975 0	153122 6	23023 08	278250 .1	23453 97	26553 82	4128 774	4837 385
Forth family group	906395.9 023	101596 1	115190 2	186446 1	190359 3	25780 12	311570 .9	26262 61	29733 68	4623 199	5747 555
Fifth family group	1078727. 116	120912 3	137091 1	221894 8	226551 9	28572 97	345324 .4	29107 73	32954 82	5124 046	6876 840
Sixth family group	1355451. 276	151929 8	172258 8	278817 1	284668 9	31867 10	385136 .2	32463 50	36754 13	5714 788	7778 582. 5
Seventh Family group	1652059. 807	185176 0	209953 6	339829 6	346961 9	36020 56	435333 .7	36694 70	41544 55	6459 636	8781 455
Eighth family group	2038148. 007	228451 9	259020 0	419248 2	428047 3	42286 56	511062 .8	43077 98	48771 49	7583 331	1009 6145
Ninth family group	2760613. 479	309431 6	350835 2	567859 7	579777 9	51810 89	626170 .9	52780 55	59756 43	9291 346	1237 1570
Tenth family group	5097027. 048	571315 4	647760 6	104846 12	107046 63	83427 35	100827 8	84988 72	96221 48	1496 1186	2090 0200

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Table 8: Calculating the poverty line of villagers based on 50%,66% average costs during 2001-2011

	01	02	03	04	05	06	07	08	09	10	11
Average of family costs	165	185	210	3408	348	358	43278	364	413	642	7456
	719	751	606	862.5	040	093	0.5737	794	009	175	378.1
	7	8	4		8	1		9	0	2	
Poverty line based on 50% average costs	828	928	105	1704	174	179	21639	182	206	642	
	598.	759.	303	431.2	020	046	0.2869	397	504	175	3728
	3	1	2		4	5		5	5	2	189
Poverty line based on 66% average costs	109	122	139	2249	229	236	28563	240	272	423	4921
	375	596	000	849.2	706	341	5.1787	764	585	835	209.5
	0	2	2		9	4		7	9	6	

The results show that in 2001, in the city culture everybody needs 1858628 rials per month to supply the least of his needs. This figure rise to1564498.7 rials in 2011. In other words, in this system the poverty line is 0.8 times more.

The calculated poverty line in the village cultures in 2001 based on 50% costs average was 828598.3 rials that in 2011 rise to 3728189 rials, means that in comparison to 2001 it is 4.5 times more.

In village cultures the calculated poverty line based on 66% costs average in 2001 was 1093750 rials that in 2011 rise to 4921209.5. means that in comparison to 1380 it is 4.5 times more.

The comparison of poverty line in city and village shows that in city cultures we have about 1.5 times rise than villages.

Determining the Poverty Line Based on 50or 66% Average of Costs of Families

Poverty line based on a percent of the costs average is the same as poverty line based on a percent of costs mean. The results of calculating poverty line based on 50% of costs mean for city cultures during 2001-2011 is written in table(8). It means that a city habitant in 2001 needs about 1073425 rials to supply his needs.

However, this figure in 2011 reached to 356121.48 rials. It means that this figure has a rise of about 33% which in comparison to system of needing calorie in 2001 has a low increase.

In the system of 66% mean in 2001 in a city culture, everybody needs1416921 rials monthly in order to supply its needs. On the other words, poverty line in comparison to 2001 has a 33% growth increase.

The calculated poverty line in the villages based on 50% mean of costs in 2001 was about 6085446 that in 2011 raised to 3241336, it means that it has a five times increase.

The average costs of city families = costs of fifth family group + costs of sixth family group / 20

Determining the Poverty Line Based on Reverse Ratio Engel

Calculating the ratio Engel for city habitant meal costs in 2001 to calculate the ratio Engel we should divide the meal costs and total costs of city families in ten income groups and then the four following econometrics models calculated.

$$F = \alpha + \alpha I + \varepsilon$$

$$\text{Ln}F = \beta + \beta \text{Ln} I + \mu$$

$$\text{Ln}F = \gamma + \gamma I + \theta$$

$$F = \eta + \eta \text{Ln} I + \vartheta$$

In all the above models F equals family group meal costs, and is one times more than total costs of every family group. ϑ , θ , μ , ε are the residuum sentences of the model. These models are estimated based on OLS system, then after studying the estimating system of OLS, the best model is chosen and ratio Engel calculated.

From now on we will calculate the ratio Engel during the period of time, and then by determining the best model we can calculate the poverty line.

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Countryside Cultures

2001

According to the meaningful level of 5% equation, the first model has chosen as the best model and we can calculate the ratio of Engel in this way:

Table 9: Determining the average costs of families in the cities during 2001-2011

	01	02	03	04	05	06	07	08	09	10	11
First family group	754564 .7	947711 .7	109309 3	160347 3.5	162526 0	228316 5	2992827. 132	269284 9	312683 8	468930 0	4790058 .6
Second family group	106427 4	133669 8	154175 0	226161 5.7	229234 5	311460 6	4082700. 597	367348 2	426551 3	639696 4	6534415 .2
Third family group	131767 3	165495 9	190883 3	280009 5.6	283814 1	378767 8	4964979. 116	446732 8	518729 7	777935 9	7946513 .4
Forth family group	164709 1	206869 9	238604 2	350011 9.5	354767 7	450034 2	5899156. 371	530787 0	616330 4	924307 1	326682
Fifth family group	194835 4	244707 6	282246 3	414031 2.3	419656 8	538457 4	7058228. 15	635076 5	737427 6	110591 59	533208. 28
Sixth family group	234534 5	294568 6	339756 0	498393 0.8	505164 9	609063 9	7983755. 616	718352 5	834124 6	125093 18	733463. 19
Seventh family group	281554 0	353623 8	407870 4	598311 0.2	606440 5	687588 9	9013080. 555	810967 8	941666 1	141221 12	34040.2 64
Eighth family group	338991 0	425763 0	491075 9	720366 4.7	730154 3	790529 3	10362447 .7	932379 5	108264 49	162363 63	63878.3 52
Ninth family group	440632 0	553421 2	638317 1	936356 7.5	949079 3	968695 3	12697890 .84	114251 51	132664 67	198956 43	107672. 4
Tenth family group	847196 0	106405 39	122728 20	180031 79	182477 94	163648 80	21451477 .71	193013 45	224120 15	336111 69	8441098 55

Table 10: Calculating 50% or 66% average costs as poverty line

	01	02	03	04	05	06	07	08	09	10	11
Poverty line based on 50% average costs	107 342 5	134 819 1	155 500 6	2281 060.8	231 205 4	286 880 3	37604 95.942	338 357 3	392 888 0	589 211 9	3561 21.48
Poverty line based on 66% average costs	141 692 1	177 961 2	205 260 8	3011 000.2	305 191 2	378 682 0	49638 54.643	446 631 6	518 612 2	777 759 7	4700 80.35

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Table 11: Determining the mean of villagers cost during 2001-2011

	01	02	03	04	05	06	07	08	09	10	11
First family group	394373. 3542	44204 5.1	50119 3.2	81122 8.1	82825 4.2	1532 485	18521 1.6	1561 166	1767 502	274 823	291 591
Second family group	560076. 4442	62777 8.4	71177 8.6	11520 80	11762 60	1997 960	24146 7.4	2035 352	2304 360	358 297	397 778
Third family group	729093. 596	81722 6.3	92657 5.7	14997 50	15312 26	2302 308	27825 0.1	2345 397	2655 382	412 877	483 738
Forth family group	906395. 9023	10159 61	11519 02	18644 61	19035 93	2578 012	31157 0.9	2626 261	2973 368	462 319	574 755
Fifth family group	1078727 .116	12091 23	13709 11	22189 48	22655 19	2857 297	34532 4.4	2910 773	3295 482	512 404	687 684
Sixth family group	1355451 .276	15192 98	17225 88	27881 71	28466 89	3186 710	38513 6.2	3246 350	3675 413	571 478	777 858
Seventh Family group	1652059 .807	18517 60	20995 36	33982 96	34696 19	3602 056	43533 3.7	3669 470	4154 455	645 963	878 145
Eighth family group	2038148 .007	22845 19	25902 00	41924 82	42804 73	4228 656	51106 2.8	4307 798	4877 149	758 333	100 961
Ninth family group	2760613 .479	30943 16	35083 52	56785 97	57977 79	5181 089	62617 0.9	5278 055	5975 643	929 134	123 715
Tenth family group	5097027 .048	57131 54	64776 06	10484 612	10704 663	8342 735	10082 78	8498 872	9622 148	149 611	209 002

Table 12: Calculating poverty line of villagers based on 50%&66% costs mean during 2001-2011

	01	02	03	04	05	06	07	08	09	10	11
Half of the costs of fifth and sixth family group determining the = mean of costs	1539 912	313 216	261 632	305 638	392 882	440 373	499 297	8081 604.7	825 122	676 191	732 771
Poverty line based on 50% mean of costs	6085 44.6	682 105.	773 374.	125 177	127 805	151 100	182 615.	1539 281	174 272	270 970	324 133
Poverty line based on 66% mean of costs	8032 78.9	900 379	102 085	165 234	168 702	199 452	241 051.	2031 851	230 039	357 681	427 856

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$$\alpha_1 = \frac{E_1}{I/F} = \frac{0.498}{0.584} = 0.851$$

$$\text{reverse ratio of engel} = \frac{1}{\alpha_1} = \frac{1}{0.851} = 1.17$$

$$\text{Poverty line in 2001} = \frac{1}{\alpha_1} \times \text{meal costs in 2001} = 1.7 \times 8254093 = 9695245$$

2002

According to the meaningful level of 5% equation, the first model has chosen as the best model and we can calculate the ratio of Engel in this way:

$$\alpha_1 = \frac{E_1}{I/F} = \frac{0.498}{0.584} = 0.664$$

$$\text{reverse ratio of engel} = \frac{1}{\alpha_1} = \frac{1}{0.664} = 1.5$$

$$\text{Poverty line in 2002} = \frac{1}{\alpha_1} \times \text{meal costs in 2002} = 1.5 \times 9454277 = 14231065$$

2003

According to the meaningful level of 5% equation, the first model has chosen as the best model and we can calculate the ratio of Engel in this way:

$$\alpha_1 = \frac{E_1}{I/F} = \frac{0.485}{0.102} = 4.722$$

$$\text{reverse ratio of engel} = \frac{1}{\alpha_1} = \frac{1}{4.722} = 0.211$$

$$\text{Poverty line in 2003} = \frac{1}{\alpha_1} \times \text{meal costs in 2003} = 0.211 \times 10220374 = 2164321$$

2004

According to the meaningful level of 5% equation, the first model has chosen as the best model and we can calculate the ratio of Engel in this way:

$$\alpha_1 = \frac{E_1}{I/F} = \frac{0.421}{0.642} = 0.655$$

$$\text{reverse ratio of engel} = \frac{1}{\alpha_1} = \frac{1}{0.655} = 2.19$$

$$\text{Poverty line in 2004} = \frac{1}{\alpha_1} \times \text{meal costs in 2004} = 2.19 \times 14711338 = 21950049$$

2005

According to the meaningful level of 5% equation, the first model has chosen as the best model and we can calculate the ratio of Engel in this way:

$$\alpha_1 = \frac{E_1}{I/F} = \frac{0.422}{0.926} = 0.455$$

$$\text{reverse ratio Engel} = \frac{1}{\alpha_1} = \frac{1}{0.455} = 2.38$$

$$\text{Poverty line 2005} = \frac{1}{\alpha_1} \times \text{meal costs in 2005} = 2.38 \times 14711338 = 3228127$$

2006

According to the meaningful level of 5% equation, the first model has chosen as the best model and we can calculate the ratio of Engel in this way:

$$\alpha_1 = \frac{E_1}{I/F} = \frac{0.418}{0.998} = 0.418$$

$$\text{reverse ratio of engel} = \frac{1}{\alpha_1} = \frac{1}{0.418} = 2.39$$

$$\text{Poverty line in 2006} = \frac{1}{\alpha_1} \times \text{meal costs in 2006} = 2.39 \times 15001575 = 35825571$$

2007

According to the meaningful level of 5% equation, the first model has chosen as the best model and we can calculate the ratio of Engel in this way:

$$\alpha_1 = \frac{E_1}{I/F} = \frac{0.999}{8.65} = 0.8$$

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$$\text{reverse ratio of engel} = \frac{1}{\alpha_1} = \frac{1}{0.8} = 1.24$$

$$\text{Poverty line in 2007} = \frac{1}{\alpha_1} \text{ meal costs in 2007} = 1.24 \times 19177479 = 166060758$$

2008

According to the meaningful level of 5% equation, the first model has chosen as the best model and we can calculate the ratio of Engel in this way:

$$\alpha_1 = \frac{E_1}{I/F} = \frac{0.45}{1.23} = 0.36$$

$$\text{reverse ratio of engel} = \frac{1}{\alpha_1} = \frac{1}{0.36} = 1.24$$

$$\text{Poverty line in 2008} = \frac{1}{\alpha_1} \text{ meal costs in 2008} = 1.24 \times 16560132 = 205549690$$

2009

According to the meaningful level of 5% equation, the first model has chosen as the best model and we can calculate the ratio of Engel in this way:

$$\alpha_1 = \frac{E_1}{I/F} = \frac{0.438}{0.134} = 3.26$$

$$\text{reverse ratio of engel} = \frac{1}{\alpha_1} = \frac{1}{3.26} = 2.9$$

$$\text{Poverty line in 2009} = \frac{1}{\alpha_1} \text{ meal costs in 2009} = 2.9 \times 18088352 = 54210556$$

2010

According to the meaningful level of 5% equation, the first model has chosen as the best model and we can calculate the ratio of Engel in this way:

$$\alpha_1 = \frac{E_1}{I/F} = \frac{0.413}{0.966} = 0.42$$

$$\text{reverse ratio of engel} = \frac{1}{\alpha_1} = \frac{1}{0.422} = 2.2$$

$$\text{Poverty line in 2010} = \frac{1}{\alpha_1} \text{ meal costs in 2010} = 2.2 \times 26561818 = 58637613$$

2011

According to the meaningful level of 5% equation, the first model has chosen as the best model and we can calculate the ratio of Engel in this way:

$$\alpha_1 = \frac{E_1}{I/F} = \frac{0.388}{0.905} = 0.428$$

$$\text{reverse ratio of engel} = \frac{1}{\alpha_1} = \frac{1}{0.428} = 2.7$$

$$\text{Poverty line in 2011} = \frac{1}{\alpha_1} \text{ meal costs in 2011} = 2.7 \times 26561818 = 87686689$$

City Cultures

2001

According to the meaningful level of 5% equation, the first model has chosen as the best model and we can calculate the ratio of engel in this way:

$$\alpha_1 = \frac{E_1}{I/F} = \frac{0.349}{0.788} = 0.442$$

$$\text{reverse ratio of engel} = \frac{1}{\alpha_1} = \frac{1}{0.442} = 2.258$$

$$\text{Poverty line in 2001} = \frac{1}{\alpha_1} \text{ meal costs in 2001} = 2.258 \times 9846789 = 22238249$$

2002

According to the meaningful level of 5% equation, the first model has chosen as the best model and we can calculate the ratio of Engel in this way:

$$\alpha_1 = \frac{E_1}{I/F} = \frac{0.789}{0.837} = 0.941$$

$$\text{reverse ratio of engel} = \frac{1}{\alpha_1} = \frac{1}{0.941} = 2.258$$

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Poverty line in 2002 = $\frac{1}{\alpha_1}$ meal costs in 2002 = $2.258 \times 120668329 = 128102882$

2003

According to the meaningful level of 5% equation, the first model has chosen as the best model and we can calculate the ratio of Engel in this way:

$$\alpha_1 = \frac{E_1}{I/F} = \frac{0.306}{0.864} = 0.354$$

$$\text{reverse ratio of engel} = \frac{1}{\alpha_1} = \frac{1}{0.354} = 2.832$$

Poverty line in 2003 = $\frac{1}{\alpha_1}$ meal costs in 2003 = $2.823 \times 12512743 = 35334303$

2004

According to the meaningful level of 5% equation, the first model has chosen as the best model and we can calculate the ratio of Engel in this way:

$$\alpha_1 = \frac{E_1}{I/F} = \frac{0.283}{0.808} = 0.349$$

$$\text{reverse ratio of engel} = \frac{1}{\alpha_1} = \frac{1}{0.349} = 2.85$$

Poverty line in 2004 = $\frac{1}{\alpha_1}$ meal costs in 2004 = $2.85 \times 16982203 = 48525288$

2005

According to the meaningful level of 5% equation, the first model has chosen as the best model and we can calculate the ratio of Engel in this way:

$$\alpha_1 = \frac{E_1}{I/F} = \frac{0.280}{0.944} = 0.296$$

$$\text{reverse ratio of engel} = \frac{1}{\alpha_1} = \frac{1}{0.296} = 3.373$$

Poverty line in 2005 = $\frac{1}{\alpha_1}$ meal costs in 2005 = $3.373 \times 16996510 = 57343758$

2006

According to the meaningful level of 5% equation, the first model has chosen as the best model and we can calculate the ratio of Engel in this way:

$$\alpha_1 = \frac{E_1}{I/F} = \frac{0.259}{1.16} = 0.223$$

$$\text{reverse ratio of engel} = \frac{1}{\alpha_1} = \frac{1}{0.223} = 4.482977$$

Poverty line in 2006 = $\frac{1}{\alpha_1}$ meal costs in 2006 = $4.48 \times 17148623 = 76876889$

2007

According to the meaningful level of 5% equation, the first model has chosen as the best model and we can calculate the ratio of Engel in this way:

$$\alpha_1 = \frac{E_1}{I/F} = \frac{0.275}{0.945} = 0.291$$

$$\text{reverse ratio of engel} = \frac{1}{\alpha_1} = \frac{1}{0.291} = 3.4$$

Poverty line in 2007 = $\frac{1}{\alpha_1}$ meal costs in 2007 = $3.4 \times 17148623 = 76876889$

2008

According to the meaningful level of 5% equation, the first model has chosen as the best model and we can calculate the ratio of Engel in this way:

$$\alpha_1 = \frac{E_1}{I/F} = \frac{0.308}{0.981} = 0.313$$

$$\text{reverse ratio of engel} = \frac{1}{\alpha_1} = \frac{1}{0.313} = 3.1$$

Poverty line in 2008 = $\frac{1}{\alpha_1}$ meal costs in 2008 = $3.1 \times 23999845 = 74663127$

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2009

According to the meaningful level of 5% equation, the first model has chosen as the best model and we can calculate the ratio of Engel in this way:

$$\alpha_1 = \frac{E_1}{I/F} = \frac{0.247}{0.9} = 0.274$$

$$\text{reverse ratio of engel} = \frac{1}{\alpha_1} = \frac{1}{0.274} = 3.6$$

$$\text{Poverty line in 2009} = \frac{1}{\alpha_1} \text{ meal costs in 2009} = 3.6 \times 22392178 = 81331307+$$

2010

According to the meaningful level of 5% equation, the first model has chosen as the best model and we can calculate the ratio of engel in this way:

$$\alpha_1 = \frac{E_1}{I/F} = \frac{0.244}{0.85} = 0.283$$

$$\text{reverse ratio of engel} = \frac{1}{\alpha_1} = \frac{1}{0.283} = 3.5$$

$$\text{Poverty line in 2010} = \frac{1}{\alpha_1} \text{ meal costs in 2010} = 3.5 \times 33140750 = 116807490$$

2011

According to the meaningful level of 5% equation, the first model has chosen as the best model and we can calculate the ratio of Engel in this way:

$$\alpha_1 = \frac{E_1}{I/F} = \frac{0.513}{5.8} = 0.08$$

$$\text{reverse ratio of engel} = \frac{1}{\alpha_1} = \frac{1}{0.08} = 11.3$$

$$\text{Poverty line in 2011} = \frac{1}{\alpha_1} \text{ meal costs in 2011} = 11.3 \times 45362319 = 495997995$$

The summary of the above results is in the below table:

11	10	09	08	07	06	05	04	03	02	01	year
49599	11680	81631	76463	81797	76876	57343	48525	35334	1.28E	22238	City
7995	7490	307	127	610	889	758	288	303	+08	249	y
87686	58637	54210	20554	16606	35825	32281	21950	21643	14231	96952	village
689	613	556	969	0758	571	277	049	21	065	45	age

CONCLUSION

In this research it is tried to measure the poverty line in city and village cultures of Kohkilloyeh and Boyerahmad with different procedures to study its improvement during 2001-2011. Poverty line is not a concrete and fix reality, but also according to the beliefs of ethical issues and the way of calculation, we can find different amounts for poverty line. The tables in chapter four testify it. By comparing the figures in these tables it is determined that the poverty line which is based on absolute is smaller than the poverty line which is based on the relative poverty.

The poverty line in 2001 is estimated based on least needed energy (2300 calorie), which is equal with 5793.35 rials per month for everybody, but on that same year reverse ratio of Engel poverty line for every city habitant was estimated about 22238249 rials. Accordingly, it is considered that poverty line based on reverse ratio of Engel is more than the poverty line which is based on the first system. In 2001 and in the village areas, the poverty line based on the reverse ratio of Engel criteria was estimated about 9695245 rials and according to the least needed energy (2300 calorie) estimated near 4617.311 rials.

In the table (1), poverty line is written based on different criteria in 2001-2011 and also separated the city and village regions. With comparison of poverty line is determined based on related criteria with mean

Research Article

and average of culture costs. Income distribution in city and villages of the province during 2001-2011 is based on left crooked because the related poverty lines are a bigger mean than the related poverty lines with average. The main point is that during all those years the poverty line in cities is bigger than poverty line of the villages; and all of the systems of calculating the poverty line testimony this. In addition, with comparison of the amount of increasing the poverty line based on different criteria, we can come into the conclusion that inequality in income division in cities is more than the villages of Kohkiluyeh and boyerahmad.

That is because of the reality is that during 2001-2011 poverty line based on the concept of absolute poverty is about 4.5 times more; however poverty line according to the reverse ratio of Engel is 22 times more. Recently the poverty line is affected by the way of income dispersion in society. In the villages the amount of poverty line which is calculated in different ways is raised in the same rate. The truth is that Kohkiluyeh and boyerahmad province, the same as other villages is faced to poverty. After the revolution, in addition to different plans and yearly budgets for removing the poverty, we can name some other supportive efforts such as supplying the didactic and sanitary facilities, drinkable water, village building and insurance services. However in spite of the different plans and yearly budgets toward removing the poverty, there are some other factors such as downturn, joblessness, crowd changes, and other economy factors which are the problems that we are always facing to.

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