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Original Article

Impact of Targeted Subsidies Implementation on Inequality in Iranian Rural Area (Case Study: Villages of Neishabour County)

Majid Hamzeei[1] **- Aliakbar Anabestani**[2]***- Ja'far Javan**[3]

1- Ph.D. Candidate in Geography and Rural Planning, Ferdowsi University of Mashhad, Mashhad, Iran
2- Full Prof. in Geography and Rural Planning, Ferdowsi University of Mashhad, Mashhad, Iran
3- Full Prof. in Rural Geography, Ferdowsi University of Mashhad, Mashhad, Iran

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Abstract

Purpose-The implementation of targeted subsidies policy in Iran is among the actions that, have been taken with the aim of reduction of poverty, reducing social class differences between different deciles of society and specially upgrading rural indicators in rural areas. The present study has been conducted with the purpose of evaluating the impacts of targeted subsidies on expansion of inequality in rural areas.

Design/methodology/approach -This fundamental-exploratory research has been done by descriptive-analytical method. The required data were collected through both field and documentary methods. In this study, first, the research indicators were investigated during two six-year courses before targeted subsidies (2005-2010) and after targeted subsidies (2011-2016) at the level of all villages in the country and the average of each indicator was compared between the two periods before and after targeted subsidies and then the obtained results of this part were compared with the results of field research in the study sample. In this study, 22 villages of Neishabour county were selected as a sample by systematic random method using Cochran's formula.

Finding- Findings of this study show that cash subsidies accounted for 7.56% of a household income portfolio in the case study in 2019. But the Gini coefficient in the period after targeted subsidies was higher than the period before the targeted subsidies, while the ratio of 10% 0f the wealthiest to 10% of the poorest population in the rural areas of the sample in 2018 was equal to 20.67. Also, despite the original goal of targeted subsidy plan, the lower deciles are far more pressured by rising energy prices, and household food expenditures are spent on food groups. However, the average caloric intake of each person in the tenth decile is seven times that of the first decile. Also, in 70% of the households of the first decile, there were no employed people. In general, the villages of the country have faced a worsening situation in seven indicators, both in the macro dimension and in a case study, but an improvement has been observed in case of one indicator.

Keywords- Targeted subsidies, Inequality in rural areas, Structural Adjustment policies, Neishabour, Iran.

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Corresponding Author:
Anabestani, Alaikbar, Ph.D.
Address: Department of Geography, Faculty of Letters & Humanities, Ferdowsi University of Mashhad, Mashhad, Iran.
Tel: +98915 571 9016
E-mail: anabestani@um.ac.ir

1. Introduction

One of the most important goals of government intervention in the economy is to establish justice. Economic and humanities experts have different opinions about justice and equality. Over the past half century, equality has come to the attention of economists in various aspects such as equality of income, welfare, resources and opportunities. Although there are different views on equality of opportunities, equality is clearer in terms of income and welfare. Increasing the welfare of the lower households of the society and improving the distribution of income is one of the most important reasons for the subsidy programs of the countries as one of the tools of government intervention in the economy (Liu & he, 2019). Given the large volume of subsidies paid in Table 1, the main issue in the Iranian economy has always been that, to what extent subsidies are close to their targets. Basically, one of the main reasons for the implementation of the targeted subsidy plan and the arguments of its proponents, has been the unbalanced distribution of these subsidies. Prior to the targeted implementation of subsidies in Iran, due to the continuous devaluation of the domestic currency relative to foreign currency and the policy of controlling prices in the energy and other commodities sectors, the payment of indirect subsidies has been on the rise over the past three decades. In the energy balance sheet of 2005, the share of the wealthiest and poorest deciles of income from subsidies for petroleum products in 2005 was 26.7% and 2.5% respectively (Hosseini & Kaneko, 2012).

Table 1. Volume of subsidies paid before the law on targeted subsidies (Amounts in billion Rials)
(Source: Budget deduction reports, 2005-2010 and authors' calculations)

Sector/Year		2005	2006	2007	2008	2009	2010
Production	Agriculture (percentage)	15.09	13.28	12.09	8.19	10.54	7.02
	Industrial (percentage)	5.12	6.17	9.1	4.07	5.19	4.92
Consumer		24.6	22.5	18.03	24.49	20.55	23.02
Service		55.19	58.05	60.78	63.25	63.72	65.04
Total subsidies paid		411811	583258	739960	791242	985442	1171082
The ratio of total subsidies to the total budget of the country		26	37	39	34	34	32
The ratio of total subsidies to development budget		393	317	435	328	370	306

In this regard, the targeted subsidies bill in Iran was also part of the "economic transformation plan" proposed by the ninth government. In total, the targeted subsidies plan was implemented to achieve the following goals:

- Achieving justice and reducing inequality between income deciles
- Optimal allocation of resources, reform of economic structure to achieve the goals of the country's vision document and implementation of general policies of Article 44 of the Constitution
- Managing consumption to prevent waste of resources (Website of the Research Center of the Islamic Consultative Assembly, Law of Targeted Subsidies, December 6th, 2009)
- According to this law, 50% of the income from targeted subsidies was supposed to be divided among households and 30% for the Manufacturers and 20% to be spent on government costs and at the end of 5 years, the cash subsidy was to become a comprehensive social security system. (The same source). Even the first government bill predicted that with this plan all the families are covered by social security, unemployment, disability, special diseases and medical insurance and each person's share of insurance payment is reduced from 70% to 30%. Even part of the cost of housing and education of low-income people is allocated to social welfare…" (Website of the Library, Museum, and Documentation Center of the Islamic Consultative Assembly, 2008: Session No. 55 of the 8th Assembly).

Prior to the targeting of subsidies, in rural communities most of the subsidies received, were in the form of production subsidies (chemical fertilizers), and in practice low-income or landless and non-agricultural households benefited less from it, while the well-to-do and non-agricultural strata of rural society are more exposed to migration to cities than others (Ziaei, 2002). But after targeting the subsidies, rural communities were announcing to be one of the areas of interests. Therefore, at the time of writing this study, wherever the government has emphasized the need

to reduce the number of recipients of subsidies, villagers, nomads, people covered by support institutions such as the Relief and welfare Committee, retirees and pensioners are always exempt from this law (Khaneh Melat News Agency, 2009).

Table 2. Revenue performance and the cost of targeted subsidies law in the years Of 2010 to 2016 (amounts in thousands billion Rials)

(Source: Annual budget laws of 2010-2016 and budget deduction reports of 2010-2016 and authors' calculations)

	Year		2010	2011	2012	2013	2014	2015	2016	Sum
Income	Forecast (budget)		80	540	660	500	480	480	480	3,220
	Proceeds (Realized)		63	540	441	430	469	433	429	2,805
	Percentage of Realization		79	100	67	86	98	90	89	87
Expense	Article7[1]	Approved Budget	63	400	480	410	425	390	420	2588
		Realized	63	460	414	420	427.4	418	421	2623.4
		Ratio of realized to Approved budget	100	115	86.25	102.44	100.56	107.18	100.24	87.38
		Share of total Approved expenditures	78.75	74.07	72.73	82.00	88.54	81.25	87.50	80.69
		Share of total Realized expenditures	100	85.19	93.98	97.67	91.13	96.54	98.14	94.66
	Article8	Approved Budget	0	100	100	40	100	52	22	59.14
		Realized Budget	0	80	0.759	0.18	23.588	5.8	3.2	113.527
		Ratio of realized to Approved Budget	0	80	0.759	0.45	23.588	11.2	14.5	18.6
		Share of total Approved expenditures	0	18.52	15.15	8.00	20.83	10.83	4.58	11.13
		Share of total Realized expenditures	0	14.81	0.17	0.04	5.03	1.34	0.75	3.16
	Assistance In the Field of Health	Approved Budget	0	0	60	50	48	48	48	144
		Realized Budget	0	0	0	0	28.4	8.7	9.2	46.3
		Ratio of realized to Approved Budget	-	-	-	-	59.17	18.13	19.17	13.78
		Share of total Approved expenditures	0	0	0	0	10.00	10.00	10.00	4.29
		Share of total Realized expenditures	0	0	0	0	6.06	2.01	2.14	1.46

Over time, the impacts of this plan was revealed in various rural economic levels. In a way that, in in September 2013, Statistical Center of Iran reported that, for the first time the inflation rate in rural areas has overtaken the urban inflation. Some consider 41.4% rural inflation in ratio with 39% urban inflation to be unprecedented in recent years and some others compare it with the inflation during years of 1973-1977. Hence, it is necessary to compare the purpose of this huge economic plan which is the reduction of inequality with the results of its implementation. Accordingly, the present study has been conducted to answer this question: Has inequality between different rural deciles decreased after implementation of targeted subsidies?

2. Theoretical literature of research

Adam Smith the founder of classic school was one of the serious opponents of government intervention in economy. This approach ruled over the western economy prior to the world wars, but with the outbreak of war and the emergence of inflation accompanied by severe economic recession of the 1930s, new ideas such as Keynesian economic thoughts gained strength in which the government emerged as one of the most important regulators of economic activities. By

1 Considering the lack of allocation of resources to the three categories of unemployment insurance, subsidies for housing facilities for vulnerable groups and compensation of government expenditures (subject of Article 11)of targeted subsidies law during the desired years, the inclusion of these items in this table has been omitted. Also, the difference in the total expenditures of different years with the addition of expenditures of Articles 7 and 8 and assistance to the health sector, due to debt repayment of the Central Bank, Treasury and Commerce (a total of 61260 billion rials for all years of targeted subsidies) is due to the following cases:

- Payment of 1700 billion rials to the Ministry of Education for the gift of the holy month of Ramadan to the educators in 2015.
- Payment of 311 billion rials to the Ministry of Defense and Armed Forces Logistics regarding paragraph g of Note 20 0f the Budget Law of 2015
- 65456 billion rials which paid to people at the end of 2013 as the festive gift of the new year

2 Article 7 includes cash and non-cash subsidies as in the basket of distributed goods in 2015

implementing this policy and improving the western economy, the control of currency and financial policy making and public sector administration was relinquished to the government (Ganji et al., 2015). Subsidy is one of the supportive tools of the governments to assist vulnerable groups and specific production sectors. In all economic systems the issue of welfare and social security has been significant and part of the government's current expenditures is allocated to transfer payments to assist vulnerable strata. In general, targeting the subsidies of energy carriers is one of the inevitable policies of the governments (Shahnazi et al., 2014), which can affect the indicators such as: income status of low income deciles, Gini coefficient status in rural areas, 10, 20, 40% of the poorest population, etc.. however, in the late 1980s, in order to address the problem of stagflation and the slowdown in capital accumulation in the advanced economies of the United States and United Kingdom, stabilization and adjustment policies were established, also known as the Washington Consensus approach. These policies have an anti-Keynesian orientation. The Washington Consensus's name for these policies is that the drafters of the "Structural Adjustment and Stabilization Policy" of the three institutions of the International Monetary Fund, the World Bank and US Treasury are based in Washington (Jellema et al., 2016). The mentioned policy package includes two components of economic stabilization and structural adjustment. The component of economic stabilization that the International Monetary Fund has been responsible for promoting, mostly emphasizes mostly the exchange rate correction and elimination of price subsidies. Structural adjustment policies also in addition to emphasis on elimination of subsidies, emphasize monetary and financial reforms and trade liberalization. Elimination of subsidies is specifically among the 13 implementation policies of structural adjustment program (Ganji et al., 2015).

Within the theoretical framework of adjustment policies, payment of public subsidies through price controls and also interventional social security system, hinder further economic growth. From this perspective, poverty and inequality and also structural impasses such as supply inelasticity to price is due to cost disturbances that need to be addressed through implementation of policies (Dini Torkamani, 2005).

The stabilization and adjustment policies are mainly contractionary policies to control the budget deficit and current account deficit. The impacts of these policies during 1980s, included on the one hand the reduction of the capital accumulation (due to the reduction of government spending) and on the other hand increasing inequality and poverty due to liberalization of commodity prices and reduction of real wages (Stewart, 1998). Until UNICEF introduced "Adjustment with Human Face" program in 1987. In these programs compensation for the negative effects on poor families during the implementation of mentioned contractionary policies was recommended. Thus, the issue of targeted subsidies was placed within the framework of adjustment policies. Anyway, if in an economy, the distribution of wealth and fixed assets including land is unequal, the primary effect of revenue transfer policies (cash payments) can be neutralized with the secondary effect resulted from rising commodity prices and production services of the owners of fixed assets. Indeed, in the unequal construction of wealth and power, any attempts to increase welfare of the poor becomes counterproductive (UNICEF, 1991). The efficiency of targeted cash subsidies as a tool of income redistribution, requires prerequisites that inflation does not increase with the implementation of adjustment policies. Otherwise, the share of fixed assets owners increases with the rising of commodity prices and services and therefore, the current pattern of income distribution remains unchanged at best. In other words, the secondary negative effect of rising prices and reduction of real wages on the poor households may be equal to the positive effect of cash subsidies paid or neutralize a significant percentage of it. In addition, with rising prices, there is a possibility that households at the bottom of the income group will fall below the poverty line which is not taken into account in the calculations (Hosseini, 2005). The second prerequisite is the almost accurate identification of target households. If this identification is based on income criteria, accurate information about the households' income status is required, which is not usually the case in developing countries. For this reason, the studies show that the policy of targeted subsidies is associated with errors that, depending on its dimensions, the effectiveness of this policy can be evaluated from another angle (Khorsandian, 2010).

In general, the issue of targeted subsidies and its impact on economic and social systems of rural settlements, have been studied from different

aspects in Iran and the world. Hence, some of the related studies to the present study are briefly stated in two parts of internal and foreign research.

Table 3. Research related to the impact of targeted subsidies on inequality in rural areas

Researchers	Results
Sadeghi et al.,2014	The execution of the plan has been effective on income increase, increasing purchasing power, quality of people's lives, but targeting subsidies had little or medium impact on improving access to health facilities, changing the trend of energy consumption (water, gas, etc.), and improving nutrition and consumption pattern.
Toulabi Nezhadet al., 2013	In regard with economic welfare, the greatest impact of subsidies is related to the component of increasing household demand and food consumption. In case of social welfare, the implementation of this plan has the greatest impact on the indicators of access to services and has the desired effects on the improvement of nutrition and diet diversity, but had not much effect on indicators such as health, education, recreation and leisure. Therefore, it can be stated that the targeted subsidies have increased the welfare of rural households.
Nourollahi et al.,2015	The targeted subsidies plan has not been effective in improving the quality of life of rural households, although the average quality of life in the dimension studied before the targeted subsidies plan was assessed as below average, after the implementation of the targeted subsidies plan, the average quality of life and its dimensions have decreased compared to before the implementation of the plan.
Ahmadi et al.,2016	Execution of the targeted subsidies law had positive and significant effect on both economic and social dimensions of the quality of villagers' lives in Urmia city, but its social effects have been higher than the economic effects. Nonetheless, since the quality of life depends on several conditions and factors, not all the changes can be exactly related to the implementation of the law on targeted subsidies.
Azizpour et al.,2017	In the field of rural economy, implementation of targeted subsidies plan has been associated with consequences such as "multiplicity of household expenditure lines and increasing the volume of pre-established payments in the rural economy", "strengthening the income of rural households", "establishing and widening the gap between producers and rural households" and so on. Eventually, it has led to three major categories: "change in income and expenditure of the villagers", "transformation of the system of production and consumption of wealth in the rural economy" and growth of risk-taking in the rural economy".
Shahnazi et al.,2014	The index of ratio of deciles as well as the Gini coefficient for urban and rural communities has decreased in the year following the targeting of subsidies. The results of the calculations with the Atkinson inequality index were also consistent with the results of the Gini coefficient and showed a decrease in inequality, with the difference that by increasing the inequality aversion parameter, the value of the Atkinson inequality index increases. This means that if the policymaker wants the targeted subsidies program to be more effective, more revenue must be transferred from high-income groups to low-income ones.
Fotros & Shahbazi2016	The Gini index calculated in the last year of the first development program shows the reduction of inequality in rural areas of Iran. Inequality has fluctuated during the second five-year development plan, the Third five-year development program shows the reduction of inequality in rural areas of Iran. Inequality has also been associated with slight fluctuations during the Fourth five-year development program and finally, according to the fifth five-year development plan, it can be stated that after the implementation of the law on targeted cash subsidies, income inequality decreased in 2012 and 2011 compared to 2010 and increased again in 2013 and 2014.
Mohammadi&Shari'ati2018	Policies designed to reduce inequality in the country need to pay more attention to the importance and role of inequality between urban and rural areas in exacerbating inequality. In general, the results show that inequality has decreased after the implementation of the targeted subsidies.
Jellema et al.,2016	In Uganda the impact of financial policies such as subsidies is below average. In other words, redistribution costs, such as developing infrastructure of water and electricity in rural areas has increased social spending and to some extent reduced inequality. But imposition of direct and indirect taxes (for instance increase of value added tax to 20%) and its redistribution in rural areas has led to increasing efficiency in rural production sector and as a result the expansion of direct employment in these areas.
Hedaia et al.,2016	In Egypt, the elimination of energy subsidies in 2014, caused direct effects on economic and social systems of rural settlements. The poor and landless villagers in particular suffered the most from the program. In attempt to reduce the damages caused by the elimination of energy subsidies on poor households and the worsening of the situation, Egypt government increased the subsidies on items such as wheat and dairy, education system and public transportations.
Balie et al.2018	The results of this policy are positive for all selected households, as long as the input market structure is competitive, even these results are doubled. Although subsidies ultimately help poor households to mitigate the effects of high costs, much of it is reabsorbed during market transfers by large producers who generally have the necessary liquidity in the market.

Differences and prominence of the present study from other researches, especially internal researches is that, in other studies the results of examining the indicators have not been compared with the studied sample at the macro level of the country's villages. While, in the present study, the results of examining the research indicators in all villages of the country have been compared with the studied sample. It should also be noted that, in the spatial dimension, a comprehensive research on the effects of the implementation of targeted subsidies in all villages of Neishabour city has not been done so far.

3. Research Methodology

In this study in order to examine the effectiveness of execution of targeted subsidies law on expansion of inequality in rural areas, primarily the research indicators were examined at the level of country's all villages using household cost and income plan data during both six-year periods prior to targeted subsidies (2015-2010) and after that (2011-2016) and each indicator's average was compared for both periods before and after targeted subsidies and then the results obtained from this part have been compared with the results of field studies in studied sample. The same indicators were also examined in selected sample from rural community of Neishabour. It is worth mentioning that, due to dispersion and high population of villages with more than 20 households, 22 villages were selected systematically using Cochran's formula. Also, in selecting the villages, an attempt has been made to include all the districts and rural areas of Neishabour in the sample villages so that the dispersion factor can be observed in the selection of villages. Also, the total number of households in the sample villages (8036 households) was sampled by Cochran method and according to the coefficients of p and q equal to 0.5 and d equal to 0.065, the sample size of 221 people (head of household) has been estimated. Based on this, first, all villages were classified into six groups.

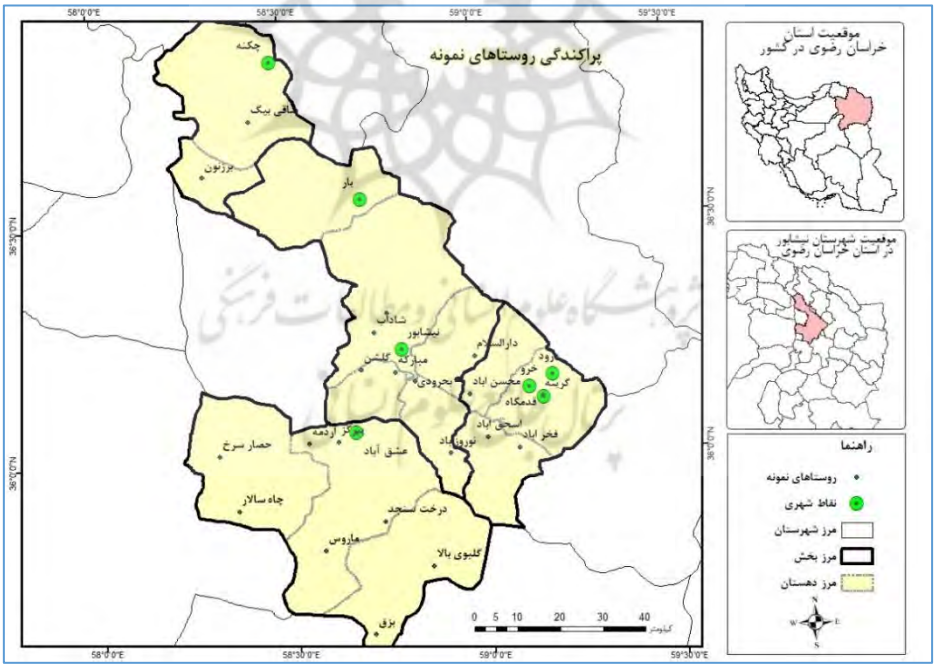

Figure 1. Dispersion of sample villages

Due to large population difference between the lowest rural population and the highest, 7 questionnaires were primarily considered for each village. Otherwise, sparsely populated villages will be decommissioned if only the weight of each village in the sample size is relied on. Finally, the rest of the questionnaires (67 questionnaires) were distributed based on the weight of each village of the total population. Eventually, the highest questionnaires were related to Ishaqabad village and the lowest were related to the group of Derakht Senjed, Robat Qal'eh and Darosalam. Relevant data were collected during the two periods before and after targeted subsidies by documentary and

library methods in villages across the country and then the results were compared with a case study based on experimental observations and completing questionnaires. According to this, in the present study, 50 items were categorized in the form of 8 indicators to evaluate the expansion of inequality in rural areas (Table 4).

Table 4. Indicators of the impact of implementation of targeted subsidies plan on the expansion of inequality in rural areas

(Source: Toulabinezhad et al., 2013; Ali Madadi et al., 2016, Hedaia et al., & UNDP, 2019)

Indicator title	Reference
Income status of Income deciles	Total household income
	Income from freelance jobs (agriculture & non-agriculture)
	Miscellaneous monetary income
	Miscellaneous non-monetary income
	The amount of subsidy received by the household
	Cash subsidy share of total household income
	The effect of cash subsidies on increasing household's income
Gini coefficient status in rural areas	Gini coefficient status in income deciles
The ratio of the Wealthiest to the Poorest	Share of 10% of the wealthiest to 10% of the poorest rural population
	Share of 20% of the wealthiest to 20% of the poorest rural population
	Share of 40% of the wealthiest to 40% of the poorest rural population
Status of non-food Expenditures of deciles	Clothing and shoes, housing, furniture and household services, healthcare, transportations and communications, recreation and entertainment, education and training
	The amount of costs deciles spent on non-food expenditures from cash subsidies
The status of food expenditures of deciles	Flour, noodles, grain and its products, meat, milk and dairy, and bird's eggs, oils and fats, nuts and legumes, sugar and sweets and tea, coffee, and cocoa, spices and flavors and other food ingredients, drinks and fast food and tobacco products
	Deciles' cost spent on household food expenses from cash subsidies
Food consumption status of deciles	Average household cost
	Average price of items (Toman)
	Average annual household consumption per kilo
	Average calories per group (Kilo)
	Average calorie intake per household
	Average calorie intake per person
Literacy status of deciles	Without a literate person, 1 literate person, 2 literate persons, 3 literate persons, 4 literate persons, 5 literate persons and more
	Average literate people in the household
	Deciles' expenses on education costs from cash subsides
Number of employed people in deciles	Average employed people, 1 employed person, 2 employed persons, 3 employed persons, 4 employed persons, 5 employed persons
Indicator	Reference
	The effect of targeted subsidies law on increase of employment of household

4. Research Findings

Prior to targeted subsidies, in rural communities the main part of paid subsidies was production subsidies (fertilizers), and practically, landless or with no land and non-agricultural households benefited less and this is while non-agricultural groups of rural communities are more exposed to migration to cities (Ziaei, 2002). But after targeting subsidies, rural communities are one of the strata of interest. On the other hand, the purpose of paying subsidies is to establish social justice,

public welfare and fair distribution of revenues. In the previous system of subsidy payment, large amounts were paid directly and indirectly and, in most cases, non-targeted, which had no role in promoting the income and welfare of vulnerable groups and its benefits went to high-income groups. In this part, considering the nature and main purpose of subsidies payment system which is the reduction of inequality, various indicators evaluating inequality will be examined based on the formal data first for all the villages of the country and next for the sample villages studied. Also based on the separation of statistical deciles of cost-income plan of rural households of Iran Statistical Center, case study sample was divided into various income deciles. Based on the table, 20.36% of families had an income of 45 to 75 million Rials per year and have been placed in the second decile, while 3.17% had an income of 270 to 360 million Rials and have been placed in 8th income decile.

Also average number of people in the household in studied case is 3.16 people, the average people with job in the household is 1.16 people and the average number of people with income in the household is 1.29 people.

Table 5. Number of households placed in income deciles in studied case sample

Source: research findings, 2019

Income deciles	Decile limit	Percentage of households in the decile	Average number of people in the decile	Average of people with job in the decile	Average of people with income in the decile
First decile	45 million and less	14.03	1.80	0.29	1.00
Second decile	Between 35 to 75 million	20.36	2.35	0.37	1.00
Third decile	Between 75 to 90 million	11.76	2.50	1.00	1.00
Fourth decile	Between 90 to 120 million	11.31	2.68	1.00	1.00
Fifth decile	Between 120 to 165 million	14.93	3.15	1.03	1.05
Sixth decile	Between 165 to 195 million	6.79	3.06	1.00	1.00
Seventh decile	Between 195 to 270 million	6.33	3.57	1.07	1.07
Eighth decile	Between 270 to 360 million	3.17	4.14	2.00	2.00
Ninth decile	Between 360 to 480 million	4.52	4.30	2.00	1.80
Tenth decile	480 million and more	6.79	4.00	1.80	1.93
Average total	221 people		3.16	1.16	1.29

4.1. Income status of income deciles

The most important effect of targeted subsidies is on the income dimension of households. After announcing the implementation of targeted subsidies on December 18, 2010, the amount of 455000 Rials could be withdrawn for each person, and thus a significant amount was added to the income of rural households. Table 6 shows the income status of rural household dimension in the upper income deciles is higher than the lower deciles. Also, the upward trend of income from 2005 onwards is quite tangible. Especially in the first year after targeted subsidies (2011), the income weight of the lower deciles from cash subsidies is very significant, so that in the first decile it has 82%, in the second decile 58% and in the third decile 49% of the household income basket.

Table 6: Average annual income per rural household by decile

(Source: Iran Statistical Center, 2005-2016)

Year	Income decile	Average people in a household (percentage)	Average people with income in the household (percentage)	Get paid (percentage)	Income from freelance jobs (agriculture and non-agriculture) (percentage)	Miscellaneous Monetary income (except cash subsidies) (percentage)	Miscellaneous Non-monetary Income (percentage)	Cash Subsidy (percentage)	Total Income (percentage)
Before Targeted	First Decile	2.12	1.12	15	11	35	31	8	100
	Second Decile	2.32	1.19	32	20	18	25	4	100
	Third Decile	2.95	1.27	35	24	15	23	3	100
	Fourth Decile	3.42	1.42	36	29	12	20	3	100

Year	Income decile	Average people in a household (percentage)	Average people with income in the household (percentage)	Get paid (percentage)	Income from freelance jobs (agriculture and non-agriculture) (percentage)	Miscellaneous Monetary income (except cash subsidies) (percentage)	Miscellaneous Non-monetary Income (percentage)	Cash Subsidy (percentage)	Total Income (percentage)
Subsidies	Fifth Decile	3.75	1.42	35	33	12	18	3	100
	Sixth Decile	4.14	1.47	38	35	11	13	3	100
	Seventh Decile	4.30	1.51	37	37	11	12	2	100
	Eighth Decile	4.49	1.59	39	37	10	11	2	100
	Ninth Decile	4.77	1.67	40	39	9	10	2	100
	Tenth Decile	5.23	1.95	33	49	9	8	1	100
	Average total (in million Rials)	4.36	1.61	103.86	117.65	25.92	32.3	7.44	287.17
	Percentage			36	41	9	11	3	100
After targeted subsidies	First Decile	1.56	1.20	4	4-	24	33	43	100
	Second Decile	3.01	1.17	14	11	18	23	34	100
	Third Decile	3.51	1.25	26	17	12	17	28	100
	Fourth Decile	3.81	1.31	30	18	13	15	24	100
	Fifth Decile	3.94	1.37	30	23	11	14	21	100
	Sixth Decile	3.99	1.85	29	27	12	14	18	100
	Seventh Decile	4.18	1.91	32	28	11	14	16	100
	Eighth Decile	4.29	2.00	33	29	12	13	14	100
	Ninth Decile	4.46	2.13	33	31	12	12	12	100
	Tenth Decile	4.81	2.45	26	45	12	9	8	100
	Average total (in million Rials)	3.84	1.42	223.06	224.4	92.77	103.08	125.74	779.05
	Percentage			29	30	12	13	16	100

Also, the descriptive findings of table 7, which are related to the job of the respondents in the case study, show that only 9 heads of households out of 31 households in the first decile and 17 heads of households out of 45 households in the second decile were employed. Second, the highest number of seasonal workers, which is one of the weakest types of employment, is seen in the first, second, and third deciles. The highest number of simple industrial workers is also seen in the fifth decile. In contrast, in the tenth decile, there are 2 cultural figures, two shopkeepers, one beekeeper and three cattle breeders. In general, the findings of this part of the study indicate the income gap caused by the type of job. Also, the descriptive findings of the case study sample indicate that the highest income (87%) of a household is provided through freelance agricultural and non-agricultural jobs and the lowest annual income of a household is provided through non-monetary and monetary incomes (excluding cash subsidies). Also, cash subsidies accounted for 7.56% of a household income portfolio in the case study sample in 2018). According to the findings of this study, cash subsidies in the first income decile constitutes 28% of the annual income volume and in this respect in the second place of importance for this decile and vice versa in the tenth income decile constitutes only three% of the sample household income and in this respect, it has the lowest level of importance for this decile.

Table 7. Income segregation per household in the study area

Income Deciles	Average income of getting paid (percentage)	Average income from freelance jobs (agricultural & non-agricultural) (percentage)	Average miscellaneous monetary incomes (excluding cash subsidies) (percentage)	Average miscellaneous non-monetary incomes (excluding cash subsidies) (percentage)	Average Cash subsidy	Total Income (percentage)	Average score Of Respondents [2]
First decile	-	9.71	24.94	37.36	28.00	100.00	4.94
Second decile	-	34	8	34	23.79	100	4.89
Third decile	-	83	-	-	16.84	100	4.58
Fourth decile	-	86	-	-	13.96	100	4.60
Fifth decile	-	87	-	-	12.57	100	4.58
Sixth decile	-	91	-	-	9.36	100	4.53
Seventh decile	-	-	91	-	-	8.73	4.21
Eighth decile	-	93	-	-	6.79	100	3.57
Ninth decile	8.92	85	-	-	5.82	100.00	2.90
Tenth decile	7	90	-	-	3.00	100	2.87
Average total (In million Rials)	8,666,667	197,517,086	1,332,710	3,151,685	17,239,663	227,907,810	4.44
Average total (%)	4	87	1	1	7.56	100	4.94

Statistical descriptive findings of the studied sample indicates that, according to the respondents, the lower deciles have rated the effect of cash subsidies on the increasing of household's income significantly higher than the upper deciles. The table shows that, from the first decile to the seventh decile the effect of cash subsidies on the income of rural households is significantly high. While the ninth and tenth deciles have rated this effect as moderate.

4.2. Gini coefficient status in rural areas

Table 8 shows the Gini coefficient status in the years before and after targeted subsidies. According to this, Gini coefficient in the period after targeted subsidies is higher than the period before it and as a result income inequality has increased. The share of the first decile (the poorest groups of rural community) from the total gross rural household's cost in 2005 was equal to 0.024% which has reduced to 0.0059% in 2016. That is, the share of the rural poor in the rural economy has decreased. In contrast, the share of the tenth decile (the wealthiest groups of rural community) from total gross rural household's cost in 2005 has been equal to 0.3063% which has reduced to 0.2662% in 2016, therefore, the share of rural rich has also been reduced.

Table 8. Gini coefficient and share of gross per capita cost per decile (decimal weight)

Component	Average amount before Targeted subsidies	Average amount after Targeted subsidies
Gini coefficient	0.3284	0.3352
Share of first decile	0.0236	0.0257
Share of second decile	0.1477	0.0437
Share of third decile	0.0479	0.0546
Share of fourth decile	0.0580	0.0662
Share of fifth decile	0.0690	0.0760
Share of sixth decile	0.0817	0.0898
Share of seventh Decile	0.0981	0.1019
Share of eighth Decile	0.1222	0.1213
Share of ninth Decile	0.1587	0.1546
Share of tenth Decile	0.3033	0.2662

4.3. Ratio of the wealthiest to the poorest people

According to table 9, share index of 10% wealthiest to 10% poorest population in rural areas in 2005 has

2 Respondents' answers to the questionnaire question were graded into five levels: very high (4 to 5), high (3 to 4), medium (2 to 3), low (1 to 2), very low (zero to 1).

been 12.74. This means that 10% of the rich rural population in the mentioned year have contributed to the country's economy 12.74 times as much as 10% of the poorest class. However, this gap has decreased to 9.25 in 2016, that is, in this year, 10% of the wealthiest people in rural areas have earned 9.25 times more than the poorest people, which indicates that the income distribution situation has increased in the 11th government. The same is true of the share of the wealthiest 20% to the poorest 20% in the rural population. This means that at the end of 2005, the share of 20% of the wealthiest was 7.6 times to 20% of the poorest population, which at the end of 2016, this gap has decreased to 5.78 times. This table shows that in case of the third index, the share of 40% of the wealthiest to 40% of the poorest population has improved. Thus, at the end of 2016, it was equal to 4.11 times, which at the end of 2016 has narrowed in the post period of targeted subsidies.

Table 9. Share of the wealthiest to the poorest rural population
(Source: Iran Statistical Center, 2020)

Component	Average amount before targeted subsidies	Average amount after targeted subsidies
Share of 10% wealthiest to 10% poorest population	12.88	9.11
Share of 20% wealthiest to 20% poorest population	7.56	5.72
Share of 40% wealthiest to 40% poorest population	4.09	3.33

The research findings in case of the study sample indicates that the share of 10% wealthiest to 10% poorest population in sample rural areas in 2019 was equal to 6.13. It means that, 10% of rich rural population in the mentioned year have won the economy of sample villages 6.13 times more than the poorest population. The table also shows that for the third indicator, the share of 40% of the wealthiest to 40% of the poorest population was equal to 20.67 times. In other words, the distance between the rich and the poor in general in the case study is greater compared to the villages of the country and as a result the situation of inequality is worse.

4.4. The status of non-food expenditures of the deciles

The indicator of non-food expenditures of households is one of the important economic indicators to evaluate the living conditions of rural households. Segregation of non-food expenditures shows that, increase of some of them (such as housing costs) during a specific period in the household consumption basket indicates the worsening of economic conditions and the growth of some other costs (travel expenses) if the inflation rate is low, indicates an improvement in the living conditions of households. Table 10 shows the details of non-food expenditures of a rural household. As shown in this table, in the period prior to the targeting subsidies, in average the highest non-food expenditures are related to housing costs. The same is true of the post-subsidy targeting period. Also, the lowest amount of non-food expenditures in the period before the targeted subsidies is related to recreation and entertainment and also education with (4%) of the household basket of non-food expenditures. This is also the case for the post-targeting subsidies period, with recreation, entertainment and education costs being the lowest of the non-food expenditures for this period. Also, the comparison of the costs of the first decile in the period before and after the targeted subsidies, reveals important points. Average housing expenditures in the pre-targeted period account for 58% of non-food household expenditures, while after targeted subsidies, housing expenditures account for 71% of the non-food expenditures of this decile. Also, the costs related to education, entertainment and recreation in the pre-targeted period of subsidies were about 25 and in the pre-targeted period, the costs of this sector were reduced to 1%.

Table 10. Non-food expenditures of household by cost deciles
Source: Iran Statistical Center, 2005 to 2016

period	Cost Decile	Average Number of People Per household	Clothing & Shoes (%)	Housing (%)	Household's Accessories Furniture & Services (%)	Healthcare	Transportation & Communications (%)	Entertainment Recreations Education & Training (%)	Goods Service & Others (%)	Total Non-food Expenditures Of Household (%)
Before Targeted subsidies	First Decile	2.12	7.38	58.42	9.12	18.55	0.08	2.36	4.08	100.00
	Second Decile	2.32	7.25	47.04	9.16	13.19	13.88	1.79	7.68	100.00
	Third Decile	2.95	9.03	38.87	9.70	14.15	16.75	2.62	8.88	100.00
	Forth Decile	3.42	9.50	38.22	9.99	12.26	15.91	2.97	11.16	100.00
	Fifth Decile	3.75	10.18	35.69	9.73	13.21	16.18	2.76	12.24	100.00
	Sixth Decile	4.14	10.33	32.68	10.26	12.98	16.42	3.99	13.33	100.00
	Seventh Decile	4.30	11.67	27.67	11.26	13.48	16.96	3.82	15.15	100.00
	Eighth Decile	4.49	12.44	25.02	11.64	12.73	18.94	5.31	16.09	102.17
	Ninth Decile	4.77	12.14	20.37	11.59	14.13	19.38	4.46	17.94	100.00
	Tenth Decile	5.23	11.64	13.81	11.14	15.11	25.48	5.86	16.97	100.00
	Average Total (Million Rials)	4.36	3.74	8.34	3.53	4.52	6.61	1.16	4.83	32.74
	Percentage		11.42	25.47	10.79	13.83	20.19	3.54	14.76	100.00
After Targeted Subsidies	First Decile	1.56	4.02	71.33	8.44	17.46	(3.93)	1.32	1.35	100.00
	Second Decile	3.01	4.68	50.20	7.95	13.83	15.15	1.55	6.63	100.00
	Third Decile	3.51	5.87	45.18	8.46	13.98	16.37	1.54	8.59	100.00
	Forth Decile	3.81	6.88	41.12	8.26	13.43	17.58	2.31	10.42	100.00
	Fifth Decile	3.94	7.66	37.89	8.35	13.91	17.99	2.58	11.63	100.00
	Sixth Decile	3.99	8.50	35.19	8.60	13.90	18.20	2.90	12.73	100.00
	Seventh Decile	4.18	9.46	32.43	8.67	13.89	18.81	3.22	13.53	100.00
	Eighth Decile	4.29	10.20	28.91	9.12	14.69	18.78	3.45	14.86	100.00
	Ninth Decile	4.46	11.20	24.98	9.40	14.83	20.80	3.69	15.10	100.00
	Tenth Decile	4.81	11.81	16.92	11.15	16.14	23.60	3.78	16.59	100.00
	Average Total (Million Rials)	3.84	7.39	22.09	7.19	11.25	14.97	2.43	10.47	75.79
	Percentage		9.75	29.15	9.49	14.85	19.75	3.20	13.81	100.00

According to table 11, the descriptive findings of the case study indicates that, here with a much lower percentage (28%) compared to the pre-targeted period in rural areas, the highest cost of non-food items is related to housing. But comparing different deciles, we get to the important point that in the first decile, housing costs account for 70% of non-food expenditures, while in the following deciles, this cost decreases significantly, and it includes only 17% of non-food expenditures in the tenth decile. Transportation and communications costs also increase from 4% for the first decile to 26% for the second decile.

As it is also observed in table 11, important results are obtained from case study. First, despite the expectations from the primary purpose of the targeted subsidy plan, the lower deciles bear more pressure due to the increase in energy carriers, because according to this table, 43.23%, 21.22%, and 14.45% of annual non-food expenditures of

household are allocated to water and energy costs for the first, second, and third deciles, while the same figure reaches to 5.20%, 4.45% and 2.90% for the eighth, ninth and tenth deciles respectively. Secondly, the findings of this study show that, as an average 7.29% of non-food expenditures of household and 3.71% of total annual expenditures of household are allocated to water and energy expenses.

Table 11. Non-food expenditures of the household in the studied area

Cost Deciles	Clothing & Shoes (%)	Housing (%)	Accessories Furniture Services of Household (%)	Health care (%)	Transportation & Communications (%)	Entertainments Recreations, & Education & Training (%)	Goods, Services & Others (%)	Total Non-food Expenditures Per Household (Million Rials)	Total Food Expenditures (million Rials)	The Percentage of Non-food Expenditures of the Total	Total Costs (Million Rials)
First Decile	4.07	70.23	7.86	18.47	-4.09	1.29	2.17	11.06	19.94	35.69	31.00
Second Decile	4.14	50.16	7.85	14.56	14.40	1.64	7.25	22.99	35.95	39.01	58.95
Third Decile	5.89	45.01	7.46	14.59	16.67	2.19	8.19	34.09	45.36	42.91	79.45
Fourth Decile	6.96	42.42	7.08	15.60	16.74	2.12	9.09	45.02	52.40	46.21	97.42
Fifth Decile	7.00	38.31	7.54	15.54	17.82	2.64	11.16	56.53	62.43	47.52	118.96
Sixth Decile	9.17	34.90	7.87	15.78	17.04	2.88	12.36	68.99	73.19	48.52	142.18
Seventh Decile	8.35	32.40	8.97	15.47	18.95	3.35	12.78	86.02	78.92	52.15	164.94
Eighth Decile	8.81	28.75	8.39	17.02	19.17	3.16	14.71	110.38	91.40	54.70	201.78
Ninth Decile	10.03	24.80	8.99	16.66	20.55	3.05	15.93	146.16	107.93	57.52	254.09
Tenth Decile	6.15	17.19	11.01	18.57	25.63	3.79	17.67	251.02	164.15	60.46	415.17
Average Total (Million Rials)	6.12	23.46	6.66	12.38	14.30	2.18	10.73	75.85	73.17	50.90	149.01
Average Total (%)	7.64	28.35	9.12	17.00	20.42	3.15	14.27	100	100	-	100.00

4.5. status of food expenditures of the deciles

According to the table below, in the post-subsidy period, costs such as housing, healthcare and transportation in the lower deciles have increased significantly. Meanwhile, the percentage of expenses for entertainment, recreation, education and training in the consumption basket of rural households has decreased to some extent in the post-targeted period, and this category also indicates the deterioration of the economic situation of the household. According to this table in 2005 the highest food expenses for the first decile is related to meat (28%) and its lowest (1%) for this decile is related to fruits, drinks and fast food and tobacco costs. While in 2016 the highest amount of costs (29%) for the tenth decile was related to grain and the lowest amount of costs (3%) is related to spices. In 2005 the highest expenses were respectively related to meat, grain, oils and fats, dairy, sugar, spices, fruits and drinks for the tenth decile while, in 2016 this order was disturbed and changed to grain, meat, fruits, dairy, sugar, drinks and tobacco, oils and nuts respectively.

Table 12. Food expenditures of rural households before and after the targeted subsidies
(Source: Iran Statistical Center, 2004-2016)

Period	Cost Deciles	Average number of people in the household	Clothing and footwear (percentage) (%)	Housing (percentage)	Household appliances, furniture and services (percentage) (%)	Health (percentage)	Transport and Communications (percentage)	Entertainment, education and training (percentage)	Miscellaneous goods and services (percentage)	Total household non-food expenses (percentage)
Before the targeted subsidies	First decile	2.12	7.38	58.42	9.12	18.55	0.08	2.36	4.08	100.00
	Second decile	2.32	7.25	47.04	9.16	13.19	13.88	1.79	7.68	100.00
	Third decile	2.95	9.03	38.87	9.70	14.15	16.75	2.62	8.88	100.00
	Fourth decile	3.42	9.50	38.22	9.99	12.26	15.91	2.97	11.16	100.00
	Fifth decile	3.75	10.18	35.69	9.73	13.21	16.18	2.76	12.24	100.00
	Sixth decile	4.14	10.33	32.68	10.26	12.98	16.42	3.99	13.33	100.00
	Seventh decile	4.30	11.67	27.67	11.26	13.48	16.96	3.82	15.15	100.00
	Eighth decile	4.49	12.44	25.02	11.64	12.73	18.94	5.31	16.09	102.17
	Ninth decile	4.77	12.14	20.37	11.59	14.13	19.38	4.46	17.94	100.00
	Tenth decile	5.23	11.64	13.81	11.14	15.11	25.48	5.86	16.97	100.00
	Average total (in Million Rials)	4.36	3.74	8.34	3.53	4.52	6.61	1.16	4.83	32.74
	(%)		11.42	25.47	10.79	13.83	20.19	3.54	14.76	100.00
After the targeted Subsidies	First decile	1.56	4.02	71.33	8.44	17.46	(3.93)	1.32	1.35	100.00
	Second decile	3.01	4.68	50.20	7.95	13.83	15.15	1.55	6.63	100.00
	Third decile	3.51	5.87	45.18	8.46	13.98	16.37	1.54	8.59	100.00
	Fourth decile	3.81	6.88	41.12	8.26	13.43	17.58	2.31	10.42	100.00
	Fifth decile	3.94	7.66	37.89	8.35	13.91	17.99	2.58	11.63	100.00
	Sixth decile	3.99	8.50	35.19	8.60	13.90	18.20	2.90	12.73	100.00
	Seventh decile	4.18	9.46	32.43	8.67	13.89	18.81	3.22	13.53	100.00
	Eighth decile	4.29	10.20	28.91	9.12	14.69	18.78	3.45	14.86	100.00
	Ninth decile	4.46	11.20	24.98	9.40	14.83	20.80	3.69	15.10	100.00
	Tenth decile	4.81	11.81	16.92	11.15	16.14	23.60	3.78	16.59	100.00
	Average total (in Million Rials)	3.84	7.39	22.09	7.19	11.25	14.97	2.43	10.47	75.79
	(%)		9.75	29.15	9.49	14.85	19.75	3.20	13.81	100.00

The findings of the case study indicates that rural household expenditures are spent on grain, meat, fruits and vegetables, dairy, sugar, nuts and tobacco and spices respectively. These findings also show that in all deciles, the highest cost is spent on grain and in 8 deciles the lowest cost is spent on spices. Also the group of meat, fruits and vegetables in all deciles is in the second and third priority of food expenses. These findings also show an increasing trend of cost for meat from first decile to second decile and vice versa decreasing trend of cost from the first decile to the tenth decile for the grain group.

Table 13. Household's food expenditures in the studied area

Cost Deciles	Grain and Its products (%)	Meat (%)	Dairy & Eggs (%)	Oils & Fats (%)	Fruits & Vssegetables (%)	Nuts & Legumes (%)	Sugar & Sweets (%)	Spices (%)	Drinks & Fast food & Tobacco (%)	Total Food Expenditures (%)
First decile	28.18	16.99	11.57	5.58	16.79	4.53	8.70	3.28	3.80	100
Second Decile	28.69	17.43	11.10	5.60	16.79	4.96	8.66	3.34	5.15	100
Third Decile	28.26	17.66	11.14	5.40	16.05	5.18	7.74	3.17	5.83	100
Fourth Decile	27.25	18.20	10.79	4.55	5.06	16.81	5.25	8.44	3.49	100
Fifth Decile	25.07	18.49	11.46	4.68	17.16	4.96	8.21	3.47	6.53	100
Sixth Decile	23.18	18.86	10.99	4.16	16.70	5.35	7.01	8.24	5.57	100
Seventh Decile	23.74	20.77	11.14	3.90	16.05	5.70	8.25	3.60	6.65	100
Eighth Decile	22.35	21.91	11.02	3.82	16.69	5.88	8.16	3.44	6.40	100
Ninth Decile	22.60	22.46	10.08	3.74	16.01	6.40	7.88	3.51	6.97	100
Tenth Decile	24.89	24.75	8.30	3.00	13.64	5.74	7.11	2.99	9.17	100
Average Total (Million Rials)	18.01	15.38	7.56	2.94	10.98	4.71	5.55	3.06	4.89	73.09
Percent of total	25	20	11	4	15	7	8	4	6	100

4.6. Status of food consumption of deciles

According to the data in the below table, it can be stated that, after targeted subsidies:

- The consumption rate of all food groups has been decreased.
- The average calorie intake per person has also decreased except for grain.
- Allegedly, considering the decrease of consuming food groups such as meat, fruits and vegetables and dairy, etc., the trend of consuming grain has accelerated and as a result the consumption pattern has changed

Table 14. Food consumption status of deciles

(Source: Iran Statistical Center, 2005-2016 and Authors' calculations)

Period	Component	Average Number of people in household	Grain & Its Products	Meat	Dairy & eggs	Oils & fats	Fruits & vegetables	Nuts & Legumes	Sugar & Sweets	Total
Before The Targeted Subsidies	Average household costs (Million Rials)	4.36	4.41	5.45	2.10	1.79	2.63	0.992	1.64	19.004
	Average items price (thousand Rials)		36.4	677.9	234.9	469.4	108.3	173.6	189.7	1890.1
	Average annual household consumption per Kilo		1,239	84	91	40	227	57	88	1,826
	Average calorie per group (Kilo)		2,640	1,803	2,341	8,645	392	3,470	2,373	21,664
	Average household calorie intake (Kilo calories)		3271.3	150.8	212.9	346.4	89.1	198.5	207.7	4476.7
	Average calorie intake per person (Kilo calories)		749.7	34.5	48.8	79.4	20.4	45.5	47.6	1026
After The Targeted Subsidies	Average household costs (Million Rials)	3.84	13.11	10.80	5.39	2.37	6.45	2.68	4.05	44.85
	Average items price (thousand Rials)		120.2	2078	736.5	1094.1	348	610	599.1	5585.91
	Average annual household consumption per Kilo		1,194	56	79	23	198	48	74	1,672
	Average calorie per group (Kilo)		2,640	1,803	2,341	8,645	392	3,470	2,373	3,095
	Average household calorie intake (Kilo calories)		3151.7	100.1	184.1	196.7	77.6	168.1	176.2	4054.6

Period	Component	Average Number of people in household	Grain & Its Products	Meat	Dairy & eggs	Oils & fats	Fruits & vegetables	Nuts & Legumes	Sugar & Sweets	Total
	Average calorie intake per person (Kilo calories)		814	25.9	47.8	51.1	20.1	43.4	45.9	1048.3
Case Study	Average household costs (Million Rials)	3.15	18.007	15.38	7.56	2.95	10.98	4.705	5.55	65.13
	Average items price (thousand Rials)		941.4	4051.9	1994.3	2213.3	723.6	1255.7	482.4	11662.5
	Average annual household consumption per Kilo		191	38	38	13	152	37	115	585
	Average calorie per group (Kilo)		2,640	1,803	2,341	8,645	392	3,470	2,373	21,664
	Average household calorie intake (Kilo calories)		1590.7	215.6	279.5	362.2	187.4	409.6	860.3	3905.5
	Average calorie intake per person (Kilo calories)		505	68.4	88.7	115	59.5	130	273.1	1239,.8

According to case study findings the average calorie intake per person in the sample household is (1,048,298 kilo calories) which is considered a higher figure in ratio with the period after targeted subsidies in country's villages. Also, the average calorie intake per each sample household is 3,905,513 kilo calories which is considered to be a lower figure in ratio with after the targeted subsidies in country's villages. According to these findings the average calorie intake in tenth decile is also 2635145 kilo calories and the average calorie intake in the first decile is 371528 which indicates that the average calorie intake in the tenth decile is seven times more than the first decile.

4.7. Literacy status of deciles

The following table indicates the literacy status in the periods before and after targeted subsidies by income deciles. According to this table the number of households without literate people has increased after targeted subsidies. The number of households with one literate person or more has also had a downward trend in the lower deciles. This issue is accelerated when the average number of literate people also decreases after targeted subsidies.

Table 15. Literacy status in rural households before and after the targeted subsidies

(Source: Iran Statistical Center, 2005-2016)

Period	Cost Deciles	Without Literate People	One literate Person	Two Literate Persons	Three Literate Persons	Four Literate Persons	Five Literate Persons & More	Average Literate People In Household
Before Targeted Subsidies	First decile	54.25	16.69	14.75	7.09	3.80	2.34	0.99
	Second decile	24.12	18.15	26.38	16.38	8.65	4.92	1.87
	Third decile	12.83	14.88	28.20	19.69	14.20	8.60	2.35
	Fourth decile	9.70	12.76	27.38	21.73	15.10	11.70	2.63
	Fifth decile	6.24	10.39	24.29	22.87	19.44	15.02	2.96
	Sixth decile	5.06	8.32	22.88	24.12	19.66	18.20	3.17
	Seventh decile	3.62	6.48	21.93	23.26	21.24	21.63	3.32
	Eighth decile	2.42	5.44	19.53	22.73	21.44	26.54	3.56
	Ninth decile	1.70	5.31	15.41	22.38	23.58	29.68	3.74
	Tenth decile	1.28	4.32	12.90	19.92	24.26	35.32	4.12
	Total average	11.81	10.16	21.28	20.07	17.28	17.69	2.87
After Targeted Subsidies	First decile	59.70	16.96	13.72	6.34	2.44	0.98	0.78
	Second decile	26.87	16.58	25.76	15.46	8.73	3.60	1.72
	Third decile	16.35	17.58	27.53	20.83	12.02	5.68	2.14
	Fourth decile	7.90	12.64	27.57	25.50	17.63	8.76	2.63
	Fifth decile	5.60	10.84	25.44	26.48	20.58	11.08	2.84
	Sixth decile	4.70	8.67	24.70	26.68	22.06	13.20	2.99
	Seventh decile	3.28	7.29	21.98	27.60	23.33	16.52	3.19

	Eighth decile	2.42	6.57	19.35	25.32	25.74	20.60	3.39
	Ninth decile	1.74	6.01	16.45	24.84	25.72	25.50	3.64
	Tenth decile	13.88	10.90	23.15	22.28	17.33	11.30	2.58
	Average total	54.25	16.69	14.75	7.09	3.80	2.34	0.99

Description of the statistical findings of case study indicates that, in average there are 2.5 literate people in each sample family. There is a significant difference between deciles in the studied sample. There are 0.68 literate people in the first decile, while there are 3.42 literate people in the tenth decile. And 63.17% of families in the first decile are without any literate people, while only 2.03% of the families in the tenth decile are without literate people. Table 16 also shows that, families in the tenth decile contain the highest number of literate people.

Table 16. Literacy status in the households of the studied area

Cost deciles	Without Literate People	One Literate People	Two Literate people	Three Literate People	Four Literate People	Fifth Literate People	Average Literate People In Household
First decile	63.17	16.25	12.94	5.5	1.56	0.58	0.68
Second decile	27.95	16.2	25.56	16.11	9.43	4.75	1.79
Third decile	18.72	17.2	22.82	20.28	14.75	6.23	2.16
Fourth decile	11.35	16.08	24.46	26.07	14.94	7.11	2.41
Fifth decile	9.54	11.94	25.65	25.48	18.52	8.87	2.61
Sixth decile	6.71	11.57	21.29	30.46	19.12	10.85	2.82
Seventh decile	4.6	8.75	23.69	28.42	22.83	11.7	2.96
Eighth decile	3.11	8.49	22.2	27.22	24.46	14.53	3.12
Ninth decile	4.5	6.45	19.17	28.71	27.36	13.81	3.15
Tenth decile	2.03	7.2	16.74	29.15	24.47	20.41	3.42
Average total	15.17	12.01	21.45	23.74	17.74	9.88	2.51

It should be noted that, only four respondents stated that one- or two-people's subsidies are spent on tuition fees and in contrast, 98.2% have stated that, they do not pay any tuition fees from cash subsidies.

4.8. Number of employed people in the deciles

The employment status is one of the indisputable indicators of evaluating inequality. Meanwhile, one of the law provisions (Article eight) of the targeted subsidies law has been the assistance to production sector and as a result creating jobs. Therefore, examining the rural employment status in both periods before and after implementation of this law can explain the inequality status and indicate the success or failure of this law. Evaluation of the following table shows that, in total, there have been no employed people in 99% of rural households in the first, second and third deciles before the targeted subsidies. But after the targeted subsidies it increases to 148%. In fact, the data of this table indicate that, it has had a downward trend in each group (one employed person, two employed persons, etc.,) and instead, the number of unemployed has increased. Hence, the evidence shows that, the employment status in rural families has generally gotten worse.

Table 17. Employment status of rural households before and after the targeted subsidies

(Source: Iran Statistical Center, 2005-2016)

Period	Cost deciles	Average literate People in household	Average People With Income in household	Average Employed people	Without Employed people	One Employed	Two Employed	Three Employed	Four Employed	Five Employed
Before Targeted Subsidies	First decile	2.33	1.20	0.53	55.18	31.83	7.45	1.00	10.08	0.03
	Second decile	3.07	1.35	0.99	27.53	47.42	16.24	3.77	13.52	0.39
	Third decile	3.71	1.43	1.22	16.94	52.18	18.81	6.49	14.42	0.72
	Fourth decile	4.06	1.54	1.31	14.08	51.27	19.86	6.88	14.06	0.96
	Fifth decile	4.29	1.54	1.45	9.74	52.98	21.34	8.21	15.51	1.42
	Sixth decile	4.57	1.59	1.52	8.65	50.53	22.49	8.93	14.79	2.01

Period	Cost deciles	Average literate People in household	Average People With Income in household	Average Employed people	Without Employed people	One Employed	Two Employed	Three Employed	Four Employed	Five Employed
	Seventh decile	4.71	1.63	1.65	6.71	47.59	24.35	10.71	13.73	2.83
	Eighth decile	4.83	1.70	1.76	5.89	45.19	24.18	12.08	13.33	3.52
	Ninth decile	5.09	1.76	1.86	5.42	42.21	24.58	12.74	13.02	4.41
	Tenth decile	5.45	1.95	1.95	5.02	38.60	25.93	13.91	11.54	6.43
	Average total	4.36	1.61	1.45	15.56	46.76	21.03	8.74	13.99	2.37
After Targeted Subsidies	First decile	2.02	1.09	0.34	70.68	25.80	3.00	0.38	0.14	0.00
	Second decile	3.10	1.22	0.75	38.87	49.47	9.58	1.71	0.29	0.08
	Third decile	3.51	1.30	4.47	26.26	56.12	13.56	3.16	0.70	0.21
	Fourth decile	3.73	1.35	1.11	17.73	60.53	16.52	4.10	0.91	0.21
	Fifth decile	3.87	1.41	1.20	13.87	61.29	18.23	5.09	1.20	0.33
	Sixth decile	4.04	1.46	1.29	11.94	52.54	19.70	6.33	1.75	0.61
	Seventh decile	4.15	1.50	1.35	10.03	50.48	21.33	6.92	2.26	0.61
	Eighth decile	4.33	1.54	1.43	9.08	49.08	21.92	8.36	2.58	1.08
	Ninth decile	4.48	1.60	1.51	8.19	47.02	23.06	9.51	3.21	1.38
	Tenth decile	4.73	1.77	1.73	7.25	40.40	25.14	12.08	5.02	3.16
	Average total	3.79	1.42	1.17	21.39	52.94	17.20	5.76	1.94	0.77

The following table indicates the number of employed people in the studied sample households. According to obtained results, it is considered that, 29.03% of the respondents in the deciles with 70.97% unemployed people have stated that there is only one employed person in their families. 62.22% of people in the second decile have also mentioned that there is no employed person in the household and 37.78% of respondents have also stated that there is only one employed person in the household. In contrast, 20% of respondent in the tenth decile stated that there is only one employed person in the household, 60% of respondents stated that there are two employed persons in the household, and 20% of respondents also stated that there are 3 employed persons in the household. 46.67% respondents in the tenth decile also stated there is only one employed person in the household, 26.67% of the respondents stated that there are two employed persons in the household and 20% of respondents stated that there are 4 employed persons in the household. The findings of descriptive statistics of the case study also indicate that, the majority of the respondents underestimated the impact of the implementation of the targeted subsidies law on increasing employment in the household. In all deciles, average response was low.

Table 18. Number of employed people per household in case study

Cost deciles	Number of Households In each decile	Percentage of households Without Employed people	Percentage Of households With one Employed person	Percentage Of households With two Employed persons	Percentage Of households With three Employed persons	Percentage Of households With four Employed persons	Percentage Of households With five Employed persons	Average
First decile	31	70.97	29.03	0.0	0.00	0.0	0.0	1.00
Second decile	45	62.22	37.78	0.0	0.00	0.0	0.0	1.11
Third decile	26	0	100.00	0	0.00	0	0	1.23
Fourth decile	25	0	100.00	0	0.00	0	0	1.36
Fifth decile	33	0	96.97	3.03	0.00	0.0	0	1.06
Sixth decile	15	0	100.00	0.00	0.00	0.0	0.0	1.00
Seventh decile	14	0	92.86	7.14	0.00	0.0	0.0	1.00
Eighth decile	7	0	0.00	100.00	0.00	0.0	0.0	1.71
Ninth decile	10	0	20.00	60.00	20.00	0.0	0.0	1.00
Tenth decile	15	0	46.67	26.67	0.0	26.67	0.0	1.33
Total	221	22.62	66.1	8.6	0.9	1.8	0.0	1.14

4.9. Activity and work motivation of the head of the household

The activity status of the head of the household is also an indicator explaining the employment status and consequently the inequality. Given that, 50% of rural households have one employed person and that one is also the head of the household, hence a more detailed study of job status of the head of the household is also important. In fact, due to the fact that most of the household income depends on the job status of the head of the household, any change in the job status of the head of the household can directly affect the living conditions of the household. The table below shows that the percentage of rural households headed by employed people in the first, second, and third deciles has decreased significantly in the post-subsidy period. In contrast, the percentage of rural households headed by unemployed people with no job income (relief committees and cash payments of subsidies, etc.) has significantly increased in the first, second, and third deciles in the same period compared to the period before the targeted subsides.

This indicator also shows that the job status has gotten worse in the post-subsidy period and consequently the rate of inequality has increased in rural areas.

Table 19. Activity status of head of the household

(Source: Iran Statistical Center, 2005-2016)

Period	Cost deciles	Employed	Unemployed	Having income Without job	Student	Housewife	Others
Before Targeted Subsidies	First decile	38.156	3.250	54.346	0.007	2.150	2.093
	Second decile	65.044	2.553	30.005	0.043	0.920	1.433
	Third decile	75.414	2.446	19.984	0.005	0.799	1.351
	Fourth decile	78.337	2.470	17.525	0.023	0.650	0.993
	Fifth decile	83.600	2.128	12.172	0.015	0.765	1.325
	Sixth decile	84.772	1.773	11.790	0.033	0.675	0.958
	Seventh decile	86.499	1.632	9.827	0.094	0.746	1.204
	Eighth decile	86.737	1.273	10.224	0.000	0.485	1.281
	Ninth decile	87.531	0.972	9.467	0.119	0.478	1.431
	Tenth decile	87.414	1.251	9.293	0.025	0.425	1.587
	Average total	77.447	1.969	18.376	0.036	0.807	1.365
After Targeted Subsidies	First decile	26.29	3.73	63.08	0.06	4.05	2.80
	Second decile	55.25	5.60	34.80	0.08	2.24	2.02
	Third decile	67.58	4.19	25.07	0.05	1.35	1.59
	Fourth decile	75.525	2.90	18.76	0.02	1.17	1.63
	Fifth decile	78.92	2.49	16.27	0.02	1.05	1.26
	Sixth decile	81.26	2.20	14.25	0.02	1.02	1.25
	Seventh decile	83.67	1.45	12.78	0.02	0.94	1.14
	Eighth decile	83.57	1.41	12.76	0.03	0.80	1.43
	Ninth decile	84.56	1.40	11.86	0.03	0.57	1.59
	Tenth decile	84.28	1.12	12.46	0.01	0.66	1.46
	Average total	72.09	2.65	22.21	0.03	1.40	1.62

Comparing the figures in the table above with the case sample also shows us other points. First, in the case sample 77.38% 0f the heads of the households were employed and 22.62% of them were unemployed. Secondly, everyone in the deciles had income without jobs (subsidies or income from relief committee, etc.). Comparing these results with country's results indicate that rate of unemployment of heads of the households in case sample (22.62%) is far more than the same rate for the whole country (2.65%).

Table 20. Activity status of head of the household in the studied area

Cost deciles	Number of Households Per deciles	Percentage of Employed People	Percentage of People having Income without Job	Percentage Of students in The households	Percentage Of housewives in The households	Percentage of others	Percentage Of unemployed
First decile	31	11.4	14.03	0.00	0.00	0.45	100
Second decile	45	44.12	20.36	0.00	0.00	1.36	100
Third decile	26	60.53	11.76	0.45	0.45	0.90	100
Fourth decile	25	68.77	11.31	0.00	0.45	2.26	100
Fifth decile	33	77.86	14.93	0.45	0.45	1.36	100
Sixth decile	15	81.21	6.79	0.90	0.90	0.90	100
Seventh decile	14	81.45	6.33	1.36	1.36	0.45	100
Eighth decile	7	83.6	3.17	0.45	0.45	1.81	100
Ninth decile	10	82.52	4.52	1.36	0.90	0.90	100
Tenth decile	15	81.08	6.79	0.00	0.45	0.45	100
Total	221	77.38	100	4.98	5.43	10.9	22.62

It is worth mentioning that, results related to the research case study indicates that, the highest amount of employed people (21) in agriculture sector are observed in the fifth decile. In contrast, the lowest amount (2) belongs to the eighth decile. The highest number of the seasonal workers are also observed in the first, second, and third deciles. Respondents were also confronted with the question of the effect of receiving cash subsidies on reducing work motivation, the results of this question are shown in table 3-107.

Descriptive findings indicate that in the fourth decile, respondents rated the effect of cash subsidies on job motivation as moderate, and in the first decile, they rated this effect as low to moderate. Other deciles have underestimated this impact.

Table 21. The rate of employment in economic sectors in the studied area

Occupational Group	First Decile	Second Decile	Third Decile	Fourth Decile	Fifth Decile	Sixth Decile	Seventh Decile	Eighth Decile	Ninth Decile	Tenth Decile	Total people in Each job
Agriculture, Horticulture And animal Husbandry	3	10	16	17	21	12	12	2	9	10	112
Industry	0	1	6	5	12	3	1	2	0	1	31
Services	6	6	4	3	0	0	1	3	1	4	28
Total employed people per decile	9	17	26	25	33	15	14	7	10	15	171
Number of households per decile	31	45	26	25	33	15	14	7	10	15	221
Average total	2.45	1.93	2.81	3.08	1.88	1.87	1.29	1.43	1	1.13	2.07

5. Discussion and Conclusion

The purpose behind providing subsidies is to establish social justice, public welfare and fair income distribution. On December 10 2010, the 10th Iranian administration implemented the targeted subsidies plan. Rural communities have been one of the target strata regarding the distribution of the benefits of this plan. The present study examined the effect of implementing such a plan on the expansion of inequality across rural areas. Findings showed that during the first year following the implementation of the plan (2011), a considerable extent of the incomes of lower deciles living in rural areas of Iran is provided by cash subsidies; accordingly, 82%, 58% and 49% of household incomes were related to subsides in the first, second and third deciles, respectively. However, considering the fixed amounts of cash subsidies through time, such extent has been decreased year after year. Additionally, the results of the case study suggest that the highest extent of income in a case study household (87%) is provided through agricultural and non-agricultural occupations; meanwhile, the lowest amount of the

annual income of a household is earned through miscellaneous monetary and non-monetary means of income (aside from cash subsidies). Moreover, cash subsidies constituted 7.56% of the income of a case study household in 2018. Having conducted similar studies, Ali Madadi et al. (2016) divided their respondents into five income groups and concluded that subsidies had a large share among the poor classes living in both areas they examined (19.6% share for the first income class in Binaloud region reducing to 5.3% for the fifth class and 24.5% for the first class in Kalat region reducing to 6.1% for the fifth class). As a result, subsidies overall have had a higher effect on increasing the income of underprivileged classes.

Regarding the Gini Coefficient, results suggest a higher Gini coefficient value in the period following the implementation of targeted subsidies compared to the previous period followed by increased income inequality and reduced share of the rural underprivileged class from the rural economy. The findings of Dadgar & Nazari (2011) demonstrates a Gini coefficient of approximately 0.55-0.35 during the examined period, suggesting an unfair income distribution in Iran. Furthermore, given the circumstances such as stagflation, continued economic crisis, absence of necessary infrastructure, the lack of an economic model, etc., not only the targeted subsidies plan will not improve the state of income distribution, but also places the underprivileged classes of the society under pressure and worsens their state of welfare. In addition, the average wealth share of the upper 10% to the lower 10% of the population has been decreased from 12.88 before the plan to 9.11; in other words, the 10% wealthy population of rural communities had a larger share of Iran's economy before the targeted subsidies plan. As for the other two indices of the 20% and 40% wealthiest to the poorest, results show improvements in the period following the targeted subsidies plan. The results of the case study also show that the 10% wealthiest to the 10% poorest in rural areas of the case study was 20.67 in 2018. The study conducted by Shahnazi et al. (2014) confirms this result as well. Having examined two years before and after the targeted subsidies plan, they concluded that the distance between the poorest and the wealthiest has been reduced from 14 to 10, showing the better income redistribution following the implementation of the plan.

Findings reflect several significant implications regarding the comparison between the expenses of the first decile in Iran in the periods before and after the implementation of the plan. There is an increase in the average expenses of different groups such as housing. Subsequently, the circumstances of the lower deciles can be assessed as worse than those of the higher deciles following the targeted subsidies plan. The results obtained from the case study also suggest that contrary to the initial expectation from the plan, lower deciles are under a considerably higher pressure caused by increased energy carriers. This finding is confirmed by the results obtained by Hazeri Nayeri & Hosseini Nasab (2014). According to their research, the modification of energy subsidies in the form of raised energy prices has reduced the welfare of all urban and rural households; and this is especially manifested among low-income deciles in both rural and urban families. Moreover, following the energy subsidies modification, rural households face a higher extent of reduced welfare compared to urban families; on the other hand, stimulus packages and income redistribution due to energy price modification under various redistribution scenarios significantly compensate for the reduced household welfare. In the food group, in 2005, the tenth decile spent the highest expenses for meat, grain, oils and fats, dairy, sugar, spices, fruits and drinks, respectively; meanwhile, the order was changed in 2016 as grain, meat, fruits, dairy, sugar, drinks and tobacco, oils and nuts. The descriptive findings of the case study suggest that the rural household's expenses for providing food is respectively spent on grain, meat, fruits and vegetables, dairy, sugar, nuts, tobacco and spices. Such findings have been confirmed by Khosravi Nezhad (2009), he concluded that following the implementation of the targeted subsidies plan, the effects of increase in the price of bread have always been higher than that of sugars and vegetable oils for the first to third classes. For the fourth and fifth classes, the effect of price regulation of vegetable oil has been higher than that of bread and sugar.

The results of the study on the consumption of foods show that given the reduced intake of groups such as meat, fruits, vegetables, dairy, etc., the consumption of grain has been accelerated which demonstrates a shift in the food consumption pattern.

Table 22. Summary of research results on the impact of targeted subsidies on the spread of inequality in rural areas

Index	Results in the macro rural dimension	Results in the case study	Analysis
The income status of income deciles	↑	↑	Considering the amounts of cash subsidies remaining fixed, the extent of income earned from these subsidies by rural households across Iran has decreased year after year. Results of the case study also suggest that cash subsidies constituted 7.56% of the whole income of a sample household in the case study in 2019.
The Gini coefficient status in rural regions	↓	-	According to the findings, the Gini coefficient was higher in the period following the implementation of targeted subsidies plan than the previous period, resulting in an increased income inequality.
The share of 10%, 20% and 40% of the wealthiest to 10%, 20% and 40% of the poorest in the rural population	↑	↓	Results of examinations show that the average share of the 10% wealthiest compared to the 10% poorest living in Iranian villages has been reduced from 12.88 in previous period to 9.11 – Results of the case study also show that the 10% wealthiest to the 10% poorest among the rural population of the case study was 20.67 in 2019.
The status of non-food expenses in deciles	↓	↓	In Iranian villages, the average housing expenses prior to the plan constituted 58% of the whole non-food expenses of a household; meanwhile, following the implementation of the plan, housing expenses constituted 71% of non-food expenses of the same decile. Findings also demonstrate that contrary to the initial expectation from the plan, lower deciles are under a considerably higher pressure caused by increased energy carriers.
The status of food expenses in deciles	↓	↓	According to the examinations on Iran regarding 2005, the tenth decile spent the highest expenses for meat, grain, oils and fats, dairy, sugar, spices, fruits and drinks, respectively; meanwhile, the order was changed in 2016 as grain, meat, fruits, dairy, sugar, drinks and tobacco, oils and nuts. Results of the case study suggest that the rural household's expenses for providing food is respectively spent on grain, meat, fruits and vegetables, dairy, sugar, nuts, tobacco and spices.
The status of food consumption in deciles	↓	↓	Following the implementation of the targeted subsidies plan in Iran, the extent of rural households' consumption of all food groups in terms of weight has been reduced. The amount of calorie intake per person has been decreased as well, except in the cereal group. Additionally, results of the case study show that the average calorie intake per person in the tenth decile is seven times that of the first decile.
The status of literacy in deciles	↓	↓	In all villages of Iran, the number of households devoid of literate members has been increased following the implementation of the plan. Descriptions of the statistical findings of the case study show that on average, there are 2.5 literate persons in each sample household. Differences between deciles in samples are significant.
The number of employed persons in deciles	↓	↓	In all villages of Iran, the extent of employment has been reduced following the implementation of the plan while the number of unemployed people has been rising. Results of the case study also show that in 2018, 70% of households in the first decile had no employed family members.
The status of activities and work motivation of heads of households in deciles	↓	↓	The number of employed heads of households in the first, second and third deciles has been significantly reduced following the implementation of the targeted subsidies plan in the entire country. In the results of the case study, the respondents from the fourth decile assessed the effect of cash subsidies on employment motivation as average; the assessment of the first decile in this respect was low to average. The remaining deciles assessed the effect as very low.

Moreover, the results obtained from the case study show the average calories received per member of a case study household as 1239845 kcal; meanwhile, the average calorie intake per person in the tenth decile is seven times the intake of a person in the first decile. In another study, Toulabinezhad et al. (2013) concluded that increased income as a result of subsidies has led to the economic welfare of rural households living in their examined region. In other words, the extent of economic welfare of the rural households in the studied area was improved through increased income due to receiving cash subsidies.

Results point to an increase in the number of families devoid of literate persons in the period following the implementation of targeted subsidies in villages throughout Iran. Additionally, the number of households with one or more literate members in low deciles has been decreasing. This is further intensified when the average number of literate persons in a household is also reduced following the implementation of the plan. Moreover, the findings of the case study demonstrated that on average, there are 2.5 literate persons in each sample household. The differences between deciles are significant in the case study samples. In addition, the highest number of literate persons live in the tenth decile households. Importantly, 98.2% of the respondents expressed that they spend no amount of money out of their cash subsidies on education expenses. These findings are confirmed by Nourallahi et al. (2015); in their study, they showed that following the implementation of the plan, the opportunity to continue education at universities has been reduced and the plan has negatively affected academic education.

Based on the results, the number of employed persons in each group has been decreasing following the implementation of the plan while the number of unemployed persons has been on the rise. Consequently, evidence show that employment conditions in rural households has generally worsened. Moreover, findings obtained from the case study suggest that there was no employed person in 70% of households in the first decile. 29.03% of the respondents expressed the presence of only one employed person in their families. On the other hand, in the tenth decile, 46.67%, 26.67% and 26.67% of the respondents pointed to the presence of 4, 2 and 1 employed persons in their families, respectively. Contrary to these findings, Riyahi & Soltanabadi (2018) concluded in their study that the direct distribution of subsidies has been effective in several components such as aiding income earning, increasing employment opportunities, facilitation of savings and reducing dependency on financial resources of intermediaries. The study of the employment and activity status of heads of households show that employment conditions have worsened in the period following the implementation of the targeted subsidies plan; in turn, this has led to higher inequalities in rural regions. Notably, according to the findings obtained from the case study, the highest number of employed individuals in the agriculture sector (21 persons) is observed in the fifth decile. Meanwhile, the lowest number of such individuals (2) is seen in the eighth decile. Additionally, most of the seasonal workers are observed in the first, second and third deciles. When the respondents were asked about the effect of receiving cash subsidies on reduced work motivation, those in the fourth decile assessed such an effect as average while the assessment of the respondents from the first decile was low to average. The remaining deciles assessed the same effect as very low. These results are consistent with the findings of Nourallahi et al. (2015); they concluded that heads of households have lost their occupational diversity following the implementation of the plan and their employment rates have been on the decline as well. Considering the above explanations to find answers to the research question (Has inequality between various rural deciles reduced following the implementation of the targeted subsidies plan?), it is concluded that while 7 indices have witnessed undesirable circumstances following the implementation of the targeted subsidies plan both in the macro scale of all rural areas in Iran and the case study region, one index has been improved. Furthermore, the results obtained from examining the one index show inconsistencies between findings in the national scale and the case study.

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Original Article

تاثیر اجرای هدفمندی یارانه‌ها بر گسترش نابرابری در نواحی روستایی ایران (نمونه موردی : روستاهای شهرستان نیشابور)

مجید حمزه‌ئی [۱]- علی اکبر عنابستانی*[۲] - جعفر جوان[۳]

۱- دانشجوی دکتری جغرافیا و برنامه ریزی روستایی، دانشگاه فردوسی مشهد، مشهد، ایران
۲- استاد جغرافیا و برنامه‌ریزی روستایی، دانشگاه فردوسی مشهد، مشهد، ایران
۳- استاد جغرافیای روستایی، دانشگاه فردوسی مشهد، مشهد، ایران

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چکیده مبسوط

۱. مقدمه

یکی از مهمتـــرین اهداف دخالت دولت در اقتصاد، برقراری عدالت است. صاحب‌نظـــران اقتصـــادی و علوم انسانی نظرات متفاوتی در مورد عدالت و برابری دارند. در نیم قرن گذشـته برابری از جنبه‌های مختلف همانـند برابری درآمـد، رفـاه، منـابع و فرصـــت‌هـا، مورد توجه‌اقتصـــاددلنان بوده‌اســت. هرچند که نظرات متفاوتی در مورد برابری فرصـــت‌ها وجود دارد، امـا برابری از منظر درآمـدی و رفـاه روشـن تر می باشـد. افزایش رفاه خانوارهای فرودست جامعه و بهتر کردن توزیع درآمد از مهمترین دلایل برنامه‌های یارانه‌ای کشـــورها به عنوان یکی از ابزارهای دخالت دولت در اقتصـــاد اســـت. از سوی دیگر مسـئله‌اصـلی در اقتصاد ایران همواره‌این بوده‌است که پرداخت یارانه‌ها تا چه‌اندازه‌ای به‌اهداف خود نزدیک بوده‌است. اساسا یکی از دلایل اصـــلی اجرای طرح هدفمنـدی و اســـتدلال‌های مـدافعان هدفمندی یارانه‌ها نیز توزیع نامتوازن یارانه‌ها بوده‌است.

۲. مبانی نظری تحقیق

آدام اسـمیت بنیانگذار مکتب کلاسـیک‌ها از مخالفان جدی دخالت دولت در اقتصـــاد بود. این بینش تا قبل از وقوع جنگهای جهانی بر اقتصاد غرب حاکم بود اما با بروز جنگ و پدیدار شـدن تورم همراه با رکود شـــدید اقتصـــادی دردهه ۱۹۳۰، اندیشـــه‌های جدید همچون اندیشـــه‌های اقتصـــادی کینزی قوت گرفت که در آن دولت به عنوان یکی از مهمترین عوامل تنظیم کننده و تعدیل کننده فعالیت های اقتصـادی مطرح شـد. با اعمال این سـیاسـت و بهبود اقتصـاد غرب، بتدریج کنترل در بخش ســـیاســـتگذاری مالی و پولی و اداره بخش عمومی در اقتصـاد به دولت سـپرده شـد. بطور کلی هدفمندسـازی یارانه حامل های انرژی بعنوان یکی از ســـیاســـت های اجتناب ناپذیردولت ها اســـت که می تواند بر شـــاخص‌هایی نظیر: وضـــعیت درآمدی دهک‌های درآمدی پایین، وضعیت ضریب جینی در مناطق روســـتایی، میزان ۱۰، ۲۰ و ۴۰ درصـد فقیرترین جمعیت و ... تاثیر بگذارد. اما در اواخر دهه ۱۹۸۰ در راسـتای مواجهه با معضـل رکود تورمی و کنـدشـــدن فرآیند انباشـــت ســـرمایه در اقتصـــادهای پیشرفته‌امریکا و انگلستان، سیاست های تثبیت و تعدیل ساختاری پی ریزی شـد که به رویکرد اجماع واشـنگتنی نیز معروف اسـت. این سـیاسـت ها دارای جهت گیری ضـد کینزی هسـتند. حذف یارانه‌ها بطور مشـــخص یکی از ۱۳ مورد ســـیاســـت اجرایی برنامه تعدیل ساختاری است.

۳. روش تحقیق

روش تحقیق در پژوهش حاضـر توصـیفی - تحلیلی و نوع آن ازنظر هدف، بنیادی است. برای جمع‌آوری اطلاعات از روش‌های اسنادی و میدانی استفاده‌شده است.

*. نویسندهٔ مسئول:
دکتر علی اکبر عنابستانی
آدرس: گروه جغرافیا، دانشکده ادبیات و علوم انسانی، دانشگاه فردوسی مشهد، مشهد، ایران.
پست الکترونیکی: Email: anabestani@um.ac.ir

در این تحقیق جهت بررسی تاثیر گذاری اجرای قانون هدفمندی یارانه‌ها بر گسترش نابرابری در نواحی روستایی، ابتدا شاخص‌های تحقیق با استفاده‌از داده‌های طرح هزینه و درآمد خانوار طی دو دوره ۶ ساله پیش از هدفمندی یارانه‌ها (۱۳۸۹-۱۳۸۴) و دوره ۶ ساله پس از هدفمندی یارانه‌ها (۱۳۹۵-۱۳۹۰) در سطح تمام روستاهای کشور مورد بررسی قرار گرفته و میانگین هر شاخص در دوره پیش و پس از هدفمندی یارانه‌ها مقایسه شده و سپس نتایج بدست آمده‌از این بخش، با بررسی های حاصل از پژوهش میدانی در ۲۲ روستای شهرستان نیشابور (بعنوان نمونه) مقایسه شده‌است.

۴. یافته‌های تحقیق

تا قبل از هدفمندسازی یارانه‌ها، در جوامع روستایی بخش اعظم یارانه دریافتی از نوع یارانه‌های تولیدی (کود شیمیایی) بود، و عملا خانوارهای کم زمین یا فاقد زمین و غیر کشاورز روستایی از آن کمتر منتفع می شدند و این در حالی است که خوش نشینان و اقشار غیرکشاورز جامعه روستایی بیشتر از سایرین در معرض مهاجرت به شهرها قرار دارند . اما پس از هدفمندسازی یکی از اقشار مورد توجه، جوامع روستایی است. از سوی دیگر، هدف از پرداخت یارانه، برقراری عدالت اجتماعی، رفاه عمومی و توزیع عادلانه درآمدهاست. در نظام قبلی پرداخت یارانه، مبالغ بالایی به صورت مستقیم و غیر مستقیم در بیشتر موارد پرداخت غیر هدفمند، در ارتقای درآمد و رفاه‌اقشار آسیب پذیر نداشت و منافع آن، نصیب گروه‌های با درآمد بالا می شد. در این بخش با توجه به ماهیت و هدف اصلی نظام پرداخت یارانه‌ها که‌همانا کاهش نابرابری است، شاخص‌های مختلف ارزیابی میزان نابرابری، ابتدا بر اساس داده‌های رسمی برای کل روستاهای کشور و سپس برای روستاهای نمونه مورد مطالعه بررسی خواهد شد. همچنین بر اساس تفکیک دهک‌های آماری طرح هزینه – درآمد خانوارهای روستایی مرکز آمار ایران، نمونه موردی پژوهش نیز به دهک‌های درآمدی مختلف تقسیم گردید. بر این اساس، ۲۰.۳۶ درصد از خانواده‌ها، درآمدی بین ۴۵ تا ۷۵ میلیون ریال در سال درآمد داشته و بنابراین در دهک دوم قرار گرفته‌اند، در حالی که ۳.۱۷ درصد نیز درآمدی بین ۲۷۰ تا ۳۶۰ میلیون ریال داشته و در دهک‌هشتم درامدی قرار گرفته‌اند. همچنین متوسط تعداد افراد در خانوار در نمونه موردی ۳.۱۶ نفر، متوسط تعداد افراد دارای شغل در خانوار ۱.۱۶ نفر و متوسط تعداد افراد دارای درامد در خانوار نیز ۱.۲۹ نفر در خانوار است.

۵. بحث و نتیجه‌گیری

در مجموع یافته‌های این تحقیق نشان می دهد یارانه‌های نقدی ۷.۵۶ درصد از سبد درآمدی یک خانوار در نمونه موردی را در سال ۱۳۹۸ تشکیل داده‌است. اما ضریب جینی در دوره بعد از هدفمندی یارانه‌ها بیشتر از دوره قبل بوده‌است، در حالی‌که ۱۰ درصد ثروتمندترین به ۱۰ درصد فقیرترین جمعیت در نواحی روستایی نمونه در سال ۱۳۹۷ برابر با ۲۰.۶۷ بوده‌است. همچنین برخلاف هدف اولیه طرح هدفمندی یارانه‌ها، دهک‌های پایین به مراتب فشار بیشتری را از افزایش حامل های انرژی تحمل کرده و هزینه‌های مواد خوراکی خانوار نیز صرف گروههای مواد خوراکی می شود. با این وجود متوسط کالری دریافتی هر نفر در دهک دهم هفت برابر دهک یکم می باشد. همچنین در ۷۰ درصد خانوارهای دهک اول هیچ فرد شاغلی وجود نداشته‌است. بطور کلی در بعد از اجرای هدفمندی یارانه‌ها در مورد ۷ شاخص‌هم در بعد کلان روستاهای کشور و هم در نمونه موردی با وخیم‌تر شدن اوضاع روبرو بوده ولی در مورد یک شاخص با بهبود اوضاع روبرو بوده‌ایم.

کلیدواژه‌ها: هدفمندی یارانه‌ها، نابرابری در نواحی روستایی، سیاست‌های تعدیل ساختاری، نیشابور، ایران.

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