

The Effects of Targeted Subsidies on Misery Index in Urban and Rural Settlements of Iran Regions

Mohamad Hajipour (Corresponding Author)

Ph. D. student of Geography and Rural Planning, Kharazmi University, Tehran, Iran
mhajipour24@yahoo.com

Mahmood Fallsolyman

Associate Professor in Geography and Rural Planning, University of Birjand, Birjand, Iran
mfall@birjand.ac.ir

Abstract

The payment of subsidies has been one of the most important issues in Iran. The payment of subsidies has been targeted since 2010. The current research attempts to study the effects of targeted subsidies on misery index in Iran regions with geographical and analytical approach. In this respect, data about unemployment rate, inflation rate and misery index is analyzed in each province, rural and urban settlements. The data has been used for period of 2009-15 years. The results showed that although the main goal of targeted subsidies has been reduce poverty and promote social welfare in Iran; so far it leads to increase poverty and reduce society welfare. So that, due to growth of unemployment in villages' misery in rural settlements has been more than cities. Finally, it can be said, targeted subsidies have deviated from its basic goals in Iran.

Keywords: Targeted Subsidies, Inflation, Unemployment, Misery.

1. Introduction

The issue of subsidies has been always one of the most challenging issues in economic policymaking in Iran (Peremeh, 2004; Abrishami et al., 2013). The first subsidizing began to compensate inflationary effects in Iran after the oil shocks of 1971s. The need to increase efficiency of economy sectors and try to develop the various productive sectors was created after the end of war with Iraq in 1988. On the other hand, evidences and researches showed that public pays and untargeted subsidies, not only have not been effective in improving the income and welfare of vulnerable groups, but also more benefits for high income groups and bad effects on consumption of subsidized commodities, especially energy, reduced productivity and the environment, over the last few years of subsidizing. Thus, with first economic development program (1989) was implemented economic adjustment policies in Iran. After the economic adjustment policies began the targeted subsidies in 2010 (Salehi et al., 2013; Mosalanejad and Yazdani, 2013; Eslami, 2000). Indeed, the distribution of subsidies which aims was to keep down the general level of prices and increase consumer welfare, hamper the creation of mobility and dynamism in Iran economy gradually; So that, the high government supports (subsidies) - about 26 percent of GDP- has created numerous problems such as low per capita income growth over three decades (Alizadeh, 2010). For this reason, by some economists cited the best approach is "targeted subsidies" for achieving important targets such as improving welfare of poor (Pajuyan et al., 2001).

Targeted subsidies law is formed based on two axes, one of "*freeing prices*" and another "*distribution of targeted subsidies*" in Iran. First axis, focused on government subsidies in energy carriers sector; in the years of before law enforcement of targeted subsidies, Iran has been second country in the world in terms of energy subsidy with \$ 37 billion. The per capita consumption of energy of Iranian has more than five times of the per capita consumption of a country like Indonesia with 225 million people, two times of China with a billion and 300 million people and 4 times of against India with a billion and 122 million. In second axis, identification of target groups and individuals who directly or indirectly by law enforcement of targeted subsidies are vulnerable (Alizadeh, 2010; Khalili and Sheykhi, 2015).

The Cash subsidies which as an instrument to redistribute income and a kind of negative tax, be awarded to people needy; also, it is a means to more efficient tax system (Karbasiyan, 2003; Deyni Torkamani, 2005). The Cash subsidies policy has four goals in Iran (Management and Planning Organization of Iran, 2001; Pajuyan et al., 2001):

- Increase of the efficiency of the economic system through freeing prices of subsidized goods;
- Reduce of consumption of subsidized goods and optimizing consumption of these goods, as well as reduction smuggling;
- Reduce of public spending and solving equilibrium lack of budgetary;
- Reduce of gap in the consumption of goods and services between income groups, as well as between urban and rural societies.

So far, researches results have shown that cash subsidies caused a reduction welfare and productivity during the period of implementation of targeted subsidies in Iranian societies (Shahmoradi et al., 2011; Parvayi, 2011; Ranjbar et al., 2014). Among Iranian people especially elites and officials are with the targeted subsidies some agree and some opposed (or critic to how to implement). Advocates of subsidies targeting plan have mentioned the following reasons as positive properties (Abrishami et al., 2013):

- Being inequitable of distribution of public subsidies;

- Increase of economic efficiency;
- Reduce of government spending;
- Clarity of direct subsidies;
- Elimination of corruption context, especially fuel smuggling;
- Reduction in energy production and consumption and create environmental benefits consequently;
- Reducing the gap between urbanites and villagers in having subsidies and help to social justice and justice space;
- Urban sprawl preventing;
- Increasing income amount of low-income households and reduce of income disparity between societies income deciles.

On the other hand, opposition of subsidies targeting plan have stated following items in Iran (Ibid):

- High inflation and the effects of its distribution;
- weakening of the manufacturing sector;
- weakness of information systems in order to identify and rank the household income;
- Failure to reduce government spending
- lack of a significant reduction in energy consumption;
- Incompatibility with other components of price adjustment in the economy;
- Not optimization of the cost of goods and government services
- Create price discrimination;
- Increased state intervention in the economy;
- Increasing dependence on government industries;
- Political and social unrest
- Intensification of intra-household inequality

The fundamental goal of subsidizing by every government is helping to poor groups and low-income class primarily. The direct payments of subsidies will increase liquidity and changes inflation rate in the framework of subsidies targeting plan. Since, any reform in the subsidies has many effects on all parts of the country (Ranjbar et al., 2014); in this study, we have tried to study the effects of targeted subsidies to the misery index in Iran regions by geographical and analytical approach. In this regard, two questions will be answered:

- A) What are the effects of targeted subsidies on misery index in geographic regions of Iran?
- B) Is there any significant difference between the effects of targeted subsidies on misery index in cities and villages of Iran regions?

2. Theoretical framework

Development and promoting welfare of the community is one of the primary objectives of governments in each country. The study of planning and actions of other countries to promote the level of development is based on two general perspectives; in some countries planning for economic growth and development followed by classical and neoclassical economic perspectives within the framework of capitalism and with an emphasis on free market principles and competition (Shakuei, 1996). Some other countries that has faced with issues such as inequality, lack of social justice, poverty and deprivation (Wills and Blunt, 2007), are looking to increase government intervention in economy within framework of Keynesian theory. Meanwhile, there are countries that followed by transition from government economy to open economy and free market to improve current situation and promote development.

Since 1970s, in societies which the government was known as development engine, was required alongside attention to physical capital as well as human capital to solve the problems and challenges of underdevelopment countries gradually. Therefore, in this period at agenda of the country's development planning were supportive policies and the allocation of "subsidy" in the form of "welfare government" (Peremeh and Heydari, 2006)

In Webster's dictionary definition of "*subsidy*" is money that is paid usually by a government to keep the price of a product or service low or to help a business or organization to continue to function (<http://www.merriam-webster.com>). Parvayi (2011) says subsidy is transfer payments from the government as a social protection policy, paid to those who have less economic strength and purchasing power. Altogether, we can say a subsidy is gratuitous financial assistance which to be paid directly or indirectly as well as cash or non-cash. Subsidy is one of the important tools of fiscal policy that government can achieve economic efficiency through changing it. It a kind of government financial assistance for increase the real purchasing power of consumers, prevent stagnation in production and support producers. Other objectives of subsidies include support of underserved populations, more equitable income distribution, reduce the class gap, improving social welfare, economic stability, the efficient allocation of scarce resources and achieve to social justice (Rahimi and Kalantari, 1992; Pandey, 2005; Ghaderi et al., 2005; Naseri et al, 2008).

Following the debt crisis and global recession, most countries reformed subsidy program and targeted subsidies in 1980s (Peremeh and Heydari, 2006). System reform of public subsidies payment has a known policy in the field of economic policy making. Public subsidies remove has been part of structural adjustment program and has reduce government intervention in economy which was coincided with weakening and collapse of socialist systems in many countries from the late 1980s. In fact, public subsidies remove has been one of the solutions to reduce the role of government and expand function of market mechanism in allocating resources (Abrishami et al., 2013). Neoclassical economists say that public subsidies are obstacle to efficient allocation of resources and growth, and finally increase poverty (Deyni Torkamani, 2005). So far, System reform of subsidies or targeted subsidies has been done in countries such as Tunisia (1970), Algeria (1973), Egypt (1977), Yemen (1992) and Jordan (1996) (Davoodi and Ashrafi, 2009).

The targeted approach in social protection politics and support of vulnerable groups means reducing the share of high levels of subsidy income and increase the share of lower income classes. Base on targeted subsidies plan, governments are seek to individuals eligible determine for receive social assistance and support programs of vulnerable groups (Pajuyan et al., 2001; Saremi, 2009; Farhang, 2014). By actual of relative prices as a result of targeted subsidies, is expected to improve resource allocation, increase efficiency and productivity in consumption and production sectors, prevent waste of resources and as a result production and employment increase. Targeted law enforcement has considerable consequences and costs in the short term; for instance in this period these things happen; slow economic growth, rising inflation and loss of utility and to compensate people welfare the government does actions like development and improvement of public goods and services or paying subsidies to people directly (Hausman, 1994). Thus, main goals of targeted subsidies law are including the efficient allocation of resources, economic stability and the equitable distribution of income (Ghaderi et al., 2005; Farzin et al., 2012). In critique of targeted subsidies Sen (1995) says that it does not succeed in its basic objectives due to uncertainty in the continuation of payment of targeted subsidies, weakness of bargaining power of poor people in power structure and its negative effect on poor people character (Deyni Torkamani, 2003).

3. Materials and Methods

This study based on its objective has applied nature. It demands descriptive as well as analytical method. Data gathered through documents study and sources such as Statistical Center of Iran and Iran's central bank for the period of 2009-15. Variables have been included annual inflation rate; unemployment rate and misery rate in geographical levels of Iran, its provinces, and urban and rural settlements of each province. Misery index was introduced by economists like Robert Barro and Arthur Okan in the 1970s. This index can be achieved with linear combination of unemployment rate and inflation rate (Hanke, 2015). For data analysis indicators of descriptive statistics and inferential statistics is used (include Independent Samples T-test and Paired-Samples T test) with Excel and SPSS software's. Geographical maps are plotted with using GIS.10.

4. Statistical findings and Discussion

Changes of Iran annual inflation rate during the period of 2009-15(it means before and after conducting targeted subsidies plan) shows that after targeted subsidies inflation rate has increased; So that, it has reached to the highest rate (34.7%) in 2012. But then, inflation rate decreased to 11.9 percent in 2015 (see figure 1). In other words, we can say freeing prices and cash payment of subsidies had drastic effect on changes of inflation rate in Iran from the beginning.

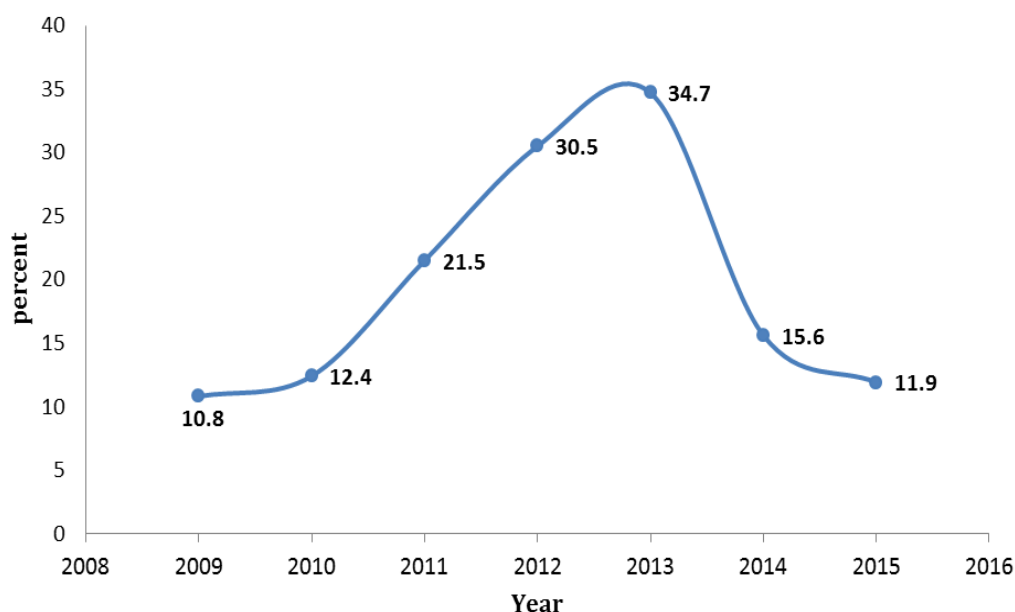


Figure1. Changes of annual inflation rate in Iran (2009-15)

Source: Central Bank of the Islamic Republic of Iran, 2016.

Cash payment in targeted subsidies, also has an impact on employment; the total of unemployment rate has increased 0.7 percent in Iran for 2009-15 (see table 1 and figure 1). Spatial analysis of unemployment among urban and rural settlements shows that unemployment rate has declined in urban settlements; but growth of unemployment has been 2.4 percent in rural settlements.

About changes of inflation rate and unemployment rate we can say that following targeted subsidies plan and direct payment subsidies, massive amounts of liquidity is monthly entered into capital market of Iran by government since 2010. According to estimations and currency conversion which has been done, about 57 billion US dollars has been paid to people directly from the beginning of implementation of targeted subsidies until the end of 2015 (Iranian Institute of Certified Accountants, 2016). Iran Production system had very weak quality and quantity in response to the needs of consumer society before the time of targeted subsidies. Because of the allocations of major of financial resources to consumption sector which leads to growth in consumer needs after the implementation of targeted subsidies. As result of fast increase of consumer needs and weakness of production system in Iran in order to meet the domestic needs; we confronted with growth in inflation rate and increase in imports of cheap Chinese goods. Increase in imports of cheap Chinese goods and non-manufacturing goods, imports of cheap Chinese goods and international sanctions against Iran, has caused that many industries and other production activities as well as agricultural activates be bankrupt and disabled, and as a result, unemployment has grown.

Table1. Percentage mean of population unemployment in Iran (2009-15)

Place	Year	
	2009	2015
Urban settlements	12.9	12.6
Rural settlements	7.2	9.6
Total of Iran	11.1	11.8

Source: Statistical Center of Iran, 2009, 2015.

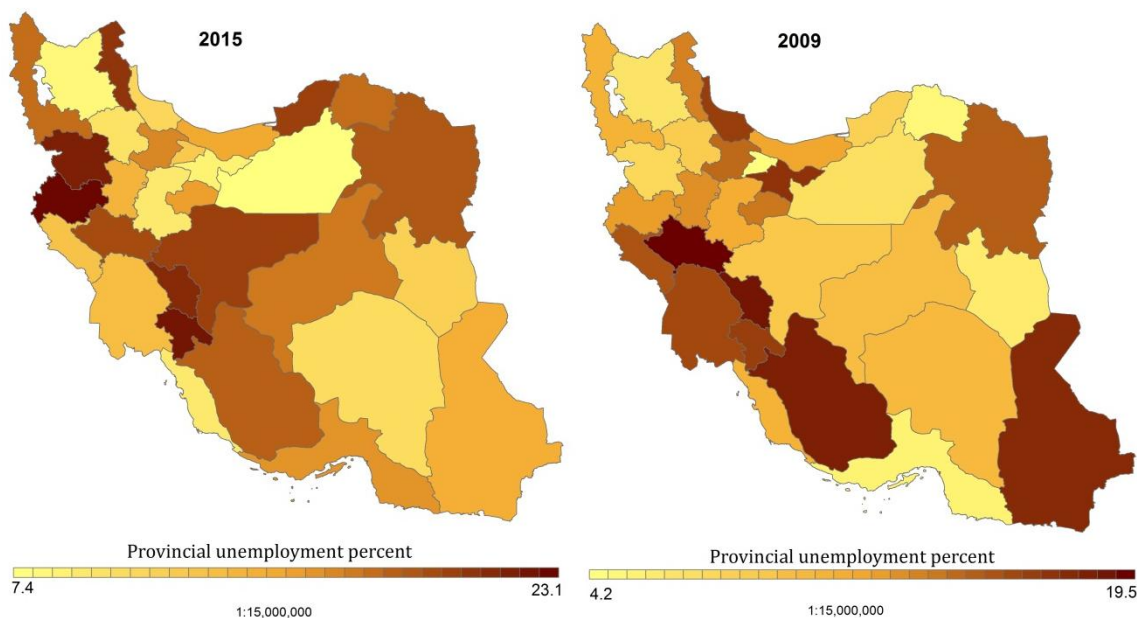


Figure2. Percentage of unemployment in provinces of Iran (2009-15)

Studies showed that despite the primary goals of targeted subsidies misery index is increased. Misery index has been 1.8 for all of Iran, 0.8 for total urban settlements and 3.5 for rural settlements (see table 2).

Table2. Mean of misery index in Iran

Place	Year	
	2009	2015
Urban settlements	23.7	24.5
Rural settlements	18	21.5
Total of Iran	21.9	23.7

Spatial analysis of changes trend of misery index in Iran's provinces showed that in most region increase in misery index happened in both cities and villages (see tables of 3, 4, 5 and figure of 3). Moreover, urban and rural misery index have only decreased among Iran provinces that are near to center of political and geographical country (Tehran) or they are oil regions that attracting more budget and investment than other regions.

Table3. Mean of misery index of urban settlements in provinces of Iran (2009-15)

Province	Year		Province	Year	
	2009	2015		2009	2015
Alborz*	-	22.1	Kurdistan	21.4	32.8
Ardabil	27.6	32	Lorestan	35.5	28.1
Bushehr	19.4	21.5	Markazi	22.5	22.1
Charmahal va Bakhtiari	27.7	31.3	Mazandaran	23.4	25.2
East Azerbaijan	20.5	21.7	North Khorasan	18.7	25.5
Fars	27.5	27.8	Qazvin	25	24.9
Gilan	29.1	23.4	Qom	21.8	23
Golestan	18.2	26.4	Razavi Khorasan	24.1	27.1
Hamadan	23.5	22	Semnan	18.8	19.9
Hormozgan	18.8	23.7	Sistan va Baluchistan	23.8	23.4
Ilam	26.7	24.5	South Khurasan	20.4	24.3
Isfahan	19.8	28.3	Tehran	24.1	20.2
Kerman	22.4	22.4	West Azerbaijan	23.7	27.7
Kermanshah	25.1	36.1	Yazd	20.8	24.9
Khoozestan	24	23.4	Zanjan	22.4	23
Kohgiluyeh va Buyerahmad	23.9	37.7			

* Alborz and Tehran provinces in 2009 have been statistics calculated together.

Table4. Mean of misery index of rural settlements in provinces of Iran (2009-15)

Province	Year		Province	Year	
	2009	2015		2009	2015
Alborz*	-	18.2	Kurdistan	14.2	33.6
Ardabil	15	23.5	Lorestan	22.9	23.5
Bushehr	21.4	19.4	Markazi	14.2	17.1
Charmahal va Bakhtiari	27.5	30.6	Mazandaran	17.7	20.1
East Azerbaijan	12.4	16.5	North Khorasan	12.1	23.4
Fars	23.1	18.3	Qazvin	15.3	20.7
Gilan	17.3	18.3	Qom	18.3	23.1
Golestan	18.6	27.5	Razavi Khorasan	19	23
Hamadan	18	23.6	Semnan	14.6	17.2

Hormozgan	13.8	22.4	Sistan va Baluchistan	25.7	21.7
Ilam	18.2	17.5	South Khurasan	13.5	18.3
Isfahan	17.4	18.8	Tehran	25.4	21
Kerman	16.2	19.6	West Azerbaijan	15.3	19.6
Kermanshah	14.5	32.7	Yazd	15	20.3
Khoozestan	21.1	19.6	Zanjan	14.1	18.1
Kohgiluyeh va Buyerahmad	22.8	30.7			

* Alborz and Tehran provinces in 2009 have been statistics calculated together.

Table5. Total misery index in provinces of Iran (2009-15)

Province	Year		Province	Year	
	2009	2015		2009	2015
Alborz*	-	21.8	Kurdistan	18.3	33.1
Ardabil	21.5	28.6	Lorestan	30.3	26.4
Bushehr	20	20.9	Markazi	20.1	20.9
Charmahal va Bakhtiari	27.6	31	Mazandaran	20.7	22.9
East Azerbaijan	17.3	20	North Khorasan	15	24.4
Fars	26.1	24.8	Qazvin	21.9	23.8
Gilan	23.4	21.5	Qom	21.6	23
Golestan	18.4	26.9	Razavi Khorasan	22.4	25.9
Hamadan	21.2	22.6	Semnan	17.8	19.3
Hormozgan	16.6	23.1	Sistan va Baluchistan	24.6	22.7
Ilam	22.9	22	South Khurasan	16.9	21.7
Isfahan	19.4	26.9	Tehran	24.2	20.2
Kerman	19.9	21.3	West Azerbaijan	20	24.4
Kermanshah	21	35	Yazd	19.7	24.2
Khoozestan	23	22.4	Zanjan	18.6	21.1
Kohgiluyeh va Buyerahmad	23.4	34.8			

* Alborz and Tehran provinces in 2009 have been statistics calculated together.

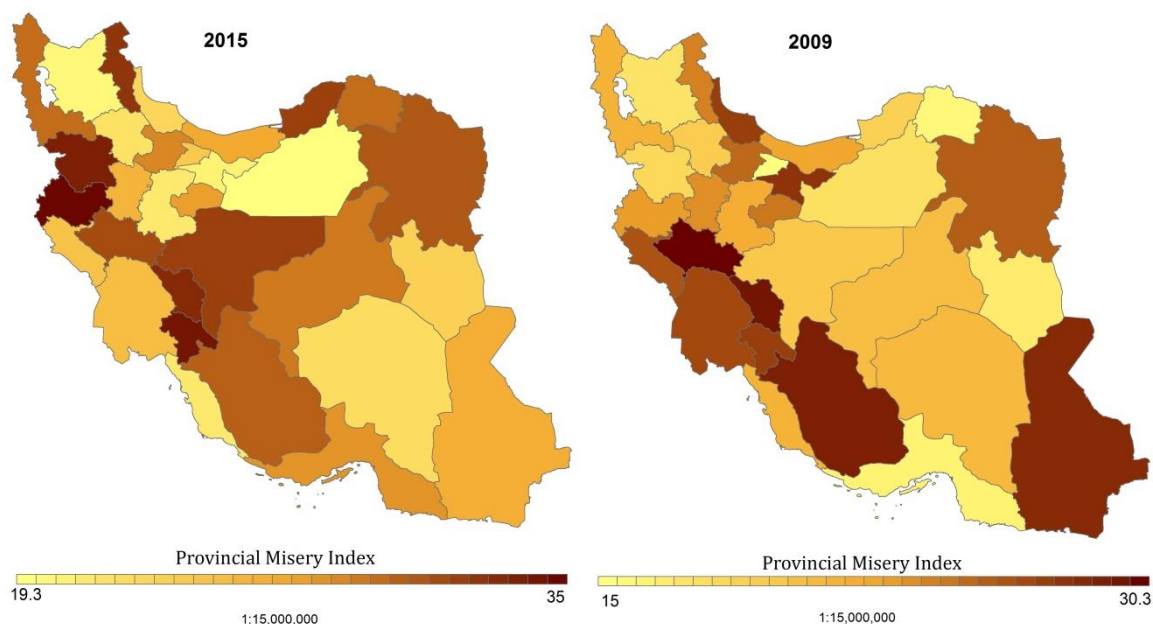


Figure3. Misery index in the provinces of Iran (2009-15)

Based on inferential statistics it can be concluded that targeted subsidies had significant effect on increase the misery of community in Iran. Among these, the villagers have been more exposed to the negative effects of targeted subsidies because jobs diversity in cities has been higher than villages and consequently finding job opportunities has been easier for urban residents than rural residents (see tables of 6, 7, 8). Therefore, targeted subsidies have been effect on unemployment and misery in rural communities more than cities in Iran.

Table6. Mean difference of misery index for urban settlements of geographical regions of Iran (Paired Samples Test)

Variables	Mean	t	df	Sig.(2-tailed)
Urban Misery Index – 2009	22.6	-2.901	30	0.007
Urban Misery Index – 2015	25.69			

Table7. Mean difference of misery index for rural settlements of geographical regions of Iran (Paired Samples Test)

Variables	Mean	t	df	Sig.(2-tailed)
Rural Misery Index – 2009	17.25	-4.242	30	0.000
Rural Misery Index – 2015	21.87			

Table8. Mean difference of misery index for total of Iran geographical regions (Paired Samples Test)

Variables	Mean	t	df	Sig.(2-tailed)
Total Misery Index – 2009	12.4	-3.862	30	0.001
Total Misery Index – 2015	15.3			

Table9. Mean difference changes of misery index of urban and rural Iran regions during 2009-15 (Independent Samples Test)

	Levene's Test for Equality of Variances		t-test for Equality of Means				
	F	Sig	T	df	Sig.(2-tailed)	Mean Difference	Std. Error Difference
Changes of Ur & Ru Misery	0.000	0.991	-1.062	62	0.293	-1.56875	1.47768
			-1.062	61.973	0.293	-1.56875	1.47768

Studies results of Shahmoradi et al. (2011), Parvayi (2011) and Ranjbar et al. (2014) showed that freeing of prices and cash subsidies payment in form of “targeted subsidies” led to decrease welfare in Iran society, since misery is also one of the indicators reflecting welfare, also it can be say that the results of this study prove the previous studies. As Hausman (1994) has noted, targeted law enforcement has consequences and considerable costs in the short term; so that it leads to decrease in growth economic, rising inflation rate and loss of utility in this period. Results of previous studies and this study confirm consequences of the above mentioned.

6-Conclusion

In this study attempted to analyze and discuss the effects of targeted subsidies plan from dimension of misery changes in Iran. Existence of short-term costs or in other words hardships of economic, social, cultural and political is one of the consequences of fundamental plans such as “targeted subsidies plan”. From this study we can conclude that despite having the experiences of other countries, planners and authorities have not been able to anticipate and control the negative consequences of targeted subsidies plan. In other words, the type of policy making was not appropriate for implementation of targeted subsidies plan; so that from the beginning of implementation of targeted subsidies indicators such as inflation, unemployment and misery have grown. Considering that life quality, human and environment development and also facilities in Iran villages have been always much lower than the cities, implementation of targeted subsidies not only improves these gaps but also has increased inequality. This means that spatial differences are not well understood at implementation of targeted subsidies plan and supportive policies have not been made for compensation the differences of development between cities and villages. In total, so far targeted subsidies plan has not reached to its fundamental goals such as social justice and reduce of classes gap in Iran. However investigation shows that achieving the goals might be easier by making reforms in implementation of the plan in the long term.

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