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Study For Changes In Social Welfare In Iran, 1380s

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Abstract

Welfare economics is the part of economics that uses microeconomic techniques, trying to resource allocation, while it will also consider the distributional effects . In this study, for changes in social welfare in Iran, we used the Lorenz curve and Gini coefficient. The period of time in this study was 1380s. Results showed an increase in welfare associated with the lack of equitable distribution of income, which is leads to a reduction in the welfare of the whole society. Then, recommended to improve income distribution by using management tools (targeted subsidies, price controls, social security) that it is can be a factor in increasing prosperity. Obviously, given the increasing income, regardless of income distribution, definitely; will diminish of economic growth.

Keywords: *welfare changes, Gini coefficient, Lorenz curve*

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Introduction

Welfare economics is a branch of economics that study some situations that social welfare is better that one or not. We can say; it is studies situations that in light of; general equilibrium models can be called optimal. Some economists focused on the performance of the pareto optimal condition for their analysis. Some situation is optimal, where, individual situation without worsening another situation improves. Social welfare is a function of two important factore; performance and justice. And it is assumed that the income is an obtaining for welfare. So we can approximated the difference between household welfare from the difference between the income earned. This study aims is done to answer the question; which, are changing the level of social welfare in 1380s, based on household welfare and cost changes, or not?

Methods:

As supposed, the income is an instrument to achieve the welfare. To study the changes of the welfare level, the income distribution has seen as scale of assessment. The most appropriate and easiest tool to measure and analysis of the income distribution is the Lorenz Curve, which possible the assessment of the financial policies and as well as comparison of the income distribution between different countries. The Lorenz Curve is based on the cumulative frequency. The horizontal axis of this curve shows the accumulation share of the population and the vertical axis shows the accumulation share of the income. Whatever the Lorenz curve be closer to the diameter of the square (the line of the perfect equality), the income distribution will be more equal and fairly. The Lorenz curve is defined as the equation (1)

$$L(p) = \frac{1}{\mu}\int_{0}^{Y} x\, f(x)\, dx \qquad (1)$$

In this equation X is income and μ is mean.

Another useful scale in the discussion of the social equity is the Gini Coefficient. The Gini coefficient is a statistical index with measuring range between 0 and 1. Whatever this scale be closer to 0, shows the perfect equality of the income distribution. Instead of, whatever this index be closer to 1, implies the perfect inequality either in the income distribution or expenditures distribution. In terms of geometric, the Gini coefficient is defined based on the Lorenz curve. In fact, the Gini coefficient is equal to the ratio of the area between the Lorenz

curve and line 45° to the total area below the line 45°. So the Gini coefficient is defined as the equation (2)

$$G = 1 - \frac{1}{n}\sum_{i=1}^{n}\left(y_i + y_{i-1}\right) \qquad (2)$$

yi shows the Cumulative percent of household income and n implies to the number of t5he income groups.

Results and Discussion:

Data gathered from the website of the central bank of the I.R.Iran. Based on the household expenditures, the years of 1380 -1389 selected as the period of review, which statistics 1389 is modified based on total index of consumable goods and services in the 1380=100 as the base year. As mentioned in above, the Lorenz Curve and Gini coefficient are used to examine changes. Thus, the figure (1) shows the Lorenz Curve in the period of the research.

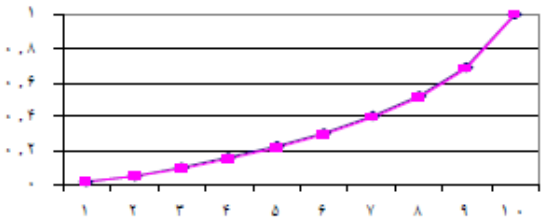

Figure 1- Lorenz curve during 1380s

In one hand, based on the social welfare, if the household status level not only be evaluated based on the absolute *value*s, but also be measured based on the relative values, then the social welfare level (W) in the society is calculated from multiplying the mean income (μ) to 1 minus the Gini coefficient(G). According to the equation (3):

$$G = 1 - \frac{1}{n}\sum_{i=1}^{n}\left(y_i + y_{i-1}\right) \qquad (3)$$

Which some researchers generalize the above equation as the equation(4)

$$W = \mu(1 - \alpha G) \qquad \alpha \geq 0 \tag{4}$$

According to equation (4), whatever α be higher, the influence of the income distribution on the welfare will be more significant. If α =1, so the age welfare index is obtained. Assuming the maintenance of the welfare at the specified level, the equation(5) will be obtained:

$$\gamma = \frac{G}{\mu} \cdot \frac{d\mu}{dG} = \frac{\alpha G}{1 - \alpha G} \tag{5}$$

Based on the above equation for α =1, 1.5 and 2 , the average growth of the welfare will be equal to 0.56, 1.98 and 2.44 respectively. This is caused by the more important role of the income distribution in the welfare analysis. The results of the equation (5) for 1380 and 1389 are represented in the table (1).

Table 1- Calculation of the welfare average

α=2		α =1.5		α=1		year
γ	W	γ	W	γ	W	
5.5251	3129107	1.9523	7635546	0.7211	11959192	1380
6.4252	3249217	2.0467	8662132	0.7587	12375199	1389

Source: finding of this study

The parameter γ in the situation of α=1 in 1380, means that to nullify the worse influence of the one percent increase at the Gini coefficient required to the increase of μ to 0.721. Which has been increased in 1389 due to made of more inequality in the expenditures distribution.

The welfare economy provide required arrangements of the demonstrability issues, and in the same time offer guidelines of the imperative discussions too. There are various ways in this branch of economics which according to them can evaluate the level of welfare. As the results of figure (1) shown, the Lorenz curves in the years of the research were coincident and didn't have the differentiation and mainly can't discuss about the changes of the welfare. Then Gini coefficient index used to assess the changes of the welfare level. Which the results shown that whatever the parameter α be higher, the influence and important of the equal income distribution will be increased and whatever this parameter be lower, the income distribution will be more equal. The efforts to improve the income distribution can be a factor to increase

the total welfare. Using of the managerial tools in the income distribution, such as the direct and indirect taxes, paying targeted subsides, health insurances and price controls, is supposed to step effectively toward the improvement of the social welfare. It is obvious that attention to increase the income without attention to its distribution will be led to reduce of the economic growth.

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