The Empirical Research of the Suzhou Civic Happiness Index

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Abstract. With the continuous increasing of GDP and people's income, people's economical life has been improved. Suzhou locates the delta of Yangtze, with top economic level and high GDP increasing, so it has important meaning to study the citizen's happiness index here. Studying on the life of Suzhou, we construct the assessment index of the citizen's happiness. Supported by the data of questionnaire and statistics, we analyze the happiness index of Suzhou citizen. What's more, we conduct the efficiency assessment as to the material input and spirit output with the help of non-radial DEA. In the end of the paper we analyzed the reasons.

Introduction of Happiness Index and Non-radial DEA

Introduction of Happiness Index

The so-called "Happiness Index" is the happiness degree measurement of subjective feelings of specific indicators. Happiness index measuring people's sense of happiness, it reflects the core indicators of the subjective quality of people's life.

In the late 1960s, in Western society, the standard of measuring the level of social development, economic development level and material wealth was gradually replaced by the quality of life which has much richer meaning, and the ultimate goal of social development has become raising people's quality of life, and happiness index is a reflection of the core index of the quality of people's life. In our country, concerning about "happiness index" is a "people-oriented" scientific concept of development. It is an important manifestation to the new era of the 21st century and is the ultimate goal of realistic focus of the economic and social development. GDP is as important as the people happiness. On the one hand, it monitors the economic and social trends, On the other hand, it can indicate people's life satisfaction.

There are still some technical and social dimensions of the problem needing to be well resolved in the people's happiness index statistical indicator system. Therefore, it has significant meaning to analyze the connotation and the establishment of index system of happiness index and find an effective and reasonable method to measure the index in a well-off society. We use the rational and effective method to evaluate people's happiness index, and it reflects the harmonious development degree of a well-off society.

Putting the relatively abstract indicators of economic growth and social progress with every family, every citizen's personal feelings closer together, thus we can achieve happiness index and the GDP increase simultaneously.

Early study largely focused on the quality of life of residents. But from the previous scholars literature we can see that the history of domestic and foreign scholars studying the quality of life is not long. Generally speaking, the quality of life study also has not become a widely accepted system of the theory and method. However, the study by scholars at home and abroad has also made a lot of results and lays the foundation for the follow-up research which makes the happiness index study better.

Introduction of Non-radial DEA

The traditional technical efficiency measurements DEA are most based on technical radial distance function by Shepherd R.W. and others. Only under the condition that the output (input) is certain to describe the radial reduce or expand the extent of the input (output) to the production forefront.

If inputs and outputs are respectively $x \in R_+^N$, $y \in R_+^M$, production Collection $T = ((x, y) \mid x$ can produce y), assuming that T satisfy Convexity, invalidity and the smallest, $(g_x, g_y) \in R_+^N \times R_+^M$, and $(g_x, g_y) \neq 0$. The CCF-distance function is $\vec{D}_T(x_0, y_0; g_x, g_y|C,S) = \max\{\beta \in R : (x - \beta g_x, y + \beta g_y) \in T\}$. We can see βg_x or βg_y is respectively the reduction or expansion volume of x or y to the frontier projection. So (g_x, g_y) is the Vector direction of the CCF distance function. When the scale is Unchanged and the elements can be freely disposed, the comprehensive technical efficiency measurement model based on the CCF distance function is [8]:

$$\vec{D}_T(x_0, y_0; g_x, g_y|C,S) = \max_{\lambda, \beta} \beta \tag{1}$$

$$s.t. \begin{cases} \sum_{j=1}^n \lambda_j x_j \leq x_0 - \beta g_x \\ \sum_{j=1}^n \lambda_j y_j \geq y_0 + \beta g_y \\ \lambda_j \geq 0, j = 1,2,...,n \end{cases} \tag{2}$$

$\vec{D}_T(x_0, y_0; g_x, g_y|C,S) > 0|(=0, <0)$ characterizes non-effective decision-making unit (effective, super-effective). In fact, the technical efficiency measurement model based on Farrell inputs and outputs distance function is only the special circumstances of the CCF distance function model.

When $(g_x, g_y) = (x_0, 0)$, FTEI $= 1 - \vec{D}_T(x_0, y_0; g_x, g_y|C,S)$,

When $(g_x, g_y) = (0, y_0)$, FTEo $= 1 + \vec{D}_T(x_0, y_0; g_x, g_y|C,S)$.

The Statistics of Capita Indicators and People's Life of Suzhou and the Happiness Index of Suzhou People

The Statistics of Capita Indicators and People's Life of Suzhou

Being known as "paradise", Suzhou covering an area of 8848 km^2 located in the golden areas of Yangtze River Delta. The city located in the south of Jiangsu province, neighboring Shanghai on the east, Zhejiang province on the south. The geographical coordinate of the city proper is at Northern latitude of 31°19′ and East longitude of 120°37′.

Suzhou boasts a household registered population of 6.5384 million. The birth rate is 10.36‰ and the natural growth rate was 3.53‰.In 2013, the per capita disposable incomes of urban residents and per capita net incomes of rural residents reached 41,096 Yuan and 21,569 Yuan.

People's happiness index can be impacted by various factors, economic income playing a decisive role. While other public facilities, social security and other factors also have a direct impact on the happiness index. The per capita disposable income is increasing from 1985 to 2007. The number

was from 918 Yuan to 21260 Yuan, about 23 times that of 1985. From people's consumption Structure and the total consumption expenditure, we can see the per capita living consumption expenditure was from 1,805 Yuan in 1990 to 12 472 Yuan in 2006, 6.91 times that of 1990, The people's Engel's Coefficient was from 42.7 % in 2000 declining to37.9 % in 2007. The per capita living square of the resident was from 1998's 14.6 square meters to 2005's 30.5 square meters. Per capita public green area in 1998 was only 4.74 square meters while 12 square metes in 2006. The number of telephone sets owned per 100 persons was from 41.63 in 1998 to 244.1 in 2006. Registered urban unemployment rate was 3.35% in 1999 dropped to 3% in 2007. The outstanding amount of saving deposits of urban and rural households was from 11,284 Yuan in 1998 to 39401 Yuan in 2006. The composition of food and clothing share are significantly declining in the consumption structure. While medical care, education, communications and other goods and services have a larger increasing proportion, which means that the living standards of Suzhou residents has been greatly improved, stepping to better life. The quality of life is gradually improving.

The Statistics of the Happiness Index of Suzhou People

For the happiness evaluation, 33 percent of the people think happiness is good health, 50 percent say family harmony. About the attitude of life, 48 percent of people are positive and optimistic, 50 percent of the people think calm and satisfaction. 81 percent of people are satisfied with their own state of the economy. As to the social security 76 percent of people think public order is quite good. 79 percent of people can accept the current price. 82% of the people are satisfied with social security. About 83 percent of people believe that the life is convenient and community service is satisfactory. But for traffic convenience, only 58 percent of the people are satisfied. 80% of the people like their career and gain reasonable compensation. As to the relationships 92 percent can recognize themselves. Among the unhappiness factors, unsatisfactory work and bad economic conditions are the main factors accounted for 42% and 31%.
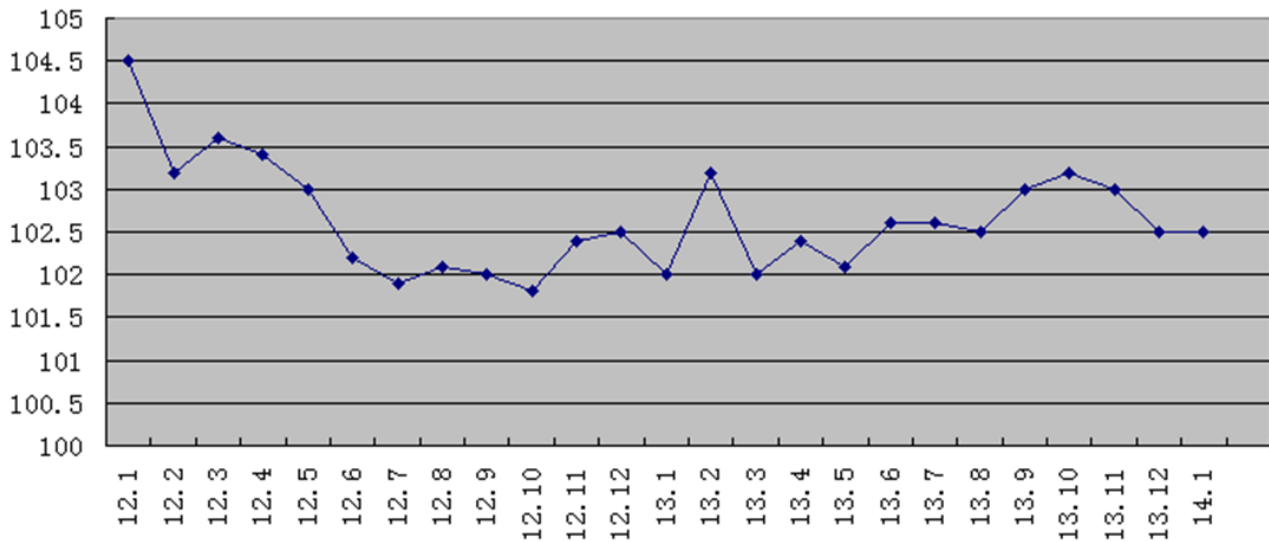
Conclusions

According to the dates we find the inefficiency from 2003 to 2006. It means that the citizens are unhappier in the later years. The reasons are the following:

People Have More and More Work Pressure

As an example, the scale of college graduates in 2014 reached 7.27 million according to the network video conference of 2014 national college graduates employment, 0.28 million more than in 2013.the situation is that not only the pressure of employment is increasing but also the structural contradiction is increasingly prominent, so the values of employment is to be further transforms values of employment for graduates.

Table 1: China's Urban inhabitants' CPI (2012.1-2014.1)

For the moment, the majority of graduates still choose the economically developed areas owing to their viewpoint that it is more easily finding the suitable job, obtaining satisfied income and actualizing the vocational achievements in the economically developed areas than economically underdeveloped areas. However, according to the employment situation in recent years, the growth rate of graduates was significantly higher than that of the stable jobs. As a result, the competition of employment is becoming fiercer and the pressure is increasing. The suitable job and satisfied income, as we know, are important reference factor of calculating the happiness index, so the increasing pressure of employment has been depressing the happiness the happiness index.

The Increasing price

A consumer price index (CPI) measures changes in the price level of a market basket of consumer goods and services purchased by households. In China, the most important components of the CPI basket are Food (31.8 percent of total weight) and Residence (17.2 percent). Recreation, Education and Culture Articles account for 13.8 percent, Transportation and Communication for 10 percent, Healthcare and Personal Articles for 9.6 percent, Clothing for 8.5 percent, Households Facilities, Articles and Services for 5.6 percent, Tobacco, Liquor and Articles for the remaining 3.5 percent. The inflation rate in China was recorded at 2.50 percent in January of 2014. Inflation Rate in China is reported by the National Bureau of Statistics of China. Inflation Rate in China averaged 5.78 Percent from 1986 until 2014, reaching an all time high of 28.40 Percent in February of 1989 and a record low of -2.20 Percent in April of 1999.

In recent years, the CPI has been increasing, and people's capacity to pay is limited, making the purchasing power decline, which is the important factor of causing people to reduce the sense of happiness.

The problem of Social Security

Social security is an economic and social system relating to the vital interests of members of the entire society for safeguarding social stability, promoting economic development. In the United States, Social Security is primarily the Old-Age, Survivors, and Disability Insurance (OASDI) federal program.Today more and more factors such as illness, inflation of prices, food safety, natural calamities and undesirable social phenomenon are affecting our lives.Some elderly and unstable low-income people relatively concern about social security. Fear of physical health and accidents, some

low-income groups have less sense of security, looking forward to the community to provide better social security.

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