Literature Review of Research on Income Satisfaction Degree

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Abstract
Income that maintains basic life requirements is foundation stone to people or family. Level of revenue of residents is measured by income satisfaction degree which compares real income to expect income. The article comments income satisfaction degree from definition, measuring method and influencing factor. We found the theory of income satisfaction degree should be noted. The problem of investigation and study on income satisfaction degree should be deeply explored and had better to look for its source.

Key words: Income Satisfaction degree; Measuring method; Influencing Factor

INTRODUCTION
Income is the foundation to maintain people’s living, and one can’t live without revenue. So income has great importance on man and family. In modern society, with increasing pressure, people need an index that reflects people’s demands of income. That is “income satisfaction degree”. In China, current researches on income satisfaction degree are focused on satisfaction of people in different position, the gap of satisfaction, satisfaction and happiness, Gini coefficient and satisfaction, GDP and satisfaction, consumption structure and satisfaction, and so on. Researches of resident family income concentrate on influencing factors, characteristics, problems, cause and countermeasures of family income in a region, etc. There’s little survey about resident family income satisfaction degree. Whereas in foreign countries, income satisfaction degree survey activities have been normalized, such as the German Socio-Economic Research (GSOEP), a comprehensive survey of the United States (GSS), the World Values Survey (WVS), American Family Research Survey (BHPS), Japan’s comprehensive survey (JGSS) European social household Survey (ECHP), the Russian longitudinal monitoring survey (RLMS), Australian household income and labor force survey (HIDA), etc.. They are all about income satisfaction degree surveys.

1. RELATED RESEARCHES OF INCOME SATISFACTION DEGREE IMPLICATIONS
Chinese scholars Luo Wenying, Chen Jian and Fu Hongchun (2007) make a broad definition of income satisfaction degree. They extend the outward of income to social security, education costs, housing, employment, savings, social security, the environment, health, leisure, love and marriage, relationships, etc. Income satisfaction degree can reflect the gap of actual life and ideal life. Their definition is tending to the satisfaction of living quality or the achievement of happiness. Such definition has both advantages and disadvantages. We can know factors affecting income satisfaction degree as far as possible if use the definition as a guide. But if we can not grasp the scale, it easily becomes the investment of living quality or the achievement of happiness, and has no focus. Zheng (2008) considered the income satisfaction degree is the personal real income compared with the expected income level. Foreign scholars Vanpraag use a function $U(y, x)$ to define the income satisfaction degree, in which $y$ represents household...
income, $x$ represents other characteristic parameters. George (1992), Diener and Biswas-Diener (2002) considered income satisfaction degree is the bridge of income and happiness: income - income satisfaction degree - happiness. In addition to income, living happiness is influenced by other factors. As Marx says the economic base determines the superstructure, so income is a crucial factor affecting living happiness, and sometimes it plays a decisive role.

Looking at the meaning of income satisfaction degree given above, it has such characteristics: Income satisfaction degree is the degree of satisfaction after contrasting target income with the current income; it’s man’s subjective feeling and many factors can be involved in the comparison process; you may compare you with the surroundings or the goals you set; income satisfaction degree is affected by objective factors, such as price level. It may influence satisfaction if the growth of price lever is larger than the growth of resident income. Due to inadequate social security system, although some people receive substantial income, but for the difficult and expensive medical treatment, high real estate price, and the elderly pension funding problems, governments have to plan ahead. If income people can use in their daily life has decreased, it also affects people’s income satisfaction degree.

### 2. RELATED RESEARCHES ON MEASUREMENT METHODS OF INCOME SATISFACTION DEGREE

Economist Samuelson put forward a formula to measure happiness: Happiness = Utility / Desire. “Utility” and “Desire” are abstract nouns mentioned in Western economics, and they’re difficult to measure numerically. While the formula reveals the concept to measure subjective feelings, and it’s consistent with the definition of income satisfaction degree. According to the formula, Fu Hongchun and Luo Wenying proposed a simple and operational calculation method (the ratio method), and the formula is: Income satisfaction degree= Actual Income / Expected Income.

Descriptive Method uses scale form proposed by Likert as the basis. It set 5 options: $A$ = very dissatisfied, $B$ = not satisfied, $C$ = generally satisfactory, $D$ = satisfied, $E$ = very satisfied. Residents make choices according to the survey questionnaire items, and the selected answer is their satisfaction status.

Digital method is a kind of mean that has given integer 0-10 (or other number), allowing respondents to choose.

Confidence Index Calculation proposed by CCSS project sets 5 grades like Likert’s scale format. The questionnaire options are: very dissatisfied (VS), dissatisfied (US), general (O), satisfactory (S), very satisfied (GS). The five options above are given to the appropriate score, followed by -1, -0.5, 0, 0.5 and 1. Then the score can be calculated as: Title score = 100% -1 × VS% - 0.5 × US% + 0.5 × S% + 1 × GS%

The calculated score reflects income satisfaction degree and the difference between the proportions of the people tend to satisfaction and dissatisfaction. It means that resident income satisfaction degree is in the general level when the score is 100%; it is in the satisfactory level when the score is greater than 100%; contrary, it is less than 100%.

SEM is a method that analyzes the relationship between income satisfaction degree and its influence factors. Structural Equation Model includes: a) measurement model that reflects the measuring relationship between the exogenous latent variables and the exogenous observed variables those affecting income satisfaction degree. b) structure model that reflects the structural relationship between the latent variables and income satisfaction degree.

Throughout these satisfaction measurement methods proposed by experts, each has its advantages, but there are some limitations:

Ratio method requires collecting relevant data of real income and expected Income. It’s quite good if respondents can provide as much as possible. However, income is a very sensitive topic to the public in China. In this case, how to ensure true and reliable data collection is a debatable issue.

Descriptive Method is widely used to collect data by questionnaire, because its simple and clear options can let people make the appropriate choice in a relatively short period of time. While it needs data transformation and the final result is an estimated data.

Digital Method is used in designing questionnaire and scale form in most foreign countries, which maybe because of foreigners’ serious attitude. This measure forms requires respondents sensitive to digital, and knowing himself well.

Index Method can directly show the satisfactory condition of a certain factor. We conduct satisfaction surveys to know all residents’ satisfactory condition. So how scores are summed for all projects when it comes to seeking all residents’ satisfaction? A simple summary? Or weighted summary? The same factor for different people has different extent of importance. How to determine a reasonable weight is related to the ability to objectively reflect all income satisfaction degree.

The advantages of SEM are those it allows the existence of the variable measurement error; handle multiple dependent variables simultaneously and measuring and structure relationships in a model; allows a more flexible model. While it needs the user with certain knowledge of mathematical statistics and related software knowledge, and its work is large.
3. RELATED RESEARCHES ON FACTORS OF INCOME SATISFACTION DEGREE

Among the surveys of scientists’ income satisfaction degree, Chen (2007) finds that it’s unreasonable to make “duty” and “titles” as a basis for the distribution of income through questionnaires among scientists in Nantong, and he think the reasonable allocation should be based on “actual work contribution”. Sun and Cui (2010) build an index system of high-tech personnel income satisfaction degree from 5 aspects: living conditions, income level, work experience, perceived fairness and income satisfaction degree. They select 13 cities in Jiangsu Province as the scope of the investigation, and the survey results show that scientists’ satisfaction depends more on the fairness between their own efforts and the return. Liao, Wu, and Cheng (2013) use 2019 scientists of 11 regions in Zhejiang Province as research samples to explore the relationship between satisfaction and background characteristics, institutional factors. They found that science and technology achievement awards incentive system has the same change with income satisfaction degree.

Among the survey researches of residents’ income satisfaction degree in different provinces, Fu and Luo (2004) have measured residents’ income satisfaction degree in Shanghai. They point that Shanghai residents’ income satisfaction degree level is low mainly because of low family expected income, such as high prices of real estate, high cost of education and high pressure of the employment. Li and Long (2012) make survey on agricultural registered permanent residence in Beijing. The result shows that income level and distribution system are two main factors, and income level has a greater impact. Zhou (2012) found absolute income and the fair degree of income distribution have influence on satisfaction through residents’ SWB investigation in Jiangsu. Wei (2012) carries out an investigation on old people’s income satisfaction degree in Guiyang. He discovered income level and income stability showed a positive change in income satisfaction degree, while income independence and income satisfaction degree were negatively to change. Zhu (2001) propose that it should combine increased revenue with increased family burden to know how increased revenue influences on residents’ happiness after a research about the relationship between income satisfaction degree and happiness in Henan. Zhou (2013) found that the absolute income level and social income distribution make impact on satisfaction, and the latter has greater influence through empirical research.

How different factors affect the income satisfaction degree? Scholar Luo (2007) make a correlation analysis between GDP and income satisfaction degree. The consequence indicates income satisfaction degree has a U-shaped change with income increased. Xie and Sun (2010) have explored the relationship among absolute income, comparison income and utility components. They discovered the utility of own income is greater than the utility of the others showing changes in income. He and Long (2011) make a conclusion that there is no significant relationship between absolute income and income satisfaction degree, and relative income has a positive impact on wages of satisfaction followed by an investment about actual income level, compared revenue and salary satisfaction. Zhang (2011) discovered that satisfaction and consumption have a weak causal relationship by Logistic regression model. Zhang and Xin (2011) use the social perspective as the starting point to analyze income satisfaction degree. They found satisfaction is affected by economic status, social status, relationships and social income distribution in different situations occupations. Liu (2013) figures out that the pay levels, structures, forms and systems are the main factors to affect employees’ salary satisfaction. Yao (2013) found men have lower satisfaction lever than women; age is U-shaped changed with satisfaction; the degree of education has no significant influence on satisfaction; reliance can raise satisfaction prominently; people who set his past lever as the reference have higher satisfaction. Guan (2013) found that the largest contribution to farmers’ income growth is operating household income, followed by wage income, property income and transfer income.

The survey findings indicate that their own efforts and the returns are main factors which have a positive impact on technological workers’ revenue satisfaction when using provinces (Jiangsu Province, Zhejiang Province - have accounted for 20 percent of the country’s scientific and technical personnel) where scientific and technical personnel distribution is more concentrated as a research location. When residents’ incomes satisfaction in different provinces is research content, it shows that income level and distribution system are the main factor affecting the income satisfaction degree whether in developed cities nor developing cities. That income level showed a positive effect on income satisfaction degree demonstrates increasing revenue is the basic factor to raise satisfaction, and “turning point” of income satisfaction degree may not appear. Besides, the fairness of income distribution is another important factor. In current stage, when studying how different factors affect the income satisfaction degree, scholars have investigated the relationship between income satisfaction degree and these factors above (Table 1).

More further studies are needed to make clear that how factors mentioned above affect income satisfaction degree due to limited literature related to certain aspect and income satisfaction degree. Besides, more other factors should be explored.
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Table 1
Satisfaction and Factors

<table>
<thead>
<tr>
<th>GDP and income satisfaction degree</th>
<th>Absolute income, relative income and income satisfaction degree</th>
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<tbody>
<tr>
<td>Satisfaction and consumption structure</td>
<td>Satisfaction and the residents economic status, social status, personal relationships, social income distribution</td>
</tr>
<tr>
<td>Utility presented by own and others’ revenue changed and income satisfaction degree</td>
<td>Salary levels, structure, form, system and income satisfaction degree</td>
</tr>
<tr>
<td>Gender, age, education level, trust, reference point setting and income satisfaction degree</td>
<td>Changes in income structure, income volatility and income satisfaction degree</td>
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CONCLUSION

Further study of income satisfaction degree theory. The theories involved throughout the related surveys of income satisfaction degree are: Expectation Theory put forward by Kalman through a series of psychological experiments and Welfarism of Welfare economics. In the former, people’s selection behavior is modeled by two processes. The parties use different decisions to edit expectation, and then make a choice by a preference function (value function). Welfarism is that the level of social welfare (social order) only depends on people’s utility level (individual order). Despite these theories are the cornerstone of the study, the income satisfaction degree is more subjective feeling, and it should use more psychological theory to explain, not only supported by economic theories. There are less literatures using psychological theory to explain income satisfaction degree, therefore, in future studies, we should make further study on the theory of income satisfaction degree, especially theory of psychology.

Discussion of the problem in depth. The primary purpose to carry out income satisfaction degree survey is to know the situation of people’s satisfaction, and then know the influencing factors. We should analyze and understand what factors leading to dissatisfaction, then look for the social deep-seated problems hidden behind the factors, and finally find the root cause of the problems. From the review of the literatures, literature with the ideas mentioned above is rarely. Luo Wenying analyzed the income satisfaction degree questionnaires from Shanghai, Anyang, Xinyang, and he found residents’ age and income satisfaction degree are U-shaped curve characteristics in the former city, while rural residents’ age and income satisfaction degree are inverted U-shaped features in the latter cities. We can see income satisfaction degree of rural residents is different from that of citizens despite in the same age stage. Its root cause is the defective social old-age security system. The construction of rural social endowment insurance started late, and it is still in the exploratory stage. But the government did not give the same amount of old-age security in rural as that in the city. Luo (2011) had measured the income satisfaction degree by farmers employment (agricultural production, rural enterprises, self-employed, migrant workers, national cadres), and he got the result that satisfaction lever of self-employed and migrant workers is lower than that of farmers engaged in agricultural production. This result also made people to think about the farmers’ identity transformation. Zheng (2013) explored income satisfaction degree “turning point” and “turning point value” impact on our public economic policy with Easterlin paradox as starting point. He analyzed by using regression methods, and found income and income satisfaction degree was “inverted U-shaped” relationship. He proposed a “turning point” income coefficient estimation method that made no rise in income satisfaction degree. The income that real satisfaction “turning point” stands for is more than 7 times than the income that year. The result raises consideration of economic policy performance. Combined with our resources, environment, public services and other conditions, experts proposed that designing systems and policies should be with the goal of reducing the income “turning point” standing for. In future studies, we should concentrate on the problems discovered in the researches and improve the effectiveness of policies set by government and relevant departments.

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