Literature Review of Research on Income Satisfaction Degree
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Abstract: Income that maintains basic life requirements is the foundation stone to people. Residents’ revenue level is measured by income satisfaction degree which compares real income to expected 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 investigation and study on income satisfaction degree should be deeply explored and had better to look for its source.

1 Introduction
Income is the foundation to maintain people’s living, and one can’t live without revenue. So income is of great importance to family. In modern society, people need an index that could indicate people's demands of income. That is “income satisfaction degree”. In China, current researches about income satisfaction degree are focused on satisfaction of people in different positions, the gap of satisfaction, Gini coefficient, GDP and satisfaction, consumption structure and satisfaction, and so on. Researches about resident family income concentrate on influencing factors, characteristics, problems, causes and countermeasures of family income in a region, etc. There’s little survey about resident family income satisfaction degree. Whereas in other countries, income satisfaction degree survey activities have been normalized, such as the German Socio-Economic Research (GSER), a Comprehensive Survey of the United States (CSUS), the World Values Survey (WVS), American Family Research Survey (AFRS), Japan's Comprehensive Survey (JCS) European Social Household Survey (ESHSS), the Russian Longitudinal Monitoring Survey (RLMS), etc. They are all about income satisfaction degree surveys.

2 Related Researches of Income Satisfaction Degree Implications
Chinese scholars Luo Wenying (2007)\textsuperscript{1} made a broad definition of income satisfaction degree. They extend the connotation 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 cannot grasp the scale, it easily becomes the investment of living quality or the achievement of happiness, and has no focus. Zheng Fangjun(2008)\textsuperscript{2} considered the income satisfaction degree is the personal real income compared with the expected income level. Foreign scholar Vanpraag used 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. Marx says economic base determines the superstructure, so income is a crucial factor affecting living happiness, and sometimes it plays a decisive role.
3 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, 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), which is: Income satisfaction degree= Actual Income /Expected Income.

Descriptive method uses scale form proposed by Likert as the basis, which sets 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 means 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%; in contrast, 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: ①measurement model that reflects the measuring relationship between the exogenous latent variables and the exogenous observed variables those affecting income satisfaction degree. ②structure model that reflects the structural relationship between the latent variables and income satisfaction degree.

Of all 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 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. Since it needs data transformation, the final result is an estimated data.

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

Index Method can directly show the satisfactory condition to certain factor. We conduct satisfaction surveys to get 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 degree 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 as follows: 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 user with certain knowledge of mathematical statistics and related software knowledge, its work is large.

4 Related Researches on Factors of Income Satisfaction Degree

Among the surveys of scientists’ income satisfaction degree, Chen Tao(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 considers that the reasonable allocation should be based on "actual work contribution". Sun Ruiling and Cui Weijun (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 depend more on the fairness between their own efforts and the return. Liao Zhongju, Wu Daoyou, Cheng Hua (2013) used 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 Hongchun, Luo Wenying(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 Chunling, Weizhong Long (2012) made 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 Chunping (2012) found absolute income and the fair degree of income distribution have influence on satisfaction through residents’ SWB investigation in Jiangsu. Wei Pu(2012) carried out an investigation on ole 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 was negatively to change. Zhu Cheng (2001) proposed 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 Chunping (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 Yanhao, Sun Jianping (2010) has 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 Wei(2011) made a conclusion that there is no significant relationship between absolute income and income satisfaction degree, and relative income has a positive impact on wages satisfaction followed by an investment about actual income level, compared revenue and salary satisfaction. Zhang Honghai (2011) discovered that satisfaction and consumption have a weak causal relationship by logistic regression model. Zhang Qun, Xin Xiaolei (2011) used 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 Quanxin (2013) figures out that the pay levels, structures, forms and systems are the main factors to affect employees’ salary satisfaction. Yao Weifeng (2013) found men have lower satisfaction level 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 level as the reference have higher satisfaction. Guan Haojie (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 main factors 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).

| Table 1. Satisfaction and Factors. |
|-----------------------------------|
| GDP and income satisfaction degree |
| Absolute income, relative income and income satisfaction degree |
| Satisfaction income and consumption structure |
| Satisfaction and the residents economic status, social status, personal relationships, social income distribution |
| Utility presented by own and others’ revenue changed and income satisfaction degree |
| Salary levels, structure, form, system and income satisfaction degree |
| Gender, age, education level, trust, reference point setting and income satisfaction degree |
| Changes in income structure, income volatility and income satisfaction degree |

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.

5 Conclusion
Looking at the research on income satisfaction degree given above, income satisfaction degree is the degree of satisfaction after comparing 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, the difficulty and expensive medical treatment, high real estate price, and the elderly pension funding problems, governments have to plan ahead. If the income that people can deal with in their daily life decreased, it also affects people's income satisfaction degree.

The primary purpose to carry out income satisfaction degree survey is to know the situation of people's income satisfaction, but more importantly, we need to understand the factors that affect the income satisfaction of residents, what factors lead to residents' dissatisfaction with their own income, and then we need to find the deep-seated social problems hidden behind the factors, and explore the problems to find the root causes of the problems. In the future research, we should strengthen the research on the problems found in the investigation, solve the problems from the source as much as possible, and improve the effectiveness of the policies formulated by the government and relevant departments.

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References
[1] Fu Hong-chun, Luo Wen-ying. Measurate and Analysis on shanghai resident income satisfaction degree[J]. Management world, 2004(11):62-67.
[2] Zheng Fang-hui, Long Xiao-lan. Research on income satisfaction degree based on performance[J]. Journal of Wuhan University, 2008(4): 585-591.

[3] Sun Rui-jun, Cui Wei-jun. Research on income satisfaction degree on high-technology companies[J], forum on science and technology in china, 2010(5): 115-121.

[4] Li Chun-ling, Wei Zhong-long. The Multidimensional Nature of Income satisfaction degree: Evidence from Residents in Beijing Rural Area[J], Journal of Capital University of Economics and Business, 2012 14(3):42-46.

[5] Zhou Chun-ping. Empirical Study on Influence of Income and Income satisfaction degree on Residents' Subjective Well-being--Based on Data of Jiangsu Province[J], Journal of Nanjing University of Aeronautics & Astronautics (Social Sciences), 2013(3):40-44.

[6] Xie Yan-hao, Sun Jian-ping. Comparative income and relative utility: an empirical study on wage satisfaction[J], Journal of Nanjing agriculture University, 2010(3): 28-37.

[7] He Wei, Long Li-rong. Verifying the Influences of Actual Income and In-Department Comparison on Pay and Benefit Satisfaction: The Moderators of Chinese Traditionality and Department Size[J], Management World, 2011(4): 98-110.

[8] Yao Wei-feng. Empirical Research on income resident Satisfaction[J], Journal of Central University of Finance & Economics, 2013(8):57-61.