Different Factors Affecting People's Happiness in China First, New First, Second and Third Tier Cities

Anqi Fan [1,2,a,*], Haifeng Fu [3,b]

[1] Bsc Economics and Finance, Xi'an Jiaotong-Liverpool University, Suzhou, China

[2] msc International Trade, Strategy and Operations (Itso), University of Warwick, Coventry, England

[3] ibss, Xi'an Jiaotong-Liverpool University, Suzhou, China

[a] anqianqiangel@126.com, [b] haifeng.fu02@xjtlu.edu.cn

*corresponding author

Keywords: Happiness, China, Different tier cities, Factors

Abstract: There are many definitions of happiness, but in any case, the ultimate goal of life is to pursue happiness. In the past decades, many Western economists have done a lot of research on happiness. However, research on the happiness of Chinese people is limited. This thesis aims at creating a new field to study the various factors affecting people's happiness level in China first, new first, second and third-tier cities.

1. Introduction

For human beings, constant struggle and exploration are all for one ultimate goal, which is to live a happier life. Happiness may contain life satisfaction, positive spiritual emotions, meaningful life among other concepts. As the greatest philosopher, Aristotle described that happiness is the purpose and meaning of life, the ultimate life goal of human existence [6]. Although in modern or ancient times, in China or abroad psychologist discuss happiness for years, the study of happiness is still a fairly new field for economists.

China has a large geographical area and population with unbalanced economic development. Jiazhi [5] argues that due to the differences in central, western and eastern regions, personal subjective well-being level is not similar. Under such an economic environment, despite the substantial increase in material standards of living, Chinese people's spiritual happiness is on a downward trend. World Value Survey [7] shows that in 1990, 27.5% of Chinese consider themselves very happy, but recent data in 2013 informed that only 15.7% describe them as very happy. Measured in proportion, Chinese resident degree of life satisfaction has dropped from 7.29 into 6.67 (scale 1 unhappy – 10 very happy) and even with a downward trend. This illustrates happiness has not increased with economic growth, which implied that there is a paradox phenomenon of happiness in China. Brockmann [1] asserted every primary social indicator to show that Chinese living standards improve fastest as ever before, in contrast to happiness rating has declined significantly.

The goal of this dissertation is to contribute to the new field of China happiness economics. This article expounds the concept of happiness, discusses the happiness index for the case studies and how to choose the most suitable city with relatively happier index. This thesis addresses three main research questions: Firstly, whether there is a discrepancy of happiness index among residents of these three different level economic background cities. Secondly, which factors have the most significant impact on each tier of cities happiness index. Third, how to improve people's well-being level. Previous studies have analyzed quantitative data on satisfaction but did not focus on what constitutes the most critical factors in happiness. Especially for China, which is considered as one of the largest economic entities, the economic development environment of China's first, new first, second and third-tier cities is quite different. The city's various conditions and activities will undoubtedly play a decisive role in people's happiness. The study of residents' well-being level

should be distinguished whether the variables influencing happiness among cities will be different under their different economic backgrounds. Therefore, we predict that in the first-tier cities, the pressure on real estate will be a lot of stress and the traffic will be relatively congested. The income and comparative social factors of second-tier cities will have a major influence on the well-being of their residents. Health care and education in third-tier cities may be a major factor affecting happiness. It is only by understanding which factors most significantly improving residents well-being of the different city, so as to formulate more targeted policies and provide the more rational solutions for raising the happiness of resident in different economic backgrounds.

2. Literature Review

China has different political, social and cultural backgrounds which distinguished from other countries so that the understanding and feelings of happiness will be different. Therefore, many scholars in China conducted their research and assessment system to observe the well-being level of Chinese people. Since the first journal published in mainland China in 1999, China's research on happiness has undergone tremendous increase. In a decade, according to Chen and Davey [2], Chinese scholars published more than 800 research papers which lead this topic gradually become a greater concern.

Measuring national happiness is a very complicated problem, which needs to be analyzed from a variety of different perspectives, so as to measure the general feelings of citizens on happiness. Zhong and Lin [8] reported the first concept and calculation method of "national happiness index" which designed by decomposing and collecting the components of national happiness from the material and spiritual aspects. They believe that happiness includes the connotation of the individual spirit in addition to the material economic and social development. This is also the earliest research on national happiness from the statistical perspective in mainland China. The result was published in the statistical institution of the Chinese government and attracted the attention of the government. Subsequently, in 2004, the Chinese Academic of science [3] conducted a national happiness index survey using the survey method of sampling statistics. A total of 28 indicators were selected and the final results were calculated used weight average. The national bureau of statistics also announced the launch of the happiness index and a serious of statistical contents in 2006, to meet the needs of China's coordinated economic and social development.

3. Research Methodology

This paper will use the structural equation model to explore the well-being index. The twenty observed variables will be obtained directly from the questionnaire which will be obtained by the formula to calculate the three latent variables - economic factors, individual factors, and other factors. Subjective well-being will be explained by these three latent variables. The equations are as follows:

$$\text{Economic factors} \approx \beta_0 + \beta_1 \text{income} + \beta_2 \text{occupation}$$

$$\text{Individual factors} \approx \beta_0 + \beta_1 \text{age} + \beta_2 \text{gender} + \beta_3 \text{ethnic} + \beta_4 \text{education} +$$
$$\beta_5 \text{region} + \beta_6 \text{accomodation} + \beta_7 \text{marital} + \beta_8 \text{health} +$$
$$\beta_9 \text{sports} + \beta_{10} \text{leisure} + \beta_{11} \text{personality}$$

$$\text{Other factors} \approx \beta_0 + \beta_1 \text{coparison with oneself} + \beta_2 \text{comparison with others} +$$
$$\beta_3 \text{environment} + \beta_4 \text{transportation} + \beta_5 \text{medical insurance} +$$
$$\beta_6 \text{social insurance} + \beta_7 \text{subsidies}$$

$$\text{Happiness}_i = \beta_0 + \beta_1 \text{economic factors} + \beta_2 \text{individual factors} + \beta_3 \text{other factors}$$

The first three equations are the relationships between the latent variables and observed variables, and the last equation describes the relationship between three latent variables and the happiness index, which is directly related to the self-assessment. The significance of parameters estimated

from the SEM will be further tested under 5% significant level with the following hypothesis:

$H_0 : \beta_i = 0$ insignificant

$H_1 : \beta_i \neq 0$ significant

Considering China's vast territory and unbalanced economic development, the same factors may have different effects in different regions. Therefore, this study will not only analyze the national integrated sample but also analyze its influencing factors from each different tire cities. This paper establishes five models: Model 1: analysis of the overall sample of each factor. Model 2: analyze the influencing factors of first-tier cities. Model 3: an analysis of the new first-tier cities of each factor. Model 4: analysis of samples from second-tier cities. Model 5: analysis of the influencing factors of third-tier cities.

4. Statistical Results

4.1 Questionnaire Results

This survey took about a week to distribute and collect information. When the number of respondents decreased slowly over time, to facilitate statistical analysis, I determined to stop collection after the 700th person completed the questionnaire. As a result, we obtained seven hundred valid data, which was randomly selected in China. Respondents living in first-tier cities account for 37.43%, which contains the highest share. Other cities at all levels have more than 130 people and less than 170 participants. The percentage of New first-tier cities, second-tier cities, and third-tier cities are 20%, 18.71% and 23.86% respectively. After collection of the information from respondents, the results indicate that most of them (41.14%) are happy, followed by neither happy or unhappy (34.43%), very happy (20.29%). Only a few respondents (4.14%) reported they feel unhappy or very unhappy.

4.2 Models of Descriptive Statistics

Given value in table 1 shows the influence of all the variables in model 1, which indicates all respondents from China. Compare with an occupation; salary has a broader influence among first-tier (Model 2), new first-tier (Model 3), second-tier cities (Model 4), but this situation do not appear in third-tier cities (Model 5). As for individual factors, we set education as the benchmark unit 1 in the personal factor to observe other factors. In Model 1, health and exercise value is most close to 1, which given 0.952 and 0.92 respectively and for personality factor are count for the lowest number in the table. When it comes to Model 2, personality becomes much smaller than before (0.665), which represent this factor is less significant in first-tier cities. And still, the health problem shows its impact on reaching 0.945, which is a little lower than education impact. The number goes down for health in Model 3, and the influence of accommodation increase to 0.929. In Model 4, all the variables of individual exceeded education factor of 1; the leisure variable become the highest (1.271), also personality reached to 1.264. Exercise re-emerged as a significant factor (1.089), which is also the only one exceed 1. Education also shows its impact as well as health (0.995).

Other factors contain three parts factors of all variables. Comparative factor shows an essential influence, which nearly all numbers are greater than 1. In all models except model 2, the comparison factors with others exceed the comparison with oneself, which indicated that comparative factors played an essential role in this survey, especially in comparison with others. Move to region characteristics, both urbanization and transportation factors appear to their weightiness, although transport factors in Model 3 seem not as important as others. When it comes to policy welfare, setting medical as the benchmark, among Model 1, Model 2 and Model 4, social insurance and policy welfare impact are less than medical insurance. However, in Model 3, policy welfare becomes the most influential factor (1.152), and both society (1.112) and welfare factor (1.008) excess than medical in Model 5. By comparing overall these three parts, comparative factors show slightly less significance than the local environment and welfare in Model 1, Model 3 and Model. However, policy welfare reached up to 1.093 in Model 2, and the regional characteristic

factor (1.112) becomes the highest in Model 5.

Table 1 the Influence of All the Variables

	Model 1	Model 2	Model 3	Model 4	Model 5
Latent variables					
	Estimate	Estimate	Estimate	Estimate	Estimate
economic factors					
salary	1	1	1	1	1
occupation	0.948	0.977	0.842	0.857	1.111
individual factors					
education	1	1	1	1	1
accommodation	0.907	0.827	0.929	1.222	0.85
marriage	0.825	0.717	0.634	1.259	0.936
health	0.952	0.945	0.71	1.23	0.995
exercise	0.92	0.866	0.63	1.214	1.089
leisure	0.879	0.808	0.861	1.271	0.773
personality	0.801	0.665	0.668	1.264	0.842
comparative factors					
compare_self	1	1	1	1	1
compare_others	1.063	0.957	1.089	1.15	1.103
regional characteristics					
urbanization	1	1	1	1	1
transport	0.905	0.935	0.656	0.907	0.975
policy welfare					
medical	1	1	1	1	1
society	0.87	0.709	0.992	0.737	1.112
policy	0.969	0.909	1.152	0.87	1.008
other factors					
comparative factors	1	1	1	1	1
regional characteristics	1.045	0.898	1.194	1.213	1.112
policy welfare	1.079	1.093	1.108	1.201	0.954
happiness					
happy	1	1	1	1	1

Table 2 shows the contribution of each factor investigated to happiness. Also, there are five different plot of each tire of cities, which clearly shows how much magnitudes for each factor contribute to their well-being level. The Numbers on the line show the contribution of each factor. The larger the number, the higher the contribution.

Table 2 Contribution of Each Factor Investigated to Happiness

	Model 1	Model 2	Model 3	Model 4	Model 5
variance					
	Std.all	Std.all	Std.all	Std.all	Std.all
salary	0.645	0.765	0.753	0.385	0.444
occupation	0.682	0.798	0.794	0.452	0.389
education	0.654	0.702	0.717	0.595	0.473
accommodation	0.68	0.765	0.725	0.481	0.516
marriage	0.712	0.787	0.848	0.51	0.526
health	0.663	0.715	0.83	0.51	0.423
exercise	0.661	0.738	0.834	0.535	0.398
leisure	0.693	0.775	0.744	0.456	0.582
personality	0.733	0.827	0.844	0.497	0.559
compare_self	0.673	0.762	0.701	0.563	0.515
compare_others	0.655	0.781	0.687	0.472	0.427
urbanization	0.669	0.78	0.649	0.396	0.529
transport	0.681	0.764	0.806	0.479	0.514
medical	0.605	0.618	0.657	0.462	0.595
society	0.675	0.779	0.648	0.633	0.567
policy	0.635	0.688	0.583	0.534	0.595
happy	0	0	0	0	0
economicFactors	1	1	1	1	1
individulFactors	1	1	1	1	1
socialComparision	0.055	−0.044	0.175	0.131	0.047
rgnlChrctrstcs	0.108	0.149	0.258	0.078	−0.017
policyWelfare	0.14	0.241	0.282	0.028	−0.149
otherFactors	1	1	1	1	1
happiness	0.033	0.003	0.024	0.024	0.024

Overall, the most significant results for this paper is represented in table 3, which is about the magnitude of the influence of the three variables on each level of the city. In Model 1, individual

and other factors show a tremendous impact on people's happiness level. Other factors (p=0.008) influence first-tier cities residents most as well as individual factors (p=0.08). The results reported the economic factors seems less important in new first-tier cities, and the individual factor (p=0.005) become the most influential one. The situation in second-tier cities are different; other factors are inconsequential for people in second-tier cities. However, respondents in third-tier cities consider other factors as an essential element for them to increase their level of happiness. Besides, compare with other tiers of cities, economic factors have a significant influence on third-tier city participants.

Table 3 Influence of The Three Variables on Each Level of the City

	Model 1		Model 2		Model 3		Model 4		Model 5
Regressions									
	P(>|z|)		P(>|z|)		P(>|z|)		P(>|z|)		P(>|z|)
happiness ~									
economicFactors	0.512		0.406		0.928		0.086		0.077
individulFactors	0.001		0.08		0.005		0.049		0.809
otherFactors	0.003		0.008		0.023		0.902		0.034

5. Evaluation of Results

The results indicate that individual factors and other factors are the most prominent part of overall China. However, economic factors seem not a crucial element to affect people's happiness level. In first-tier cities, other factors show the highest number of influencing subjective well-being, and economic parts are relatively not significant. The reason for this phenomenon may be because respondents from first-tier cities generally have a sufficient income condition; also their education degree is relatively stated in high level. This point can also be analyzed by the economics of diminishing returns to wealth, Easterlin [4] claim that when wealth reaches a certain level, each additional increase in wealth will gradually reduce the increase in happiness. Besides, they may have sufficient time for recreation and doing exercise, so the personalized factor in this group of people is accessible to satisfied. Therefore, the importance of the individual factor is slightly lower than in the general case in China. As the top cities in China, first-tier cities have developed economy, advanced industry, strong comprehensive strength, with a dense population and more job opportunities. Therefore, the desire for income and career are not that aspired. However, although it seems they are satisfied with their current living quality, they are more concerned about future development, such as medical care, old-age care, and long-term follow-up government welfare. They hope that they can better tap their potential in the future and they can have better development space to achieve a more successful life. Due to the broad area of first-tier cites, and the fact that many people work far away from home, the traffic problems are outstanding, so they desire that the traffic problem in cities can be improved, and look forward to a better living environment. That may be the reason why respondents from first-tier cities are concerned about other factors as a significant factor which affected their happiness level.

In new first-tier cities, individual factors reach the top influential part for their happiness level. New first-tier cities as a new batch of first-tier cities, with their increasingly prominent economic performance, rising per capita income and more development opportunities, are favored by people and attract a large number of people to move in. However, in favor of the rapid increase in the pace of life, a considerable number of respondents did not have time for leisure and sports, which leads to the existence of sub-health conditions. The gradual increase in workload has also made respondents eager to have more free time to spend with their families. Furthermore, as the housing prices rise and people wish to buy their apartment, residents are facing the housing pressures higher than before. Thus, individual factors play an essential role in the happiness of the new-first tier cities residents. With the influx of new immigrants, comparative factors also rising, they hope that they can achieve higher social status or live a better quality of life than before, and they expected to be more successful to gain a sense of identity. So, factors of comparison are relatively high in these groups of people.

Compare with first-tier cities, second-tier cities belong to a relatively stable type of cities, and

various industries are in the stage of stable development. At the same time, people living in second-tier cities are also relatively comfortable and satisfied with the status quo, unwilling to make excessive comparisons with others and themselves. Thus, the influence of other factors is relatively low. Respondents in second-tier cities would love to entertain with friends in their free time, which can significantly enhance their happiness level.

Third-tier cities are characterized as undeveloped areas. Compared with other regions, they prefer to obtain higher incomes and better living conditions, so that basic living standards can be guaranteed. Economic factors and other factors have become significant factors affecting the level of happiness in third-tier cities respondents. Other factors also have an essential effect in first-tier cities, but the reasons are different from third-tier cities. Participants from third-tier cities with normal income conditions choose to rely more on government welfare and medical and social insurance; they expected the government could do more to improve their living environment and transportation facilities.

6. Conclusion

This paper has demonstrated that various factors affecting people's happiness level in China first, second and third-tier cities. By using the questionnaire method, a random sample survey was conducted nationwide, and finally, 700 valid data were obtained. We used the SEM model to construct five different models and analyze the results. The conclusion is consistent with our expectation. Due to the differences in economic, cultural and educational backgrounds of cities at different levels, the factors affecting the happiness of people living in different cities are different.

From our overall data, respondents across the country agree that personal factors and other factors have a more significant impact on their happiness. Among individual factors, education has the most substantial effect on the improvement of happiness. For interviewees, health and exercise also affect their happiness to a great extent. Exercise can relieve people's pressure in work and life and relax their body and mind. Housing is also an important factor worth considering. Stable housing can bring people more happiness while renting and borrowing will put pressure on people's lives and lead to a decrease in happiness. Across the country, other factors also have a significant impact on happiness. Among them, comparative factors are the most prominent. People are social groups, there will always be comparison and competition in life, and the psychological satisfaction or gap brought by this horizontal comparison will have a significant impact on happiness. The living environment of different cities also has a great impact on happiness. A pleasant environment can help us relieve tension and anxiety, and let the body and mind get better relaxation. Therefore, it is indispensable to improve people's happiness and improve the urban environment.

Respondents in first-tier cities generally have better economic conditions, so economic factors have less impact on them. Other influencing factors are the biggest. In first-tier cities, traffic congestion is increasing and the environment is being continuously damaged, which has a negative effect on the happiness of local residents. Comparative factors are also prominent in first-tier cities. In the new first-tier cities, In the second-tier cities, people live in a comfortable life, and other factors no longer have a significant impact on their happiness. However, in the third-tier cities, residents with lower income tend to be more willing to rely on the government, leading to other factors affecting their happiness.

References

[1] Brockmann, H., Delhey, J., Welzel, C., & Yuan, H. (2009). The China puzzle: Falling happiness in a rising economy. Journal of Happiness Studies, 10(4), 387-405.

[2] Chen, Z., & Davey, G. (2008). Happiness and subjective wellbeing in mainland China. Journal of Happiness Studies, 9(4), 589-600.

[3] China Population Communication Centre Investigation and Data Information Centre, Chinese Academy of Social Sciences. (2011). Report of Survey on Family Happiness in China. China

Population Today (06), 9-17.

[4] Easterlin, R. A. (1995). Will raising the incomes of all increase the happiness of all. Journal of Economic Behavior & Organization, 27(1), 35-47.

[5] Jiazhi, C. (2012). Survey on "Happiness Ranking of On August 19, 2012 China's Cities". Contemporary Chinese Population, 5, 008.

[6] Urmson, J. O. (1988). Aristotle's ethics. Wiley-Blackwell

[7] Yearbook, C. S. (2018). National Bureau of statistics of China. China Statistical Yearbook.

[8] Yonghao Zhong, Hong lin, (2001). The designing of the Gross National Happiness system, Strategy and Prediction. 2001, (6) :26.