

Are People Economically Prepared for Retirement in China?

ABSTRACT: China is the second largest, most populated and rapidly ageing country in the world. Using the data from the China Health and Retirement Longitudinal Study (CHARLS) and China's six waves of national census, we construct a China-specific model to estimate the retirement preparation by various groups of population in China, in terms of age, sex, education and marital status. The results will be compared with those of other countries including US. Based on the new findings, we would propose several policy suggestions for the government.

1. Introduction

China is the second largest, most populated and rapidly ageing country in the world. The share of the China population over the age of 65 was 5.6% in 1990, 7.0% in 2000, 8.9% in 2010, and are projected to reach 26.5% by 2050. In such a populated and ageing country, it is an important job to measure the adequacy of economic preparation for retirement.

A usual way to measure the adequacy of economic preparation for retirement is the income replacement rate, the ratio of income after retirement to income before retirement. But this replacement rate has a couple of obvious drawbacks. **First**, it focuses only on the income stream rather than the total economic resources (particularly wealth) which the retiree can use. **Second**, it does not take into account the changes of the consumption during retirement. For instance, although the work-related expenses can be eliminated, the health care spending may rise up substantially.

There is a large literature in China that studies the income replacement rate. To some extent, it can measure the retirement preparedness, but it is far from an ideal measurement due to three reasons. **First**, the two above-mentioned drawbacks of the income replacement rate exist in almost all the existing literatures. **Second**, almost all the existing research focuses on the income replacement rate of the first-pillar social security, which to its best could only represent a part of the retirement preparedness. **Third**, most of the retirement preparedness research is on the "average" level instead of the "individual" level. For example, a research finding of an average 42 percent income replacement rate can tell us some information about the retirement preparedness, but relatively quite limited. It cannot tell us the percentage of population who are well prepared or not prepared; neither can it tell us the different situations faced by different groups of population in terms of age, sex, education and

marital status.

The purpose of this paper is to estimate the economic preparation for retirement in China by various groups of population in terms of age, sex, education and marital status. Based on the possible new findings, we would propose some policy recommendations for the government.

2. Literature Review and Methodology

Rising life expectancies change the environment for retirement planning. A longer lifespan will translate into a lower level of annual consumption. Shoven and Slavov (2013) point out individuals should not plan based only on average life expectancy, but that they must also consider the upper tail of the distribution of life length. In addition, aggregate data on mortality improvement also conceal substantial differences in the rate of longevity improvement for individuals with different characteristics, in terms of age, sex, education and marital status.

Poterba (2014) finds that elderly individuals exhibit wide disparities in their sources of income. For those in the bottom half of the income distribution, Social Security is the most important source of support. For those higher-income elderly individuals who have more diverse income sources, income from private pensions, assets, and earnings are relatively more important.

For the studies that focus on judging the adequacy of retirement preparation, the following are among the most well-known ones.

Munnell, Hou and Webb (2014) construct the “National Retirement Readiness Index (NRRI)” which involves three steps: one, projecting a replacement rate for each member of a nationally representative sample of U.S. households; two, constructing a target replacement rate that would allow each household to maintain its pre-retirement standard of living in retirement; three, comparing the projected and target replacement rates to find the percentage of households “at risk”. By using the Federal Reserve’s 2013 Survey of Consumer Finances (SCF) in the US, they find that 52 percent of households were “at risk”, which means that they would not have enough retirement income to maintain their pre-retirement standard of living, even if they work to age 65.

Scholz, Seshadri and Khitatrakun (2006) use a life cycle model to solve each household’s optimal saving decisions. The model incorporates uncertain lifetimes, uninsurable earnings and medical expenses, progressive taxation, government transfers and pension and social security benefits. With optimal decision rules, they compare wealth predictions from the life cycle model using a nationally representative sample. They find that in the US fewer than 20 percent of households have less wealth than their optimal targets, and the wealth deficit of those who are under saving is generally small.

Hurd and Rohwedder (2012) define and estimate measures of economic preparation for retirement based on a complete inventory of economic resources while taking into account the risk of living to advanced old age and the risk of high out-of-pocket spending for health care services. They ask whether, in a sample of 66-69 year-olds, observed economic resources could support with high probability a life-cycle consumption path anchored at the initial level of consumption until the end of life. They find that 71 percent of persons are adequately prepared, but there is substantial variation across age, sex, education and marital status.

Brady (2010) constructs a replacement rate measure that attempts to measure replacement of pre-retirement consumption rather than income, earnings, or expenditures during retirement. This measure accounts for saving, taxes, and (for homeowners) mortgage payments. Savings and investment behavior judged by standard analysis to be inadequate is shown to result in high real consumption during retirement relative to pre-retirement consumption.

The above studies provide a good basis for the research on the retirement preparation in China. Based on the availability of data and the actual conditions of China (including but not limited to mortality, social security, saving, investment, housing, asset, consumption, health care spending, etc.), we will construct a China-specific model, mainly following the framework proposed by Hurd and Rohwedder (2012), to estimate the retirement preparation by various groups of population in China, in terms of age, sex, education and marital status.

3. Data

Our analyses are based on data from the China Health and Retirement Longitudinal Study (CHARLS) and China's six waves of national census.

The CHARLS is a part of a family of well-established international ageing studies, including the Health and Retirement Study (HRS) in the US, the England Longitudinal Study of Ageing (ELSA), and the Survey of Health, Ageing and Retirement in Europe (SHARE) that share several key features that make them the most influential studies in the world on ageing issues.

The CHARLS national baseline survey was conducted in 2011, and the second wave was done in 2013. The CHARLS national survey is a nationally representative survey that included successful surveys of one person per household who was 45 years of age or older and their spouses (totaling 17,708 individuals) living in 10,287 households in 450 villages/urban communities in 150 counties/districts in 28 of China's 30 provinces excluding Tibet. The response rate for the survey was over 80% (94% in rural areas and 69% in urban areas). The survey followed exacting protocols for sampling, conducting the field surveys, and checking and verifying the quality of the data. The CHARLS provides a unique, high quality dataset to support the

scientific analysis of ageing issues in China.

In addition, the six waves of national census in China (1953, 1964, 1982, 1990, 2000 and 2010) also provide very rich data for this research.

4. Structure

The paper consists of six sections. Section 1 is the introduction. Section 2 is the literature review. Section 3 presents the methods and the models used for analysis. Section 4 describes the data of the CHARLS and China's national censuses. Section 5 does the estimation and reports the analysis results and findings. Section 6 draws the conclusions and proposes several policy recommendations for government.

5. References

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