

# Macro Econometric Model for Social Security in Japan

Katsuya Yamamoto \*

Itaru Sato<sup>†</sup>

## Abstract

This paper analyzes the problem that which raises the welfare, pension benefit or medical care.

The characteristics of this paper are as follows. First, we divide the consumption function by four functions, general consumption function of the young, consumption function of medical service of the young, general consumption function of the old, consumption function of medical service of the old. This is because we want to analyze the effect of pension benefit and medical care fee, which are determined depending on the age. Second, we add the rate of contribution for old-age medical care as independent variable because it is contribution of the firm and we think that this contribution decreases the investment of the firm.

We conclude that increasing the burden of old-age medical care for the old and keep the level of the pension benefit is better than keep old-age medical care and decreasing the pension benefit.

**Key Words;** Macro Model, Finance, Aging, Public Pension, Public Health Insurance

## 1 The summary of the model

After the Second World War, older people are increasing and new births are decreasing in Japan. And many Japanese think this phenomenon makes Japanese society and economy seriously injured. Younger generation's contribution for pension benefit, medical care fee and long-term care fee for old age are growing up every year. In 2000, population census show the over 65 years people in Japan is about 15%, on the contrary, Japanese total medical cost is approximately £ 15 billion and this figure means that 30% of total medical cost is for Old age. In other words, Old age medical cost twice as much as young in Japan.

Our model<sup>1</sup> is based on the critical mind that which is more important for the household of the old, pension or medical care, that is, which raises the welfare of the old, pension as the benefit of money or medical care as the benefit of allowance in kind. And when we think about the problem of public finance, we think it important that we must harmonize the contribution of pension and medical care. Tax rate plus social security contribution rate, which is discussed recently, is used for the index of reducing the disposable income of the young(Figure 1). This contribution of social security is divided by pension contribution, medical care contribution, and long term

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<sup>1</sup>Yamamoto,Sato(2001)