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主 論 文 題 名 :				
Population Aging, Unemployment, and Social Security				
(内容の要旨)				
<p>The population aging due to the declining fertility and increasing life expectancy has been the common concern faced by many industrial countries in the world. The two main trends, as well as the retirement of generation of baby-boomers, born in 1950s, lead to the increases in the old-age dependency ratio. When pensioners become more, and labor forces become less, it put increasing pressure on the widely used Pay-As-You-Go (PAYG) pension, one of the main pillar of the contemporary social security system (SSS) of the world. Therefore, the sustainability of social security and the problem of pension reform has been the crucial issues of the current debate. On the other hand, in labor market, unemployment, as a macroeconomic factor, has existed for a long time. The relationship between population aging and social security should not only be considered in competitive economy, but also be analyzed in imperfect labor market.</p> <p>In this dissertation “Population aging, Unemployment, and Social Security”, I revisit the relationship between population aging and social security system, especially PAYG pension in labor market with unemployment due to different causes and dwell on the mechanism of how unemployment can affect fertility via social security in the channel of capital accumulation and interest rate changes in general equilibrium analysis of overlapping generations model. The first study is due to the constant minimum wage (Fanti and Gori, 2007), the second results from the union wage setting (Ono, 2007; 2010), and the last</p>				

arises from efficiency wages (Shapiro and Stiglitz, 1984).

The rest of the dissertation is organized as follows. Chapter 2 presents the literature review on “Population aging, unemployment, and social security”. The review is divided into several parts. The first part is “Background and motivation” of this dissertation. It gives the “Definition of population aging”, and presents two important literature strands that motivated the studies of this dissertation: “Effects of demographic trends on social insurance” and “Population aging and the labor market”. The second is the literature on the “Fertility and Social Security system”, presenting several research strands on the reasons for fertility decline and what an extra child will bring to social security system. The third part is “Unemployment research on population aging and social security system”, summarizing previous studies on the mutual relationship between unemployment and population aging through social security system.

Chapter 3 “Fertility and Unemployment in a Social Security System” analyses the effect of a social security system composed of PAYG pension and child allowances on endogenous fertility in a two-period general-equilibrium overlapping generations (OLG) model with unemployment considered. The unemployment is due to constant minimum wage. It extends the study of Fanti and Gori (2007) and wonder whether it affects the mechanism of child allowances on fertility when pension is introduced to the economy. Contrary to the common sense that the development of social security system is always accompanied with decrease in fertility, the analysis reveals that the effect on fertility depends on the level of pensions. Furthermore, even with child allowances, the effect is not always positive.

Chapter 4 “Fertility, Union Wage Setting and Social Security System” analyzes how a social security system composed of a public pension, child allowances, and unemployment

insurance affects endogenous fertility and unemployment when the wage level is endogenously set by monopolistic trade unions in an OLG model. The analysis reveals, first, that increased pension tax rates lead to a higher fertility rate when wages are higher but a lower rate when wages are lower. Second, an increased child allowances tax rates lead to an increased fertility rate when wages are lower but a decreased rate when wages are higher. Moreover, to improve social welfare, it is preferable to increase public pensions or the child allowances tax rate and reduce the unemployment insurance tax rate when wages are lower, while it is preferable to reduce the child allowances or the unemployment insurance level when wages are higher. Therefore, both social security and wage bargaining should be considered in order to improve fertility and reduce unemployment.

Chapter 5 “Fertility, Efficiency Wages and Social Security in an Overlapping Generations Model” analyses how fertility is affected by social security system when efficiency wages are considered in an overlapping generations model of a small open economy. Unemployment of this economy is due to the efficiency wages set by firms. It reveals that the effects of social security system on fertility depend on the level of childrearing cost: when the costs are at higher level, both pensions and unemployment insurances will decrease the fertility; while when the costs are at lower level the effects are opposite. On the other hand, the higher effort or labor efficiency level leads to higher ability to raise children, improving fertility.

Chapter 6 gives the closing remarks.