Reaching Universal Health Coverage through Tax-based Financing Schemes: Challenges of Informal Economy and Population Ageing

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Abstract

Universal health coverage (UHC) has been increasingly discussed by policymakers and the general public, and many different schemes exist to reach the goal of universal coverage. For instance, health insurance scheme has been a common approach in such developed countries as Japan. By focusing on the impacts of UHC in developing countries with a large informal economy, this research discusses a UHC scheme financed directly through government tax revenue to cover the uncovered population. Compared with voluntary schemes like insurance, such a scheme helps to reach universal coverage effectively in developing countries.

The impacts of UHC financed though tax revenue can be multi-fold at both the macro and micro levels. In this study, the macro perspectives are of primary interest, although the linkages between individual behaviors and aggregate effects are also being discussed. To answer the research questions of welfare and financing options, the modern macroeconomics approach of Dynamic Stochastic General Equilibrium (DSGE) model with heterogeneous agents is applied and the calibration is based on the case of one developing country. Furthermore, as developing countries are no exception to the trend of population ageing, demographic change is examined within the context of universal health coverage. Other factors such as the health cost inflation and the changing size of the informal economy are also examined.

This dissertation starts with the background in Chapter One, which gives a quick overview of universal health coverage, the coverage schemes in Thailand, and the challenges of implementing the universal coverage scheme. After the overview, the motivation, methodology and data are briefly described. Finally, the outline of the dissertation follows and the future research agenda is explored.

After the introduction, Chapters Two to Four provide the main content of the dissertation. The settings of the model of these three chapters are similar as follows. The model has two sectors (formal and informal), two types of education (high, which is high school and above, and low, which is below high school), a standard production function with both capital and labor consisting of formal and informal labor input, and government balancing the budget by collecting revenue and spending on a multi-tier social security system. Such a social security system includes a universal coverage scheme for health service access, an old-age pension program, and a social safety net. The UHC scheme is implemented to cover the uninsured citizens who do not contribute to the social security pool, who are workers in the informal sectors, and who are the old retirees in the model. However, each chapter also differs in the following aspects. Chapter Two focuses on the financing of UHC, assuming inelastic labor and taking a progressive labor income tax into consideration besides proportional taxes. Chapter Three examines financing the path of ageing for three kinds of proportional taxes, given the cases of both an inelastic and an elastic labor supply. Chapter Four studies the effect of the labor supply on the UHC scheme and health cost inflation.

The findings of the dissertation are as follows. First, given that the labor supply is inelastic, there is a consistent welfare gain of running the universal coverage scheme regardless of which tax financing option is chosen, although the choice does matter for the size of welfare gain. Among all the options, the one with the highest redistributive effects–progressive labor income tax–brings the largest welfare gain. Secondly, in terms of financing ageing, three kinds of proportional tax options are examined. A large tax hike would be required for the population age structure in 2050 (i.e. for the case of labor income tax, an additional 11% increase in the tax rate would be required to balance the budget). It was also found that a formalization of the informal sector can substantially alleviate the tax burden. Regarding welfare comparison among alternative tax options, the labor income tax is preferred as it brings the largest redistributive effect due to the existence of a large informal labor sector. Without the informal sector, a capital tax would be better than labor or consumption taxes. When labor is endogenous, the distortive effect of labor income tax on the labor supply outweighs the redistributive effect, where a capital tax is a better choice than a labor income tax and a consumption tax. Third, the labor supply pattern in response to UHC is examined for both intensive and extensive margins (labor hours and participation rates). The labor supply responses were shown to have a different direction depending on the type of tax. When health cost inflation needs to be financed, a capital income tax performs better by increasing the labor supply and output.

Finally, Chapter Five summarizes the findings of the dissertation and discusses the policy implications. The success of implementing the UHC scheme financed by government revenue in Thailand relies on many factors, including the low level of national total health expenditure, the accumulation of health service capacity for decades, and the institutional arrangements. Meanwhile, both the short-term feasibility and long-term sustainability of the UHC should be considered, especially within the context of ageing. Finally, in order to design and implement a UHC scheme which fits the different nature of each country, that the welfare gain or loss depends on a spectrum of policy choices and endogenous factors such as financing options, labor market and overall economic characteristics should also be well understood.