Summary of Essays on Health Inequality and Healthcare Utilization: The Case of Older People in Vietnam

By

Le Duc Dung

Ph.D. in Public Policy, National Graduate Institute for Policy Studies

In line with a rapid demographic transition towards an aging society in the world, Vietnam is undergoing an unprecedented pace of aging process, and is expected to experience the fastest aging process in region. The association between increasing age and individuals' health deterioration has been well-documented across settings. Consequently, health conditions and demand for healthcare utilization of Vietnamese older people raise major concerns for healthcare practitioners, public health researchers, and policymakers in Vietnam. This dissertation contributes to a growing literature on health inequality and modeling healthcare utilization in developing countries by conducting three distinct studies. The first two studies utilize the Oaxaca-Blinder and concentration index decompositions, which are preferred techniques in health inequality studies, to examine contribution of each factor to explanation of inequalities in the most common health problems encountered among older people: functional disability and non-communicable diseases (NCDs), under gender and locality of residence perspectives. The third study, utilizing currently appropriate econometric practices in modeling healthcare utilization (measured as count outcomes), contributes to empirical evidence on the best choice of econometric models that best explains variability in number of outpatient visits. The dissertation yields several findings:

- ✓ The results of the first study show that the mean functional disability score, estimated from multiple regression analyses, is higher for older women than that for their male counterparts. The Oaxaca-Blinder decomposition results show that the distribution of the social determinants explains about 54 per cent of gender inequality in functional disability; among the determinants, age, employment status, and educational level are the major drivers. Approximately 46 per cent of the inequality are explained by unobserved factors.
- ✓ As for the second study, significant socioeconomic inequalities in self-reported NCDs favoring the rich are found, in which the degree of inequality is more pronounced in urban areas than in their rural counterparts. Household wealth and social health insurance are the

main drivers contributing to increased socioeconomic inequalities in self-reported NCDs in rural and urban areas, respectively.

- ✓ We find strong evidence in favor of hurdle negative binomial model 2 (HNB2), for both in-sample and out-of-sample selections, over other econometric models considered in the third study. The estimation results of the HNB2 show that predisposing (e.g., ethnicity), enabling (e.g., household size, region of residence, and social health insurance), need (e.g., disability and NCDs), and lifestyle factors (e.g., smoking) are significantly associated with number of outpatient visits. The predicted probabilities for each count event show the distinct trends of use of healthcare utilization among those with and without social health insurance: at low count events, women and people in younger age group use more healthcare utilization than do men and their counterparts in older age groups, but a reversed trend is observed at higher count events.

The findings of this dissertation highlight the need for policy to mitigate the social determinants (e.g., wealth, social health insurance, education, and employment) that contribute to health inequality among older people. In addition, the findings of the third study lay the groundwork for future research on the modeling of healthcare utilization in developing countries and those findings could be used to forecast on healthcare demand and making provisions for healthcare costs.