RESEARCH PROPOSAL

Impact of health insurance card on consumption behaviour of unskilled labour in Vietnam

1. Motivations:

One of the biggest shocks to households is major illness of household's members which have a negative and significant effect on consumption or income. Illness will raise two important economic costs: the cost of medical care and income loss due to reduced labour supply. The unpredictable characteristic of these two costs make households unable to smooth their consumption over periods of major illness, especially in developing countries where few individuals have health insurance. In addition, households in developing countries find difficult to access to formal credit market. Therefore, they have to rely on informal coping mechanisms such as drawing on savings, selling assets, transfers from other families or social support networks. In case of low-income households who cannot use these channels to smooth their consumption, they are more likely to fall into poverty trap.

Mclntyre et al (2006) finds that health care payments place a considerable emphasis on households in low- and middle- income countries. The burden of health care pushes individuals experiencing illness into poverty or forced into deeper poverty. "Research into alternative health care financing strategies and related mechanisms for coping with the direct and indirect costs of illness is urgently required to inform the development of appropriate social policies to improve access to essential health services and break the vicious cycle between illness and poverty." (McIntyre et al. 2006)

Facing high costs of health care, one of the main strategies is selling livestock. Another strategy is using intra-household labour substitution to compensate for labour lost. Inter-households transfers of resources might take a small role (Sauerborn, Adams & Hien 1996). Similarly, a research in Russia shows that "chronic diseases are significantly associated with higher levels of household healthcare expenditure in Russia and productivity losses reflected by reduced labour supply and reduced household labour income." The authors find that households in Russia depend on informal coping mechanisms in the face of chronic diseases, irrespective of insurance cover (Abegunde & Stanciole 2008).

Another research shows that about 25.9 percent of households in forty low- and middle-income countries borrowed money or sold items to pay for health care. The health shocks were more severe among the poorest households and in countries with less health insurance. Healthcare systems in developing countries have been failing to insure families against the financial risks of seeking health care (Kruk, Goldmann & Galea 2009). In Vietnam, Kim et al (2011) finds that "the likelihood of reducing food consumption to pay for extremely high cost treatment increased most for the poor in both inpatient and outpatient contexts. Decreased funding and increased costs in health care rendered sample's population vulnerable to the consequences of detrimental coping strategies such as debt and food reduction." (Kim et al. 2011)

Literature on health shocks has proved the role of health insurance. (Kent 2002) highlights that community-based health insurance schemes in India can protect poor households from the unpredictable risk of medical expenses. (Gertler & Gruber 2002) investigates a panel data set from Indonesia and suggest that public insurance or subsidies for medical care may improve households' welfare by providing consumption insurance.

Vietnam is a developing country with relatively high growth rate. The level of GDP per capita has significantly increased from Doi Moi (*New Era*), a thoroughly economic reform in 1986. Taking the importance of health policies, Vietnam has gained substantially improvements in the health sector. The social health insurance program presently covers about half of the population. Since 2002, a large budget each year was allocated to the Health Care Fund for the Poor, which provides health insurance cards for the poor and selected ethnic minorities. The near-poor are also to be subsidized through the voluntary health insurance. However, Vietnam still has challenges in health care. For instance, Vietnam has a high level of catastrophic household health spending. That means there is still a large number of households make out-of-pocket payments for health care. This is because of two facts: the country's social health insurance program does not cover all people and people in the health care program might not receive full health care services. Although health insurance coverage has increased significantly recently, substantial numbers of people have no coverage, not even a health insurance card. This non-coverage is considered harder-to-identify and harder-to-coerce into contributing[1] and most of them are unskilled workers.

Therefore, how to expand coverage and how to deepen coverage so that insurance reduces out-of-pocket spending are crucial to health policy makers. While deepening coverage is quite complicated, expanding coverage is more feasible within government's budget constraint. This potential intervention will help to reduce the level of catastrophic household health spending, improving welfare of low-income households without health insurance initially. This intervention also improves the labour productivity as well as the equality in accessing health care services. This project aims to estimate the impact of health insurance cards on consumption smoothing behaviour of unskilled labours in Vietnam. In particular, this project will ask whether a health insurance card can help unskilled labours maintain their consumption as well as assets for investment. Results of the research have important and useful implications for policy makers, and academics.

2. Description of policy intervention:

Vietnam presently has two insurance schemes (compulsory and voluntary). The compulsory scheme includes two groups: formal sector workers and civil servants and policy beneficiaries. Since 2003, government has issued Decision 139, which adds the poor, ethnic minority

[1] The groups that are relatively easy to identify for tax-financed support (the poor, people living in officially designated disadvantaged communes, ethnic minorities living in mountainous regions) are already largely covered, while those who are relatively easy to coerce into contributing (workers in the formal sector) are mostly contributing

households living in remote mountainous areas and households living in communes officially classified as "special poor" into policy beneficiaries. The voluntary scheme includes full-time students paid by students' family, all family members of the compulsory insured and others enrolled through group organizations. The voluntary enrolment has been low and showed no signs of growth. A large fraction of population is still uncovered by health insurance. About 36 percent of population does not belong to any target groups. Just over 15 percent of these people have formal insurance coverage but only 3 percent have a health card. For this group, 24 million people lack coverage of any type, accounting for 60 percent of insured population.

This time, the intervention program will issue health cards for previous-non-target households. Vietnamese government is aiming to universal health insurance but this phrase we choose to benefit "low-skilled" households at "poor" provinces that determined in the Decision 135-1998. The word "low-skilled" is used for the main earning individual in households[2]. If households' members are high skilled, they might be eligible for present health insurance programs. From VHLSS data, low-skilled labour accounts for a large percentage of population. Then, this program will go along with Vietnamese pro-poor policies as well as the universal health insurance objective.

According to the Decision 139-2002, all households in some "special poor" communes in those "poor" provinces are eligible for a previous health care program. Therefore, our target areas this time are not-special-poor communes in "poor" provinces. We buy health cards for every member of low-skilled households who have never received any types of health insurance. The effective duration of these health cards is one year and they are delivered to our target households simultaneously.

Because all eligible households are given health cards, we can control the problem of adverse selection in the insurance market. To control moral hazard, the near-poor households are required to pay 5 percent health care costs; the other eligible households have to pay 20 percent of health care costs. This co-payment requirement is applying to individuals having a health insurance card according to the Health Insurance Policy.

3. Research question and hypothesis:

Does heal shock affect household life (earning, consumption, transfer, labor supply)?

Does health insurance card impact low-skilled households' consumption (total, foods, education, health care)?

How does health cards help low-skilled reduce out-of-pocket payment for health care?

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[2] Cleaners and domestic helps; Low-skilled labourers in agriculture, forestry and fisheries; Workers in mining, construction, industry, and transport; Assistants in food preparation; Street-based and sales-related labourers; Waste collectors and other low-skilled labourers (from VHLSS 2010)

Does a cost and benefit analysis of the program have a positive outcome?

From literature reviews, we expect that health insurance card can help households reduce their out-of-pocket payment and maintain their consumption to some extent. If the result are significantly positive, the intervention is successful and ready to apply to other regions in the countries.

4. Research design and methodology:

Panel data from the Vietnam Households Living Standard Survey (VHLSS) provide us a change to have pre-intervention analysis and post-intervention analysis. The data give us information on consumption, health status and household characteristics. In Vietnam, the data has been collected in a two-year interval since 2000 with two exceptions in 1992-1993 and 1997-1998. The panel data help us to eliminate the confounding effects.

With pre-intervention analysis, we plan to build a panel data for the period of 2002-2006 consisting the time when the Decision 139 has been officially effective. Decision 139 decides that every household in “specific poor” communes are eligible for health insurance, including low-skilled households. From the Decision 139, we have treatment group in “specific poor” communes and control group in other communes in the same provinces. Low-skilled households will be chosen within these two types of communes. One potential problem here that the target communes in Decision 139 were not randomized. Communes in the program are chosen because they are very poor[3].

If the intervention program is implemented in 2013, we might have VHLSS 2014 to track the impact of this program. Then we have more information to compare and explain the impact of program. However, this time we cannot use communes in the same provinces for control group because all households in poor provinces might have health insurance cards. Therefore, we have to choose low-skilled households from not-in-Decision 139 provinces for control group. The treatment group are low-skilled households that received health card from the intervention.

Estimation model

First, we estimate the impact of health problem on households via below model:

$$Z_{ij} = \alpha + \beta . H_i + \gamma . T_t + \delta . H_i * T_t + \mu X_i + \varphi_j + \varepsilon_{it}$$

Where

[3] We are considering using propensity score matching to identify matched control households. This method is applied by Wagstaff (2005) in a health research in Vietnam. According to this author, this method will help us reduce the risk of biases due to inappropriate specification of the outcome regression model.

Z_{ij} denotes the outcome (earning, household consumption, transfers) for household *i* in commune *j.*

H_i denotes a health change (using health deterioration measures or dummy reflect the presence a serious health shock)

T_t is a dummy variable taking the value 1 in the post treatment period and 0 in the pre-treatment period. γ reflects the time effect that is common across

X_i is the vector of baseline characteristics of households.

φ_j is the commune fixed effect that might affect health.

One potential problem here is the correlation between ε_{it} and δ. This might happen if there is unobserved factors are simultaneously affecting health changes and the outcome of interest. Therefore, we plan to use an instrumental variable. One of good instrument to identify the causal impact of health on earning and labor supply are prices of health inputs. According to Genoni (2012), "prices of health inputs are likely to be correlated with health status, and, if we are able to control for aspects of the local infrastructure and labor demand conditions, they should not have a direct impact on labor supply or earnings." {Genoni, 2012 #149}

Second, the impact of treatment (health card) on the outcomes can be estimated via the following regression equation:

$$Y_{it} = \alpha + \beta.I_i + \gamma.T_t + \delta.I_i * T_t + \mu X_i + \varepsilon_{it}$$

Where:

Y_{it} is the outcome variables; *i* refers to the household; *t* =0 denotes the pre-period and *t*=1 denotes the post-period. The outcomes of health insurance card we need to examine here are variables such as consumption (on foods, education, others), health care, out-of-pocket payments and debts. δ is the object of interest which reflects the impact of the intervention.

I_i is a dummy variable taking the value 1 if the household is in the treatment group (having health insurance card) and 0 if they are in the control group.

T_t is a dummy variable taking the value 1 in the post treatment period and 0 in the pre-treatment period. γ reflects the time effect that is common across

X_i is the vector of baseline characteristics of households. It is time-variant fixed effect of households

One potential problem is that there unobservable factors that are correlated with the outcomes of interest and the health insurance card become endogenous. In that case, we will apply remedies which are suggested by Trivedi (2003), Jowett et al (2004) and Wagstaff and Pradhan (2005).

References

Abegunde, DO & Stanciole, AE 2008, 'The economic impact of chronic diseases: how do households respond to shocks? Evidence from Russia', *Social science & medicine (1982)*, vol. 66, no. 11, p. 2296.

Gertler, P & Gruber, J 2002, 'Insuring Consumption against Illness', *The American Economic Review*, vol. 92, no. 1, pp. 51-70.

Islam, A & Maitra, P 2012, 'Health shocks and consumption smoothing in rural households: Does microcredit have a role to play?', *Journal of Development Economics*, vol. 97, no. 2, pp. 232-43.

Kent, RM 2002, 'Reduction of catastrophic health care expenditures by a community-based health insurance scheme in Gujarat, India: current experiences and challenges', *Bulletin of the World Health Organization*, vol. 80.

Kim, TN, Oanh, THK, Shuangge, M, Pham, DC, Khuat, GTH & Ruger, JP 2011, 'Coping with health care expenses among poor households: evidence from a rural commune in Vietnam', *Social Science & Medicine*.

Kruk, ME, Goldmann, E & Galea, S 2009, 'Borrowing and selling to pay for health care in low-and middle-income countries', *Health Affairs*, vol. 28, no. 4, pp. 1056-66.

McIntyre, D, Thiede, M, Dahlgren, Gr & Whitehead, M 2006, 'What are the economic consequences for households of illness and of paying for health care in low- and middle-income country contexts?', *Social Science & Medicine*, vol. 62, no. 4, pp. 858-65.

Sauerborn, R, Adams, A & Hien, M 1996, 'Household strategies to cope with the economic costs of illness', *Social Science & Medicine*, vol. 43, no. 3, pp. 291-301.

Segall, M, Tipping, G, Lucas, H, Dung, TV, Tam, NT, Vinh, DX & Huong, DL 2000, *Health care seeking by the poor in transitional economies: the case of Vietnam*, Institute of Development Studies Brighton,, UK.