

The determinants of the willingness-to-pay for community-based prepayment scheme in rural Cameroon

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Abstract In rural Cameroon, many people have no access to quality healthcare services. This is largely attributed to lack of private out-of-pocket payment to finance healthcare services. A community-based prepayment health insurance scheme may be implemented to improve healthcare access in rural areas. This study examines the determinants of willingness-to-pay for a community-based prepayment healthcare system using a contingent valuation method conducted in rural Cameroon. To mitigate potential hypothetical bias, a consequential script is introduced in the questionnaire. The results indicate age, religion, profession, knowledge of community-based health insurance, awareness of usual practice in rural areas, involvement in association and disposable income are the key determinants of willingness to pay for a prepayment health scheme. On average, willingness to pay for the scheme by rural households is 1011 CFA francs/person/month (2.15 US dollars). The results underlie two important implications: first, there is substantial demand for a community healthcare prepayment scheme by rural poor households in Cameroon; second, rural households are averse to health shocks and hence they are willing to sacrifice monthly premium payments to protect themselves (and their households) from unforeseen health-related risks. If government could engage in social marketing strategies such as mass media campaigns and awareness, this could prove vital for encouraging participation by the rural poor in healthcare prepayment scheme in Cameroon.

Keywords Rural areas · Health prepayment scheme · Contingent valuation

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Introduction

According to the theory of endogenous growth, good health increases productivity and economic growth. It is thus essential for achieving the Millennium Development Goals (MDGs) to eradicate poverty. This may explain why some developing countries are improving the provision of health care in both urban and rural areas. Despite these efforts, many developing countries are far from achieving universal coverage. The situation is even worse in rural areas where both the living standards (WHO 2000) and the quality of health care services are low. Khan (2001) observes that a majority of rural households in developing countries (more than 90%) are not only faced with limited access to health care, but also have poor quality water and unsafe sanitation. Therefore it is not surprising that rural households are more inclined to suffer from illness, mortality and malnutrition than urban households. To tackle this issue, many policymakers and international organizations advocate for developing specific health care insurance schemes for rural households, including the community-based health insurance. Community-based health insurance (a) operates by risk-pooling, (b) is financed through regular premiums and is (c) tailored to poor people who would otherwise not be able to take out insurance (Churchill 2006).

In many developing countries, community-based prepayment schemes have proven to facilitate access to health care services especially among children, pregnant women and moonlighters, a majority who are excluded from formal insurance (Dror and Preker 2002; Shaw and Griffin 1995). Based on this success, the government of Cameroon has adopted a national strategic plan which aims at covering at least 40% of the population by community-based prepayment health insurance schemes by 2015.

However, no contingent valuation study has been conducted in Cameroon to better identify who would benefit from such insurance scheme and to what extent. The aim of the paper is to explore the determinants of the willingness-to-pay (WTP) of rural households in Cameroon and to estimate the mean WTP. In order to get reliable results, (i) a statistical approach is used to deal with protest answers and (ii) a script is implemented in the questionnaire to mitigate potential hypothetical bias. Little attention has been given to both hypothetical bias and protest answer issues in previous studies on insurance, although these issues may bias WTP estimates. Section “Existing studies” reviews existing studies on community health care prepayment schemes. Sections “Econometric treatment” and “Survey design” describe the econometric treatment and the survey respectively. Section “Results” provides the empirical results of the study while section “Discussion” discusses the results. Section “Conclusions” concludes with some policy implications.

Existing studies

According to neoclassical theory, the equilibrium market price is found at the intersection of demand and supply curves. For some goods, however, there is no available market. To tackle this issue, the contingent valuation method (CVM) can be used. It consists of estimating the value a person places on a good by setting up a hypothetical situation. Since the first study (Davis 1963) on forest recreational activities, the CVM has been used in many areas including groundwater contamination, air quality improvement, water supply, parks, and more recently on health insurance.

Only a few empirical studies exist on community-based health insurance. The results are mixed regarding the determinants of WTP. The respondent's age is found to have a positive effect on WTP in some studies (Asenso-Okyere et al. 1997; Asgary et al. 2004); while in others, it is the reverse (Dong et al. 2003a,b). Likewise, distance to the nearest health facility has been found to have a positive effect on WTP in some cases (Asenso-Okyere et al. 1997; Asgary et al. 2004) while in other it has had a negative effect (Dong et al. 2003b; Jiang et al. 2004). In most studies, income turns out to have a positive effect on WTP (see for instance Dong et al. 2003a,b). However, there are some exceptions (see for instance Asenso-Okyere et al. 1997).

Regarding the mean WTP, some differences are found between studies. Dong et al. (2003a,b, 2004a) used the CVM in Burkina Faso (West Africa) and found a WTP ranged between 3.17 US dollars and 4.25 US dollars per individual per annum, and between 8.6 US dollars and 13.03 US dollars per household per annum. Dong et al. (2004b) asked 698 heads of household in Burkina Faso for their WTP to insure both themselves and the whole household. The mean WTP by heads of households for themselves (3,575 CFA francs) was twice bigger than the mean WTP for the whole household (1,759 CFA francs). Lastly, Asgary et al. (2004) examined the WTP for health insurance in rural Iran and found that households were willing to pay on average 2.77 US dollars per month for health insurance.

No special interest has been shown in any existing studies for the treatment of protest answers and mitigation of hypothetical bias although both issues may bias WTP estimates.

Econometric treatment

The valuation exercise is focused on a health scheme using the double-bounded dichotomous choice. The individual is faced with the possibility of securing a change from q^0 to q^1 . As the change (here the health scheme) corresponds to an improvement, $q^1 > q^0$ and $v(p, q^1, y, s, \varepsilon) > v(p, q^0, y, s, \varepsilon)$ where $v(\cdot)$ is the indirect utility function which depends on p the prices of the market goods, q the non-market item to be valued, y the level of income, s the individual's characteristics and ε a stochastic component allowing for random utility maximization.

When the individual is asked whether he or she would accept to pay A CFA Francs for the health scheme, the person responds 'yes' if $v(p, q^1, y - A, s, \varepsilon) > v(p, q^0, y, s, \varepsilon)$ and 'no' otherwise. The compensating variation measure corresponds to the quantity WTP that satisfies $v(p, q^1, y - WTP, s, \varepsilon) > v(p, q^0, y, s, \varepsilon)$ as shown by Hanemann and Kanninen (1999).

The double-bounded dichotomous choice (DBDC) elicitation format is broadly used among valuation practitioners. Proposed by Hanemann et al. (1991), it has the advantage of placing a low burden on the respondents compared to open-ended questions and to provide a high level of statistical information compared to the single dichotomous choice question. First, the respondent is asked whether he would be willing to pay an initial bid. Then a second bid, lower or higher than the first one depending on the initial response, is assigned. Therefore, the WTP is unobserved by the practitioner and there are three cases depending on the respondents' answer: WTP lies somewhere (a) between the two bids ('yes'-'no', 'no'-'yes'), (b) below the second bid ('no'-'no') or (c) above it ('yes'-'yes'). The interval data model (Cameron 1988) can be used to explore the determinants of the WTP. This censored regression approach corresponds to a reparametrization of the random utility maximization (RUM) approach proposed by Hanemann (1984) (for more detail on the RUM, see approach Hanemann and Kanninen 1999). The function to be estimated is:

$$WTP_i = x_i'\beta + \varepsilon_i,$$

where WTP_i is the willingness-to-pay, x_i a vector of explanatory variables including individual’s characteristics, and ε_i a random component following a normal distribution with mean zero and standard deviation σ .

The probability associated to each case is:

(a)

$$P(t_{li} < WTP_i < t_{ui}) = P\left(\frac{t_{li} - x_i'\beta}{\sigma} < z_i < \frac{t_{ui} - x_i'\beta}{\sigma}\right) = \Phi(z_{ui}) - \Phi(z_{li}),$$

(b)

$$P(WTP_i < t_{ui}) = P\left(z_i < \frac{t_{ui} - x_i'\beta}{\sigma}\right) = \Phi(z_{ui}),$$

(c)

$$P(t_{li} < WTP_i) = P\left(\frac{t_{li} - x_i'\beta}{\sigma} < z_i\right) = 1 - \Phi(z_{li}),$$

where t_{li} denotes the lower bound, t_{ui} the upper bound, z is the standard normal variable and Φ is the cumulative distribution function of the standard normal distribution.

The following log-likelihood function can then be maximized for N independent observations to estimate both β and σ :

$$\text{LnL} = \sum_{i=1}^N \left[I_i^a \cdot \ln(\Phi(z_{ui}) - \Phi(z_{li})) + I_i^b \cdot \ln(\Phi(z_{ui})) + I_i^c \cdot \ln(1 - \Phi(z_{li})) \right],$$

where the indicator variables I^a , I^b and I^c take the value one when the argument is true and zero otherwise.

The mean WTP can be estimated by removing the explanatory variables from the WTP function (for more information see [Cameron 1988](#)).

Table 1 describes the explanatory variable used in the regression analysis

Survey design

A face-to-face survey was administered to 410¹ rural households in Bandjoun (West Province, Cameroon) during November 2009. These rural households were selected using a two-step cluster procedure. The first step of this two-step cluster consisted of the selection of clusters: six villages were selected based on population size and availability of health centres. The second step consisted of selecting households within clusters. The two-step cluster was applied for two reasons. First, there were no reliable address listings in Bandjoun (which is the case of most rural areas in Sub-Saharan African countries). Secondly, the authors found it a cost-effective way of collecting data.

The questionnaire was administered by a team of eight trained enumerators who conducted face-to-face interviews with the head of each household. The questionnaire was administered mainly in French though it was translated to local language at times. Some visual aids were used to facilitate understanding of the scenario in line with practical guidelines provided by

¹ 11 respondents did not complete the whole questionnaire, hence the total number of useable observations is 399.

Table 1 Explanatory variables

Variable	Description
Male	Gender of the respondent (1 if the male, 0 otherwise)
Healthstate	Health status of the respondent (1 if he/she has a poor or very poor health state, 0 otherwise)
Knowledge	Knowledge regarding the concept of community health insurance (1 if know the concept, 0 otherwise)
Hhnumber	Number of people in the household (continuous)
Catholic	Religion (1 if Catholic, 0 otherwise)
Age	Age (number of years)
Farmer	Profession (1 if farmers/sellers, 0 otherwise)
Meanstreatment	The means of seeking treatment when any member of the household falls sick (1 if orthodox, 0 otherwise)
Education	Level of education of the respondent (1 if the respondent has been to school at least 7 years, 0 otherwise)
Involvement	Participation in a health policy and/or in an association which aims at improving the health status (1 if yes, 0 otherwise)
Income	Level of income (1 if equal or above average income, 0 otherwise)

Arrow et al. (1993); Carson (2000); Carson et al. (2001). The questionnaire consisted of four parts. Part I started with some warm-up questions aimed at establishing a friendly relationship with the respondent (Whittington 1998) before moving on to some specific questions related to the community health care prepayment scheme. Part II provided information related to the availability and the quality of health centers in the respondent's vicinity, respondent's health status and his or her knowledge and prior participation in any health policy or association which aims to improve the health of rural households and alleviates poverty in their communities. Part III described the hypothetical scenario which is a crucial part in the CV survey. The scenario of the prepayment scheme² was described in detail to each respondent. This included the nature of the scheme, the organization, the membership criteria, and the expected benefits. This insurance scheme was similar to other schemes being piloted through NGOs whose central objective is to provide insurance to the uninsured in rural areas in Cameroon. Visual aids in this part were effectively used to better transmit the message to the respondent.

Then a consequentialist script was introduced in the questionnaire. This approach makes the participants believe that their answers might be consequential. Bulte et al. (2005) included the following script in a survey involving seal conservation: 'the results of the study will be made available to policy makers, and could serve as a guide for future decisions with respect to taxation for this purpose. It is important that you think before answering the question'. The script turned out to be effective at reducing stated WTP unlike the 'cheap talk' script which consists of warning the participants about the potential hypothetical bias. Based on this success, the script from Bulte et al. (2005) was adopted in our questionnaire. Furthermore, an income reminder was also introduced to encourage people consider their income when responding to the valuation question.

² The hypothetical community-based prepayment scheme that was proposed to the respondents was similar to the one that the NGO SAILD (Service d'Appui aux Initiatives Locales de Développement) usually offered to rural households in Cameroon.

Carson et al. (2004) conducted a field experiment in which the participants were informed about the probability that the dichotomous choice referendum would become binding. They found that as long as the probability is superior to zero, participants responded in the same way as they did in the actual referendum. More recently, Herriges et al. (2010) explored the effect of consequentiality in a dichotomous choice survey on water quality through a follow-up question and found that the willingness to pay was equal among those believing the survey to be consequential and different for those believing that the survey was relevant for policy purposes.

The third part of the questionnaire corresponds to the valuation task. A bid was randomly assigned to the respondents among 250, 350, 450, 550, 650 or 800 CFA Franc to avoid starting point bias (Mitchell and Carson 1989). The second bids were the double or half of the first one, depending on the first response. Furthermore, an open-ended follow up question was added to collect more information on WTP.

The last part of the questionnaire contains debriefing questions to detect protest answers. People stating zero WTP were asked in an open-ended manner why they refused to pay for the program. Furthermore, those stating a positive WTP were asked why they accepted to pay. In addition, all the respondents were encouraged to give their opinion about the survey. For instance, a 'yes'–'yes' respondent declared: 'the government ought to pay for the insurance scheme'. This individual might be considered as a protest respondent even though he did not state zero WTP. According to Mitchell and Carson (1989), protest answers are found amongst both people refusing to pay, and among those stating an unreasonably high WTP. Furthermore, the 10-point scale proposed by Champ et al. (1997) was also incorporated to assess how certain people felt about their WTP. Analysis of the 10-point scale is beyond the scope of the paper. Finally, socio-demographic questions such as age, gender income,³ profession etc. were asked.

Before undertaking the final survey, focus groups and pre-tests were carried out to ensure that the questionnaire was properly worded, and that the people did believe that their answer might be consequential. Furthermore, an open-ended question was used to collect prior information on WTP distribution. This information, along with collaboration with a reputable NGO operating near the study area in Bandjoun called SAILD ('Service d'Appui aux Initiatives Locales de Développement') helped to set the bid amounts.

Results

Table 2 provides summary statistics on the explanatory variables.

On average, the household head is 42 years old and there are 6 members in the household. About 62% of the respondents are male-headed households. This is consistent with African household settings in rural areas. Most of the household heads interviewed are married (76%) and Catholic (59%). In the study, 52.63% of the respondents are farmers/sellers, 21.30% are jobless, 13.78% are self-employed, 6.77% are civil servants (or working in the public sector) and 5.51% are employed in the private sector. Hence, farming/selling is the main profession in this rural setting. Furthermore, 38% of the respondents earn less than 15,000 CFA francs

³ Several methods are used as proxy of the respondent's income. We could use the assets that the respondent possesses and his or her monthly expenditure. During the pre-test of the survey instrument, we found that respondents were so hostile about questions regarding the assets they possess; some even thought that we were spies or thieves; hence this question was removed from the final survey instrument. Because rural households in Bandjoun were so reluctant to divulge information about their income, respondents were asked to place themselves in income intervals.

Table 2 Summary statistics of the explanatory variables

Variable	Mean	Standard deviation	Min	Max
Male	0.62	0.48	0	1
Healthstate	0.26	0.02	0	1
Knowledge	0.27	0.44	0	1
Hhnumber	6.18	3.81	1	30
Catholic	0.59	0.49	0	1
Age	42.39	12.42	22	82
Farmer	0.53	0.50	0	1
Meanstreatment	0.83	0.38	0	1
Education	0.94	0.23	0	1
Involvement	0.55	0.50	0	1
Income	0.16	0.37	0	1

Table 3 Selected bid responses

First bid	Second bid	
	Yes	No
Yes	46.87%	33.83%
No	10.78%	8.52%

(32 US dollars) per month. This is equivalent to 1 dollar per day. This shows the extent of poverty in rural areas of Cameroon.

According to 40% of the household heads, health care expensive services are generally too expensive. They also reported (43%) that the problem of inadequate health care services in their community was very serious. A majority of the sampled households (74%) indicated that they could not afford health care services.

On average each of the surveyed area is serviced by two (2) health centers. About 59% of the respondents reported a household member falling sick in the nine months prior to the interview. A total of 26.39% of the household heads reported a health status above 'good' at the time of interview. On the average across the whole sample, a rural household consisting of 6 family members spent 29,507.80 CFA francs (62.85 US dollars) on medical treatment⁴. This is a substantial expense for most of the rural poor. A total of 35% of rural households had a high level of involvement with associations which aim to improve health and alleviate poverty in their community. Very few respondents in the study area knew about community-based health insurance (27.07%). This suggests that public awareness campaigns have an important role to play in better informing rural communities about community health care prepayment schemes.

Table 3 shows that 44.61% of the participants responded either 'yes-no' or 'no-yes' (case a), 8.52% said 'no-no' (case b), while 46.87% said 'yes-yes' (case c). Furthermore, the open-ended follow up question (Table 4) revealed that 6.02% of the participants were not willing to pay for the program (WTP = 0). This suggests that the group of 'no-no' participants comprised two parts: the respondents with a WTP equal to zero, and those with a small but positive WTP.

Table 5 provides information on protest answers. Relevant reasons for not paying for the scheme included lack of income, and a good health status. Other responses may be considered

⁴ At the time of the survey, 1 US dollar was equivalent to 469.52 CFA francs.

Table 4 Response to the follow-up open-ended question

Willingness to pay	Percentage
WTP=0	6.02
WTP > 0	93.98
Total	100.00

Table 5 Protest answers

Response category	Percentage
I doubt the management of the fund	29.41
It is the responsibility of the government to pay for such a program	5.88
Proportion of protest answer	35.29

Table 6 Reasons for paying

Response category	Percentage
I consider this program as a way to improve my health and alleviate poverty in my community	27.81
I really want my family and I to be protected against any social disasters such as chronic diseases which may lead to death	42.25
I would like to have health insurance like citizens in urban areas	18.72
I am always sick, and my health will improve via this program	10.16
Other reasons	1.06
Total	100.00

to be protest answers, like lack of credibility of the payment vehicle, or lack in trust of the government. In the whole sample, 35.29% of answers were protest answers. This included people who refused to pay for the program or refused to complete the questionnaire, and also those who stated a positive WTP. For instance, [Mitchell and Carson \(1989\)](#) argued that one way to protest is to state an unreasonably high WTP. [Table 6](#) provides information on true positive WTP respondents. About 42.25% of sampled households are willing to pay for a scheme which could guarantee health security for family members. Essentially the scheme would protect family members against any health-related shock (e.g., chronic diseases which may lead to death).

Discussion

A common practice in contingent valuation studies is to remove protest answers from the sample. However, this may bias the results when protest answers are not random. The sample selection model developed by [Heckman \(1979\)](#) allows this to be tested (see for instance [Ami et al. 2011](#)). This implies two equations: (1) a participating equation accounting for whether or not the subject agrees to take part to the valuation, i.e. the subject does not give a protest response; (2) a WTP equation. Results from the follow-up open-ended question suggest that there is no sample selection. The likelihood ratio test indicates that the null hypothesis of independence cannot be rejected at the 5% level ($P = 0.8552$). Thus, omitting protest answers may not be an issue in this empirical application.

Results of both the interval data regression model (based on the ‘yes’–‘no’ responses) and the OLS model (based on the follow-up open-ended question) are displayed in [Table 7](#) after

Table 7 Results of the interval data regression model

Variable	Interval data	OLS
Age	-8.78** (3.080)	-7.42** (2.16)
Healthstate	23.09 (80.23)	38.47 (56.94)
Hhnumber	9.84 (9.86)	3.48 (6.69)
Catholic	178.60** (72.54)	148.8** (50.99)
Meanstreatment	219.00* (91.26)	122.30* (65.64)
Knowledge	141.20* (81.10)	154.7** (56.30)
Involvement	179.9** (71.58)	195.6** (50.20)
Farmer	-120.6* (71.29)	-82.21 (50.25)
Education	136.0 (151.2)	20.10 (113.4)
Income	212.8* (100.2)	231.7** (68.54)
Male	57.61 (75.35)	25.78 (53.64)
Intercept	757.0** (232.9)	630.1** (168.6)

**, * Significant at 1 and 5% respectively
Standard errors are in brackets
McFadden's $R^2 = 0.04$

discarding protest answers. Results are similar. The demand of households for community-based health insurance depends not only on the quality of care offered by the health centers, on the premium and benefit package, but also on socio-economic and cultural characteristics of households in the rural areas.

The coefficient on age is statistically significant. The negative coefficient implies that the younger individuals are more willing to pay than older ones. The coefficient on religion is positive and statistically significant implying that Catholic household heads are more willing to pay than those of other religions. The involvement of the household heads in associations such as 'tontines' or 'jangy' has an impact on the WTP. The positive and significant coefficient of this variable reveals the strong degree of community solidarity which is an important factor in establishing a community health care prepayment scheme.

The households in the rural areas of Bandjoun which are more knowledgeable about community-based health insurance tend to be more willing to pay than their counterparts. Besides, the positive and significant coefficient of the usual means of seeking treatment implies that the household heads who regularly use the orthodox means of seeking treatment (clinics/hospitals) when they get sick are more willing to pay than those who use other means (traditional healers, herbalists). This variable is a crux factor for establishing community health care prepayment scheme since the establishment of this program requires the regular use of orthodox means of treatment. Results of studies carried out elsewhere were in accordance with the findings of the present study (Ataguba et al. 2008). Moreover, the heads of the household

Table 8 Mean WTP

Mean	[95% Confidence interval]
1010.90 (38.65)	935.15–1086.64

Standard errors are in brackets

who are farmers/sellers are less willing to pay than those who are self-employed or working in the private/public sector.

An important variable in the decision of respondents to pay for community health care prepayment scheme is the income. The positive coefficient of income is in conformity with economic theory. In fact, according to theory, there must be a positive relationship between income and WTP. Income has a positive, consistent, and statistically significant impact on the WTP. This seems to be in agreement with findings by other researchers that income has a positive and significant influence on the WTP for community health care prepayment scheme (Dror et al. 2007; Mao 2000; Wang et al. 2005). Lastly, the health status indicator variable does not affect the decision of the respondents to pay for the community health care prepayment scheme.

The Pseudo R^2 is low but it is not a problem when we explore the determinants of WTP and are not interested in prediction. As outlined by Greene (2003), having a low value with the Pseudo R^2 is not a problem in micro data. Many CV studies have found R-square low. For instance, Aadland and Caplan (2003) conducted a CV study on curbside recycling and found a Pseudo R^2 of 0.08. Hannover (2010) applied the CV on cultural goods and obtained a Pseudo R^2 of 0.02. Furthermore, Dorsch (2011) found a Pseudo R^2 of 0.05 in a multi-country study dealing with environmental protection.

One of the key aspects of CV studies is to determine the mean of the WTP. In Table 8, the mean WTP is approximately 1011 CFA francs/person/month which is equivalent to 2.15 US dollars. This information is important for the government and health practitioners to be able set premiums that will not exceed the amount households are willing to pay.

Conclusions

The community-based health care prepayment scheme is increasingly being recognized as a potentially powerful instrument for granting the rural poor access to health services in a more equitable way. Hence, the overall objective of the study was to assess the willingness to pay of rural households and its determinants in Cameroon for a proposed community-based health care prepayment scheme. The results of the study reveals that age, religion, profession, knowledge of the basic concept of community-based health insurance, usual practice when the rural population gets sick, involvement in association and income are determinants of WTP. Moreover, one of the main reasons for paying was that such a policy will protect the rural household and its family members from any health-related shocks. Rural households are willing to pay on average 1011 CFA francs/person/month (2.15 US dollars). The study reveals that there is a potential demand for a community health care prepayment scheme in the study area –93.98% of rural households are willing to pay for the scheme. This suggests that this type of low-cost health insurance scheme could be well accepted in rural areas of Cameroon and has the potential to protect rural households from health risks. This study provides data for setting premiums for community health care prepayment schemes.

In most CVM studies dealing with community health-based insurance, authors have omitted the introduction of consequentialism which may bias the results. They have neglected to consider the underlying motives (reasons) behind the WTP (or refusal to pay) which is

important when dealing with protest answers. To the best of our knowledge, this study is the first which integrates the consequentialism script in the area of a community health care prepayment scheme and deals with protest answers in an attempt to get reliable results.

The low level of knowledge about the community health care prepayment scheme seems to be due to a lack of information campaigns or use of the mass media to communicate information. Government should educate the rural population about the concept of insurance and risk management to improve willingness to pay for insurance as well as to engender realistic expectations about microinsurance. This could be done via a well-considered social marketing strategy which includes using mass media and public campaigns to inform people about community-based health insurance and its advantages.

Lastly, given that the farmers/sellers are less willing to pay than those who are self-employed or working in the private/public sector, policymakers should be aware that they could be excluded from such scheme. A policy option here could be to subsidize/reduce their premiums.

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