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Abay Asfaw "Costs of Illness, Demand for Medical Care and the Prospect of Community Health Insurance Schemes in the Rural Areas of Ethiopia", ZEF/ University of Bonn, 2002

Summary

Despite the remarkable economic and social progress achieved in the 20th century, there are still around 1.3 billion people leading their lives in the swamp of poverty on our planate. It is not only the static figure that frustrates researchers and policy makers but the trend has also been very gloomy especially in Sub Sahara African Countries. Governments and international organisations have been trying to combat poverty from three angles. The leading strategy is reducing poverty through economic growth by augmenting the physical capital of the population. The second strategy is to lessen poverty through direct transfer of resources to the poor via safety net programs such as food aid, food for work programmes, and the like. Attacking poverty by enhancing the human capital of the poor through the provision of efficient and accessible education and health services is the third front line. We believe that little has been done in the third strategy especially in attacking poverty by improving the health status of the population in the rural areas of most developing countries.

Though it cannot be denied that poverty has a strong effect on health, there are convincing arguments that good health is a pre-requisite for poverty reduction and sustainable economic development in less developed countries like Ethiopia. Therefore apart from being the ultimate goal of social and economic progress, health care development is one of the most crucial prerequisites for human capital formation, poverty reduction, and sustainable economic development. Especially in developing countries like Ethiopia where agriculture is the backbone of the economy and more than 80 percent of the population engaged in subsistence agriculture (labour and land being the dominant inputs), healthy and physically strong work force is indispensable for economic growth and poverty reduction.

The health situation in Ethiopia .however, is one of the worst in the world by any conventional yardstick. The percentage of the population with access to safe water, sanitation, primary health care, etc. is very low even by the standard of Sub-Saharan African (SSA) countries. The per capita health expenditure, the health professionals and health facilities population ratios, etc. are also among the lowest in the world. The performance of the health sector in improving the health status of the population in general and the rural people and the socially excluded and disadvantaged groups of the population (children, women and the elderly) in particular has been very poor. As a result, the country has the highest infant and maternal mortality rates and the lowest life expectancy in SSA. All these results indicate that the country has failed to develop a mechanism for producing healthy and strong labour force, which is one of the crucial vehicles for poverty reduction and sustainable socio-economic development.

Various factors are responsible for the weak performance of the Ethiopian health sector. Most

researchers agree that shortage of finance is the 'single most' important factor that affects the performance of the Ethiopian health sector. Though allocating and using the available meagre resources efficiently need considerable attention, it is argued that generating additional resources to the health sector should be one important priority area of intervention to change the current dismal picture of the health sector outcomes both from the supply and the demand sides.

It has increasingly become clear that due to market failure, state failure, and other reasons, the conventional sources of finance such as the government (from tax), the private sector (from out of pocket payments), the foreign sources (from aid and loan), and the private insurance alone could not solve the health problem of the country particularly that of the rural population and the high risk groups. As a result, there is a worldwide initiative to find additional sources of finance, which are broad based, sustainable, and suitable to the socio-economic situations of individuals outside the formal sector and of the rural population. At the same time it has become clear that unless household are protected against health shocks, the impact of other growth oriented policy measures such as provision of improved inputs, expanding credit and market facilities, etc. could be easily wiped out by illness.

Community Based Health Insurance Schemes (CBHIS) are one of the most recently mentioned options to narrow the existing wide gap between demand for and supply of financial resources in the health sector and to narrow the existing inequalities in access to basic health care services. This study tries to assess the prospect and potential role of community based health insurance schemes in rural Ethiopia by thoroughly investigating the economic costs of illness and the capacity of existing risk sharing arrangements in protecting households against health shocks and by analysing the health care demand behaviour and the willingness to pay of rural households in Ethiopia.

The study tries to show why illness is a serious problem for subsistence farmers in rural Ethiopia by investigating both the direct and the indirect economic costs of illness. We argue that measuring the economic costs of illness only in terms of direct costs (financial and time costs) is likely to underestimate the negative impact of illness on rural households and the potential welfare gains from different health policy interventions. Based on the Ethiopian Rural Household Survey of Addis Ababa University (AAU)/Oxford (4 rounds of panel data), the results of the study show that illness costs Birr 95.49 (around US$ 12) worth of direct resources (cash and time) per ill individual per month. This is more than 4 percent of the average annual income of rural households.

Attempts are also made to investigate the indirect impact of illness on labour supply, the decision to sale livestock, and other household assets, and more importantly on income of households. To take into account the multidimensional nature of health, illness or health status is measured by self reported symptoms, number of days unable to work, physical inability indices, and body mass index of the household head and other household members aged six and above. The results of the panel data analysis show that the illness of the household head or any economically active member of the household (especially aged 14 and above) has a negative and statistically significant impact on the labour supply of households and the results are robust irrespective of the way illness is measured. Perhaps the most important finding that emerges from the indirect costs of illness analysis is the very strong and negative impact of illness on the income of households. The results show that illness of the household head measured by self reported symptoms may cost 12 percent of the household's annual income (which is much higher than the direct costs) and the results are

consistent irrespective of the way illness is measured. These results clearly demonstrate that costs of illness figures computed based on the financial and time costs of illness alone may camouflage the real costs of illness for rural households and underestimate the potential social welfare gains of different health interventions.

The study also tries to test the capacity of existing inter and intra village level risk sharing arrangements in insuring the consumption of households against the illness of the household head. The results reveal that neither households themselves nor existing risk sharing arrangements are capable of insuring purchased food (which constitute half of the total food consumption) and non-food non-medical consumption items. Specifically the results indicate that the movement of the household head form a healthy to unhealthy status would lower the weekly purchased food consumption items of the household by 24 percent and the non-food consumption items by 28 percent. This clearly demonstrates that unless adequate insurance mechanism is developed to protect households against illness, the impact of other growth oriented policy measures such as provision of improved inputs, expanding the credit and output market, etc. could be easily wiped out by health shocks. In other words, there would be a significant amount of welfare gain if the existing endogenous risk sharing arrangements can be strengthened or some sort of prepayment or community based health insurance schemes can be introduced in the rural areas of Ethiopia.

The design of appropriate health policy requires a thorough analysis of the health care demand behaviour of households. Using a discrete choice model (based on the data collected by the author from various rural areas of Ethiopia), this study tries to investigate factors that affect the health status of individuals, the decision to join the health care market, the health care provider choice and the impact of various individual and provider characteristics on health care demand behaviour of households.

The results show that the poor are more likely to fall ill but less likely to get outside medical help compared to their rich counterparts. This implies that the rich have disproportionately benefited from the existing subsidies of the government to public health care providers. Poverty, not only directly affects the health status of individuals but also increases the duration of illness and hampers the cross effect of education on reducing the incidence of illness and the probability of seeking outside medical care and choosing modem providers. Education, especially education of mothers has a paramount importance in decreasing the incidence of illness, increasing the probability of entering into the health care market and even in the choice of provider (in favour of modem providers) once the decision to seek outside medical help is made. However, the impact of mothers' education on seeking outside medical help is eroded by poverty. The cross effect of mothers' education in the decision to seek outside medical help (given illness) is 10 times less in the lower income quartile compared to the other three quartiles.

User fees have a very strong negative impact on utilization of medical care compared to all other access variables such as distance and waiting time. The nested multinomial logit model results reveal that an increase in the user fees of government clinics and health centres has the strongest impact on deterring individuals from seeking medical help with deleterious consequences on social welfare. The results also show that the 'demand reduction effect' of user fees is much higher than the 'demand diversion effect' for the poor households. If the user fees at all providers increase simultaneously by ten percent, the probability of seeking modem medical care declines by 6 percent for all individuals but by 30 percent for the people at the lower end of the income distribution. This clearly indicates that policies designed to

generate additional financial resources by increasing user fees may not be achieved without significantly crowding out the poorest segment of the population from the health care market.

Given this result and the failure of the market (through private insurance) and the government (through tax and foreign sources) in financing the health sector, community insurance schemes may be alternative ways of mitigating the current crisis of the health sector and providing affordable basic health services to the rural population. However, in a country like Ethiopia where the experiences of health insurance hardly exist in urban areas let alone in the rural areas, it is not straightforward to examine the prospects of CBHIS. This study has therefore tried to shade some light on the prospect of CBHIS by examining the health care financing strategy of the government, the institutional environment, and the willingness of households to join and pay for potential health insurance schemes in the rural areas of Ethiopia.

Contingent Valuation (CV) methods are used to elicit the willingness and the ability of households to join and pay for potential CBHIS. Most of the results show general enthusiasm on the part of households. Out of 438 households, 94.7% are willing to join the scheme. Based on the double bounded dichotomous choice format and the bivariate probit model results, households in the sampled areas are willing to pay Birr 4.75 per month (around 3.5% of their monthly income) to be a member of a potential CBHIS that covers the out and inpatient expenses of all the family members. However, to take into account the problem of cash constraints in the rural areas, respondents were asked about their willingness to pay (WTP) if the payment was totally in terms of labour. On the average, households are willing to contribute Birr 14 worth of labour per month to be a member of the insurance scheme which is nearly 3 times higher than their mean money WTP. Relatively poor households also show more preference to contribute in terms of labour than in cash. These results have two important policy implications. First, the premium level can be set much higher than the average money WTP if households are allowed to contribute some part of the premium in cash and some part in labour. Second, since the poor are more willing to contribute in labour than the rich, adjusting the payment vehicle can help to reach the poorest of the poor segment of the population.

As expected, income has a statistically significant positive impact on the willingness of households to pay the first and second bids (potential premium levels) though its marginal impact is negative in the case of the second bid. These results indicate that both the rich and the poor can be embraced by the scheme and the problem of adverse selection could be reduced since the relatively rich households are willing to pay both the first and the second (the highest) bids and the poor are still willing to pay the second (the lowest) bid. The sensitivity and reliability of these results are checked based on different econometric specifications, economic theory, and nonparametric approaches. To take also into account the restrictive nature of the parametric method, nonparametric approach, which is assumed to be robust against misspecification errors, is used to estimate the mean WTP value. Usually due to differences in distributional assumptions, non-parametric approaches are expected to give higher mean WTP values than parametric methods. According to the non-parametric approach, households are willing to pay Birr 10 per month per household, which is as expected much higher than the results of the parametric approach.

Albeit CV method gives reasonable results in the absence of revealed preferences, it is liable to various problems. Therefore, it is usually advisable to verify the validity of the CV method results externally. Welfare analysis (equivalent variation) is used as indirect method to

validate the WTP results of the CV method externally. The result of this approach though should be taken cautiously, shows that an average household in the sampled areas is willing to pay Bin- 12.25 per month for an insurance scheme that operates without co-payment. This result is not very far from the non-parametric WTP results.

The study also tries to assess the prospect of CBHIS in the rural areas of Ethiopia from policy environment, institutional backgrounds, and rough financial viability points of view. Both the new health policy and the health care financing strategy of the country clearly acknowledge shortage of finance as the main problem of the health sector and suggest community health insurance financing as one possible sources of finance for the health sector. 'Iddirs', which are one of the most stable, widely available, and democratic indigenous institutions in Ethiopia, have laid the institutional base for disseminating the idea of risk sharing. After some works are done in the areas of capacity building, improving legal status, horizontal and vertical integration, etc., 'iddirs' can be used as a starting point of introducing the idea of health insurance in both rural and urban areas of the country.

Finally, the viability (in very general terms) and the prospect of CBHIS in lessening the financial crisis of the health sector are investigated. To roughly examine the financial viability of CBHIS in the rural areas, what households are willing to pay to be a member of the schemes is compared with the expected costs of illness (the potential premium level) in the sampled areas and the results give encouraging results. The prospect of CBHIS in curbing the current financial crisis of the health sector is also investigated. If we assume universal coverage of insurance and Bin- 7 per month per household premium level, it is possible to generate between 0.631 and 1.627 billion Bin- from 11.07 million households in the country and this amount is much higher than the maximum amount of money used as a recurrent budget for the health sector (Birr 0.456 billion in 1998/1999) in the country. This shows that CBHIS help to generate large and sustainable resources for the financially destitute health sector of Ethiopia without significantly evicting the poor and the socially excluded section of the population from the health care market. In other words, CBHIS help policy makers to kick two birds with one stone: they alleviate the shortage of finance, which is the single most important problem of the health sector by ensuring sustainable and broad based sources of finance and address the equity issue by ensuring the access of basic health services for the disadvantaged groups of the population.

Therefore, despite the fact that Ethiopia was rated as one of the least countries in Africa in terms of feasibility of health insurance schemes (based on some macro and aggregate data), this study shows that there are fertile and favourable environments to initiate the idea of CBHIS even in the rural areas of the country. Nevertheless, CBHIS should not be taken as a solution for all the problems of the health sector and even should not be taken as a substitute for all other sources of finance. The conclusion of the study is that CBHIS can produce healthy and strong labour force needed for poverty reduction and economic development by promoting equity in the provision of basic health care, reducing the financial concerns of households at the time illness, empowering the people in the decision making process of the health sector and generating sustainable and broad based sources of finance for the health sector.

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