Willingness to Pay for Health Insurance: An Analysis of the Potential Market for Health Insurance in Namibia

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Why Private Health Insurance?

Dr. Juma can treat, solve many problems such as:
- Malaria
- Dengue
- Fevers
- Arthritis
- Cancer
- Headaches
- To relieve measles pains
- Stomach
- Woman with pregnancy
- Prostate
- Vomiting all the time
- Miscarriages
- Demands
- Vomits
- Misunderstanding with anybody
- Court cases
- Casino specialist
- Bad luck
- Customer attraction
- Etc.
Why Private Health Insurance?

- Impoverishment, ill health and death can be result of inadequate resources to cover health care
- Evidence shows that 150 million people globally suffer financial catastrophe due to out-of-pocket expenditures
- Budgets for health in developing countries are constrained and often public expenditures crowd-out private resources

- Provision of low-cost private voluntary health insurance is one innovative method that is being offered as an alternative to existing situation
Low-cost Health Insurance Programs

• Dutch NGO Pharmaccess with Health Insurance Fund currently developing low-income health insurance products for a variety of low-income workers in Africa - in about thirty African countries to date

• Grant from the Dutch government – premium subsidized for the first few years to entice even low income households to participate. Steady income flow from these pre-paid schemes allows providers to invest in improvements of health care infrastructure

• Began in 2004 with workplace programs in large int’l companies, providing comprehensive health insurance for the workers, including HIV/AIDS counseling and treatment and treatment of TB and malaria.

• Contracts between insurers and providers guarantee easily accessible and high quality care and an easy mechanism for donor support to subsidize the insurance premiums

• Group insurances are being developed for farmer co-ops, participants of micro-finance schemes, market women, fishermen co-ops, small ICT enterprises, organized coffee growers, and other target groups
Success Depends on Demand

- Determining the demand for the schemes is crucial to ascertain their feasibility, establish prices, and set potential subsidy levels
- Baseline and follow-up surveys in the PharmAccess program-countries gather data on willingness-to-pay for health insurance
- Based on the literature for willingness-to-pay for health insurance we conduct a contingent valuation study using these data from Namibia
# WTP for Health Insurance Literature

<table>
<thead>
<tr>
<th>Authors</th>
<th>Country</th>
<th>WTP Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dror et al. (2007)</td>
<td>India</td>
<td>150- 230 INR (US$4 -US$6) per capita/per annum</td>
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<td></td>
<td></td>
<td>1.35% of median annual household income</td>
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<tr>
<td>Barnighausen et al. (2007)</td>
<td>China</td>
<td>Informal workers are willing to pay 30 RMB (about US$4) per member per month-a WTP higher than estimated cost of CBHIS based on past health expenditures</td>
</tr>
<tr>
<td>Asfaw, von Braun (2005)</td>
<td>Ethiopia</td>
<td>5 Birr (US$0.60) per month per member</td>
</tr>
<tr>
<td>Asgary et al. (2004)</td>
<td>Iran</td>
<td>US$2.77 per month</td>
</tr>
<tr>
<td>Dong et al. (2004)</td>
<td>Burkina Faso</td>
<td>Mean WTP for themselves (US$4.80) was twice their mean WTP for the household as a whole</td>
</tr>
<tr>
<td>Asenso-Okyere et al. (1997)</td>
<td>Ghana</td>
<td>64% of respondents were willing to pay about Cedi 5000 or US$3.00/month for a HH of five for a NHI scheme aimed at the informal sector</td>
</tr>
</tbody>
</table>
The Insurance Card: Benefits of the Potential Health Insurance Scheme

- Unlimited access to private nurse
- Six annual visits to private doctor
- Basic medicines
- HIV Treatment
- Limited private hospitalization, i.e. the doctor only refers to the hospital for urgent medical treatment
- Maternity benefits
The WTP that equates the two indirect utility functions with and without health insurance can be written as:

\[ v[(q^1, y - WTP, X, \pi); \varepsilon_1] = v[(q^0, y, X, \pi); \varepsilon_0] \]

\[ WTP = \varphi(q^1, q^0, y, X, \pi, \varepsilon) \]

is the maximum value individuals are willing to forgo to avoid medical expenses associated with illness.

Maximizing the equation results in individuals buying the health insurance policy if:

\[ v[(q^1, y - WTP, X, \pi); \varepsilon_1] \geq v[(q^0, y, X, \pi); \varepsilon_0] \]

If a discrete yes/no referendum question is asked, and if P represents the bid (premium) level, then

\[ \Pr(yes = 1) = \Pr[v(q^1, y - P, X, \pi); \varepsilon_1] \geq \Pr[v(q^0, y, X, \pi); \varepsilon_0] \]

\[ \equiv \Phi[\Delta v(\cdot)] \]

\[ = 1 - \psi(\cdot) \]
Findings: Probability of WTP Bid Level

Pr(WTP the bid level =1|WTJ= 1)

Income quintile
Findings: Aggregate Demand for Health Insurance

Pr(WTP the bid level = 1/WTJ = 1)
Findings: Mean WTP for Health Insurance Premia and Expected Health Expenditures

<table>
<thead>
<tr>
<th>Quintile</th>
<th>Expected Health Expenditures per capita/year N$</th>
<th>Mean WTP/per capita/year N$</th>
<th>WTP as percentage of mean per capita consumption/year %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quintile 1</td>
<td>130</td>
<td>132</td>
<td>4.97</td>
</tr>
<tr>
<td>Quintile 2</td>
<td>162</td>
<td>180</td>
<td>3.07</td>
</tr>
<tr>
<td>Quintile 3</td>
<td>215</td>
<td>204</td>
<td>1.96</td>
</tr>
<tr>
<td>Quintile 4</td>
<td>324</td>
<td>264</td>
<td>1.31</td>
</tr>
<tr>
<td>Quintile 5</td>
<td>902</td>
<td>312</td>
<td>0.47</td>
</tr>
<tr>
<td>Total</td>
<td>283</td>
<td>252</td>
<td>1.20</td>
</tr>
</tbody>
</table>

Source: Calculations and Estimations based on Republic of Namibia Okambilimbili Survey (2006).

Note: At time of study exchange rate equaled NAD 7.20 to US$1.00.
Namibia: Summary WTP for Health Insurance

- Almost 87 percent of the uninsured respondents are willing to join the proposed health insurance scheme.
- Respondents are willing to insure 3.5 individuals (around 66 percent of the average family size).
- Willing to pay NDR 252 (US$35) per capita per year.
- Those in the poorest income quintile are willing to pay up to 5% of their income, which is almost exactly equal to their current expected out-of-pocket expenditures.
Conclusions

- Resources scarce and large proportion are private
- Private health insurance may mitigate risk of catastrophic expenditures and may leverage private resources

- However, success of such programs depends on
  1. Demand for health insurance
  2. Appropriate design of contracts with providers