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# The joint demand for health care, leisure, and commodities: Implications for health care finance and access in Vietnam

Chad D. Meyerhoefer , David E. Sahn & Stephen D. Younger

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## ABSTRACT

This paper explores linkages between the demand for health care providers and the consumption of food, non-food goods, and leisure in Vietnam, using a mixed continuous/discrete dependent variable model. Cross-price elasticities calculated from the model suggest there are strong substitution effects between health care, leisure, and certain commodities. The model allows us to explore the implications of replacing user fees with alternative forms of health care finance, such as commodity taxes. In particular, the results suggest financing public health care services with a non-food sales tax rather than user fees would be more progressive and would improve access to care.

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## Notes

1. For example, Gertler et al. ([1987](#)) find that although user fees generate substantial revenue in Peru, they are accompanied by large reductions in aggregate consumer welfare, with the poor shouldering most of this burden. Sahn et al. ([2003](#)) show that own-price health care elasticities in Tanzania are decreasing in income, suggesting higher fees create larger barriers to care for the poor. Analogously, Deininger and Mpuga ([2005](#)) find that the removal of user fees in Uganda led to improved access to care by the poor and a reduced probability of sickness.
2. This is consistent with the broader literature on the demand for health care services. One notable exception to the lack of research on alternatives to user fees is that on community financing of health care in Carrin ([1992](#)).
3. For example, Dor et al. ([1987](#)) find that travel time plays an important role in the demand for health care in rural Côte d'Ivoire, with poorer individuals' demand being significantly more travel time elastic than that of the wealthy.
4. The extent to which leisure includes caretaking time by household members depends on how literally respondents interpret the survey question on home production. This focuses on household tasks such as cooking and cleaning, and does not explicitly mention caring for the sick, so a literal interpretation of the question would result in caretaking being included in the residual leisure category.
5. Our specification differs from Alderman and Sahn in that a single household value of leisure is incorporated into the model. While we originally specified separate demands for male and female leisure, we found near coincidence in the resulting elasticity estimates, allowing us to simplify the model by combining male and female leisure.

6. Another practical reason for restricting the sample in this manner is that the VLSS only collects commune level health centre information in non-urban locations.
  7. This is a reasonable assumption given that public clinics are located in each of the surveyed communes and are typically the least expensive treatment alternative. In cases where an individual visited both a pharmacy and non-clinic provider, we model the probability of the former, given the likelihood that the pharmacy visit is for an unrelated minor illness.
  8. Private facilities consist mainly of private clinics, since the exclusion of urban households makes private hospital visits highly unlikely. House calls made by doctors/nurses in a private capacity are included in private facilities while those made in an official government capacity are included in public clinics. Pharmacy transactions also include drugs purchased from 'medicine peddlers'. Although the VLSS collects information on traditional (eastern) medical practitioners, only 2.3 per cent of health care demanders used their services. Therefore, traditional practitioners are included in the no-care category.
  9. Dow ([1995](#)) also demonstrates via a dynamic model of health inputs that estimates conditional on health status can only capture the short-run effects of policy reform while unconditional estimates yield long-run demand elasticities.
  10. It is doubtful that participation in health education programmes and many forms of preventative care is recorded by households as a visit to the public clinic in order to 'diagnose or treat an illness or injury', suggesting clinic characteristics are correlated with factors increasing the efficiency of self-care.
  11. Sahn et al. ([2003](#)) find a similar result for Tanzania.
  12. The poverty line is set at 30 per cent of per capita household full income. This is consistent with estimates by the World Bank ([2001](#)).
  13. Our definition of user fees includes the cost of drugs administered at hospitals or clinics since these are typically rolled into provider service charges and separate from pharmacy drug costs.
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