

GUEST EDITORIAL

THE ECONOMICS OF TOBACCO IN INDIA

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Tobacco consumption is the single most important avoidable factor in the growth of non-communicable diseases in developing countries,¹ particularly in India. Tremendous economic growth has spurred a visible rise in disposable incomes and in the affordability of tobacco products in the country. As international and domestic tobacco companies apply ever more effective tobacco marketing strategies in this large and rapidly developing economy, the risk of an increase in tobacco consumption remains significant.

Tobacco use patterns in India are unique and reflect longstanding cultural practices. Two features stand out — bidis are more common than cigarettes; and chewing tobacco use is widely prevalent. The diversity in forms of tobacco consumption complicates any assessment of tobacco taxation in India. Tobacco is also fairly important as an economic activity in India — its production and sale directly or indirectly involve some 7 million workers, and tobacco contributes roughly 2% of central tax revenue. India also has a mosaic of taxation approaches, mirroring a diverse tobacco manufacturing and legislative environment.

Roughly 10% of the world's tobacco smokers live in India, representing the second largest group of smokers in the world after China.² India is also the third largest producer of tobacco leaf in the world. In contrast to most other countries, India's tobacco consumption pattern reflects heavy use of noncigarette tobacco, primarily in the form of bidis, chewing tobacco and paan preparations. Bidis account for as much as 85% of total smoked tobacco. With a rise in disposable incomes, per capita consumption of cigarettes is expected to increase. Further, quitting is still uncommon, and less than 2% of adults identify themselves as ex-smokers.³

Prevalence estimates of the number of smokers in India have varied, in part due to difficulties in comparing questions posed in successive sample surveys. The most direct estimation uses the National Family Health Survey-3 (NFHS-3) of 2005-06.⁴ NFHS-3, however, does not represent all adults; it collected data for men aged 15-54 and women aged 15-49. Analysis of a combination of sources suggests that an estimated 120 million Indians smoke some form of tobacco, a figure that includes 115 million male smokers and 5-6 million female smokers.

There is a body of evidence in India and worldwide on the adverse health effects of tobacco consumption. Globally, 5.4 million deaths annually are caused by tobacco use, and it is expected that by the year 2030 about 80% of these deaths will be in developing countries.² The leading causes of death from smoking

are cardiovascular diseases, chronic obstructive pulmonary disease, and lung cancer. About one-half of deaths due to tobacco consumption occur in people aged 35 to 69,⁵ the period of life when individuals are most economically productive.

Health care costs from tobacco use impose burdens on annual health budgets, especially in poor countries like India. By one estimate, India spent approximately Rs 300 billion (US\$ 6.2 billion) in 2002-03 in public and private spending on the treatment of tobacco-related illnesses.⁶ If accurate, this would amount to roughly one-fourth of all health spending in the country — as a point of comparison, tobacco-related health spending tends to amount to 6-15% of health spending in other developing countries.⁷ Another study using nationally representative health care expenditure data found that the direct cost of treating four major tobacco related diseases (respiratory, tuberculosis, cardiovascular, and neoplasms) in India amounted to Rs 54 billion (US\$ 1.2 billion) in 2004, or 4.7% of India's national health care expenditure that year.⁸

Tobacco is a labour-intensive crop in India. Growing, harvesting and processing tobacco represent the means of livelihood of a large number of agricultural labourers.⁹ National employment surveys by the National Sample Survey Organization (NSSO) place the direct and indirect tobacco workforce in India at approximately 7 million during 2004-05, representing approximately 1.5% of overall employment in the formal sector. This includes workers engaged in tobacco farming, manufacturing and the wholesale/retail trade, either full or part time.

The vast majority of these jobs, perhaps more than 4million, are in bidimanufacture,¹⁰ with women making up half of the tobacco-related workforce. The number of workers directly or indirectly engaged in the tobacco sector has more than doubled over the past 20 years, from 2.88 million in 1983 to roughly 7.0 million in 2004-05, against an increase of approximately 50% in employment in general over the same period. Many of these workers, however, are employed part-time, so that the figures tend to overstate the importance of tobacco as a source of full-time employment in the country.

India is the world's third largest tobacco producing country after China and Brazil and produced more than 10% of the world's raw tobacco during 2003-04, but ranked only ninth globally as an exporter of tobacco and tobacco products. Tobacco production in India is geared towards consumption within the country. A large proportion of raw tobacco is used to manufacture chewing tobacco, bidis and other products. Cigarette

tobacco accounted for less than a third of the total tobacco production in 2004.⁶

Four multinational companies — the ITC Group, Godfrey Philips India Ltd, VST Industries Ltd and GTC Industries Ltd. — account for almost all of India's cigarette manufacturing sector and together account for Rs 150 billion (US\$ 3.4 billion) in annual revenue. Of these four, the ITC Group dominates cigarette production and controls about 70% of market volume.

In contrast, none of the more than 300 brands of bidis commands even a 5% market share within India.¹⁰ The bidi industry is composed of a large number of small-scale manufacturers,¹¹ with more than 98% of bidis being handmade. The number of small-scale manufacturers has fallen by more than half since producers increasingly outsource to households to circumvent tax rules. Despite this, there were still some 3000 bidi producers as of 2004. Interestingly, while these are nominally small-scale industries, many are owned by, or under the control of larger manufacturers. Accurately determining the actual scale of co-ownership has been difficult,¹² but will be central to enforcing legislation.

Against this complex economic background, increases in tobacco consumption and in the prevalence of tobacco-related illnesses and mortality only underscore the urgency of using policy interventions, including tobacco taxation, to improve public health in India.

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ORIGINAL ARTICLE

A STRUCTURAL EQUATION MODEL OF THE DETERMINANTS OF HEALTH CARE IN THE SURVEYED HOUSEHOLDS IN RURAL AREA OF DHARWAD DISTRICT, KARNATAKA STATE, INDIA

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ABSTRACT

Introduction: Health and health care need to be distinguished from each other for no better reason than that the former is often incorrectly seen as a direct function of the latter. Hence, the good health confers on a person or groups freedom from illness and the ability to realize one's potential. However, a few studies had shown that health care is associated with socio-economic, demographic and ecological factors which are diverse and interrelated. Therefore, the purpose of this study to examine the causal relationships among factors determining how much care people are willing to purchase.

Method: A systematic random sample of 1408 persons interviewed from 320 households, in which 453 persons were reported with health problems. Out of this, 235 persons were reported with medical health problems and 218 persons were reported with oral health problems during reference period of study. The data on different factors were collected through direct personal interview method. The causal relationships were established by structural equation modeling (SEM) method using SPSS and AMOS statistical software.

Results: The SEM fitted to the medical and oral health care data adequately. The results indicated that, the age of sick person, duration of illness episode (in days) and the total number of visits made to source of health care during the reference period had significant effect on medical health care expenditure ($p < 0.05$). But, the duration of illness episode (in days), total number of visits made to source of health care during the reference period and distance of care from the residence of the household (in km) had significant effect on oral health care expenditure ($p < 0.05$).

Conclusions: The duration of illness episode (in days) and the total number of visits made to source of health care during the reference period are the main contributors to both medical and oral health care expenditure in surveyed households in rural area of Dharwad district, Karnataka State, India. It is proposed that to increase in the demand for health care, efforts should be made to reduce the duration of illness, the distance traveled by the sick person or patient and also the number of visits to health care providers. It may lead to improved health status at lower expenditure.

Key Words: Structural Equation Model, Medical and Oral Health care, Sick person

INTRODUCTION

Medical and oral health care are fundamentally different from the usual commodities like, food clothes, or any other commodity, which purchased by an individual. In the consumption of medical and oral health cares are, for rationally to hold, the consumer must be ill and most individuals would prefer no to be. This simple fact has significant consequences for the economic analysis of health care. A large number of marketable commodities affect on health; are only consumed on the presumption that it has investment benefits in good health status.

Health care is critical investment for personality development in present society. National Health (Public) policy for health has been based on implicit assumptions of health care as a basic right to which people should not be denied access on grounds of inability to pay or other socio-economic and others reasons. However, the resources provided by the government to achieve better health status through the provision of high priority of primary health care services for the vast majority of the population have been insufficient. The continued trend of increases in the cost of health care as well as growth of population that all persons of the society deserve adequate health