

Willingness to Pay for Air Quality Improvement in Kolkata, India: Revealed and Stated Preferences

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There is an urgent need to improve air quality in Kolkata, India. However, the cost of an improvement strategy can be very high. This study uses a survey strategy designed to establish the Revealed Preference (RP) and Stated Preference (SP) of citizens for an air quality improvement programme. A lower bound to household's total RP Willingness To Pay (WTP) can be estimated by measuring the Cost Of Illness (COI) households have to bear on airborne respiratory diseases. The value is compared with the SP estimate obtained in response to a dichotomous choice WTP question. The study found a general WTP for clean air.

I Introduction

Air quality situation in Kolkata needs more attention. Automobile and industrial pollution has pushed the level of pollution above the safe permissible limit. The major polluting industries in the city are thermal power plants, cement, rubber, dyeing and bleaching, paper and board, pharmaceuticals, tanneries, etc. The use of coal in industries contributes to air pollution. Exhaust emission from vehicles contributes about 50 per cent of air pollution load in the city. The transport system in Kolkata is characterised by petrol/diesel-based vehicles, use of vehicles which do not conform to pollution norms, low availability of road area, heavy congestion, low average speed, rapid expansion of personalised vehicles, etc. All these have significantly contributed to air pollution. The pressure of growing population, expansion of the city area and life style changes imply that air pollution is likely to continue as a major problem. Anon (1997), Lahiri *et al.* (2002), Ghose *et al.* (2004) and Majumdar (2010) have found that the residents of Kolkata face several air pollution-related diseases and have to bear significant health cost.

The primary object of the study is to obtain RP and SP estimates of 600 households of Kolkata for the air of desirable quality. A lower bound on household's total RP, WTP for air of desirable quality can be estimated by measuring the COI, one has to bear on airborne respiratory diseases. Such

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