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**Thesis Title:** Impact of Cooking Energy Sources on Respiratory Health in Pakistan

### **Abstract**

Around 2.8 billion people across the world (90 percent from rural populations) utilize biomass energy sources such as firewood, animal dung, agriculture residue, kerosene, coal and other biomass fuels for cooking purposes. Several studies have linked the burning of biomass fuels with respiratory diseases with the main disease being asthma. However, these studies do not take into account the endogeneity of choice of cooking energy sources by the household and suffer from omitted variable bias. To address this problem, this study uses an instrumental variable (IV) approach to estimate the correlation between cooking energy sources and respiratory health. The analysis is based on Pakistan's Rural Household Panel Survey (RHPS) and the Pakistan Demographic and Health Surveys (PDHS). Results based on OLS estimates provide inconsistent evidence for the impact of cooking energy sources on respiratory health particularly for asthma and respiratory health. The results based on the IV approach provide an insignificant relationship between the use of energy sources and asthma prevalence and acute respiratory infection. This study has contributed towards existing literature in terms of usage of IV approach to address concerns of endogeneity of choice of cooking energy sources.

*JEL Classification:* D100, Q400, Q410, I120

*Keywords:* Household, Energy Sources, Energy Consumption, Health Behavior Pakistan, Respiratory Health