BROWN BAG SEMINAR

DEPARTMENT OF ECONOMICS

NSU SBE NORTH SOUTH UNIVERSITY SCHOOL OF BUSINESS AND ECONOMICS

Title: "An Analysis of the Preference and Spatial Dependence of Welfare Estimates for a Solid Waste Management System in Nepal; A Choice Experiment Approach"

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Date: July 15th, 2021 11:00am -12:00pm

Profile of the speaker:

Mohammad Mashiur Rahman is a Ph.D. candidate in Economics at the University of New Mexico, Albuquerque. He is an applied microeconomist with a focus on environmental and natural resource economics and applied econometrics. His research interest focuses on the valuation of environmental services, management of natural resources, impacts on health from environmental issues, and the policy implications for local administration by analyzing the economic data from econometric models. Theretofore, he has papers published at the *Journal of Environmental Economics and Policy, Water Resources and Economics,* and *Journal of Health Management*. Mohammad received his Bachelor's and Master's degree in Economics from the University of Dhaka, Bangladesh. Also, he holds a Master's degree in Economics from UNM.

Abstract:

The fast population growth in developing countries' municipalities is creating an enormous burden of household solid waste. Currently, households in Siddharthanagar municipality in Nepal—a gateway of tourist attraction and a border city—produce solid waste beyond the collection capacity, resulting in a significant portion of the waste left unmanaged. This paper deploys a choice experiment method to estimate the preference and willingness to pay for a better solid waste management system. We utilize primary data collected on 610 households and find a potential preference for a better waste management service from a Generalized Multinomial Logit Model. By accommodating each choice selection's preference certainty in the GMNL model, we find significant heterogeneity in preferences by households. The geographic distribution of the marginal willingness to pay by hot spot analysis from the geocoded location also indicates the spatial heterogeneity across the study area. We also observe that the marginal willingness to pay for each waste management attribute is spatially autocorrelated, and household awareness and attitude significantly impact this spatial dependence. Overall, the results from choice models and spatial analysis indicate the policy should be targeted at a localized level and increase awareness concerning the proper management of solid waste.

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