

### Course Description

This course provides participants with an overview of **tools to estimate the benefits of environmental (non-market) goods using contingent valuation method (CVM)**. The course introduces participants to techniques for designing, testing, and implementing a survey instrument using contingent valuation. After the course participants should be able to appreciate and apply key concepts of survey design and estimation of benefits in a non-market context. Examples will be used to illustrate how theory is used and applied in practice.

**20-21  
March  
2021**



**4-hours each day  
(and self-study)**

### Who can attend?

The course is open to INSEE members. There is no registration fee. Preference will be given to research students and early career academics. Given the interactive nature of the course enrolment is limited to 25 participants.

### Course Instructor Dr. Kavita Sardana

INSEE Life Member &  
Assistant Professor  
TERI School of Advanced  
Studies  
New Delhi



### Pre-requisite

Participants should have basic knowledge of masters level micro-economics. Since the course will be conducted online, participants must have Stata 11 or later pre-installed on their laptop/desktop computer. They should be comfortable in reading/importing datasets in Stata.

**Register here: ( LAST DATE OF REGISTRATION - 7th March 2021 )**

[https://docs.google.com/forms/d/e/1FAIpQLSfLaHTqmOuYi8XvOK3B9\\_V1PTe9CP2JHMDSp0MkaR3-e\\_Rw3Q/viewform?usp=sf\\_link](https://docs.google.com/forms/d/e/1FAIpQLSfLaHTqmOuYi8XvOK3B9_V1PTe9CP2JHMDSp0MkaR3-e_Rw3Q/viewform?usp=sf_link)

**For questions and queries contact:**

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[kavita.sardana@terisas.ac.in](mailto:kavita.sardana@terisas.ac.in) (for all other queries)

# Course Outline

1. Parametric Models for Dichotomous Choice Questions
  - The Random Utility Model (RUM).
  - Calculating willingness to pay (WTP) using the Random Utility Model.
  - NOAA Panel Guidelines for Value Elicitation Surveys.
  - Estimation of RUM using Single Bounded Dichotomous Choice Model
2. Contingent Valuation with Follow up Questions
  - Theoretical Foundations of Contingent Valuation with Follow up Questions.
  - The Bivariate Probit Choice Model
  - The Interval Estimation Model
3. Assessing the validity of stated preference welfare measures
  - Criterion validity - Reducing hypothetical bias, focusing on incentives, consequentiality
  - Construct validity-Sensitivity to scope
  - Content validity- Misspecification of scenario

## Readings

Bateman, I. J., Langford, I. H., Jones, A. P., & Kerr, G. N. (2001). Bound and path effects in double and triple bounded dichotomous choice contingent valuation. *Resource and Energy Economics*, 23(3):191-213.

Cummings, R. G., & Taylor, L. O. (1999). Unbiased value estimates for environmental goods: a cheap talk design for the contingent valuation method. *American Econ Review*, 89(3):649-665.

Cummings, R. G., Elliott, S., Harrison, G. W., & Murphy, J. (1997). Are hypothetical referenda incentive compatible? *Journal of Political Economy*, 105(3):609-621.

Haab, T.C., McConnell, K.E. (1997). Referendum models and negative willingness to pay alternative solutions. *Journal of Environmental Economics and Management* 32 (2):251–270.

Sardana, Kavita (2019). “Tourists’ Willingness to Pay for Restoration of Traditional Agro-forest Ecosystems Providing Biodiversity: Evidence from India.” *Ecological Economics* 159: 362-372.

Freeman III, A. Myrick, Joseph A. Herriges, and Catherine L. Kling (2014). *The measurement of environmental and resource values: theory and methods*. Routledge.

## About the Instructor

Dr. Kavita Sardana is Assistant Professor of Economics at TERI School of Advanced Studies, New Delhi. She is an applied econometrician and her research interests are in non-market valuation of environmental goods and services with a special focus on forest resources and payment of ecosystem services. Her articles have appeared in journals, including the *Journal of Agricultural and Applied Economics*, *Ecological Economics*, *Journal of Environmental Management*, *Journal of Public Economic Theory*, and *Crop Science*. Dr. Sardana received her Ph.D. in Agricultural and Applied Economics with specialization in modeling choice-based samples from University of Georgia. She is a SANDEE grantee (2014-16) and serves as Member, Expert Group on Environment Damage Assessment appointed by Central Pollution Control Board. She has also taught at the department of Economics at Iowa State University.

## Course Timing:

20 March 2021 **Sesion 1:** 10:30 pm-12:30 pm **Session 2:** 1:30 pm - 3:30 pm

21 March 2021 **Sesion 3:** 10:30 pm-12:30 pm **Session 4:** 1:30 pm - 3:30 pm