Consumer Economics: Theory and Application for Valuing Non-Market Goods

Instructor: Professor Xiaohua YU Ph.D., University of Göttingen
Email: xyu@gwdg.de ; **Tel:** 0551-3919574
Office: MZG 2027 **Office Hour:** TBA
Lecture Room: TBA (Goettingen).
Lab Session: the Computer Lab of the Department of Agricultural Economics and Rural Development, University of Göttingen (Blue tower 11th floor)
(Platz der Göttinger Sieben 5, 37073 Göttingen)
Lecture Time: 9 Aug. 2010 - 13 Aug. 2010

Course Description

The techniques of valuating non-market goods are widely used for agribusiness and environmental economics. This course is designed for graduate-level students at the University of Goettingen and some other related universities, and helps understand the fundamental economic theory of non-market goods and master basic econometric techniques for applications.

This course includes three parts: Part I introduces the basic theory; Part II introduces the econometric techniques; and Part III is practice with the real data.

Course Outline

1 Introduction

Part I: Basic Theory

2 Measurements of Welfare Changes
- 2.1Individual Preferences and Demand
- 2.2 Welfare Measures for Changes in Prices
- 2.3 Welfare Measures for Changes in Factor Prices
- 2.4 Welfare Measures for Quantity Changes
- 2.5 Aggregation and Social Welfare

3 The Structure of Preferences and Measures of Value
- 3.1The Household Production Framework
- 3.2 Perfect Complements
- 3.3 Weak Complementarity
- 3.4 Substitutes
- 3.5 Perfect Substitutes

4 Nonuse Values
- 4.1 Total value
- 4.2 Weak Complementarity and Use Values
- 4.3 Separable Preferences and Use versus Nonuse Values
- 4.4 The Household Production Framework and Use Values
- 4.5 Nonuse and Existence Values

5 Values under uncertainty
- 5.1 Individual Preferences and Expected Utility
- 5.2 The Willingness-to-Pay Locus

5.3 The Required Compensation Locus
5.4 Risks in Food safety: An Example

Part II: Methods and Econometric Techniques

6 Contingent Valuation Methods
6.1 Continuous Methods: Open-Ended and Payment Cards
6.2 Discrete methods: Single-Bounded and Double Bounded

7 Choice Experiments
7.1 Experiment Design
7.1 Econometric Estimation

8 Experimental Auction
8.1 Auction Design
8.2 WTP Estimation

9 Heterogeneities in Non-Market Evaluations
9.1 Factual Heterogeneity
9.2 Methodological Heterogeneity

10 Hedonic Techniques
10.1 Basic Theory
10.2 Model Specification and Estimation
10.3 Measurement of Welfare Changes

Part III: Practice

11 Lab Sessions

Readings and References

Antle J. M. 2001. "Economic Analysis of Food Safety". B. L. Gardner & G. C. Rausser (ed.) *Handbook of Agricultural Economics,* Vol.1B (Chapter 19): 1083-1136.

Dannenberg A. 2009"The Dispersion and Development of Consumer Preferences for Genetically Modified Food — A meta-analysis", *Ecological Economics*, Vol.68:2182-2192.

Deaton A. and J. Muellbauer. 1980. *Economics and Consumer Behavior*. Cambridge: Cambridge University Press.

Carson R.T. and W. M. Hanemann.2005. "Contingent Valuation". *Handbook of Environmental Economics*, Chapter 17, Vol.2: 821-936.

Fischhoff A. 2005. "Cognitive Processes in Stated Preference Methods". *Handbook of Environmental Economics*, Chapter 18, Vol.2.

Freedman A. M.1993 *The Measurement of Environment and Resource Values: Theory and Methods*, Resource for the Future, 1993.

Gao Z., T. C. Schroeder and X. Yu, 2010 "Consumer Willingness to Pay for Cue Attributes: the Value beyond Its Owen", *Journal of International Food and Agribusiness Marketing*, Vol.22(1):108-124.

Gao Z., X. Yu and L. House 2009 "Using Choice Experiment to Estimate Consumer Valuation: the Role of Experiment Design and Attribute Information Loads." Paper presented at the Agricultural and Applied Economics Association 2009 Annual Meeting, Milwaukee, Wisconsin . Available at: http://ageconsearch.umn.edu/handle/49406

Hanemann M. 1984. “Welfare Evaluations in Contingent Valuation Experiments with Discrete Responses” *American Journal of Agricultural Economics*, Vol. 66(3): 332-341.

Hanemann M., J. Loomis, and B. Kanninen, 1991. “Statistical Efficiency of Double-Bounded Dichotomous Choice Contingent Valuation.” *American Journal of Agricultural Economics*, Vol. 73(4):1255-1263.

Liu Y., Y. Zeng and X. Yu, 2009: Consumer Willingness to Pay for Food Safety in Beijing: A Case Study of Food Additives. Paper at the 27th Conference of International Association of Agricultural Economists (IAAE), 16-22 Aug., Beijing

Lusk J. L. and T. C. Schroeder 2004. “Are Choice Experiments Incentive Compatible? A Test with Quality Differentiated Beef Steaks.” *American Journal of Agricultural Economics*, Vol. 86(2):467-82.

Maddala G.S. (1983) *Limited Dependent and Qualitative Variables in Econometrics,* Cambridge University Press,.

Nelson J.P., Kennedy P.E., 2008, “The Use (and Abuse) of Meta-Analysis in Environmental and Natural Resource Economics: An Assessment”, downloaded from http://ssrn.com/abstract=1117490, 08/2008.

Ready R. C., J. C. Buzby and D. Hu 1996. “Differences between Continuous and Discrete Contingent Value Estimates.” *Land Economics*, Vol. 72,(3): 397-411.

Ready R.C. and D. Hu1995 “Statistical Approaches to the Fat Tail Problem for Dichotomous Choice Contingent Valuation.” *Land Economics*, Vol. 71(4): 491-499.

Ready R. C., S. Navrud and W. R. Dubourg 2001. “How Do Respondents with Uncertain Willingness to Pay Answer Contingent Valuation Questions?” *Land Economics*, Vol. 77(3):315-326.

Shorgen J. A..2005. “Experimental Methods and Valuation”. *Handbook of Environmental Economics*, Chapter 19, Vol.2.

Yu X. 2009 “Incorporating Zero and Missing Responses into CVM with Open-Ended Bidding: Willingness to Pay for Blue Skies in Beijing.” Chapter 3, *Essays on Consumer Behavior and Demand Analysis*, Ph.D. thesis, Penn State University. http://etda.libraries.psu.edu/theses/approved/WorldWideIndex/ETD-3805/index.html

Teaching Method: Lectures + Lab Sessions

Language: English

Credits: 3

Grades: Assignments (60%) + Final Exam (40%)