Food and Resource Economics Department
University of Florida

AEB 6933 - Applied Valuation Methods
Fall 2021

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Location and Class Hours:

Tuesday: BEN 0328   9:35 AM – 10:25 AM

Thursday: BEN 0328   8:30 AM - 10:25 AM

Course Description:
This is a class focusing on the application of valuation methods that are frequently used for the valuation of the market and non-market goods and services. We will focus on the methods that estimate consumer willingness to pay (WTP) for products and services. We begin from the basic economic theory to derive the WTP measures, followed by the empirical methods used to elicit consumer WTP. Three key methods will be covered. Choice experiments will cover choice experiment designs, underlying economic theory, and major econometric methods. Contingent valuation methods (CVM) will cover key methods, including open-ended CVM, close-ended, single-bounded referendum, and close-ended double-bounded referendum as well as corresponding econometric methods. Experimental auction discussions will cover major auction methods, BDM, 2nd price auction, random nth price auction, and the corresponding econometric method. The pros and cons of each method will also be discussed in the class.

Objective:
By taking this course, students should be able to
1. Understand the theoretical foundation of valuation methods.
2. Understand the key difference between the valuation methods.
3. Choose the proper methods and data collection process for consumer WTP estimation.
4. Employ appropriate statistical and econometric methods to analyze data.
5. Interpret the results from various valuation methods and economic models.
6. Obtain basic knowledge of the software that can be used for analyzing the data obtained from different valuation methods.

Prerequisites:
Knowledge of graduate microeconomics theory I (ECO 7115) and Ph.D. level econometrics is required. Knowledge of the maximum likelihood method and econometric models for limited dependent variables such as Tobit, Logit, and Multinomial Logit models is recommended.

Homework and Grading:

Homework based on class lectures and reading will be assigned across the semester. All assignments are due at the beginning of class on the due date. Each student is expected to give three in-class presentations and one final project.

The weights for different components are:

Homework	20%
Presentation 1	20%
Presentation 2	20%
Presentation 3	20%
Final Project	20%

Final grade is based on the weighted average of homework and exams.

Course Grade	Letter Grade	Grade Point
90 - 100	A	4.00
87 - 89	A-	3.67
84 - 86	B+	3.33
81 - 83	B	3.00
78 - 80	B-	2.67
75 - 77	C+	2.33
72 - 74	C	2.00
< 72	D	1.00

Presentation 1: Article Presentation

Each student would choose a paper from a list provided by the instructor and summarize the key finding of the paper. She/he also needs to discuss the pitfalls and potential improvement of the paper as well as some future research topics related to the paper.

Presentation 2: Project Proposal Presentation

Present the research background of their project, including the motivations, the literature reviews, and the methods.

Presentation 3: Final Project Presentation

Present the results, conclusions, implications, limitations, and future research directions of the project.

Applied Valuation Methods Project:

The project can be a group project with two or three members per group. The project can be 1) a complete study (or perhaps pilot) applying the valuation methods discussed in this class; 2) a comprehensive literature review of studies related to valuation methods or estimation of consumer preference of market and non-market goods using some statistical method such as Meta-analysis (https://en.wikipedia.org/wiki/Meta-analysis).

Suggested Project Structure (adapted from the Authors' guide of Food Quality and Preference, you can use other structures if you know the journals that you want to publish your paper in)

    1. Title Page
Report title
Project group members and department
    2. Abstract
A brief statement of the motivations, the methods, the main results and key conclusions of the research project.
    3. Report body
    a. Introduction: motivation of the research project, background, identification, and the significance of the research problem. Related literature should be discussed, but avoiding a detailed literature survey or a summary of the results.

    b. Material and methods (i.e. Data collection method; statistical and econometric models: Provide sufficient detail to allow the work to be reproduced. Methods already published should be indicated by a reference: only relevant modifications should be described.

    c. Theory/calculation: A Theory section should extend, not repeat, the background to the article already dealt with in the Introduction and lay the foundation for further work. In contrast, a Calculation section represents a practical development from a theoretical basis.

    d. Results: key tests, key tables, and figures, interpretation of the results.

    e. Discussion: This should explore the significance of the results of the work, not repeat them. A combined Results and Discussion section is usually only appropriate for short communications. Avoid extensive citations and discussion of published literature.

    f. Conclusions: The main conclusions of the study may be presented in a *short* Conclusions section, which may stand alone or form a subsection of a Discussion or Results and Discussion section. It should provide the take-home message of the project, limitation of the project, future direction of the research.

Notes:

1. One semester may not be enough to complete a full project that requires primary data collection. If you choose option 1) you can do a pilot data collection with a small sample size (i.e., collecting data from your classmate or friends). But you still need to analyze your data with the models discussed in this class. Hopefully, this process can help you identify the potential problems in your data collection and analysis so that you can make an improvement if you want to collect a larger sample size in the future to write a full research paper.

2. It is strongly recommended that you bring your laptop to the class. A laptop is needed to create questionnaires online and do data analysis in class.

3. Your laptop should have the following software installed: SAS, R, and R Studio. We may discuss the use of other software such as Nlogit and Biogeme. But they are not required.

4. SAS student license can be purchased from UF. If you don't want to buy the license, you can use both online at https://login.apps.ufl.edu/ . Please check more information at https://info.apps.ufl.edu/ .

5. R and R Studio can be obtained https://cran.r-project.org/mirrors.html and https://www.rstudio.com/ , respectively.

6. Software for reference management: It is recommended that you install Zotero for reference management.

   Zotero is a free reference management software and browser add-on for reference management. Zotero also integrates with Microsoft Word. You should use it to share the references used in your project report so that we can double-check the references. Zotero can be downloaded at https://www.zotero.org/

   Another free reference management software is Mendeley. It provide similar function as Zotero. You can download it from https://www.mendeley.com/download-reference-manager/

   A comparison between Zotero and Mendeley is here https://www.library.yorku.ca/web/research-learn/citing-your-work-academic-integrity/citations/zotero-vs-mendeley-comparison/

7. The IRB, if you are going to collect data for your project, you need to get IRB approval. Before you apply for IRB, you need to finish the IRB training session at http://irb.ufl.edu/irb02/required-training-for-irb-02.html

8. You can create IRB at http://my.irb.ufl.edu/ . **Warning**, to log into your account, you must first log in UF VPN (https://it.ufl.edu/ict/documentation/network-infrastructure/vpn/). **This is required no matter you are on campus or not**.

9. Qualtrics: Qualtrics is an online platform to create questionnaires for online data collection. UF has purchased the license, so you can use Qualtrics for free as long as you have a valid UF ID. You can log into Qualtrics at https://ufl.qualtrics.com/ . If this is the first time that you use Qualtrics, you may need to activate your account.

Suggested Textbooks (not required):
Choice Experiments
1. Hensher, D.A., Rose, J.M., Greene, W.H., 2015. Applied Choice Analysis: A Primer. Cambridge University Press. https://www.amazon.com/Applied-Choice-Analysis-David-

Hensher-dp-1107092647/dp/1107092647/ref=dp_ob_title_bk
2. Kuhfeld, W.F., 2005. Marketing research methods in SAS. Experimental Design, Choice, Conjoint, and Graphical Techniques. Cary, NC, SAS-Institute TS-722.
https://support.sas.com/techsup/technote/mr2010.pdf
3. Louviere, J.J., Hensher, D.A., Swait, J.D., 2000. Stated Choice Methods: Analysis and Applications. Cambridge University Press.
https://www.amazon.com/gp/product/B0014JUZGK/ref=dbs_a_def_rwt_hsch_vapi_tkin_p1_i0
4. Train, K.E., 2009. Discrete choice methods with simulation. Cambridge university press.
http://eml.berkeley.edu/books/choice2.html

Contingent Valuation
1. Arrow, K., Solow, R., others, 1993. Report of the NOAA panel on contingent valuation. National Oceanic and Atmospheric Administration Washington, DC.
https://edisciplinas.usp.br/pluginfile.php/4473366/mod_folder/intro/Arow_WTP.pdf
2. Hausman, J.A., 2012. Contingent valuation: A critical assessment. Elsevier.
3. Mitchell, R.C., Carson, R.T., 2013. Using surveys to value public goods: the contingent valuation method. Routledge.

Experimental Auctions
1. Klemperer, P., 2004. Auctions: Theory and Practice. Princeton University Press, Princeton.
2. Krishna, V., 2009. Auction Theory. Academic Press.
3. Lusk, J.L., Shogren, J.F., 2007. Experimental auctions: Methods and applications in economic and marketing research. Cambridge University Press.

Readings
A reading list will be given across the semester. You are expected to read those chapters/papers with asterisks. You are also responsible for the material in handouts that will be distributed in class—some supplemental papers and provided for each topic. Students may read unassigned chapters/papers at their discretion.

Topic Outline
Week 1:   Introduction to the Course (e.g., Examples, Tools and Software) and Theoretical Foundation of Valuation Method.
Week 2:   Choice Experiment Design
Week 3:   Practice of Choice Experiment Design and Manipulation of Choice Experiment Data
Week 4:   Conditional Logit Model and Interpretation of Model Results
Week 5:   Practics of Manipulation of Choice Experiment Data and Model Estimation
Week 6:   Heteroscedastic Extreme Value Model and Mixed Logit Model (MLM) and Project Proposal Presentation
Week 7:   Latent Class Model (LCM) and Practice of MLM and LCM
Week 8:   Scale Parameters, Scaled Multinomial Logit, Generalized Mixed Logit
Week 9:   Willingness to Pay Estimation (WTP), and Model in WTP Space
Week 10:   Contingent Valuation Method and Experimental Auctions

Week 11:	Journal Article Presentation 1
Week 12:	Journal Article Presentation 2
Week 13:	Journal Article Presentation 3
Week 14:	Final Project Presentation 1
Week 15:	Final Project Presentation 2
Week 16:	Final Project Presentation 3

Important Dates

Classes Begin	August 23
Classes End	December 8
Drop/Add (11:59 pm of last day)	August 23 - 27
Withdrawal with no Fee Liability (11:59 pm of last day)	August 27
Reading Day	December 9 - 10
Final Grades available	December 22
Holidays - no classes	September 6: Labor Day October 8 - 9: Homecoming November 11: Veterans Day November 24 - 27: Thanksgiving

Tentative dates	
Class Presentation (in class)	TBD
Final Project	December 18

Attendance Policy: Class attendance is expected. Students should inform the instructor of expected absences. Excessive unexcused absences will result in negative consequences.

Policy On In-Class Cell Phone Use And Text Messaging: Cell phones should be turned off or put on vibrate mode and should not be answered during class periods. Non-emergency, in-class text messaging is not acceptable.

Students Requiring Accommodations

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

Course Evaluation

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at https://gatorevals.aa.ufl.edu/students/. Students are notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at https://gatorevals.aa.ufl.edu/public-results/.

In-Class Recording

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled.

The only allowable purposes are: (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A "class lecture" is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To "publish" means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

University Honesty Policy

UF students are bound by The Honor Pledge: "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Conduct Code specifies a number of behaviors that are in violation of this code and the possible sanctions. Click here to read the Conduct Code. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Software Use

All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest

standards of honesty and integrity.

Student Privacy
There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see the Notification to Students of FERPA Rights.

Campus Resources:

Health and Wellness
U Matter, We Care: If you or someone you know is in distress, please contact umatter@ufl.edu, 352-392-1575, or visit U Matter, We Care website to refer or report a concern and a team member will reach out to the student in distress.

Counseling and Wellness Center: Visit the Counseling and Wellness Center website or call 352-392-1575 for information on crisis services as well as non-crisis services.

Student Health Care Center: Call 352-392-1161 for 24/7 information to help you find the care you need, or visit the Student Health Care Center website.

University Police Department: Visit UF Police Department website or call 352-392-1111 (or 9-1-1 for emergencies).

UF Health Shands Emergency Room / Trauma Center: For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; Visit the UF Health Emergency Room and Trauma Center website.

Academic Resources

E-learning technical support: Contact the UF Computing Help Desk at 352-392-4357 or via e-mail at helpdesk@ufl.edu.

Career Connections Center: Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services.

Library Support: Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center: Broward Hall, 352-392-2010 or to make an appointment 352- 392-6420. General study skills and tutoring.

Writing Studio: 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers.

Student Complaints On-Campus: Visit the Student Honor Code and Student Conduct Code webpage for more information.

On-Line Students Complaints: [View the Distance Learning Student Complaint Process](#).