Department of Agribusiness and Agricultural Economics
University of Manitoba

ABIZ/ECON 7950 Advanced Agricultural Demand Analysis

Fall 2022

Lectures: Tuesdays and Thursdays 10:00 am – 11:15 am, 365 Agriculture Building
Class web page: www.umanitoba.ca/umlearn

Instructor

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Office hours: Mondays 10:00 am – 11:00 am or by appointment.

Course Description

In this course we will examine theory and applications of demand systems used primarily in agricultural settings, although other markets may be explored. We will begin with consumer demand theory, restrictions, and dual relationships. A large part of the course will be devoted to understanding how and why agricultural demand is specified and used. Specification of single demand equations will include functional forms, transformations, and dynamic models. Emphasis will be placed on demand systems: Linear Expenditure System (LES), Rotterdam, Almost Ideal Demand System (AIDS), Translog, and Inverse models. The relationship between price flexibilities and price elasticities will be also discussed. Finally, we will cover discrete choice models for demand.

Course Objectives

By the end of this course students should:

- Have a thorough understanding of the underlying theory of consumer behaviour
- Develop economic intuition
- Be able to bridge theory with empirical implementation
- Comprehend the analytical procedures and empirical techniques used in consumer demand
- Be able to formulate, estimate, and test complete systems of consumer demand equations
- Be familiar with the literature of consumer demand applied to agricultural settings

Course website

Class material will be posted on UM Learn (www.umanitoba.ca/umlearn). The page provides announcements, information about the course, grades, and other pertinent information. You may also use UM Learn to submit your assignments. I strongly recommend you to check the course web site frequently during the term, especially for announcements prior to class. If you have trouble logging into UM Learn please contact the Information Services & Technology (IST) Service Desk by phone at (204) 474-8600, or by e-mail at servicedesk@umanitoba.ca.

Course Material

Materials will be drawn from various sources, including book chapters and journal articles. The book by A. Deaton and J. Muellbauer, *Economics and Consumer Behavior*, Cambridge University Press, is a highly recommended reference and contains much of the material we will cover in class. Also, your microeconomics and econometrics textbooks from previous courses may be valuable references. A reading list where you can download almost all of the material needed for class will be posted in the course website.

Course Format and Requirements

This class will meet for two instructor-guided lectures per week. Students are expected to read the course material before coming to class. Several times throughout the course students will be assigned a journal article to lead class discussion. To pass the course students are expected to complete homework assignments, a term paper, a midterm, and a final exam.

Homework Assignments

Assignments will be given throughout the term. I encourage you to work together and discuss problem sets with your classmates, but you must submit a separate assignment which must be entirely your own work. Assignments are expected to be presented in an organized and legible manner. When appropriate, you are also expected to provide economic discussion of models and interpretation of economic results. You may use the econometrics software of your choice. However, I will be most able to provide support for Stata and R, which is available in the graduate computer lab (366 Agriculture Building). Stata user manuals in pdf format are also available in the lab.

Term paper

The term paper should address a consumer demand problem using the methods discussed in class. Research problems can be identified through the readings. You are also welcome to meet with me for further discussion of your research topic. A written proposal including selected references is due on October 13. At this stage, you should focus on identifying the problem and suggesting, in general terms, what theory, procedures and data might be used. A preliminary written report with a brief in-class oral presentation is due on November 17. You should briefly revisit the motivation for the analysis, but focus on a discussion of the data, any preliminary results, and problems you are encountering with the work. In-class discussion is expected. The final paper is due on December 6. The paper should not exceed 20 pages (double spaced), including tables, figures, and references. Please proofread and spell-check your work before submitting it.

The reference and liaison librarian of the Agriculture Library, Ryan Schultz (Ryan.Schultz@umanitoba.ca) can show you resources that may be helpful to complete your term paper (and further research in general). This includes locating appropriate data sources, managing citations, or addressing any other questions you may have regarding the research process.

Exams

There will be a midterm exam and a final exam. The midterm exam will be on October 25. The final exam will be comprehensive and will take place during the final exam period.

Grading

Homework Assignments	15%	
Midterm Exam	25%	
Term paper	30%	(proposal: 6%, preliminary report: 9%, final paper: 15%)
Final Exam	30%	

Make-Up Policy

There will be NO make-up assignments/exams. Legitimate absences that are appropriately communicated will be considered on a case by case basis. Failure to write a scheduled in-class exam without submitting the appropriate form will result in a grade of zero. Late or missed homework assignments will also receive a grade of zero.

In accordance with the Self-Declaration for Brief and Temporary Absences Procedure and Policy students are not required to present medical or other documentation for absences due to extenuating circumstances of 72 hours or less; however, you must complete the form at the following link: https://umanitoba.ca/governance/sites/governance/files/2022-06/self-declaration-for-brief-and-temporary-student-absences-fillable-form-final-for-website.pdf. You must submit the form to your instructor in lieu of any medical or other documentation. Please note that further documentation may be requested from students who claim multiple temporary absences or absences for more than 72 hours. You only need to submit this form if you miss an assessment. You do not need to fill out this form if you are missing a lecture.

Class communication

All communication for the course must comply with the Electronic Communication with Students Policy, which requires the use of your university email (http://umanitoba.ca/admin/governance/governing_documents/community/electronic_communication_with_students_policy.html). Please activate your account and check your university email regularly.

Academic Integrity

All University of Manitoba guidelines for academic honesty apply in this class. Students are expected to do their own assignments and exams. Plagiarism or any other form of cheating in assignments, examinations or term tests is subject to serious academic penalty. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty (see the University of Manitoba's General Calendar for further details).

Accommodations for students with disabilities

I am available to discuss appropriate academic accommodations that may be required for students with disabilities. Requests for academic accommodations are to be made during the first three weeks of the term, except for unusual circumstances, so arrangements can be made. Students are encouraged to register with Student Accessibility Services (SAS - http://umanitoba.ca/student-supports/accessibility) to verify their eligibility for appropriate accommodations. You can contact the SAS office by phone at (204) 474-7423, or by email at student_accessibility@umanitoba.ca.

ROASS Schedule A

Schedule A of the Responsibilities of Academic Staff with regards to Students (ROASS) provides information on various University policies and resources that are available for students. Schedule A is posted on the course website. It is important that you familiarize yourself with this document.

Important dates

September 20: Last day to drop courses
September 21: Last day to add courses
September 30: National Truth and Reconciliation Day
October 10: Thanksgiving Day
October 13: Term paper proposal due
October 25: Midterm exam
November 7-10: Fall term break
November 11: Remembrance Day
November 17: Preliminary report due
November 22: Last day for voluntary withdrawal (VW)
December 6: Term paper due
December 12: Last day of classes
December 13-23: Final exam period

Course Outline and List of Readings

1. Consumer Demand Theory

Deaton, A., and J. Muellbauer. *Economics and Consumer Behavior*, Cambridge University Press, 1980, Chapters 1-2 (exclude 2.6 and 2.7).

Varian, H. *Microeconomic Analysis*, W.W. Norton & Company, Inc., Third edition, 1992, Chapters 7-8 (pages 116-131).

2. Single Equation Demand Relationships

Deaton, A., and J. Muellbauer. *Economics and Consumer Behavior*, Cambridge University Press, 1980, Section 3.1.

Ferris, J. "Measuring Demand for Domestic Consumption." Chapter 3 in *Agricultural Prices and Commodity Market Analysis*, Mc Graw-Hill, 1998.

Tomek, W., and H. Kaiser. "Demand Elasticities and Related Coefficients." Chapter 3 in *Agricultural Product Prices*, Cornell University Press, Fifth edition, 2014.

Chang, H., and H. Kinnucan. 1991. "Advertising, Information, and Product Quality: The Case of Butter." *American Journal of Agricultural Economics* 73: 1195-1203.

Hassan, Z., and S. Johnson. 1979. "The Demand for Meat in Canada: An Application of the Transform of Variables." *Canadian Journal of Agricultural Economics* 27(3): 1-12.

Tolley, G., Y. Wang, and R. Fletcher. 1969. "Reexamination of Time Series Evidence on Food Demand." *Econometrica* 37(4): 695-705.

Houck, J. 1965. "The Relationship of Direct Price Flexibilities to Direct Price Elasticities." *Journal of Farm Economics*, 47(3): 789-792.

3. Demand Systems

Deaton, A., and J. Muellbauer. *Economics and Consumer Behavior*, Cambridge University Press, 1980, Sections 3.2-3.5.

Pollak, R., and T. Wales. 1969. "Estimation of the Linear Expenditure System." *Econometrica* 37(4): 611-628.

Christensen, L., D. Jorgenson, and L. Lau. 1975. "Transcendental Logarithmic Utility Functions." *American Economic Review* 65(3): 367-383.

Eales, J., and L. Unnevehr. 1993. "Simultaneity and Structural Change in U.S. Meat Demand." *American Journal of Agricultural Economics* 75: 259-268.

Deaton, A., and J. Muelbauer. 1980. "An Almost Ideal Demand System." *American Economic Review* 70(3): 312-326.

Brester, G., and M. Wohlgenant. 1991. “Estimating Interrelated Demands for Meats Using New Measures for Ground and Table Cut Beef.” *American Journal of Agricultural Economics* 73: 1182-1194.

Kinnucan, H., H. Xiao, C. Hsia, and J. Jackson. 1997. “Effects of Health Information and Generic Advertising on U.S. Meat Demand.” *American Journal of Agricultural Economics* 79: 13-23.

4. Aggregation and Separability

Deaton, A., and J. Muellbauer. *Economics and Consumer Behavior*, Cambridge University Press, 1980, Chapter 5 and Sections 6.1-6.2.

Eales, J., and L. Unnevehr. 1988. “Demand for Beef and Chicken Products: Separability and Structural Change.” *American Journal of Agricultural Economics* 70(3): 521-532.

Moschini, G., D. Moro, and R. Green. 1994. “Maintaining and Testing Separability in Demand Systems.”*American Journal of Agricultural Economics* 76: 61-73.

Edgerton, D. 1997. “Weak Separability and the Estimation of Elasticities in Multistage Demand Systems.” *American Journal of Agricultural Economics* 79: 62-79.

Nayga, R., and O. Capps. 1994. “Tests of Weak Separability is Disaggregated Meat Products.” *American Journal of Agricultural Economics* 76: 800-808.

Hayes, D., T. Wahl, and G. Williams. 1990. “Testing Restrictions on a Model of Japanese Meat Demand.” *American Journal of Agricultural Economics* 72: 556-566.

5. Time series, Specification and Structural Change

Enders, W. *Applied Econometric Time Series*, Wiley, 2010, Chapter 4.

McGuirk, A., P. Driscoll, J. Alwang, and H. Huang. 1995. “System Misspecification Testing and Structural Change in the Demand for Meats.” *Journal of Agricultural and Resource Economics* 20(1): 1-21.

Eales, J. 1996. “A Symmetric Approach to Canadian Meat Demand Estimation.” *Journal of Agricultural and Resource Economics* 21(2): 368-380.

Moschini, G., and K. Meilke. 1989. “Modeling the Pattern of Structural Change in U.S. Meat Demand.” *American Journal of Agricultural Economics* 71: 253-261.

6. Discrete Choice Models

Train, K. *Qualitative Choice Analysis: Theory, Econometrics, and an Application to Automobile Demand*, MIT Press, 1993, Chapters 1-3.

Berry, S. 1994. “Estimating Discrete-Choice Models of Product Differentiation.” *The RAND Journal of Economics* 25: 242-262.

Goolsbee, A., and A. Petrin. 2004. “The Consumer Gains from Direct Broadcast Satellites and the Competition with Cable Television.” *Econometrica* 72: 351-381.