### **GEORGE CARROLL DAVIS**

Department of Agricultural and Applied Economics Department of Human Nutrition, Foods, and Exercise 214 Hutcheson Hall Virginia Tech University Blacksburg, VA 24061

### **EDUCATION**

- **Ph.D.** Economics, Statistics Minor, August, 1991. N. C. State University, Raleigh, North Carolina.
- M.S. Agricultural Economics, May, 1986. Clemson University, Clemson, South Carolina. B.S. Agricultural Economics, May, 1983. Clemson University, Clemson, South Carolina.

### PROFESSIONAL EXPERIENCE:

**Professor,** Department of Agricultural and Applied Economics/Department of Human Nutrition, Foods, and Exercise. Virginia Tech University (August 2007 to present). Joint research (80%) and teaching appointment (20%) in health economics and applied econometrics. Research focus involves problems related to food consumption and health, econometrics, and methodology. Teach courses in microeconomics and Food, Nutrition, and Health Economics.

**Academic Visitor.** Sabbatical at Centre of Time Use Research (CTUR). The University of Oxford. Oxford, UK. (July, 2014 – December, 2014). Worked on a textbook on food and nutrition economics and with faculty and staff at the CTUR on topics related to time use and food.

**Professor** (Assistant – Full), Department of Agricultural Economics, Texas A&M University (January 1996 to present). Joint research (65%) and teaching appointment (35%) in food demand and marketing. Research focused on problems related to food and fiber demand, econometrics, and methodology. Taught graduate courses in econometrics and advanced demand analysis.

**Assistant Professor,** Department of Agricultural Economics and Rural Sociology, University of Tennessee (July 1991 to December 1995). Areas of research: International Agricultural Trade and Marketing. Econometric modeling. Methodology.

### Some Professional Service and Awards

**Co-Editor.** *Review of Economics of the Household.* 2014-Present.

**Co-Editor.** *Journal of Agricultural and Resource Economics*. 2007-2009.

**Editorial Council**,

Applied Economics Perspectives and Policy 2009-2012.

American Journal of Agricultural Economics 2004–2007.

**AAEA Publication of Enduring Quality Award Committee** 2012-2015. Chair – 2014.

**AAEA Mentoring Program Mentor 2013-2014.** 

AAEA Bruce Gardner Memorial Prize for Applied Policy Analysis Committee 2008-2009.

**Quality of Communication Award. 2016.** Agricultural and Applied Economics Association. Awarded for the Oxford University Press 2016 book with Elena Serrano, *Food and Nutrition Economics: Fundamentals for Health Sciences*.

**Article of the Year Award. 2015.** Western Agricultural Economics Association. Awarded for article with Senarath Dharmasena and Oral Capps, Jr. "Partial and General Equilibrium Effects of a Sugar Sweetened Beverage Tax." *Journal of Agricultural and Resource Economics*. Vol. 39. No. 2. (Aug. 2014): 157-173.

**Excellence in Applied Research Award. 2014.** College of Agriculture and Life Sciences. Virginia Tech. Shared with Wen You for research on time allocation implications for SNAP effectiveness.

**Article of the Year Award**. **2011**. Agricultural and Applied Economics Association. Food Safety and Nutrition Section. Awarded for article with Wen You, "Household Food Expenditures, Parental Time Allocation, and Childhood Obesity: An Integrated Two-Stage Collective Model with an Empirical Application and Test." *American Journal of Agricultural Economics*. Vol. 92. No. 3. (April, 2010):859-872.

Co-Advisor William Preston Society Master's Thesis Gold Watch Award. 2009. Virginia Tech. Co-Advisor with Wen You for award given to Ge Zhang for her thesis "Incorporating Food-Away From Home into Thrifty Food Plan."

Major Advisor Outstanding Dissertation Award. 2006. American Agricultural Economics Association. Awarded to Wen You for her dissertation "Parental Time and Children's Obesity Measures: A Theoretical and Empirical Investigation."

Outstanding Alumnus Award. 2001. North Carolina State University. Department of Agricultural and Resource Economics.

### **Publications**

### **Books**

Davis, George C. and E. L. Serrano. Food and Nutrition Economics: Fundamentals for Health Sciences. Oxford University Press. 2016

McIntosh, Alex, George C. Davis, Rodolfo Nagya, Jr., Jenna Anding, Cruz Torres, Karen Kubena, Ernesto Perusquia, Genevieve Yeley, and Wen You. *Parental Time and Obesity*. *Novika Publishing*. 2007.

#### Articles

You, Wen and George C. Davis. "Estimating Dual Headed Time in Food Production with Implications for SNAP Benefit Adequacy." *The Review of Economics of the Household. Forthcoming* 

Davis, George C., R. Baral\*, T. Strayer\* and E. Serrano. "Using Pre- and Post-Survey Instruments in Interventions: Determining the Random Response Benchmark and Its Implications for Measuring Effectiveness." *Public Health Nutrition. Forthcoming.* 

- Grebitus, C. and G. C. Davis. "Change is Good!? Analyzing the Relationship Between Attention and Nutrition Facts Panel Modifications." *Food Policy. Forthcoming*
- Farris, A. R.\*, S. Misyak, K. Duffey, N. Atzaba-Poria, K. Hosig, G. Davis, M. McFerren, E. Serrano. "Elementary Parent Perceptions of Packing Lunches and the National School Lunch Program." *The Journal of Child Nutrition and Management*. Vol. 40. No. 1. Spring 2016.
- Yang, Yanliang\*, G.C. Davis, and M. Muth. "Beyond the Sticker Price: Including and Excluding Time in Comparing Food Prices." *The American Journal of Clinical Nutrition*. Vol. 102. No. 1 (2015): 165-171.
- Davis, George C. and A. Carlson. "The Inverse Relationship Between Food Price and Energy Density: Is It Spurious?" *Public Health Nutrition*. Vol. 18. No. 6. (April 2015):1091-97.
- Farris, A.R.\*, S. Misyak, K.J. Duffey, G.C. Davis, K. Hosig, N. Atzaba-Poria, M.M. McFerren, and E. L. Serrano. "A Comparison of Fruits, Vegetables, Sugar Sweetened Beverages, and Desserts in Packed Lunches of Elementary Children." *Childhood Obesity*. Vol. 11. No. 3. (June 2015): 275-280.
- Brenseke, B.\*, J. Bahamonde, M. Talain, E. Kornfeind, J. Daly, G. Cobb, J. Zhang, M. R. Prater, G.C. Davis, and D. J. Good. "Mitigating or Exacerbating Effects of Maternal-Fetal Programming of Female Mice Through the Food Choice Environment." *Endocrinology*. Vol. 156. No. 1. (Jan. 2015): 182-192.
- Farris, A.R.\*, S. Misyak, K.J. Duffey, G.C. Davis, K. Hosig, N. Atzaba-Poria, M.M. McFerren, and E. L. Serrano. "Nutritional Comparison of Packed and School Lunches in the Pre-Kindergarten and Kindergarten Children Following the Implementation of the 2012-2013 National School Lunch Program Standards." *Journal of Nutrition Education and Behavior*. Vol. 46. No. 6. (Nov./Dec. 2014):621-626.
- Dharmasena, S., G.C. Davis, and O. Capps. "Partial and General Equilibrium Effects of a Sugar Sweetened Beverage Tax." *Journal of Agricultural and Resource Economics*. Vol. 39. No. 2. (Aug. 2014): 157-173.
- Byker, Carmen\*, A. Farris, M. Marcenel, G.C. Davis, and E. Serrano,. "Food Waste in a School Nutrition Program After Implementation of New NSLP Guidelines." *Journal of Nutrition Education and Behavior*. Vol. 46. No. 5. (Sept./Oct. 2014):406-411.
- Davis, George C. "Food at Home Production and Consumption: Implications for Nutrition Quality and Policy." *Review of Economics of the Household.* Vol. 12. No. 3. (Sept. 2014): 565-588.
- Li, Yiran\*, B. Mills, G. C. Davis, and E. Mykerezi. "Child Food Insecurity and the Food Stamp Program: What a Difference Monthly Data Makes." *Social Service Review*. Vol. 88. No. 2. (June 2014): 322-348.
- Davis, George C. and W. You. Estimates of Returns to Scale, Elasticity of Substitution, and the Thrifty Food Plan Meal Poverty Rate From A Direct Household Meal Production Function. *Food Policy*. Vol. 43. (December 2013): 204-212.

- Baral, R.\*, G. C. Davis, E. L. Serrano, W. You, and S. Blake. "What Have We Learned About the Cost and Effectiveness of the Expanded Food and Nutrition Education Program? *Choices*. (4<sup>th</sup> Quarter 2013). Vol. 28. No. 4:1-5.
- Baral, R.\*, G. C. Davis, S. Blake, W. You, and E. L. Serrano. "Using National Data to Estimate Average Cost Effectiveness of EFNEP Outcomes by State/Territory" *Journal of Nutrition Education and Behavior*. Vol. 45. No. 2. (March-April 2013):183-187.
- Holmes, A.\*, E. L Serrano, J. E. Machin, T. Duetsch and G. C. Davis. "Effect of Different Children's Menu Labeling Designs on Family Purchases." *Appetite*. Vol. 62. No. 1. (March 2013): 198-202
- Davis, George C., J. Jacob, and D. J. Good. "Effects of Incentives and Genetics on Food Choices and Weight Phenotypes in Neuroendocrine Gene Tubby Mutant Mice." *The Open Neuroendocrinology Journal*. 5(2012):13-21.
- Holmes, A.\*, P. Estabrooks, G. C. Davis, and E. L. Serrano. "Effect of a Grocery Store Intervention on Sales of Nutritious Foods to Youth and Their Families." *Journal of American Dietetic Association*. Vol. 112. No. 6. (June 2012):897-901.
- Baral, Ranju\*, George C. Davis, and Wen You. "Consumption Time in Household Production: Implications for the Goods-Time Elasticity of Substitution." *Economics Letters*. Vol. 112. No. 2. (August 2011):138-140.
- Boyle, K. J., Davis, G., Estabrooks, P.A., Good, D.J., King-Casas, B., Marathe, A., and You, W. Translational Economics Research: Integrating Genetics, Nuerosciences, and Behavioral Sciences, *Association of Environmental and Resource Economists*, 31(1) 2011: 16-25.
- Serrano, E., M. Townsend, S. Baker, N. Franz, M. Lambur, M. Ellerbrock, K. Hosig, and G. Davis. Cost-effectiveness Model for Youth EFNEP programs: What Do We Measure and How Do We Do It? *Journal of Nutrition Education and Behavior*. Vol. 34. No. 4. (July-August 2011):295-302.
- You, Wen and George C. Davis. "Childhood Obesity: Does the Quality of Parental Time Matter?" Special Issue on "Health, Economics, and Family Role" in *Journal of Family and Economic Issues*. Vol. 32. No. 2 (June 2011):219-32.
- Davis, George C., and Wen You. "Not Enough Money or Not Enough Time to Satisfy the Thrifty Food Plan? A Cost Difference Approach for Estimating a Money-Time Threshold." *Food Policy*. Vol. 36. No. 2. (April 2011):101-107.
- Davis, George C., and Wen You. "The Thrifty Food Plan is Not Thrifty When Labor Cost is Considered." *Journal of Nutrition*. Vol. 140. No. 4. (April 2010): 854-857.
- You, Wen and George C. Davis. "Household Food Expenditures, Parental Time Allocation, and Childhood Obesity: An Integrated Two-Stage Collective Model with an Empirical Application and Test." *American Journal of Agricultural Economics*. Vol. 92. No. 3. (April, 2010):859-872.

- Davis, George C. and Wen You. "The Time Cost of Food Preparation at Home: General Population and Food Stamp Participant Profiles." *Applied Economics*. Vol. 42. No. 20. (August, 2010):2537-2552.
- Bryant, Henry and George C. Davis. "Revisiting U.S. Aggregate Meat Demand with a Bayesian Averaging of Classical Estimates Approach: Do We Need a More General Theory?" *American Journal of Agricultural Economics*. Vol. 90. No. 1: (February 2008): 103-116.
- Davis, George C. "The Significance and Insignificance of Demand Analysis in Evaluating Promotion Programs." *American Journal of Agricultural Economics*. Vol. 87. No. 3. (August 2005):673-688.
- Davis, George C. "Clarifying the 'Puzzle' Between the Textbook and LSE Approaches to Econometrics: A Comment on Cook's Kuhnian Perspective of Econometrics." *Journal of Economic Methodology*. Vol. 12. No. 1. (March 2005): 93-116.
- Davis, George C. "Rejoinder on Cook and Response to Chao: Moving the Textbook/LSE Debate Forward" *Journal of Economic Methodology*. Vol. 12. No. 1. (March 2005): 137-48.
- Davis, George C. "The Structure of Models: An Application to Theory Reduction and Testing with a Production Example." *Journal of Agricultural and Resource Economics*. Vol. 29. No. 1. (April, 2004): 65-78.
- Davis, George C. "The Generalized Composite Commodity Theorem: Stronger Support in the Presence of Data Limitations." *Review of Economics and Statistics*. Vol. LXXXV. No. 2 (May, 2003):476–480.
- Jakus, Paul M., Kim L. Jensen, and George C. Davis "Revenue Impacts of MPP Branded Funds: A Firm Level Analysis." *Agricultural and Resource Economics Review*. Vol. 32. No. 2. (October, 2003): 184-197.
- Davis, George C. and Sung-Yong Kim. "Measuring Instrument Relevance in the Single Endogenous Regressor-Multiple Instrument Case: A Simplifying Procedure." *Economics Letters*. Vol. 74. No. 3: (February, 2002):321–325.
- Siebert, John. W., George C. Davis, Kerry K. Litzenberg, and Joseph. M. Broder. "Time Allocation Decisions Associated with Job Market Preparation: Undergraduate Perceptions Versus Market Realities." *American Journal of Agricultural Economics*. Vol. 84. No. 1. (February, 2002):222–233.
- Davis, George C. and Ernesto Perusquia. "Student Numbers and Sustaining Courses and Fields in Ph.D. Programs." *Journal of Agricultural and Applied Economics*. Vol. 34. No. 3. (December, 2002):531–546.
- Park, Jaehong\* and George C. Davis. "The Theory and Econometrics of Health Information in Cross–Sectional Nutrient Demand Analysis." *American Journal of Agricultural Economics*. Vol. 83. No. 4. (November, 2001):840–851.

- Shumway, C. Richard and George C. Davis. "Does Consistent Aggregation Really Matter?" *Australian Journal of Agricultural and Resource Economics*. Vol. 45. No 2. (June, 2001): 161–194.
- Yian, Jian\*, George C. Davis, and David J. Leatham. "Impact of Interest Rate Swaps on Corporate Capital Structure: An Empirical Investigation." *Applied Financial Economics*. Vol. 11. No. 1. (February, 2001):75–81.
- Davis, George C. "A Semantic Interpretation of Haavelmo's Structure of Econometrics." *Economics and Philosophy.* Vol. 16. No. 2. (October, 2000):205–228.
- Davis, George C., and M. Cristina Espinoza. "A Unified Approach to Sensitivity Analysis in Equilibrium Displacement Models: Reply." *American Journal of Agricultural Economics*. Vol. 82. No. 1. (February, 2000):241–243.
- Davis, George C., Ni Lin and C. Richard Shumway. "Aggregation Without Separability: Tests of U.S. and Mexican Agricultural Production Data." *American Journal of Agricultural Economics*. Vol. 82. No. 1. (February, 2000):214–230.
- Davis, George C. "The Science and Art of Promotion Evaluation." *Agribusiness: An International Journal*. Vol. 15. No. 4. (Fall, 1999):465–483.
- Jensen, Kim L. and George C. Davis. "An Analysis of Export Market Strategies and Barrier Perceptions by U.S. HVP Agricultural Exporters." *International Food and Agribusiness Management Review*. Vol. 1. No. 4. (1998):509–524.
- Davis, George C., and M. Cristina Espinoza. "A Unified Approach to Sensitivity Analysis in Equilibrium Displacement Models." *American Journal of Agricultural Economics*. Vol. 80. No. 4. (November, 1998):868–879.
- Samonte–Tam\*, Giselle P.B. and George C. Davis. "Economic Analysis of Stake and Rack Hanging Methods of Farming Oysters in the Philippines." *Aquaculture*. Vol. 160. No. 3–4. (January, 1998):239–249.
- Flemmings, Jon Ann\*, Kim L. Jensen, and George C. Davis. "A Study of Export Assistance Needs of U.S. HVP Agricultural Exporters." *Journal of International Food and Agribusiness Marketing*. Vol. 9. No. 3. (1997):21–40.
- Davis, George C. "The Logic of Testing Structural Change in Meat Demand: A Methodological Analysis and Appraisal." *American Journal of Agricultural Economics*. Vol. 79. No. 4. (November, 1997):1186–1192.
- Adams, Barry H., George C. Davis, Kim L. Jensen, and Paul M. Jakus. "Priorities and Preferences in the Allocation of MPP Branded Funds." *American Journal of Agricultural Economics*. Vol. 79. No. 4. (November, 1997):1319–1331.
- Adams, Barry H.\*, Kim L. Jensen, and George C. Davis. "Knowledge and Use of Export Assistance Services by Agribusiness." *Agribusiness: An International Journal*. Vol. 13. No. 3. (May/June, 1997):285–294.

- Davis, George C. "Product Aggregation Bias as a Specification Error in Demand Systems." *American Journal of Agricultural Economics*. Vol. 79. No. 1. (February, 1997):100–109.
- Davis, George C., and C. Richard Shumway. "To Tell the Truth About Interpreting the Morishima Elasticity of Substitution." *Canadian Journal of Agricultural Economics*. Vol. 44. No. 2. (July, 1996):173–182.
- Davis, George C., and William J. Hewitt. "Measuring the Quality of Imported Tobacco." *Journal of Agricultural and Applied Economics.* Vol. 28. No. 1. (July, 1996):148–158.
- Davis, George C., and Jean Gauger. "Measuring Substitution in Monetary Asset Demand Systems." *Journal of Business and Economic Statistics*. Vol. 14. No. 2. (April, 1996):203–208.
- Davis, George C. "Product Differentiation and Representative Agent Import Demand Systems: A Reconsideration and Reconciliation." *Canadian Journal of Agricultural Economics*. Vol. 43. No. 1. (March, 1995):149–164.
- Davis, George C., and Kim L. Jensen. "Two-Stage Utility Maximization and Import Demand Systems Revisited: Limitations and an Alternative." *Journal of Agricultural and Resource Economics*. Vol. 19. No. 2. (December, 1994):409–421.
- Davis, George C. "Christmas Tree Consumption: A Review of the Research." *American Christmas Tree Journal.* Vol. 38. No. 1. (July, 1994):54–57.
- Davis, George C., and Nancy C. Kruse. "Consistent Estimation of Armington Demand Models." *American Journal of Agricultural Economics.* Vol. 75. No. 3. (August, 1993):719–723.
- Davis, George C., and Michael K. Wohlgenant. "Demand Elasticities from a Discrete Choice Model: The Natural Christmas Tree Market." *American Journal of Agricultural Economics*. Vol. 75. No. 3. (August, 1993):730–738.
- Davis, George C. "Consumers' Species Knowledge and the Value of Christmas Tree Characteristics." *Journal of Agricultural and Applied Economics*. Vol. 25. No. 1. (July, 1993):266–277.
- Davis, George C., Michael E. Hammig, and C. Parr Rosson. "European Community Soybean Market Response to Proposed Vegetable Oils Tax." *Atlantic Economic Journal*. Vol. XV. No. 1. (December, 1987):100.

### External Funding (past 5 years)

Food Acquisitions, the Thrifty Food Plan, and Benefit Adequacy for SNAP Participants (July, 2016 – Dec. 2017)

Sponsor: University of Kentucky Poverty Research Center and USDA

Amount: \$47,846

Involvement: Co-Principle Investigator with Wen You

Cost Effectiveness of the Virginia SNAP-Ed program. (Aug. 2013 – Aug. 2014)

Sponsor: Virginia Cooperative Extension Service.

Amount: \$34,000 Involvement: PI

Maternal Nutrition and Offspring Predisposition to Development of Metabolic Disease: Mitigating or Exacerbating the Effects of Fetal Programming Through the Choice Environment (Aug. 2011 – May 2013)

Sponsor: Institute for Society, Culture, and Environment and Fralin Life Science Institute,

Virginia Tech

Amount: \$15,000

Involvement: Co-Principal Investigator with Debby Good and Renee Prater

The Impact of Household Labor Market Shocks on Child Food Insecurity (Aug. 2011 – July 2012).

Sponsor: University of Kentucky Center for Poverty Research

Amount: \$71,821

Involvement: Co-Principal Investigator with Brad Mills

Cost Effectiveness of Nutrition Education Programs for Limited Resource Youth (Dec. 2008-Dec. 2011).

Sponsor: USDA NRI Human Nutrition and Obesity

Amount: \$628,097

Involvement: Co-Principal Investigator

### Recent Invited Presentations (past 5 years):

Yang, Yanliang\*, George C. Davis, and Wen You. "Measuring Food Expenditure Poverty in SNAP Populations: Some Extensions with an Application to the American Recovery and Reinvestment Act." University of Florida. Gainesville, FL. Oct. 13, 2017.

Grebitus, Carola and George C. Davis. "Does the New Nutrition Facts Panel Help Compensate for Low Numeracy Skills? An Eye-Tracking Analysis." *Agricultural and Applied Economics Association Meetings*. Chicago, IL. July 31- Aug 2. 2017.

You, Wen and George C. Davis. "Estimating Dual Headed Time in Food Production with Implications for SNAP Benefits." Washington State University. Pullman, WA. April 21, 2017.

Davis, George C. and Elena L. Serrano. "Cognitive Load and Neuro-economics: Implications for Food Consumption and Health." *Deans Lecture Series*. Utah State University. Logan, UT. Nov. 11, 2016.

You, Wen and George C. Davis. "Estimating Dual Headed Time in Food Production with Implications for SNAP Benefits." University of Newcastle, UK. Dec. 8, 2014.

You, Wen and George C. Davis. "Estimating Dual Headed Time in Food Production with Implications for SNAP Benefits." University of Oxford, UK. Nov. 27, 2014.

- Davis, George C. "Direct Household Meal Production Function Estimation: Returns to Scale, Elasticity of Substitution, and Poverty Thresholds." University of Melbourne, Australia. July 24, 2013.
- Davis, George C. "Direct Household Meal Production Function Estimation: Returns to Scale, Elasticity of Substitution, and Poverty Thresholds." La Trobe University, Australia. July 25, 2013.
- Davis, George C. "Direct Household Meal Production Function Estimation: Returns to Scale, Elasticity of Substitution, and Poverty Thresholds." Monash University, Australia. July 26, 2013.
- Davis, George C. "Money or Time: Which is More Important for a Nutritious Diet and Public Policy?" American Public Health Association Meetings. San Francisco, CA. October, 29. 2012.
- You, Wen and George C. Davis. "Understanding Conflicting and Compatible Incentives for Retailers in Promoting Healthy Eating." Paper presented at American Agricultural and Applied Economics meeting. Seattle, WA. July, 2012.
- Davis, George C. "Is Time More Important Than Money? Implications for Nutritional Policy of Ignoring Time" Presentation made at Workshop for the Committee on Examination of the Adequacy of Food Resources and SNAP Allotments. Food and Nutrition Board. Institute of Medicine. The National Academies. Washington, DC. March 28, 2012.
- Davis, George C. "What is the Full Cost of a Meal? Implications for Nutritional Quality and Policy" Virginia Dietetic Association 83<sup>rd</sup> Annual Meeting. Blacksburg, VA. March 26, 2012.

### Current Classes Taught at Virginia Tech

**Food and Health Microeconomics, AAEC 6214. Ph.D. Level.** Microeconomics of food and health. Overview of nutrition recommendations and implications for economic decisions. Individual and household food consumption and health production models. Farm to consumer market linkage models with nutrition and health implications.

### Advanced Food, Nutrition, and Health Economics, AAEC 5814. M.Sc. level.

Microeconomics of food and health. Overview of nutrition recommendations and implications for economic decisions. Individual and household food consumption and health production models. Farm to consumer market linkage models with nutrition and health implications. Costbenefit and cost effectiveness analysis.

### Food, Nutrition, and Health Economics, AAEC 4814. B.S. level.

Microeconomics of food and health. Overview of nutrition recommendations and implications for economic decisions. Individual and household food consumption and health production models. Farm to consumer market linkage models with nutrition and health implications. Costbenefit and cost effectiveness analysis.