



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

The Joy of Cooking? Analysis of Well-Being in Food Activities and Implications for Nutrition Policies

Yu Sun (ruthsun@vt.edu)

Department of Agricultural and Applied Economics, Virginia Tech

Wen You (wenyou@vt.edu)

Department of Agricultural and Applied Economics, Virginia Tech

George C. Davis (georgedavis@vt.edu)

Department of Agricultural and Applied Economics, Virginia Tech

Selected Paper prepared for presentation at the 2017 Agricultural & Applied Economics Association Annual Meeting, Chicago, Illinois, July 30-August 1

Copyright 2017 by [authors]. All rights reserved. Readers may make verbatim copies of this document for non-commercial purposes by any means, provided that this copyright notice appears on all such copies.

The Joy of Cooking? Analysis of Well-Being in Food Activities and Implications for Nutrition Policies

Yu Sun; Wen You, PhD; George C. Davis, PhD

Department of Agricultural and Applied Economics, Virginia Tech

1. Introduction

- Food habits have been shifting away from home-prepared food over the last several decades.
- FAFH contains relatively higher saturated fat, calories and sodium density relative to home foods.¹
- FAH have been found to be associated with healthier dietary intakes
- A healthy eating pattern is an effective strategy for improving health.
- Studies also show that SNAP participants choose more low-quality food relative to non-participants.²
- Process benefits: direct effect on utility from engaging an activity.
- Attitudes³, level of satisfaction⁴ and joy⁵ influence the time allocation

2. Objectives

- To determine associations between certain demographic and process benefits in food production.
- Specifically, do process benefits differ by variables that determine SNAP eligibility?

3. Data

- The Well-being (WB) Module of American Time Use Survey (ATUS): feelings of three randomly selected activities ("happy", "meaningful", "tired", "stressed", "sad" and "pain")⁶.

1). U-indicator: identify most intense feeling for each episode
 U-indicator=1 if Max (Stress, Tiredness, Pain, Sad) > Max (Happy, Meaningful)
 =0 otherwise

2). U-index: weighting the U-indicator with the duration of each activity over the total time related to food-related activities during the day for that individual⁷

$$U - index = U - indicator \times \frac{duration}{totaltime}$$

3). U-intensity: intensity of two often dominant negative feelings: stress and tiredness.

4. Conceptual Framework

Maximize utility function

$$U = U(Z, t_f, t_w, t_i; D_i, D_h)$$

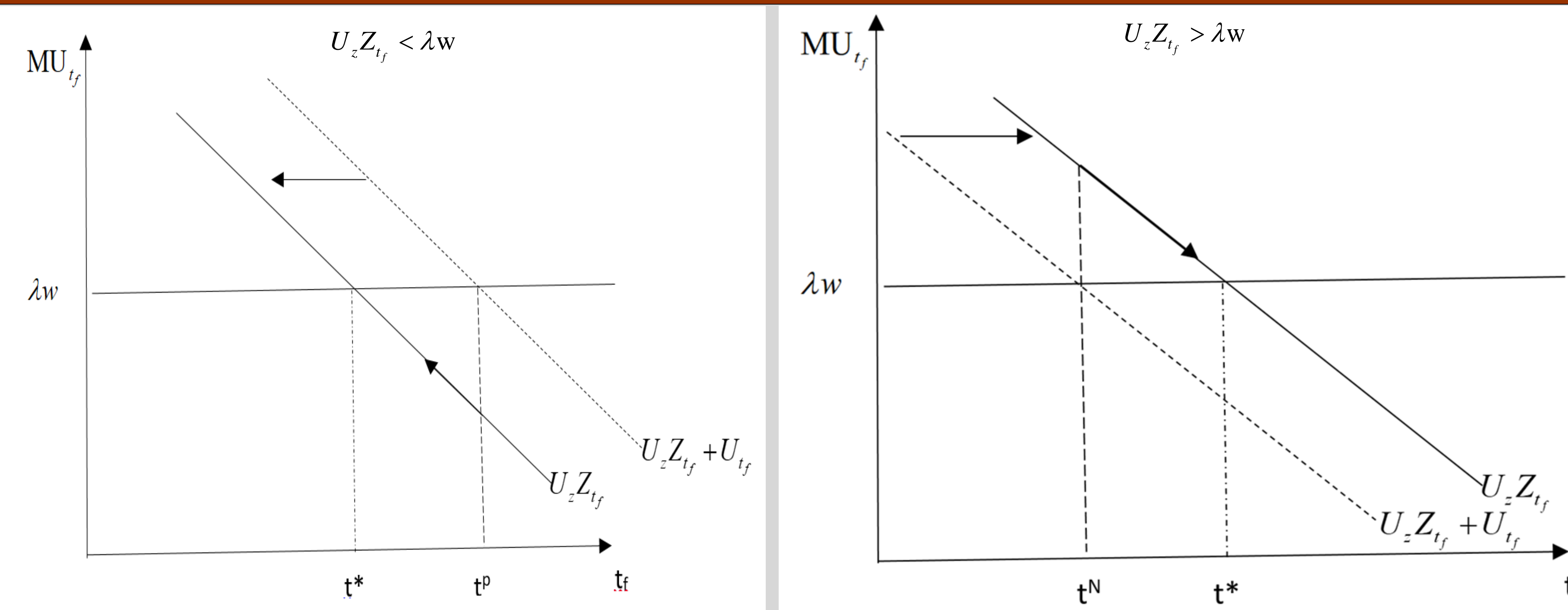
Subject to

$$Z = Z(x_f, t_f; D_z)$$

$$wT + I = px_f + wt_f + wt_i$$

The First order condition w.r.t t_f :

$$U_z Z_{t_f} + U_{t_f} = \lambda w$$



5. Empirical Approach

Latent model specification

$$G(X; \beta) = \beta_0 + \beta_1 AGE + \beta_2 AGE^2 + \beta_3 MALE + \beta_4 WHITE + \beta_5 ASIAN + \beta_6 OTHERRACE + \beta_7 LOWINCOME + \beta_8 HIGHSCHOOL + \beta_9 COLLEGE + \beta_{10} MARRIED + \beta_{11} WIDOWED + \beta_{12} DIVORCED + \beta_{13} BREAKFAST + \beta_{14} DINNER + \beta_{15} WEEKEND + \beta_{16} HOUSEHOLDSIZE + \beta_{17} KIDS + \beta_{18} WITHFAMILY + \beta_{19} WITHOTHER + \beta_{20} YEAR 2012 + \beta_{21} YEAR 2013$$

6. Results

Table1. Average marginal effects of fractional logit modeling the relationship between u-index and demographic and socioeconomic factors. Dependent variable is U-index.

| Variable | One Activity of food and drink preparation, presentation and clean up | Two activities of food and drink preparation, presentation and clean up | One activity of food purchasing |
|-----------------------|---|---|---------------------------------|
| Age | -0.0004*** (0.0001) | -0.0005*** (0.0002) | -0.0004 (0.0002) |
| Male | -0.0049 (0.0031) | -0.0099*** (0.0038) | -0.0062 (0.0075) |
| White | 0.0039 (0.0040) | 0.0066 (0.0051) | 0.0237*** (0.0077) |
| Income <\$50000 | 0.0076** (0.0033) | -0.0024 (0.0044) | 0.0046 (0.0079) |
| Married | -0.0075* (0.0044) | -0.0051 (0.0059) | -0.0205* (0.0106) |
| If time for breakfast | -0.0093** (0.0041) | 0.0053 (0.0067) | -0.0203 (0.0190) |
| If time for dinner | 0.0109*** (0.0034) | 0.0063 (0.0043) | 0.0268** (0.0115) |
| If weekend | -0.0046* (0.0028) | 0.0020 (0.0038) | 0.0077 (0.0072) |
| Household size | 0.0013 (0.0020) | -0.0082** (0.0036) | -0.0044 (0.0051) |
| With family | -0.0117*** (0.0032) | -0.0046 (0.0044) | -0.0141* (0.0077) |
| With other people | -0.0181*** (0.0044) | -0.0082 (0.0057) | -0.0166* (0.0097) |

Table2. Average marginal effects of Logit regression for the relationship between u-index and demographic and socioeconomic factors. Dependent variable is U-indicator.

| Variable | One Activity of food and drink preparation, presentation and clean up | Two activities of food and drink preparation, presentation and clean up ^a | One activity of food purchasing |
|-----------------------|---|--|---------------------------------|
| Age | -0.0009** (0.0004) | -0.0018*** (0.0007) | -0.0016* (0.0009) |
| Male | -0.0381*** (0.0087) | -0.0502*** (0.0189) | -0.0270 (0.0242) |
| White | 0.0324*** (0.0112) | 0.0325 (0.0264) | 0.0563* (0.0295) |
| Asian | 0.0486* (0.0252) | -0.0299 (0.0460) | -0.0493 (0.0498) |
| Married | -0.0409*** (0.0137) | -0.0363 (0.0302) | -0.0398 (0.0343) |
| If time for breakfast | -0.0344*** (0.0118) | 0.0056 (0.0244) | -0.0882* (0.0490) |
| If time for dinner | 0.0425*** (0.0099) | 0.0336* (0.0199) | 0.0567* (0.0334) |
| If weekend | -0.0152* (0.0084) | 0.0140 (0.0185) | 0.0039 (0.0239) |
| With family | -0.0505*** (0.0096) | -0.0186 (0.0198) | -0.0528* (0.0287) |
| With other people | -0.0780*** (0.0130) | -0.0467 (0.0293) | -0.0596* (0.0317) |
| Duration | -0.0259** (0.0108) | -0.1062*** (0.0244) | 0.0090 (0.0211) |

7. Discussion

Extra efforts are needed to help the participants to reach the policy target time

- Nutrition education program
 It should provide information on local fresh produce procurement or new recipes for individuals with positive process benefits and motivate home production, providing information on health benefits of home food for individuals with negative process benefits
- Involving friends or family members in activities related to food production is an effective strategy to promote the process benefits and healthier intakes.

8. Conclusions

- Individuals with different demographic characteristics may receive different process benefits from activities related to home food productions
- This study provides explanations that why policy target time could not be reached for programs like SNAP. People with negative process benefits tend to spend less time than the policy target time simply because they don't like cooking.

References

- Polsky, Jane Y, Rahim Moineddin, James R Dunn, Richard H Glazier, and Gillian L Booth. 2016. 'Absolute and relative densities of fast-food versus other restaurants in relation to weight status: Does restaurant mix matter?', *Preventive Medicine*, 82: 28-34.
- Mancino, Lisa, and Joanne Guthrie. 2014. 'SNAP households must balance multiple priorities to achieve a healthful diet', *Amber Waves*: 1D
- Reynolds, Crask et al. 1977, Blaylock and Smallwood 1987, Mahon, Cowan et al. 2006
- Davies, Gary, and Omer Omer. 1996. 'Time allocation and marketing', *Time & Society*, 5: 253-68.
- Bowen, Sarah, Sinikka Elliott, and Joslyn Brenton. 2014. 'The joy of cooking?', *Contexts*, 13: 20-25.
- <https://www.bls.gov/tus/wbdatafiles.htm>
- Krueger, Alan B, Daniel Kahneman, David Schkade, Norbert Schwarz, and Arthur A Stone. 2009. 'National time accounting: The currency of life.' in, *Measuring the subjective well-being of nations: National accounts of time use and well-being* (University of Chicago Press).

More information

Presenting author: George C. Davis
georgedavis@vt.edu

Presented at: the Agricultural & Applied Economics Association Annual Meeting, Chicago, IL, July 30-August 1, 2017