

Supplemental Appendix

Modifications to the Healthy Eating Index

USDA's 1995 Healthy Eating Index (HEI) awards 10 points maximum for each consuming various servings of the following food groups: grains, vegetables, fruits, dairy, and protein.

Table A1 shows the scoring system used by the 1995 HEI (Bowman, Gerrior, and Basiotis 1998) as modified by the authors to accommodate the 1936 and 1952 surveys' meal data.

Specifically, we had to assume that if an item was offered at a meal, one serving would have been eaten at that meal as we did not have information on how many servings of a dish were eaten. To the extent that individuals ate more than one serving of a specific dish, our measure would underestimate the true HEI score. To the extent that individuals did not partake of a specific dish, or ate less than a single serving, our measure will overestimate the true HEI score.

Table A1. Healthy Eating Index (HEI) Scoring System

Food Group	Range of score on what was offered over the course of the three meals	Criteria for a Perfect Score	Criteria for Score of 0
Grains	0-10 (e.g., 3 offered grains over the course of the day would get a score of 5)	6	0
Vegetables	0-10 (e.g., 1 vegetable offered over the course of the day would get a score of 3.3, 2 would get a score of 6.7)	3	0
Fruits	0-10 (e.g., 1 fruit offered over the course of the day would get a score of 5)	2	0
Milk	0-10 (e.g., 1 milk offered over the course of the day would get a score of 5)	2	0
Meat	0-10 (e.g., 1 meat offered over the course of the day would get a score of 5)	2	0

Estimation of the Instrumental Variables and Reduced Form Models

Although the tests reveal no support for the supposition that homemakers' food time is endogenous with diet quality, we present the instrumental variables and reduced form models here for completeness. The instruments used are the variables hypothesized to affect homemakers' food-related time by shifting preferences. They are: (1) hours spent in food-related activities by other household members on the diary day, (2) number of minor children in the home, (3) the presence/absence of other adults (beyond the homemaker and the spouse) in the home, and (4) whether 3+ hours per week is spent baking (1936 only). Wald tests indicate that these instruments are strong for both the 1936 data (Wald $\chi^2=20.10$, critical value 5.44) and the 1952 data (Wald $\chi^2=7.06$, critical value 6.46). The independence of the instruments is also confirmed in both years for both measures of diet quality.¹ The resulting estimates for both the instrumental variables models and the reduced form models are presented in Tables A2 and A3.

¹ Independence of the instruments is confirmed by a statistically insignificant χ^2 . The Basman test statistics are as follows: HEI in 1936 $\chi^2=1.42$, $p=0.24$, *Variety of food served in 1936*, $\chi^2=0.57$, $p=0.64$, HEI in 1952 $\chi^2=0.82$, $p=0.45$, *Variety of food served in 1952*, $\chi^2=0.24$, $p=0.78$.

Table A2. 1936 LIML and Reduced Form Diet Quality Parameter Estimates (t ratios in parentheses)

Independent Variables	Number of Different Foods Prepared for Meals		Modified Healthy Eating Index	
	LIML Model	Reduced Form Model	LIML Model	Reduced Form Model
Intercept	5.74 (7.73)**	6.02 (10.13)**	22.18 (10.86)**	22.56 (14.39)**
Homemaker's Hours Spent in Food-Related Activities on Diary Day	0.18 (0.93)	---	0.48 (0.89)	---
Homemaker has a Driver License	-0.32 (-1.48)	-0.34 (-1.57)	-1.12 (-1.97)**	-1.16 (-2.02)**
May Interview	0.44 (1.59)	0.45 (1.62)	1.26 (1.71)*	1.28 (1.73)*
Grocery Store Less than 2 Miles Away	-0.10 (-0.45)	-0.08 (-0.38)	0.51 (0.88)	0.46 (0.79)
Baker's Wagon Comes to Door	0.36 (1.48)	0.33 (1.37)	0.59 (0.92)	0.63 (0.97)
Dairy Farm	-0.44 (-1.85)*	-0.46 (-1.93)*	-0.46 (-0.73)	-0.58 (-0.92)
Homemaker Works on Farm > 2 Hrs/Day	-0.53 (-1.92)*	-0.55 (-1.97)**	-1.26 (-1.72)*	-1.26 (-1.71)*
Financial Wealth in Lowest Survey Quartile	-0.42 (-1.83)*	-0.65 (-2.76)**	-0.99 (-1.62)	-1.02 (-1.66)*
Number of Rooms	0.07 (1.72)*	0.07 (1.80)*	-0.01 (-0.14)	-0.02 (-0.21)
Electric Lights	0.08 (0.33)	0.06 (0.24)	0.44 (0.72)	0.39 (0.63)
Refrigerator	0.99 (3.11)**	0.95 (2.95)**	1.50 (1.78)*	1.43 (1.69)*
Multiple Cooking Fuels	0.20 (0.95)	0.18 (0.84)	0.14 (0.25)	0.15 (0.26)

Kitchen Sink with a Drain	0.61 (2.01)**	0.61 (2.02)**	1.69 (2.12)**	-1.70 (-2.12)**
Homemaker Age >40	-0.24 (-1.05)	-0.22 (-0.96)	-1.54 (-2.61)**	-1.31 (-2.16)**
Homemaker's Education \geq 12 yrs	0.57 (2.31)**	0.55 (2.24)**	0.50 (0.77)	0.55 (0.85)
Hrs/Day Spent in Food-Related Activities by Other Household Members	---	-0.00 (-0.36)	---	-0.00 (-0.46)
Baking Time 3+ Hrs./Wk	---	0.19 (0.85)	---	0.15 (0.25)
Number of Minor Children	---	0.07 (1.01)	---	0.25 (1.41)
Adult(s) Other than Homemaker/Spouse Live in Home	---	0.19 (0.86)	---	0.96 (1.62)
Missing Breakfast	-2.82 (-4.54)**	-2.78 (-4.47)**	-6.77 (-4.13)**	-6.58 (-4.00)**
Missing Noonday Meal	-1.38 (-4.15)**	-1.40 (-4.17)**	-3.96 (-4.53)**	-3.98 (-4.50)**
Missing Supper	-1.42 (-3.82)**	-1.45 (-3.87)**	-3.38 (-3.44)**	-3.33 (-3.38)**
Adjusted-R ²	.18	.18	.12	.12
F Statistic	6.23**	5.55**	4.32**	3.82**

*p<.10 **p<.05

Table A3. 1952 LIML and Reduced Form Diet Quality Parameter Estimates (t ratios in parentheses)

Independent Variables	Number of Different Foods Prepared for Meals		Modified Healthy Eating Index	
	LIML Model	Reduced Form Model	LIML Model	Reduced Form Model
Intercept	10.25 (8.85)**	11.09 (11.48)**	30.85 (10.85)**	32.63 (13.50)**
Homemaker's Hours Spent in Food-Related Activities on Diary Day	0.37 (1.42)	---	0.61 (1.03)	---
Homemaker has a Driver License	0.32 (0.90)	0.31 (0.86)	0.73 (0.82)	0.70 (0.78)
Lives in Town	-0.13 (-0.18)	-0.16 (-0.21)	2.30 (1.24)	1.81 (0.96)
May/June Interview	0.39 (0.64)	0.40 (0.65)	-0.15 (-0.10)	0.06 (0.04)
Homemaker's Hours of Paid Work on Diary Day	-0.07 (-1.16)	-0.07 (-1.16)	-0.29 (-1.99)**	-0.28 (-1.92)*
Homemaker Works on Farm > 2 Hrs/Day	-0.16 (-0.27)	-0.16 (-0.25)	-0.32 (-0.20)	-0.52 (-0.33)
Number of Rooms	0.01 (0.74)	0.05 (0.59)	0.38 (1.85)*	0.40 (1.88)*
Refrigerator with a Freezer	1.00 (2.00)**	0.97 (1.93)*	2.77 (2.20)**	2.75 (2.18)**
Electric Mixer	0.55 (1.48)	0.54 (1.43)	1.70 (1.82)*	1.74 (1.86)*
Pressure Cooker	0.29 (0.90)	0.27 (0.83)	1.88 (2.34)**	1.88 (2.32)**
Homemaker Age >40	-0.74 (-2.24)**	-0.72 (-2.01)**	-3.79 (-4.55)**	-3.65 (-4.10)**
Hrs/Day Spent in Food-Related Activities by Other Household Members on the		-0.00 (-0.53)		-0.02 (-1.45)

Diary Day				
Number of Minor Children		0.13 (0.99)		0.14 (0.43)
Adult(s) Other than Homemaker/Spouse Live in Home		0.29 (0.70)		-0.57 (-0.54)
Missing Noonday Meal	-3.25 (-5.35)**	-3.26 (-5.29)**	-9.58 (-6.25)**	-9.89 (-6.42)**
Missing Supper	-3.00 (-3.22)**	-3.08 (-3.26)**	-8.15 (-3.45)**	-8.64 (-3.65)**
Adjusted-R ²	.24	.23	.35	.35
F Statistic	7.06**	5.95**	11.13**	9.68

*p<.10 **p<.05