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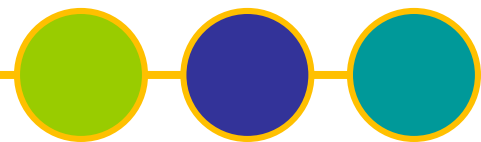
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The Effect of China's Family Structure on Household Nutrition

Yan Wang, Thomas I. Wahl, Junfei Bai, James L. Seale, Jr.

Selected Paper prepared for presentation at the International Agricultural Trade Research Consortium's (IATRC's) 2017 Annual Meeting: Globalization Adrift, December 3-5, 2017, Washington, DC.

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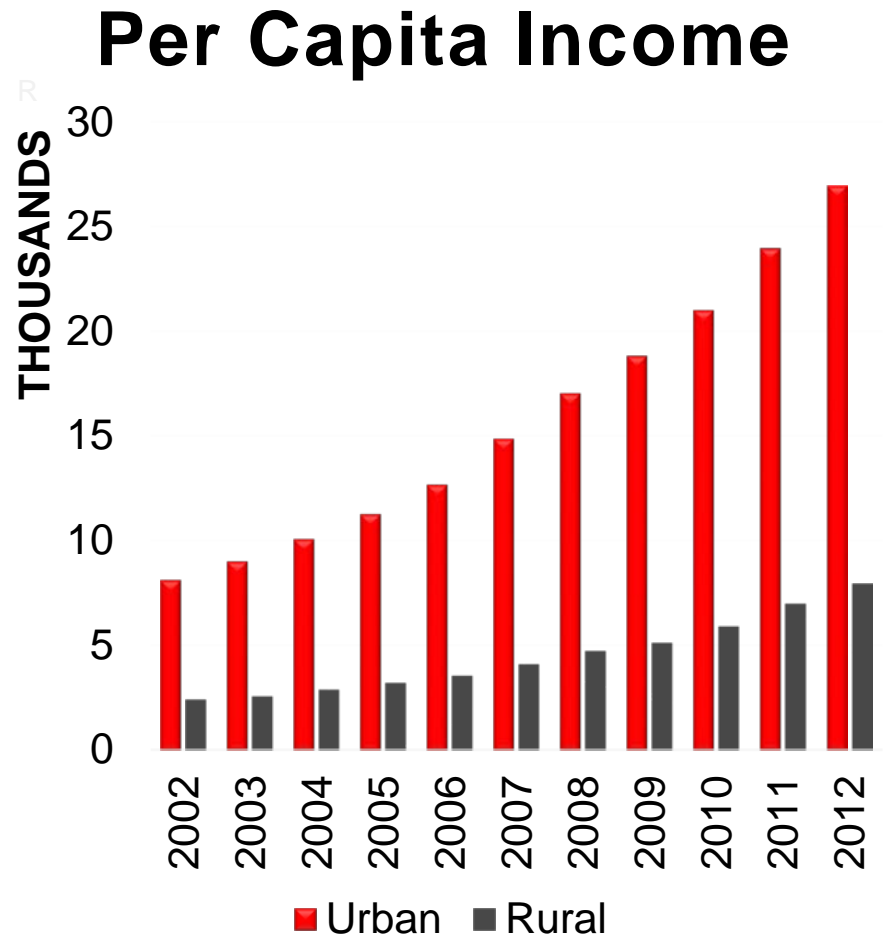
**Yan Wang, Thomas I. Wahl, Junfei
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Presented at IATRC, Washington DC 12/5/17

Introduction

- 1.3 Billion population
- China's growing economy and emerging middle class
- Urban vs. rural
- 40% of income on food



Introduction

2015 Global Nutrition Report:
850 million Chinese overweight

- Eating too much?
- Unhealthy diet?

China's one-child policy and
emphasis on the family

- More or “better” food?
- Little Kings?
- Extended family?



Research Questions?

Are Chinese consumers eating healthy?

Does having a child or seniors in the HH affect the type and amount of food consumed?



Healthy Eating

Develop a measure of eating healthy

- Eating Healthy Index (EHI)

Household survey data



Data

- Diary-based household survey, 2007-2012
 - 11 cities
 - Approximately 200 households from each city
 - 3-meal/7-day diary record
 - 2342 households



China's Compilation of Food-Based Dietary Guidelines

Chinese Nutrition Society recommendations

- Eat a variety of foods
- Consume milk, beans or dairy- or bean-products every day
- Consume vegetables, fruits and tubers
- Consume appropriate amounts of fish, poultry, eggs and lean meat



Chinese Dietary Guidelines

Component	Recommended	Mean
Meat	50g-75g	62.5
Fruit	200g-400g	300
Vegetables	300g-500g	400
Seafood	75g-100g	87.5
Dairy	≥300g	300
Grain	250g-400g	325
Eggs	25g-50g	37.5

Eating Healthy Index, S_i

$$EHI: S_i = \alpha |Q_i - M_i| + \beta$$

Where:

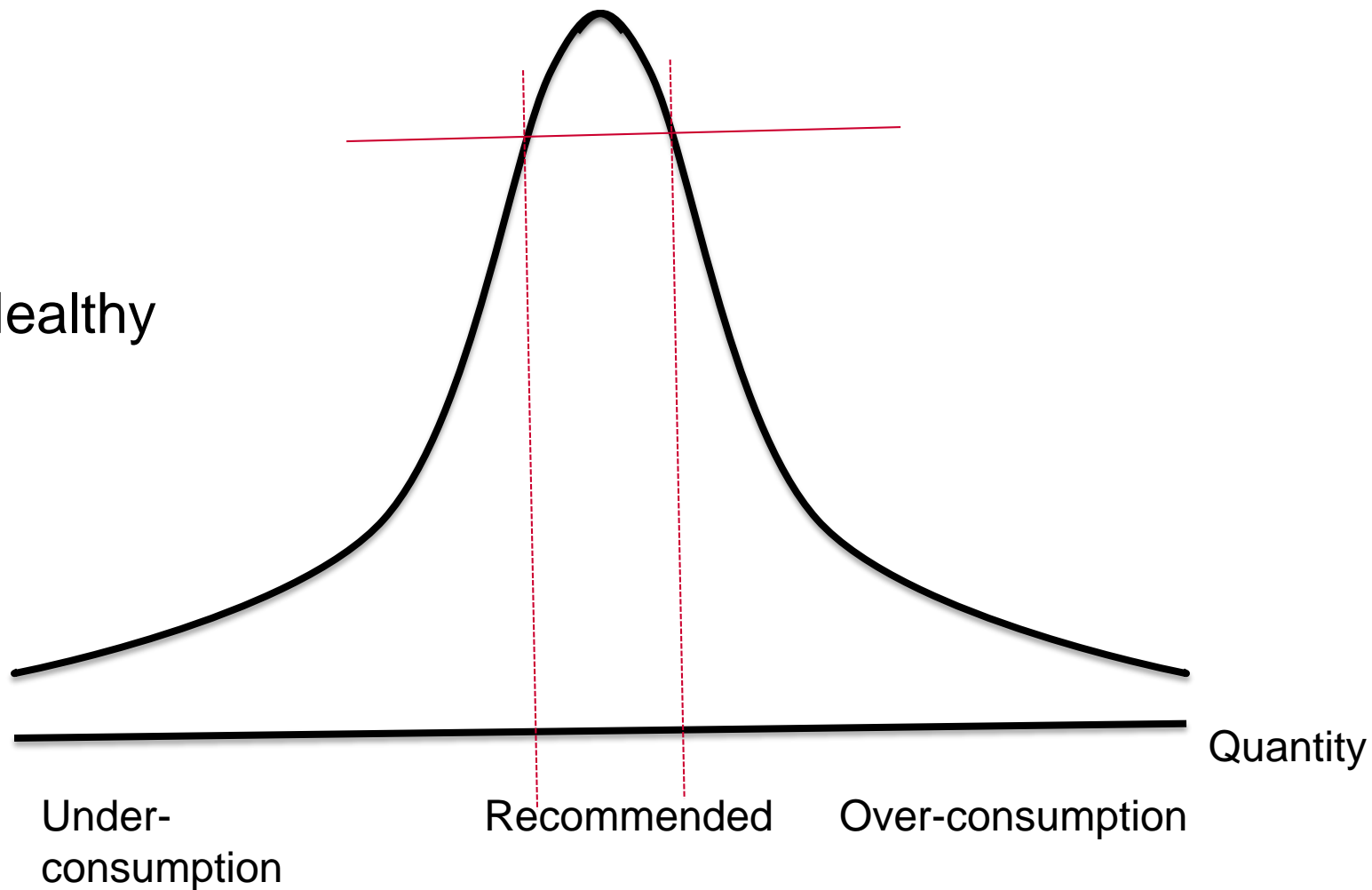
Q_i = household consumed and

M_i = mean of the standard range

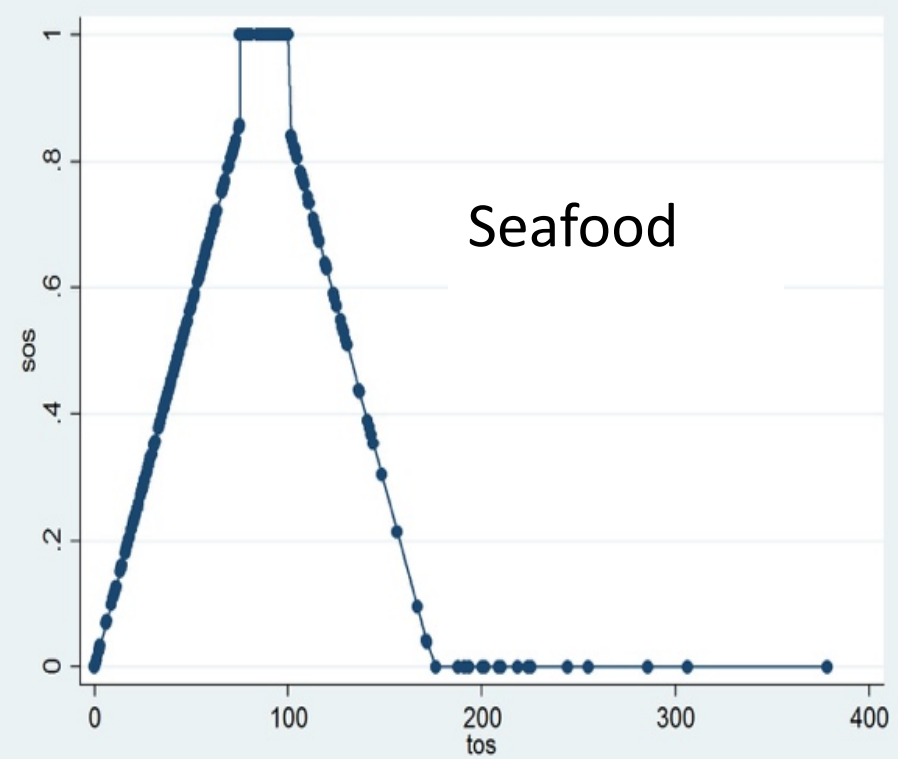
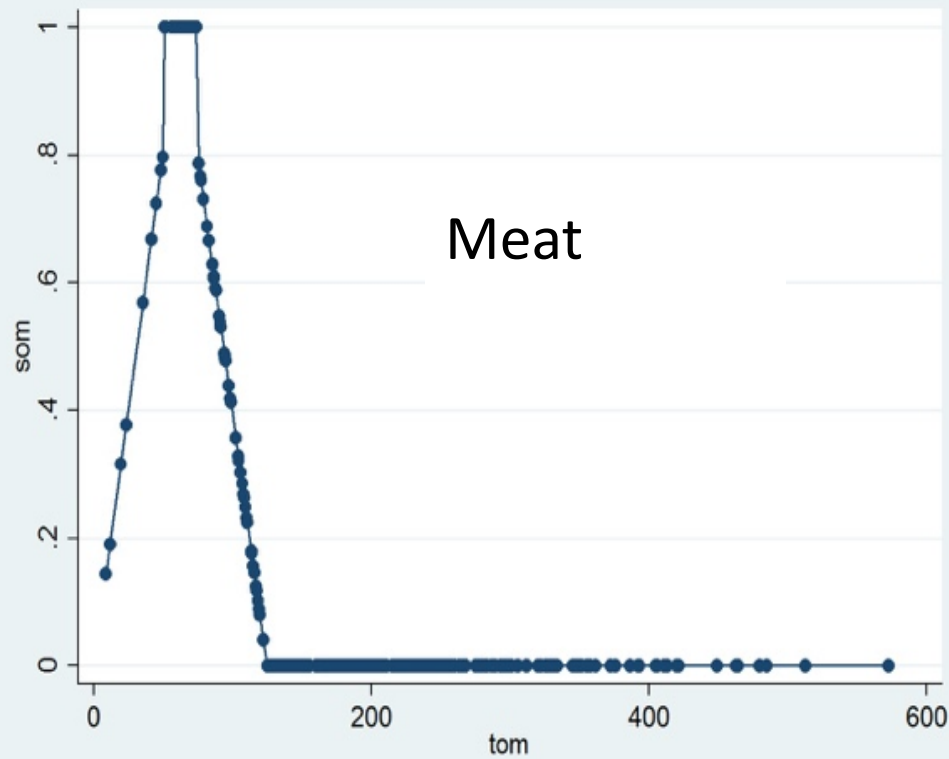
α = scaling coefficient

β = constant

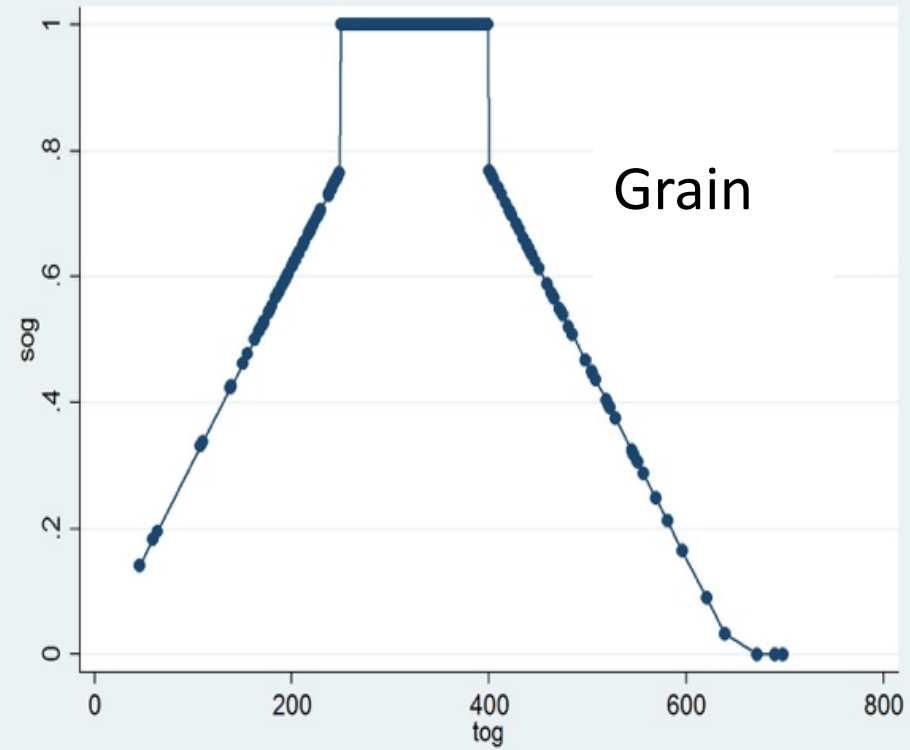
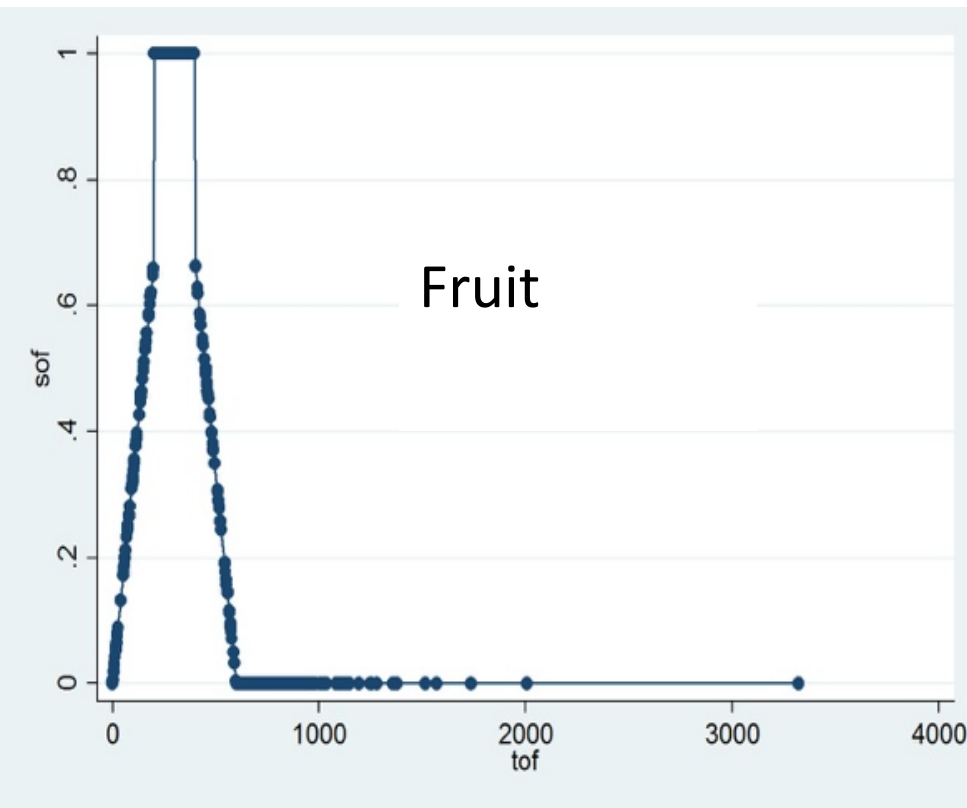
Eating Healthy
Index



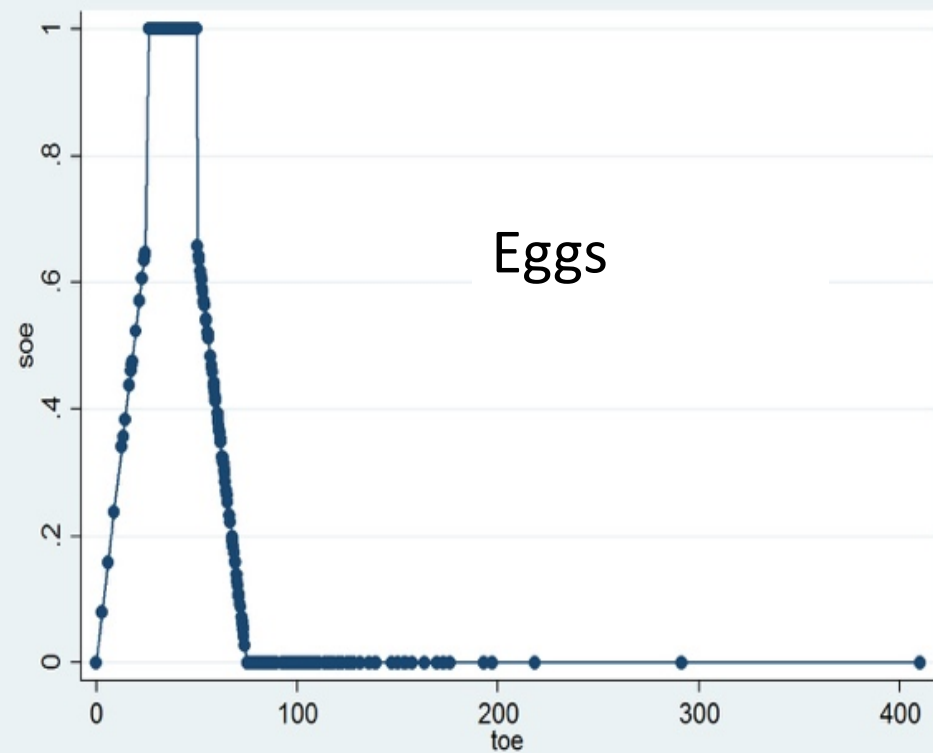
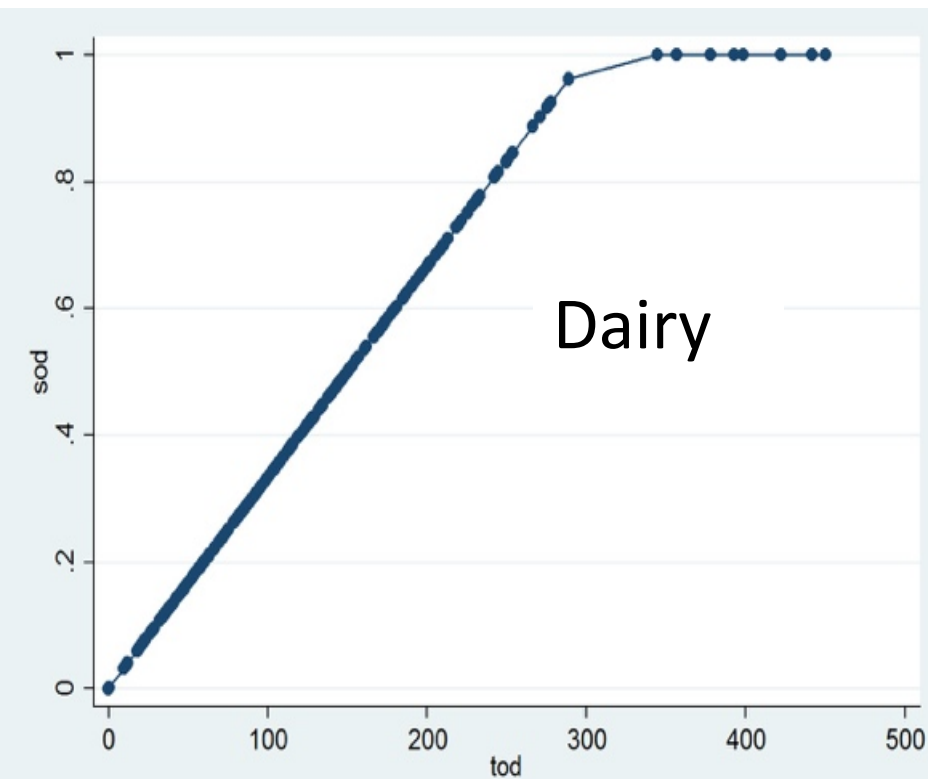
Results



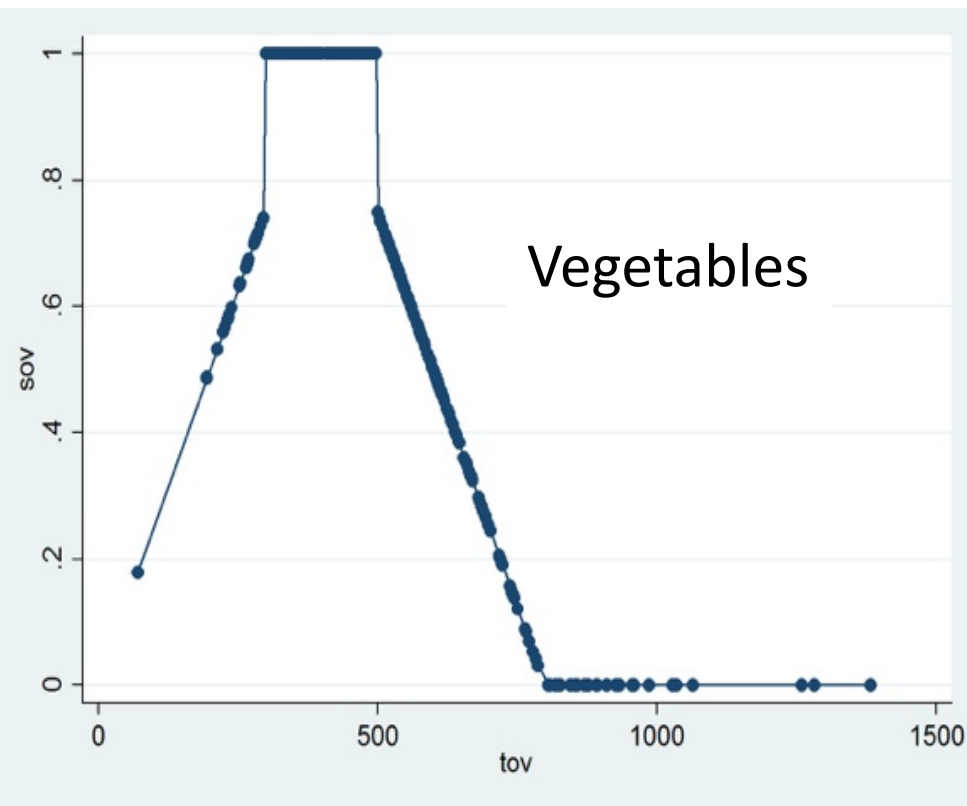
Results



Results



Results



Factors affecting EHI

- Child
- Seniors
- Regional effect
- Household income
- Wife's education
- Wife's age
- Household size



	Grain	Meat	Seafood	Eggs	Veg	Fruit	Dairy
HH Inc_L	4.16E-05	0.205***	0.078***	0.017	0.002	0.022	0.013
HH Size_L	-0.333***	0.712***	-0.022	-0.213**	-0.358***	-0.448***	-0.352***
Child_L	0.093	-0.092	-0.018	0.544***	0.400**	0.390***	0.450***
Senior_L	-0.02	-0.136	-0.250**	-0.272*	0.234*	0.004	0.046
HH Inc_M	0.031**	0.148***	0.039	0.094***	0.036**	0.103***	-0.018
HH Size_M	0.955***	2.714***	2.332***	1.877***	1.121***	1.945***	2.562***
Child_M	-0.473***	-1.665***	-1.293***	-1.097***	-0.503***	-1.037***	-1.039
Senior_M	0.029	0.333*	0.08	0.048	0.089	0.055	0.227
HH Inc_H	-0.004	-0.041***	-0.089***	-0.041**	-0.057***	-0.054**	
HH Size_H	-0.832***	-0.130**	0.375***	-0.827***	-0.831***	-0.667***	
Child_H	0.754***	0.277***	-0.348	0.666***	1.159***	0.563***	
Senior_H	-0.108	0.01	0.079	-0.048	-0.073	-0.074	

	Grain	Meat	Seafood	Eggs	Veg	Fruit	Dairy
W City	0.212**	-0.376***	-0.433***	0.095	-0.031	0.059	1.028***
E City	0.322***	-0.597***	0.945***	0.104	0.113	-0.009	0.427***
Wife's Edu	0.043	0.006	0.161***	0.053	0.025	0.017	0.255***
Wife's Age	0.0021	0.012**	0.004	0.005	-0.002	-0.002	0.028***
R ²	0.6711	0.5987	0.3801	0.7339	0.684	0.7125	0.1713

Note: confidence level *10% ** 5% *** 1%;

Results for Low EHI

- Consumption less than recommended levels
- Children in HH have a positive effect for all but meat and seafood
- Seniors have a positive effect on vegs, fruit, and dairy
- HH size has a negative effect



Results for Medium EHI

- Consumption at recommended levels
- Positive effects for HH size, and seniors
- Children have a negative effect



Results for High EHI

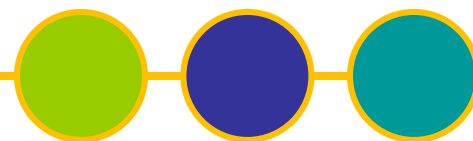
- Consumption above recommended levels
- Negative effects for HH size
- Positive effect for children, except seafood
- Negative effect for seniors except for meat and seafood



Conclusions

- HH with children and seniors tend to eat healthier
- Children may be an investment in the future? Little kings....
- Seniors may eat healthier and thus influence the family's diet





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