
Nutrition

The Demand for Food and Calories

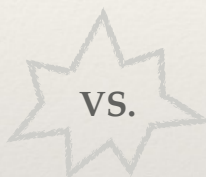
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Motivation and Objective of Study

- ❖ This paper is concerned with the relationship in poor countries between...

Economic status

income or total expenditure



Nutritional status

Calories consumed

- **Engel curves** for calories - the extent to which nutrition responds to income.
- **Efficiency wages** - link from nutrition to productivity, plausible cause of poverty?

Methodology

- ❖ The data was taken from the thirty-eighth round (1983) of the National Sample Survey (NSS) for rural households in Maharashtra state in (south) western India.

- Consists of 5,630 households, 10 in each of 563 villages

1. Nutrition measurement : Intake by calories, Expenditure = P x Intake

2. Elasticity of calorie

$$n_{it} = f(Y_{it}) + \beta X_{it} + \epsilon_{it}$$

Results

- ❖ The total expenditure elasticity of expenditure on food is 0.75, and it is 0.3655 for calorie and 0.3799 for price per calorie.
- ❖ As income increases 1%, they would spend on calorie approximately 0.35%. Declining with income.
- ❖ As household become richer, they substitute between groups of goods and away from those cereals that provide cheap calories.
- ❖ Nothing in that the range of estimates suggest that elasticity of calorie is zero.

- Subramanian and Deaton (1996) (OLS regression)

OLS ESTIMATES OF DOUBLE LOG CALORIE AND CALORIE PRICE REGRESSIONS WITH OTHER COVARIATES

	LOG CALORIE AVAILABILITY				LOG PRICE PER CALORIE			
	All Data (1)		Within Village (2)		All Data (3)		Within Village (4)	
	β	t	β	t	β	t	β	t
Constant	6.028	(78)			-1.5934	(18)		
ln PCE	.3655	(29)	.3407	(27)	.3799	(25)	.3217	(23)
ln household size	-.1572	(14)	-.1630	(21)	.0839	(6.8)	.0661	(8.4)
rm04	-.0967	(2.2)	-.1461	(4.1)	.1024	(2.3)	.1008	(3.3)
rm59	.0488	(1.2)	.0321	(1.0)	-.0467	(1.2)	-.0331	(1.2)
rm1014	.0891	(1.9)	.0612	(1.9)	-.1120	(2.3)	-.0842	(2.9)
rm1555	.1636	(5.1)	.1634	(5.9)	-.1700	(4.3)	-.1347	(5.0)
rm55+	.1406	(3.0)	.1213	(2.8)	-.1565	(3.6)	-.1074	(2.9)
rf04	-.1359	(3.1)	-.1869	(4.9)	.0460	(1.1)	.0742	(2.2)
rf59	.0176	(.4)	-.0040	(.1)	-.0643	(1.4)	-.0476	(1.4)
rf1014	.1140	(2.8)	.0679	(2.0)	-.1108	(2.7)	-.0873	(3.0)
rf1555	.0420	(1.6)	.0514	(2.1)	.0085	(.3)	-.0021	(.1)
Scheduled caste	-.0083	(.8)	-.0179	(2.0)	.0020	(.2)	-.0071	(.8)
Hindu	.0114	(.7)	.0302	(2.1)	-.0562	(2.6)	-.0605	(4.4)
Buddhist	.0237	(1.1)	.0400	(2.0)	-.1080	(4.0)	-.0760	(4.0)
Self-employed nonagriculture	.0187	(1.0)	.0064	(.4)	-.0270	(1.1)	.0079	(.5)
Agricultural labor	.0433	(2.2)	.0222	(1.4)	-.0837	(3.4)	-.0418	(2.7)
Nonagricultural labor	.0275	(1.1)	.0293	(1.5)	-.0210	(.8)	-.0315	(1.7)
Self-employed agriculture	.0618	(3.5)	.0389	(2.7)	-.0610	(2.8)	-.0118	(.8)
R ²	.5532		.6706		.4254		.6414	

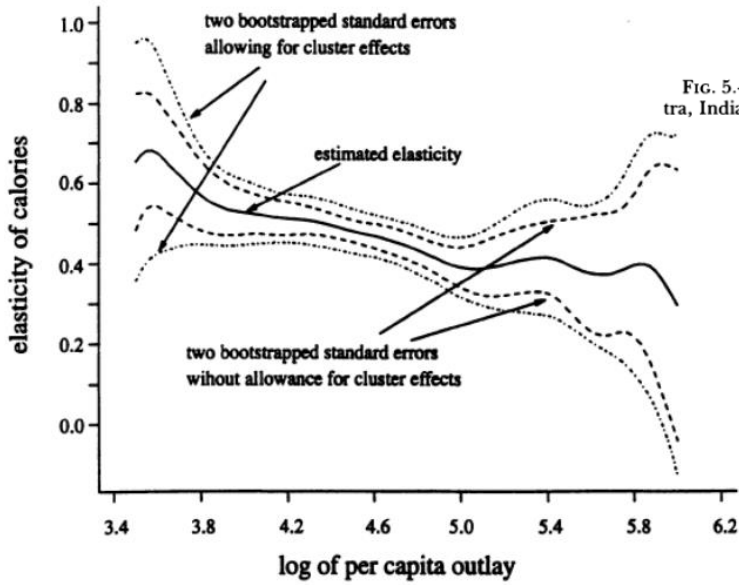


FIG. 3.—Elasticity of per capita calories to per capita expenditure, Maharashtra, India, 1983.

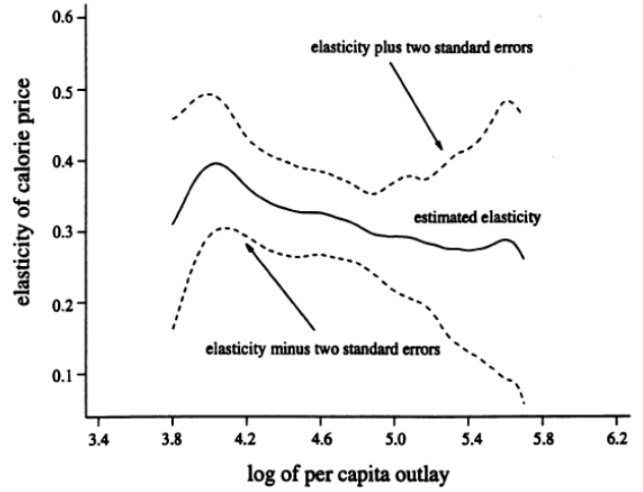


FIG. 5.—Elasticity of calorie price with respect to per capita expenditure, Maharashtra, India, 1983.

Policies implication

- ❖ Subsidy on children nutrition meals in schools.
- ❖ Promote education not only in schools but also in the communities about nutrition needs.
- ❖ Encourage households to planting the backyard garden vegetables according to self-sufficient economy theory, by providing the seeds.
- ❖ Develop the economic growth

**EE468: Integrated Public Economics, Development and Political
Economics**

Lecture 4: Nutrition
22 February 2014

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