Dietary Diversity in Nepal 2013-16

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(with thanks to S. Gosh, R. Shrestha & P. Webb)

FEED THE FUTURE
The U.S. Government's Global Hunger & Food Security Initiative

Outline

Motivation: Dietary Diversity & HAZ

District average household dietary diversity score (HDDS)
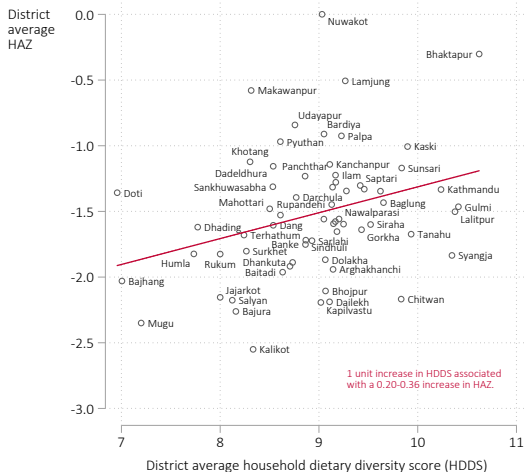
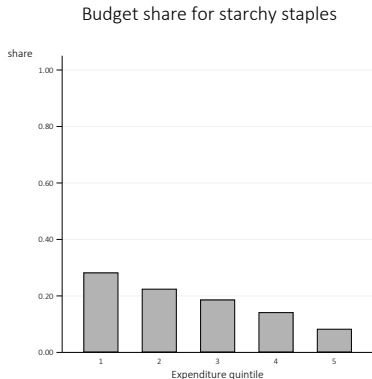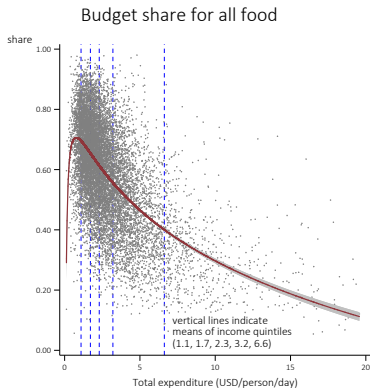Source: 2016 DHS and 2015-16 AHS; population weighted

Changes in Income Drive Changes in Diet

Engel's Law (left) and Bennett's Law (right)

Budget share for all food

Budget share for starchy staples

vertical lines indicate
means of income quintiles
(1.1, 1.7, 2.3, 3.2, 6.6)

Total expenditure (USD/person/day)

Expenditure quintile

Research Questions

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2. What explains observed patterns of food expenditures, household dietary diversity sources (hdds) and consumption of animal sourced food (asf)?

Data & Methods

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- OLS regressions for budget shares
  Poisson regressions for hdds
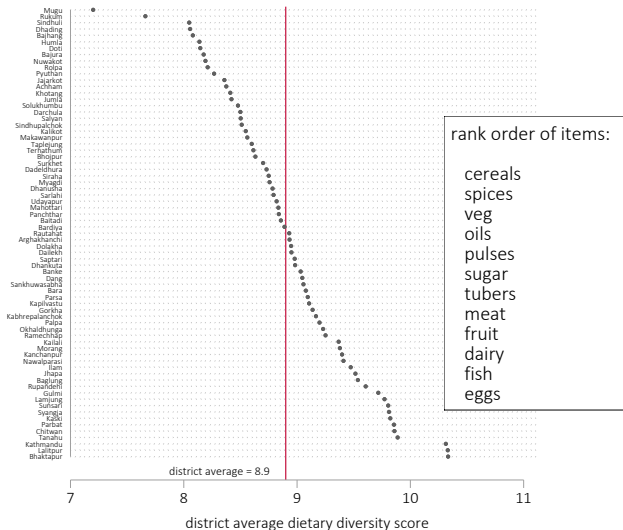 Probit regressions for asf consumption

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Notes:

- calculations exclude in-kind food expenditures

- expenditures converted to adult-equivalents

- results population weighted (using AHS sample weights)

- 4 districts (Rasuwa, Manang, Mustang, Dolpa) excluded (incomplete data)

Dietary diversity by district

rank order of items:

cereals
spices
veg
oils
pulses
sugar
tubers
meat
fruit
dairy
fish
eggs

district average = 8.9

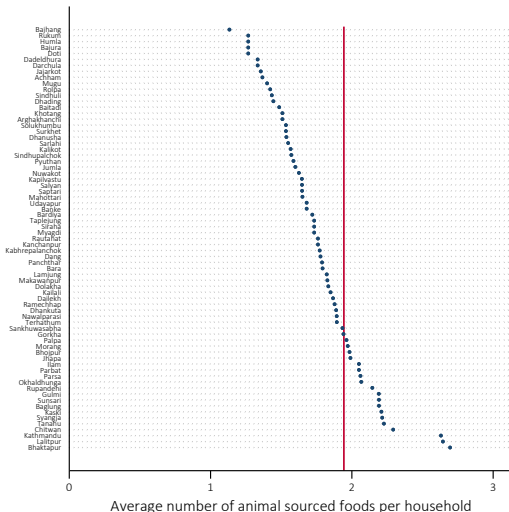district average dietary diversity score
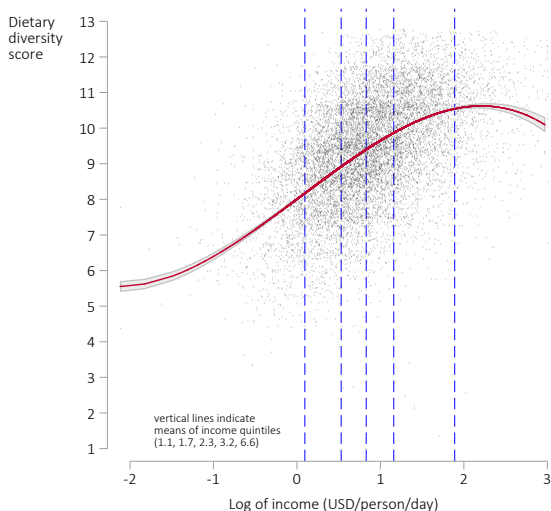
Source: population weighted AHS 2013 - 2015

Animal sourced food consumption by district

Source: Nepal AHS 2013-15; n=11,809 households; based on 7-day recall

Dietary diversity and income

Dietary diversity score (y-axis)
Log of income (USD/person/day) (x-axis)

vertical lines indicate
means of income quintiles
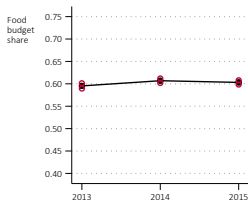(1.1, 1.7, 2.3, 3.2, 6.6)

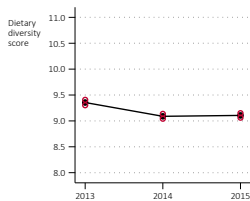Source: population weighted AHS 2013-2015
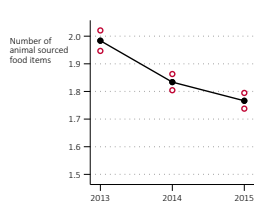
Indicators by year

Food budget share

Dietary diversity score

Animal sourced foods

Source: population weighted AHS 2013-2015; open circles represent 95% confidence bands

Expenditure Elasticities

(% change in *y* for a 1% change in per capita income)

	food	staples	hdds	pr(asf)
All	0.68	0.24	0.14	0.14
Male	0.68	0.24	0.14	0.15
Female	0.70	0.25	0.13	0.13
Urban	0.64	0.17	0.12	0.10
Rural	0.72*	0.34*	0.14*	0.16
Terai	0.64	0.19	0.14	0.17
Hills	0.71*	0.26*	0.15*	0.12
Mountains	0.84*	0.58*	0.11*	0.13

* significantly different from comparison group at 95% confidence level; estimates based on unconditional, population-weighted regressions; n=11,771; OLS regression used for food and staple shares, poisson regression used for hdds, probit regression used for pr(asf).

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Conditional Marginal Effects

(change in y for a change in x at the sample mean)

	hdds	pr(asf)
Income	0.113*	0.135*
Urban	0.022*	0.002
Agricultural	-0.011*	-0.012*
Female head	0.021*	0.012*
HH size	0.042*	0.049*
Education	0.014*	0.007*
Wealth	0.001*	0.003
Food away	0.060*	0.024*
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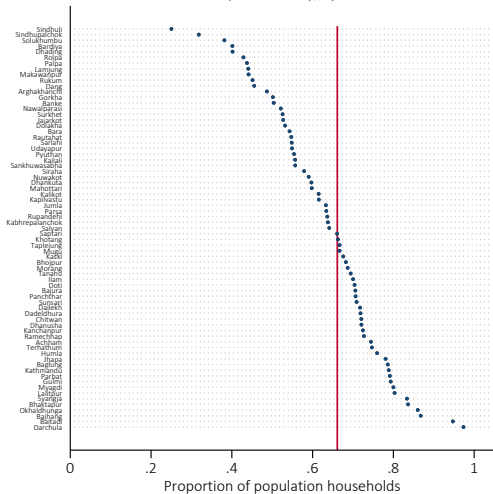- policy challenge: hdds & asf are not very responsive...

Consumption of fruit, by district
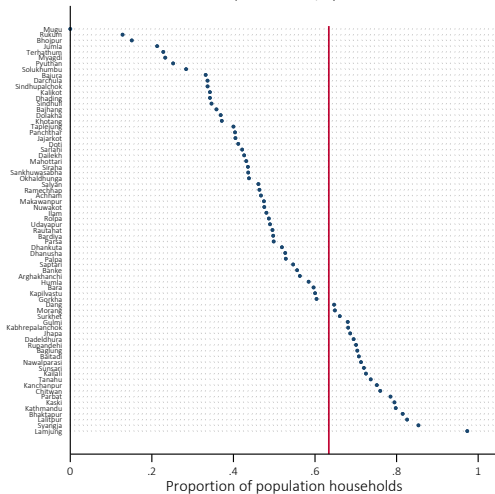
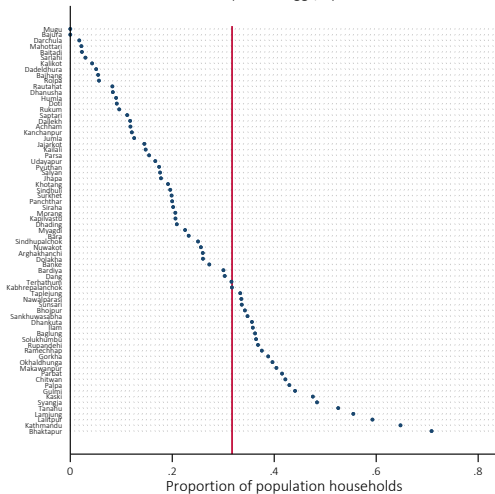Source: Nepal AHS, 2013-2015; n = 11,809 households

Consumption of dairy, by district

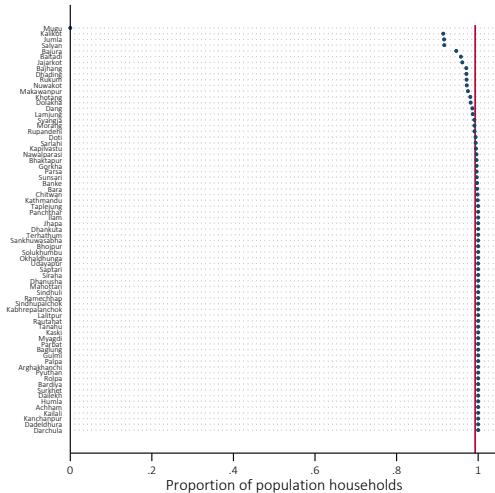Source: Nepal AHS, 2013-2015; n = 11,809 households

Consumption of eggs, by district

Source: Nepal AHS, 2013-2015; n=11,809 households

Consumption of vegetables, by district

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