Consumer preference on rice as the most favorite staple food in rural Ghana

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Background
- Rice consumption in Ghana: rapidly increasing from 13.3kg/capita/year in 1990 to 32.0kg/capita/year in 2010 (MOFA 2015)
- There are many staple foods such as maize, cassava, Yam, and plantain
- Rice consumption increase is the largest growth among other staple foods
- Domestic rice supply has not been able to keep up with the increase in its demand
- Ever-increasing rice import has been pressuring Ghanaian finances

Objectives
- One of the reasons for this rapid increase in rice consumption is a change in consumers’ preferences towards rice
- Previous studies on consumer’s rice preference in Ghana:
  - Mostly in urban settings due to the focus on convenience of rice cooking or the fact that various foods are available
  - Preference on rice varieties such as imported/domestic or with/without aroma. There is little research on rural consumer’s preference on rice dish compared to other staple foods.
- This study:
  - Explore rural consumer’s preference on rice as a dish

Methods
Household survey
- Conducted in February 2017
- Target: all households in three rural villages located in the Northern Region - the largest rice producing region in Ghana
- Number of households interviewed: 388, including 3,652 individuals
- Interview covered: household characteristics, agricultural production, dietary habits, and consumer preference

Analysis
- Categorized the individuals into two groups based on their preference
  - 1) selected rice dish as the most preferred staple food
  - Rice preference: defined as “selecting a rice dish as the most preferred staple food, compared to other dishes including traditional dishes”
  - Does not mean that the others hate rice
- Multilevel (mixed-effects) logistic regression with random intercepts
  - Two levels of variables: household level and individual level
  - Individual level: age, gender, school years
  - Multilevel analysis might be more appropriate because of their intra-class correlation (ICC)
  - From the tests of the goodness of fit, two-level random intercept model appeared to be the most appropriate model

Results

Crops grown
- Almost all households were engaged in agriculture
- Three major crops the households in these villages produced: maize, pepper, and rice (99%, 85%, and 65% of households produced)
- Rice: both for home consumption (main) and selling at the market

Preference of staple foods (Fig 1)
- Among 3,401 individuals (exclude children under 2 (211) & invalid answers (40) from 3,652)
- Traditional dish “TZ (Tuo Zaafi),” made from maize was indicated as being the most preferred
- Rice dish is the second most popular
- Fufu (made from cassava and plantain) is also popular
- Categorized into 1) prefer rice: 1,250 & 2) prefer other: 2,151 individuals

Regression (Table 1, Fig 2)
- Estimated probabilities of respondents choosing a rice dish as the most preferred staple food
- Individual level:
  - Age (younger) and enrolled school years (longer school years) had remarkable positive effects
  - Gender did not make a significant difference

Conclusions
Considering generation change, longer enrolled school years, and more opportunity of eating-out in the future, these results imply that it is certain that rural farmers in Ghana will increasingly prefer rice dishes. At the same time, the demand for rice is also increasing in urban areas. Hence, consumer demand for rice in Ghana will increase further not only by the urban demand but also by rural demand derived from farmers’ own preferences as consumers.

References