

Domestic or Imported: An Analysis of Rice Demand in Senegal

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Introduction

Rice plays a decisive role in achieving food security in many developing countries. In many Sub-Saharan African nations, rice is the main staple food in both urban and rural areas. Many countries, including Senegal, are net importers of milled rice. Besides increasing the import bill, this dependency leaves Senegal vulnerable to world market shocks such as price increases and export restrictions. The policy framework for reducing this dependency in Senegal has focused on boosting local supply through provision of improved seeds, fertilizer subsidies, and irrigation. The assumption is that consumers readily substitute between imported and domestic rice (Demont et al. 2017).

However, domestic and imported rice may not be strong substitutes, depending on their quality and availability. Preferences for these attributes may differ across different types of households. This brief assesses the trends in rice consumption by income and household location, the effect of price changes on rice expenditure, and the substitutability between imported and domestic rice for different types of households.

What we found

In Senegal, broken imported rice is preferred due to the widely held belief that it is more suitable for the national dish “ceebu jën” (Fall, 2015). With increasing incomes, urban households have become more demanding about the quality of the locally produced rice.

Results show that the proportion of rice in Senegalese cereals’ consumption has risen steadily, going from 24% in 1990 to 40% in 2018. However, the increase in rice demand is due to different reasons. While urban households enjoy the availability of local unbroken grain

Key Facts

- In Senegal, rural households consume less rice than urban households, but demand for rice is increasing for both types of households (rice consumption as a proportion of cereals has gone up from 24% in 1990 to 40% in 2018).
- Urban households spend more on unbroken grain rice while rural households spend more on broken rice.
- Urban households consume relatively more unbroken grain local rice while rural households consume more broken imported rice.
- To substitute imports, production and availability of locally grown broken rice needs to increase for both rural and urban households. For rural households, better availability of good quality local rice also needs to be ensured.
- Rice demand is price inelastic, so subsidies and taxes would have little effect on consumption.

rice, rural households are substituting to imported broken rice from other cereals such as millet, maize, and sorghum.

We found that location is an important determinant of household rice consumption. Rural households consume far less domestic rice than their urban counterparts (Table 1). However, this is more an issue of availability because rural households mostly have access to low quality domestic rice.

Senegalese households spend relatively more on broken imported rice than any other rice type (Figure 1). It accounts for 34% of total rice expenditures. However, results are different for urban and rural households. For urban consumers, whole grain local rice has the highest share in total rice expenditures while for rural households, it is the broken imported rice that has the highest share.

Elasticity estimates provide important insights into changes in demand with changes in prices and incomes. First, expenditure on rice increases for both urban and rural households as their incomes rise. Second, we find that the price elasticity of demand for local rice is low or inelastic for both urban and rural households. In addition, domestic and imported rice are not

substitutes for urban households while they are only weak substitutes for rural households. This suggests that domestic and imported rice are treated as two different products.

However, the low substitution between imported and local rice in rural areas might be because rural households do not have access to good quality locally grown rice. Access to good quality domestic rice may help change the preferences and thus increase substitution.

Furthermore, because demand for local rice does not react strongly to changes in prices, changes in prices will not affect the demand considerably. Therefore, taxes or subsidies will not be good policies for inducing consumers to switch their consumption to locally grown rice. Instead, rising incomes and increased urbanization are more likely to accelerate this shift.

Conclusion

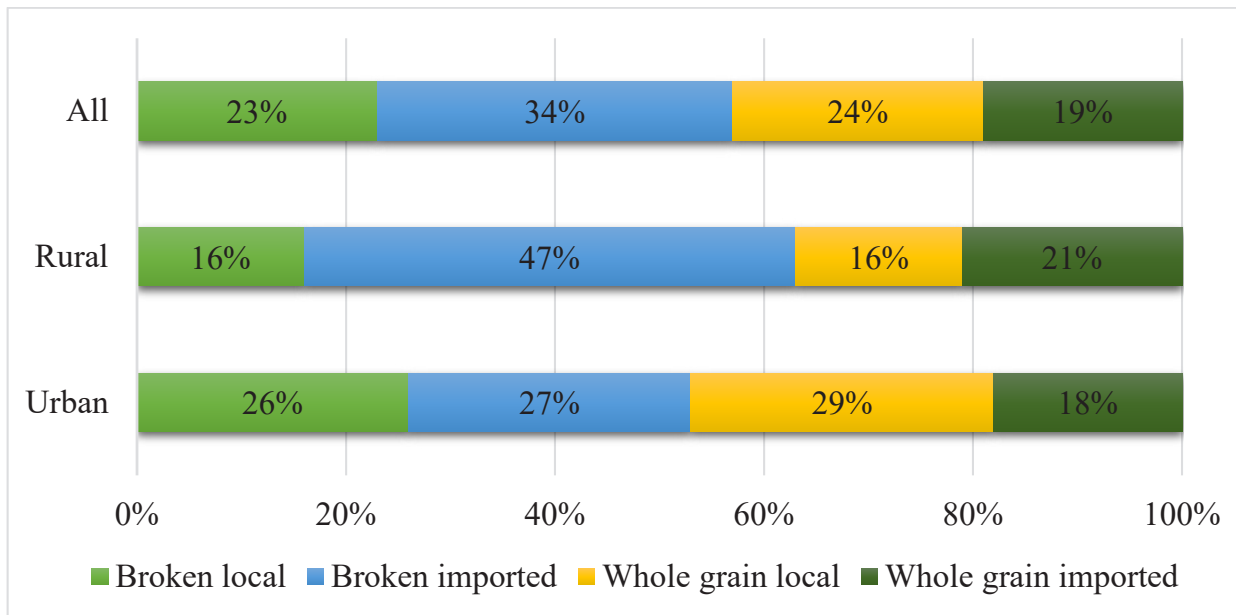
This study has significant implications for policies related to rice consumption and demand, rice production, rice availability and value chain, rice import and rice pricing in Senegal.

Table 1. Per capita annual consumption (kg) of different rice types, by urban and rural households

Rice consumption per capita by rural and urban	National	Urban	Rural
Rice	88	91	83
Imported rice	47	41	57
Broken	30	25	39
Whole grain	17	17	18
Local rice	41	49	27
Broken	20	23	13
Whole grain	21	26	13

Source: Authors' calculations based on PAPA surveys, 2017 and 2018

Figure 1. Share of different rice types in total rice expenditures, by geographic group



Source: Authors calculations based on PAPA surveys, 2017 and 2018

- Policy intervention should seek to address the issue of access to good quality local rice for rural households through investments in developing value chains and increasing the production of good quality local rice.
- Efforts should be made to increase the availability of local broken rice for both urban and rural consumers. It is also important to ensure availability of good quality local unbroken grain rice for rural consumers.
- As far as rice import is concerned, restrictions on the import of unbroken grain rice may not negatively affect consumers who prefer broken grain rice. However, a decrease in welfare would be expected for consumers who prefer unbroken rice.
- Price changes through policies such as subsidies or taxes will do little to change consumer preferences towards local rice. Two factors that do, however, help in increasing the demand for local rice are higher income levels and increased urbanization. Investments that reduce marketing costs of local rice to rural residents could also lead them to consume that higher quality rice.

References

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This policy brief was prepared by the Feed the Future Innovation Lab for Food Security Policy, Research, Capacity and Influence (PRCI) with funding from the United States Agency for International Development (USAID) under Grant No. 7200AA19LE00001. The contents are the responsibility of the authors of this report (i.e., PRCI team) and do not necessarily reflect the views of USAID, the United States Government, Michigan State University, IFPRI, Cornell University, ReNAPRI, University of Ghana, Kasetsart University, and Research and Information System for Developing Countries (RIS).

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