Meat consumption dynamics and demand elasticities in Abuja, Nigeria

Executive summary

This technical note analyses meat consumption patterns in Abuja, Nigeria, focusing on preferred meat types, demand responses to income and price changes, and demographic factors. Findings highlight distinct consumption patterns across income levels, noting that beef is considered an inferior good among high-income households. Proposed recommendations include targeted subsidies for fish and chicken production, promotion of local production, consumer education on different protein sources, and monitoring meat prices to enhance food security in response to projected demand growth by 2050.

Context

Commissioned by the Permanent Inter-State Committee for Drought Control in the Sahel (CILSS) within the framework of the Regional Sahel Pastoralism Support Project, or PRAPS 2, the 'Analysis of the characteristics and models of meat consumption and demand in West Africa' study was conducted in 2023. It was carried out jointly by researchers from the International Livestock Research Institute (ILRI) and the Centre for International Cooperation in Agricultural Research for Development (CIRAD) in 4,000 households in the capitals of Senegal, Côte d'Ivoire and Nigeria. Its main objective was to characterize and analyze current and future trends in meat consumption and demand and their sensitivity to price and income variations. This technical note summarizes the main results relating to Abuja and the consumption patterns and factors influencing meat demand in this city.

Between 2000 and 2021, Nigeria experienced economic challenges, including declining growth rates and rising inflation that almost reached 17% in 2021. These problems have exacerbated poverty levels, particularly affecting the agricultural sector which employs over 70% of the population and contributes 23% to the gross domestic product (GDP). Despite having the largest livestock population in West and Central Africa, Nigeria remains a net importer of livestock products, with 30% of slaughtered animals imported. A demand for meat projected to quadruple by 2050 requires urgent policy interventions to strengthen local production and reduce reliance on imports.

Characteristics of meat consumption

Popular meats:

- **Fish**: Consumed by 87% of households.
- **Beef**: Consumed by 78% of households.
- **Goat meat**: Consumed by 67% of households.
- **Chicken**: Consumed by 64% of households.
- **Eggs**: Consumed by 52% of households.
- **Pork**: Consumed by only 8% of households, indicating cultural or dietary preferences.

Weekly consumption:

- **Beef**: Average weekly consumption of 1.1 kg.
- **Fish**: Average weekly consumption of 0.8 kg.
- **Chicken**: Average weekly consumption of 0.7 kg.
- **Pork**: Average weekly consumption is significantly lower at 0.2 kg.

Income disparities:

Consumption varies according to income level:

- **Low-income households:** Average weekly consumption of 0.9 kg of beef, 0.6 kg of fish, and 0.5 kg of chicken.
- **Middle-income households:** Average weekly consumption of 1.2 kg of beef, 1.0 kg of fish, and 0.8 kg of chicken.
- **High-income households:** Average weekly consumption of 1.4 kg of beef, 0.7 kg of fish, and 1.5 kg of chicken.

Elasticities of meat demand

Income elasticities

All income elasticities of demand for different types of meat are positive, except for beef:

- **Beef**: Negative income elasticity suggests that as income increases, the demand for meat decreases, indicating that it is an inferior good for high-income households.
- **Fish and chicken**: These meats have positive income elasticity, meaning demand increases with increasing income. As households earn more, they tend to consume more fish and chicken.
- **Goat and sheep**: They also show positive income elasticities, suggesting they are normal goods. With increasing income, households are likely to consume more of these meats.

Price elasticities

Although specific price elasticities are not detailed in the study, they generally measure the sensitivity of the quantity demanded to changes in the price of the good. The demand for meat can be influenced by the prices of substitutes (such as chicken versus beef) and complements (such as eggs). If chicken prices decrease, consumers may opt for chicken instead of beef, negatively affecting the demand for beef.

Demographic influences on elasticities

Several demographic factors influence meat demand and associated elasticities:

- **Household size**: Larger households tend to reduce their demand for goat meat and eggs while increasing fish consumption.
- **Gender of the head of household**: The gender of the head of household significantly influences the demand for pork, without significant effects on other meats.
- **Age of the head of household**: Age of household head shows a slight positive correlation with demand for goat and chicken meat, although these effects are marginal.

Policy recommendations

1. **Stimulating local meat production:**
- Encourage local meat production through financial incentives and increased support for local farmers. This will help reduce dependence on imports and stabilize prices in the domestic market.

2. **Promoting food diversification:**
- Encourage a diversified diet by promoting the consumption of different protein sources, including plant proteins, through educational campaigns and incentive policies.

3. **Strengthening food security:**
- Develop integrated food security strategies adapted to regional diversity and the specific needs of households, particularly those in rural areas.

4. **Investing in infrastructure and logistics:**
- Improve transportation and storage infrastructure to reduce food losses and ensure product quality throughout the supply chain.

5. **Supporting research and innovation:**
- Support continued research on food consumption patterns, demographic trends and demand elasticities to inform public policies and agricultural initiatives.

6. **Strengthening governance and community participation:**
- Strengthen institutional capacities for better governance of the agricultural sector, emphasizing transparency, accountability, and stakeholder participation.

Conclusion

Understanding the dynamics of meat consumption in Abuja reveals critical insights into consumer behavior by income and demographic factors. Policy-makers can leverage this knowledge to strengthen food security, improve nutrition, and navigate economic challenges as Nigeria moves forward and predicts substantial growth in demand for meat by 2050.

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