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BEFS Module 3 – Agricultural Markets Outlook

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Background: Agriculture in Tanzania

- Largest and most important sector in the economy

-Accounts to 25-30% Gross domestic product (GDP)

-Employs 60% of population labour force in rural –yet, most in rural live on a dollar per day.

-Accounts to 40% of foreign exchange earning

- Characteristics: Poor rural infrastructure (roads, irrigation) and poor provision of inputs and modern technologies (i.e lack mechanisation, better seed and breeding qualities, better resource management etc).
- A small fraction of arable land is utilised

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Key questions for agriculture in Tanzania

- What is the status quo of agriculture
- What are the effects on agriculture of introducing a domestic biofuel sector?
- What are the risks in regard to food security, agriculture, and energy?

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Outlook for agricultural markets

- The outlook covers a 10 year period (2007-2017) and provides projections for demand, supply, price and net trade trends.
- A baseline scenario is developed against which different bioenergy development pathways (scenarios) are compared.
- Impacts of international biofuel policies are discussed.

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Model Used and Source of Data

- Module 3 employs the AGLINK-COSIMO, a joint OEDC and FAO model, that uses GDP, population and agriculture growth trends
- National Tanzania statistics
- FAO, World Bank, OECD

Results:The baseline scenario for Tanzania

No biofuel sector

- In the period 2008 – 2017 Tanzania becomes more dependant on food imports as food demand goes up faster than food production
  - Reduced maize exports
  - More reliance on imports for wheat and vegetable oil
  - Tanzania remains a net importer in rice
  - Decrease in imports for sugar

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Domestic blending mandate for biofuel

All three scenarios comply with a domestic proposed consumption mandate to use 10% ethanol and 5% biodiesel.

Scenario 1: Biofuel Mandate-No significant land expansion for biofuel.

- Under this scenario, a relatively small area of land is needed (ca. 23,000 ha. for ethanol-sugar cane 50%, cassava 50% and 27,000 ha. for biodiesel-jatropha 80% and 20% palm oil).
- The impacts on agriculture markets compared to the baseline is not significant.

Scenario 2: *314,000 hectares devoted to producing biofuel feedstock*

- Biofuel production exceeds domestic demand and permits entry into global biofuel markets: large production excess.
- No impacts on the net trade position of food crops due to new land being used
- Tanzania becomes a significant player in world biofuel markets, hence is more sensitive to oil price changes and international bioenergy policy changes➔ Under the EBA Initiative, Potential EPA the EU will be the key export market

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Scenario 2b: Same a*s Scenario 2 but with lower oil prices*

- Lower oil prices lead to increased food imports because of lower commodity prices.

Summary

- There is insignificant food crop market effect via small land expansion of new land for biofuel production.

- There is no net effect on food crop trade even via land expansion of 314,000 ha. for biofuel production. This yields more biofuel than the domestic market can absorb, so Tanzania becomes a major biofuel exporter and becomes more sensitive to international oil prices.

Conclusion and Policy implication

- Tanzania cannot afford to maintain the status quo to agriculture. The future for food security is bleak –with or without biofuel. Greater need for improvement in agriculture.
- Main Stakeholders (policy makers and investors) should utilize the information to ascertain if Tanzania agricultural markets have the capability to develop biofuels without adversely affecting food security.
- Even with land for biofuel and available market in EU, risks exist.

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