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Mozambique's Natural Resource Boom:

What Potential Impacts on Agriculture's Competitiveness?



Confederação das Associações Económicas de Moçambique

Por um Melhor Ambiente de Negócios!

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MAY 2015

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OVERVIEW OF AGRICULTURE (AG) COMPETITIVENESS STUDY

- Broad understanding of the competitiveness of five AG commodity's value chains in export oriented and import substitution -small and large industries
- A quantification of competitiveness constraints on the profitability of the private sector and derived economic profitability
- Perspective on the potential impact of Dutch Disease on the competitiveness of the identified value chains
- Key messages



THIS STUDY...

Is part of a series of SPEED program reports to help understand:

- The potential impacts of the country’s natural resource boom on the Mozambican economy.
- Awareness on **Natural Resource Wealth** and **Economic Performance**
- Concerns about potential effect of rich resources that can lead to Poor Economic Performance through (transmission channels):
 - Price Volatility
 - **Dutch Disease** (Currency and exchange rate appreciation → Relative price impacts → Competitiveness impacts)
 - Public Institutions -Weak government institutions increase the odds of economic mismanagement



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WHY WORRY?

Appreciation of the metical, as demand for meticais rises sharply (exchange rate effect);

Increased domestic spending, facilitated by increased revenues (spending effect);

Rise in prices of domestic, non-tradable goods and services, relative to prices of tradables (real exchange rate effect):

Reduced profitability of tradable sectors and increased profitability of non-tradable sectors of the economy; and thus

Increased incentives to shift resources into non-tradable sectors of the economy and away from traditional tradable sectors.



WHAT COULD THIS MEAN FOR...



- The smallholder farmer growing rice in Xai-Xai, cotton in Niassa, tomatoes in Moamba District, soybeans in Zambezia?
- The Mozambican and foreign agribusinesses and agro-partnerships engaged in plantation agriculture, such as bananas for export?
- The 80% of the population engaged in agriculture, what would a worst-case Dutch Disease scenario look like, and how might its effects be mitigated?



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OVERVIEW OF MOZAMBIQUE'S AGRICULTURAL SECTOR

Some signs of strength in the Agriculture Sector :

- Despite expansion of megaprojects' (extractives, aluminum, electricity) exports, **agricultural exports have maintained their share of total merchandise exports (around 18%)** over the last 7 years
- Signs of **diversification into new value chains** (soy-poultry) and rising productivity (cotton, rice) – **emerging farmers**
- Evidence of new **foreign investment & partnership** interest, in both export & import-substitution crops

These emerging gains can be reversed if Mozambican agriculture is not resilient to negative shocks – such as Dutch Disease.



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OVERVIEW OF MOZAMBIQUE'S AGRICULTURAL SECTOR (CONT.)

But, challenges persist.....

- Mozambican agriculture occupies a **very small space** in **global value chains**,
- The predominance of **low input-low yield** systems, coupled with **poor infrastructure** limiting **access to markets** and contributes to the current **limited state of agro-industry** in Mozambique,
- The use of **improved agricultural inputs**, such as fertilizers and pesticides, **is very low**
 - 3 % of small and medium farms use inorganic fertilizers
 - 6 % pesticides (tobacco and cotton),
 - 9% use improved maize seeds

Source: Integrated Agriculture Survey
2012



THE APPROACH...

ITERATIVE IN CLOSE COLLABORATION WITH PRIVATE SECTOR & SELECTED KEY INFORMANTS





WHICH VALUE CHAINS ?

REFERENCE MARKET	SCALE OF PRODUCTION	
	Commercial-scale	Small Farmer-scale
Export-oriented	Bananas*	Cotton*
Import substitution-oriented (important MZ food diet)	Rice*	Rice*, Soybeans, Tomatoes

Mozambican farmers' incentives are strongly affected by economic forces, some local and some that occur beyond Mozambique's borders. These three factors are:

- 1) exchange rates of the metical with global currencies,*
- 2) regional and international market prices, and*
- 3) domestic costs of production, processing, marketing (including transport and logistics)*

**Value chains of focus identified by Monitor Group in GOM multi-stakeholder action plan (August 2012)*



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WHAT HAVE WE LEARNED?

Current (2013) situation (costs, yields and prices)

- Bananas, cotton, soybeans, and tomatoes are economically competitive (economic cost-benefit ratios are less than 1.00)

But

- Rice is not economically competitive (cost-benefit ratio is 1.41)

What if the metical strengthened to 20 MT/\$? Can Mozambican agriculture withstand the impact of “Dutch Disease”?

- Cotton and soybeans look vulnerable (not and marginally competitive)
- Tomatoes and bananas remain competitive
- The rice situation becomes worse – competing with cheaper rice from Asian imports becomes a daunting challenge!



VALUE CHAIN FINDINGS: BANANAS



- Production (2012) 470,000 tons (USD 132,000)
- Yield range 36-40 ton/ha initial cycles to 52 tons/ha with maturity
- 85% consumed locally & 15% exported
- Commercial plantation output is targeted for export in Maputo and Nampula
- Investments have slow down
 - high costs of logistics
 - Panama disease
- Down stream, post plantation costs are driven by transport to port, trade facilitation and shipping costs – 30% of total value chain cost → this render **uncompetitive** exports from Nacala and Beira

Exchange rate effect of 30MT/US\$ to 20/US\$

- Unit economic profitability declines from MT 17,144 to MT 9,026 more than 50%!
- Innovation + logistics improvement restores profitability to 11437 MT/ha



VALUE CHAIN FINDINGS: COTTON



- Cotton is the third most important agricultural export
 - in 2013 cotton lint exports represented 14% of total agricultural exports and 2% of total exports
 - Important source of family income
- Export earnings, 2013 reached nearly US\$ 100 million
- Mozambique Cotton production is at mid point of African cotton producers led by Burkina Faso (261,000 MT), Mali (205,000 MT), and Côte d'Ivoire (163,000 MT)
- In the aggregate, African producers account for about 6% of global lint production in 2013/14, and MZ and accounts only about 2% of Africa's share.
- Seed cotton yields of 600-700 kg per hectare, ...

Exchange rate effect → impact of metical appreciates from 30 MT/\$ to 20
→ The cotton industry becomes non competitive (1.01)

Innovation + exchange rate effect (20 MT/\$ & YIELD 1 T/HA) →
economic profitability would be restored (0.79)



VALUE CHAIN FINDINGS: SOYBEANS



- Soybeans in Mozambique is experiencing rapid growth → to supply the poultry industry in substitution for imported soybean cake.
 - Yields vary 1.2 – 2.2 tons/ha, SA yields: 1.7 tons/ha
 - Demand for soybeans in Maputo met by imports ← logistics and transports
 - Need to explore and expand other markets such as soy oil, soy milk, soy tufo + regional markets
 - Cost structure: 70% cost production and 30% market and logistics
- Exchange rate effect → lower price of imported soy-cake, making it more attractive for poultry feed blenders to import soy or soy cake.
- farm-level financial profitability falls from 9,083 MT/ton in the base case to 5,313 MT/ton in this scenario
 - But would still be positive
 - Economic profitability, however, would be borderline uncompetitive (cost-benefit ratio of 0.96).



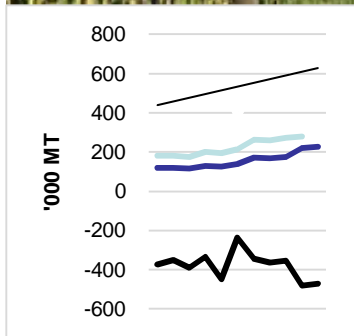
VALUE CHAIN FINDINGS: TOMATO



- Widespread consumption in the Mozambican diet in both urban and rural settings
- Seasonal production (February to August); off-season demand met by imports mainly from South Africa
- 72 % of total South Africa tomato exports to the SADC region (RSA DAFF 2012)
- The bulk of Mozambican tomato production is sold fresh to domestic retail markets – Limited cold storage and processing
- informal agreement but de facto, a voluntary ban on imports during Mozambique production season
- Imported inputs drive the costs of tomato production in Moamba - almost 50 % of total financial costs
- Relatively high yields → good profitability
- **Exchange rate** effect: limited impact due import ban, tomato continue strongly competitive



VALUE CHAIN FINDINGS: RICE



- Two-thirds of total rice consumption is imported (about 480,000 tons)
- Chinese investments engaged in large-scale production in Gaza province - assistance to local farmers on outgrower schemes
- Capacity to mill paddy is limited, milling obsolete and operating below capacity
- New investments emerging – but in large scale and led by the state
- Rice imports mainly from Thailand, Pakistan, Vietnam, and India
- Without significant productivity improvements, Mozambique will be unable to compete

Exchange rate effect: Lowers both the cost in meticals of imported inputs and the price in meticals of imported rice □ worsening the non-competitiveness of rice value chain.

Innovation effect: 9 tons per hectare would be required to break even, in terms of economic profitability!



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WHAT IT WOULD TAKE TO STRENGTHEN COMPETITIVENESS IN CASE OF A STRONGER METICAL?

- 25-45 % increase in yields restores economic profitability to cotton and soybeans

What it would take to compete with rice imports?

- 9 tons of paddy rice per hectare (more than double current yields) to gain competitiveness even with WC5 appreciated metical.
- Reduced transport, logistics, and trade facilitation costs

Increased productivity and efficiency of agriculture value chains are keys to success!

Slide 17

WC5

???

Willie Chonguiça, 5/19/2015



THE NUMBERS....

Value Chains	Reference Market	Economic Profitability		
		Base Case (Yield)	@ 20 MT/\$	@ 20 MT/\$ with Yield Increase
Bananas	CIF Europe	0.40 (40 T/ha)	0.52	0.44 (52 T/ha)
Cotton	FOB	0.67 (0.7 T/ha)	1.01	0.79 (1 T/ha)
Rice	Maputo	1.41 (4 T/ha)	1.74	0.98 (9 T/ha)
Soybeans	Entry, feed mill	0.71 (1.2 T/ha)	0.96	0.81 (1.5 T/ha)
Tomatoes	Maputo	0.43 (40 T/ha)	0.51	<i>Not needed</i>



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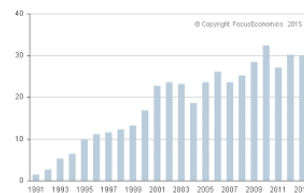
OTHER IMPORTANT FACTORS AFFECTING AG COMPETITIVENESS INCLUDE...

- Difficult **access to land** complicates commercial agriculture, and discourages new investments
- **Logistics/infrastructure** constraints (storage, roads, power,...) hamper market access for producers
- **Trade facilitation** constraints (ports, customs, taxation)
- Agricultural **minimum wage** (Mozambican plantation workers are now paid more than a factory worker in Bangladesh; factory worker minimum wage raised this year in Bangladesh to \$68/month vs \$100/month for agricultural worker in Mozambique)



KEY MESSAGES

- **Strengthening crop productivities & VC efficiencies now**, so that combination of ER effect + Innovation effect will continue building competitive agriculture,
- Target public spending towards investments that will offset the threat of the stronger currency through **access to markets** and **infrastructure improvements** to enhance the competitiveness of the agricultural sector,
- Encourage investments in **agro-processing** to strengthen the competitiveness of local products through productivity and **quality improvements and value-addition**, and
- Building skills and entrepreneurship – a constraint on competitive commercial agriculture and agribusiness is inadequate **management and entrepreneurial skills**.





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Thank you!
Obrigada!