

# BILATERAL TRADE ARRANGEMENT AND CUSTOM UNIONS: EU AND SOUTH AFRICA

“Base” Study Results  
Experiments done by Group 2

# Introduction

History of SACU

Free Trade Agreement

## B. Base Study Approach

1. Incorporating a revenue sharing formula as to reflect the SACU arrangement: Tariff revenues are pooled and distributed.
2. Some adjustments in the closures:
  - a. Fixing trade balance.
  - b. Employment of unskilled labor.
  - c.
    - i. Fixing price (fob) and quantity of diamond exports to all region
    - ii. Fixing price (fob) and quantity of processed food products from Botswana.
3. Input substitution elasticities are reduced by half.

# Findings:

## 1. Under the EU RSA FTA:

### Full Liberalization:

- \* The EU and South Africa will be gainers due to promotion of allocative efficiency in both parties, employment growth in South Africa and improvement in terms of trade for the EU.
- \* The rest of the economies including Botswana will be the losers.
- Gains for South Africa come through expansion of food and agricultural production and trade.

### Partial Liberalization:

- \* Gains for South Africa would be reduced by half and for the EU would not change.
- \* The rest of the economies including Botswana will be losers or get no gains.

# “Effects of EU and RSA FTA”

## Motivation

- ? EU RSA FTA leads to asymmetric benefits
  - more benefit to EU & RSA (EU(797), RSA, (1,729), BWA, (-71.5))
  - There are three fixations in the closure
- ? What happens if trade balance fixation is relaxed?
  - Whether it makes BWA better off?

# A Prior Expectations

- ? With no trade balance fixation, FTA b/w EU and RSA ? trade creation & diversion
- ? GDP ?? more import (demand) from EU and RSA ? Export Price of food ?
- ? TOT and trade balance improved ?
- BWA better off

# Approach

- ? Change the Closure
  - Only two swaps(fixing BWA' diamond and beef export)
- ? The same shocks-full liberalization b/w EU and RSA

# Results

## 1) Welfare Decomposition

		Total	Alloc	Endw	TOT	IS_F1
BWA	EXP 1	-71.5	1.6	-1.1	-4.6	10.4
	EXP 2	-107.7	1.9	-23.2	-24.1	13.9
RSA	EXP 1	1,729.5	350	1,318.9	-66.5	39.4
	EXP 2	2,831.2	661.1	1,765.8	318	11.1
EU	EXP 1	797.2	345.9	0	471.1	23.9
	EXP 2	674.1	290.8	0	398.0	-14.7

# ? Allocative Efficiency by Sector

		Allocative Efficiency
BWA	EXP 1	? mainly from food sector(1.6)
	EXP 2	? Still from food sector(1.4)
RSA	EXP 1	? mainly from food(189.3), lman(141.2)
	EXP 2	? still from food(254.4), lman(228), mine(83.3)
EU	EXP 1	? food(178.3), capital(29.8), mine(28.6)
	EXP 2	? food(174.8), tex(23.3), capital(24)

# Endowment Efficiency

		Endowment Efficiency
BWA	EXP 1	? worsening by unsklab(-1.1)
	EXP 2	? worsening by unsklab(-23.2)
RSA	EXP 1	? improving by unsklab(1,318.9)
	EXP 2	? improving by unsklab(1,765.8)
EU	EXP 1	? No change
	EXP 2	? No change

# TOT Efficiency by Sector

		TOT Efficiency
BWA	EXP 1	? better off in lman(2.1), food(0.9) ? worse off in crops(-3.4), serv(-3.7)
	EXP 2	? worse off in lman(-6.3), serv(-6.1), crop(-2.8)
RSA	EXP 1	? better off in crops(34.7), mine(14.4) ? worse off in food(-51.5), lman(-34.3)
	EXP 2	? better off serv(66.6), crops(51.4), mine(42.9) ? worse off food(-32.5)
EU	EXP 1	? better off lman(174.0), serv(165.6) ? worse off mine(-7.2), crops(-7.0)
	EXP 2	? better off lman(170.4), serv(165.6) ? worse off mine(-22.7), crops(-12.3)

## 2) Change in GDP Index

	BWA	RSA	EU
EXP 1	0.01	1.20	0.004
EXP 2	-0.46	1.75	0.004

### 3) Change in Export and Import

		BWA	RSA	EU
Import	EXP 1	-8.34	3,814.4	2,648.3
	EXP 2	-63.2	4,859.8	2,419.2
Export	EXP 1	-27.03	3,491.3	1,638.5
	EXP 2	10.8	1,674.0	205.1

## 4) Trade Balance

	BWA	RSA	EU
EXP 1	-21.3	16.4	-239.1
EXP 2	51.9	-2,352.0	327.5

# Wrap-up

- ? With no trade balance fixation, BWA better off in terms of trade and trade balance
  - however, total EV more worse off due to endowment and TOT inefficiency
  - More unemployment in unskilled labor
  
- ? RSA better off mainly by improving endowment efficiency, especially unskilled labor sector, and allocative efficiency in food and light manufacturing sector.
  
- ? In FTA EU RSA, special consideration should be given to BWA (e.g. increase in unskilled labor by importing food more)

# FTA between EU and SACU members

Presented by Alex & Lisa

## - **Motivation:**

- EU-RSA FTA makes BWA worse off  
(mainly asymmetric effect b/w EU and BWA)
- What happens to EU and BWA if EU-SACU have FTA

## **Initial changes:**

- [cmfstart.shk](#)

defined a set of non-mineral commodities (NMIN\_COMM) as a subset of  
TRAD\_COMM

# FTA between EU and SACU members

- closure

- price and quantity of minerals from BWA assumed constant
  - export of crops from BWA excluded
  - removed assump. of duty free exports of beef from BWA to EU

- shocks

- removed import and export tariffs for all products between SACU and EU, except minerals for BWA (b/o Central Selling Organization-diamonds cartel)
  - Shocks added to base shocks:

- shock tms(NMIN\_COMM,"bwa","eur")

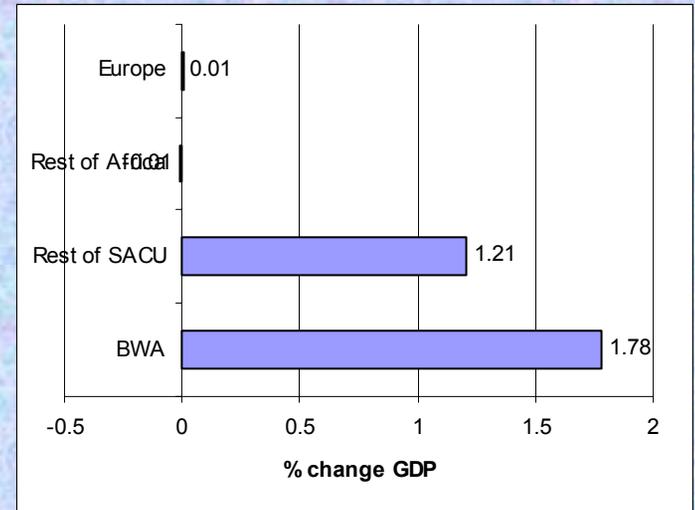
- shock txs(NMIN\_COMM,"bwa","eur")

- shock txs(TRAD\_COMM,"eur","bwa")

# FTA between SACU and EU members

## Results:

- SACU and EU gain but ROA is losing
- BWA benefits (1.8% of GDP)
- S. Africa (1.2% of GDP)
- EU (0.01% of GDP)



- BWA has a welfare benefit of the order of 60 USm against a loss of 71.5 USm in base scenario

# FTA between EU and SACU members

## Welfare effects:

BWA: - increase in welfare due to endowment & TOT effect



More use of unskilled labor

Increase px food

- fall in welfare due to fall in import tax redistribution

S. Africa: - increase in welfare due to alloc.n & endowment



More food, light manuf.

More use of unskilled labor

- fall in welfare due to negative TOT



a)  $\downarrow$  subsid<sub>EU</sub>  $\rightarrow$   $\uparrow$ PM food, crops

b)  $\uparrow$ PM food, crops from EU for better quality

# FTA between EU and SACU members

## Sectoral change in VA:

- BWA: reallocate resources from crops, light and heavy manufactures into food and animal agriculture.
- S. Africa: reallocate resources from minerals into capital goods and food.
- EU: minimal change.

## Change in Commodity Exports to EU:

- ↑ food export from BWA and S. Africa

## Change in Commodity Imports from EU:

- BWA: ↑ light manufactures
- S. Africa: ↑light, heavy manufactures and food.

## FTA between EU and SACU members

### Further analysis:

BWA: - ↓ share of domestic sales of crops  
- ↓ share of export sales of light manufactures  
- ↓ share of domestic sales of services  
(while services from EU to BWA ↑ by 10.7%)

S. Africa: - ↑ share of export sales of food

EU: - minimal change

# EU SSA Agriculture Liberalization

## The Case of No Agricultural Liberalization between EU and SSA

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August 2004

# EU RSA FTA: Ag Tariff Implications

	100% ag tariff		50% ag tariff		No ag tariff	
	GDP	Welfare (EV)	GDP	Welfare (EV)	GDP	Welfare (EV)
	% chg	\$US m	% chg	\$US m	% chg	\$US m
<b>BWA</b>	0.0	-36.9	0.0	-42.9	0.0	-71.5
<b>S.A.*</b>	0.3	242.9	0.6	792.9	1.2	1729.5
<b>Rest of SADC</b>	0.0	17.5	0.0	4.6	0.0	-14.2
<b>Rest of Africa</b>	0.0	-8.1	0.0	-20.1	0.0	-37.5
<b>EU</b>	0.0	613.6	0.0	770.5	0.0	797.2
<b>Total</b>		290.9		954.6		1821.1

# EU RSA FTA: Welfare Decomposition

- Allocative Efficiency:
  - Improved allocation of existing resources
- Endowment Effect:
  - Relates to changes in use of unskilled labor
- Terms of Trade:
  - More favorable terms of trade if it is  $>0$
- Tax Pool:
  - Relates to tariff revenue sharing formula

# EU RSA FTA: Ag Tariff Implications

## Changes in Exports (\$US m)

	100% ag tariff			50% ag tariff			No ag tariff		
	BWA	S.A.*	EU	BWA	S.A.*	EU	BWA	S.A.*	EU
<b>Crop</b>	0.0	4.8	-47.0	0.0	137.2	-85.2	0.0	277.2	-111.4
<b>Animal</b>	0.2	5.7	-9.5	0.3	14.1	-7.1	0.7	18.3	-0.3
<b>Food</b>	2.0	-22.1	-181.1	-2.7	555.6	-70.1	-10.4	2123.4	413.8
<b>Mining</b>	0.0	2.6	-24.6	0.0	-21.5	-22.0	0.0	-63.2	-17.0
<b>Textiles</b>	4.0	220.0	277.6	3.9	208.7	288.0	4.0	197.5	300.3
<b>H Mfg</b>	-2.1	835.8	83.9	-1.9	671.3	146.6	-1.3	425.3	250.0
<b>L Mfg</b>	-34.0	672.1	1042.3	-32.6	602.2	1113.5	-29.0	502.2	1231.6
<b>Svs</b>	7.0	121.9	-517.2	7.5	77.4	-480.0	8.5	14.4	-400.2

# EU RSA FTA: Ag Tariff Implications

## Changes in Imports (\$US m)

	100% ag tariff			50% ag tariff			No ag tariff		
	BWA	S.A.*	EU	BWA	S.A.*	EU	BWA	S.A.*	EU
<b>Crop</b>	-0.6	-22.7	6.8	-1.5	9.9	71.5	-3.1	74.8	149.3
<b>Animal</b>	0.0	-0.8	3.7	-0.2	4.2	6.5	-0.5	13.9	7.9
<b>Food</b>	-1.6	-122.0	2.5	-1	284	338.8	3.2	1440.2	1111.9
<b>Mining</b>	0.1	-1.8	-2.5	0.1	0.8	-0.7	0.4	6.8	1.7
<b>Textiles</b>	2.5	169.0	158.8	2.4	177.1	164.4	2.5	188.4	169.6
<b>H Mfg</b>	-9.1	452.8	322.9	-9.8	498	320.8	-10.1	587.0	320.1
<b>L Mfg</b>	5.7	1131.0	575.3	4.2	1257.2	594.8	2.5	1497.6	617.3
<b>Svs</b>	-2.5	-70.2	246.0	-2.7	-38.2	251.1	-2.8	14	254.3

# EU RSA FTA: Export Subsidy Implications

	100% ag tariff		100% ag tariff	
	w / ag export subsidy		w / o ag export subsidy	
	GDP	Welfare (EV)	GDP	Welfare (EV)
	% chg	\$US m	% chg	\$US m
<b>BWA</b>	0.0	-36.2	0.0	-36.9
<b>S.A.*</b>	0.4	385	0.3	242.9
<b>Rest of SADC</b>	0.0	12.4	0.0	17.5
<b>Rest of Africa</b>	0.0	-16.1	0.0	-8.1
<b>EU</b>	0.0	691.5	0.0	613.6
<b>Total</b>		484		290.9

# EU Enlargement and Changing Preferential Trade Benefits

By  
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# What are the Impacts of Expanding Preferential Trade Arrangements

- Preferential trade arrangements (PTAs) and agreements (FTAs) are expanding
- The benefits of preferential market access are continuing to change with enlargement of PTA and FTA arrangement
- The Minister of Industry and Trade stated to the South African Congress that an enlarged EU was good for South Africa and its neighbors

# Simulation Background: EU Enlargement

- Built on Version 5 GTAP database shocked to simulate RSA-EU FTA (McDonald and Walmsley 2001)
- Walmsley simulation shocked for EU enlargement:
  - ✓ Reciprocal elimination of EU and E. Europe tariffs
  - ✓ Elimination of remaining intra E. Europe tariffs
  - ✓ E. Europe duties adjusted to the EU common external tariff

# Impacts of EU Enlargement on Welfare Gains\Losses from EU – RSA FTA

Country\ Region	Million US\$		Welfare Change Relative to RSA FTA Welfare (%)
	(1) RSA FTA w/o Enlargement	(2) RSA FTA with Enlargement	
Botswana	-71.5	-68.39	4.3
South Africa	1,729.5	1,581.1	-8.6
EU	797.2	3,186.5	299.7

A little over half (54%) of the lose in welfare is due to changing terms of trade

# Impacts of EU Enlargement Relative to RSA-EU FTA (Exports \$US million)

Commodities	Botswana	South Africa	EU
Food	(0.3)	(273.7)	7,296.1
Other	(1.2)	(4.4)	5,654.7
Services	0.9	57.1	(300.3)
Heavy Manf.	(0.1)	46.8	2,375.4
Light Manf.	(0.1)	27.1	4,381.2
Total	(0.7)	(147.2)	19,407.1

# Changes of Trade Balance (X-M)

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Trade	Botswana	South Africa	EU
Exports	(0.7)	(147.2)	19,407.1
Imports	0.5	(239.4)	18,822.8
Net Trade Balance	(1.3)	92.2	584.3

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# Conclusion: EU Expansion and the Benefits of EU-RSA FTA

- Reduction in South African FTA welfare benefits are modest (-8%)
- Botswana's welfare losses are reduced minimally (-4%)
- However, there are winners and losers in South Africa's export sector:
  - ✓ Losers (Food, textiles)
  - ✓ Winners (Light and Heavy Manf., Services)