Trade Policy and Trends in the South African Agriculture

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PRESENTATION OUTLINE

- INTRODUCTION
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- METHODOLOGY FOR ESTIMATING TRENDS
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  - ✓ Coefficients of Variation
  - ✓ Shares
- AGGREGATE TRADE FLOWS TRENDS: SECTOR LEVEL
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  - ✓ Mining
  - ✓ Industry
- DISAGGREGATE TRADE FLOWS TRENDS: PRODUCT LEVEL
  - ✓ Agricultural products at HS2 level
  - ✓ Agricultural products at HS4 level
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SA's TRADE POLICY

- Historically, SA's agric sector was characterized by trade distorting measures such as:
  - ✓ Quantitative restrictions,
  - ✓ Price controls,
  - ✓ Direct subsidies, etc.
- In response to globalization challenges, SA adopted deregulation and trade liberalization policies in the early 1990s.
- In pursuing trade liberalization strategy, SA adopted a two-pronged approach:
  - ✓ Multilateral approach.
  - ✓ Bilateral and/or regional approach(s).
- SA is one of the founder members of GATT (1947) that created a framework to regulate international trade.
- SA participated in all multilateral negotiation rounds:
  - ✓ Geneva (1947 and 1956), Annecy (1949), Torguay (1950), Dillon (1960-61), Kennedy (1962-67), Tokyo (1973-79), Uruguay (1986-93) and Doha (2001).
  - ✓ Earlier rounds focused on the promotion of multilateral tariff reductions, excluding agriculture.
  - ✓ Agricultural sector trade was placed on the GATT negotiating table during the Uruguay and Doha Rounds.

SA's TRADE POLICY (CONT)

- SA became a signatory to Marrakech Agreement of GATT in 1994 that established WTO, which became effective in 1995.
- In 1995, SA became a WTO member and committed to the 1986 UR rules and policies that established WTO AoA.
- In 1997, SA became a CG member showing its UR commitment of global agric trade liberalization.
- SA's international and deregulation policy resulted with the:
  - ✓ Introduction of new Marketing of Agricultural Products Act in 1996.
  - ✓ Removal of export subsidies
  - ✓ Replacement of import permits by import duties
- At the regional level, SA is a member of SACU and SADC.
- At bilateral level: SA was accepted as a qualified member of ACP-EU Partnership Agreement (**from Lomé to Cotonou**), but excluded from non-reciprocal trade preferences available to other ACP.
- SA and EU concluded a TDCA in 1999 and was implemented with effect from January 2000.
- SA is also AGOA beneficiary since 2001 & benefit from the US's GSP.
- SA is currently negotiating FTAs & PTAs with US, EFTA, MERCOSUR.
- It is envisaged that SA will open FTA negotiations China and India.

TRADE AGREEMENTS & AGRICULTURE

- WTO'S UR AoA:
  - ✓ Market access improvement
  - ✓ Domestic support reduction
  - ✓ Export subsidies reduction
  - ✓ SPS harmonization
- TDCA's main agric features are:
  - ✓ Agricultural tariff phase-down.
  - ✓ Agricultural tariff quotas.
  - ✓ Wines and Spirits Agreements.
- SADC Trade Protocol
  - ✓ Elimination of import duties (tariffs)
  - ✓ Elimination of all NTBs not related to SPS, e.g. quantitative restrictions, single channel marketing regime, etc.
  - ✓ Harmonization of SPS

TRADE AGREEMENTS: TDCA'S AGRIC Tariff Quotas

HS Code	Product Description	Initial Quota	Tariff Quota Duty	AGF
European Union's offer to South Africa				
0406	Cheese and curd	5 000 T	Reduced by 100% of MFN	**5%**
0603	Cut flowers – roses, orchids & chrysanthemums	500 T	Reduced by 100% of MFN	**3%**
	Cut flowers – proteas	990 T	Reduced by 100% of MFN	**5%**
	Other cut flowers	1 100 T	Reduced by 75% of MFN	**3%**
0811	Frozen fruits and nuts	250 T	Reduced by 100% of MFN	**3%**
2008	Prepared or preserved fruits and nuts	60 000 T	Reduced by 100% of MFN	**3%**
2009	Fruit and vegetable juices	5 700 T	Reduced by 50% of MFN	**3%**
2204	Wine of fresh grapes – sparkling wine	450 000 L	Reduced by 100% of MFN	**5%**
	Wine of fresh grapes – excluding sparkling wine	32 000 000 L	Reduced by 100% of MFN	**3%**
South Africa's offer to the European Union				
0406	Cheese and curd	5 000 T	Reduced by 50% of MFN	**3%**
2204	Wine of fresh grapes – sparkling wine	260 000 L	Reduced by 100% of MFN	**5%**
	Wine of fresh grapes – excluding sparkling wine	1 000 000 L	Reduced by 100% of MFN	**5%**

TRADE AGREEMENTS: SADC'S AGRIC Tariff Phase-down

- SACU's combined offer to non-SACU SADC countries:
  - ⇨ Products with tariffs rates from 1-17%: Immediate removal upon implementation.
  - ⇨ Products with tariffs rates from 18-25%: Three-year linear phase-down
  - ⇨ Products with tariffs above 25%: Five-year linear phase down.
  - ⇨ Sensitive product: dairy, wheat and meslin, sugar and sugar confectionary, textiles, foot wear and vehicles.
- Non-SACU SADC countries's offers to SACU countries:
  - ⇨ Elimination of tariffs on most products by the end of year eight of the implementation period.
  - ⇨ Elimination of tariffs for sensitive products by the end of year 12
  - ⇨ There are various offers for specific agricultural products by non-SACU SADC countries to SACU countries.

TRADE AGREEMENTS: SADC'S AGRIC Tariff Phase-down (cont)

Commodities	Malawi	Mauritius	Mozambique	Tanzania	Zambia	Zimbabwe
Dairy	8 yrs	5 yrs except bird eggs & honey 12 yrs	12 yrs	8 yrs	12 yrs except for milk-8 yrs	8 yrs
Deciduous fruits	8 yrs	5 yrs, strawberries-12 years	8 yrs, citrus-12 yrs	8 yrs	8 yrs	8 yrs
Dried fruits	8 yrs	5 yrs	12 yrs	8 yrs	8 yrs	0 from year 1
Canned fruits	8 yrs	5 yrs	12 yrs	8 yrs	8 yrs	5 yrs
Fruit juices	8 yrs	5 yrs	12 yrs	12 yrs	8 yrs	8 yrs
Wines and spirits	8 yrs	12 yrs	12 yrs	12 yrs	12 yrs	8 yrs
Wool and mohair	0 from year 1	0 from year 1	0 from year 1	7 yrs	0 from year 1	8 yrs
Wheat	0 from year 1	0 from year 1	8 yrs	8 yrs	5 yrs	8 yrs
Wheat flour	8 yrs	12 yrs	8 yrs	12 yrs	12 yrs	8 yrs

METHODOLOGY FOR ESTIMATING TRENDS: Growth rates, Coefficients of Variation & Shares

Periods	Policy Changes
1990 – 1994	International community lifts sanctions against SA and SA signed the Marrakech Agreement that established WTO
1995 – 1999	Deregulation and implementation of Uruguay Round Agreement on Agriculture
2000 – 2004	Implementation of EU-SA TDCA and SADC Trade Protocol
1990 – 2004	All policy changes

Coeffs of Variation:

$$\Pi = \frac{\sqrt{\sigma^2_{Y_t}}}{\sum_{t=1}^{n} \overline{Y}_t}$$

Growth rates:

$Y_t = \varepsilon^{\alpha + \beta t}$, *transformed to* logarithms *as*:

$\ln Y_t = \alpha + \beta t$

$\beta =$ instantaneous growth rate

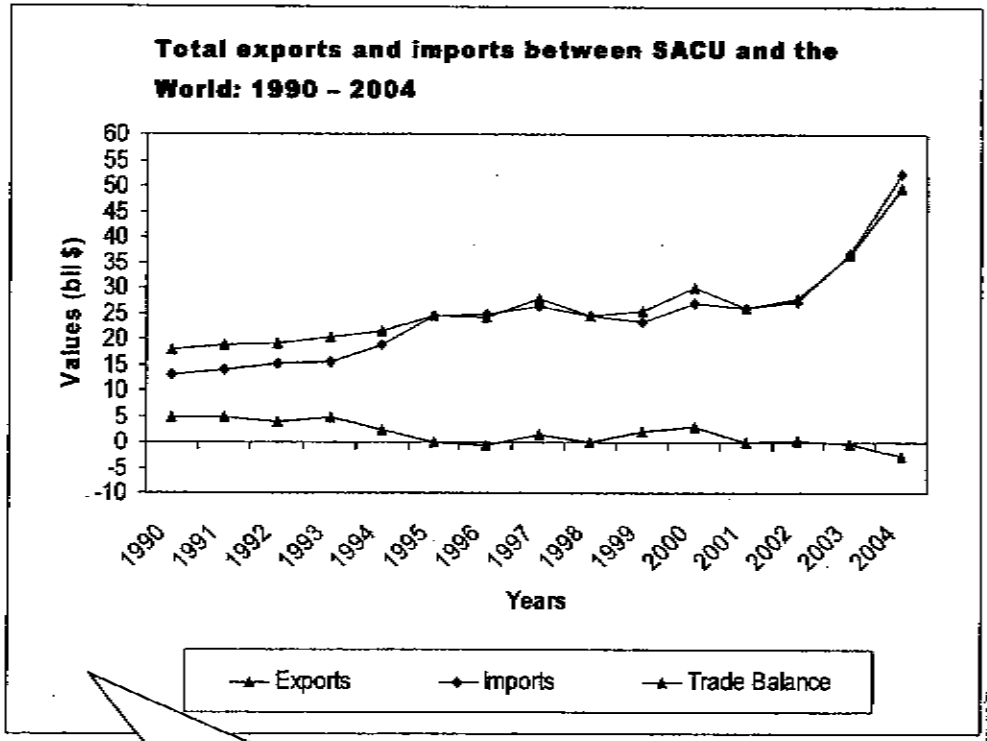
Compound growth rate = Antilog of β minus one, i.e.

$\text{Exp}(\beta) - 1$

Shares:

$$\Omega = \frac{\sum_{t=1}^{n} y_t}{\sum_{t=1}^{n} Y_t} * 100$$

AGGREGATE TOTAL TRADE FLOW TRENDS: WORLD

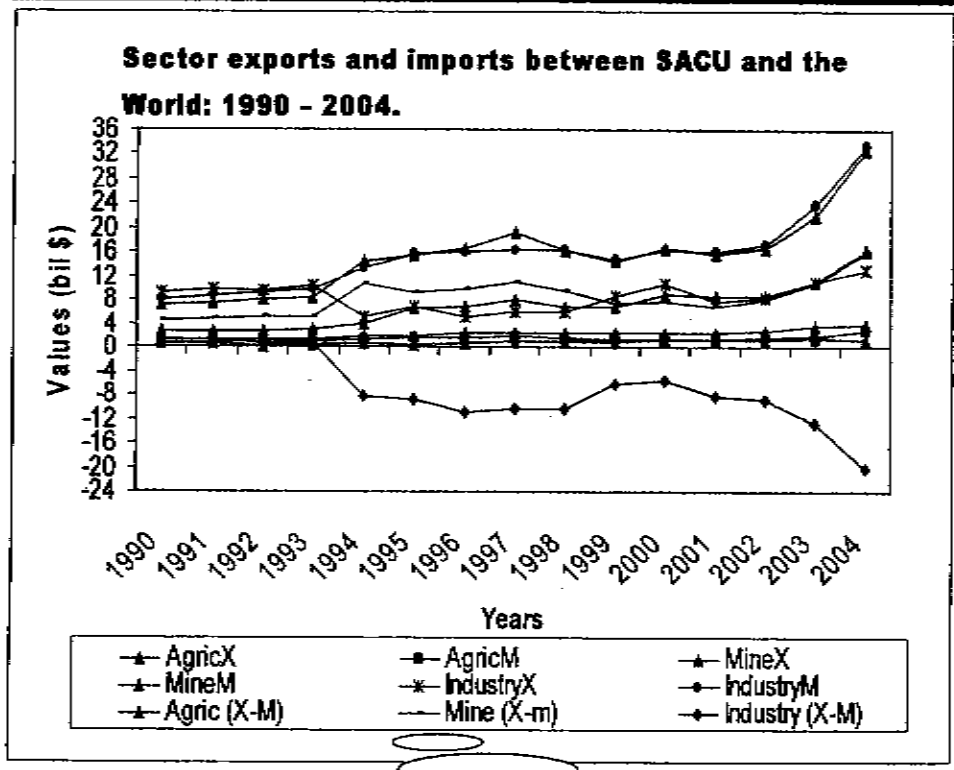


Period	Exports	Imports
1990-2004	30.97	**77.85**
1990-1994	6.96	32.49
1995-1999	5.96	28.57
2000-2004	28.51	22.73

Period	Exports	Imports
1990-2004	**5.55** **5.40**	**8.03** **7.73**
1990-1994	**4.37** **4.28**	**8.74** **8.38**
1995-1999	**1.01** **1.00**	**-1.15** **-1.16**
2000-2004	**14.49** **13.53**	**18.17** **16.70**

- ✓**Volatile M:1990-2004**
- ✓**Positive trade balance in favour of SACU before 2003**
- ✓**High growth rates of both X & M: 2000 - 2004**

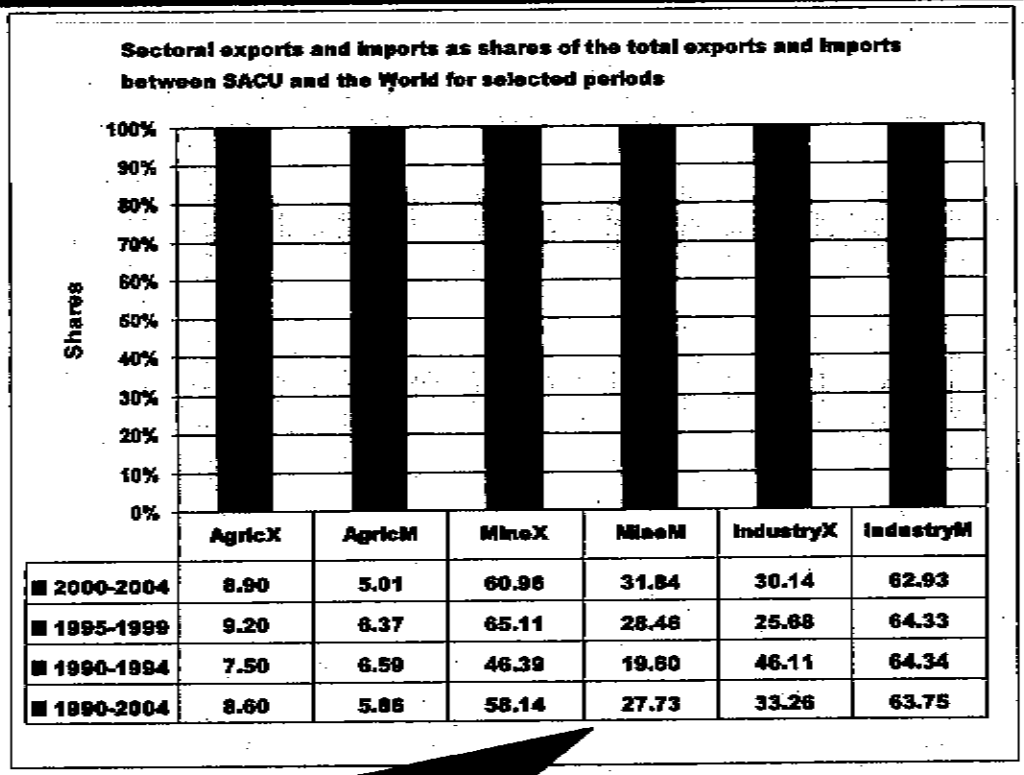
AGGREGATE SECTOR TRADE FLOWS: WORLD



Period	1990 - 2004	1990 - 1994	1995 - 1999	2000 - 2004
AgricX	34.40	17.83	9.17	23.31
AgricM	33.77	26.43	10.65	35.93
MineX	42.36	33.51	10.61	34.23
MineM	**54.38**	16.27	8.85	30.97
IndustryX	28.16	25.07	20.95	21.01
IndustryM	40.47	21.10	3.68	34.23

✓SACU – net exporter of agric & mineral products: +ve balance from 1990 to 2004
✓SACU – net importer of industrial products since 1994: -ve balance from 1994 to 2004

AGGREGATE SECTOR TRADE FLOWS: WORLD(cont)



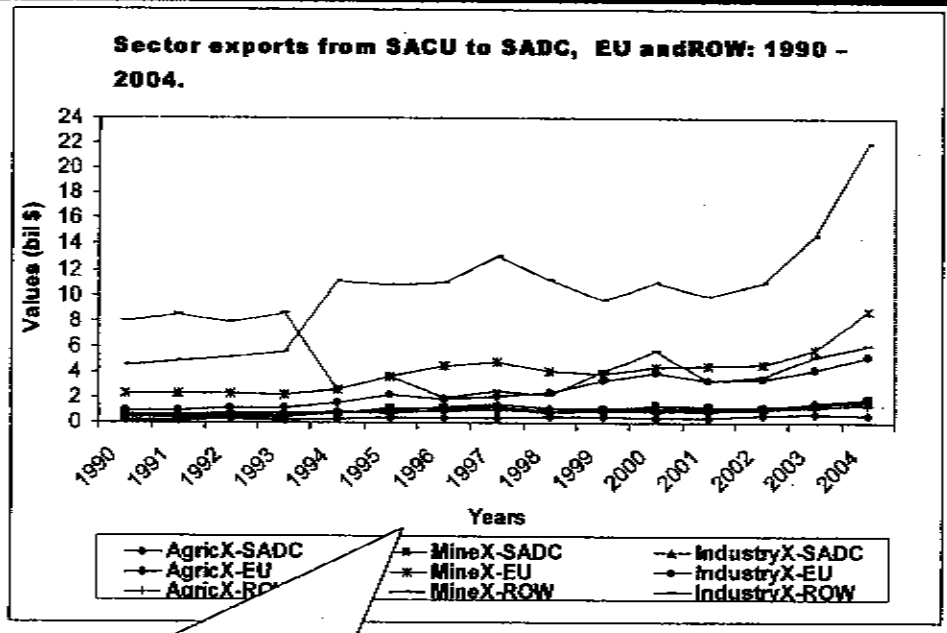
	1990 - 2004	1990 - 1994	1995 - 1999	2000 - 2004
AgricX	7.54 7.27	7.98 7.68	3.46 3.40	14.38 13.44
AgricM	5.61 5.46	14.11 13.19	-5.59 -5.75	20.78 18.88
MineX	8.76 8.40	16.04 14.87	-1.68 -1.69	18.24 16.75
MineM	12.92 12.16	9.53 9.10	1.48 1.47	15.68 14.57
IndustryX	1.41 1.40	-11.31 -12.00	6.20 6.02	7.51 7.24
IndustryM	8.02 7.71	12.00 11.33	-1.01 -1.02	19.60 17.90

X & M: small different to other periods

X & M: large different to other periods

X: large different to other periods & M: not

AGGREGATE SECTOR EXPORT TRENDS: SADC, EU & ROW



✓X to ROW & EU were mainly dominated by Mining followed by Indusry
✓X to SADC were dominated by Agric

	1990 - 2004	1990 - 1994	1995 - 1999	2000 - 2004
AgricX SADC	38.80	18.53	10.96	21.64
AgricX EU	41.13	20.39	11.70	20.80
AgricX ROW	33.97	21.77	14.35	19.53
MineX SADC	36.41	8.60	8.04	33.25
MineX EU	42.82	7.91	11.35	33.32
MineX ROW	**52.90**	23.15	24.79	18.63
IndustryX SADC	34.80	38.89	13.66	16.54
IndustryX EU	43.16	44.60	11.03	36.15
IndustryX ROW	48.27	35.56	32.95	25.85

AGGREGATE SECTOR EXPORT TRENDS: SADC, EU & ROW (cont)

SACU's sector exports as shares of the total exports to SADC, EU and ROW for selected periods.

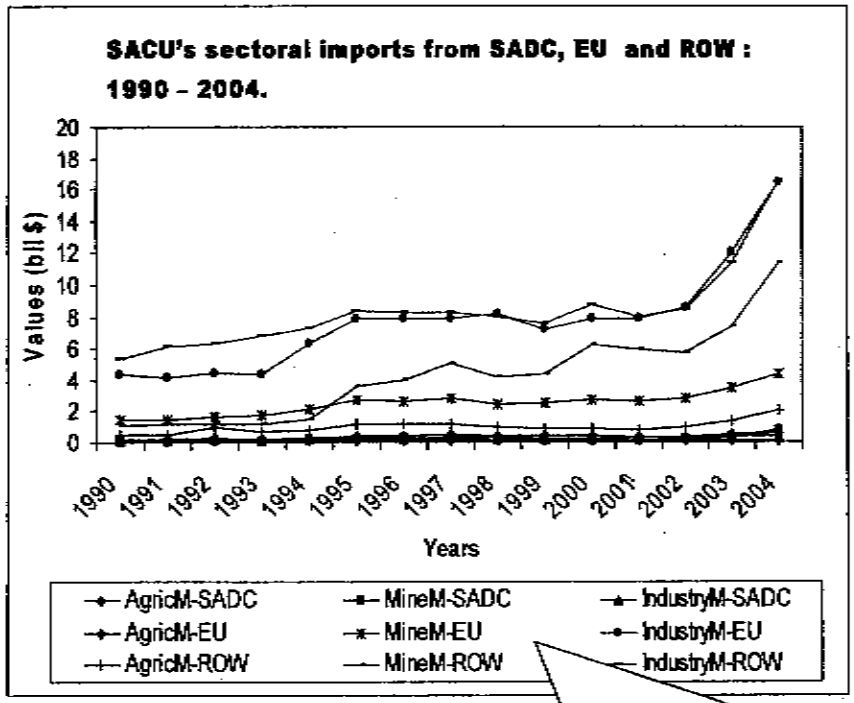
	AgricX-SADC	MineX-SADC	Industry X-SADC	AgricX-EU	MineX-EU	Industry X-EU	AgricX-ROW	MineX-ROW	Industry X-ROW
2000-2004	1.68	4.18	3.97	3.78	16.46	11.97	3.43	40.32	14.20
1995-1999	1.82	4.36	4.77	3.73	16.60	9.43	3.66	44.15	11.48
1990-1994	1.20	2.74	3.31	3.43	11.98	5.89	2.87	31.68	36.91
1990-2004	1.59	3.82	4.04	3.66	15.22	9.40	3.35	39.10	19.83

- ✓**Bigger share of agric X to SADC: 1995 – 1999: Insignificant differences from others**
- ✓**Bigger share of mine X to SADC: 1995 – 1999: Insignificant differences from others**
- ✓**Bigger share of industry X to SADC: 1995 – 1999: Insignificant differences from others**
- ✓**Bigger share of agric X to EU: 2000 – 2004: Insignificant differences from others**
- ✓**Bigger share of mine X to EU: 1995 – 1999: Significantly larger than 1990 - 1994**
- ✓**Bigger share of industry X to EU: 2000 – 2004: Significantly larger than others**
- ✓**Bigger share of agric X to ROW: 1995 – 1999 : Insignificant differences from others**
- ✓**Bigger share of mine X to ROW : 1995 – 1999 : Significantly larger than others**
- ✓**Bigger share of industry X to ROW : 1990 – 1994 : Significantly larger than others**

AGGREGATE SECTOR EXPORT TRENDS: SADC, EU & ROW (cont)

	1990 - 2004	1990 - 1994	1995 - 1999	2000 - 2004
Agricultural Exports to SADC	9.39 8.98	11.72 11.08	6.06 5.88	**12.76** **12.01**
Agricultural Exports to EU	6.71 6.50	5.18 5.05	3.91 3.83	**20.22** **18.42**
Agricultural Exports to ROW	7.84 7.54	**8.93** **8.55**	1.75 1.73	8.88 8.51
Mining Exports to SADC	9.69 9.25	**12.37** **11.66**	-3.51 -3.57	8.12 7.81
Mining Exports to EU	8.54 8.19	2.20 2.17	-0.09 -0.09	**18.11** **16.64**
Mining Exports to ROW	8.84 8.47	21.77 19.70	-2.07 -2.09	**19.43** **19.76**
Industrial Exports to SADC	7.88 7.58	**15.35** **14.28**	2.58 2.55	11.86 11.21
Industrial Exports to EU	13.23 12.43	**13.67** **12.81**	12.02 11.35	7.95 7.65
Industrial Exports to ROW	-3.39 -3.45	-19.79 -22.05	3.57 3.50	**6.33** **6.14**

AGGREGATE SECTORAL IMPORT TRENDS: SADC, EU & ROW

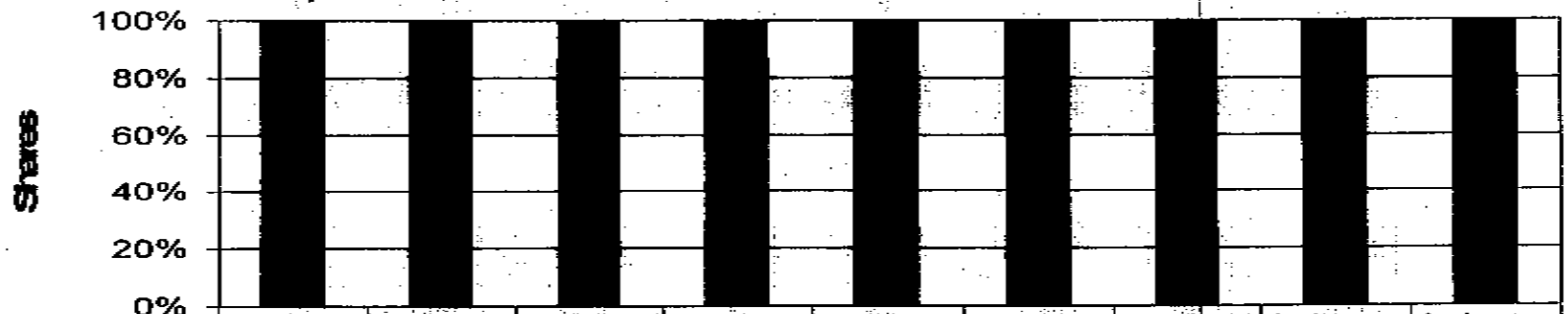


	1990 - 2004	1990 - 1994	1995 - 1999	2000 - 2004
AgricM SADC	18.28	22.70	13.01	17.71
MineM SADC	**88.57**	**65.83**	27.09	**89.47**
IndustryM SADC	42.25	38.71	17.01	31.72
AgricM EU	26.50	16.10	7.88	24.62
MineM EU	30.92	16.87	6.24	23.73
IndustryM EU	41.35	18.97	4.65	35.01
AgricM ROW	39.11	32.15	12.03	41.74
MineM ROW	**67.88**	12.27	12.56	32.01
IndustryM ROW	31.75	11.59	3.97	33.42

✓SACU M were dominated by Industry from ROW followed by EU.
✓Similarly to Mine M.
✓More Agric M were from ROW

AGGREGATE SECTOR IMPORT TRENDS: SADC, EU & ROW (cont)

SACU's sector imports as shares of the total imports from SADC, EU and ROW.



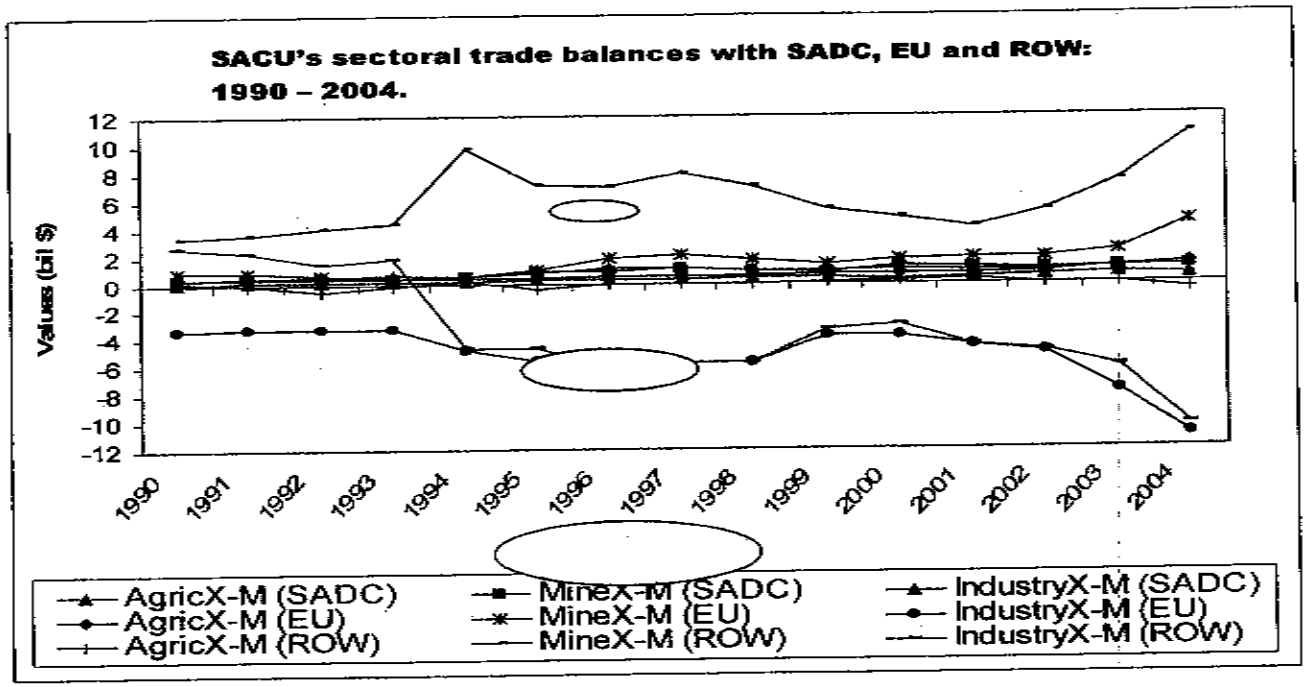
	AgricM-SADC	AgricM-EU	AgricM-ROW	MineM-SADC	MineM-EU	MineM-ROW	Industry M-	Industry M-EU	Industry M-ROW
2000-2004	0.31	1.17	3.53	0.86	9.40	21.59	0.91	31.01	31.22
1995-1999	0.45	1.64	4.28	0.76	10.59	17.10	1.06	31.52	32.59
1990-1994	0.60	1.66	4.33	0.60	11.11	7.89	0.88	31.19	41.74
1990-2004	0.43	1.45	3.98	0.76	10.22	16.74	0.96	31.23	34.23

- ✓**Bigger share of agric M from SADC: 1990 – 1994: Insignificant differences from others**
- ✓**Bigger share of mine M from SADC: 2000 – 2004: Insignificant differences from others**
- ✓**Bigger share of industry M from SADC: 1995 – 1999: Insignificant differences from others**
- ✓**Bigger share of agric M from EU: 1990 – 1994: Insignificant differences from others**
- ✓**Bigger share of mine M from EU: 1990 – 1994: Insignificant differences from others**
- ✓**Bigger share of industry M from EU: 1995 – 1999: Insignificant differences from others**
- ✓**Bigger share of agric M from ROW: 1990 – 1994 : Insignificant differences from others**
- ✓**Bigger share of mine M from ROW : 2000 – 2004 : Significantly larger than others**
- ✓**Bigger share of industry M from ROW : 1990 – 1994 : Significantly larger than others**

AGGREGATE SECTOR IMPORT TRENDS: SADC, EU & ROW

TRADE FLOWS	1990-2004 (%)	1990-1994 (%)	1995-1999 (%)	2000-2004 (%)
Agric Imports from SADC	1.91 1.89	**15.15** **14.10**	-5.59 -5.75	10.50 9.98
Agric Imports from EU	4.57 4.47	8.57 8.22	-2.60 -2.64	**12.09** **11.41**
Agric Imports from ROW	6.43 6.23	16.42 15.20	-6.71 -6.95	**24.83** **22.17**
Mining Imports from SADC	12.90 12.14	43.23 35.93	-4.64 -4.75	**59.68** **46.80**
Mining Imports from EU	6.45 6.25	10.29 9.80	-2.39 -2.42	**13.45** **12.62**
Mining Imports from ROW	**18.23** **16.75**	6.29 6.10	4.34 4.25	**15.28** **14.22**
Industrial Imports from SADC	9.50 9.08	25.47 22.69	0.65 0.65	**22.74** **20.49**
Industrial Imports from EU	8.03 7.73	8.26 7.94	-1.45 -1.46	**20.82** **18.91**
Industrial Imports from ROW	5.14 5.02	7.57 7.30	-2.30 -2.32	**17.73** **16.32**

AGGREGATE SECTOR TRADE BALANCES: SADC, EU & ROW

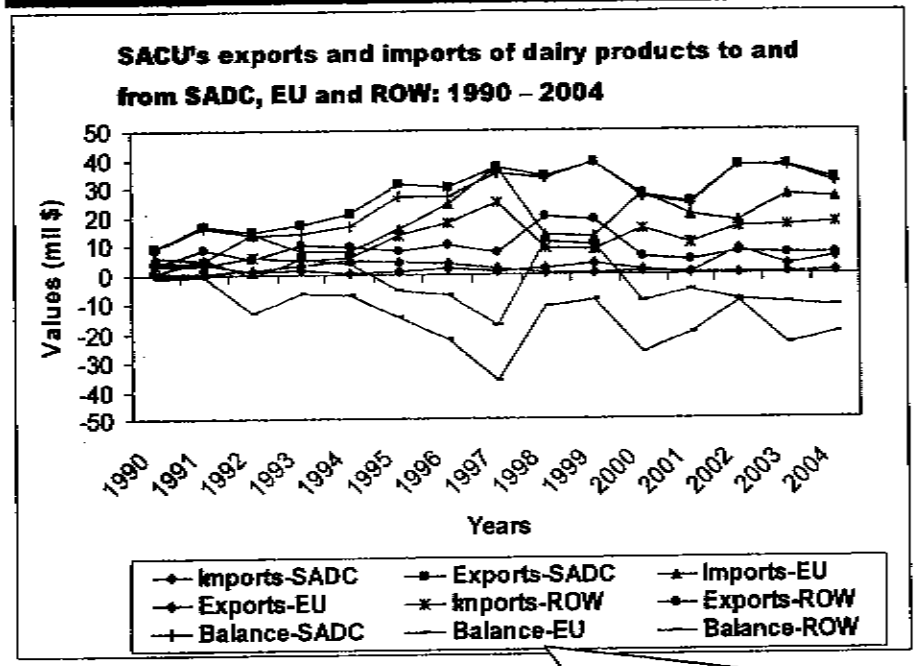


✓**SACU – net agric exporter to SADC, EU & ROW: +ve balance from 1990 to 2004, except from 2003 with ROW**

✓**SACU – net mineral exporter to SADC & EU: +ve balance from 1990 to 2004**

✓**SACU – net industrial importer from ROW since 1994: -ve balance from 1994 to 2004 and from EU: -ve balance from 1990 to 2004**

DISAGGREGATE TRADE TRENDS: Dairy Products (HS 04)



	1990 - 2004	1990 - 1994	1995 - 1999	2000 - 2004
ImportsADC	**104.47**	**98.62**	**91.85**	**42.92**
ExportsSADC	35.43	26.88	11.09	18.51
ImportsEU	**54.69**	44.61	**50.67**	18.19
ExportsEU	**95.05**	**89.16**	**69.39**	**90.89**
ImportsROW	**56.39**	30.41	47.31	18.46
ExportsROW	**52.95**	40.53	47.43	14.37

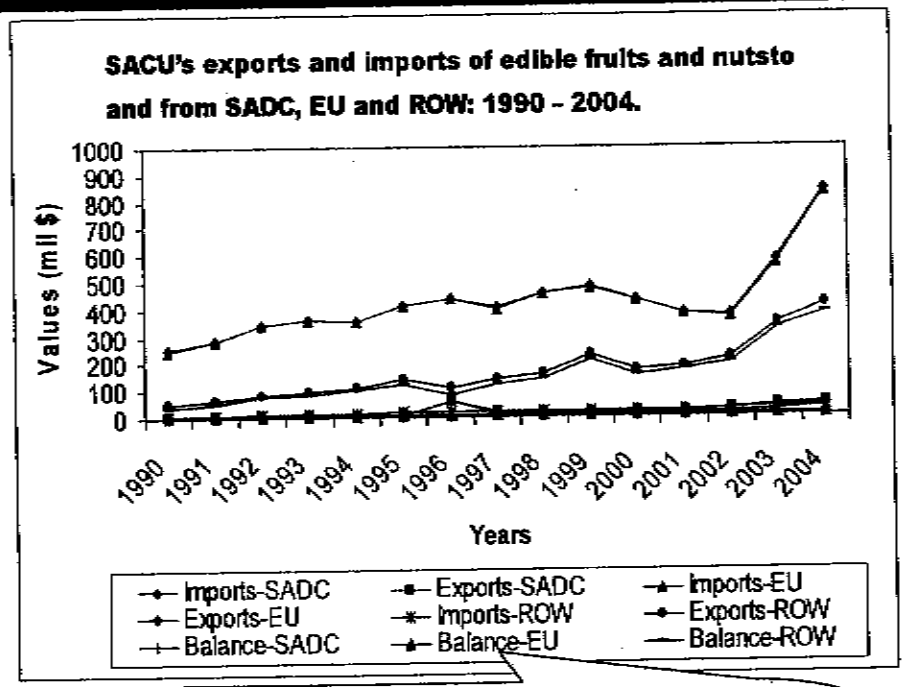
✓More X to SADC followed by ROW and then EU
✓More M to EU followed by ROW and then SADC
✓SACU - net dairy exporter to SADC: +ve trade balance from 1990 - 2004
✓SACU - net dairy importer from EU: -ve trade balance from 1990 – 2004
✓SACU - net dairy importer & exporter with ROW: –ve & +ve trade balance in certain years

DISAGGREGATE TRADE TRENDS: Dairy Products (cont)

	1990 - 2004	1990 - 1994	1995 - 1999	2000 - 2004
Exports SADC	-6.27 -6.48	**120.63** **79.13**	59.74 90.99	0.44 0.44
Imports SADC	7.98 7.68	**18.03** **16.57**	5.88 5.71	7.90 7.60
Exports EU	11.23 10.64	**13.11** **12.32**	-9.45 -9.93	1.68 1.67
Imports EU	5.19 5.06	-43.72 -57.48	45.08 37.21	**88.62** **63.46**
Exports ROW	11.91 11.26	**19.20** **17.56**	-15.20 -16.49	7.64 7.36
Imports ROW	1.14 1.13	**26.29** **23.34**	27.49 24.29	5.85 5.68

✓**Bigger M world prod share from SADC: 1990 – 1994 : Significant larger than others**
✓**Bigger X world prod share to SADC: 2000-2004: Significant larger than others**
✓**Bigger M world prod share from EU: 2000-2004: Significant larger than others**
✓**Bigger X world prod share to EU: 2000-2004 : Significant larger than 1995-1999**
✓**Bigger M world prod share from ROW: 2000-2004 : Significant larger than 1990-1994**
✓**Bigger X world prod share to ROW: 1990-1994: Significant larger than 2000-2004**

DISAGGREGATE TRADE TRENDS: Edible Fruits and Nuts (HS 08)



	1990 - 2004	1990 - 1994	1995 - 1999	2000 - 2004
Imports SADC	45.77	32.47	26.07	**54.96**
Exports SADC	**88.32**	31.99	91.46	39.57
Imports EU	**52.06**	25.85	20.03	43.89
Exports EU	32.30	15.22	7.16	37.42
Imports ROW	39.80	20.14	6.23	35.79
Exports ROW	**61.03**	31.29	29.49	40.26

✓More X to EU followed by ROW and then SADC

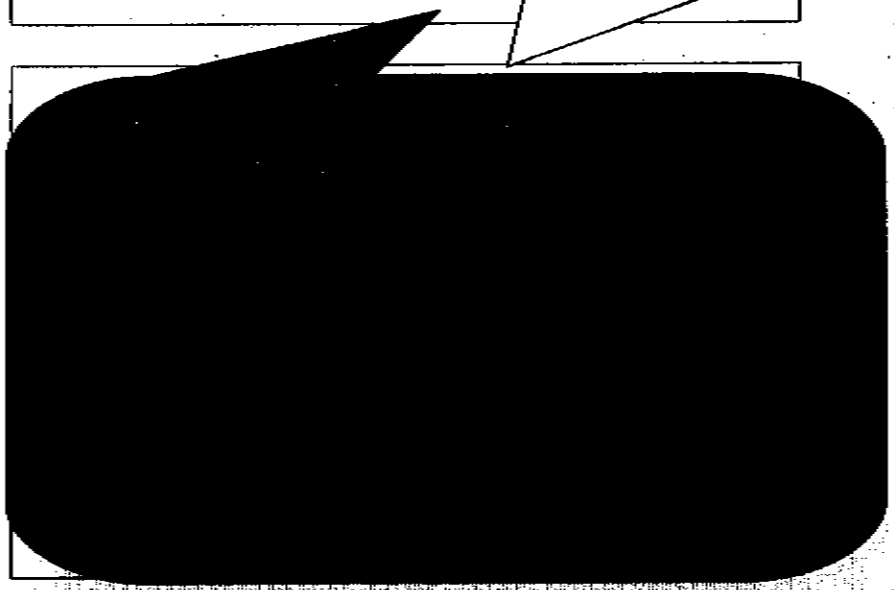
✓M from EU, ROW & SADC are almost equal

✓SACU - net exporter of edible fruits and nuts to SADC, EU and ROW.

✓Hence positive trade balances in favour of SACU from 1990 – 2004

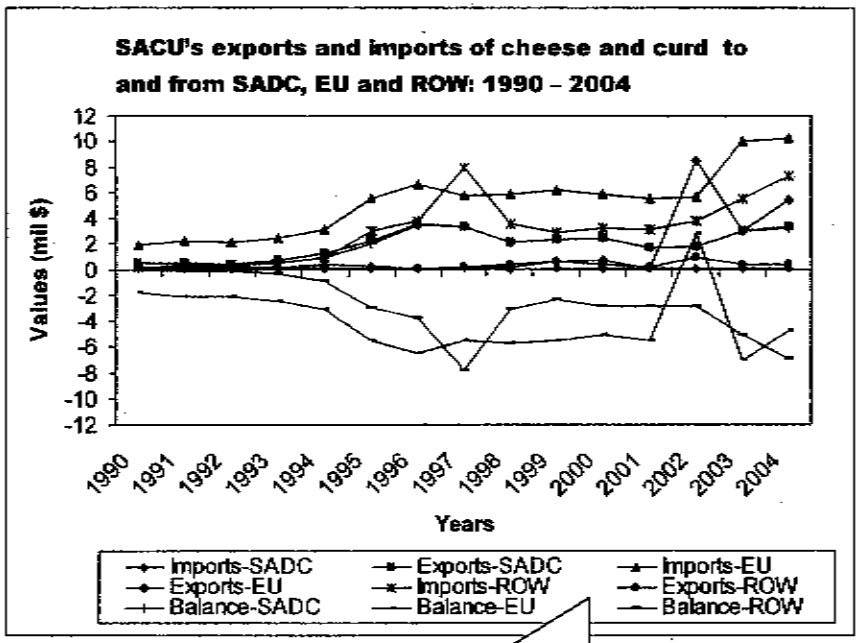
DISAGGREGATE TRADE TRENDS: Edible Fruits and Nuts (cont)

- ✓Bigger M world prod share from SADC: 1990 – 1994 : Significant larger 2000-2004
- ✓Bigger X world prod share to SADC: 2000-2004: Significant larger 1990-1994
- ✓Bigger M world prod share from EU: 2000-2004: Significant larger than others
- ✓Bigger X world prod share to EU: 1990-1994: Significant larger than 2000-2004
- ✓Bigger M world prod share from ROW: 1995-1999: Insignificant difference
- ✓Bigger X world prod share to ROW: 2000-2004: Significant larger than others



	1990 - 2004	1990 - 1994	1995 - 1999	2000 - 2004
Exports SADC	6.04 5.86	22.32 20.15	9.53 9.11	**25.14** **22.43**
Imports SADC	18.32 16.82	14.05 13.15	-6.57 -6.79	**27.67** **24.43**
Exports EU	9.42 9.01	-12.74 -13.62	4.73 4.62	**28.33** **24.95**
Imports EU	5.18 5.05	9.67 9.23	3.51 3.45	**18.82** **17.25**
Exports ROW	7.79 7.50	13.79 12.92	-0.09 -0.09	**13.73** **12.87**
Imports ROW	13.53 12.67	23.06 20.72	14.86 13.85	**26.61** **23.59**

DISAGGREGATE TRADE TRENDS: Cheese and Curd (HS 0406)

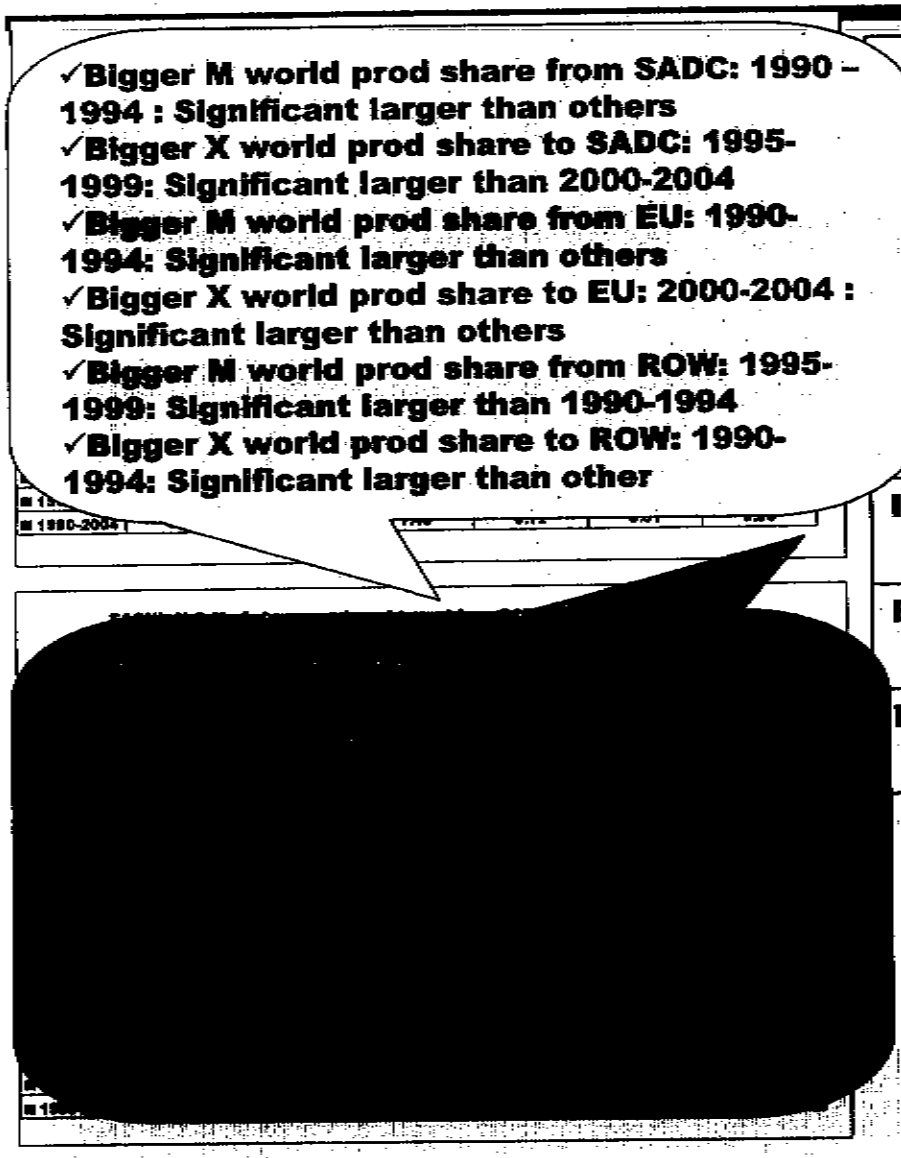


	1990 - 2004	1990 - 1994	1995 - 1999	2000 - 2004
Imports SADC	**135.26**	**92.56**	**105.61**	**94.19**
Exports SADC	**56.22**	**57.65**	24.01	28.47
Imports EU	**49.10**	18.80	7.04	33.10
Exports EU	**198.93**	**141.39**	**112.13**	**98.88**
Imports ROW	**78.84**	**64.08**	49.51	38.94
Exports ROW	**83.19**	39.48	**88.08**	**56.48**

✓More X to SADC than ROW and EU
✓More M from EU followed by ROW
✓SACU - net cheese exporter to SADC: +ve balance from 1990-2004
✓SACU - net cheese importer from EU and ROW: -ve trade balance from 1990 – 2004

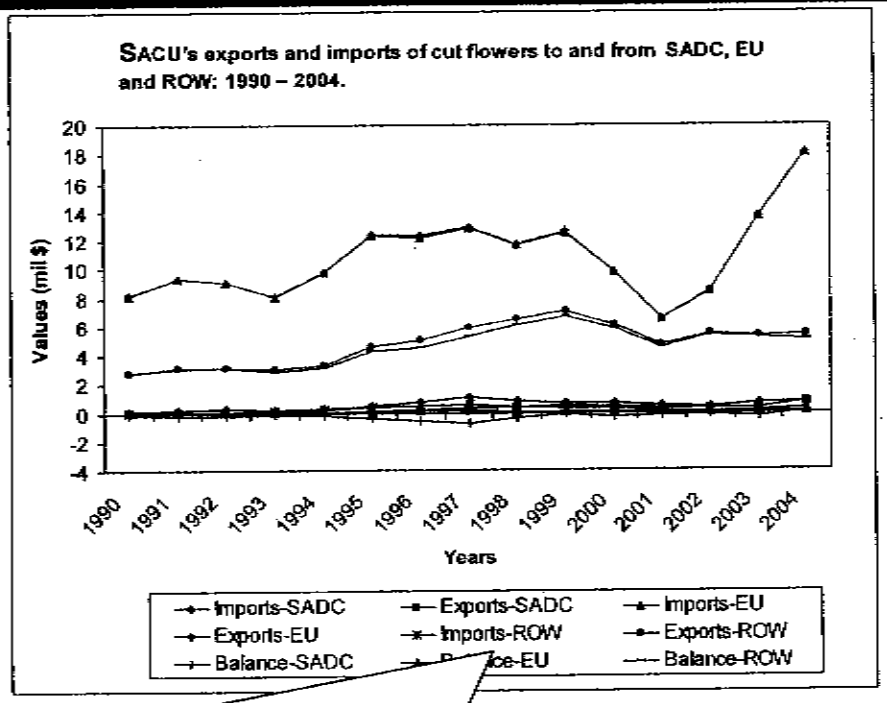
DISAGGREGATE TRADE TRENDS: Cheese and Curd (cont)

- ✓Bigger M world prod share from SADC: 1990 – 1994 : Significant larger than others
- ✓Bigger X world prod share to SADC: 1995-1999: Significant larger than 2000-2004
- ✓Bigger M world prod share from EU: 1990-1994: Significant larger than others
- ✓Bigger X world prod share to EU: 2000-2004 : Significant larger than others
- ✓Bigger M world prod share from ROW: 1995-1999: Significant larger than 1990-1994
- ✓Bigger X world prod share to ROW: 1990-1994: Significant larger than other



	1990 - 2004	1990 - 1994	1995 - 1999	2000 - 2004
xports SADC	0.00 0.00	110.23 74.30	0.00 0.00	**182.35** **103.80**
nports SADC	14.49 13.54	**28.65** **25.19**	-3.47 -3.54	12.43 11.71
xports EU	11.57 10.95	11.31 10.71	1.14 1.14	**18.84** **17.26**
Imports EU	63.10 48.92	-72.98 -130.84	**257.55** **125.41**	162.19 96.39
Exports ROW	**26.61** **23.59**	46.47 38.16	-1.55 -1.56	**24.45** **21.87**
Imports ROW	14.07 13.17	-14.94 -16.19	**87.11** **62.65**	6.46 6.26

DISAGGREGATE TRADE TRENDS: Cut flower (HS 0603)



	1990 - 2004	1990 - 1994	1995 - 1999	2000 - 2004
Imports SADC	**52.08**	27.35	29.39	25.55
Exports SADC	**84.92**	**60.16**	**51.30**	45.82
Imports EU	**63.81**	**40.78**	21.83	**72.91**
Exports EU	26.80	8.35	3.49	40.53
Imports ROW	**75.87**	**92.80**	27.86	**63.72**
Exports ROW	28.81	5.78	16.81	9.12

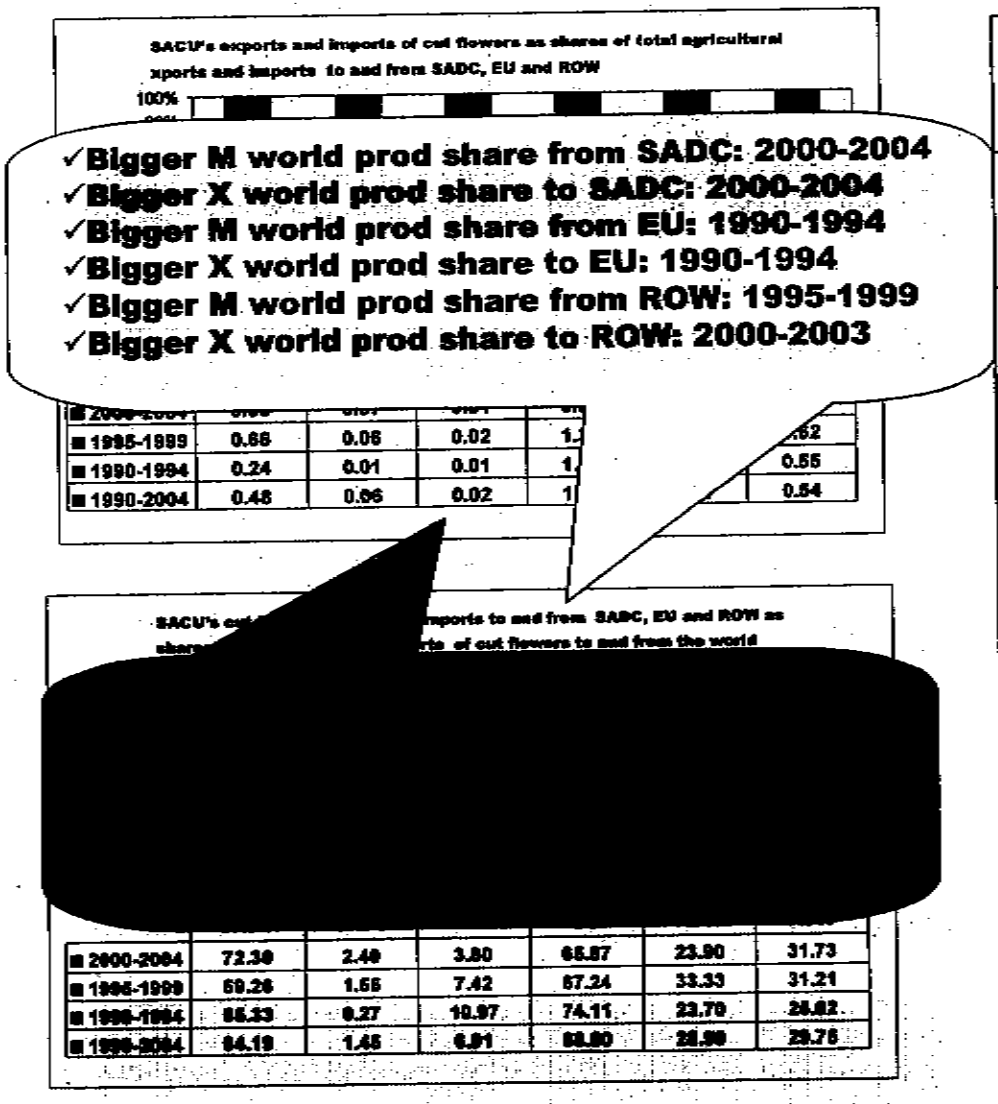
✓More X to EU followed by ROW and then SADC

✓More M from SADC than EU & ROW (almost equal)

✓SACU - net exporter of cut flowers to EU and ROW and net importer from SADC.

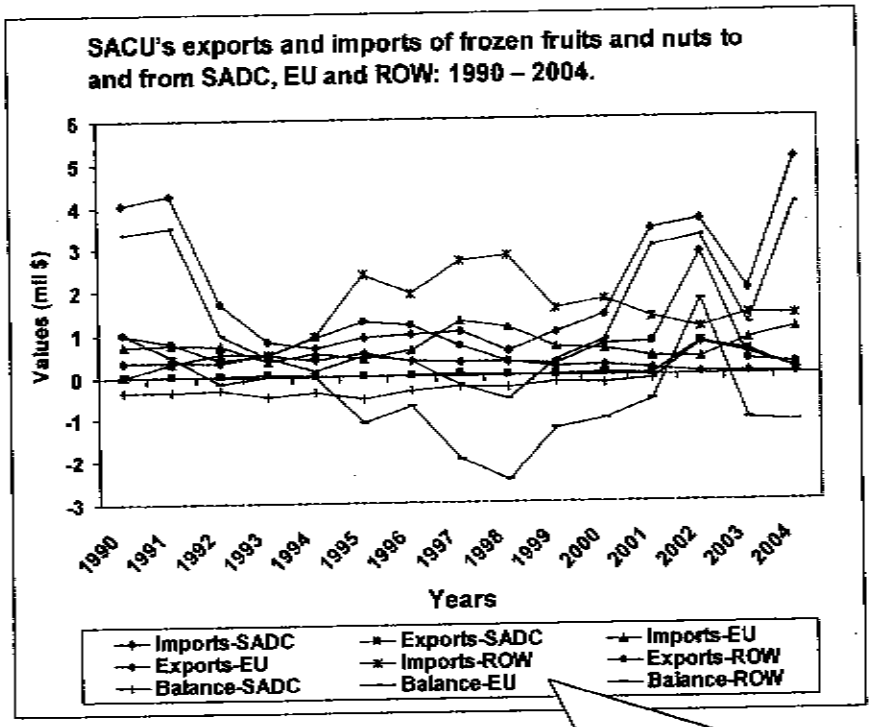
✓Hence positive trade balances in favour of SACU from 1990 – 2004, except with SADC

DISAGGREGATE TRADE TRENDS: Cut flower (cont)



	1990 - 2004	1990 - 1994	1995 - 1999	2000 - 2004
Exports SADC	9.91 9.45	**12.82** **12.06**	8.32 7.99	3.58 3.52
Imports SADC	29.49 25.84	35.37 30.38	**45.42** **37.45**	13.55 12.71
Exports EU	-5.45 -5.60	**25.79** **22.95**	-6.29 -6.49	-40.83 -52.48
Imports EU	2.36 2.33	2.13 2.11	-0.21 -0.21	**21.59** **19.55**
Exports ROW	12.66 11.92	**98.13** **68.38**	-6.84 -7.08	-0.22 -0.22
Imports ROW	5.56 5.41	2.95 2.91	**11.28** **10.69**	-1.08 -1.08

DISAGGREGATE TRADE TRENDS: Frozen Fruits & Nuts (HS 0811)



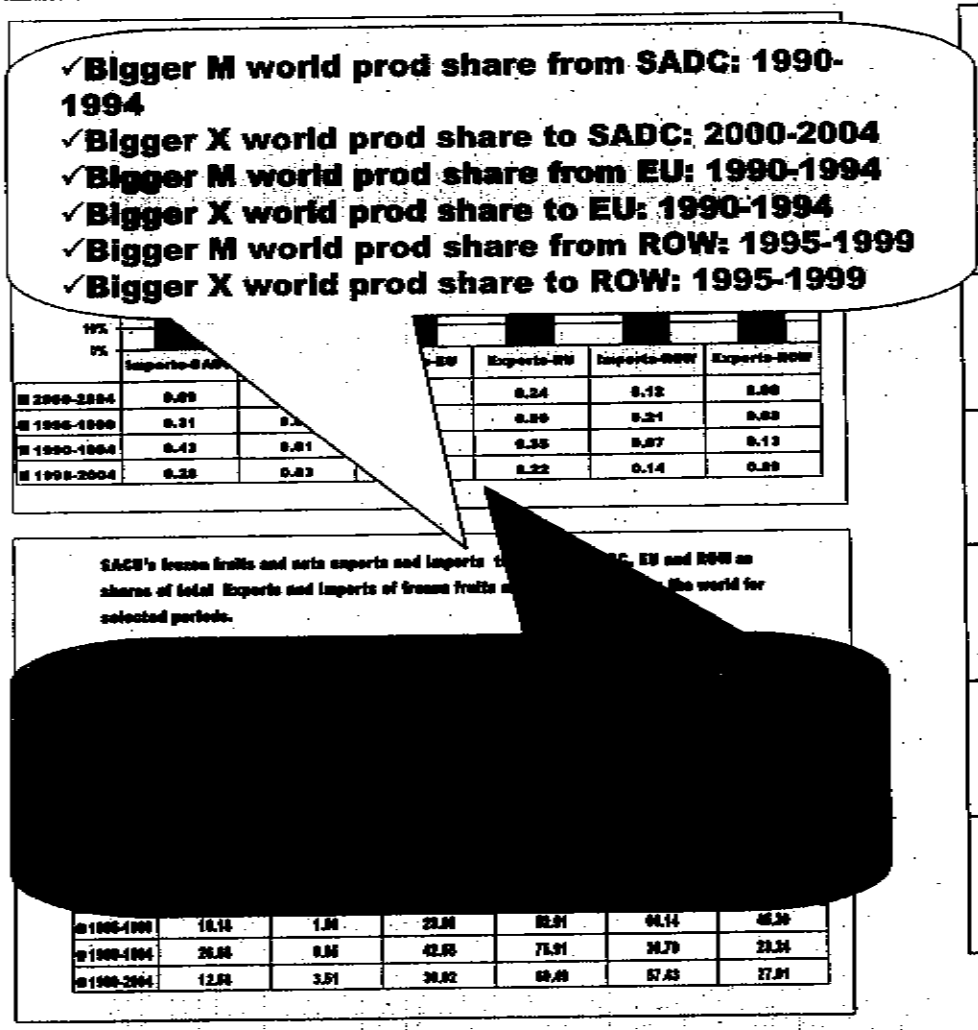
	1990 - 2004	1990 - 1994	1995 - 1999	2000 - 2004
Imports SADC	**58.70**	17.16	35.35	**96.26**
Exports SADC	**189.82**	**55.07**	38.18	**114.37**
Imports EU	39.76	26.41	44.64	43.45
Exports EU	**73.39**	**75.76**	21.70	46.73
Imports ROW	**61.28**	**71.32**	23.36	17.38
Exports ROW	**79.85**	37.47	**62.93**	**110.13**

✓SACU - net exporter of frozen fruits and nuts to EU

✓SACU - net importer of frozen fruits and nuts from SADC and ROW

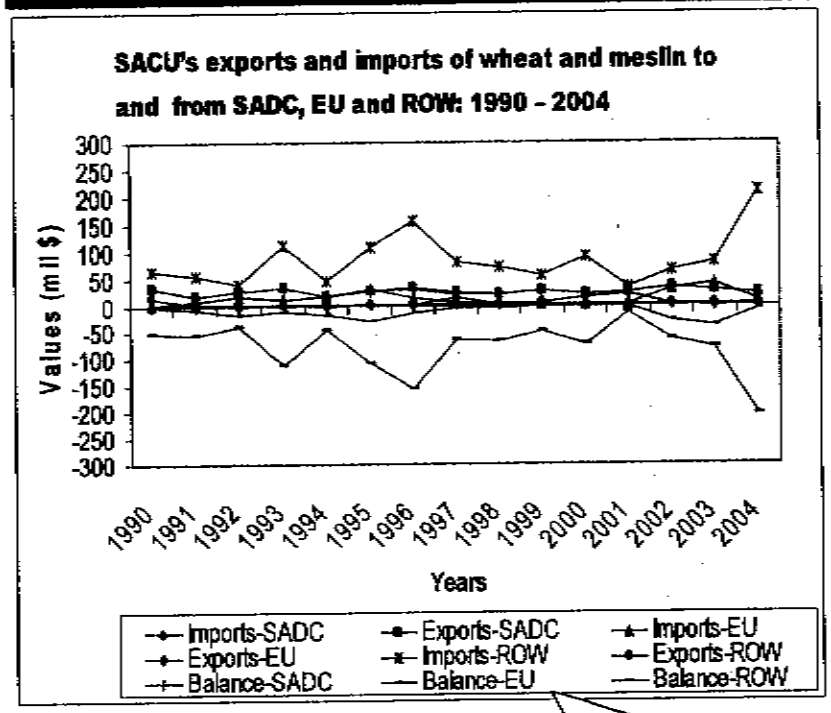
DISAGGREGATE TRADE TRENDS: Frozen Fruits & Nuts (cont)

- ✓Bigger M world prod share from SADC: 1990-1994
- ✓Bigger X world prod share to SADC: 2000-2004
- ✓Bigger M world prod share from EU: 1990-1994
- ✓Bigger X world prod share to EU: 1990-1994
- ✓Bigger M world prod share from ROW: 1995-1999
- ✓Bigger X world prod share to ROW: 1995-1999



	1990 - 2004	1990 - 1994	1995 - 1999	2000 - 2004
Exports SADC	-17.51 -19.25	**4.45** **4.35**	-19.39 -21.55	-46.19 -61.97
Imports SADC	18.82 17.24	-9.93 -10.46	6.60 6.39	**75.43** **56.21**
Exports EU	0.91 0.91	-12.15 -12.95	16.38 15.17	**20.21** **18.40**
Imports EU	3.03 2.98	-40.76 -52.35	-3.01 -3.06	**22.25** **20.09**
Exports ROW	17.79 16.38	**116.94** **77.45**	-4.79 -4.91	-4.42 -4.52
Imports ROW	**-3.33** **-3.38**	**-6.39** **-6.60**	**-35.77** **-44.28**	**-27.09** **-31.59**

DISAGGREGATE TRADE TRENDS: Wheat & Meslin (HS 1001&1101)

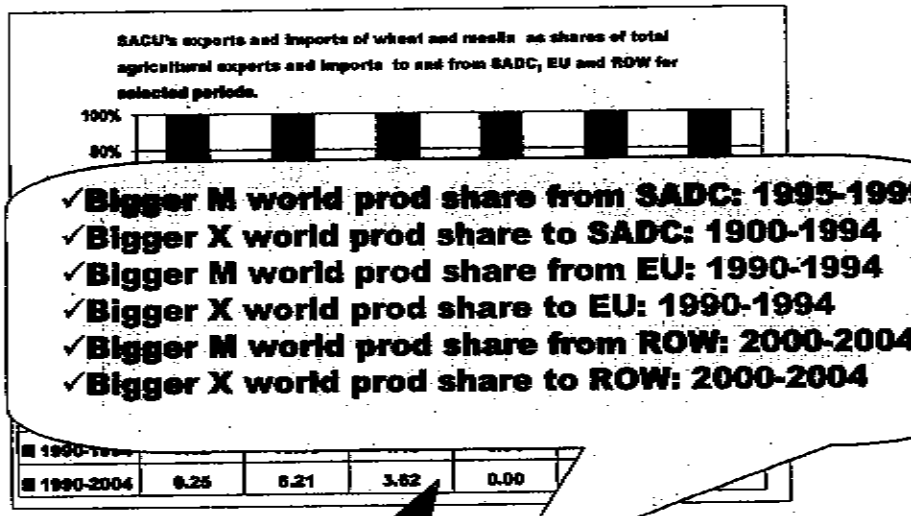


	1990 - 2004	1990 - 1994	1995 - 1999	2000 - 2004
Imports SADC	**190.09**	**201.62**	**105.97**	**221.53**
Exports SADC	24.07	32.65	19.48	23.80
Imports EU	**95.66**	**51.55**	**107.73**	**114.03**
Exports EU	**306.60**	**200.93**	**91.71**	**158.58**
Imports ROW	**55.51**	44.56	42.60	**70.23**
Exports ROW	**150.15**	**220.55**	**135.66**	**135.92**

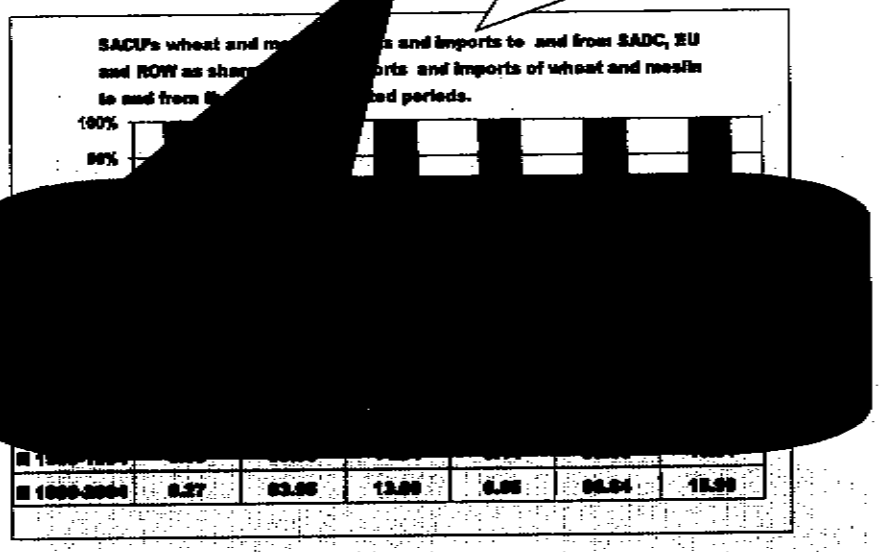
✓SACU - net exporter of wheat and meslin to SADC

✓SACU - net importer of wheat and meslin from EU and ROW

DISAGGREGATE TRADE TRENDS: Wheat & Meslin (cont)

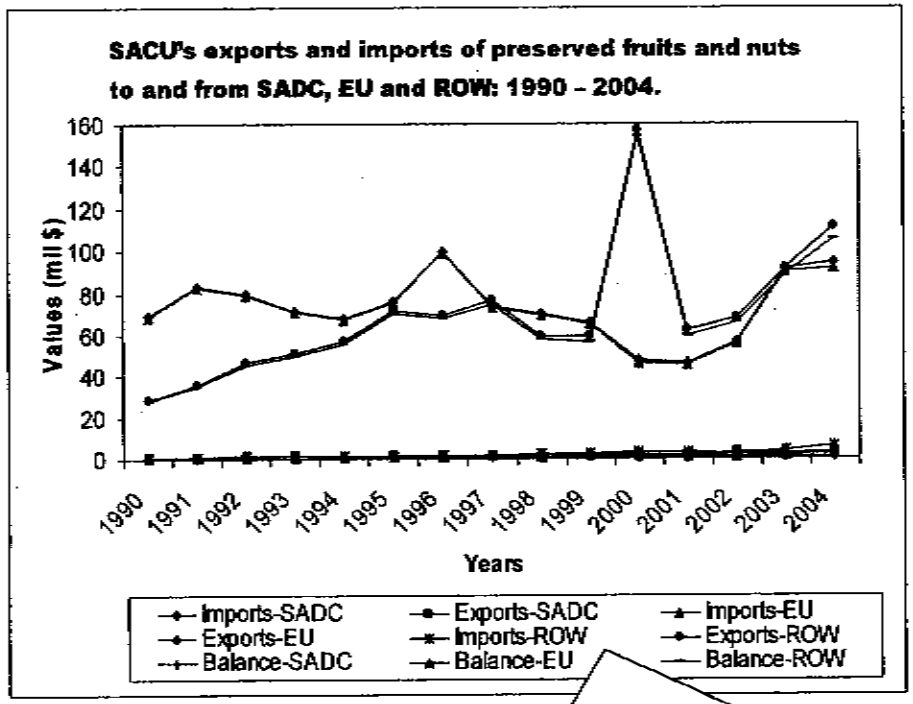


- ✓Bigger M world prod share from SADC: 1995-1999
- ✓Bigger X world prod share to SADC: 1900-1994
- ✓Bigger M world prod share from EU: 1990-1994
- ✓Bigger X world prod share to EU: 1990-1994
- ✓Bigger M world prod share from ROW: 2000-2004
- ✓Bigger X world prod share to ROW: 2000-2004



	1990 - 2004	1990 - 1994	1995 - 1999	2000 - 2004
Exports DC	0.00 0.00	0.00 0.00	**-66.25** **-108.63**	0.00 0.00
ports DC	-0.44 -0.44	-7.37 -7.66	-6.01 -6.20	**3.31** **3.25**
Exports EU	-8.01 -8.34	44.79 37.01	-74.59 -137.00	**329.91** **145.84**
Imports EU	0.00 0.00	0.00 0.00	-71.24 -124.61	0.00 0.00
Exports ROW	2.79 2.75	-0.47 -0.47	-19.35 -21.50	**29.20** **25.62**
Imports ROW	21.25 19.27	-72.94 -130.70	**470.62** **174.16**	-74.24 -135.63

DISAGGREGATE TRADE TRENDS: Preserved Fruits & Nuts (HS 2008)



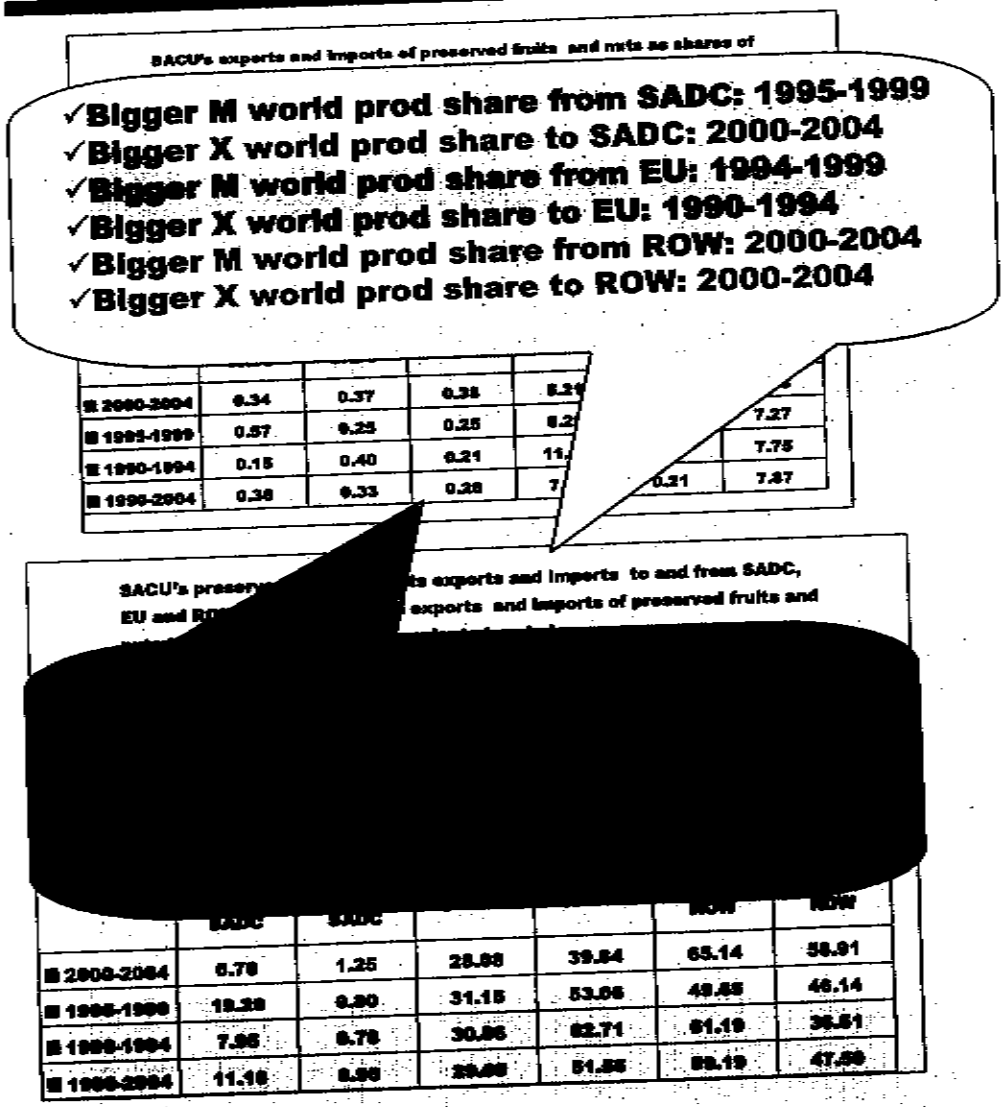
	1990 - 2004	1990 - 1994	1995 - 1999	2000 - 2004
Imports SADC	**74.90**	**78.62**	47.85	41.09
Exports SADC	**51.48**	33.08	18.60	40.15
Imports EU	**58.29**	**57.28**	14.98	49.93
Exports EU	21.26	8.95	16.89	35.23
Imports ROW	**67.32**	33.24	32.68	45.09
Exports ROW	45.60	26.14	11.42	39.34

✓SACU - net exporter of preserved fruits and nuts to SADC, EU and ROW

✓Hence positive trade balances in favour of SACU

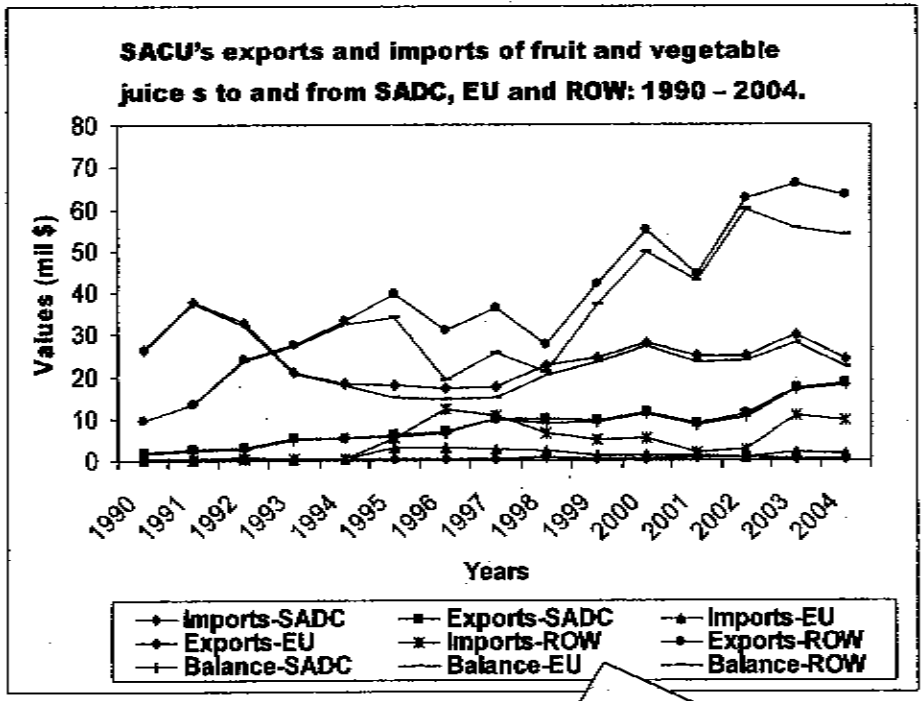
DISAGGREGATE TRADE TRENDS: Preserved Fruits & Nuts (cont)

- ✓Bigger M world prod share from SADC: 1995-1999
- ✓Bigger X world prod share to SADC: 2000-2004
- ✓Bigger M world prod share from EU: 1994-1999
- ✓Bigger X world prod share to EU: 1990-1994
- ✓Bigger M world prod share from ROW: 2000-2004
- ✓Bigger X world prod share to ROW: 2000-2004



	1990 - 2004	1990 - 1994	1995 - 1999	2000 - 2004
Exports SADC	12.29 11.59	26.73 23.69	-10.70 -11.32	**33.78** **29.10**
Imports SADC	8.22 7.90	6.53 6.33	-5.55 -5.71	**28.48** **25.06**
Exports EU	11.49 10.88	18.59 17.05	5.57 5.42	**19.14** **17.51**
Imports EU	-0.88 -0.88	-1.77 -1.79	-6.08 -6.27	**22.61** **20.38**
Exports ROW	12.94 12.17	15.79 14.66	**23.36** **20.99**	17.26 15.92
Imports ROW	7.53 7.26	**18.80** **17.23**	-5.18 -5.32	-2.98 -3.03

DISAGGREGATE TRADE TRENDS: Fruit & Vegetable juices (HS 2009)



	1990 - 2004	1990 - 1994	1995 - 1999	2000 - 2004
Imports SADC	48.56	39.24	**53.17**	37.78
Exports SADC	**57.44**	45.32	22.25	30.62
Imports EU	**68.48**	37.30	29.65	26.02
Exports EU	24.08	29.86	16.37	9.69
Imports ROW	**92.36**	71.68	40.78	**67.75**
Exports ROW	45.68	45.45	16.96	15.14

✓SACU - net exporter of fruit and vegetable juices to SADC, EU and ROW

✓Hence positive trade balances in favour of SACU

DISAGGREGATE TRADE TRENDS: Fruit & Vegetable juices (cont)

- ✓Bigger M world prod share from SADC: 1990-1994
- ✓Bigger X world prod share to SADC: 2000-2004
- ✓Bigger M world prod share from EU: 1990-1994
- ✓Bigger X world prod share to EU: 1990-1994
- ✓Bigger M world prod share from ROW: 2000-2004
- ✓Bigger X world prod share to ROW: 2000-2004

SACU's exports and imports of fruit and vegetable juices as shares of total

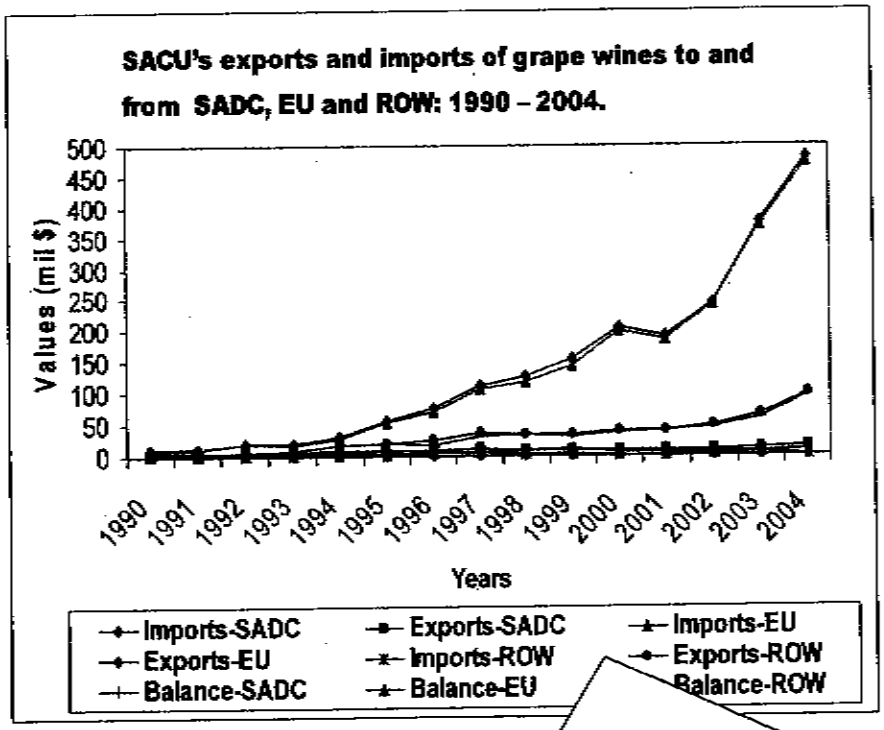
1995-1999	0.41	1.82	0.61	2.11		3.77
1990-1994	0.30	1.53	0.17	4.11		
1990-2004	0.38	1.97	0.40	2.6		4.28

SACU's fruit ... es exports and imports to and from SADC, EU and ... exports and imports of fruit and vegetable

	SADC	SADC			ROW	ROW
2000-2004	8.26	13.61	17.21	28.84	76.62	59.66
1995-1999	4.23	13.14	22.60	31.33	73.17	55.53
1990-1994	28.91	6.82	44.37	52.65	26.72	40.52
1990-2004	6.49	11.84	21.98	36.63	71.69	62.83

	1990 - 2004	1990 - 1994	1995 - 1999	2000 - 2004
Exports SADC	5.93 5.76	**17.25** **15.92**	1.04 1.03	2.81 2.78
Imports SADC	15.26 14.20	**33.76** **29.09**	13.35 12.53	17.55 16.17
Exports EU	10.68 10.15	-0.52 -0.52	-18.26 -20.16	**11.99** **11.33**
Imports EU	-0.25 -0.25	-12.22 -13.03	**9.15** **8.75**	-1.27 -1.28
Exports ROW	35.59 30.46	**59.33** **46.58**	-7.85 -8.17	35.01 30.02
Imports ROW	11.74 11.10	**37.60** **31.92**	0.05 0.05	7.06 6.82

DISAGGREGATE TRADE TRENDS: Grape Wines (HS 2204)



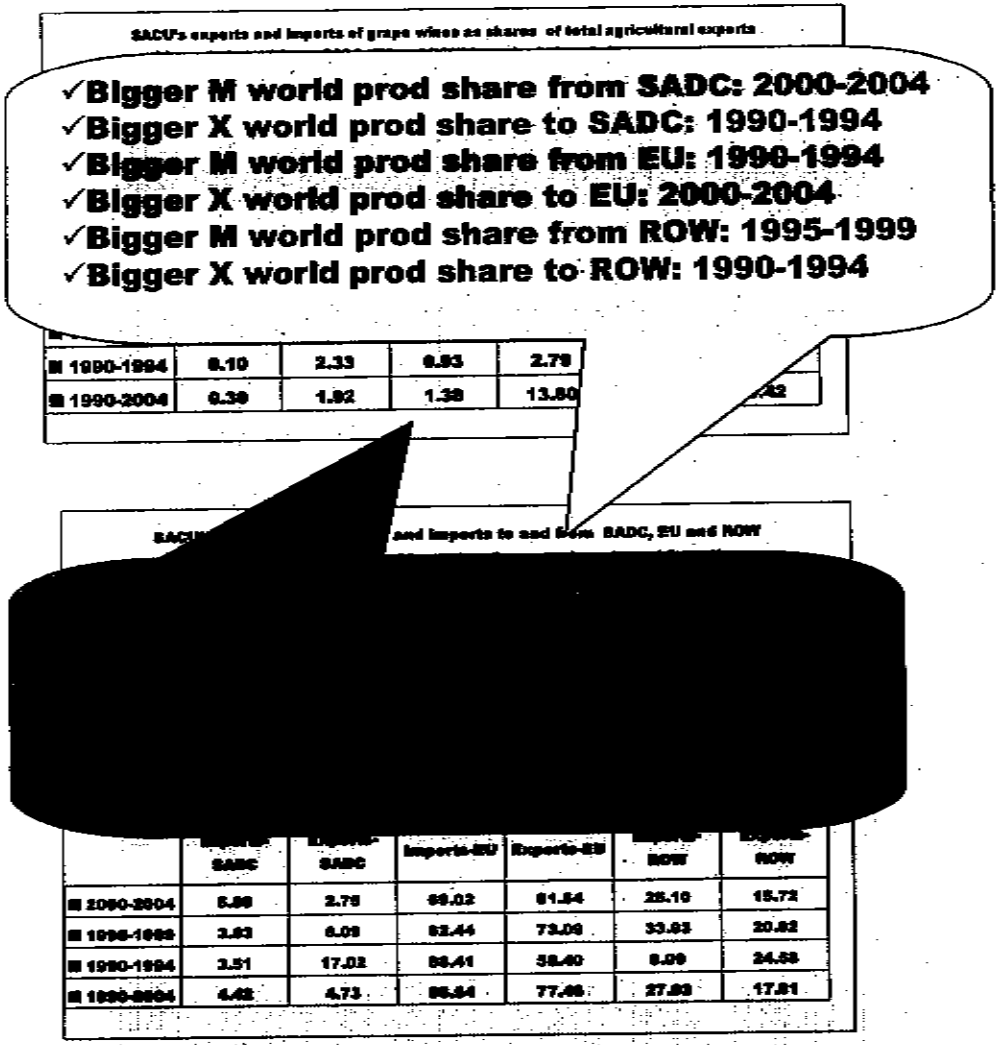
	1990 - 2004	1990 - 1994	1995 - 1999	2000 - 2004
Imports SADC	**80.52**	**73.16**	48.66	**59.76**
Exports SADC	35.42	25.19	23.71	29.40
Imports EU	**52.49**	13.07	42.06	28.54
Exports EU	**99.77**	44.28	37.66	42.00
Imports ROW	**123.49**	**91.69**	**78.61**	**113.88**
Exports ROW	**79.46**	**62.87**	25.40	42.18

✓SACU - net exporter of grape wines to SADC, EU and ROW

✓Hence positive trade balances in favour of SACU

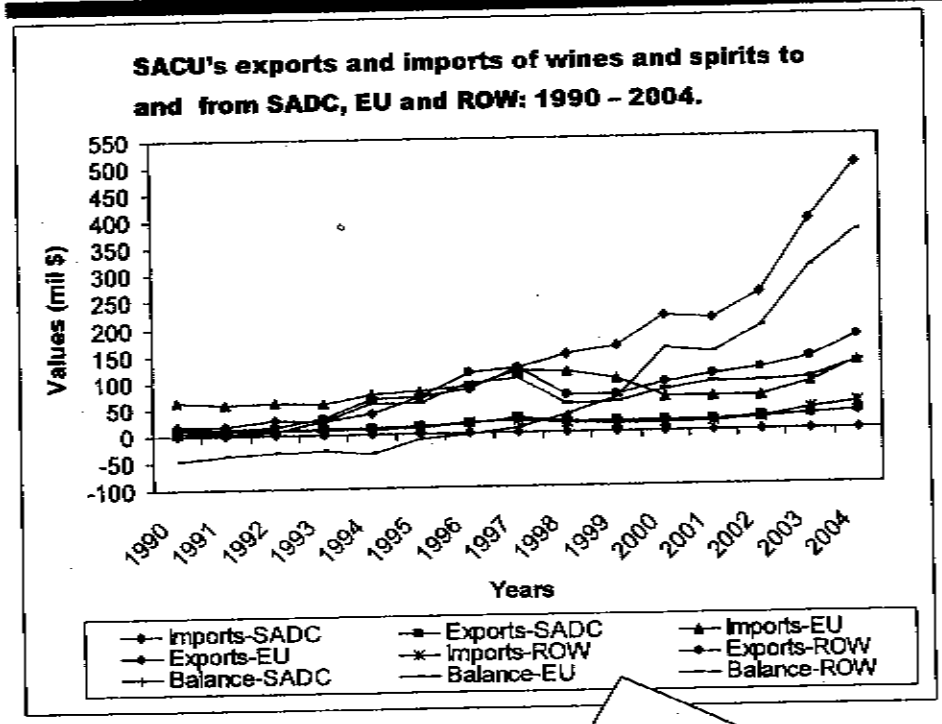
DISAGGREGATE TRADE TRENDS: Grape Wines (cont)

- ✓Bigger M world prod share from SADC: 2000-2004
- ✓Bigger X world prod share to SADC: 1990-1994
- ✓Bigger M world prod share from EU: 1990-1994
- ✓Bigger X world prod share to EU: 2000-2004
- ✓Bigger M world prod share from ROW: 1995-1999
- ✓Bigger X world prod share to ROW: 1990-1994



	1990 - 2004	1990 - 1994	1995 - 1999	2000 - 2004
Exports SADC	20.56 18.70	47.55 38.90	46.55 38.22	**83.22** **60.55**
Imports SADC	6.89 6.67	17.56 16.18	3.16 3.11	**18.65** **17.10**
Exports EU	10.13 9.65	5.52 5.37	**32.69** **28.28**	9.82 9.37
Imports EU	**31.66** **27.51**	**31.58** **27.45**	29.07 25.52	27.16 24.03
Exports ROW	22.82 20.55	**55.29** **44.01**	0.32 0.32	10.04 9.57
Imports ROW	22.99 20.69	**37.55** **31.88**	14.80 13.80	26.37 23.40

DISAGGREGATE TRADE TRENDS: Wines & Spirits (HS 2204 – 2208)



	1990 - 2004	1990 - 1994	1995 - 1999	2000 - 2004
Imports SADC	**68.08**	**55.52**	32.73	49.81
Exports SADC	46.37	24.76	29.02	23.28
Imports EU	28.87	11.76	15.39	35.58
Exports EU	**94.90**	37.19	34.46	40.17
Imports ROW	**70.93**	10.81	25.69	**53.22**
Exports ROW	**61.78**	**90.82**	30.62	25.81

✓SACU - net exporter of wines and spirits to SADC, EU (only after 1997) and ROW

✓Hence positive trade balances in favour of SACU, except EU before 1997

DISAGGREGATE TRADE TRENDS: Wines & Spirits (cont)

SACUs exports and imports of wines and spirits as shares of total agricultural exports and imports to and from SADC, EU and ROW for selected periods.

- ✓Bigger M world prod share from SADC: 2000-2004
- ✓Bigger X world prod share to SADC: 1990-1994
- ✓Bigger M world prod share from EU: 1990-1994
- ✓Bigger X world prod share to EU: 2000-2004
- ✓Bigger M world prod share from ROW: 2000-2004
- ✓Bigger X world prod share to ROW: 1990-1994

2000-2004	0.64	4.30	28.31
1995-1999	0.44	3.97	24.16
1990-1994	0.17	3.76	24.95
1990-2004	0.41	4.06	23.10

2000-2004	0.62	5.34	74.09	67.83	28.28	26.83
1995-1999	0.43	5.34	55.62	51.78	14.05	33.95
1990-1994	0.22	14.83	59.96	41.69	9.89	43.36
1990-2004	0.45	7.19	63.87	56.39	19.89	32.61

	1990 - 2004	1990 - 1994	1995 - 1999	2000 - 2004
Exports SADC	17.88 16.45	**57.48** **45.41**	25.45 22.67	56.94 45.07
Imports SADC	11.13 10.56	**15.53** **14.44**	9.77 9.32	**14.93** **13.92**
Exports EU	2.89 2.85	3.46 3.40	6.72 6.50	**19.56** **17.87**
Imports EU	**28.51** **25.09**	24.95 22.28	25.84 22.99	**25.88** **23.01**
Exports ROW	13.71 12.85	4.34 4.25	3.92 3.85	**38.77** **32.77**
Imports ROW	20.04 18.27	**61.01** **47.63**	-5.35 -5.50	16.52 15.29

CONCLUDING REMARKS

- These are observations rather than conclusions
- At the aggregate level, all sectors' trade flows improved during the implementation of trade agreements:
  - High growth rates and shares in 2000-2004
- At the disaggregate level, some of the products' trade flows improved, but others not.
- Why more trade agreements?

Reciprocal preferential tariff quotas and market access for selected agricultural products under the EU-SA TDCA: Is the trade-divide being bridged? [1]

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Reciprocal preferential tariff quotas and market access for selected agricultural products under the EU-SA TDCA: Is the trade-divide being bridged?

Abstract

The study used both descriptive and econometric approaches to analyze effects of the EU-SA TDCA's reciprocal preferential tariff quotas on trade flows of cheese, sparkling wine and wine. Descriptive results indicated that tariff quotas implementation period resulted with higher shares export and import shares of these products compared to other periods. However, the growth rates during the same were not significantly higher compared to other periods. Empirical results from the fixed effects dynamic gravity model indicated that lagged trade and countries' income played a significant positive role in influencing the trade flows of these products. However, exchange rates and tariff quota implementation have impacted negatively on the trade flows of these products, except that the implementation of tariff quota had significantly improved the market access of SA wines into the EU market.

1. Introduction

Before mid-1990s, international markets for agricultural products were characterized by, amongst others, quantitative restrictions, tariff-based protection, border protection, non-tariff barriers, etc that led to an agricultural trade-divide. In response to globalization challenges gaining increasing prominence since the early 1990s, South Africa also joined hands with the international community by pursuing a strategy of trade liberalization and adopted a two-pronged approach to trade policy, i.e. a multilateral approach as well as bilateral and/or regional approaches (Kusi, 2002; Loots, 2002). At the multilateral level, South Africa has successfully implemented its commitments as negotiated in terms of the Agreement on Agriculture (AoA) during the Uruguay Round. At the bilateral/regional level South Africa has signed a Trade, Development and Co-operation Agreement (TDCA) with EU (better known as the EU-SA TDCA and includes a Free Trade Agreement) and is also a member of the Southern African Customs Union (SACU) and the Southern African Development Community (SADC). Moreover, trade liberalization and deregulation have resulted in a more open trade regime due to the elimination/less strict trade restrictions, the rationalization and simplification of the tariff regime, as well as the reduction of tariff rates (NAMC, 1999).

This paper focuses mainly on the EU-SA TDCA that was concluded in 1999 and implemented with effect from 2000. The EU-SA TDCA is a reciprocal agreement in which the EU will liberalize approximately 61% of agricultural imports from South Africa over a ten-year implementation period, whereas South Africa will liberalize approximately 83% of agricultural imports from the EU over 12 years. To achieve this both sides have placed products in tariff phase-down groups or lists based on the sensitivity of the product or industry to tariff liberalization. Both parties granted each other reciprocal preferential tariff quotas for cheese; and sparkling wine and wine. In addition, the EU has also granted South Africa preferential tariff quotas for cut flowers (including a separate quota for protea), frozen strawberries, canned fruit and fruit juices. These quotas make up approximately 13% of South Africa's agricultural trade with the EU (EU Council, 1999).

Historically before the conclusion and implementation of the EU-SA TDCA, the EU has been South Africa's main trading and investment partner, accounting for over 40% of its total trade. Likewise, the EU foreign investment in South Africa accounts for over 70% of its total foreign direct investment (FDI), a figure that is also likely to grow in the light of this

agreement. It is expected that the EU-SA TDCA will also strengthen and improve the access of the South Africa's agricultural products into the EU market and vice versa, as a result of the tariff cuts and quota allocations committed by both parties.

The objective of this paper was to investigate the effects of the EU-SA TDCA's reciprocal preferential tariff quotas on trade flows and market access for cheese, sparkling wine and wine between South Africa and EU countries, i.e. whether they have significantly improved market access for South Africa's exports of these products to the EU and/or vice versa, thereby minimizing the trade-divide between the two parties. The analysis would be conducted at two levels: Firstly, a descriptive approach looking at the growth rates and shares of selected agricultural product exports from South Africa to the EU, as well as selected agricultural product imports from the EU to South Africa. Secondly, an econometric approach will be used to determine whether the five-year implementation of the EU-SA TDCA's agricultural preferential tariff quotas had significant positive or negative effects on trade between South Africa and the EU for the products in question.

This paper is organized as follows: Sections 2 reviews selected literature pertaining to the implications of the EU-SA TDCA for South Africa. In section 3 trends of agricultural trade between SA and EU are described. Section 4 describes the methodology, while Section 5 presents the empirical results. Section 6 provides conclusions.

2. Implications of the EU-SA TDCA on agricultural trade

There are several studies that have evaluated the impacts of the EU-SA TDCA on trade, economic growth, employment, welfare, etc. For example, Davies (1998) simulated a Free Trade Agreement (FTA) between the EU and South Africa and found a strong potential for trade diversion following an FTA. His study showed the FTA would cause a switch from cheaper sources to less-efficient EU products. In contrast, Penzhorn and Kirsten (1999) also analysed the impacts of the EU-SA TDCA on the South African agriculture and found that both South Africa and the EU will experience welfare gains as a result of the agreement. Furthermore, they determined that the exports of dairy products to the EU would increase by another 35% while exports of vegetables and fruit, and other agricultural products will also increase by 25% and close to 30%, respectively.

A study by Andriamananjara and Hillberry (2001) found consistent results with those of Davies (1998), except for an observation of trade creation as the net effect, since South Africa's exports and imports both increase. In addition, their study incorporates dynamic effects of trade and growth, adding estimates of the links between trade openness and total factor productivity (TFP) shocks for South Africa. They found that the trade-induced growth is two percent of total growth over the phase-in period.

McDonald and Walmsley (2001) also analysed the impacts of the EU-SA FTA on Botswana (a member of SACU) and found that while the FTA may substantially benefit the signatories, there are appreciable negative impacts for other SACU states, especially for South Africa's immediate neighbours that are also members of the SACU. Moreover, the reluctance of the EU to fully liberalize trade in food and agriculture commodities results in a major reduction in the benefits for South Africa without ameliorating substantively the adverse implications for other nations.

Kalaba (2001) also analysed the effects of the EU-SA FTA on South African agriculture with special reference to the competitiveness of fruits (i.e. grapes, pears and apples) in the EU market. He found that South African fruit exports to the EU are at least competitive among the selected suppliers, i.e. US, Chile, Turkey and New Zealand. Furthermore, he found that there is evidence of complementary relationships between South African apples and those from the US, and that South Africa faces strong competition in grapes from Chile and the US. However, South Africa's trade liberalization appears to have increased the exports of grapes to the EU.

3. Agricultural trade trends between SA and EU

This section provides descriptive trends analysis of total agriculture imports and exports between South Africa and the EU. In addition imports and exports of selected agricultural products that have reciprocal preferential tariff quotas under the EU-SA TDCA, namely cheese and curd (HS[5] 0406) and grape wines (HS 2204) are also discussed. The analysis focuses on the growth rates and shares of the selected agricultural products' imports and exports on an annual basis from 1990 to 2004, as well as for selected periods, as specified in Table 1.

Table 1: Selected periods of factors and/or historical events that have implications on agricultural trade

Periods	Factors or historical events
A: 1990 – 1994	International community lifts sanctions against South Africa and SA signed the Marrakech Agreement that established WTO
B: 1995 – 1999	Deregulation and implementation of Uruguay Round Agreement on Agriculture
C: 2000 – 2004	Implementation of EU-SA TDCA and SADC Trade Protocol
D: 1995 - 2004	Phase B plus C
E: 1990 - 2004	All phases

3.1 Imports and exports trends of agricultural sector

Figure 1 shows the actual values of total agricultural imports, exports and trade balances between South Africa, the EU and the World. (i.e. from Chapter 1 to 24 according to the Jacobsen Tariff Book and EU-SA TDCA). The value of agricultural exports from South Africa to the EU and the World, respectively, have consistently been greater than the value of imports from the EU and the World, respectively, from 1990 to 2004. As a result, the agricultural trade balance for the period in question has been positive in favour of South Africa. Interestingly, the agricultural trade balance between South Africa and EU was greater than the total agricultural imports from the EU to South Africa.

This figure also shows that from 1990 to 1993 the total value of agricultural exports moved sideways, increased from 1994 to 1997 after which is showed a decreasing trend from 1998 to 2001. It increased significantly from 2002 to 2004. The value of total agricultural imports also followed the same trends as exports, except for the value of agricultural imports from the world that significantly increased in 1992 and then declined again. These trends could be explained by different historical events and factors depending on the periods in which they occurred, for example, lifting of sanctions against South Africa, deregulation of the agricultural sector with the implementation of the Agricultural Products Marketing Act of

[5] Harmonized System

1996, trade liberalization through the implementation of multilateral and bilateral/regional trade agreements, exchange rate fluctuations of the South African rand against major international currencies, etc.

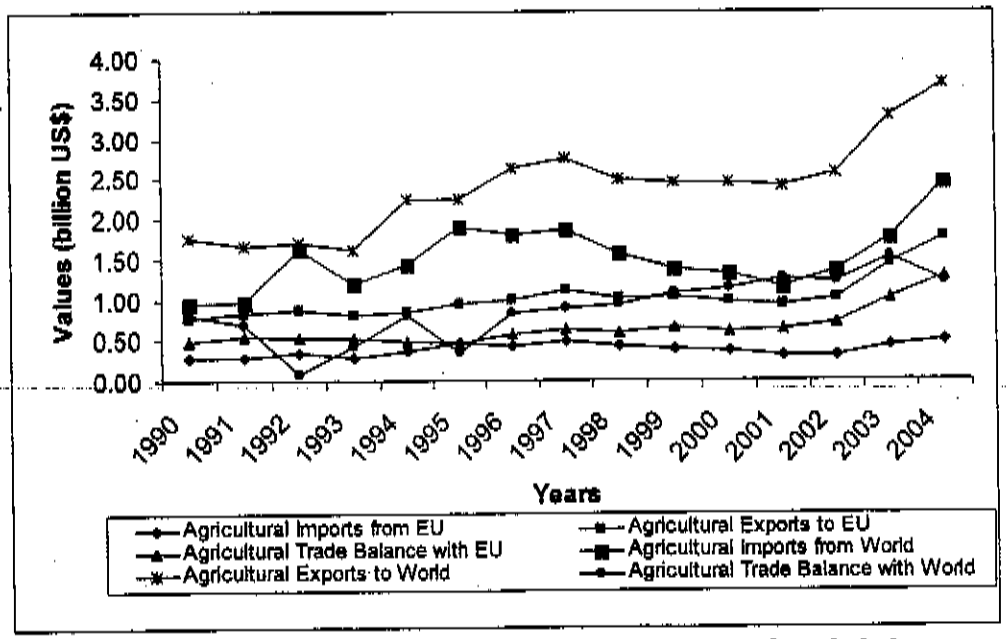
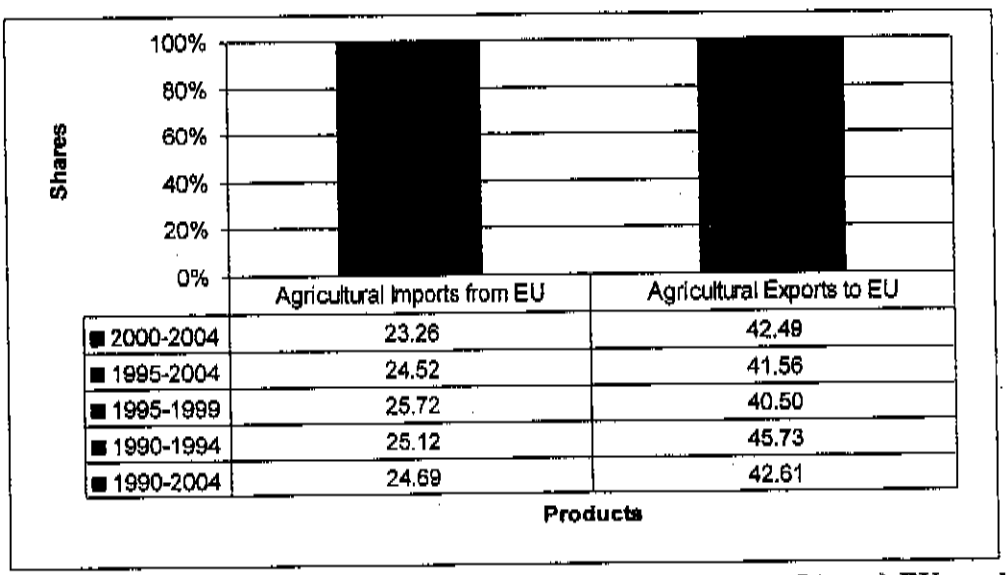


Figure 1: Values of total agricultural imports, exports and trade balance between SA, EU and the World (1990 -2004)



	Agricultural Imports from EU	Agricultural Exports to EU
2000-2004	23.26	42.49
1995-2004	24.52	41.56
1995-1999	25.72	40.50
1990-1994	25.12	45.73
1990-2004	24.69	42.61

Figure 2: Total agricultural imports and exports between SA and EU as shares of the world for selected periods

The agricultural imports and exports between SA and EU as shares of the agricultural imports and exports by South Africa from and to the world are presented in Figure 2. From this figure, one can observe that between 1995 and 1999, there was a slight improvement of import shares even though the growth was negative 5% (see Table 2). However, a slight decline of export shares was also observed during the same period even though the growth was positive (about

2%). Export shares have improved significantly from 2000 to 2004 in light of the implementation of the TDCA, whereas import shares have declined significantly during this period. This could mean due to the TDCA, the EU agricultural market was more opened for South Africa than South African market for EU.

Even though the annual export shares were improving significantly from 2000 to 2004, the 2000 – 2004 average export share (about 42.5%) is less than the 1990 to 2004 average share (about 42.6%) and even lower than the 1990 – 1994 share of about 45.7%. Similarly the import shares also followed the same trend as export shares during the same periods, except that the 2000 – 2004 import share was less compared to all shares of the selected periods. The import and export shares for all the periods were not significantly different.

Overall, the total value of agricultural imports and exports between South Africa, the EU and the World had positive growth rates during the entire period of 1990 – 2004, as shown in Table 2. Note should be taken of the significant positive growth rates that were experienced in both imports and exports during the period 2000 – 2004 compared to other selected periods. During this period, agricultural exports to the EU have grown more than agricultural exports to the World. In contrast, agricultural imports from the World to South Africa have grown significantly more than imports from the EU.

Table 2: Instantaneous[6] and compound[7] growth rates of the total values of agricultural exports and imports from SA to the EU for selected periods

Period	Agricultural Imports from EU (%)	Agricultural Exports to EU (%)	Agricultural Imports from World (%)	Agricultural Exports to World (%)
1990-2004	4.57	6.71	5.61	10.13
	4.47	6.50	5.46	9.65
1990-1994	8.57	5.18	14.10	5.52
	8.22	5.05	13.19	5.37
1995-1999	0.35	7.07	2.18	3.83
	0.35	6.83	2.16	3.76
1995-2004	-2.60	3.91	-5.57	32.69
	-2.64	3.83	-5.73	28.28
2000-2004	12.09	20.22	20.71	9.82
	11.41	18.42	18.82	9.37

* All growth rates are significant at 5% level 1st line = instantaneous & 2nd line = compound
Note - See Table 1 for the description of different periods

Exports to the EU have also grown more than imports from the EU, whereas export growth rates to the World were less than the import growth during the same period. This might be an indication that the EU-SA FTA have created favorable circumstances for agricultural exports to the EU, but that, overall, South Africa still find it more advantageous to import agricultural products from the rest of the World than from the EU. The latter could be due to lower priced imports from other regions than the EU or that EU exporters find other regions more

[6] $Y_t = e^{\alpha + \beta t}$, then transformed to natural logarithms as follows:
$\ln(Y_t) = \alpha + \beta t$
where:
Y_t = Values of agricultural exports and imports in time t, US$;
t = Time in years;
β = Estimated coefficient (i.e. instantaneous growth rate); and
α = Constant

[7] Antilog of instantaneous growth rate minus one:
i.e. Compound growth rate = Exp(β) - 1

profitable than South Africa or a combination of the aforementioned. It is furthermore surprising to see the negative growth rates for imports from both the EU and the World between 1995 and 1999. This period was characterized by the implementation of the deregulation policies resulting from the introduction of the Marketing of Agricultural Products Act of 1996, as well as the implementation of AoA.

3.2 Imports (M) and exports (X) trends of selected agricultural products

Figure 3 shows the value of imports and exports of cheese and curd (HS0406) and grape wines (HS2204) from 1990 to 2004. Figure 3 depicts that South Africa is a net importer of cheese and curd from the EU, except in 2002, hence the EU's positive trade balance. Furthermore, this figure depicts that South Africa had a positive trade balance with the EU for grape wines for the entire period. A decline in the value of grape wines exports from 2000 to 2001 might be due to the delayed implementation of TDCA's Wines and Spirits agreement, which was implemented in 2002.

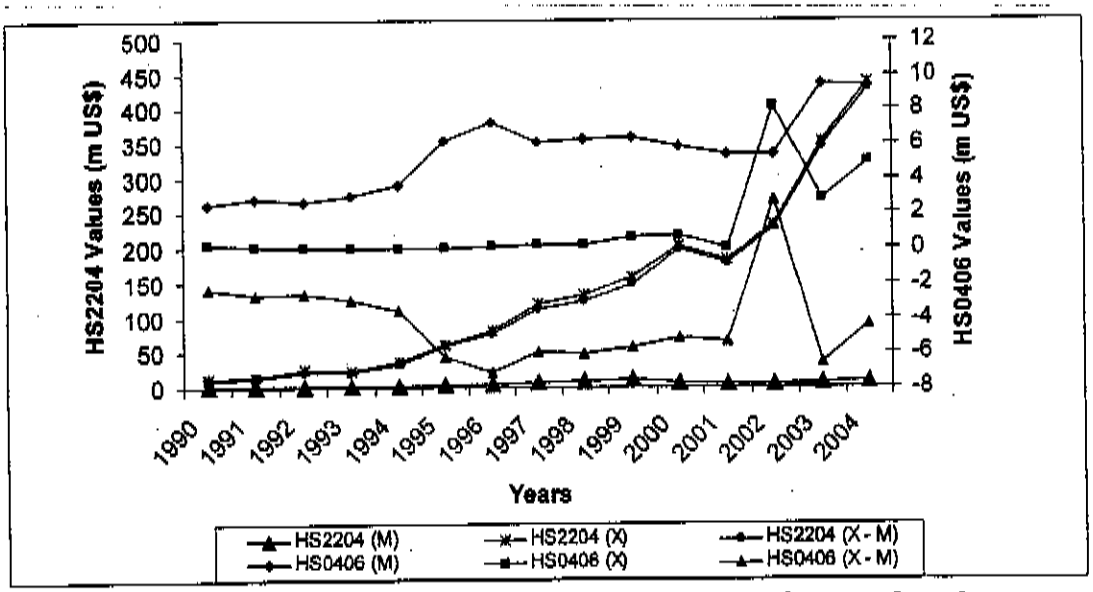


Figure 3: Values of exports, imports and trade balance of cheese and curd (HS0406) and grape wines (HS2204) between SA and EU

Figures 4 shows annual imports and exports of cheese and curd (HS0406) and grape wines (HS2204) as shares of the value of total agricultural imports and exports between SA and the EU and also as shares of total imports and exports of cheese and curd (HS0406) and grape wines (HS2204) of the world. This figure clearly indicates that, at the aggregate level, the bigger shares of exports for both cheese and curd and grape wines were during the period 2000 – 2004. However, the export shares for cheese during this period were not significantly different from other periods where the wines exports shares were significantly different. On the import side, the bigger share of cheese and curd import occurred during the same period and for grape wines import share was experienced between 1995 and 1999, but were insignificantly different from the other periods. Similarly, at the disaggregate level, the export shares of both cheese and curd and grape wines were bigger during the period 2000 to 2004 with actual percentages of about 55% and 82%. These export shares were significantly higher compared to other periods. However, the import shares of both cheese and curd and grape wines during the period 2000 – 2004 were almost the same as those of the other periods with

the exception that they were significantly smaller compared to the 1990 – 1994 shares. From this figure, one could associate the bigger shares of 2000 – 2004 with the implementation of the EU-SA TDCA's preferential tariff quotas for the products in question.

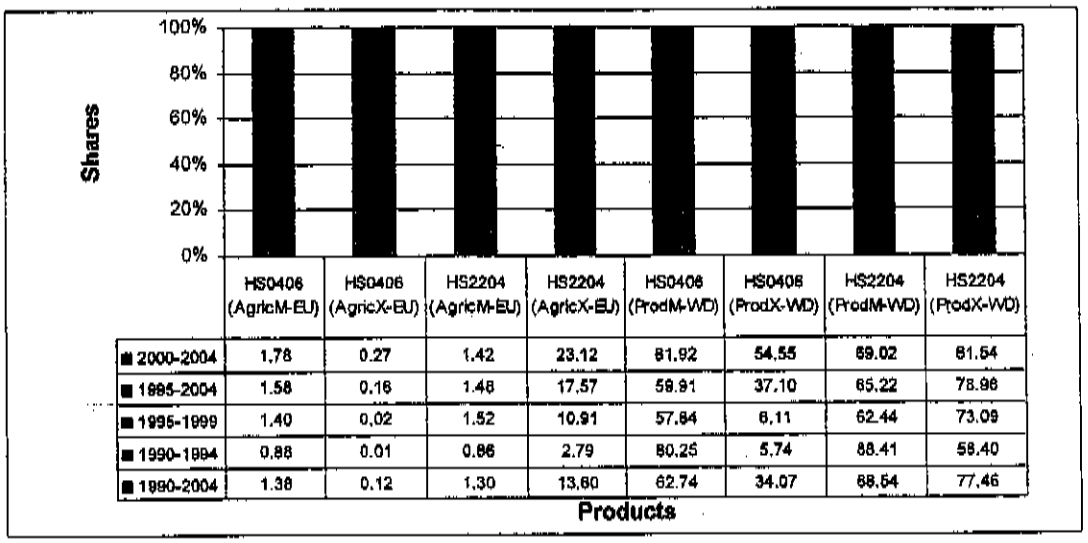


Figure 4: Shares of imports and exports of cheese and wines SA and the EU for selected periods

Table 3 shows that cheese and curd exports to the EU had positive annual and compound growth from 1990 to 2004 of about 63% and 49% respectively with the highest growth rates during the periods 1995 – 1999 and 2000 – 2004, the growth for 2000 - 2004 were significantly lower compared to the 1995 – 1999 growth. These high growth rates in 1995 – 1999 might be due to the implementation of deregulation policy and the AoA. On the import side, growth rates for 1990 – 2004 were positive with highest growth rates during the period 2000 – 2004, but not significantly different from those of the other periods.

Table 3: Instantaneous and compound growth rates of the values of exports and imports of the selected agricultural products between SA and EU for selected periods

	CHEESE (HS0402)		WINES (HS2204)	
PERIOD	**Exports (%)**	**Imports (%)**	**Exports (%)**	**Imports (%)**
1990-2004	63.10	11.57	31.66	10.13
	48.92	10.71	27.51	9.65
1990-1994	-72.98	11.31	31.58	5.52
	-130.84	10.71	27.45	5.37
1995-2004	96.85	5.11	24.55	3.83
	67.73	4.98	21.95	3.76
1995-1999	257.55	1.14	29.07	32.69
	127.41	1.14	25.52	28.28
2000-2004	162.19	18.84	27.16	9.82
	96.39	17.28	24.03	9.37

* All growth rates are significant at 5% level 1st line = instantaneous & 2nd line = compound
Note - See Table 1 for the description of different periods

The annual and compound growth rates of grape wines exports for all the selected periods were positive falling in the range of between 22 – 32%, with the highest rates recorded for the entire period, i.e. 1990 – 2004. Despite the insignificant growth differences for all the selected

periods, the share of wines export to the EU was bigger during the period 2000 – 2004 indicating that implementation TDCA's in-quota tariff rates made a significant contribution. High annual and compound growth rates of grape wines imports from the EU to SA were experienced during the period 1995 to 1999. Surprisingly, even with the implementation of the TDCA's wine preferential tariff quota, imports growth rates for the period of 2000 – 2004 were lower compared to 1995 – 1999 and were even lower than those of the entire period.

4. Methodology

This section describes the theoretical framework and the estimation of the model used in this study, as well as the data used.

4.1 The Model

Given the nature of this study and the types of research questions that need to be addressed, the study will apply a gravity trade model. A gravity model was used because of number of reasons. **Firstly**, the gravity model makes use of raw data without reliance on prior estimation of various elasticities. **Secondly**, the gravity model can readily exploit panel data, and thereby capture dynamic aspects of trade policy impacts. **Lastly**, a gravity model singles out distance between countries as a significant explanatory variable, which is desirable given South Africa's location relative to its main trading partners. Initially, gravity models were developed on a mostly empirical basis, with researchers emphasizing that country size and transportation costs between countries were good predictors of trade volumes. Gravity models have been used by many researchers to examine the impact of the factors influencing trade performance, to examine whether a trade agreement leads to trade creation or trade diversion between trading partners, as well as to estimate trade potentials (Tinbergen, 1962; Anderson, 1979; Bergstrand, 1989; Frankel, Stein and Wei, 1996; Wei and Parsley, 1995; Cassim, 2001; Poonyth *et al*, 2002; Chauvin and Gaulier, 2002; Nouve and Staatz, 2003; Alemu *et al*, 2004).

Gravity econometric equations could be estimated using various types of data, i.e. cross-section, time-series or panel data, depending on the type of research question to be addressed and are applicable to both static and dynamic modelling (Bun and Klaassen, 2002). Although early studies used cross-section analysis to estimate gravity models (Aitken, 1973; Bergstrand, 1985), the analysis cannot answer a policy-related question of the impact of changes in relative market size (or income) of countries on changes in the pattern of bilateral trade over time. Temporal effects can be answered by using cross sectional time series analysis as discussed by Mátyás (1997); De Grauwe and Skudelny (2000); Bun and Klaassen (2002), Wall (2000); Glick and Rose (2001). One reason is that the extra time series observations result in more accurate estimates. Moreover, in a cross-section analysis unobserved country-pair specific time invariant determinants of trade are necessarily captured by the disturbance term. As these variables are likely to be correlated with observed regressors, the usual least squares estimator is inconsistent. In contrast, having panel data the effects of such unobserved determinants can be modelled by including country-pair "individual" effects in order to avoid the above inconsistency (Cheng and Wall, 2005)

4.2 A dynamic gravity equation

The equation would be estimated for South Africa's trade with EU countries due to the EU-SA TDCA, as well as other selected trading partners that have historical record of trade data for the selected agricultural products. This model is used to determine the impacts of TDCA's

reciprocal preferential tariff quotas on the imports and exports of cheese and wines at HS4 level. The equation is expressed as follows:

$$\ln Y_{ijt} + \alpha_i + \sum_{p=1}^{n} \lambda_p \ln Y_{ijt-p} + \beta_1 \ln GDPPC_{it} + \beta_2 \ln GDPPC_{jt} + \beta_3 REER_{it} + \beta_4 TDCA_{ijt} + \eta_{ij} + \varepsilon_{ijt}$$

$\ln Y_{ijt}$ represent the logarithms of real selected agricultural exports from country i to j (in all cases "i" denotes South Africa) and country j (in all cases "j" denotes SA's trading partner) in year t and real selected agricultural imports from country j to i in year t respectively as well as their p-year lags. $\ln GDPPC_{it}$ and $\ln GDPPC_{jt}$ represent the logarithms of the real per capita gross domestic products for countries i and j in year t respectively. $REER_{it}$ represents the real effective exchange rate of SA Rand to the base year 2000.

$TDCA_{ijt}$ is a dummy variable for trade agreement and has been interacted the $GDPPC_{jt}$ (in this case a trade agreement means the implementation of reciprocal preferential tariff quotas for cheese and curd (HS 0406)[8] and fresh grape and sparkling wines (HS 2204)[9] between SA and EU countries). η_{ij} represent time-invariant variables such as distance, common language, etc. Symbols λ_p and β_n represent the coefficients associated with the above explanatory variable, whereas α_i and ε_{ijt} represent the constant and random error term respectively. The values of Exports, Imports and GDPPCs variables are expressed in constant 2000 United States dollars (US$). This gravity equation extends from the one used by De Grauwe and Skudelny (2000) and Bun and Klaassen (2002). Due to the presence of lagged dependent variables among the regressors in the above equation, an autoregressive approach was employed in order to allow for dynamic effects.

4.3 Data

In order to estimate the above gravity trade equations, secondary data was required. These data included both time-series and cross-sectional dimensions, thus permitting a special econometric technique adapted to dynamic panel data modelling. SA's agricultural trading partners, i.e. countries, were the cross-sectional units whereas the time series dimension were the years from 1990 to 2004. The model required data on imports, exports, countries' per capita incomes (GDPPCs) and effective exchange rates (REER). The imports and exports data on selected agricultural products were obtained from the trade databases of the Trade and Investment Policy Strategies (TIPS) and Eurostat of the European Commission. GDPPCs were obtained from the World Development Indicators database of the World Bank. REER was obtained from the South African Reserve Bank.

[8] According to the TDCA, both parties offered each other a preferential tariff quota of 5 000 tonnes per annum for 10 years with annual growth factors of 5% for SA and 3% for EU implemented from January 2000. SA offered EU 50% MFN in-quota tariff rate while EU offered SA 100% MFN in-quota tariff rate.

[9] According to the TDCA, EU offered SA a preferential tariff of 32 million litres of wines of fresh grapes and 450 000 litres of sparkling wines per annum for 10 years with effect from January 2000 with annual growth factors of 3% and 5% respectively. On the other hand, SA offered EU a preferential tariff of 1million litres of wines of fresh grapes and 260 000 litres of sparkling wines per annum for 10 years with effect from January 2000 with annual growth factor of 5% each. Both parties offered each other 100% MFN in-quota tariff rates for wines. The implementation of the wines preferential quotas were delayed until January 2002 due to some disagreements about the originality of the names port and sherry during the negotiations of the Wines and Spirits Agreements. However, both parties agreed on a formula to increase the wine quota as a compensation mechanism to take into account of the fact that the quota has not been opened in 2000 and 2001.

5. Empirical results

The study used the panel data to estimate the impacts of EU-SA TDCA's reciprocal preferential in-quota tariff rates of cheese and curd (HS 0406) as well as of fresh grape and sparkling wines (HS 2204) on SA's imports and exports of such products. Chow procedure was used to test the poolability of the panel data across the cross sections. The Chow statistic is distributed like F-statistic and is only valid under homoskedasticity (Wooldridge, 2003). In this case,

$$F_0 = \frac{(RRSS - URSS)/(N-1)}{URSS/(NT-N-K)} \approx F_{(N-1),(NT-N-K)}$$

RRSS stands for the restricted residual sum of squares estimated using pooled least squares with the assumption of no individual effects, i.e. same intercept for all cross sections. Whereas, URSS stands for the unrestricted residual sum of squares estimated using LSDV with the assumption of individual effects, i.e. unique intercept for each cross sections (Baltagi, 1995; Green, 2000). The null and alternative hypotheses of the F-test are as follows:

$\mathbf{H_0}$: $\mu_1 = \mu_2 = \mu_{n-1} = 0$ (there are no individual effects)
$\mathbf{H_1}$: $\mu_1 \neq \mu_2 \neq \mu_{n-1} \neq 0$ (there are fixed effects)

The estimated F-statistic and F-critical values at 1%, 5% and 10% from the F distribution table are presented in Table 4. The computed F values in all regressions are greater than the critical F values at 1, 5 and 10 percents levels of significant indicating that the poolability of the data across the cross sections is impossible. As a result, the null hypothesis that there are no individual effects is rejected. Therefore, the "within" estimation or fixed effect model was used to estimate the parameters of the above dynamic gravity equation.

Table 4: Chow tests results

Products	N-1	NT-N-K	F-crit (1%)	F-crit (5%)	F-crit (10%)	F-est
EXPORTS						
Cheese (HS0406)	31	408	1.73	1.48	1.36	3.89
Wines (HS2204)	101	1318	1.38	1.25	1.19	4.19
IMPORTS						
Cheese (HS0406)	23	304	1.87	1.57	1.42	3.26
Wines (HS2204)	42	551	1.61	1.41	1.30	5.21

Due to the fact this equation represents the dynamic panel model with both country-pair effects and time effects, a fixed-effects or within estimator is a solution to control for countries' heterogeneity because it is based on the time-demeaned variables (Miniesy and Nugent, 2005). In most cases, fixed effect models were used to remove the time-invariant unobservable heterogeneity (η_{ij}), if there is no serial correlation in error terms. But if the error terms are serially correlated, first differencing estimator is more efficient that the fixed effect estimator. The autocorrelation coefficients (ρ), as presented in Table 5, are not statistically significant at all levels meaning that the fixed effect model is more efficient. This model was estimated using Generalized Least Squares (GLS) with the White Heteroskedadasticity-Consistent Standard Errors and Covariance in order to obtain the robust estimates of standard errors so as to consider the presence of heteroskedasticity in the model (Baltagi, 1995)

The lag length of the dependent variable was determined using an ad hoc approach, i.e. by looking at the significance level. This is because the Akaike Information Criteria (AIC) that is normally used in time series analysis for the determination of lag length is not appropriate with panel data analysis. In the case of imports and exports cheese and curd as well as the imports of wines, lags beyond the first one did not add to the predictive power of the model meaning that the second and further lags were not statistically significant. However, in the case of wines exports, three lags were statistically significant.

Wooldridge (2003) argues that time-constant variables (such as time period dummy variables) cannot be included by themselves in the fixed effects model and indicated that they should be interacted with variables that change over time. Doing so will estimate how the partial effect of that variable changes over time. Therefore, the dummy variable ($TDCA_{ijt}$) was interacted with the GDP per capita of the SA's trading partner in order to keep it in the model.

The fixed effect regression results are presented in Table 5. High values of the goodness of fit (R^2) in all equations were expected due to the presence of the lagged dependent variables among the explanatory variables, thus emphasizing the importance of dynamics. Indeed, all the lagged variables were positive and significant at 10% level, thus supporting many economic arguments that suggested that lagged trade is the predictor for current trade (see Bun and Klaassen, 2002). The results show that the previous year's trade flows between SA and its trading partners have significantly improved the current trade flows, for example, cheese exports and imports by 0.4 and 0.5 percents respectively, and wines exports and imports by 0.2 and 0.3 percents respectively.

Table 5: Regression results

Variables	CHEESE (HS0402)		WINES (HS2204)	
	Exports	Imports	Exports	Imports
lnY_{ijt-1}	0.444** (0.042)	0.536** (0.044)	0.239** (0.019)	0.295** (0.040)
lnY_{ijt-2}	-	-	0.069** (0.014)	-
lnY_{ijt-3}	-	-	0.044** (0.006)	-
$lnGDPPC_{it}$	-5.588* (2.353)	0.944* (0.427)	12.254** (0.294)	1.986 (1.384)
$lnGDPPC_{jt}$	0.138 (0.120)	2.013** (0.573)	1.031** (0.107)	0.709 (0.565)
$REER_t$	-0.011** (0.002)	-0.0011** (0.0006)	-0.0001 (0.0003)	-0.005** (0.001)
$TDCA_{ijt}$	-0.108 (0.081)	-0.012** (0.004)	0.020** (0.001)	-0.041** (0.009)
Observations	448	336	1224	602
Cross-Sections	32	24	102	43
R^2	0.966	0.997	0.997	0.987
ρ-value	-0.099 (0.065)	-0.007 (0.081)	-0.112 (0.065)	-0.033 (0.055)

* and ** denote significance at the 5 and 10 percent levels respectively. White-corrected standard errors are in parentheses

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