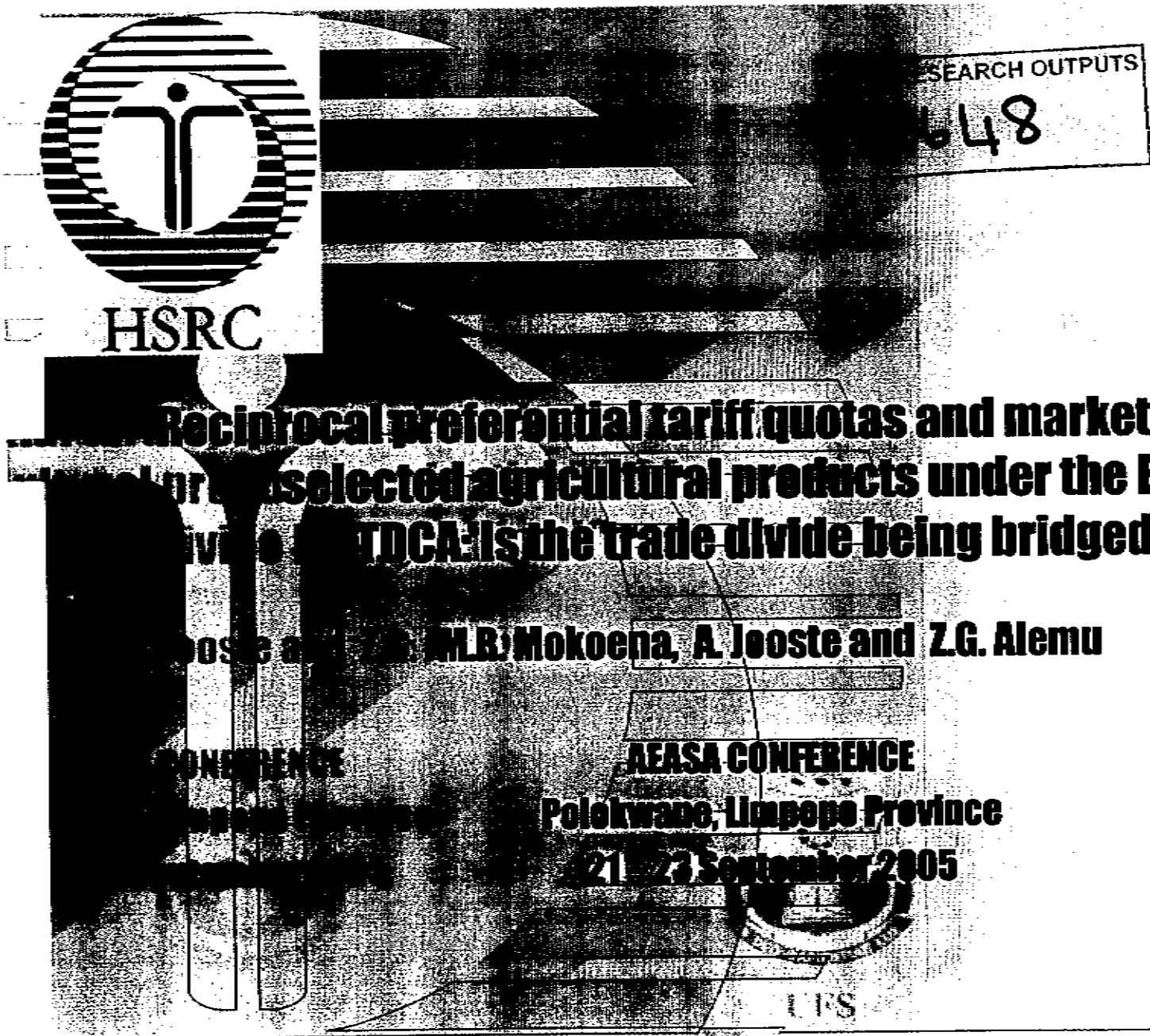

HSRC

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

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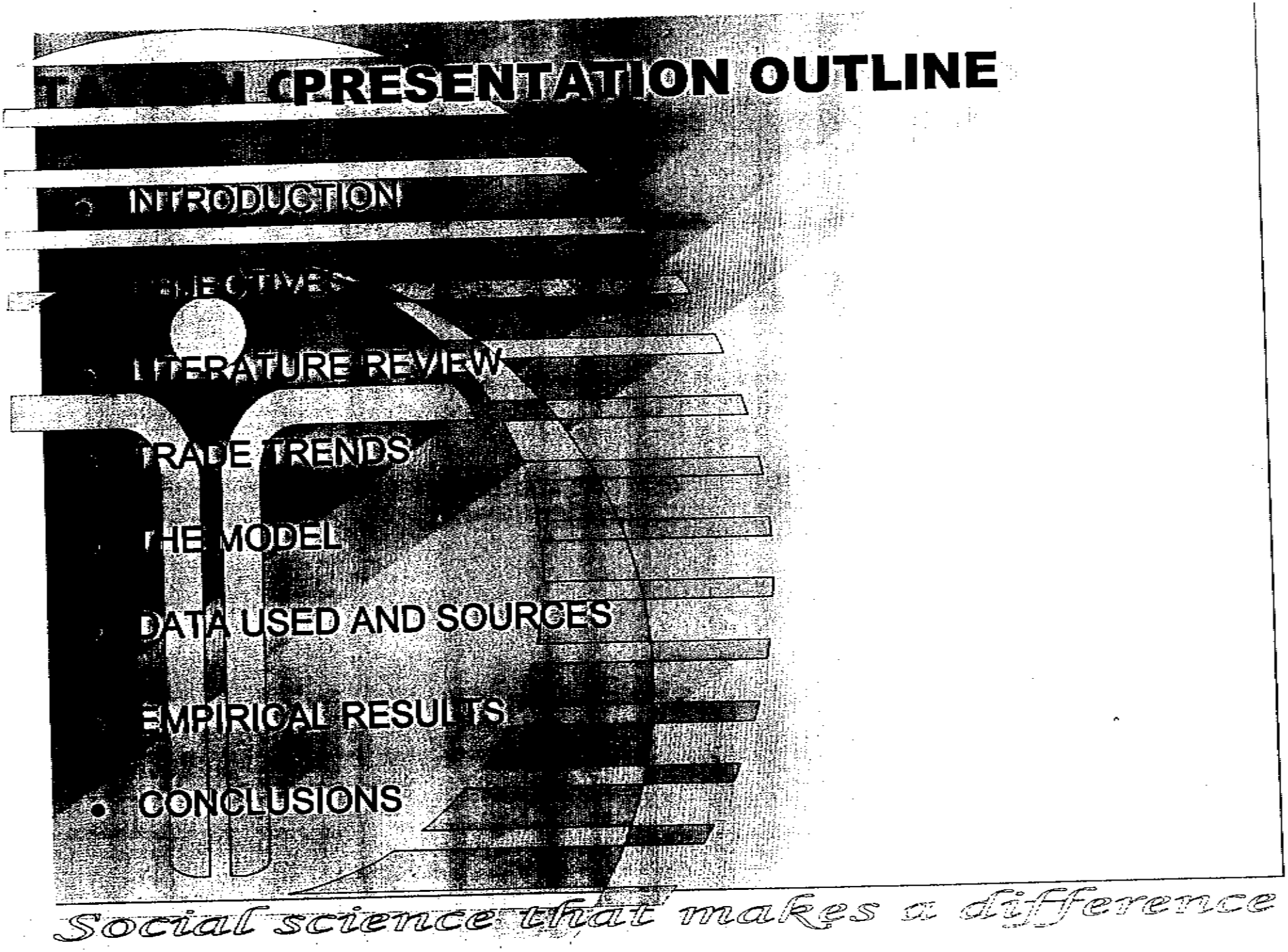
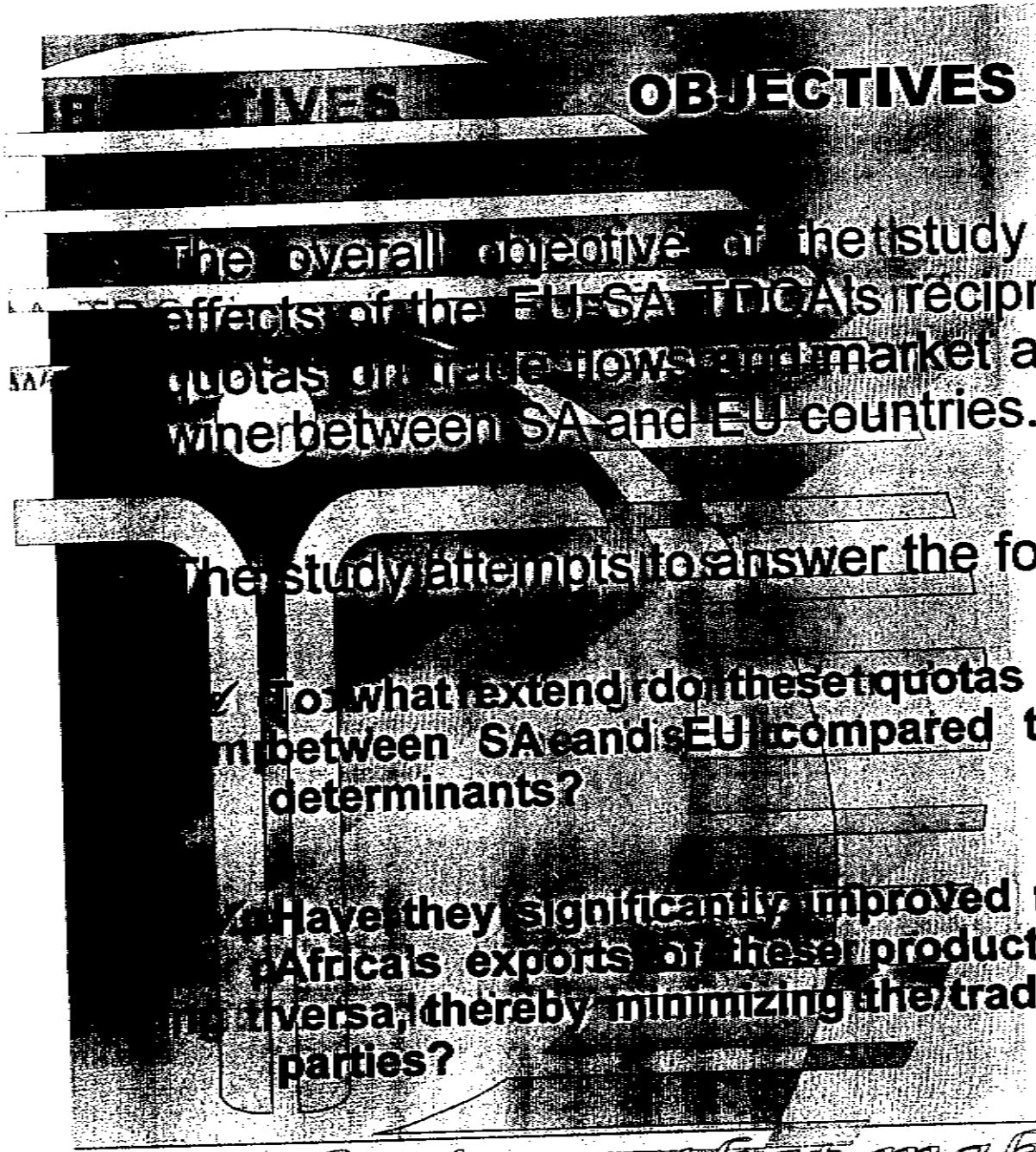

PRESENTATION OUTLINE
INTRODUCTION
LITERATURE REVIEW
TRADE TRENDS
THE MODEL
DATA USED AND SOURCES
EMPIRICAL RESULTS
CONCLUSIONS

INTRODUCTION

- EU-SA TDCA was concluded in 1999 and implemented in 2000.
- It's a reciprocal agreement which entails the following:
  - EU will liberalize approximately 61% of agricultural imports from SA over 10 years, whereas
  - South Africa will liberalize approximately 83% of agricultural imports from the EU over 12 years.
- TDCA's main agric features are:
  - ✓ Agricultural tariff phase-down.
  - ✓ Agricultural tariff quotas.
  - ✓ Wines and Spirits Agreements.
- Reciprocal preferential quotas for selected agric products:
  - (%): Cheese and curd (HS0406):
    - 0% MFN EU's offer to SA-a5000 t (100% MFN reduction & 5% agf); and
    - 0% MFN SA's offer to EU-a5000 t (50% MFN reduction & 3% agf).
  - 2 Wines of fresh grapes (HS2204):
    - EU's offer to SA-32 mill of bottled wine (100 MFN reduction & 3% agf) and 450 000 l of sparkling wine (at 100% MFN reduction & 5% agf); and
    - SA's offer to EU-0 mill of bottled wine (100 MFN reduction & 5% agf) sparkling wine (0 and 260 000 l of sparkling wine (100% MFN reduction & 5% agf)

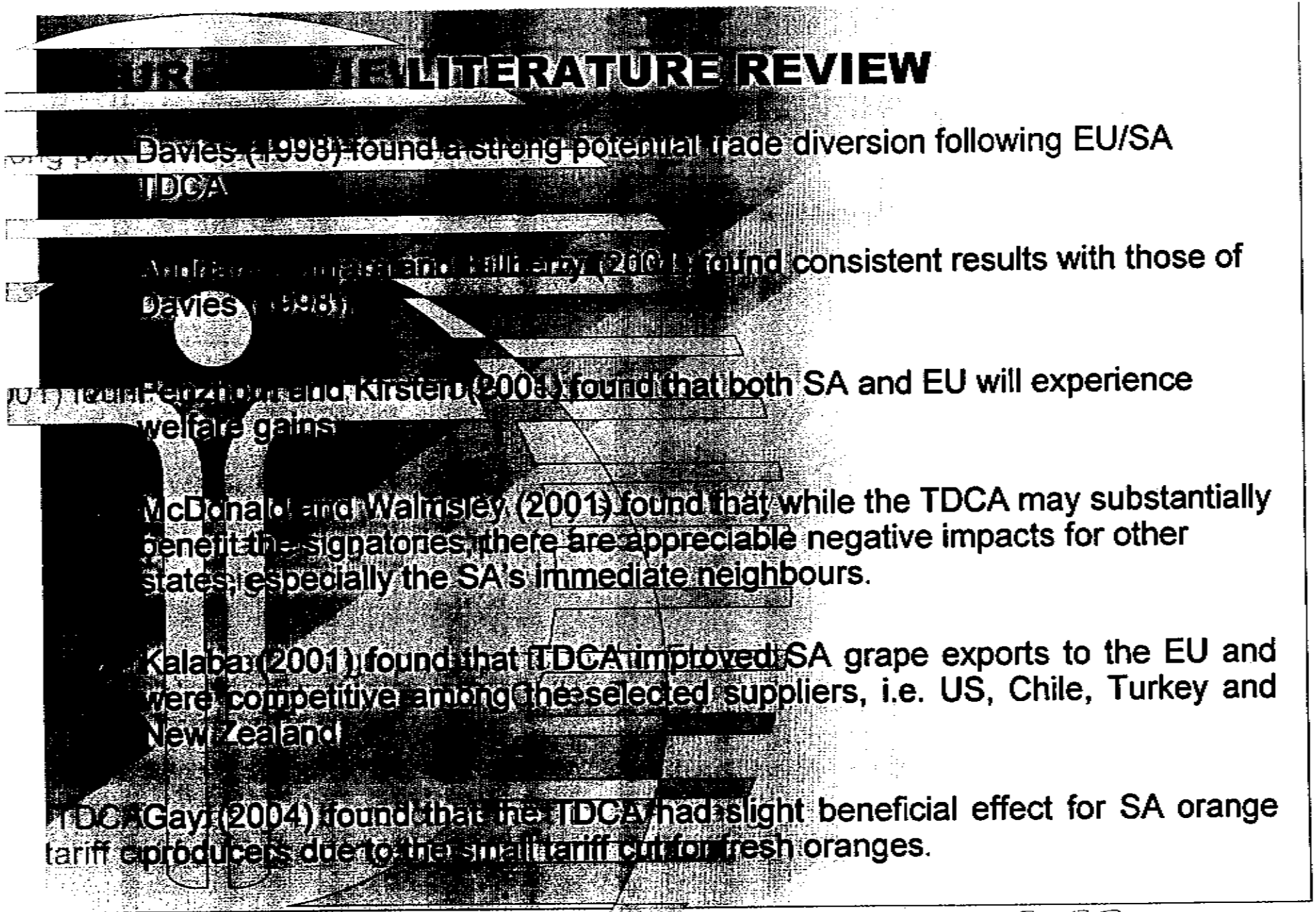


OBJECTIVES

The overall objective of the study is to investigate the effects of the EU-SA TDCA's reciprocal preferential tariff quotas on trade flows and market access for cheese and wine between SA and EU countries.

The study attempts to answer the following questions:

- To what extend do these quotas affect agricultural trade between SA and EU compared to other historical trade determinants?
- Have they 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?



LITERATURE REVIEW

Davies (1998) found a strong potential trade diversion following EU/SA TDCA

[illegible] found consistent results with those of Davies (1998)

[illegible] found Perroni and Kirsten (2001) found that both SA and EU will experience welfare gains

McDonald and Walmsley (2001) found that while the TDCA may substantially benefit the signatories, there are appreciable negative impacts for other states, especially the SA's immediate neighbours.

Kalaba (2001) found that TDCA improved SA grape exports to the EU and were competitive among the selected suppliers, i.e. US, Chile, Turkey and New Zealand

TDCA Gay (2004) found that the TDCA had slight beneficial effect for SA orange tariff eproducers due to the small tariff cut for fresh oranges.

TRADE TRENDS: Estimating Growth rates & Shares

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

Growth rates:

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

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

β = instantaneous growth rate

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

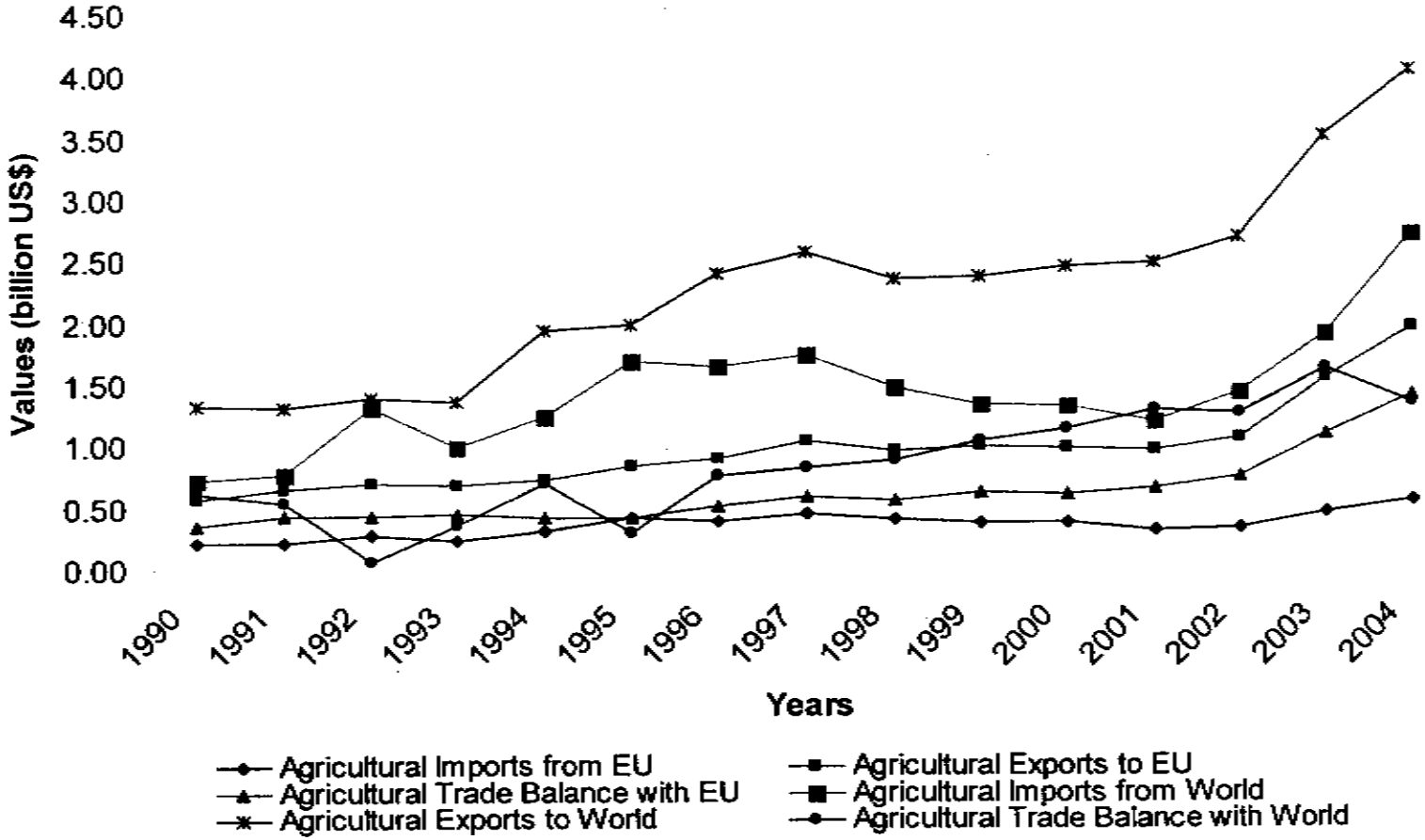
$\text{Exp}(\beta) - 1$

Shares:

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

TRADE TRENDS: Total Agric Values

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



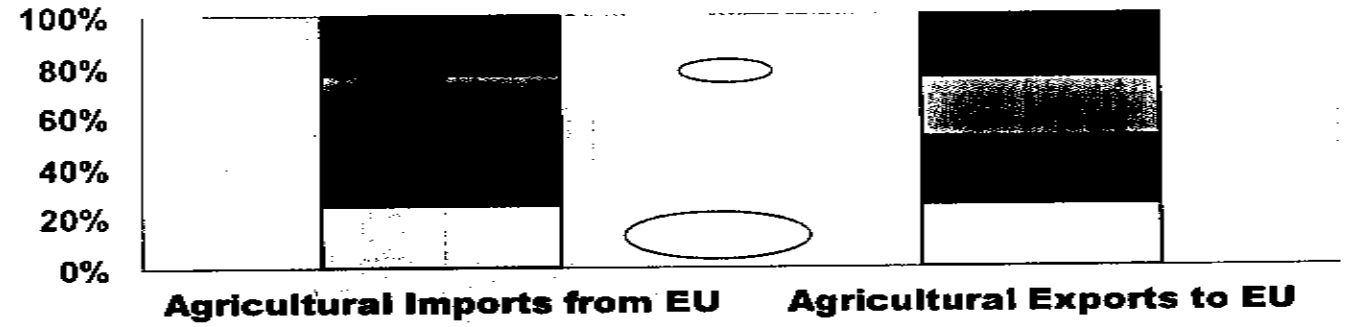
TRADE TRENDS: Total Agric – growth rates

1st line = compound & 2nd line = instantaneous

	AgricM EU (%)	AgricX EU (%)	AgricM WLD (%)	AgricX WLD (%)
1990-2004	[illegible]	6.71	5.61	10.13
	[illegible]	6.50	5.46	9.65
1990-1994	[illegible]	5.18	14.10	5.52
	[illegible]	5.05	13.19	5.37
1995-1999	-2.60	33.91	-5.57	32.69
	-2.64	28.83	-5.73	28.28
2000-2004	12.09	20.22	20.71	9.82
	11.51	18.42	18.82	9.37

TRADE TRENDS: Total Agric – shares

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

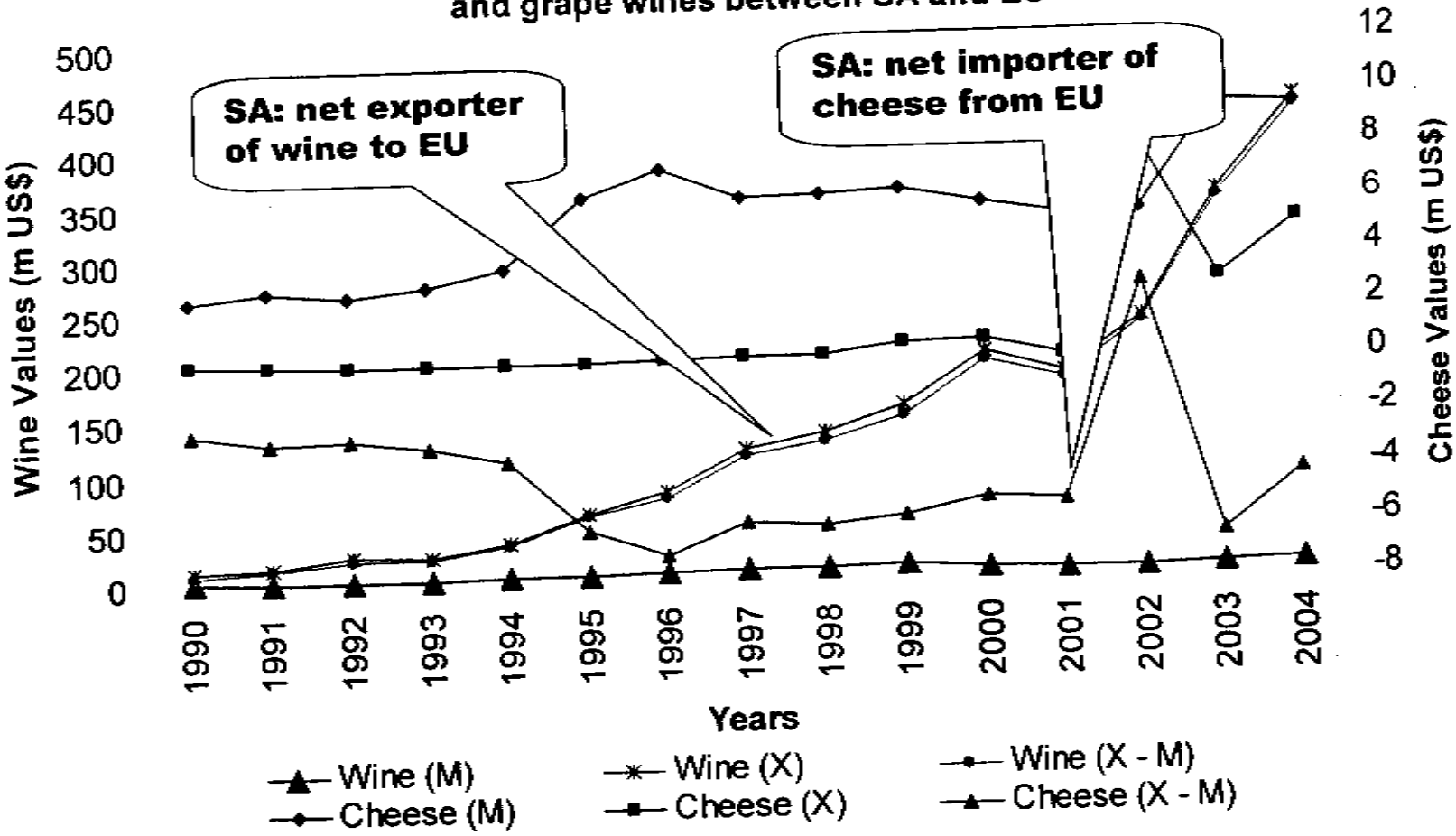


	Agricultural Imports from EU	Agricultural Exports to EU
2000-2004	23.18	42.60
1995-1999	25.75	40.50
1990-1994	25.05	45.65
1990-2004	24.57	42.54

- ✓Agric M & X shares were not highly different for almost all selected periods.
- ✓2000-2004: Agric X shares improved, but Agric M shares declined.
- ✓TDCA opened EU market for SA, but EU may have utilized other markets and policies.

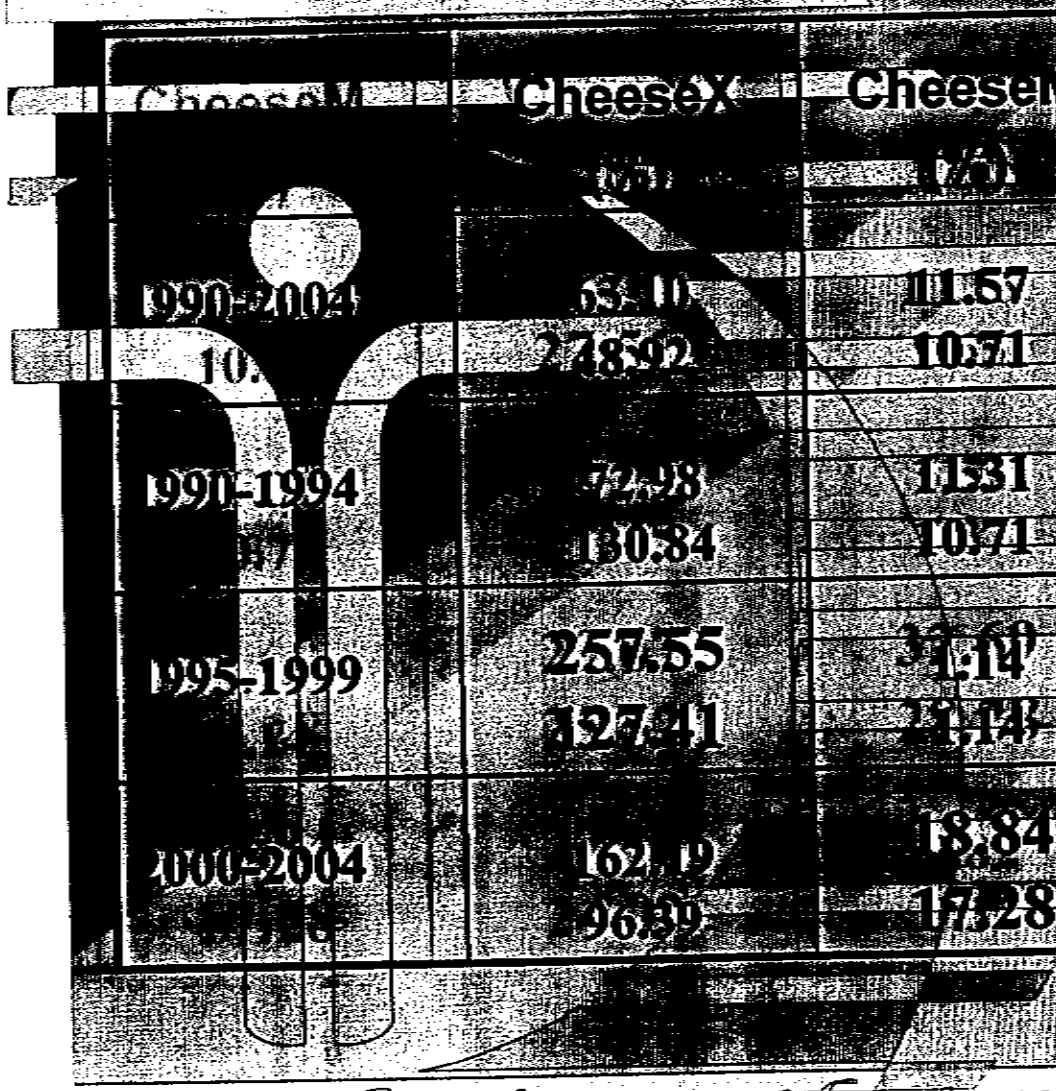
TRADE TRENDS: Cheese and Wines Values

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



TRADE TRENDS- Cheese & Wines – growth rates

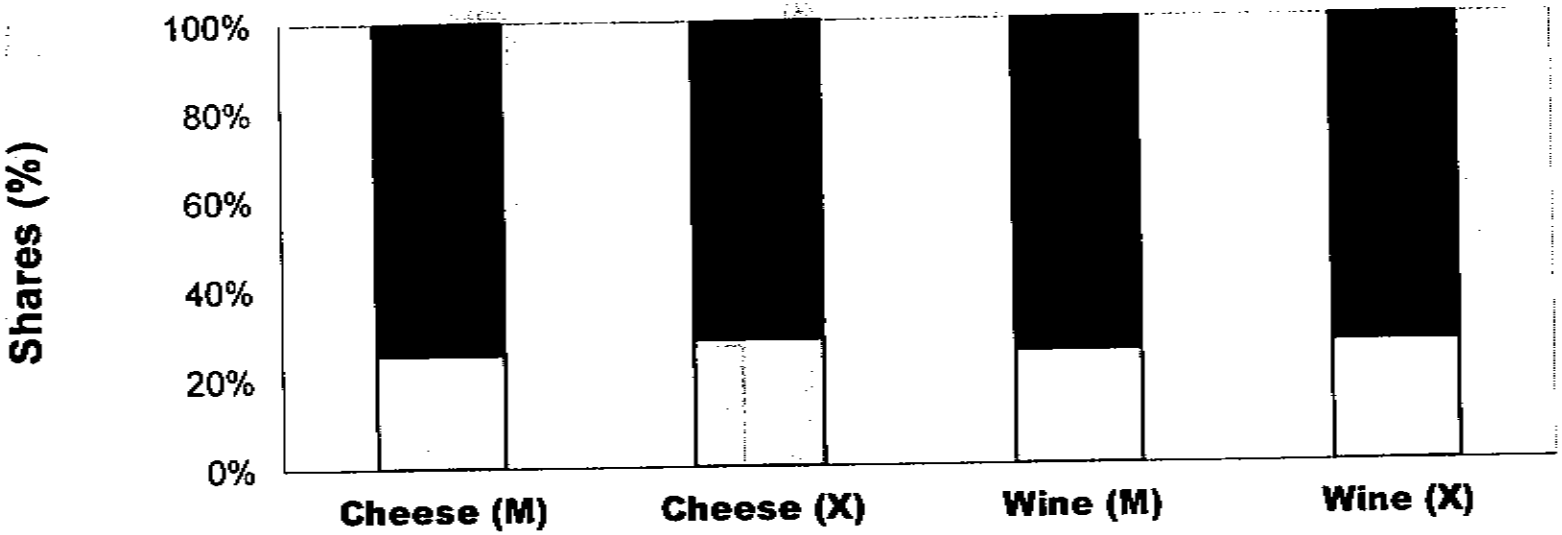
1st line = compound & 2nd line = instantaneous



	CheeseX	CheeseM	WinesX (%)	WinesM (%)
1990-2004	63.10 248.92	11.67 10.71	31.66 27.51	10.13 9.65
1990-1994	72.98 130.84	11.31 10.71	31.58 27.45	5.52 5.37
1995-1999	257.55 327.41	11.14 11.14	29.07 25.52	32.69 28.28
2000-2004	162.12 196.89	13.84 17.28	27.16 24.03	9.82 9.37

SHARES: Cheese and Wine – Aggregate level

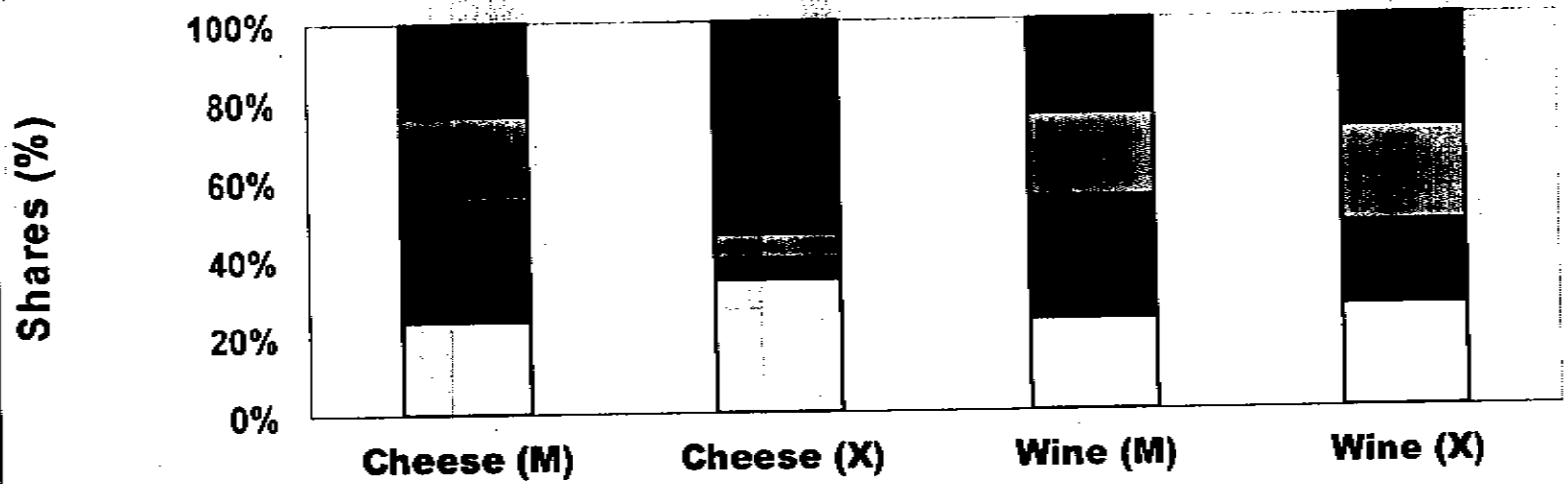
Figure 4: Imports and exports of cheese and wines as shares of total agricultural imports and exports between SA and the EU for selected periods



	Cheese (M)	Cheese (X)	Wine (M)	Wine (X)
2000-2004	1.78	0.27	1.42	23.12
1995-1999	1.40	0.02	1.52	10.91
1990-1994	0.88	0.01	0.86	2.79
1990-2004	1.38	0.12	1.30	13.60

SHARES: Cheese and Wine – Disaggregate level

Figure 5: Imports and exports of cheese and wine between SA and the EU as shares of total imports and exports of cheese and wine between SA and the world for selected periods



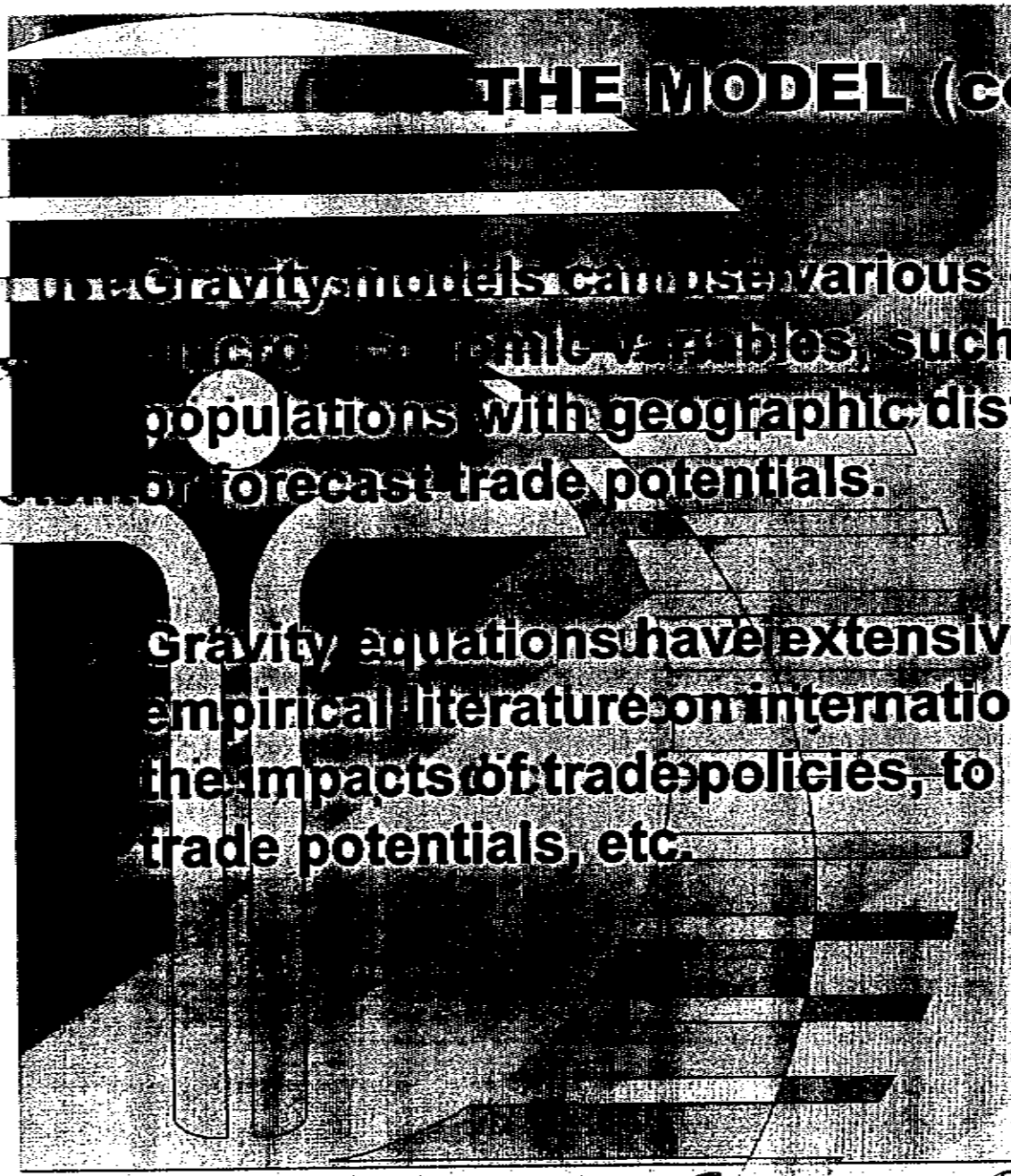
	Cheese (M)	Cheese (X)	Wine (M)	Wine (X)
2000-2004	61.92	54.55	69.02	81.54
1995-1999	57.84	6.11	62.44	73.09
1990-1994	80.25	5.74	88.41	58.40
1990-2004	62.74	34.07	68.54	77.46

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 because of the following reasons:

- Firstly, the gravity equation makes use of raw data without reliance on prior estimation of various elasticities, etc.
- Secondly, gravity equation can readily exploit panel data, and thereby capture dynamic aspects of trade policy impacts
- Lastly, gravity equation singles out distance between countries as a significant explanatory variable, which is desirable given South Africa's location relative to its main trading partners.

Gravity models could be estimated using various types of data, i.e. cross-section, time-series and panel data, depending on the type of research question to be addressed and are applicable to both static or dynamic modeling.



THE MODEL (cont.)

- Gravity models can use various combinations of economic variables, such as GDP and populations with geographic distance., etc; to predict or forecast trade potentials.

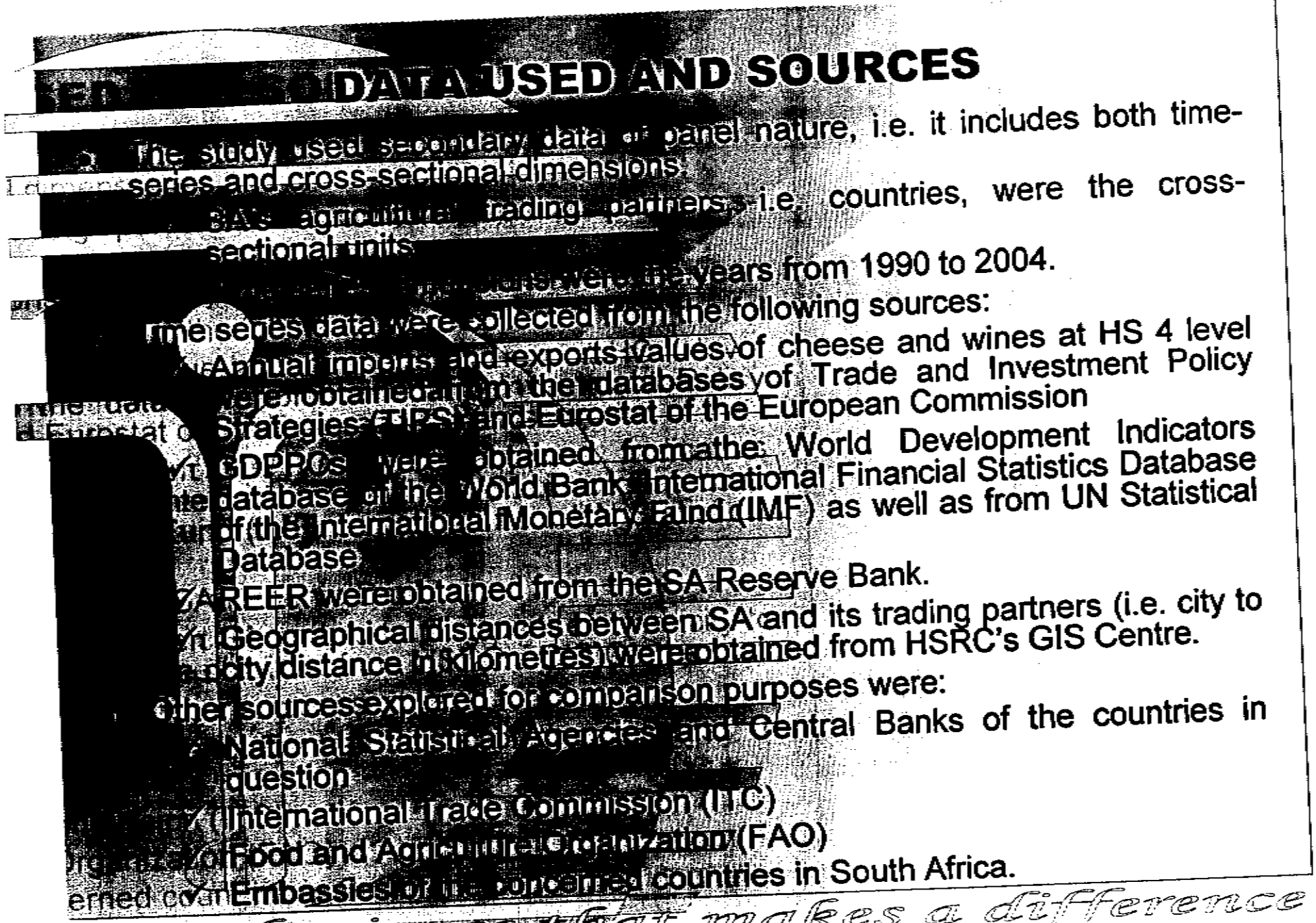
- Gravity equations have extensively been used in the empirical literature on international trade to analyze the impacts of trade policies, to predict or forecast trade potentials, etc.

THE MODEL (cont.)

- $\ln Y_{ijt}$ represent the logarithms of real exports of cheese and wines from country i (in all cases "i" denotes South Africa) to country j (in all cases "j" denotes SA's trading partners) in year t and real imports of cheese and wines from country j to i in year t as well as their p-year lags;
- $GDPPC_{it}$ and $GDPPC_{jt}$ represent the logarithms of the real per capita gross domestic products for countries i and j in year t respectively;
- $REER_{it}$ is the real effective exchange rate of SA Rand to the base year 2000;
- $RDQA_{ijt}$ is the dummy variable for the implementation of the reciprocal preferential quotas between countries I and j in year t and was interacted with $GDPPC_{jt}$;

THE MODEL (cont.)

- DIST is a geographic distance between country i and [illegible] serves as a proxy for transportation costs,
- [illegible] time-invariant unobservable variables such as common language, etc.
- Symbols α_i and β_i represent the coefficients associated with the above explanatory variable;
- α_i is constant term for each **cross section**; and
- ε_{it} is **idiosyncratic** error term.
- Y and GDPPC values are expressed in constant 2000 US$
- This equation is estimated four times.



DATA USED AND SOURCES

The study used secondary data of panel nature, i.e. it includes both time-series and cross-sectional dimensions.

SA's agricultural trading partners, i.e. countries, were the cross-sectional units.

years from 1990 to 2004.

following sources:

Annual imports and exports values of cheese and wines at HS 4 level were obtained from the databases of 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, International Financial Statistics Database of the International Monetary Fund (IMF) as well as from UN Statistical Database

ZAREER were obtained from the SA Reserve Bank.

Geographical distances between SA and its trading partners (i.e. city to city distance in kilometres) were obtained from HSRC's GIS Centre.

Other sources explored for comparison purposes were:

National Statistical Agencies and Central Banks of the countries in question

International Trade Commission (ITC)

Food and Agriculture Organization (FAO)

Embassies of the countries in South Africa.

EMPIRICAL RESULTS

- ADF test confirmed the stationarity of the variables, i.e. no pooled unit roots.
- In panel data analysis, AIC is not appropriate to determine the lag length and it was then determined using an ad hoc approach, i.e. by looking at the significance level and the predictive power of the model:
  - 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.
- Should the data be pooled or not?
  - Chow test procedure was used to test the poolability of the panel data across the cross sections, i.e. same intercept for all cross sections
  - Null hypothesis was rejected meaning pooled OLS was inappropriate due to the uniqueness of the intercept for each cross section.

EMPIRICAL RESULTS (cont.)

- How to treat time-invariant unobservable heterogeneity across the cross sections?
- [illegible] was used to test for fixed or random effects and the heterogeneity was not subsumed in the error term.
- Due to time demeaning transformation, time-constant observables and unobservables were eliminated from the original equation.
- There was no proof of serial correlation in the error terms
- Demeaning the fixed or linear unobservable effects model or the fixed within estimator was more efficient than the first differencing estimator.
- Fixed effects model was estimated with GLS assuming White standard errors
- Arellano White Heteroskedasticity-Consistent Standard Errors and Covariance were imposed in order control heteroskedasticity.

EMPIRICAL RESULTS (cont.)

- SA's cheese imports from EU had declined by 0.01% and exports were not significant during the quota implementation period. The reasons might be:
  - [illegible] in SA compared to some of the trading partners, hence the lower aggregate demand of SA cheese in the international markets
  - EU's import licensing system
  - EU standards, e.g. only four SA companies were approved to export dairy products to EU
  - SA's non-refund measure
- SA's wines imports from EU had declined by 0.04% and exports increased by 0.02% during the quota implementation period. The reasons might be:
  - Positive impacts on exports: South African Wine Industry is well established and on aggregate has a greater variety of wines to serve a diverse international demand.
  - Negative impacts on imports: Delayed implementation of Wines and Spirits Agreement

EMPIRICAL RESULTS (cont.)

VARIABLES	CHEESE (HS0406) EXPORTS	CHEESE (HS0406) IMPORTS	WINES (HS2204) EXPORTS	WINES (HS2204) IMPORTS
IMPORTS	(0.042)	1.536** (0.04[illegible])	0.239** (0.019)	0.295** (0.040)
[illegible]			0.069** (0.014)	-
[illegible]			0.044** (0.006)	-
RGDP[illegible]	[illegible] (2.53)	0.944[illegible] (0.427)	12.254** (0.294)	1.986 (1.384)
RGDPPC[illegible]	[illegible] (0.120)	2.013**[illegible] (0.573)	1.031** (0.107)	0.709 (0.565)
[illegible]	[illegible] (0.002)	-0.0011** (0.0006	-0.0001 (0.0003)	-0.005** (0.001)
[illegible]	[illegible]108 (0.081)	-0.012**[illegible] (0.004)	0.020** (0.001)	-0.041** (0.009)
Observations	148	6836	1224	602
Cross-sections	[illegible]	[illegible]	102	43
Adjusted R^2	[illegible]	[illegible].997	0.998	0.986

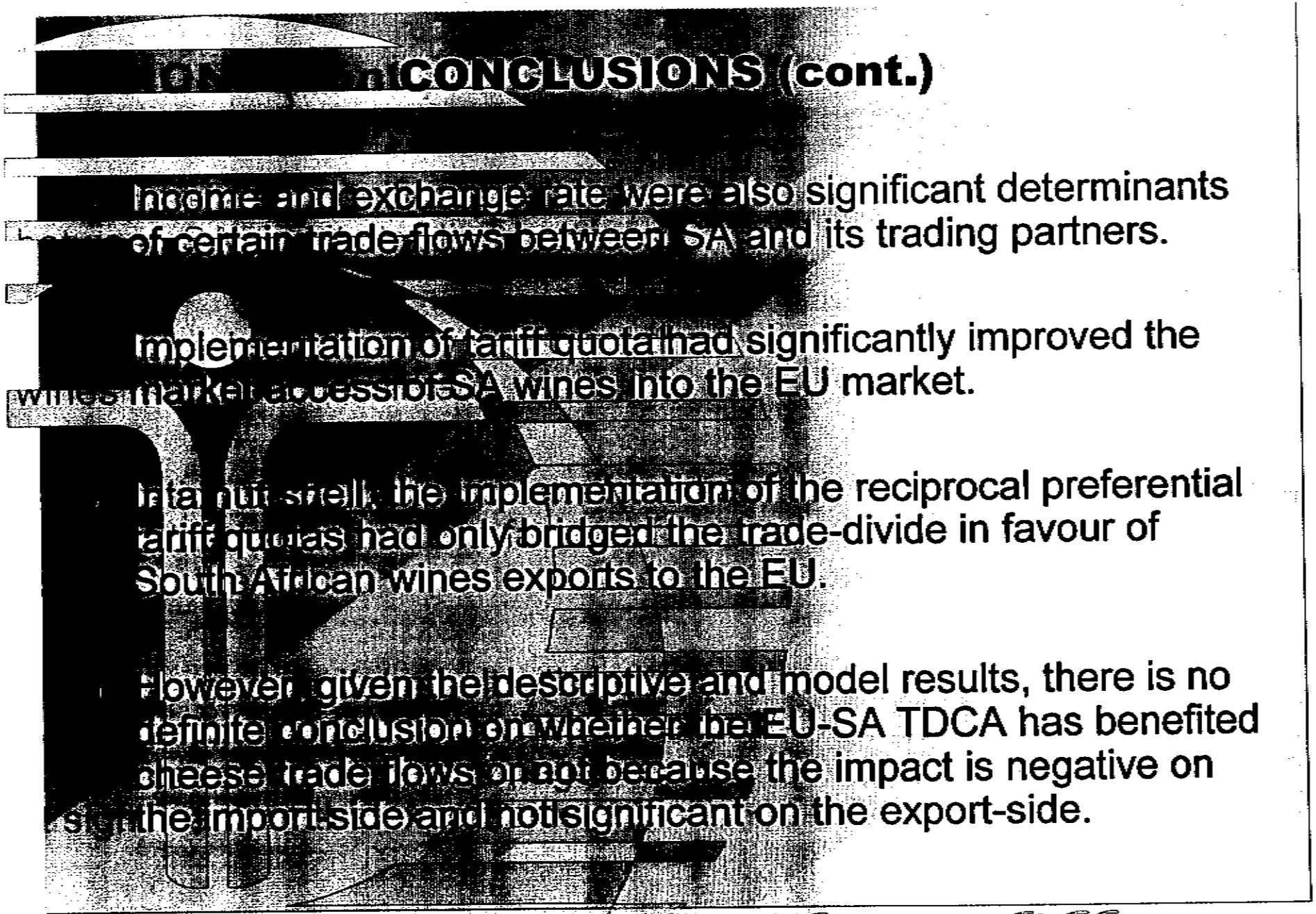
[illegible] and * denote significance at the [illegible] and 10 percent levels respectively
[illegible]white-corrected standard errors are in parentheses

CONCLUSIONS

- Cheese quota implementation did not improve the share and growth of cheese M from EU to SA, but cheese X shares were [illegible] periods with significantly declined growth compared to period before.

- Wines quota implementation improved significantly the share and growth of wines X from SA to EU, but the wines M share did not significantly differ from those of the other periods and the growth was even lower compared to others.

- Significant positive lagged dependent variables emphasized the importance of dynamics in trade meaning that the lagged trade is a predictor of the current trade.



CONCLUSIONS (cont.)

Income and exchange rate were also significant determinants of certain trade flows between SA and its trading partners.

Implementation of tariff quotas had significantly improved the wine market access of SA wines into the EU market.

In a nutshell, the implementation of the reciprocal preferential tariff quotas had only bridged the trade-divide in favour of South African wines exports to the EU.

However, given the descriptive and model results, there is no definite conclusion on whether the EU-SA TDCA has benefited cheese trade flows or not because the impact is negative on the import side and not significant on the export-side.

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