

Cape Colony Commodity Prices

1889-1914

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Presentation

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- 3 The Data
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Introduction



Sentiment - Confidence and Uncertainty

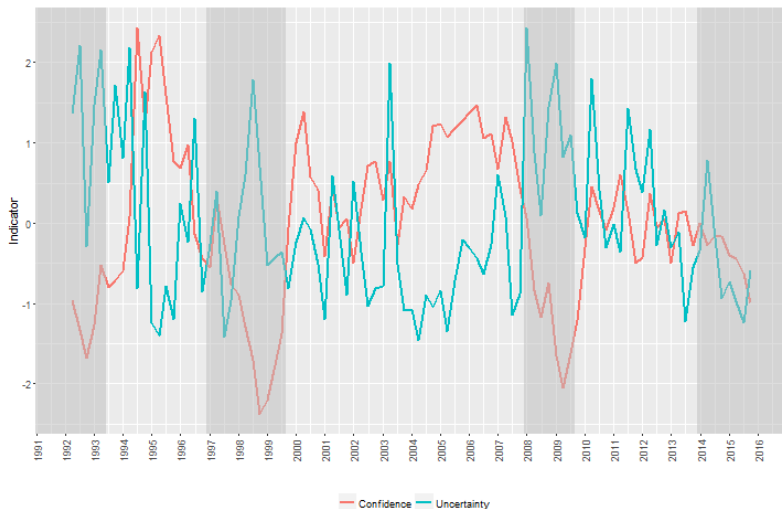


Figure 1: Sentiment plot



Art Price Indices

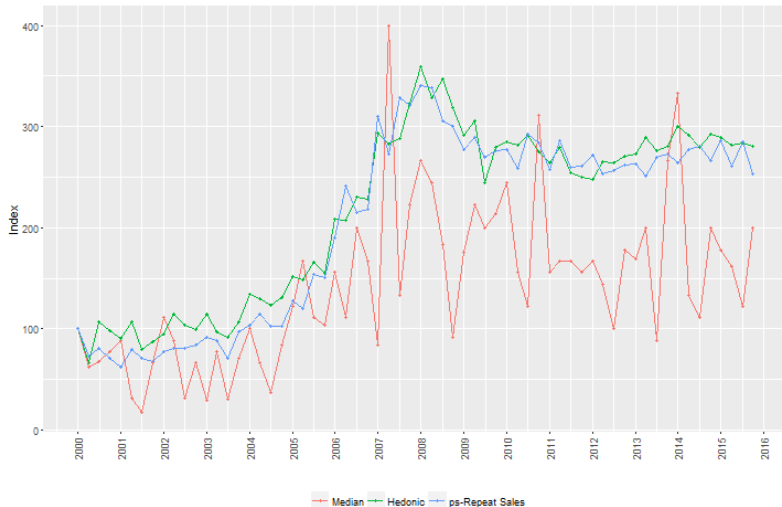


Figure 2: Art Price Indices
Cape Colony Commodity Prices



Historical Commodity Prices

Create historical (high-frequency) monthly wholesale price indices for agricultural commodities in the Cape Colony

Data Revolution in African Economic History

1889-1914 interesting period

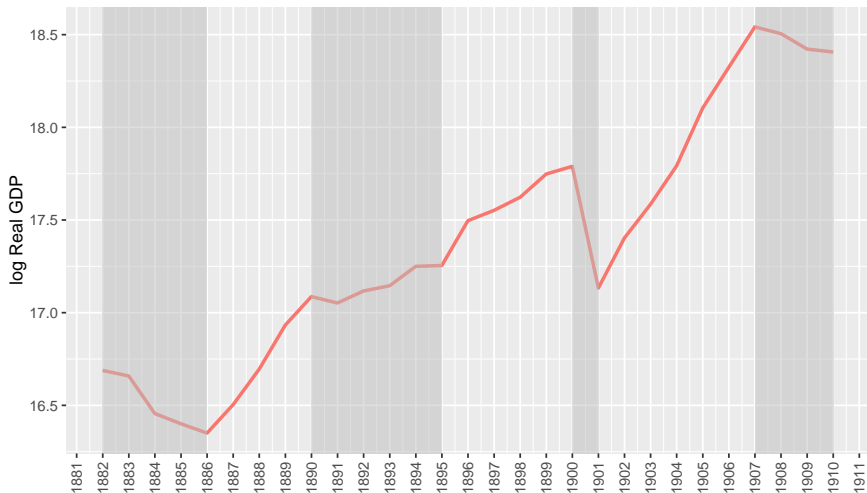
- Discovery of gold in the Witwatersrand (1886)
- Second South African War (1899-1902)
- Formation of the Union of South Africa (1910)
- Outbreak of WWI (1914)



The Economic History of the Cape Colony



Real GDP in the Cape Colony (1956-1909)



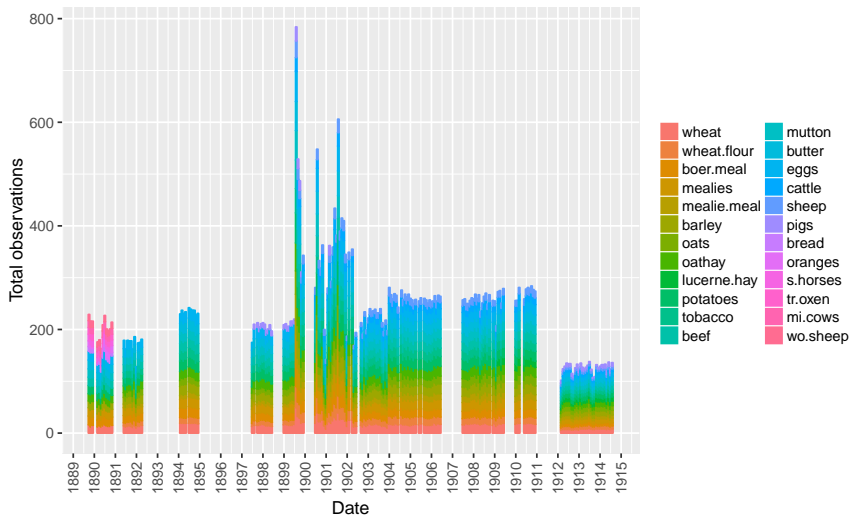
Total Imports and Exports in the Cape Colony



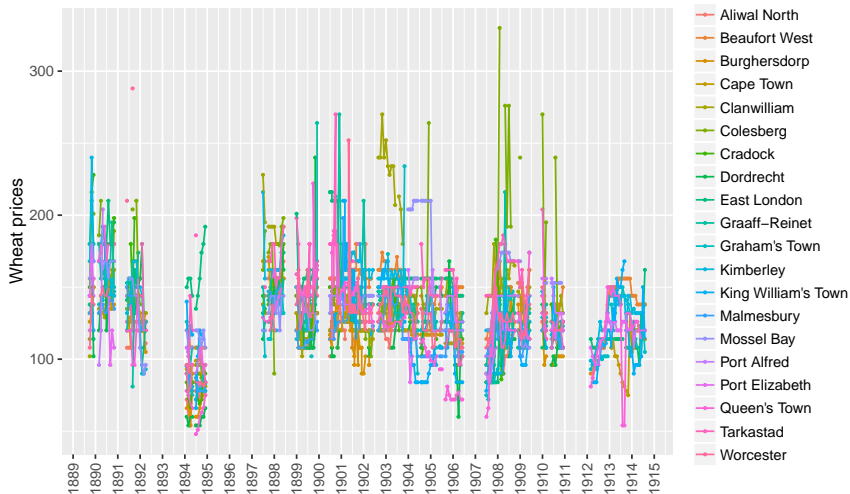
The Data



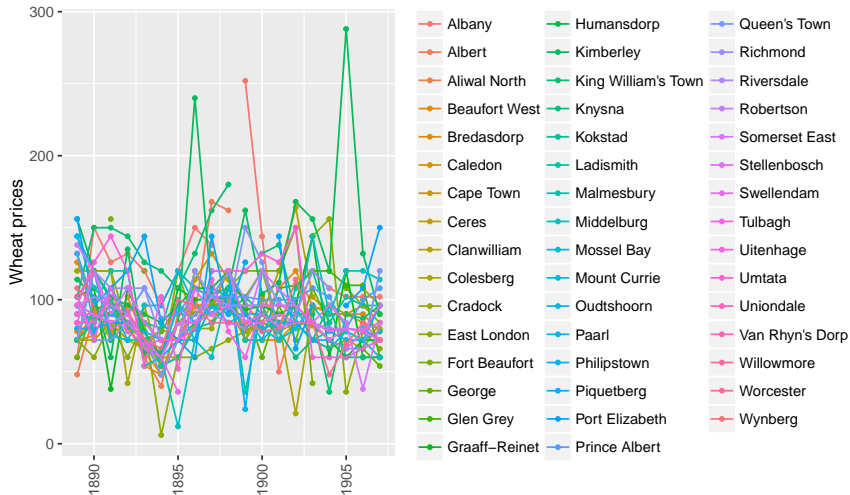
Agricultural Journals: Total Observations



Agricultural Journals: Monthly wheat prices by town



Blue Books: Annual wheat prices by town



Method



Repeat Sales Method

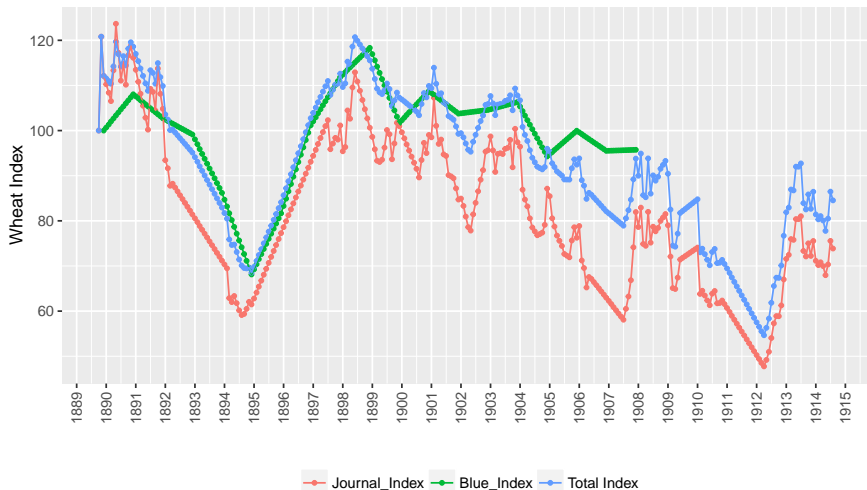
$$\ln \frac{P_{it}}{P_{is}} = \sum_{t=1}^T \beta_t D_{it} + u_{it}$$

Table 1: Repeat sales example with wheat prices

Date	Period	Beaufort.West	Cape.Town	Worcester	Index
Jun 1891	1	150		210	100.00
Jul 1891	2	135	138		88.83
Aug 1891	3	135	150		92.01
Sep 1891	4			288	138.94
Oct 1891	5		144		86.37
Nov 1891	6		144		84.45
Dec 1891	7	120	144		82.57
Jan 1892	8			144	70.38
Feb 1892	9		126	144	71.31
Mar 1892	10		126		71.31



Wheat indices for the Cape Colony



Aggregating commodity indices

Table 2: Commodity classification

Crops	Agri.Produce	Pastoral.Products	Livestock	Pastoral.Provisions	Agri.Provisions	Other.Prov
Wheat	Tobacco	Wool	Cattle	Beef	Bread	Tea
Mealies	Dried Fruit	Hides	Horses Mules & Asses	Mutton	Flour	Coffee
Barley	Wine	Skins	Sheep	Pork	Mealie Meal	Sugar
Oats	Brandy	Cheese	Pigs	Eggs	Boer Meal	Beer
Oathay		Fat & Tallow	Goats	Butter	Oatmeal	Rice
Rye		Soap	Fowls & Ducks	Milk		Salt
Peas & Beans						Candles
Potatoes						

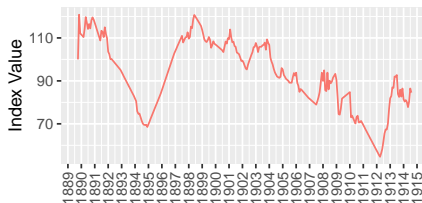


Results

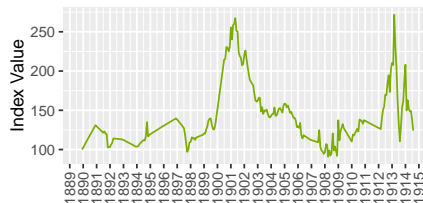


Commodity Indices

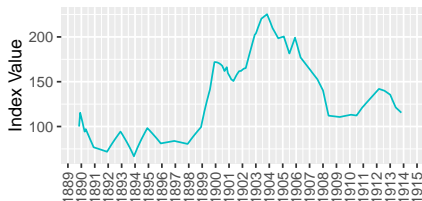
Wheat Index



Tobacco Index



Cattle Index



Beef Index

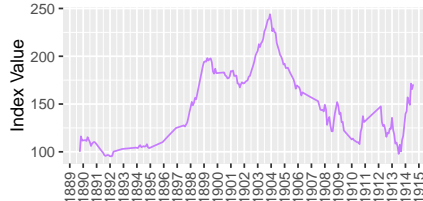
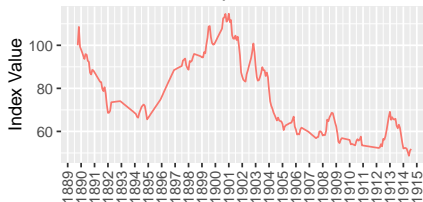


Figure 2: Individual commodity price indices

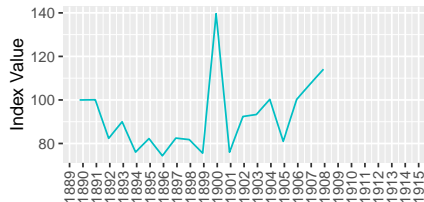


Commodity Group Indices (1)

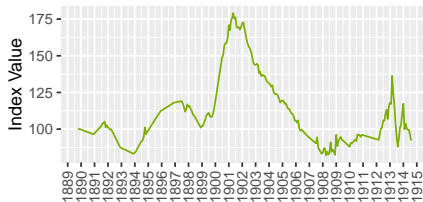
Crops Index



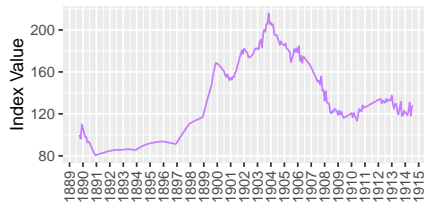
Pastoral Index



Produce Index

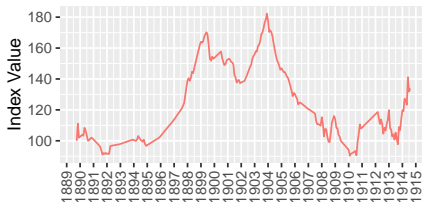


Livestock Index

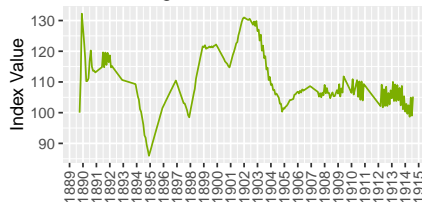


Commodity Group Indices (2)

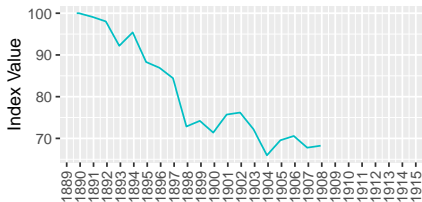
Pastoral Provisions Index



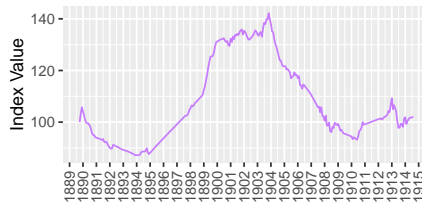
Agri Provisions Index



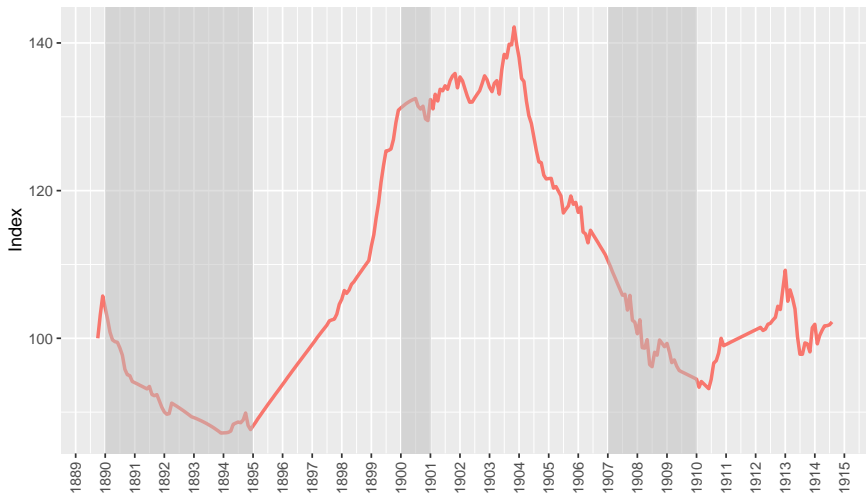
Other Provisions Index



Total Index



Aggregate Commodity Index



Comparisons: Cape retail price indices (1910=100)

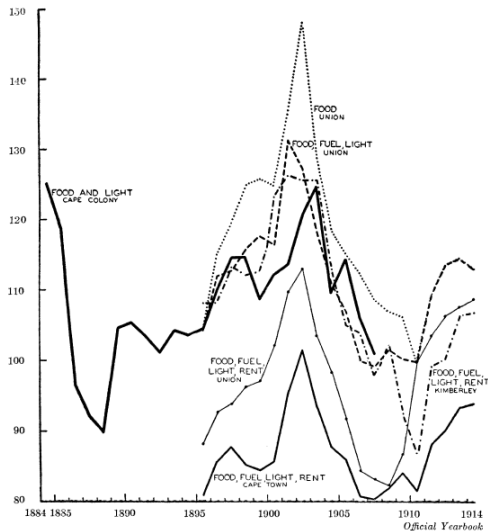
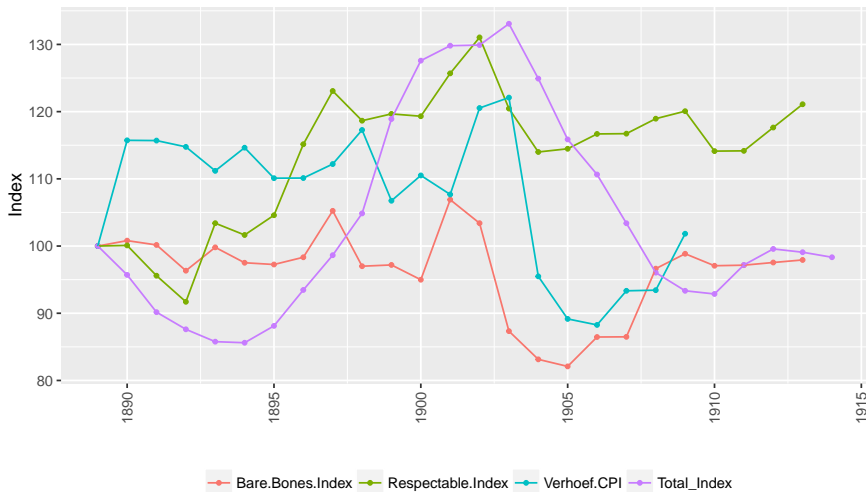


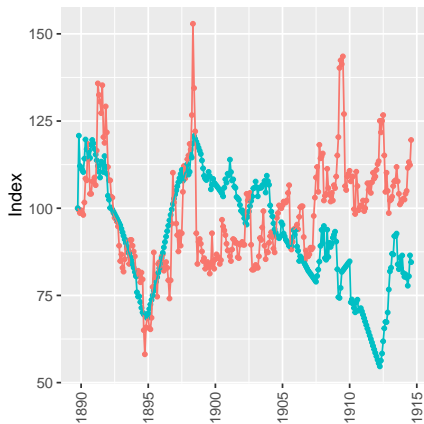
Figure 4: Gilbert (1922)



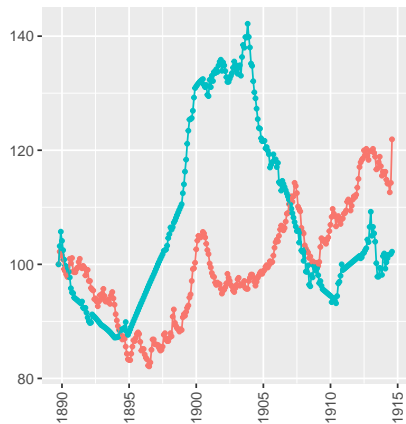
Comparisons: CPI



Comparisons: UK Wholesale Prices



UK.Wheat.Index Cape.Wheat.Index



UK.Wholesale.Index Cape.Wholesale.Index

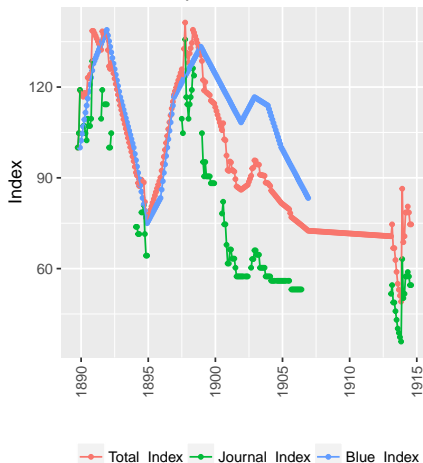


Market Integration in the Cape Colony

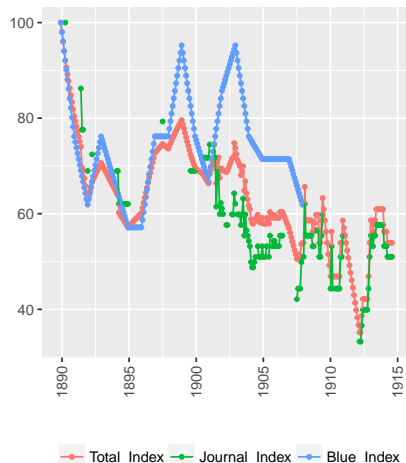


Regional Integration

Cape Town Wheat



Beaufort West Wheat



Pre-War Correlations

	Cape Town	Port Elizabeth	East London	Kimberley
Cape Town				
Port Elizabeth	0.35***			
East London	0.27***	-0.30***		
Kimberley	0.77***	0.38***	0.02	
Worcester	0.16**	0.38***	-0.39***	0.38***
Malmesbury	0.57***	0.51***	0.21**	0.68***
Beaufort West	0.21**	0.66***	-0.20**	0.32***
Mossel Bay	0.34***	0.47***	-0.33***	0.41***
Clanwilliam	-0.24**	-0.51***	0.49***	-0.13
Graham's Town	0.54***	0.37***	0.20**	0.65***
Port Alfred	0.13	0.41***	-0.08	0.39***
Graaff-Reinet	0.68***	0.39***	-0.06	0.59***
Cradock	0.24**	0.36***	0.05	0.51***
Colesberg	0.40***	0.39***	0.10	0.59***
King William's Town	0.61***	0.52***	0.05	0.66***
Queen's Town	0.66***	0.45***	-0.22**	0.50***
Burghersdorp	0.53***	0.60***	-0.25**	0.41***
Aliwal North	0.76***	0.48***	0.13	0.58***
Dordrecht	0.57***	0.31***	0.01	0.44***
Tarkastad	0.48***	0.28***	0.42***	0.28***



Post-War Correlations

	Cape Town	Port Elizabeth	East London	Kimberley
Cape Town				
Port Elizabeth	0.34***			
East London	0.79***	0.32***		
Kimberley	0.72***	0.16*	0.52***	
Worcester+	0.97***	0.47***	0.82***	0.67***
Malmesbury+	0.94***	0.54***	0.74***	0.55***
Beaufort West	0.92***	0.43***	0.77***	0.64***
Mossel Bay+	0.80***	0.36***	0.87***	0.67***
Clanwilliam	0.89***	0.37***	0.62***	0.50***
Graham's Town	0.64***	0.73***	0.66***	0.36***
Port Alfred+	0.22**	0.30**	0.49***	0.12
Graaff-Reinet+	0.71***	0.43***	0.75***	0.70***
Cradock+	0.89***	0.58***	0.81***	0.46***
Colesberg+	0.80***	0.44***	0.91***	0.43***
King William's Town	0.79***	0.65***	0.67***	0.50***
Queen's Town	0.35***	0.46***	0.53***	-0.03
Burghersdorp	0.51***	0.14	0.49***	0.68***
Aliwal North	0.70***	0.56***	0.70***	0.46***
Dordrecht+	0.67***	0.40***	0.81***	0.51***
Tarkastad+	0.73***	0.34***	0.87***	0.71***

Notes: + indicates restricted sample (Dec 1910)



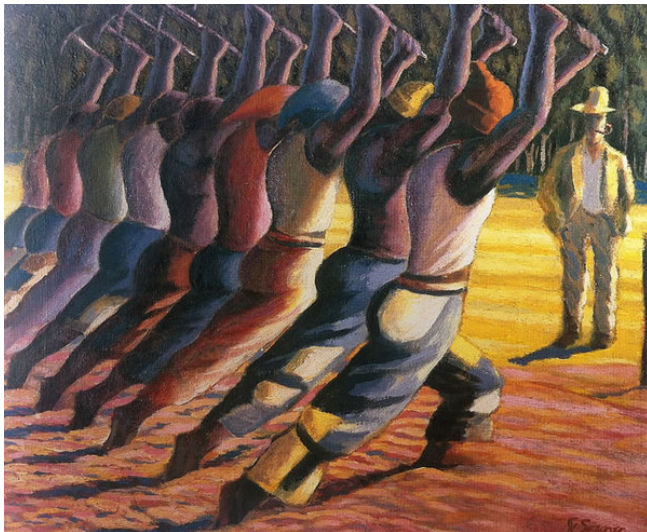
Unit Root Tests - relative to Cape Town

	Pre-War	Post-War	Full Period
Port Elizabeth	-1.68	-2.17	-2.57
East London	-2.75	-1.48	-3.22*
Kimberley	-3.22*	-2.54	-2.76
Worcester+	-3.16*	-4.05**	-3.79**
Malmesbury+	-2.45	-3.37*	-2.67
Beaufort West	-1.99	-2.45	-2.96
Mossel Bay+	-2.22	-3.30*	-2.66
Clanwilliam	1.96	-3.54**	-2.22
Graham's Town	-2.12	-3.16*	-3.85**
Port Alfred+	-0.80	-3.27*	-2.55
Graaff-Reinet+	-3.26*	-2.66	-4.42**
Cradock+	-1.45	-2.12	-2.82
Colesberg+	-2.67	-2.31	-2.92
King William's Town	-2.29	-3.96**	-3.09
Queen's Town	-0.07	-2.43	-1.95
Burghersdorp	-3.32*	-2.61	-2.64
Aliwal North	-3.28*	-3.78**	-4.17**
Dordrecht+	-2.50	-2.12	-3.11
Tarkastad+	-2.77	-2.82	-2.80

Notes: + indicates restricted sample (Dec 1910)



Suggestions and Advice?



Cape Colony Commodity Prices