

Economic Effects of the Proposed Australia-China Free Trade Agreement



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Outline of Presentation



- Objective of the Study
- Pattern of Trade Between Australia and China
- Modelling Framework - GTAP Model
- Free Trade Agreement (FTA) Simulations
- Results from GTAP Model
- Summary and Conclusion

Objective of the Study



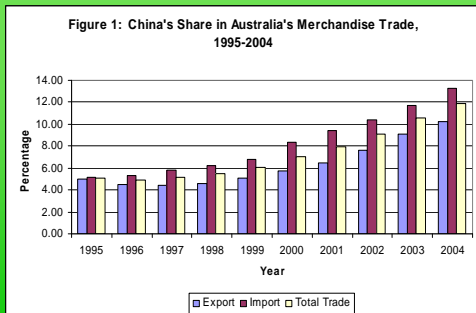
- Australia has negotiated four Free Trade Agreements with following countries:
New Zealand (1983), Singapore (2003), United States (2005), Thailand (2005)
- Plans are underway for several more FTAs. China, Japan, ASEAN, Malaysia, and UAE
- Australia and China launched negotiations in April 2005 for an FTA. Four rounds of talk have taken place.
- Objective of this study is to assess the economic impact of the Australia-China FTA using the GTAP model.

Pattern of Trade Between Australia and China



- Importance of China to Australia
- China is the world's fastest growing economy (over 8%)
- China is Australia's second largest trading partner
- Total exports to China A\$ 16 billion (2005)
- Total imports from China A\$ 21 billion (2005)

Pattern of Trade Between Australia and China



Pattern of Trade Between Australia and China



Pattern of Trade Between Australia and China

Table 1: Australia's Merchandise Trade (A\$ billion)

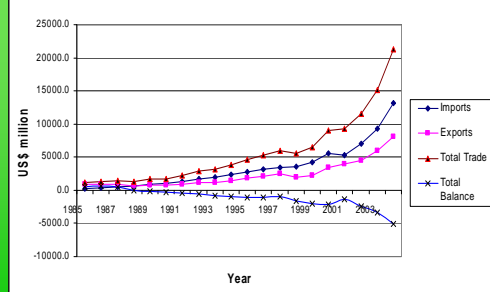
	1992		2003		Increase in Value	Percentage Increase in Value
	Value of Exports	%	Value of Exports	%		
USA	5.2	9.5	8.7	4.3	83	
ASEAN (6)	7.1	12.9	12.0	11.0	4.9	69
China	1.5	2.7	9.9	9.1	8.4	560
Japan	14.6	26.5	19.7	18.1	5.1	35
South Korea	3.4	6.2	8.4	7.7	5.0	147
Taiwan	2.5	4.5	3.7	3.4	1.2	48
Hong Kong	2.1	3.8	2.7	2.5	0.6	29
Rest of World	18.6	33.9	43.0	39.5	20.9	112
World	55.0	100	108.9	100	53.9	98

	1992		2003		Increase in Value	Percentage Increase in Value
	Value of Imports	%	Value of Imports	%		
USA	13.0	21.8	20.2	15.5	7.2	55
ASEAN (6)	4.9	8.2	20.1	15.3	15.2	310
China	2.6	4.4	15.3	11.7	12.7	488
Japan	11.1	18.6	16.1	12.3	5.0	45
South Korea	1.7	2.9	4.9	3.7	3.2	188
Taiwan	2.2	3.7	3.4	2.6	1.2	54
Hong Kong	0.8	1.3	1.2	0.9	0.4	50
Rest of World	23.3	39.1	49.8	38.0	26.5	114
World	59.6	100	131.0	100	71.4	120

Note: ASEAN(6) includes Indonesia, Malaysia, Philippines, Singapore, Thailand, and Brunei.

Pattern of Trade Between Australia and China

Figure 3: Australia's Merchandise Trade with China, 1985-2004



Pattern of Trade Between Australia and China

Table 2: Australia's Bilateral Merchandise Trade with China by Commodity, 2003 (A\$ million)

Commodity group	Exports to China	%	Imports from China	%	Trade balance by commodity
Food & live animals	497	5.7	238	1.8	259
Beverages & tobacco	3	0.0	28	0.2	-25
Crude materials, inedible, except fuel	3889	44.7	71	0.5	3818
Mineral fuels, lubricants & related materials	752	8.6	266	2.0	486
Animal & vegetable oils, fats & waxes	96	1.1	3	0.0	93
Chemical & related products	253	2.9	504	3.8	-251
Manufactured goods	785	9.0	2215	16.6	-1430
Machinery & transport equipment	331	3.8	4070	30.5	-3739
Miscellaneous manufactures	138	1.6	5707	42.8	-5569
Commodities not included elsewhere	1965	22.6	238	1.8	1727
Total	8709	100	13341	100	-4632

Source: Australian Bureau of Statistics, International Merchandise Trade (Cat. No. 5422)

Modelling Framework - GTAP Model

- Global Trade Analysis Project (GTAP) is a World CGE Model
- This Study Uses Version 6 Database:
 - 87 Regions (countries)
 - 57 Sectors (Commodities)
- We have aggregated it into:
 - 10 Regions
 - 20 Sectors


Main Features of the GTAP Model

- Product differentiation by country of origin
- Explicit recognition of savings by regional economies
- A capital goods producing sector in each region to service investment
- International mobility of capital
- Multiple trading regions
- Multiple goods and primary factors
- Empirically based differences in production technology and consumer preferences across regions
- Global transport sector

Trade Liberalisation Simulations with the GTAP Model


- All bilateral tariffs are removed between Australia and China.
- Discrimination against non-FTA countries is maintained.
- GTAP model is simulated in the long run framework.

Table 3: Bilateral Import Tariffs of Australia-China Merchandise Trade (%)



	Australian Tariffs	Chinese Tariffs
Grains	0.0	89.9
Other crops	0.6	8.3
Animal products	0.0	3.3
Forestry and fishing	1.2	6.0
Mining and energy	2.4	0.4
Meat products	3.1	12.4
Other food products	3.1	23.2
Dairy	3.7	22.1
Sugar	0.0	19.5
Beverages and tobacco	19.0	57.3
Textiles	18.1	24.8
Wearing apperals	18.3	13.9
Wood and paper products, publishing	4.6	13.4
Chemicals, rubber and plastic	4.5	16.6
Ferrous metals	3.8	11.4
Metal products	5.7	12.0
Motor vehicles and parts	4.9	12.4
Machinery and equipment	2.6	13.3
Miscellaneous manufactures	3.7	18.8
Services	0.0	0.0


Table 4: Macroeconomic and Trade Performance under Australia-China FTA



	Real GDP	Export Volume	Import Volume	Terms of Trade	Trade Balance (US\$ Million)	Equivalent Variation (EV) (US\$ million)	Real Consumption Expenditure
AUS	0.58	2.57	2.92	0.77	354.43	2118.33	0.32
USA	-0.01	-0.01	-0.02	0.00	197.00	-818.50	0.00
ASEAN(6)	-0.05	-0.07	-0.09	-0.02	-31.83	-271.79	-0.06
CHI	0.15	0.72	1.09	-0.04	-392.98	1254.08	0.29
JPA	-0.02	-0.05	-0.04	-0.02	-161.82	-566.99	-0.01
KOR	-0.03	-0.07	-0.11	-0.02	-9.08	-109.69	-0.01
TWN	-0.03	-0.05	-0.07	-0.02	-12.64	-101.01	-0.02
KHG	-0.01	-0.01	-0.01	0.00	-5.94	-5.19	0.01
EU	-0.01	-0.02	-0.02	0.00	33.30	-775.65	0.00
ROW	-0.02	-0.03	-0.05	-0.01	17.69	-871.78	-0.01


Source: Author's simulations of GTAP.
Note: All projections are percentage deviations from the base period except the trade balance and the equivalent variation (EV) which are in US\$ million.

Table 5: Sectoral Output Changes Under the Australia-China FTA (percentage change)




	Australia	China
Grains	24.75	-4.11
Other crops	-2.09	0.24
Animal products	-1.45	0.32
Forestry and fishing	0.12	0.10
Mining and energy	-0.15	0.05
Meat products	-0.82	0.08
Other food products	0.04	0.19
Dairy	0.33	-4.17
Sugar	2.21	-3.53
Beverages and tobacco	-0.10	0.16
Textiles	-6.70	1.10
Wearing apperals	-9.92	1.04
Wood and paper products, publishing	0.31	0.11
Chemicals, rubber and plastic	1.92	0.02
Ferrous metals	5.49	-0.41
Metal products	-0.43	0.26
Motor vehicles and parts	-0.50	0.17
Machinery and equipment	1.19	0.12
Miscellaneous manufactures	-0.23	0.15
Services	0.47	0.14

Table 6: Changes in Demand for Key Primary Factors in Australia and China due to the FTA (percentage changes)




	Australia				China			
	Land	Unskilled Labour	Skilled Labour	Capital	Land	Unskilled Labour	Skilled Labour	Capital
Grains	17.94	26.7	26.73	27.05	-3.29	-4.44	-4.45	-4.4
Other crops	-3.96	-4.66	-1.64	-1.39	0.44	0.15	0.13	0.19
Animal products	-0.43	-0.99	-0.96	-0.72	0.31	0.24	0.22	0.28
Forestry and fishing	-2.19	0.12	0.15	0.36	0.38	0.13	0.12	0.16
Mining and energy	-5.69	-0.71	-0.64	0.02	0.65	0.00	-0.03	0.11
Meat products	-7.59	-1.08	-0.96	0.21	0.87	-0.01	-0.07	0.18
Other food products	-7.35	-0.55	-0.44	0.74	0.92	0.08	0.01	0.27
Dairy	-7.27	-0.28	-0.26	0.02	-1.17	-4.25	-4.32	-4.07
Sugar	-6.39	1.63	1.76	2.96	-0.87	-2.64	-2.70	-2.86
Beverages and tobacco	-7.55	-1.01	-0.89	0.28	0.91	0.06	0.00	0.25
Textiles	-10.66	-7.12	-6.99	-5.76	1.37	0.99	0.92	1.21
Wearing apperals	-11.80	-10.21	-10.09	-8.89	1.36	0.97	0.89	1.18
Wood and paper products, publishing	-7.62	-0.33	-0.19	1.13	0.94	0.03	-0.05	0.24
Chemicals, rubber and plastic	-6.99	1.20	1.34	2.69	0.89	-0.09	-0.16	0.13
Ferrous metals	-5.59	-6.69	-4.83	6.22	0.71	-0.40	-0.56	-0.27
Metal products	-7.85	-0.89	-0.76	0.56	1.01	0.18	0.10	0.39
Motor vehicles and parts	-7.96	-1.15	-1.02	0.20	0.86	0.07	-0.01	0.28
Machinery and equipment	-7.2	0.69	0.83	-7.17	0.94	0.02	-0.05	0.23
Miscellaneous manufactures	-7.79	-0.73	-0.60	0.72	0.93	0.02	-0.06	0.23
Services	-7.84	-0.16	-0.02	1.44	0.99	0.06	-0.02	0.29

Table 7: Changes in Bilateral Export Volumes under the Australia-China FTA (percentage changes)



	From Australia to China	From China to Australia
Grains	614.13	28.73
Other crops	33.68	8.34
Animal products	4.4	5.01
Forestry and fishing	22.85	5.27
Mining and energy	2.02	24.92
Meat products	112.51	38.62
Other food products	134.36	17.11
Dairy	203.26	36.36
Sugar	104.65	3.96
Beverages and tobacco	175.12	49.78
Textiles	416.65	116.68
Wearing apperals	207.11	72.71
Wood and paper products, publishing	114.41	32.00
Chemicals, rubber and plastic	166.93	33.91
Ferrous metals	101.20	32.80
Metal products	126.57	46.00
Motor vehicles and parts	107.09	36.49
Machinery and equipment	176.09	23.60
Miscellaneous manufactures	248.92	24.83
Services	-2.00	1.44

Table 8: Effects on Trade Flows of Australia-China FTA (US\$ million)



	Australia's Exports to										Australia Imports from													
	China	World	USA	ASEAN	CHI	JPA	KOR	TWN	HKG	EU	ROW	China	World	USA	ASEAN	CHI	JPA	KOR	TWN	HKG	EU	ROW		
Grains	1318.2	797.8	0.3	0.1	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Other crops	33	-1789	3	3.9	2.1	0.1	0.1	0.1	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Animal products	39.1	-97.7	0.5	0.2	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Forestry and fishing	6.8	-3.2	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Mining and energy	23.3	-284.8	0	-0.4	77.6	-0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Meat products	242.4	-85.3	0.5	0.4	0.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Other food products	83.8	19.2	2.3	4.9	13.7	6.6	0.3	0.2	0.2	0.5	6.6	0.2	0.2	0.5	6.6	0.2	0.2	0.5	6.6	0.2	0.2	0.5	6.6	
Dairy	115.8	17.1	0.2	0.1	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sugar	37.4	30.4	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Beverages and tobacco	8.0	-11.1	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Textiles	142.1	144.9	-85.5	-63.4	675.3	-16.5	-41.3	-37	-43	-100	-188.9	92.9	173.5	-21.6	-78	1011.6	-1.5	-9.9	-7.9	-4.5	-120.3	-198.5	-188.5	
Wearing apperals	99.2	66.7	-1.1	-1	83.3	-6.2	-0.1	-0.1	-0.1	-0.1	-2.3	-1.5	0.4	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Wood and paper products, publishing	99.2	66.7	-1.1	-1	83.3	-6.2	-0.1	-0.1	-0.1	-0.1	-2.3	-1.5	0.4	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Chemicals, rubber and plastic	404.1	338.7	3.5	1.1	178.8	1	0.5	0.5	0	5.3	1.9	0.5	0.5	0	5.3	1.9	0.5	0.5	0	5.3	1.9	0.5	0.5	
Ferrous metals	1222.9	966.5	1.2	9.5	26.4	4.3	7.8	0.9	0.1	5.3	10.8	13.4	0.6	-3.4	110.3	-3.5	-1.4	-4.6	-0.5	-12.5	-6.3	-6.3		
Metal products	18.1	-85.5	11.9	0.9	33	21.2	2.6	0.6	0	12.5	3.7	441.7	366.8	-10.8	-7.1	337.1	-4.6	-2	-1.3	-0.1	-12	-3.6		
Motor vehicles and parts	52.3	13.4	-1.1	-7.9	132.7	-5.1	-1.7	-3.5	-0.8	-17.4	-12.7	-5.4	-37.6	46.1	9.7	3	4.4	3	2.4	15.4	90.4	40.7	40.7	
Miscellaneous manufactures	-5.4	-37.6	46.1	9.7	3	4.4	3	2.4	15.4	90.4	40.7	495.2	1881.5	-16.5	-130.3	2033.6	-1.7	-42.2	-49.6	5.7	-368.8	-287	-287	
Services																								
Total																								

Summary and Conclusions

- Both countries will benefit from the FTA.
- Trade creation will be greater than trade diversion.
- Gains - In Australia, agricultural and resource based industries. In China, manufacturing industries
- These sectors will export more.
- There will be some displacements of manufacturing workers in Australia, mainly in 'Wearing apparels' and 'Textiles' sectors.
- Limitation: Service trade not fully captured
- Policy Implication:
It is worth pursuing the FTA.



Thank you

Questions and comments

