

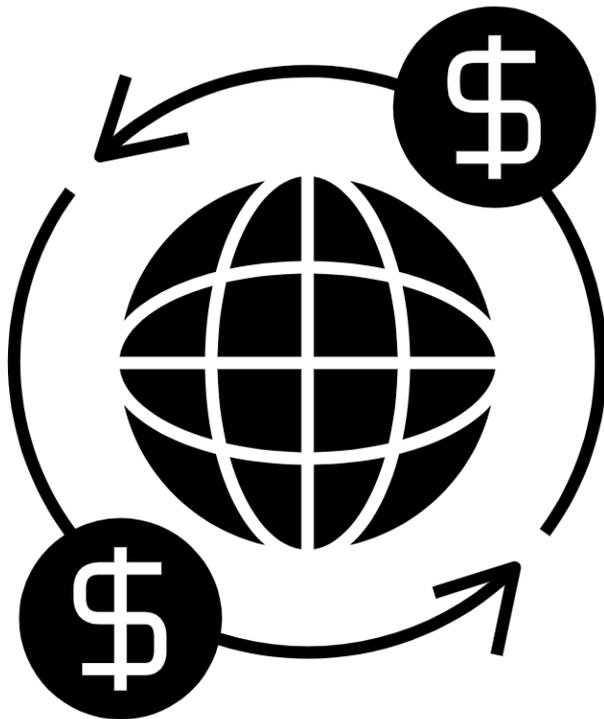


Department of
Education

Year 12 Economics

Unit 3 – Australia and the global economy

Terms of trade



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Year 12 Economics
Unit 3 – Australia and the Global Economy
TERMS OF TRADE

Estimated time to complete this topic: 5 hours

Topic - Terms of trade

The terms of trade is an index that measures the relative movements between the prices of imports and prices of exports. The terms of trade plays a significant role in Australian economic history. In recent times, Australia experienced its largest sustained rise (between 2001 and 2012) since the Australian dollar was floated in 1983. The profound effect this had on the exchange rate, the balance of payments, investment, inflation and, subsequently, the standard of living in Australia are important connections to understand. The impact of the substantial fall in terms of trade since 2012 and subsequent improvement from 2016 will also be examined.

Syllabus points

- the concepts of the terms of trade and the terms of trade index
- factors that affect the terms of trade
- recent (the last ten years) trends in Australia's terms of trade
- the significance of changes in Australia's terms of trade

Analysis

- apply mathematical techniques relevant to international trade, including; calculating the terms of trade index.

Text: You will need to refer to Chapter 5 in *Investigating Macroeconomics* by Parry & Kemp 5th and 6th Ed. as you complete this booklet.

Terms of trade – Expanded syllabus for teaching and learning

- The concept of the terms of trade
- The concept of the terms of trade index – export price index and the import price index
- The factors that affect the terms of trade – including commodity prices, global growth
- Changes in Australia’s terms of trade over the past ten years
- The significance of changes in the terms of trade
- Effects of changes in the terms of trade on the balance of payments, the exchange rate and the level of economic activity
- The effect of the terms of trade on national income

Carefully read the materials which follow.
Complete all questions and activities.
You will need to refer to your text, as directed.

Explain the concepts of the terms of trade and the terms of trade index

The terms of trade are critical in reflecting a country’s economic trading ‘health’ compared to the rest of the world. The Terms of Trade is an indication of the quantity of imports that a country can exchange from a given quantity of imports.

What are the terms of trade? Define:

Unit 3–Australia and the global economy

It is an index that measures the relative prices of exports and imports and is calculated using the formula:

$$\text{Terms of Trade} = \frac{\text{Export Price Index}}{\text{Import Price Index}} \times 100$$

Any index number is a way of expressing price changes, in the case below on a year-on-year basis.

A higher terms of trade means the general level of import prices is lower and more can be bought with the same amount of exports. E.g. in 2011. However, if the term of trade falls, then more exports are required for the same amount of imports.

2000 was identified as the base year in Australia when the terms of trade were set to 100.

Calculate the terms of trade

	Price (\$ per unit)		
Exports	2017	2018	2019
Iron Ore	90	86	102
Coal	35	28	39
Education	150	165	180
<i>Total</i>	<i>275</i>		
XPI	100		
Imports	2017	2018	2019
Vehicles	25000	28000	22000
Computers	800	900	1200
Machinery	600	650	800
<i>Total</i>	<i>26,400</i>		
MPI	100		
Terms of Trade	$\frac{100}{100} \times 100 = 100$		

To calculate the XPI for 2018 we take the total price in 2018, divide it by the total price in 2017 then multiply that by 100.

To calculate the MPI for 2018 we take the total price in 2018, divide it by the total price in 2017 then multiply by 100.

Then when we have the new XPI and MPI we simply use the formula $\frac{XPI}{MPI} \times 100$

Activity: Now complete the table.

Importance of the terms of trade index.

The value of the indices is not particularly useful; it is the movement that is most important.

A fall in the terms of trade is considered to be _____ whilst a rise in the terms of trade is referred to as a _____ movement.

The terms of trade could rise for one of two movements in the index numbers. Either a fall in total import prices, or a _____ in total _____ prices.

Was the movement in the terms of trade unfavourable or favourable in 2018 and 19 in your table above? What caused them to be so – a change in import prices or a change in export prices or both?

Australia's terms of trade

Review: Composition of Trade

- Go to the DFAT report on Australia's trade at <https://www.dfat.gov.au/about-us/publications/trade-investment/trade-at-a-glance/trade-investment-at-a-glance-2019/Pages/default#profile-of-australian-trade> to review the top 5 imports and exports.

Our main exports:

Our main imports:

Australia's export composition in particular affects our terms of trade. Why?

What is a 'price taker'?

Significance of changes in the terms of trade

When terms of trade change, this can have important repercussions for:

1. Balance of payments
2. Output and employment.
3. Business cycle
4. Investment.
5. National income

Current account balance in the Balance of Payments

Terms of trade reflects changes in the price of exports compared to the price of imports.

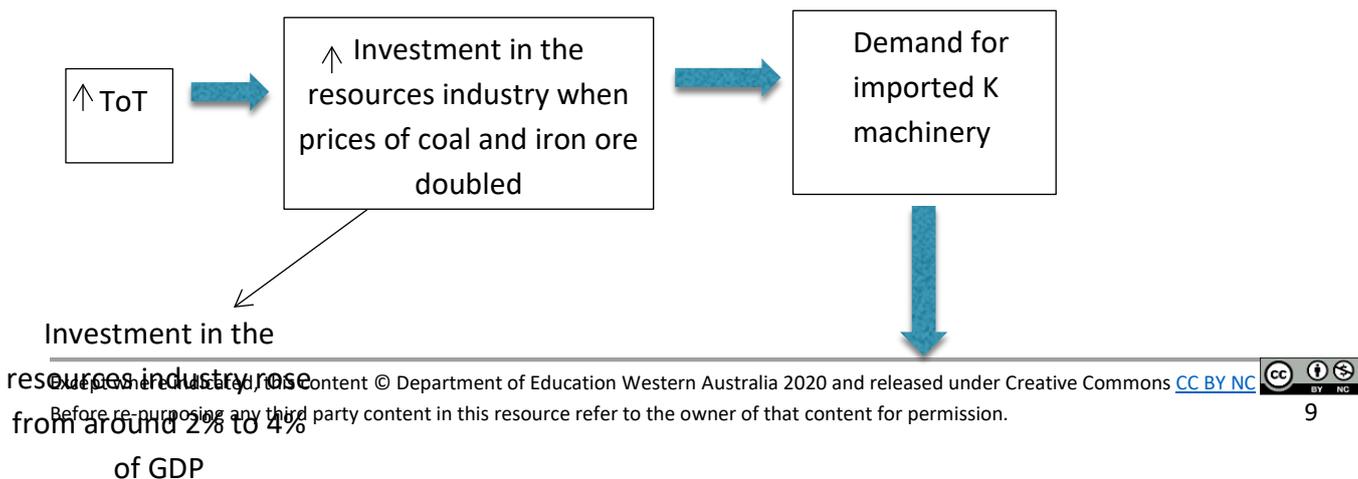
Trade Account – measures the changes in the VALUE of exports and imports.

Difference? – the trade account takes into account quantities AND prices.

Generally, there will be a direct relationship between the two measures. Certainly in the short term. When the terms of trade rise for some reason, there will *usually* be an increase in the current account balance (or a decrease in the CAD). E.g. demand for our exports during the mining boom increased our export price index.

BUT

Note: an increase in the terms of trade means an increase in national income and therefore an increase in consumption. This means import spending will increase and possibly partially offset the increase in export income. An example of this occurred in 2011-12:



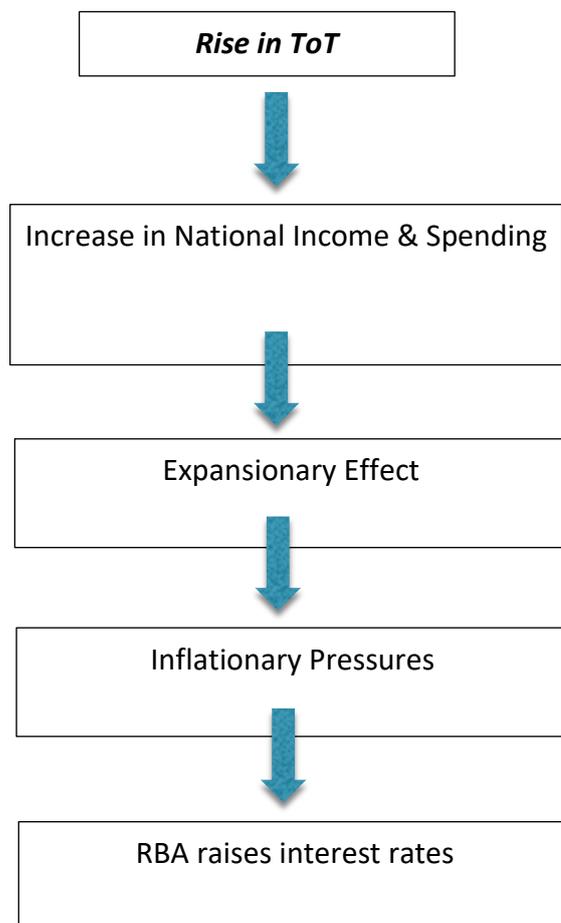
Reduced trade surplus,
increased the CAD.

Read pp. 96 – 98 in *Investigating Macroeconomics* to complete notes on the other impacts of changes in the terms of trade. Ensure you make a note of any significant movements in recent years and what caused them.

Output and employment

Business cycle

Inflation & Interest Rates



Summary of Effects

Refer to page 97 of *Investigating Macroeconomics*

	Favourable		Unfavourable	
Cause				
Meaning				
Effects:	1.		1.	
	2.		2.	
	3.		3.	
	4.		4.	
	5.		5.	
	6.		6.	
	7.		7.	

Test your understanding

Review questions

Topic: Terms of Trade

Practice multiple choice questions from past ATAR exams

All ATAR Examination questions and answers sourced from School Curriculum and Standards Authority, Economics – Past ATAR Course Exams <https://senior-secondary.scsa.wa.edu.au/further-resources/past-atar-course-exams/economics-past-atar-course-exams>

1.(Q11 SCSA 2019 ATAR course exam)

Which of the following most likely explains the recent movements in Australia’s terms of trade?

- (a) changes in commodity prices caused by shifts in global commodity demand and supply
- (b) changes in the value of the Australian dollar caused by Chinese industrialisation
- (c) changes in Chinese and American trade policies
- (d) changes in the value of Australian exports and imports caused by the Australian business cycle

2. (Q10 SCSA 2019 ATAR course exam)

This question refers to the table below

Year	Export price index	Import price index
1	100	100
2	90	80
3	80	75

For this economy in Year 3 the

- (a) total value of exports is greater than the total value of imports.
- (b) terms of trade have deteriorated from the previous year.
- (c) terms of trade have not changed from the previous year.

Unit 3–Australia and the global economy

(d) average price of exports is lower than the average price of imports.

3. (Q9 2013 SCSA WACE course exam)

What is the most likely impact of a significant improvement in Australia's terms of trade?

- (a) more imports can only be purchased with an increased volume of exports
- (b) a depreciation in the value of the Australian dollar
- (c) a decrease in the capital and financial account surplus
- (d) the current account deficit will increase

4. (Q9 2018 SCSA ATAR course exam)

In 2011, Australia's terms of trade peaked at 136.6. Early in 2016, the index had fallen to 87.9 and then recovered to stand at 115.1 in January 2018. The main reason for these changes has been

- (a) volatility in the price paid for merchandise imports from Asian manufacturers.
- (b) the changing supply and demand for agricultural exports.
- (c) variation in the value of the Australian dollar.
- (d) changes in the level of demand for the commodities that Australia exports.

5. (Q9 2016 SCSA ATAR exam)

The main reason for the recent decline in Australia's terms of trade is the

- (a) decrease in the quantity of goods exported.
- (b) increase in the quantity of goods exported.
- (c) decrease in the price of goods exported.
- (d) increase in the price of goods exported.

Practice short answer/data interpretation question

Q26 2017 SCSA ATAR exam

(12 marks)

The table below shows terms of trade data for the Australian economy

	Export price index	Import price index	Terms of trade index
March quarter 2016	72.9	104.5	69.8
June quarter 2016	73.9	103.5	71.4
September quarter 2016	76.5	102.5	74.6
December quarter 2016	86.0	102.7	

(a) (i) Calculate the terms of trade for the December quarter 2016. (1 mark)

(ii) What does the terms of trade index measure? (1 mark)

(b) Describe the trend in Australia's terms of trade evident in the table and identify two possible economic reasons for this trend. (3 marks)

Unit 3–Australia and the global economy

(c) Describe the likely effect of the movement in the terms of trade, shown in the table on the previous page, on the following: (6 marks)

Exchange rate:

Trade balance:

Inflation rate:

Extended answer

Q30 2014 SCSA ATAR Exam

- (a) Explain the significance of the terms of trade for the balance on goods and services. (8 marks)
- (b) Explain the likely economic effects of a fall in the terms of trade on consumers, businesses and the macroeconomy. (12 marks)

Answers

Topic: Terms of Trade

Multiple choice

Q1 a

Q2 b

Q3 c

Q4 d

Q5 c

Data interpretation/short answer question

Check your answer to Question 26 from the 2017 ATAR exam against the marking key:

https://senior-secondary.scsa.wa.edu.au/_data/assets/pdf_file/0018/460521/RATIFIED-Economics_Marking_Key_2017.PDF

Extended answer

(SCSA Ratified marking key 2014 ATAR Exam)

(a) Explain the significance of the terms of trade for the balance of goods and services. (8 marks)

Description	Marks
Definition of the terms of trade, formula Measured by the terms of trade index which only relates to the prices of trade goods The direction of the movement of the figures more important than the absolute value	1–4
For example the effects of a fall in the terms of trade: Expect a direct relationship between the terms of trade and the balance of goods and services Should lead to a decrease in export receipts and an increase in import payments which will cause a decrease in the balance of goods and services (this assumes that quantities of X and M do not significantly change) Australia is mainly a price taker for traded goods so this assumption is likely to hold true.	1–4
Total	8

Unit 3–Australia and the global economy

(b) Explain the likely economic effects of a fall in the terms of trade on consumers, businesses and the macroeconomy. (12 marks)

Description	Marks
Unfavourable movement in the terms of trade (export prices have fallen relative to import prices)	1–2
Consumers: Likely to be associated with lower levels of economic activity and employment Hence lower real consumer incomes A fall in the terms of trade will decrease the Australian dollar and increase import prices.	1–2
Businesses: May signal a slowdown in sectors of the economy that had previously been strong (e.g. mining) with lower levels of investment in these areas There may be less evidence of a ‘two speed economy’ with more resources available to the non-minerals sectors A decline in the terms of trade is likely to be associated with a fall in the \$A which will assist exports such as tourism and education and import competing manufacturing.	1-3
Macroeconomy: Overall a fall in the terms of trade is likely to have a contractionary impact on the economy. A fall in commodity prices is likely to lead to less investment in the mining sector and a fall in economic growth and employment Relates to the current situation in Australia Such effects may be cushioned by a fall in the \$A that is likely to accompany a fall in the terms of trade The slowdown in the economy may also lead to expansionary monetary and fiscal policy stances Higher inflation due to increased import prices Will experience a decrease in purchasing power as less exports can be purchased with a given volume of exports	1-5
Total	12