

7.2 Trade, exchange rates and the balance of payments

Name: _____ Class: _____ Date: _____

Total: 36 marks

KEY WORDS terms of trade • comparative advantage • tariff
• depreciation • Marshall-Lerner condition - • J-curve J

Objective

Calculate and interpret the terms of trade and opportunity costs, analyse protection with a tariff diagram, and evaluate current-account and exchange-rate policies at full IA2 essay standard.

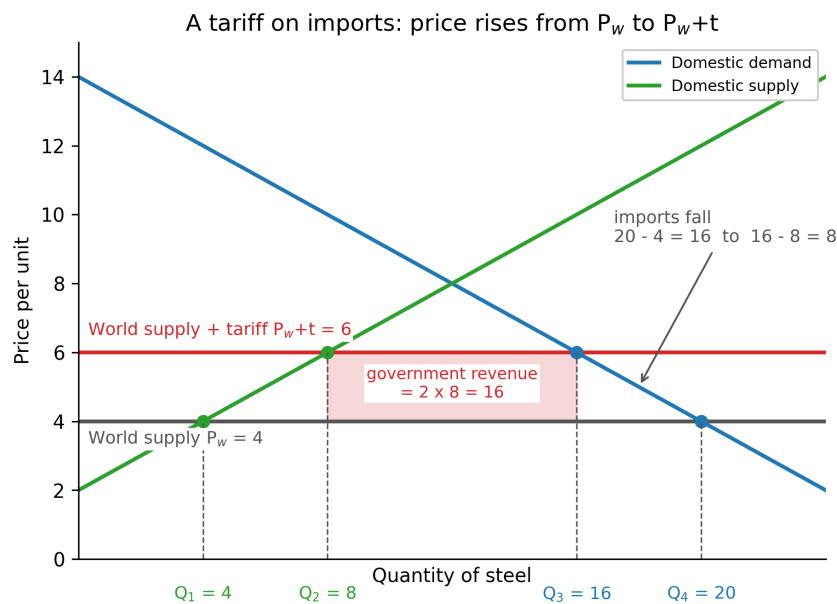
1 Key knowledge and worked examples

The **terms of trade** = (index of export prices / index of import prices) $\times$ 100. A rise is an “improvement”: each export unit buys more imports. Whether export *revenue* rises depends on how strongly quantities respond.

Worked example. In 2024 an economy’s export price index fell from 100 to 96 while its import price index fell from 100 to 98. $ToT = 96 / 98 \times 100 = 97.96 \approx 98.0$ – a deterioration of about 2%, because export prices fell faster.

Comparative advantage means lower opportunity cost, not greater speed. For two countries and two goods, compute each opportunity cost in the same units; a trade ratio between the two opportunity costs can benefit both.

A **tariff** raises the domestic price from the world price P_w to $P_w + t$: domestic output rises, consumption falls, imports shrink, and the government gains revenue of t times the new import quantity.



A **depreciation** lowers a floating currency's value; a **devaluation** is an official cut in a fixed rate. In the traditional initially balanced-trade model with perfectly elastic supply and full price pass-through, the **Marshall-Lerner condition** requires the magnitudes of export and import demand elasticities to sum to more than 1 for a trade-balance improvement. The **J-curve** is a possible initial worsening before later improvement, conditional on prices, contracts and quantity responses.

2 Practice

2.1 A country's export price index rises from 100 to 108 while its import price index rises from 100 to 112. Calculate the new terms of trade and state whether this is an improvement or a deterioration. [4]

2.2 Country P uses 5 worker-hours per phone and 10 per table; country Q uses 8 per phone and 8 per table. Calculate each country's opportunity cost of one phone and one table, state each comparative advantage, and judge whether trading at 1 phone for 1.2 tables benefits both. [6]

2.3 Using a domestic supply-and-demand diagram with a horizontal world supply, explain the effect of a quota that limits imports to less than the free-trade quantity on the domestic price and on government revenue. [6]

3 Exam-style questions

3.1 The fictional economy of Barokia has run a current-account deficit near 6% of GDP for five years, financed by selling government bonds to foreign investors. Its currency floats freely. Evaluate measures that could be taken to reduce Barokia's current account deficit. Refer to Barokia in your answer. [20]

Solutions

2.1 $\text{ToT} = 108 / 112 \times 100 = 96.43 \approx 96.4$. A deterioration, because export prices rose more slowly than import prices: each export unit now buys about 3.6% fewer imports. Authored marking guidance (original, not an official scheme): M1 method, A1 answer, B1 judgement, B1 reason.

2.2 In P, one phone costs $5/10 = 0.5$ tables and one table costs $10/5 = 2$ phones. In Q, one phone costs $8/8 = 1$ table and one table costs 1 phone. P has comparative advantage in phones, Q in tables. At 1 phone for 1.2 tables: P receives 1.2 tables for a phone that costs it 0.5 tables, so P gains; but Q pays 1.2 tables for a phone it could make for 1 table, so Q loses. The ratio must lie strictly between 0.5 and 1 table per phone for both to gain. Authored marking guidance (original): M1 method, A1 values, B1 advantages, A1 judgement, B1 condition.

2.3 A binding quota limits supply at the world price, so total supply turns vertical at the quota quantity: the domestic price rises above P_w until demand equals domestic supply plus the quota. Unlike a tariff, a quota raises no government revenue unless import licences are auctioned; the price gain goes to foreign exporters or licence holders. Consumers lose surplus; domestic producers gain. Authored marking guidance (original): diagram, mechanism, revenue contrast, incidence.

3.1 Model response (original; official WEC14 essays are marked 12 for knowledge, application and analysis plus 8 for evaluation; “refer to a country” is required).

Definition and context: Barokia’s current account – trade in goods and services plus income and transfers – is in deficit near 6% of GDP, financed by foreign purchases of its bonds.

Analysis of measures: expenditure-reducing policy – higher income tax or lower government spending could cut disposable income and import spending; higher interest rates would cut spending and also attract capital inflows that support the currency’s financing side. Depreciation of Barokia’s floating currency would cheapen exports and raise import prices, potentially improving the trade balance if quantity responses are sufficient. Apply the Marshall-Lerner condition within its stated benchmark assumptions; a J-curve warns of a possible initial deterioration if prices change before volumes. Supply-side measures – education, infrastructure, R&D incentives – would raise competitiveness and export value over time. Protectionism (tariffs, quotas) would cut imports directly.

Evaluation: deflation costs output and jobs, especially risky if domestic demand is already weak; a current-account deficit alone does not establish that weakness. Depreciation may fail Marshall-Lerner if Barokia’s exports are raw materials with inelastic demand, and it raises imported-input costs, feeding inflation. Supply-side policies take years and need funding a deficit country may lack. Tariffs may invite retaliation and can conflict with trade commitments, depending on their design and the applicable rules. The bond financing is also fragile: if investors lose confidence, capital flight could force a crisis rather than an adjustment.

Judgement: for Barokia, a managed depreciation plus phased supply-side investment is the least damaging path; sharp fiscal deflation would turn a trade problem into a recession. (≈ 350 words; allow supported alternative judgements with conditions.)