

ATHENS UNIVERSITY of ECONOMICS and BUSINESS
MSc PROGRAM in INTERNATIONAL and EUROPEAN ECONOMIC STUDIES
International Business Economics (IBE)
1st In-Class Quiz

NAME: -----

A. (5 points): Circling your correct answer (ONE) to the following questions

Part A - Multiple-Choice Questions

1. Country A can produce both pharmaceuticals and textiles using fewer resources than Country B. However, Country A sacrifices 3 units of textiles to produce one additional unit of pharmaceuticals, while Country B sacrifices only 1 unit of textiles. Which statement is most consistent with the theory of comparative advantage?

- A. Country A should specialize in both products because it has an absolute advantage in both.
- B. Country B has a comparative advantage in pharmaceuticals.
- C. Country A necessarily has a comparative advantage in pharmaceuticals because it is absolutely more efficient.
- D. No gains from trade are possible because Country A has an absolute advantage in both goods.

Correct answer: B

Explanation: Comparative advantage depends on opportunity cost, not absolute productivity. Country B gives up only one unit of textiles to produce pharmaceuticals, compared with three in Country A, and therefore has the comparative advantage in pharmaceuticals.

2. Suppose aircraft production involves very large fixed costs and substantial economies of scale, so that the world market can profitably support only a few producers. Which explanation of international trade is most relevant?

- A. Absolute advantage based exclusively on natural-resource endowments.
- B. New trade theory emphasizing economies of scale and first-mover advantages.
- C. Comparative advantage requiring constant returns to scale and perfect competition.
- D. The infant-industry argument, because every large producer must initially receive government protection.

Correct answer: B

Explanation: New trade theory emphasizes that economies of scale may cause global production to become concentrated among relatively few firms. Early entrants may develop a scale-based cost advantage that is difficult for later entrants to overcome.

3. Consider a small importing country that introduces a tariff on a product whose world price it cannot influence. Which of the following best describes the “deadweight loss” of this policy?

- A. The extraction of surplus from consumers and the net efficiency loss caused in domestic production.
- B. The extraction of surplus from consumers and tariff revenue for the government, which otherwise could have been generated.

- C. The extraction of surplus from consumers and all domestic producers, of the exported and imported products
- D. There is no deadweight loss, so long as the country is a small importing country which cannot influence the product's world price. Consumers lose exactly the amount gained by domestic producers, so national welfare is unchanged.

Correct answer: A

Explanation: The tariff redistributes income toward domestic producers and the government, but consumers pay higher prices and the economy suffers production and consumption distortions, generating deadweight loss.

4. A government restricts imports of electric vehicles to 100,000 units per year. The resulting scarcity raises the domestic price above the world price, and foreign exporters holding import licences earn additional profits. These additional profits are best described as:

- A. tariff revenues.
- B. producer subsidies.
- C. dumping.
- D. quota rents.

Correct answer: D

Explanation: A quota rent is the extra profit generated because the quantity of imports is artificially restricted. Unlike a tariff, an import quota does not automatically transfer this revenue to the importing country's government.

5. The strongest economic justification for temporary infant-industry protection is that:

- A. domestic firms should permanently be protected from more efficient foreign producers.
- B. current production may generate learning effects that reduce future production costs sufficiently for the industry eventually to compete without protection.
- C. tariffs always generate more government revenue than the consumer surplus they destroy.
- D. protection ensures that domestic firms will develop a comparative advantage regardless of underlying economic conditions.

Correct answer: B

Explanation: Infant-industry protection may potentially be justified when temporary production permits learning and cost reductions that eventually make the domestic industry internationally competitive without continued protection

Part B - Case Study

In 2022, the United States enacted the **Inflation Reduction Act (IRA)**. From 2023, eligible vehicles could qualify for a tax credit of up to \$7,500. To qualify for the credit, among other conditions, a vehicle's final assembly had to take place in North America. For EVs, at least 40% of the value of critical minerals in the battery had to be extracted or processed in the United States or a qualifying free-trade-agreement partner or recycled in North America. At least 50% of the value of battery components had to be manufactured or assembled in North America.

At the same time, foreign producers and trading partners argued that conditioning consumer subsidies on regional production and sourcing could discriminate against competitive imported

vehicles and components. As a result, several U.S. trading partners considered introducing their own subsidies, sourcing restrictions, or other trade-policy measures in response.

Questions

(a) Give one economic argument in favor of the IRA sourcing requirements and one economic argument against them. In your answer, relate the policy to the concepts of infant-industry protection and/or strategic trade policy.

(b) Explain why possible retaliation or the adoption of similar industrial policies by other countries may alter the overall welfare assessment of the IRA.

Indicative Answers

(a) Argument in favor: The U.S. government could justify these provisions to support the transition toward EVs, strengthen domestic and regional battery supply chains, encourage investment in clean-energy manufacturing, and reduce dependence on concentrated foreign sources of critical inputs. The policy could be justified using an infant-industry or strategic-trade-policy argument. Battery production may involve economies of scale, learning-by-doing, technological spillovers and important first-mover advantages. Temporary policy support may allow domestic or regional firms to expand production, reduce average costs and become internationally competitive.

Argument against: The policy may distort sourcing decisions by encouraging firms to purchase more expensive regional inputs instead of lower-cost foreign inputs. This can reduce productive efficiency and raise costs for automobile manufacturers and consumers. There is also a risk that political pressure keeps protection in place even after its original economic justification has disappeared.

(b) Retaliation can substantially change the welfare calculation. Trading partners may introduce competing subsidies, discriminatory sourcing requirements or restrictions against U.S. exports. This could reduce exports and profits in other U.S. industries and generate broader trade distortions. Moreover, if several governments simultaneously attempt to shift investment and profits toward their own firms, the result may be a subsidy race rather than a simple transfer of rents toward one country. The strategic-trade benefit that appears attractive when one government acts in isolation may therefore be weakened or reversed once other countries respond.

The European Battery Requirement: Industrial Policy or Disguised Protectionism?

The government of Eurovia, a large market for electric vehicles (EVs), introduces a new 'Green Mobility Programme.' Consumers receive a EUR 7,500 subsidy when purchasing an EV, but the subsidy is available only if:

- at least 55% of the value of the battery is produced in Eurovia; and
- at least 40% of battery minerals are processed domestically.

The government argues that taxpayers are financing the transition to clean transport and that public expenditure should therefore also create domestic manufacturing capacity, technological know-how and employment.

Before the policy, most batteries were imported from Asian producers at an average price of EUR 8,000 per battery. Domestic batteries cost approximately EUR 10,500.

Two years after the programme is introduced:

- domestic battery production has increased substantially;
- investment in domestic battery plants has risen;
- imported batteries have lost market share;
- average battery costs for EV manufacturers have increased;
- foreign producers claim the measure discriminates against imported inputs;
- one major exporting country announces that it is considering retaliatory restrictions against Eurovian exports.

At the same time, the Eurovian government argues that battery production involves substantial economies of scale, learning-by-doing, and significant strategic importance for the future automobile industry.

Case Questions

- (a) Identify the principal trade-policy instrument contained in the Green Mobility Programme. Explain briefly how it affects domestic producers, foreign producers and consumers.
- (b) Give one economic argument in favor of the policy and one economic argument against it.
- (c) Suppose that domestic battery costs fall from EUR 10,500 to EUR 7,700 after several years of accumulated production experience. How would this affect the economic case for the policy?
- (d) Why might retaliation by the exporting country alter the welfare assessment of the programme?

Indicative Answers to the Case Study

(a) Policy instrument and effects

The programme contains a local-content requirement because access to the subsidy is conditional on a specified share of the battery and its inputs being produced or processed domestically.

Likely immediate effects include: domestic battery producers gain because demand is redirected toward their output; foreign producers lose because imported components are placed at a competitive disadvantage; EV manufacturers face higher input costs, at least initially; and some of these higher costs may ultimately be passed on to consumers.

(b) Argument for and against

Argument in favor: an infant-industry or strategic-trade-policy argument can be made. Battery production may involve economies of scale and learning effects. Temporary support could enable

domestic firms to increase output, reduce costs, accumulate technological capabilities, and eventually compete internationally without protection.

Argument against: the policy forces firms to substitute relatively expensive domestic inputs for lower-cost imported ones, creating an efficiency cost and potentially raising EV prices. It may also protect firms that would never become internationally competitive and may be vulnerable to capture by special interests.

(c) Falling domestic costs

The fall from EUR 10,500 to EUR 7,700 strengthens the infant-industry argument. Initially, domestic production was EUR 2,500 more expensive than imported production (EUR 10,500 - EUR 8,000). After learning occurs, domestic production becomes EUR 300 cheaper than the original imported price (EUR 8,000 - EUR 7,700).

If the cost reduction genuinely results from learning generated by temporary domestic production, and the industry can thereafter compete without the local-content requirement, the original intervention may have helped create a viable competitive industry. However, this does not automatically prove that the policy improved welfare; future gains must be compared with the costs imposed during the protection period.

(d) Retaliation

Retaliation may cause Eurovia to lose export opportunities in other sectors. The welfare calculation can no longer consider only the gains of domestic battery producers. Benefits in the battery sector may be offset by falling exports, lower profits and employment in retaliated-against sectors, higher prices, and escalation into broader trade restrictions.

Suggested Marking Scheme

Part A: 16 marks (2 marks per multiple-choice question)

Part B: 24 marks (6 marks per case-study question)

Total: 40 marks

Case Study

Teaching Note

This case is designed to test whether students can distinguish a pure local-content requirement from a broader package combining consumer subsidies, regional sourcing rules and strategic industrial policy. It also invites discussion of infant-industry protection, economies of scale, learning-by-doing, strategic trade policy, welfare effects and retaliation.

Sources / Background

- Internal Revenue Service (IRS), Clean Vehicle Credit guidance and eligibility rules under IRC Section 30D.
- U.S. Inflation Reduction Act of 2022, clean-vehicle provisions.

Course lecture material: International Business Economics - Political Economy of International Trade; local-content