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Economics Higher level Paper 3

16 May 2024

Zone A morning | Zone B morning | Zone C morning

Candidate session number

1 hour 45 minutes

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Instructions to candidates

- Write your session number in the boxes above.
- You are permitted access to a calculator for this paper.
- Do not open this examination paper until instructed to do so.
- Answer all the questions.
- Answers must be written within the answer boxes provided.
- Unless otherwise stated in the question, all numerical answers must be given exactly or correct to two decimal places.
- You must show all your working.
- Use fully labelled diagrams where appropriate.
- The maximum mark for this examination paper is **[60 marks]**.



Please **do not** write on this page.

Answers written on this page
will not be marked.



Answer **all** the questions. Answers must be written within the answer boxes provided.

1. **Table 1** shows information from the balance of payments for Chile for each quarter (3-month period) of 2021.

Table 1: Balance of payments for Chile in millions of US dollars (US\$) in 2021

	First quarter (Q1)	Second quarter (Q2)	Third quarter (Q3)	Fourth quarter (Q4)	Total
Balance of trade in goods	4145	4665	933	785	10 528
Balance of trade in services	–2326	–2602	–3298	–3753	–11 979
Income	–4286	–5015	–4485	–4636	–18 422
Current transfers	–221	–243	–19	50	–433
Foreign direct investment	2354	2478	–138	–3897	797
Portfolio investment	–609	12 887	15 950	2390	30 618
Official borrowing	3499	–6085	–259	6053	3208
Reserve assets	–2557	–6086	–8684		–14 321

- (a) (i) Using the information provided in **Table 1**, calculate Chile's current account balance for the second quarter (Q2) of 2021.

[2]

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- (ii) The financial account balance for the fourth quarter (Q4) of 2021 was US\$7552 million. Using the information provided in **Table 1**, calculate the change in reserve assets for the fourth quarter (Q4) of 2021. You **must** state whether reserve assets have increased or decreased.

[2]

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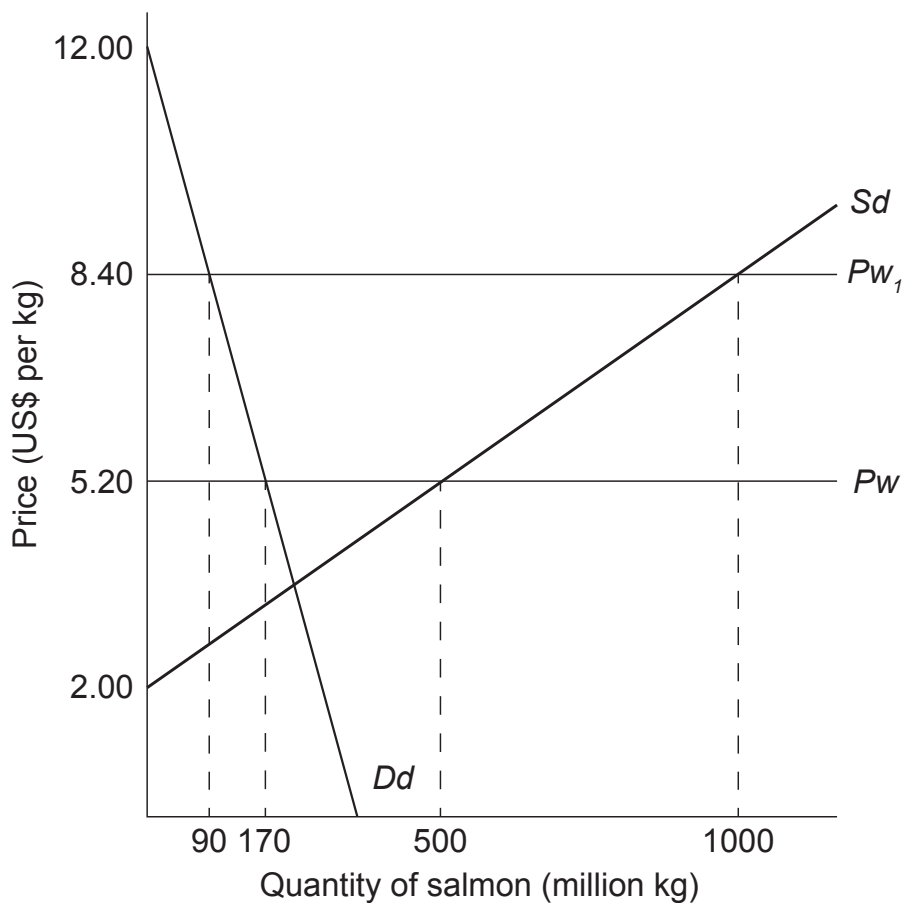
(Question 1 continued)

Salmon farming in Chile

Salmon is Chile's most important food export. The value of salmon exports increased sharply in 2021, largely due to a recovery in the world price of salmon. This boosted economic activity and employment, creating opportunities for entrepreneurship and regional development.

Figure 1 illustrates the market for salmon in Chile. Dd is the domestic demand for, and Sd is the domestic supply of, salmon in US\$ per kg. P_w is the world price and P_{w_1} is the world price after an increase from US\$5.20 to US\$8.40 per kg.

Figure 1: The market for salmon in Chile



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(Question 1 continued)

- (iii) Using **Figure 1**, calculate the change in domestic spending on salmon in Chile as a result of the increase in the world price of salmon from US\$5.20 to US\$8.40 per kg. [2]

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- (iv) Using **Figure 1**, calculate the price elasticity of demand for salmon in Chile when the world price increases from US\$5.20 to US\$8.40 per kg. [2]

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- (v) Using **Figure 1**, calculate the social/community surplus in the salmon market in Chile after the increase in the price of salmon from US\$5.20 to US\$8.40 per kg. [2]

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(Question 1 continued)

- (vi) Using an international trade diagram, explain how an export subsidy could be used to increase the quantity of salmon exports from Chile.

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(Question 1 continued)

Salmon in Chile are bred in fish farms. Some of these farms have been criticised for using large amounts of antibiotics. Although the fish are kept in ocean-based farms, chemicals and other salmon by-products can spread. This threatens marine life in areas near the fish farms and can lead to antibiotic-resistant strains of bacteria which can infect humans, causing them to seek medical attention.

Some indigenous fishing communities are fighting for their traditional way of life. Salmon farms use the ocean, a common access resource, so intensively that there are far fewer fish available for local communities who rely on small-scale fishing for their livelihood.

(vii) Define the term *common access resources*.

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(Question 1 continued)

- (viii) Using an externalities diagram and the information provided, explain how salmon farming in Chile can result in market failure.

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(This question continues on page 9)



(Question 1 continued)

- [10]

[illegible]

2. The economy of Türkiye has faced a number of challenges since 2018. Foreign investors have sold their financial assets, such as bonds and stocks. Türkiye's currency, the Turkish lira (TRY₺), has depreciated while inflation has risen sharply. However, the economy has somehow managed to grow. Türkiye has a strong business culture, with a large proportion of the population aspiring to be entrepreneurs. It has also benefited from supply-chain constraints in other parts of the world, which have created opportunities for Turkish firms.

Table 2: Economic indicators for Türkiye

	2020	2021	2022
Gross domestic product (GDP) (billion TRY₺)	5046	7207	
GDP deflator	182.74	235.20	
Consumer price index (CPI)	469.7	558.7	1003
Population (million)	84.34	85.04	

- (a) (i) Using the information in **Table 2**, calculate the real GDP per capita in Turkish lira (TRY₺) for Türkiye in 2021. [2]

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- (ii) Using the information in **Table 2**, calculate Türkiye's rate of inflation for 2022. [2]

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(Question 2 continued)

Table 3 provides information on the real GDP per capita for Türkiye and the real GDP per capita at purchasing power parity (PPP) in December 2021.

Table 3

	December 2021
Real GDP per capita (US\$)	13 251
Real GDP per capita PPP (US\$)	31 252

- (iii) Using the information in **Table 3** to illustrate your answer, outline why GDP data is often presented with an adjustment to purchasing power parity (PPP). [2]

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(Question 2 continued)

Table 4: Development indicators for Türkiye (2013 – 2019)

	2013	2015	2017	2019
Gross national income (GNI) per capita (PPP, US\$)	23 937	25 766	27 553	27 984
Carbon dioxide (CO ₂) emissions (metric tonnes per capita)	4.19	4.48	5.13	4.76
Life expectancy at birth (years)	75.78	76.53	77.16	77.69
Expected years of schooling	16.46	17.32	17.98	18.34
Gini coefficient	0.402	0.429	0.414	0.419
% of population living on less than US\$5.50 a day (PPP)	3.00	2.90	2.10	2.70

- (iv) Using the information in **Table 4**, explain **one** reason why an increase in real GNI per capita might have a positive impact on living standards **and one** reason why it might have a negative impact.

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In August 2022, Türkiye surprised many economists by cutting its rate of interest, despite an extremely high rate of inflation. The central bank had been expected to keep the interest rate at 14 %, but instead lowered it to 13 %, expressing concern about the possibility of slowing economic growth.

The Turkish currency has fallen more than 25 % in 2022 as high inflation and deep concern over the central bank's monetary policy have prompted foreign investors to take their investments out of the country. Türkiye's policy contrasts with other countries where the central banks have raised interest rates in order to reduce inflation.

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(Question 2 continued)

Türkiye reported a TRY£1.1 billion budget deficit for June 2022, an increase of 24.3 % compared to the previous year. Government spending increased by an annual 87.1 % in the same period. While transfer payments more than doubled to TRY£8 billion, wage costs for government employees rose by an annual 58.7 %.

- (v) Outline why there is “concern over the central bank’s monetary policy”. [2]

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- (vi) Using an exchange rate diagram, explain how a relatively high rate of domestic inflation is likely to affect the exchange rate for the Turkish lira. [4]

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Turn over

(Question 2 continued)

Türkiye earned more than US\$2.6 billion from exports of carpets in 2020.

Table 5: The exchange rate for the Turkish lira (TRY₺) per euro (EUR€) from January to August 2022

	TRY₺/EUR€
January 2022	13.1
April 2022	14.7
August 2022	18.1

- (vii) The price of a Turkish carpet, exported to Italy in August 2022, was TRY₺ 120 000. Using the information in **Table 5**, calculate the price of the carpet in euros. Assume no indirect tax has been added.

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When carpets are sold in Italy, the seller must add indirect tax to the price. The rate of indirect tax in Italy is 22 %.

- (viii) Calculate indirect tax collected on the sale of a more valuable carpet sold for EUR€11 316 (including indirect tax) in Italy.

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(b) Using the text/data provided and your knowledge of economics, recommend a policy which could be introduced by the government of Türkiye to reduce the rate of inflation in Türkiye.



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References:

- Table 1** Banco Central Chile, 2021. *Statistics database*. [online] Available at: https://si3.bcentral.cl/siete/EN/Siete/Cuadro/CAP_BDP/MN_BDP42/BP6M_RES01 [Accessed 2 May 2023]. Source adapted.
- Question 1** Customs Chile and Chilean Salmon Council, 2022. [online] Available at: <https://www.consejodelsalmon.cl/informe-del-consejo-del-salmon-exportaciones-crecieron-182-en-2021-y-vuelven-a-niveles-prepandemia/>. Public domain.
- Laje, D., 2019. *Are Chile's industrial salmon farms changing the seas?* Aljazeera, [online] 18 November. Available at: <https://www.aljazeera.com/economy/2019/11/18/are-chiles-industrial-salmon-farms-changing-the-seas> [Accessed July 2022]. Source adapted.
- Poblete, E.G., et al., 2019. *The impact of trade and markets on Chilean Atlantic salmon farming*. Aquaculture International, [online] (27), pp. 1465–1483. Available at: <https://link.springer.com/article/10.1007/s10499-019-00400-7> [Accessed 2 May 2023]. Source adapted. Public domain.
- Figure 1** Customs Chile and Chilean Salmon Council, 2022. [online] Available at: <https://www.consejodelsalmon.cl/informe-del-consejo-del-salmon-exportaciones-crecieron-182-en-2021-y-vuelven-a-niveles-prepandemia/>. Public domain.
- Table 2** OECD 2022, *Main Economic Indicators*, https://www.oecd-ilibrary.org/economics/data/main-economic-indicators/main-economic-indicators-complete-database_data-00052-en [Accessed in July 2022]. Public domain.
- Knoema, 2022. *Turkey - Gross domestic product per capita based on purchasing-power-parity in current prices*. [online] Available at: <https://knoema.com/atlas/Turkey/topics/Economy/National-Accounts-Gross-Domestic-Product/GDP-per-capita-based-on-PPP#:~:text=In%202021%2C%20GDP%20per%20capita,average%20annual%20rate%20of%206.52%25>. [Accessed 2 May 2023]. Source adapted.
- Moody's Analytics, 2023. *Turkey – Consumer Price Index (CPI)*. [online] Available at <https://www.economy.com/turkey/consumer-price-index-cpi> [Accessed 2 May 2023]. Source adapted.
- Question 2** The Economist, 2022. *How has Turkey's economy kept growing despite raging inflation?* [online] 21 July. Available at: <https://www.economist.com/briefing/2022/07/21/how-has-turkeys-economy-kept-growing-despite-raging-inflation> [Accessed 2 May 2023]. Source adapted.
- Yackley, A.J., 2022. *Turkey surprises with interest rate cuts as inflation soars*. [online] 19 August. Available at: <https://www.ft.com/content/8530b61a-67eb-4b83-aaf6-a88df0dd79c6> [Accessed 2 May 2023]. Source adapted.
- Türkiye Cumhuriyet Merkez Bankası, 2023. *Consumer Prices*. [online] Available at: <https://www.tcmb.gov.tr/wps/wcm/connect/EN/TCMB+EN/Main+Menu/Statistics/Inflation+Data/Consumer+Prices> [Accessed 2 May 2023]. Source adapted.
- Table 3** Trading Economics, 2023. *Turkish Lira*. [online] Available at: <https://tradingeconomics.com/turkey/currency> [Accessed 2 May 2023]. Source adapted.
- Agenzia Entrate, 2023. *VAT in Italy*. [online] Available at: <https://www.agenziaentrate.gov.it/portale/web/english/nse/business/vat-in-italy#:~:text=In%20Italy%20the%20standard%20Vat,listed%20uses%20and%20listed%20drugs>. [Accessed 2 May 2023]. Source adapted. Public domain.
- Table 4** United Nations Development Programme, 2022. *UNDP: The 2021/2022 Human Development Report*. [online] New York: 1UN. Available at: https://hdr.undp.org/system/files/documents/global-report-document/hdr2021-22reportenglish_0.pdf [Accessed 2 May 2023.] Source adapted. CC BY 3.0 IGO.
- United Nations Development Programme, 2022. *TÜRKİYE*. [online] 8 September. Available at: <https://hdr.undp.org/data-center/specific-country-data#/countries/TUR> [Accessed 2 May 2023]. Source adapted. CC BY 3.0 IGO.
- The World Bank, 2022. *World Development Indicators*, 2016–2021. [online]. Available at: <https://databank.worldbank.org/source/world-development-indicators> [Accessed 2 May 2023]. Source adapted.
- Ahval News, 2022. *Turkey's budget swings to 31.1 billion liras deficit from record surplus*. [online] 18 July. Available at: <https://ahvalnews.com/turkey-budget/turkeys-budget-swings-311-billion-liras-deficit-record-surplus> [Accessed 2 May 2023]. Source adapted.

