International economics (2019–2020)
Final exam

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13 January 2020, 12.00

Surname: _____

First name: _____

ID or passport number: _____

Group: _____

Question	Points	Obtained
1	8	
2	8	
3	8	
4	8	
5	8	
Total	40	

Instructions

The exam consists of **five questions.**

In total, it is possible to obtain up to **40 points**.

Duration of exam: **1 hour** (= 1.5 minutes per point or 12 minutes per question).

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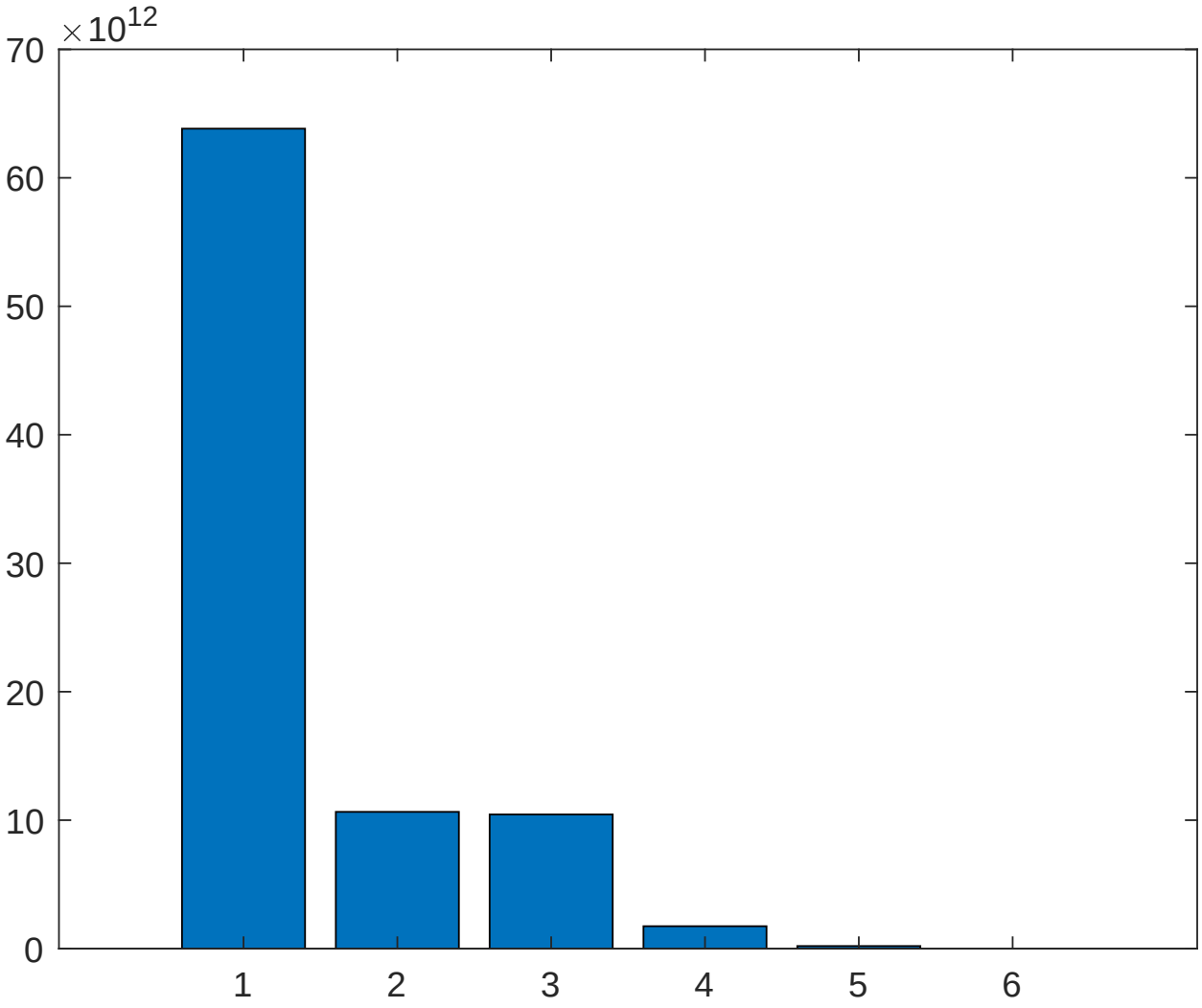

Figure 1: Economic performance of an undisclosed country in 2016. The variables take the following values (in 10^{12} US dollars): (1) 63.827, (2) 10.647, (3) 10.445, (4) 1.747 and (5) 0.202. No variable is shown in column 6. Sources: International Financial Statistics (IMF), Global Wealth Report (Credit Suisse), Wikipedia.

1. (a) Figure 1 plots the following five variables in a random order: w^{H}, z^{HF}, Δz^{HF}, Y^{H}, $Y^{\text{E,H}}$. To which of the variables 1 to 5 in figure 1 do you think does each of the stated variables correspond? Please explain your answer. [5]

(b) To which country do the data shown in figure 1 belong: China, Germany, Spain or the United States? Why? (If you are unsure but think you can rule out some of the countries, state which ones you would dismiss.) [1]

(c) Are the data shown in figure 1 measured in millions, billions, trillions or quadrillions of US dollars? [1]

(d) Let variable 6 in figure 1 represent K^{H}. Please add a bar representing the approximate value of this variable to the bar plot. [1]

Total of question 1: [8]

2. (a) Suppose there are two countries, a home country (H) and a foreign country (F), and two goods, A and B. Let a_{LA} be the unit labour requirement of the home country in the production of apples, a_{LB} the unit labour requirement of the home country in the production of bananas, a^*_{LA} be the unit labour requirement of the foreign country in the production of apples and a^*_{LB} the unit labour requirement of the foreign country in the production of bananas.

   i) Is it possible for country H to have an absolute advantage in the production of both goods, A and B? Explain briefly. [1]

   ii) Is it possible for country H to have a relative advantage in the production of both goods, A and B? Explain briefly. [1]

   iii) Is it possible for country H to have a relative advantage, but not an absolute advantage, in the production of good A? Explain briefly. [1]

   iv) Is it possible for country H to have an absolute advantage, but not a relative advantage, in the production of good A? Explain briefly. [1]

   (b) The following questions refer to the macroeconomic part of the course:

   i) How are the current account and the international investment position related to each other? [1]

   ii) Is it possible for the current account of a country to be larger than its international investment position? Explain briefly. [1]

   iii) Can wealth be negative? Explain briefly. [1]

iv) Consider the following model that is used in the intertemporal approach to the current account: [1]

$$\max_{C_1, C_2, z_1^{\text{HF}}} u(C_1) + \beta u(C_2), \tag{1}$$

subject to:

$$C_1 + z_1^{\text{HF}} = Y_1 + (1+R) z_0^{\text{HF}}, \tag{2}$$
$$C_2 + z_2^{\text{HF}} = Y_2 + (1+R) z_1^{\text{HF}}. \tag{3}$$

Write down the Lagrangian function $\mathcal{L}$ and the three first-order conditions. Note that you do not need to solve the model beyond the statement of the first-order conditions.

Total of question 2: [8]

3. (a) In the model of economies of scale, the average cost of producing a good by a firm is determined by the following equation: [3]

$$AC = c + \frac{F}{S} \times n. \tag{4}$$

Explain how c, F, S and n affect AC and why.

(b) In the model of economies of scale, the price of a good is determined by the following equation: [3]

$$P = c + \frac{1}{bn}. \tag{5}$$

Explain how c, b and n affect P and why.

(c) How are the equilibrium values of AC, P and n obtained? [2]

Total of question 3: [8]

4. (a) What kind of effect does a temporary, positive income shock in a given period have on the current account in that period according to the intertemporal approach to the current account? [2]

   (b) What kind of effect does a permanent, positive income shock in a given period have on the current account in that period according to the intertemporal approach to the current account? [2]

   (c) Apart from income, can you think of any other variable that might affect the current account balance? State the variable you are thinking of and the reason for its effect on the current account. [2]

   (d) Considering the historical episodes of boom-and-bust cycles discussed in class, do you think: [2]

   1. that aggregate spending is mostly flat during such cycles (as the intertemporal approach to the current account suggests with respect to consumption expenditure),
   2. that aggregate production and income drive aggregate spending, or
   3. that aggregate production and income are driven by aggregate spending.

   Briefly, what is the reason for your answer? Can you think of empirical evidence that supports the answer you have chosen?

Total of question 4: [8]

5. Why do central banks in high-inflation countries often face the choice to either sell official reserves or to devalue the domestic currency (or both)? In providing your answer, try to be as ”technical” as you can. [8]

Total of question 5: [8]