International macroeconomics (2018–2019)
Final exam

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10 January 2019, 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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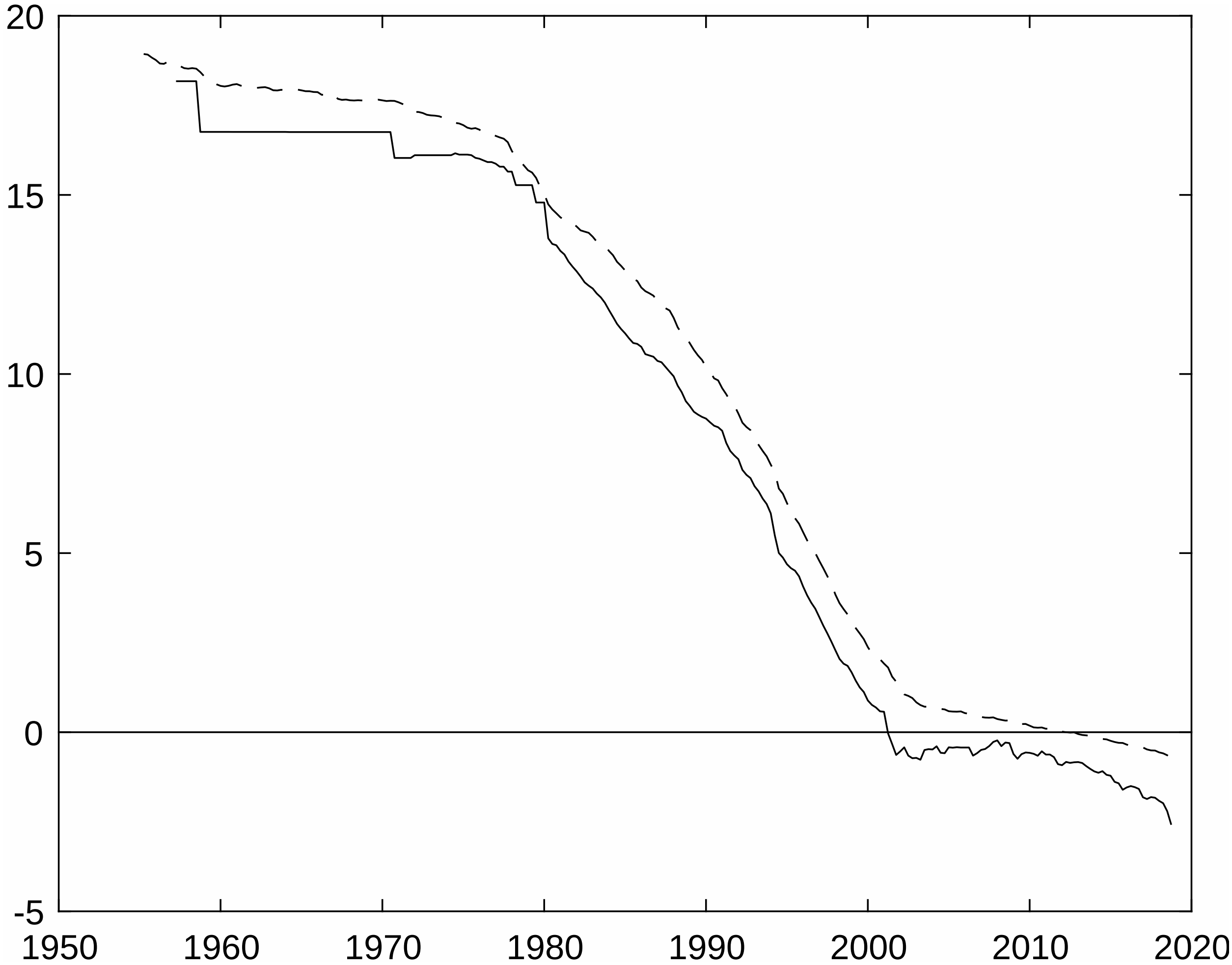

Figure 1: Economic variables of Turkey. Source: International Financial Statistics (IMF).

1. Consider the following three variables:

   - The nominal exchange rate of Turkey vis-à-vis the United States, measured in US dollar per Turkish lira:

     $$s_t.$$

   - The real exchange rate of Turkey vis-à-vis the United States (that is, the ratio of the Turkish and US consumer price levels, where both price levels are measured in the same currency):

     $$q_t.$$

   - Minus the ratio of the Turkish and US consumer price indices:

     $$-(p_t^{\text{H}} - p_t^{\text{F}}).$$

   Note that the nominal and real exchange rates as well as the price level ratio are measured in logarithms to the base 2. Remember that $\log_2(0.25) = -2$, $\log_2(0.5) = -1$, $\log_2(1) = 0$, $\log_2(2) = 1$, $\log_2(4) = 2$, $\log_2(8) = 3$ etc.

Now answer the following two questions:

(a) Consider figure 1, which plots two of the three mentioned variables for the last six decades. Which variables do the solid and dashed lines, respectively, represent most probably? Explain your answer briefly. [4]

(b) Do you think that the data shown in figure 1 support the hypothesis of purchasing power parity (PPP) in its absolute or relative versions? Please explain your answer briefly. [4]

Total of question 1: [8]

2. (a) Explain the standard argument that is put forward to justify the theory of purchasing power parity (PPP)? In your answer, you may use the equation of the real exchange rate to indicate how convergence towards PPP comes about. [3]

   (b) Even if the argument you have just described is correct, why may we still observe small deviations from PPP that do not disappear over time? (Note that this question refers to a limitation of the PPP theory, but not to the "PPP fallacy" we have discussed in class.) [1]

   (c) Economists have for a long time been puzzled by the fact that deviations of the real exchange rate from PPP are often quite large and persistent (the so-called "PPP puzzle", see Rogoff, 1996). Making reference to the "PPP fallacy" we discussed in class, explain very briefly what it is that the traditional PPP theory overlooks.[1] Again, please consider using formulas to make your answer as clear as possible. [4]

Total of question 2: [8]

[1]Note that the "PPP fallacy" is explained in detail in Eleftheriou and Müller-Plantenberg (2018a,b), but that the explanations given in class are fully sufficient to answer the question.

3. (a) The intertemporal approach to the current account in its basic version considers consumption spending but ignores other components of national expenditure. Intuitively, why does this theory come to the conclusion that, say, positive, temporary income shocks lead to current account surpluses? [3]

   (b) State three historical episodes of countries that experienced strong economic expansions and, at the same time, ran very large current account deficits. For each episode, indicate simply the country (or countries) affected and the year when the boom ended. [3]

   (c) In the examples you have given in the previous question, why were the economic booms associated with current account *deficits* and not with current account *surpluses* as the intertemporal approach in its basic version would predict (see part a of this question). [2]

Total of question 3: [8]

4. (a) Why does a current account deficit sooner or later lead to a nominal depreciation according to the currency flow model? Your answer may be brief, but please indicate the relevant equations. [3]

(b) Why does a strong nominal depreciation sooner or later lead to an improvement of the current account? Your answer may be brief, but please indicate the relevant equations. For simplicity, assume that the ratio of domestic and foreign prices is constant. [3]

(c) Some countries running current account deficits experience initially a nominal and real appreciation, rather than a depreciation. Assuming again that the ratio of domestic and foreign prices is constant, what might be the reason? [2]

Total of question 4: [8]

5. (a) Explain the concept of (financial) leverage using the example of a home buyer or that of a commercial bank. [4]

   (b) Why do you think did leverage aggravate the global financial crisis of 2008? [4]

Total of question 5: [8]

References

Eleftheriou, Maria and Nikolas A. Müller-Plantenberg. Price level convergence and purchasing power divergence. *International Finance*, vol. 21, no. 1, 2018a, 71–91.

Eleftheriou, Maria and Nikolas A. Müller-Plantenberg. The purchasing power parity fallacy: Time to reconsider the PPP hypothesis. *Open Economies Review*, vol. 29, no. 3, 2018b, 481–515.

Rogoff, Kenneth S. The purchasing power parity puzzle. *Journal of Economic Literature*, vol. 34, no. 2, Jun. 1996, 647–668.