

Universität Siegen

Fakultät III
Univ.-Prof. Dr. Jan Franke-Viebach

Exam "International Economics"
Winter Semester 2019-20
(1st Exam Period)

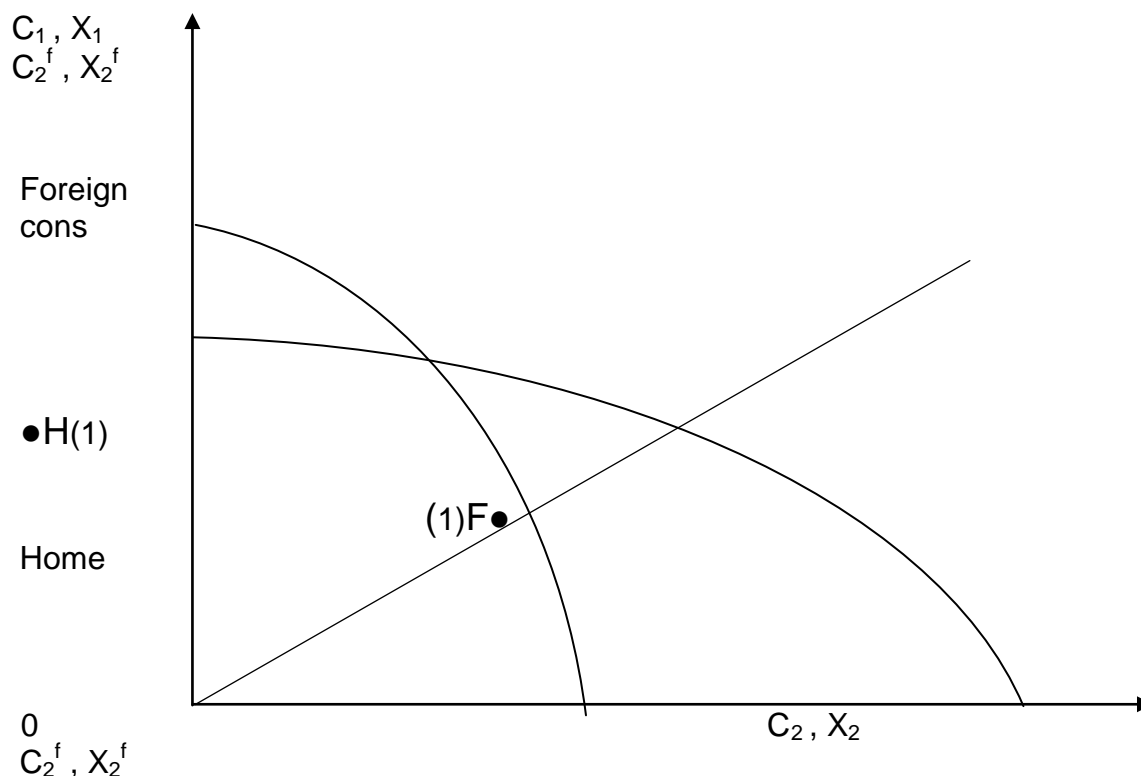
Solution

Available time: 60 minutes

For your attention:

1. The exam is made up of 9 pages (including this cover page). Please check and see if the exam you are holding is **complete**.
2. For your answers, use the designated spaces. Should these not suffice, use the backside of the pages. Please do not write and draw with a **pencil**.
3. Additional materials you may use for the exam: a non-programmable calculator. (Smart phones and mobile **phones** are **not** allowed!)
4. **ATTENTION:** The names for variables have the same meaning as in the lecture. Insofar as you also use the same symbols for the variables as we did in the lecture you will not have to define these any further.

Question	1	2	3	4	5	Sum	Mark
Points achievable	15	10	13	10.5	11.5	60	
Points achieved							



b) Now, both countries open their borders for trade with each other.

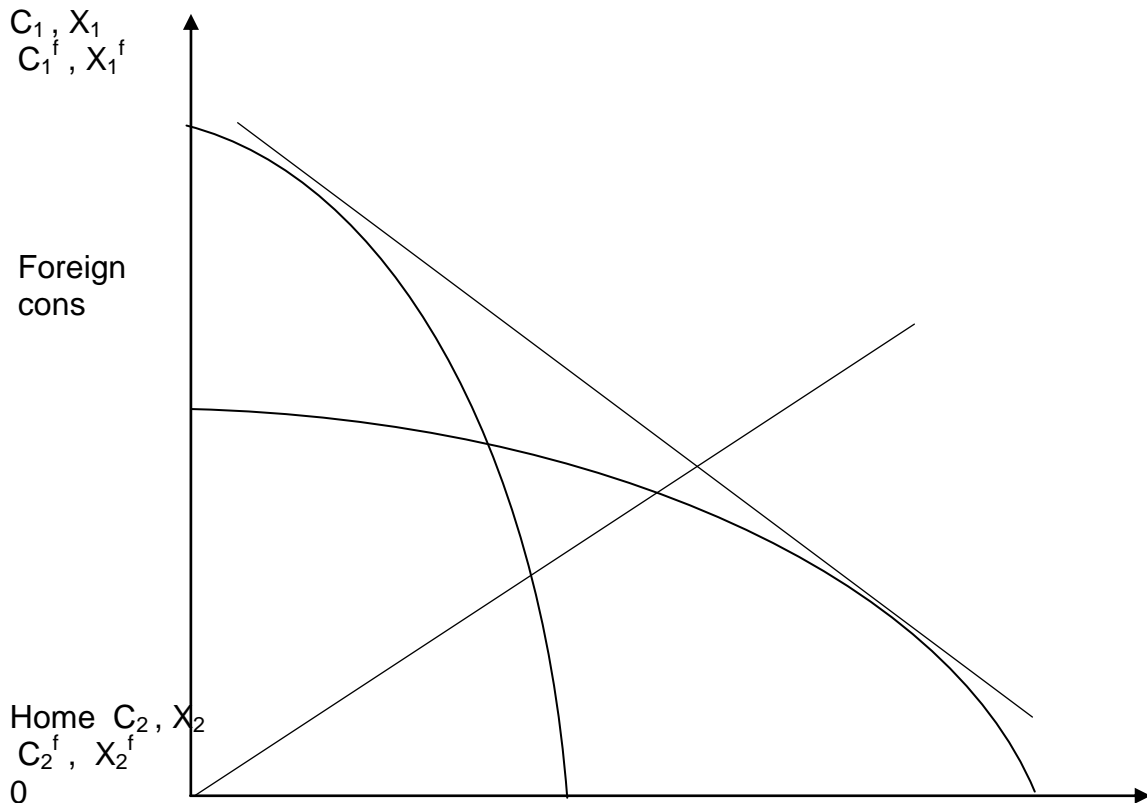
b₁ How will foreign consumers react? [2 points]

Solution: they will buy good 2 in Home (or: they will import good 2)(2)

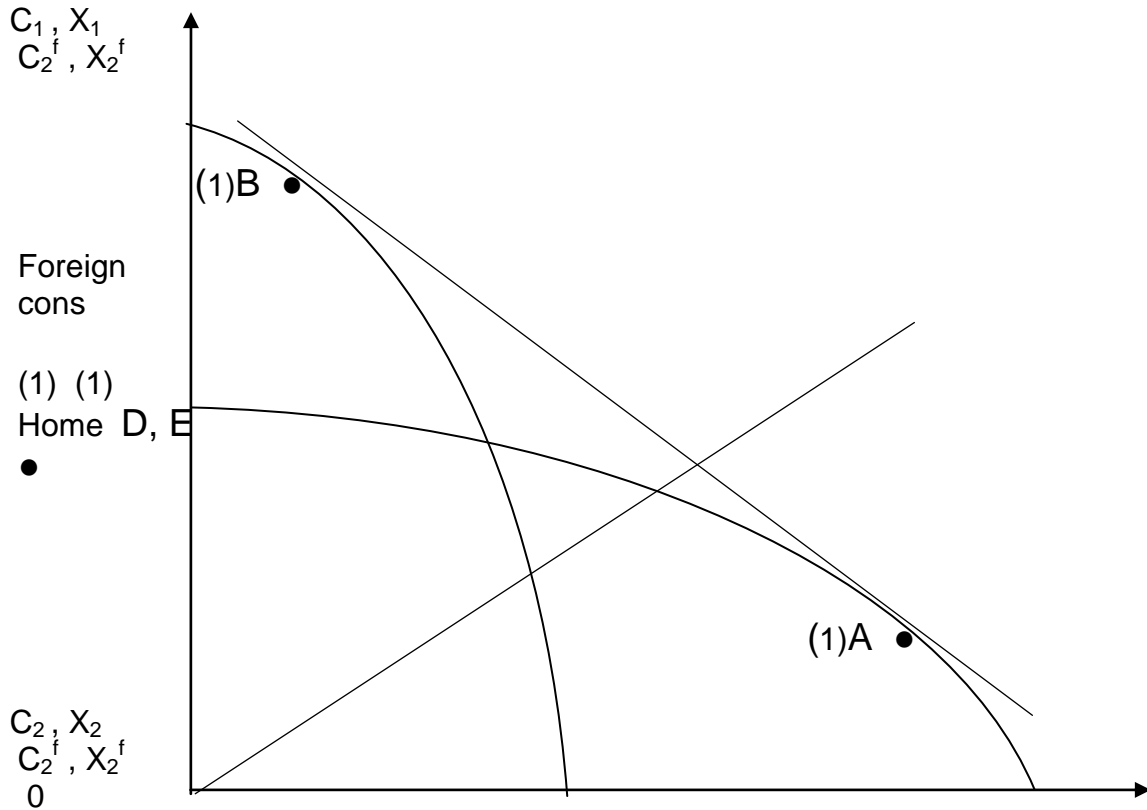
b₂ How does that reaction affect the price ratio (p_2/p_1) in Foreign? [2 points]

Solution: (p_2/p_1) will fall (2)

b₃In the following graph, the common price ratio is indicated by the slope of the common price line $\tan \beta = (p_2/p_1)^W$. Please indicate the new production points of Home and Foreign as A and B, respectively; indicate the new consumption points of Home and Foreign as D and E, respectively. [4 points]

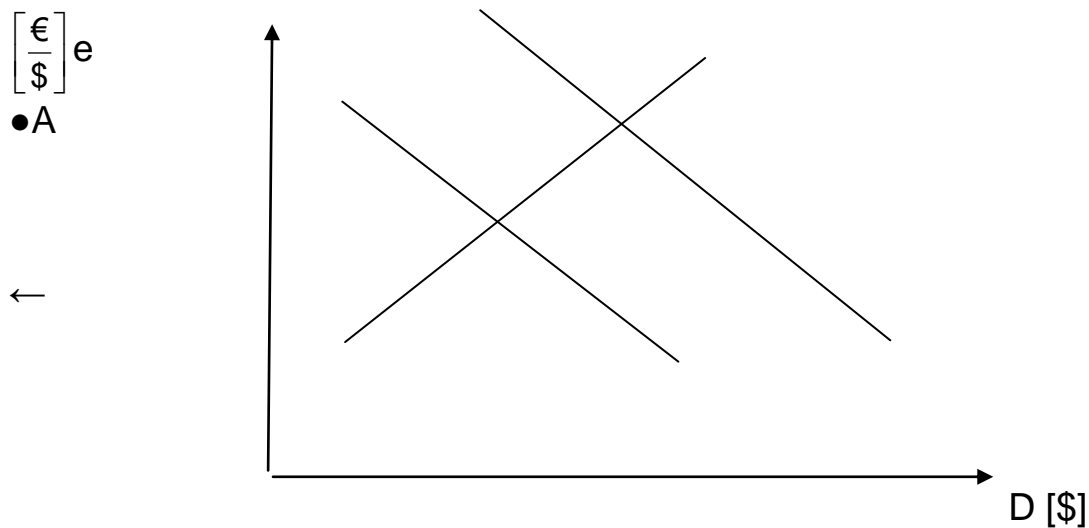


Solution:



Problem 2: Market of Foreign Exchange (FX)

We look at the market of the US dollar against the euro. In the beginning, there is an equilibrium in that market: see point A in the following graph.



Then, there is a leftward shift of the demand function. Please briefly indicate two potential reasons for that shift. Hint: name the sources of the demand for foreign currency and say if they have increased or decreased in the present situation. [6 points]

Solution:

Decrease of capitatexport, Decrease of goods import
 (1) (1) (1) (1) (1) (1)

b) In the following table, please indicate whether the exchange rate (e) and the official reserves (OR) increase (+), fall (-) or remain unchanged (const.). Please distinguish between a flexible-rate system and a fixed-rate system. [4 points]

	e	OR
flexible rate		
fixed rate		

Solution:

e	OR		
flexible rate	-	(1)	const. (1)
festerKurs	const.	(1)	+ (1)

Problem 3: Exchange Rates and Interest Rates

We look at the following relation:

$$e^e = e \cdot \frac{1 + i}{1 + i^f}$$

where e denotes the spot exchange rate of the dollar in terms of the euro, i. e. the direct rate of the dollar [€/\$]; e^e denotes the expected one-year spot rate while i and i^f are the domestic and the foreign one-year interest rates, respectively.

a) How is this relation called? [1.5 points]

Solution: uncovered interest rate parity
 (0.5) (0.5) (0.5)

b) The following equation is an approximation of the above relation:

$$i = i^f + \left(\frac{e^e - e}{e} \right)_{approx}$$

Please interpret this equation. [3 points]

Solution:

domestic interest rate equals the total return on an investment abroad
 (0.5) (1) (0.5) (0.5) (0.5)

(or: ... equals the sum of foreign interest rate and expected change of spot rate)

c) We want to look at the assumptions underlying the above equation.

c₁ Which assumption is made concerning domestic and foreign assets? [1.5 points]

Solution: (1)
 They are perfect substitutes
 (0.5) (1)

c₂ By which assumption may the assumption in c₁ be replaced? [2 points]

Solution: investors are risk neutral
 (1) (1)

d) We want to look at the empirical testing of the above equation.

d₁ Briefly indicate the difficulty of an empirical test of the relation. [2 points]

Solution: expected spot rate not observable
 (1) (1)

d₂ How can we try to overcome that difficulty? [3 points]

Solution: take the spot rate as a proxy for the expected spot rate
 (1) (1) (1)

Problem 4: Income and Trade Balance in the Short Run

We look at a small open economy:

$$Y = \frac{1}{1 - c + m} [\bar{C} + \bar{I} + \bar{EX} + \bar{G}]$$

$$TB = \bar{EX} - \bar{IM} - mY$$

We want to analyse an exogenous change in government expenditure ($d\bar{G}$).

a) Please calculate the multiplier of income with respect to government expenditure.

[2.5 points]

Solution: $\frac{dY}{dG} = \frac{1}{1 - c + m}$

(1) (1.5)

b) Is the multiplier positive or negative? Please briefly explain. [4 points]

Solution: positive, as $1 - c + m > 0$

(2) (2)

c) Please compare it with the corresponding multiplier of a closed economy and briefly explain the difference. [4 points]

Solution:

smaller than in closed model as $m > 0$ (or: because of „leakage“ through imports)

(2) (2)

Problem 5: Exchange-Rate Policy of the Euro System

a) What is the primary goal of the exchange-rate policy of the euro system? [1 point]

Solution: price stability (1)

b) Which institution decides on the exchange rate system of the euro against another currency, e. g. the US dollar? [1 point]

Solution: council of ministers (1)

c) Does the euro currently have a fixed or a flexible exchange rate against the US dollar? [1 point]

Solution: flexible (1)

d) Exchange Rate Mechanism II (ERM II)

d₁ Please briefly describe the purpose of the ERM II. [3 points]

Solution:

limit fluctuations of exchange rates between euro countries and other EU members
(0.5) (0.5) (0.5) (0.5) (0.5) (0.5)

(or: foster an orderly economic development in the single market

or: prepare other EU members for their accession to the euro)

d₂ Please briefly describe the two elements of the ERM II. [5.5 points]

Solution:

- fixed exchange rate to the euro
(2) (0.5)

- interventions of the ECB and of the national central bank
(2) (0.5) (0.5)