

International Real Estate Markets Final Exam

February 2, 2023

Exam instruction:

1. This exam consists of 6 questions in total
2. Provide your answer clearly in English
3. For calculation questions, you need to show the calculation steps, and you do not earn points if the calculation steps are missing, even if the result is correct
4. You do not earn points if there is inconsistency in your answers even if the result is correct
5. The exam will last for 2 hours
6. Using toilet during the exam is NOT allowed
7. Students can lodge an appeal against the results of an examination with the Central Portal for the Legal Protection of Student Rights (CLRS) within 6 weeks of the date on which the result was announced.

If you are unsure about the meaning of any of the exam instructions mentioned above and/or exam questions, please ask the exam supervisor, and do NOT rely on your own interpretations! The interpretation of the exam instructions and exam questions by the examiner will prevail in the grading process and you cannot use your own interpretation to challenge the grading of the exam.

Good luck!

Calculation Question (25 points)

An international investor is interested in investing in farm land and industrial real estate in country A and country B given that both countries are expected to reach a trade agreement next month. He learns that both countries currently produce food and clothing with only labor used as the input for the production. In country A, it takes 2 labor hours to produce one meter of cloth and 4 labor hours to produce one kilo of food, while in country B, it takes 6 labor hours to produce one meter of cloth and 3 labor hours to produce one kilo of food. The labor supply in country A and country B are 2,000 labor hours and 1,200 labor hours respectively.

- A) Use equations to indicate the production possibility frontier in country A and country B respectively, and show that country A will export cloths and country B will export food. (10 points)

For country A, production possibility frontier (PPF) is given by $2Q_C + 4Q_F = 2,000$

→ $Q_F = 500 - \frac{1}{2} Q_C$ (producing one meter of clothing will cost half kilo food production, so the opportunity cost (OC) is $\frac{1}{2}$).

Similarly, for country B, PPF is given by $6Q_C + 3Q_F = 1,200$

→ $Q_F = 400 - 2Q_C$ so that OC is 2.

Since country A has a comparative advantage in cloth production and country B has a comparative advantage in food production, country A will specialize in cloth production and export cloth while country B will specialize in food production and export food.

B) Indicate the gains from trade for country A and country B respectively? (10 points)

For country A, before trade, 2 labor hours produce $\frac{1}{2}$ kilo of food. After trade, 2 labor hours produce 1 meter of cloth that can be exchanged for 2 kilos of food.

For country B, before trade, 3 labor hours produce $\frac{1}{2}$ meter of cloth. After trade, 3 labor hours can produce 1 kilo of food that can be exchanged for 2 meters of cloth.

Both countries gain from trade since trade increases the indirect production of food for country A and of cloth for country B.

C) Given the analysis above, what is the investment strategy for the investor regarding whether to invest in farm land or industrial real estate in country A and country B? (5 points)

Given the expected trade pattern, the investor should invest in production plant in country A and in farm land in country B.

Essay and Knowledge Questions (75 points)

Question 1 (10 points)

You are hired as a consultant for a U.S. real estate fund concerning investment opportunities in both the U.S. and Vietnam. Through your research, you discover that the U.S. is capital-abundant and Vietnam is labor-abundant, and real estate asset returns of both countries are negatively correlated.

Despite the potential benefit of diversification by investing in Vietnam, if your client tells you that they still prefer to invest in the U.S., what might be the possible reasons? (Give at least three reasons) (10 points)

1. Hedge against inflation at home
2. High institutional barriers that preclude foreign investors
3. High transaction costs
4. Institutional risk of investing in a foreign country

Question 2 (10 points)

A real estate investor is concerned about retail real estate market cycle in country A. She observes the following graph that describes the various phases in a retail property market cycle. She is also curious about the cause of the cycle, i.e. endogenous cycle or exogenous cycle.

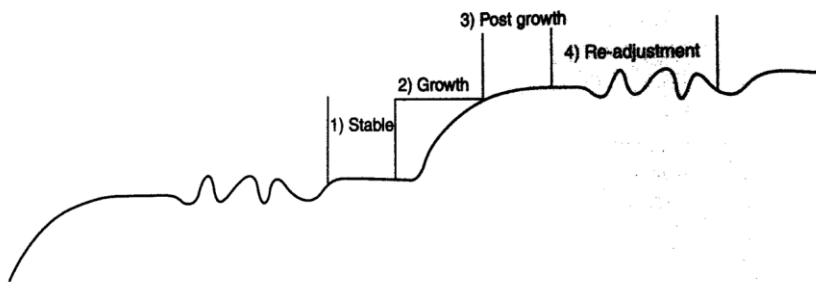


Figure 4.4 Retail property market rental cycle in Europe
Source: RREEF(2006b) European property cycle monitor, December.

How should she distinguish between an endogeneous cycle and an exogeneous cycle?

Macroeconomic stability → endogeneous cycle

Macroeconomic instability → exogeneous cycle

Question 3 (15 points)

In the guest lecture by Prof. Nozeman, he discussed institutions and market dynamics of international real estate market. Relating to his lecture, please mention pro and con arguments for the theorem “Any society has options on the Institutional Possibility Frontier” (Djankov et al. 2003)?

Pro: In theory any parliament or autocrat regime could change any moment its ideas about the optimal institutional solution and has the power to implement and enforce those ideas (7 points)

Con: In practice there are hurdles to change the actual institutional situation: Court decisions, strong opposition. path dependency prevents choosing a radical different option (8 points)

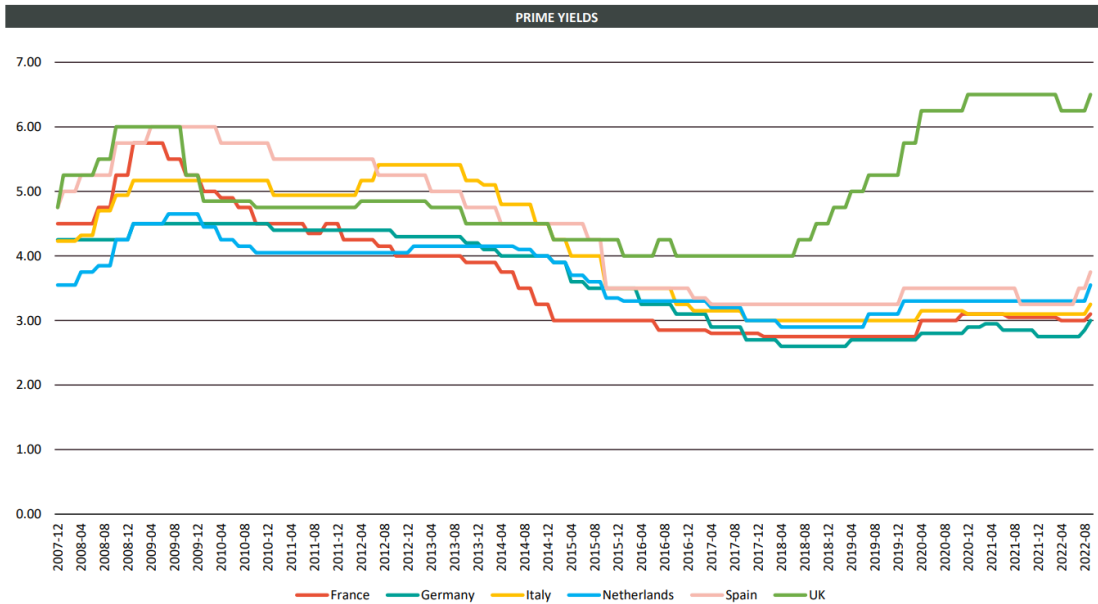
Answer can be found by combining the knowledge from sheets nr 6 and nr 11 and the elucidation given in class on 15 December 2022

Question 4 (20 points)

In the guest lecture of Dr. Herman Kok, he presented the graph below that shows the yield trend of prime retail real estate for Spain, France, Germany, Italy, Netherlands and UK respectively from 2007 to 2022. According to Dr. Herman Kok, why does UK stand out in the yield trend after 2018 in comparison with other countries? Please list four reasons.

Yield Trend – Prime retail

Prime yields for offices and residential more resilient. Retail mixed bag with prime highstreet and prime shopping centre yields under pressure, but supermarket (convenience) yields compressing further



Source: CBRE ERIX

1. Brexit
2. Online penetration in retail sales is higher in UK than EU
3. Low profitability of retailers due to competition
4. Changing social economic demographics leading to income polarization with shrinking middle class which depresses retail demand

Question 5 (20 points)

FDI underlies capital flow across borders that contributes to the development of international real estate markets.

a) What are the differences between horizontal FDI and vertical FDI? (10 points)

- Production replication → horizontal FDI
- Production chain is broken up and part of the production processes is transferred to the affiliate abroad → vertical FDI

b) What is/are the drivers for horizontal FDI and vertical FDI? (10 points)

- › Horizontal FDI is able to locate production close to a firm's large customer bases to circumvent the high trade cost (dominated by flows between developed countries)
- › Vertical FDI is driven by cost differences between countries (dominated by flows from developed to developing countries)