

考試科目	經濟學	系所	國貿系	考試時間	6月21日上午
		組別			第 一 節

一. 假設有一代表性個人的模型如下：消費者的偏好為

(25%)
$$U(C, l) = \ln C + \alpha \ln l \quad \alpha > 0$$

其中 C 是消費， l 是休閒，消費者擁有一單位的時間和 k_0 單位的資本，代表性廠商的生產技術則為

$$y = z k^\nu n^{1-\nu} \quad 1 > \nu > 0$$

其中 z 是總要素生產力， k 是資本投入， n 是勞動投入，假設 w 是工資率， r 是資本報酬率。

- (1) 請計算競爭均衡下的價格和產出。
- (2) 請證明競爭均衡和柏拉圖最適是一樣的。
- (3) 請計算和討論 z 增加對均衡價格和產量的影響。

二. 假設有一兩國總體模型如下 (外國用上標 $+$ 代表)：

(25%)
$$P_t = S_t + P_t^+$$

$$M_t = P_t + \alpha Y_t - \beta Y_t^+ \quad \alpha, \beta > 0$$

$$M_t^+ = P_t^+ + \alpha Y_t^+ - \beta Y_t^+$$

$$Y_t = Y_t^+ + E_t S_{t+1} - S_t$$

其中 Y_t 是本國實質產出， P_t 是物價水平， Y_t^+ 是利率， M_t 是貨幣供給， S_t 是匯率， $E_t S_{t+1} - S_t$ 是預期匯率變動率。在浮動匯率和完全預期下，試求，在 $E_t S_{t+1} = S_{t+1}$ 下，

- (1) 匯率的時間路徑為何 (基本解和泡濤解)？
- (2) 恆久性的貨幣供給增加是否有產生匯率過度反應的現象？
- (3) 暫時性的貨幣供給增加兩期對匯率時間路徑的影響？
- (4) 暫時性的外國利率上升一期，對匯率時間路徑的影響？

考試科目	經濟學	系所組別	國貿學系	考試時間	6月27日(上) 星期 二 下午第一節
------	-----	------	------	------	---------------------

國立政治大學圖書館

三. Utility Maximization and Profit Maximization (25 points)

Let $U(c_x, c_y)$ be twice continuously differentiable with $U_{c_x} > 0$, and $U_{c_y} > 0$ for all $c_x \geq 0$ and $c_y \geq 0$. Let $f(\ell, k)$ be twice continuously differentiable with $f_\ell \geq 0$ and $f_k \geq 0$ for all $\ell \leq 0$ and $k \leq 0$. Consider the following two optimization problems.

Utility Maximization

$$\begin{aligned} \max_{\{c_x, c_y\}} & U(c_x, c_y) \\ \text{s.t.} & p_x \cdot c_x + p_y \cdot c_y \leq I \end{aligned}$$

Profit Maximization

$$\max_{\{\ell, k\}} p \cdot f(\ell, k) - w \cdot \ell - r \cdot k$$

- (1) (5 points) Give additional condition(s) to assure an interior solution in the utility-maximization problem.
- (2) (5 points) In the utility-maximization problem is the budget constraint always binding (that is, the constraint holds at equality)? Why?
- (3) (5 points) The concavity of $U(c_x, c_y)$ can be used to assure the sufficient condition for the utility maximization. However, it is too strong. Provide a weaker condition to assure that the first order condition is sufficient for maximization.
- (4) (5 points) Can the condition in your answer for (c) be applied to the profit maximization problem? Why?
- (5) (5 points) Provide additional condition(s) to assure that the derived demands from profit maximization is downward sloping in their own prices (that is $\frac{\partial \ell^*}{\partial w} < 0$ and $\frac{\partial k^*}{\partial r} < 0$, where (ℓ^*, k^*) is the solution of the profit maximization problem).

IV. General Equilibrium

Consider a production economy with L agents, each agent is endowed with one unit of labor time and K/L units of capital. There are two goods X and Y in this economy. Each agent obtains utility only from the consumption of X and Y . The preferences over the consumption of both goods is described by the utility function: $U(C_x, C_y) = C_x^\alpha C_y^{1-\alpha}$. The production functions of goods X and Y are $X = L_x^\beta K_x^{1-\beta}$ and $Y = L_y^\gamma K_y^{1-\gamma}$ respectively. Since these two production function are constant returns to scale, the number of firms of each good does not really matter and we can treat the production side as if there were only one firm in each industry. Assume both firms are price-takers.

- (1) (10 points) Define the following terms for this economy: allocation, technically feasible, feasible, and Pareto efficient.
- (2) (5 points) Define competitive equilibrium (Walrasian equilibrium), and write down all equilibrium conditions.
- (3) (10 points) Show Walras' law holds in this economy.

考試科目	英文	系所組別	國貿	考試時間	月 日 上 午 第 節 星期 下
------	----	------	----	------	---------------------

1. 請對以下的敘述, 整理出摘要, 並提出你的看法. (Hint: You may explain the growth experiences of Taiwan using Stiglitz's viewpoints.) (30%)

“In a 1996 article in The World Bank Research Observer, Joseph Stiglitz lists his favorite metaphors for economic development. One is the engine metaphor, in which capital accumulation (or a particular sector) is seen as the driving force of growth. Another is the chemical metaphor, in which the government catalyzes growth without necessarily providing significant resources. A third is the biological metaphor, which sees adaptation to changes in the environment as the key to survival. A fourth metaphor views the economy as an equilibrium. Stiglitz mentions it but omits it from his list.”

2. 請針對以下幾段文字, 提出你的看法. (20%)

“However defined, achieving sustainable development necessarily entails creating and maintaining wealth. Given the centrality of savings and investment in economic theory, it is surprising that the effects of depleting natural resources and degrading the environment have not, until recently been considered in measurements of national savings.

In this article, we suggest the concept of genuine savings to enlarge the traditional net savings concept. Genuine savings is defined as the traditional net savings less the value of resource depletion and environmental degradation plus the value of investment in human capital. Calculation of genuine savings account for resource depletion, carbon dioxide emissions, and the coverage of pollutants. The use of genuine savings measures suggests a series of policy questions that are key to sustaining development. There are also explored, specifically the extent to which monetary and fiscal policies, exports of exhaustible resources, stronger resource policies, and pollution abatement measures boost genuine savings rate.”

考試科目	英文	系所	國貿	考試時間	星期	月	日	上午	下午	節
------	----	----	----	------	----	---	---	----	----	---

國立政治大學圖書館

3. 請針對以下敘述，整理出摘要，並提出你的看法。(20%)

Readers of the financial press are familiar with the gyrations of the currency market. No matter which way currencies zig or zag, it seems there is always an analyst with a quotable, ready explanation. Either interest rates are rising faster than expected in some country, or the trade balance is up or down, or central banks are tightening or loosening their monetary policies. Whatever the explanations, the underlying belief is that exchange rate are affected by fundamental economic forces, such as money supplies, interest rates, real output levels, or the trade balance, which, if well forecasted, give the forecaster an advantage in predicting the exchange rate.

What is not so well known outside academia is that exchange rates do not seem to be affected by economic fundamentals in the short run. Being able to predict money supplies, central bank policies, or other supposed influences does not help forecast the exchange rate. Economists have found instead that the best forecast of the exchange rate, at least in the short run, is whatever it happens to be today. On the other hand, to the extent that these forecasts reflect market sentiment or a self-fulfilling prophecy, economic models or fundamentals may be useful.

備

考

試題隨卷繳交 - 10 -

命題委員：

(簽章)

年

月

日

命題紙使用說明：
 1. 試題將用原件印製，敬請使用黑色墨水正楷書寫或打字（紅色不能製版請勿使用）。
 2. 書寫時請勿超出格外，以免印製不清。
 3. 試題由郵寄遞者請以掛號寄出，以免遺失而示慎重。

考試科目	英文	系所 組別	國政	考試時間	星期	月	日	上午	下午	節
------	----	----------	----	------	----	---	---	----	----	---

國立政治大學圖書館

4. 對以下的文字敘述，整理出摘要並提出你的看法。(30%)

There is a growing awareness--- in countries at all levels of development that many public goals can best be achieved in a decentralized fashion, through the operation of market forces. The revision by a large number of developing countries of their laws and regulations in the area of foreign direct investment is part and parcel of this broader process. There has been a marked decline in the incidence of nationalization and an increase in the arbitration of disputes between transnational corporations and host country Governments. To be sure, the straitened economic circumstances that many countries are facing has left them with no other option. But, generally, foreign investment and transnational corporations have come to be seen in a more favorite—and more technical and less political—light.

In an era of large international capital flows and rapid technological change, developing countries will increasingly look to transnational corporations for economic stimulation. For their part, transnational corporations will frequently be in a position to provide significant long-term benefits to many developing countries. An important component in the next generation of development policies is that this mutuality of interest continues to grow.

備	考	試題隨卷繳交 -102-
---	---	--------------