

財政理論試題

一、地方分權有無降低公共支出成長之可能
理論之實證分析之。(25分)

二、請列表對照 Lindahl, Samuelson, Bowen.

Kingson & Stiglitz. Buchanan 財政支出與理論之真偽。
並指出其不足之處。(15分)

考試科目	財政理論	系所組別	財政系	考試時間	6月27日 上午第 節 星期 下
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租稅部分共兩大題，五小題，每小題各佔 10%

三、試以圖形及經濟直觀說明下列有關風險與所得稅問題：

- (一) 如何衡量風險承擔成本(The cost of risk-taking)? Domar and Musgrave (1944) 如何定義風險(risk)?
- (二) 試簡述 Domar and Musgrave 的模型並說明在何種情況下課徵所得稅會提高社會對風險的承擔意願?
- (三) 當個人風險資產多樣化且其報酬呈負相關或相互獨立時，所得稅課徵如何影響社會對風險的承擔意願?

四、試以圖形及經濟直觀說明下列有關國家安全捐問題：

對於海峽兩岸經貿投資問題，有學者主張對大陸投資台商課徵所謂的「國家安全捐」，

- (四) 試從財政的資源配置效率與社會公平的角度說明課徵國家安全捐的利弊得失。
- (五) 就財政政策目標而言，你是否贊成課徵此一國家安全捐？請說明理由。

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Part I. Short-Answer Questions (20 points): State whether they are *True, False, or Uncertain*. Explain why using any appropriate diagrams, equations, stylized facts, or empirical results. Be sure to state all pertinent assumptions you are making. Each question is worth five points.

1. The Barro-Ricardo equivalence proposition depends on the absence of liquidity constraints and the presence of an *operational bequest motive*.
2. In Mankiw's model of menu costs, a small increase in aggregate demand will reduce welfare but a large increase in aggregate demand will increase welfare.
3. A country with a declining population growth will tend to achieve a higher level of output per capita. Therefore, governments should design policies to decrease population growth.
4. The assumption of rational expectations normally implies that markets always clear immediately. Under the new Keynesian models, firms in imperfectly competitive markets are reluctant to change prices. Thus, we know that the new Keynesian models assume that people do not have rational expectations.

Part II. Problems (10 points): Show all your work and the formula you used to arrive at your answer. Each question is worth five points.

1. Suppose you define your permanent income as the average of income over the past five years (which includes the current year), and you always consume 90% of your permanent income. What is your current consumption if your income was \$100,000 five years ago, and each year you got a \$5,000 raise?
2. (An Endogenous Growth Model) Consider an economy whose production function is $Q = K^\theta (AL)^{1-\theta}$, with $A = 4(K/L)$. Assume that it has a savings rate of 0.2, a population growth rate of 0.1, an average depreciation rate of 0.1, and that $\theta = 0.5$. What is the growth rate of output?

Part III. Essay Questions (20 points): Each question is worth ten points.

1. (The Neoclassical Growth Model) Graphically show the following results:
 - a. An increase in the population growth rate reduces the steady-state level of capital per head and output per head.
 - b. An increase in the population growth rate increases the steady-state rate of growth of aggregate output.

2. Consider the following, ad hoc, classical model with real money balances and the real stock of government debt in the consumption function. Government expenditures, G , taxes, T , the money supply, M , and inflation expectations, π , are assumed exogenous.

$$Y^s = Y$$

$$I = I(r), \quad I' < 0$$

$$C = C\left(Y - T, \frac{M + B}{P}\right), \quad C_1 > 0, C_2 > 0$$

$$\frac{M}{P} = L(Y, i), \quad L_Y > 0, L_i < 0$$

$$Y = C + I + G$$

Now, consider an increase in the money supply brought about by open market operations. Compute the effect on nominal interest rates.

Part IV.: Answer the following questions.

1. Compare and contrast the assumptions on the existence of a unique up to a monotonically increasing transformation utility function and the existence of a unique up to an affine transformation utility function. Show rigorously which one is a stronger assumption. (15 points)
2. Prove, assuming we employ only two inputs, the Cobb-Douglas, linear and Leontief production technologies are all special case of a CES production process. Give your answer also by going through the cost functions. (20 points)
3. There are two agents with the following characteristics:

$$U^1(x_1, x_2) = 2x_1 + x_2 \text{ and } e^1 = (0, 4)$$

$$U^2(x_1, x_2) = x_1 + x_2 \text{ and } e^2 = (4, 2)$$
 where the U^i 's and e^i 's are utility function and endowment vector for $i = 1, 2$.
 - a/. Find a fair allocation of goods to agents in this economy.
 - b/. Now suppose that the economy is replicated three times, i.e., there are three 1's and three 2's. Find a fair allocation of goods to agents in this economy. (15 points)