

## Principles of Economics I: Microeconomics - Final Exam [1/11/13]

Note: You have 3 hours (9:10am-12:10pm), and there are 100 points. Allocate your time wisely.

### Part I (15%): The Movie “花漾”

Consider the movie “花漾” which grossed only 3.8 million nationwide in the first five days, but cost 150 million to produce (“Film causes stir after box office flop,” Taipei Times, 1/8/2013).

1. (3%) What are the possible fixed costs for the movie company to screen a movie? What are the variable costs? What is the marginal cost of screening the movie once more? Explain.
2. (3%) Depict the following curves in a graph of price and quantity: Average fixed cost, average variable cost, average total cost, and marginal cost.
3. (2%) Knowing the gross of the first week, will the movie company continue to screen “花漾” next week? Why or why not?
4. (2%) When will the movie company stop screening “花漾”? Explain.
5. (3%) Are private investors likely to invest in this director’s next movie? Why or w-hy not?
6. (2%) Compared to private companies, is the Taiwanese government more likely or less likely to invest in this director’s next movie? Explain.

### Part II: Solving Taiwan’s Wage Stagnation Mystery, Wall Street Journal (10/3/2012), by Eva Dou and Jenny W. Hsu

#### A. (10%) Income Elasticity and Trickleing Down

According to Wikipedia ([http://en.wikipedia.org/wiki/Income\\_elasticity](http://en.wikipedia.org/wiki/Income_elasticity)), the income elasticity is 2.46 for automobiles, 1.44 for books, 1.40 for restaurant meals, 0.64 for tobacco, and -0.36 for public transportation. Read the following excerpts of Dou and Hsu (2012) and answer the questions below, assuming these income elasticities apply to the four Asian tigers and that other things are equal.

“...A growing economy typically should see wages grow faster than inflation. This has been the case for most of Taiwan’s peers: From 2000 to 2011, real wages — or wages minus inflation — rose an average of 3.8% a year in South Korea, 1.8% in Singapore and 0.8% in Hong Kong, according to calculations by DBS economist Ma Tieying. But in Taiwan, workers’ real salaries have actually seen zero growth in that time period, Ma says. Real monthly wages for the first seven months of this year came in at NT\$44,360 (US\$1,513), down from NT\$45,469 over the same period in 2003...”

1. (2%) In which countries of the four Asian tigers (if any) would automakers enjoy growing demand between 2000 and 2011? Explain.
2. (2%) Is there a country in which the demand for restaurants doubled between 2000 and 2011? Explain.
3. (2%) Which of the five industries (if any) faced declining demand in Singapore and Hong Kong between 2000 and 2011? Explain.

4. (2%) Do you think owners of the firms in the industries with declining demand will decide to reduce or shut down in response? Why or why not? (Hint: Would private companies act differently from public ones?)
5. (2%) Which of the assumptions here may not hold in reality? How does that affect your conclusions of trickling down?

### **B. (20%) Wage Stagnation in Taiwan**

Read the following analysis of Lou and Hsu (2012) and answer the questions below:

“...So what’s the matter with Taiwan? Economists say Taiwan’s heavy reliance on contract manufacturing is partly to blame. The island rapidly industrialized in the second half of the 20th century by manufacturing electronics and other goods for foreign brands. But since loosening regulations in 2001, the island has seen most of its factories move to China and Southeast Asia, leaving many local workers behind. Taiwan has found itself in a Catch-22 as it tries to shift away from contract manufacturing toward building its own brands: By traditionally working as contractors for slim profits, Taiwanese companies discovered they lacked the cash to make large research investments or to attract talent through high salaries – thus preventing them from developing more profitable products. “Taiwan will need greater investments to raise labor productivity,” says Elliot Fan, an economics professor at National Taiwan University. “This is easier said than done. Taiwan has been trying to make this transformation for years.” Fan adds that the education system also needs a reboot. Although Taiwan teems with college-educated workers, the education system emphasizes rote memorization over innovation, he says... (Deleted) ...The newest controversy is over whether Taiwan should take a cue from Singapore and Hong Kong by setting different minimum wages for domestic and foreign workers...”

1. (3%) How is labor demand affected by the “loosening regulations in 2001”? What is the effect on wages (by this particular change)? Draw a supply and demand diagram to illustrate.
2. (3%) How does this “loosening” of regulation affect the welfare of Taiwanese workers? What about the welfare of Chinese workers? Indicate this in a supply and demand diagram.
3. (2%) How does loosening regulation affect the welfare of Taiwanese firms? Do you think it is good that the Taiwanese government loosened to regulation? Explain. (You should clearly state the value judgment required for your conclusion.)
4. (4%) What does the neoclassical theory say about Taiwan’s labor demand? How could “invest and raise labor productivity” help? Explain.
5. (2%) Why would “shifting away from contract manufacturing toward building its own brands” help Taiwan’s solve its wage stagnation? Explain.
6. (4%) Explain what are the signaling theory and the human capital theory of education.
7. (2%) What do the above two theories of education have to say about the effect of “rebooting the education system” on wages?

### C. (20%) Foreign vs. Domestic Labor Market for Low Skill Workers

Suppose Daiwanese firms in labor intensive industries can participate in two labor markets: the domestic labor market of foreign workers and the labor market in TionKok. Domestic foreign workers are covered by a binding minimum wage law, but workers in TionKok are not.

1. (4%) Draw a diagram for each of these markets. Is the binding minimum wage higher or lower than the equilibrium wage of the labor market in TionKok? Is there a shortage or surplus in the domestic labor market of foreign workers?
2. (2%) If you were a firm in a labor intensive industry, what is the maximum you are willing to pay to get a foreign worker in Daiwan? Indicate with segments on your graphs.
3. (4%) Suppose there is a quota of foreign investment, and there is only one middleman with Guanxi who can help apply for Daiwan firms to open a factory and hire workers in TionKok, how much would this middleman be charging the firms who want to apply per worker? How much would the actual labor cost be (per worker) for Daiwanese firms in TionKok?
4. (6%) Suppose the Daiwanese government lowers the minimum wage for foreign workers in Daiwan. Indicate on your graphs how
  - a. actual per worker labor cost in both markets,
  - b. the number of TionKok workers hired by Daiwanese firms (in labor intensive industries),
  - c. the amount charged by the monopoly middleman company.Would the shortage or surplus in Daiwan's foreign worker market increase or decrease? Who will be happy about this policy? Will anyone be unhappy with this policy? Explain. (Note: You would have to take into account how the decreased minimum wage for foreign workers in Daiwan affect TionKok's labor market.)
5. (2%) How much would the middleman charge if the minimum wage drops to zero (not bind)?
6. (2%) The Daiwanese government wants to increase the welfare of foreign workers in Daiwan. Would you suggest raising or lowering their minimum wage? Why?

### Part III (35%): Showdown Over 'Showrooming': Target Asks Vendors for Help Keeping Comparison Shoppers, Wall Street Journal, (1/23/2012), by Ann Zimmerman

Read the following excerpts and answer the questions below:

"Target Corp. is tired of being used. In one of the starkest signs yet that chain stores fear a new twist in shopping, Target is asking suppliers for help in thwarting "showrooming"—that is, when shoppers come into a store to see a product in person, only to buy it from a rival online, frequently at a lower price. Last week, in an urgent letter to vendors, the Minneapolis-based chain suggested that suppliers create special products that would set it apart from competitors and shield it from the price comparisons that have become so easy for shoppers to perform on their computers and smartphones. Where special products aren't possible, Target asked the suppliers to help it match rivals' prices. It also said it might create a subscription service that would give shoppers a discount on regularly purchased merchandise... (Deleted) ...Vendors are likely to have little choice but to play ball with Target because of its clout as the second-largest discount chain. Major suppliers, including Kraft

Inc., TV maker Vizio and Procter & Gamble Inc., either wouldn't confirm they received the letter or didn't return calls seeking comment..."

1. (1%) Assume iPads sold online are identical to those sold in a retail store like Target. Is the retail market of iPads perfectly competitive, monopolistic, monopolistically competitive or oligopolistic?
2. (6%) How does Target determine its price and quantity supplied in this market? How do the numerous online resellers determine their prices and quantities? What is the market price?
3. (2%) Explain why Apple, as the sole producer of iPad, might want to engage in "retail price maintenance" and set a minimum price an iPad can be sold by authorized resellers.
4. (2%) Should lawmakers regulate this kind of producer's behavior? Why or why not?
5. (2%) In reality, is an iPad sold online identical to one sold in a retail store like Target? How would this affect your answer above? Explain.
6. (1%) Suppose Target cooperates with Apple Inc. to sell an exclusive version of iPad at its stores. Is this retail market of iPads perfectly competitive, monopolistic, monopolistically competitive or oligopolistic?
7. (4%) How does Target determine its price and quantity for this exclusive iPad?
8. (3%) Is Target better off with an exclusive version of iPad or not? How do you know?
9. (2%) Compared to Apple Inc., would vendors of other products be more likely or less likely to cooperate with Target in creating an exclusive product? Explain.

Consider the following newspaper excerpt "Publishers propose legislation to prevent heavy discounting (新書不能折扣太多 出版商促立法)" from United Daily News (聯合報), 7/18/2010

走進書店，「新書七九折」等牌子掛滿牆；上網路書店，大家等著搶購殺到六六折的折扣書...圖書發行協進會與獨立書店聯盟等出版業者，正研擬推動限制新書折扣的「圖書統一定價制」，希望遏止折扣戰的惡風。Banners that say "New arrivals 21% off!" hang in retail bookstores; people rush to buy discounted books that are 34% off online... The Publisher's Association and the Independent Bookstore Union are proposing uniform price fixing for new books to stop this never-ending price war of discounting...

10. (3%) Which market analyzed above best resembles this market? How would your answer above apply?
11. (3%) Explain why a private agreement among publishers to stop discounting new books are likely not possible to sustain.
12. (2%) Does the fragility of private agreements increase or decrease social welfare? Explain.
13. (2%) Should lawmakers regulate this kind of producer's behavior? Why or why not?
14. (2%) Is your answer to the previous question the same as that for "retail price maintenance"? Why or why not?