**CHAPTER TWO - Baye**

**Market Forces : Demand And Supply**

Samsung and Hynix Semiconductor to Cut Chip Production

Sam Robins, owner and CEO of PC Solution, arrived at the office and glanced at the front page of the *Wall Street Journal* waiting on his desk. One of the articles contained statements from executives of two of South Korea’s largest semiconductor manufactures – Samsung Electronic Company and Hynix Semiconductor-indicating that they would suspend all their memory chip production for one week. The article went on to say that another large semiconductor manufacturer was likely to follow suit. Collectively, these three chip manufacturers produce about 30 percent of the world basic semiconductor chips.

 PC Solutions is a small but growing company that assembles PC’s and sells them in the highly competitive market “clones.” PC Solutions experienced 100 percent growth last year and is in the process of interviewing recent graduates in an attempt to double its workforce.

 After reading the article, Sam picked up the phone and called a few of his business contracts to verify for himself the information was contained in the Journal. Satisfied that information was correct, he called the director of personnel, Jane Remak. What do you think they discussed?

**Demonstration Problem 2-1**

An economic consultant for *X* Corp. recently provided the firm’s marketing manager with this estimate of the demand function for the firm’s product :

$$Q\_{x}^{d }=12,000-3P\_{x}+ 4P\_{y}- 1M+2A\_{x} $$

Where $Q\_{x}^{d}$ represents the amount consumed of good *X*, $P\_{x} $is the price of good *X*, $P\_{y} $is the price of good *Y*, *M* is income, and $A\_{x}$ represents the amount of advertising spent on good *X* . Suppose good *X* sells for $200 per unit, good *Y* sells for $15 per unit, the company utilizes 2,000 units of advertising, and consumer income is $10,000. How much of good X do consumers purchase? Are good *X* and *Y* substitutes or compliments? Is good *X* a normal or an inferior good?

**Demonstration Problem 2-2**

A typical consumer’s demand for the Happy Beverage Company’s product looks like that in Figure 2-5(a). If the charges a price of $2 per liter, how much revenue will the firm earn and how much consumer surplus will the typical consumer enjoy? What is the most a consumer would be willing to pay for a bottle containing exactly 3 liters of the firm’s beverage?

**Demonstration Problem 2-3**

Your research department estimates that the supply function for television sets is given by

$$Q\_{x}^{s}=2,000+3P\_{x}- 4P\_{r}- P\_{w} $$

Where $P\_{x} $is the price of TV sets, $P\_{r} $represents the price of a computer monitor, and $P\_{w} $is the price of an input used to make television sets. Suppose TVs are sold for $400 per unit, computer monitors are sold for $100 per unit, and the price of an input is $2,000. How many television sets are produced?

**Demonstration Problem 2-4**

According to an article in China Daily, China recently accelerated its plan to privatize tens of thousand of state-owned firms. Imagine that you are an aide to a senator on the Foreign relation committee of the U.S. Senate, and you have been asked to help the committee determine the price and quantity that will prevail when competitive forces are allowed to equilibrate the market. The best estimates of the market demand and supply for the good (in U.S. dollar equivalent prices) are given by $Q^{d}=10-2P and Q^{s}=2+2P,$ respectively. Determine the competitive equilibrium price and quantity.

**Demonstration Problem 2-5**

Based on your answer to the Senate Foreign Relation Committee ( Demonstration Problem 2-4 ), one of the senators raises a concern that the free market price might be too high for the typical Chinese citizen to pay. Accordingly, she asks you to explain what would happen if the Chinese government privatized the market, but then set a ceiling price at the Chinese equivalent of $1.50. How do you answer? Assume that the market demand and supply curves (in U.S. dollar equivalent prices) are still given by

$$Q^{d}=10-2P and Q^{s}=2+2P$$

**Demonstration Problem 2-6**

One of the members of the Senate Foreign Relation Committee has studied you analysis of Chinese privatization (Demonstration Problems 2-4 and 2-5) but is worried that the free-market price might be too low to enable producers to earn a fair rate of return on their investment. He asks you to explain what would happen if the Chinese government privatized the market, but agreed to purchase the good from suppliers at a floor price of $4. What do you tell the senator? Assume that the market demand and supply curves (in U.S. dollar equivalent prices) are still given by

$Q^{d}=10-2P and Q^{s}=2+2P$

**Demonstration Problem 2-7**

The manager of a fleet of cars currently rents them out at the market price of $49 per day, with renters paying for their own gasoline and oil, in a front-page newspaper article, the manager learns that economists expect gasoline prices to rise dramatically over the next

Of elasticity and show how to use them in making managerial decisions. We will also present some additional quantitative tools to help managers make better decisions.