3

Demand for Health: The Grossman Model

Comprehension Questions

Indicate whether the statement is true or false, and justify your answer. Be sure to cite evidence from the chapter and state any additional assumptions you may need. Review the basic assumptions of the Grossman model before answering these questions.

1. In real life, investments in health can generate long-lasting benefits, but the Grossman Model neglects this aspect of health.

   FALSE. One of the central features of the model is that health is (in part) an investment good. If someone invests in his health today, it will be higher both today and in the future.

2. In the framework of the Grossman model, one's level of health is completely controlled by her actions. Thus, in any given period, an individual is unconstrained in her choice of health status.

   FALSE. Individuals do have a lot of control over their health level, but there may be high levels of health that they cannot achieve given time and income constraints. If someone invests all her time and money in improving health, she may still not be as healthy as she would like.

3. In the Grossman model, the marginal efficiency of investment in health care declines as health improves.

TRUE. Someone who is very unhealthy receives major dividends from even a small improvement in health, but someone who is already very healthy receives little benefit.

4. Aging shifts the marginal efficiency of investment in health curve inward.

   FALSE. As aging occurs, the depreciation rate of health increases. This results in a movement along the marginal efficiency of investment curve upward, which implies worse optimal health.

5. An hour spent exercising always pays for itself by decreasing the time spent sick by more than an hour.

   FALSE. This is only true in the "free lunch zone." Once a certain level of health is attained, an hour spent exercising generates less than an hour of additional productive time.

6. Assume the PPF is as pictured in Figure 3.3. People might choose point E as their optimum even if they value the home good Z.

   FALSE. The only way someone might choose point E is if his indifference curves are vertical. But a vertical indifference curve means he does not value the home good, Z at all.

7. In the Grossman model, optimal health status declines with age.

   TRUE. See Figure 3.13 for an explanation.

8. The fact that older people spend more on health care is evidence against the Grossman model, which predicts that spending will decline as δ increases.

   FALSE. The Grossman model predicts that health optimally declines with age; it does not predict that health expenditures decline with age. The effect of aging on health expenditures is ambiguous in the Grossman model. As you age, you need to spend more money and time on health to maintain a fixed level because of the increasing depreciation rate of health capital.

9. People who drop out of high school are able to produce more health than college graduates because they have more free time to invest in health production.

   FALSE. In the Grossman model, more education shifts out the marginal efficiency of investment curve. This means that better educated people have a

PPF that is shifted upwards relative to people with fewer years of education. Thus, better educated people spend less time sick and have more productive time overall. See Figure 3.14.

10. According to the Grossman model, people choose an optimal time to die (barring any unforeseen accidents).

    TRUE. In the Grossman model, death occurs when it no longer makes sense to invest in health because the depreciation rate of health capital is so high.