Macroeconomics 12th edition Colander Solutions Manual

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CHAPTER 1: ECONOMICS AND ECONOMIC REASONING

Questions and Exercises

1. Coordination refers to how the three central problems facing any economy are solved. Those three problems are what and how much to produce, how to produce, and for whom to produce. Inevitably, individuals desire more than is available regardless of how much they're willing to work for what they desire, causing a problem of scarcity.

   The concept of scarcity has two elements: our wants and our means of fulfilling those wants. These two elements are interrelated since wants are changeable and are partially determined by society. In addition, the degree of scarcity is constantly changing, depending upon the available means of production and the development of new wants.

   Therefore, the author focused on coordination rather than on scarcity to emphasize the subsidiary nature of scarcity to the overall concept of coordination. Economics is not merely about our wants or the means of fulfilling those wants; it is also about reconciling our wants with reality, where reality consists of decision-making mechanisms, social customs, and political realities.

2. a. Macroeconomic
   b. Microeconomic
   c. Macroeconomic
   d. Microeconomic
   e. Microeconomic
   f. Microeconomic

   Microeconomics studies how economic forces influence individual choices such as the pricing policies of firms, households' decisions on what to buy, and how markets allocate resources among alternative ends. Macroeconomics studies aggregate relationships such as how household consumption is related to income and how government policies can affect growth.

3. Answers will differ. Two microeconomic problems are the pricing policies of firms (price-fixing in particular) and the way wages are determined in labor markets. (Why do athletes and celebrities make so much money, anyway?) Two macroeconomic problems are unemployment and inflation (business cycles and growth are also macroeconomic problems).

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4. a. The opportunity cost of attending college is the sacrifice one must make by attending college. It can be estimated by figuring out the benefit of the next-best alternative. If that alternative is working, one would guess the likely wage that could be earned at a job that does not require a college degree and then multiply by 40 hours for each week in college. The opportunity cost is also what could be done with the money used for tuition and other costs related to attending college.

   b. The opportunity cost of taking a course could also be estimated using the same technique as in part *a* if you otherwise would be working during these hours. If you had taken another course instead, the opportunity cost would be the benefit you would have received from taking that other course.

   c. The opportunity cost of attending yesterday's lecture would depend on what you otherwise could have done with that time (sleep, eat lunch with an interesting person, etc.). Although this is no longer a choice to you, past activities do have opportunity costs.

5. Answers will vary. A correct answer will indicate that the student compared the marginal costs and benefits and chose the activity because the marginal benefit exceeded the marginal cost.

6. The marginal costs are the additional costs of the additional activity. In this case, the additional activity is driving (200 – 100) miles. The marginal cost is the 10 cents per mile for all miles over 100 plus the additional cost of gas. Therefore, the marginal cost is $\$10.00 = [0.10 \times (200 - 100)]$ plus the cost of gas. The initial payment can be forgotten because it is a sunk cost; it is not part of the marginal costs.

7. No, since the marginal cost of drug control exceeds the marginal benefit; the government should not spend $4,170 to deter one person from using drugs.

8. The opportunity cost of buying a $20,000 car is the benefit you would have gained by using that $20,000 for the next-best alternative, which could be spending it on other goods and services or saving it.

9. Only the marginal costs and benefits of taking the job are relevant. That means that the sunk cost of the bachelor's degree is irrelevant. Therefore, the relevant costs are the opportunity cost of taking the job (forgone earnings from your current job) and other things you could have done with the money you need to

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pay for business school. The relevant benefit is the increased lifetime earnings of $600,000.

10. You should spend the $5 million on projects that provide the highest marginal benefit per dollar spent. The opportunity cost of spending the money on one project is the lost benefit that the college would have received by spending it on a different project. Thus, another way to restate the decision rule is to spend the money on the project that minimizes opportunity cost per dollar.

11. Answers will differ. Two examples of social forces are our unwillingness to charge friends interest and our unwillingness to "buy" friends. These issues are still subject to economic forces; however, there is no market in "friends" or in loans to friends, and so the economic force does not become a market force.

12. Answers will differ. Two examples of political or legal forces are rent control laws and restrictions on immigration. Both prevent the invisible hand from working. Rent control laws place a price ceiling on rent, causing shortages of apartments, and immigration restrictions cause the number of immigrants seeking entry to exceed the number allowed to enter, which tends to cause wage rates to differ among countries.

13. a. Both parties benefit. The person who gains the kidney benefits if it works when transplanted into his or her body as he or she will no longer have the emotional and financial burden of dialysis. The person selling the kidney gains the $30,000. Their gains will also have impacts on others (their family, for example).

b. Both parties must undergo surgery and face all the attendant risks and costs. The seller faces the potential cost of a future illness or injury harming his or her only remaining kidney, causing the seller to need dialysis. It raises moral issues that could be seen as hurting society because organs change from being inalienable to being a commodity and, hence, is another element that negatively affects the individuals.

c. Whether a society should allow this transaction is a question of value judgments and cultural norms. Our society has chosen not to allow such transactions because (among other reasons) those with more money would have increased access to organs and therefore would have advantages over those of limited means. Thus, the poor could be exploited in such transactions.

14. An economic model is a framework that places the generalized insights of a theory in a more specific contextual setting. Policymakers need to understand the

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empirical evidence supporting the theory as well as real-world economic institutions to make policy recommendations.

15. No. Economic theory proves nothing about what system is best. It simply provides a way to look at systems and indicates what the advantages and disadvantages of various systems will likely be. Normative decisions about what is best can only follow from one's value judgments, which are subjective.

16. A theorem is a proposition that is logically true based on the assumptions of the model, whereas a precept is a policy rule that a particular course of action is preferable. Economists can agree about theorems but disagree about precepts if they have different value judgments regarding the intended goals.

17. A normative statement reflects ethical judgments about what should be. It reflects values and is subjective. A positive statement refers to a fact or a logical relationship. It is in principle testable or is the result of logic analysis. Positive statements of facts are not subject to debate among individuals. The art of economics refers to issues of judgment on how to achieve the goals determined in normative economics, giving the facts and logical relationships one finds in positive economics. Art of economics statements are subject to debate.

18. a. Positive statement, since it is a statement of logic.

    b. Normative economics, since it deals with what the goals of the economy should be and is subjective.

    c. Since this is relating a normative goal to a decision, this could be a statement in the art of economics. It could also be seen as a normative statement if one interprets it as a normative imperative.

    d. Positive statement, since it is a statement of fact.

Questions from Alternative Perspectives

1. *Austrian*

   Most economists would answer "yes" because they see economic variables such as unemployment as objective measures, which make them available as measures for planning. Most economists see only individual preferences, not social preferences, as subjective. Austrians believe in a radical subjectivity, uncertainty with respect to time, knowledge, and matters beyond preferences. This eliminates

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the possibility of using objective economic analysis as the basis for government planning. For an Austrian study on the nature of time and uncertainty for economics, see the work of Mario Rizzo and Gerald O'Driscoll, Jr.

2. *Religious*

   a. The rational choice model assumes that individuals are one-dimensional, that they know what they want, and that they will do what is in their best interest. Addictive behavior undermines that assumption, leading to a conflict between passion and reason.

   b. The conflict suggests that we have to be careful not to apply the economic model in cases in which that conflict is important, such as with behaviors that have addictive elements. When there is a conflict between passion and reason, there may be greater reason for government to limit access to the addictive good or behavior.

3. *Feminist*

   a. Patriarchy is a social institution in which men exercise a disproportionate amount of social power and are in a position to define the roles of women and children. Because patriarchy affects the way people behave and interact, it is an institution. Gender affects the labor market because those who are in power will make hiring decisions that perpetuate their position of power. For example, husbands and fathers may make, or heavily influence, the decisions of whether a woman will look for work.

   b. Some economists might argue that men and women are merely expressing their preferences in job choices, whereas feminist economists might argue that these choices are culturally determined by institutions, or patterns of behavior, such as the patriarchy. It is impossible to separate the market from the institutions within which they are embedded. The free market may not determine the institutions or mores of a society, but it nevertheless operates within those institutions.

4. *Institutionalist*

   a. A free market outcome would provide the flu vaccine to those willing and able to pay the most for it, which probably would not include all of those given priority under the rationing scheme.

   b. The determination of which option is "just" requires delving into theories of justice. The free market solution best mirrors commutative justice—one based on efficiency of exchange— and the rationing scheme best mirrors distributive

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justice—one based on some notion of fairness that favors those with a greater predisposition to illness.

5. *Post-Keynesian*

   a. This answer will differ among students but should include an assessment of the marginal benefits incurred between various institutions.

   b. Most students probably will answer this question "no." The standard theory presented in the book is based on the assumption that decision makers have full information about all factors that might influence their decisions: They have substantive knowledge of all possible outcomes of their decision making and the consequences of each decision. Most likely you had limited knowledge of the pros and cons of the schools you were considering when deciding which college to attend. As a result, you probably turned to the advice and norms of a small group of friends, family members, or teachers to help you make a decision.

   c. Recognizing that you have limited time, knowledge, and ability to compute all the possible outcomes of each economic decision, you probably rely on social norms and rules of thumb to help you make many of your economic decisions. For example, when you go to the grocery store, you may continue to buy Diet Coke even though other diet sodas might provide you with a higher level of satisfaction at a lower price because you are in the habit of buying Diet Coke and uncertain of the exact benefit you will incur from other diet beverages.

   d. The implication of this behavior is that individuals do not follow the economic decision rule of gaining complete information to optimize their choices but rely on rules of thumb or habit to come up with a satisfactory outcome even though it might not be the most optimizing. This means that economic analysis, which assumes that humans are one-dimensional rational beings who calculate all relevant marginal costs and benefits, is limited.

6. *Radical*

   a. It implies that there is no clear-cut distinction between positive and normative economics and that seemingly positive economics has implicit value judgments hidden within it.

   b. Economics is value laden. The relevant question about whether the distinction is tenable is whether it is relatively less value-laden than the alternatives. That is an open question.

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Issues to Ponder

1. Regretting a decision doesn't necessarily mean that we did not use the economic decision rule when making that decision. The economic decision rule infers that the individual has perfect information, which is an idealization of the reality of decision-making. At the time the decision was made, we weighed the marginal costs and marginal benefits, undertaking the activity if the marginal benefit exceeded the marginal cost and not undertaking the activity if the marginal cost exceeded the marginal benefit. Many decisions are made without knowledge of the full marginal costs and marginal benefits. Sometimes these marginal costs and marginal benefits are revealed at a later date, making us regret the initial decision. An example is going out to a restaurant. From recommendations, we form an expectation about the marginal benefit. If that recommendation overstates our actual experience, we will have overestimated the marginal benefit of eating out. We may regret having spent the money to eat out.

2. a. It depends on the perspectives used to answer the question. From a purely economic perspective, we would conclude that it is reasonable to execute hackers based on cost/benefit analysis. However, since this decision can by no means be simplified to pure economics, we need to take into consideration social, political, and religious factors. Therefore, Landsburg's argument should be evaluated in a more holistic context.

   b. Cost/benefit analysis can be extended to many areas, such as social welfare programs and almost all the policy discussions. (Source: "Feed the Worms Who Write the Worms to the Worms," http://slate.com/id/2101297/), *Slate Magazine*, May 26, 2004.)

3. The *Theory of Moral Sentiments* emphasizes the importance of morality. The invisible hand directs people's selfish desires (tempered by the social and political forces) to the welfare of society but is based on certain presuppositions about the morality of individuals which constrains individuals' selfish actions. What Smith is suggesting is that the way individuals calculate marginal cost and marginal benefit must be interpreted within a social context.

4. a. & b. Parts *a* and *b* have no "right" answers. Most people would say "no" to *a* and "yes" to *b*. If one were answering this question from the perspective of the economic decision rule alone, one would measure the marginal benefits against the marginal costs of the choice.

   c. People tend to believe that children should be afforded greater protection than is afforded to adults and are therefore repelled by the idea of sacrificing a child even

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though it would save the lives of other children. Sick people are closer to death, and therefore their lives tend to be valued less.

d. Brain imaging suggests that the moral sense behind one's answers does not come from rational thought, but instead from emotional, gut responses. This suggests that a kind of moral intuition exists that is quite separate from reason. If that is the case, opportunity costs were not central to the decision. It was a moral, not an economic, decision. Opinions among philosophers and economists differ on this issue.

5. a. It depends. On the basis of cost/benefit analysis, one could figure out cases in which most people would say that they should be dishonest, but cost/benefit analysis is not the final arbiter if you believe that dishonesty is wrong. Additionally, you should consider the social implications of dishonesty, as your reputation and future interactions may be impacted.

b. You can make yourself more believable by developing a reputation for honesty. Developing such a reputation usually has a cost because it requires you to be honest even when others might be dishonest. To encourage the other person to tell the truth, you could use economic incentives.

6. a. Answers will vary.

b. Economic theory says that prices are determined by supply and demand, but businesses often use cost-plus-markup rules, or rules of thumb, to set their prices. If two firms have different costs of supplying the same item, they probably will set different prices for that item. People might be willing to pay the higher price if the store is closer to where they live or simply to support a smaller, local store.

c. Again, answers will vary, but the reasoning is the same as in part *b*.

7. It depends on the perspective one takes. It is economically reasonable to legalize organ sales. But from a moral perspective, organ sales may be unethical, and poorer people might feel compelled to sell their organs to support their family, a result that many people would find morally reprehensible. Economics has nothing definitive to say on normative moral issues such as this.

8. Answers will vary. Here is an example: Banks are economic institutions. They take a cost/benefit approach to deciding to whom to give loans, and they influence decision making by allowing individuals to spend more money than they earn or have as wealth.

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9. a. This is a matter of personal views; there are arguments for and against it. An argument against the practice is that wealthy songwriters would have too much power in promoting their songs. The songs of the songwriters who can afford to share profits will get more play time and become even more famous to the detriment of new entrants into the industry. Arguments for this practice are that it could be used to offset racism as in the example given and, to the extent that new songwriters have the capability of offering such royalty share, promote new kinds of music.

   b. The royalty payment gave Freed a strong incentive to choose what he considered the best song and to promote that song heavily. The flat payment would have just given him an incentive to play any song and no long-term interest in whether the song succeeded or failed.

   c. Answers will vary. Here are a few examples: Product placement in movies is legal, as are free newspapers to professors for getting a class to use the newspaper. Direct payments to doctors for prescribing a particular type of drug are illegal, although taking doctors to lunch is not.

10. Three ways (among many) that dormitory rooms could be rationed are administrative decree, lottery, and a market system. In the first, individual behavior would be forced to fit the will of the administrator. Individuals probably would complain and try to influence the administrator's decision. Because administrative decree is not necessarily an efficient system, some people probably would attempt to trade rooms after the allocation. In the second, individual behavior would be forced to fit the luck of the draw; individuals probably would attempt to trade rooms after the draw. In the final example, individual behavior would have already been subject to economic forces, and thus, there would be no tendency to trade after one has "bought" the room one can afford.

11. It suggests that policy should be willing to give up more in possible gains to avoid losses than otherwise would be the case. Economic policies should be risk-averse—more committed to maintaining the current standard of living than to risking economic losses by trying to improve it. Another possible policy response would be to offset this tendency by making gains more salient than losses.

12. A good economist always tries to be objective. However, no one can ever be completely objective. Sometimes the best we can hope for is an awareness of the cultural norms and value judgments that influence our views and decisions. Additionally, many policy issues (such as organ markets and minimum wage laws) probably should not be approved in a purely objective way since they also have moral and social implications.

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13. “Letting the data speak” means using computer power to find patterns in data. As computational methods have improved exponentially, the patterns that computers find are more robust and useful in finding patterns. So, the reason modern economists are more likely to let the data speak is due to technological change in computational methods.

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CHAPTER ONE
ECONOMICS AND ECONOMIC REASONING PROBLEM SET

1. Briefly point out the faulty reasoning in each of the following situations: *(LO2)*

   a. You win a free, nontransferable ticket to a Taylor Swift concert. Since the ticket is free and it will therefore cost you nothing to go, you decide to go to the concert.

   b. You paid nonrefundable tuition of $3,000 to take a 15-week course. Therefore, the opportunity cost of attending class each week is $3,000 divided by 15, or $200.

   c. You like to avoid costs; every decision involves opportunity cost. So you don't make decisions.

   d. You have purchased 5 premium apples for $1.99 a pound, but when you get home, you discover they are mushy. Since you paid top dollar for these apples, you decide you have to eat them.

2. Classify the following *Wall Street Journal* articles as involving *macroeconomic* or *microeconomic* issues based on their titles: *(LO1)*

   a. "Jerome Powell Affirms Fed's Patient Approach to Future Interest Rate Charges"

   b. "How Drugs for Rare Diseases Became Lifeline for Companies"

   c. "Monetary Tightening Damps Brazil Investment"

   d. "Debut of *Chicken Little* Gives Disney Something to Crow Over"

3. Identify the following statements as examples of *positive economics*, *normative economics*, or *the art of economics*: *(LO5)*

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a. The Federal government needs to raise the minimum wage to $8 per hour so that families will have sufficient income to meet their basic needs.

b. A country's overall income is more important than how that income is distributed.

c. One in four workers today has no access to employment-based family health coverage.

d. To reduce income inequality in the U.S., we could increase the earned-income tax credit.

e. It is the federal government's responsibility to assure health coverage for all families.

4. Briefly explain why the following statements are either TRUE or FALSE: *(LO3)*

a. Even though school dormitory rooms are rationed by lottery, these rooms are still affected by economic forces.

b. Because the U.S. postal service is a monopoly and Congress sets postal prices through legislation, market forces do not determine stamp prices.

c. The New York City government auctions taxi medallions that give the right to transport passengers by taxi. Because the government controls the number of medallions, market forces do not determine their price.

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Answers to the Problem Set

1. a. Going to the concert does have a cost to you. The cost is the benefit you would have received from another activity, or opportunity cost.

   b. Since the tuition is nonrefundable, it is a sunk cost and therefore no longer represents opportunity costs. The true opportunity costs of continuing to take the course are the benefit of doing something else during class time.

   c. Deciding not to make decisions is still a decision. The opportunity cost of not considering choices is the benefit you would have gained from making those choices.

   d. How much you paid for the apples is a sunk cost, and therefore is not relevant.

2. a. Macroeconomics

   b. Microeconomics

   c. Macroeconomics

   d. Microeconomics

3. a. Normative

   b. Normative

   c. Positive

   d. Art of economics

   e. Normative

4. a. True. Economic forces always operate.

   b. True. Political forces, not market forces determine stamp prices.

   c. False. Even though the government regulates this market, because the medallions are sold at an auction, market forces determine their prices.

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