Microeconomics for Life 3rd edition Cohen Solutions Manual

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What's in Economics for You?

Scarcity, Opportunity Cost, Trade, and Models

Learning Objectives

1. Explain scarcity and describe why you must make smart choices among your wants.
2. Define and describe opportunity cost, the most important concept in economics.
3. Describe how comparative advantage, specialization, and trade make us all better off.
4. Explain how models like the circular flow of economic life make smart choices easier.
5. Differentiate microeconomic and macroeconomic choices, and explain the Three Keys model for smart choices.

Lecture Narrative

George Bernard Shaw's quote, "Economy is the art of making the most out of life," introduces economics and the problem of scarcity. This text defines economics in a way that focuses on the choices of key players — how individuals, businesses, and governments make the best possible choices to get what they want, and how those choices interact in markets. Because of scarcity, choices involve a trade-off, leading to the concept of opportunity cost — the single most important concept in economics. Incentives are also crucial for understanding choices. Opportunity cost and comparative advantage are key to understanding why specialization and voluntary trade make us all better off. The most basic choice is whether to produce for yourself or to specialize, trade in markets, and depend on others. There is a simple example of two previously self-sufficient settlers in the same country coming together to trade. This example of the gains from trade purposefully avoids the politically charged issue of trade between countries, focusing instead on the general benefits of markets and exchange.

This chapter then introduces models (using a road-map example) and what it means to think like an economist. The circular flow model reduces the complexity of the economy to three sets of players who interact in markets—households, businesses, and governments. Without using the phrase *ceteris paribus*, the assumptions of "all other things unchanged" are compared to the mental equivalent of controlled experiments in a laboratory. The positive/normative distinction is also part of thinking like an economist. Finally, microeconomics and macroeconomics are distinguished.

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This chapter also introduces the Three Keys to Smart Choices as the microeconomic "model" that focuses attention on the information most useful for making smart choices:

1. Choose only when additional benefits are greater than additional *opportunity costs*.

2. Count only *additional* benefits and *additional* costs.

3. Be sure to count *all* additional benefits and costs, including *implicit costs* and *externalities*.

Watch "The Five-Minute University" at (https://www.youtube.com/watch?v=kO8x8eoU3L4). The Three Keys model is what students should remember five years (at least!) after they have taken introductory economics. This is students' first look at the Three Keys, which recur throughout the book.

Graphs, Tables, and Illustrations

Figure	**Title**	**G, I, T**
1.1	Jill's Production Possibilities	T, G
1.2	Marie's Production Possibilities	T, G
1.3	Opportunity Costs for Jill and Marie	T
1.4	Opportunity Costs for Jill and Marie	T T
unnumbered	Gains from Specialization and Trade	
1.5	Mutually Beneficial Gains from Trade	G
1.6	Circular Flow of Economic Life	I
1.7	Three Keys to Smart Choices	I

Key:

G - Graph(s)

I - Illustration

T – Table

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To access the Animated Figures (Videos) for this chapter, log into the Pearson course website (pearsonmylab.com), click on the Multimedia Library, then select Animation and then Chapter 1.

Active Learning Suggestions

Top Choice

First class meetings are often short and focus on administrative course details. The time could also be used for a small group activity to help students get to know each other.

For microeconomics, use the policy debate over whether government should impose a tax on sugary pop to counter obesity. There has been much press on the topic. In the United States, former New York City mayor Michael Bloomberg proposed making giant size soft-drink cups illegal. In Canada, the Heart and Stroke Foundation called for a tax on sugary drinks (http://www.ctvnews.ca/health/heart-and-stroke-foundation-calls-for-tax-on-sugary-drinks-1.1999780). Mike Moffat has an excellent article in the September 2012 *Walrus*, "Pop and the Tax Question" (http://thewalrus.ca/pop-and-the-tax-q/). The discussion can focus on these policy questions:

You are the Minister of Health and your government is considering a tax on sugary pop.

1. What are the consequences of this policy — all intended and unintended consequences? (How do people change their choices after the sugar tax?)
2. Should the government tax sugary pop? What are the arguments for and against this policy?

For macroeconomics, the small group exercise focuses on this policy question:

Assume that Canada is in a deep recession, with high unemployment and with manufacturing plants closing because of cheap imports from Asia. The government deficit is growing; inflation is 3 percent.

You are the Minister of Finance. Come up with three policies that would help Canadians and improve the economy.

This exercise often brings out students' misconception about economics (most will suggest high tariffs on imports without understanding the consequences), and gives you an idea of what knowledge of economics they bring to this course.

For either group activity, if you have time it adds interest if the class votes on the best group presentation, and you award candy prizes. Of course you do not want to criticize wrong information,

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	but rather to note it and explain how what they will learn will likely change their thinking about these issues.
Dynamic Study Modules	Dynamic Study Modules are available for each chapter of *Macroeconomics for Life*, 3rd edition. These study modules allow students to work through groups of questions and check their understanding of foundational economics topics. Access the Dynamic Study Module for Chapter 1 through MyLab Economics.
Teaching Blog	Check out economicsforlife.ca for new media stories, related discussion questions, and other active learning ideas. All posts are tagged by textbook chapters and topics.

1.1

Are You Getting Enough?

Scarcity and Choice

Learning Objective

Explain scarcity and describe why you must make smart choices among your wants.

Main Point

Because you can never satisfy all of your wants, making the most out of your life requires smart choices about what to go after, and what to give up.

Key Terms

scarcity

the problem that arises from our limited money, time, and energy

economics

how individuals, businesses, and governments make the best possible choices to get what they want, and how those choices interact in markets

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Discussion or Homework Q&A

1. Q. Olga chooses to live at home rather than move into residence during her first year of college. She often brags about the fact that she saves a lot of money by living at home. Provide some examples of what Olga may have given up by choosing to live at home.

A.
- freedom
- some privacy
- parties at the residence
- readily available study partners

2. Q. "If all people would only make smart choices and economize, the problem of scarcity would be solved." Agree or disagree, and explain why.

A. Disagree. If everyone makes smart choices and economizes, then everyone makes the best possible use of resources and gets the greatest benefits or satisfaction possible given the limited quantity of resources. But this does not mean that we would satisfy all of our limitless needs. The problem of scarcity can never be "solved" as long as people have infinite needs and finite resources for satisfying those needs.

Refresh Q&A

1.1.1 Q. You can't get everything you want because you are limited by
a. time.
b. money.
c. energy.
d. all of the answer choice are correct.

A. **D** – All resources are limited and making choices is necessary. No person can have as much as they want of any good or service. Economics is the science of choice.

1.1.2 Q. Scarcity is
a. not a challenge for governments.
b. not a challenge for celebrities.
c. not a challenge for people who win the lottery.
d. a challenge for everyone.

A. **D** – Although some people have access to more resources, they are limited for everyone, including governments and the wealthy. Therefore, scarcity exists and

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choices must be made by everyone.

1.1.3 Q. Economics does NOT focus on

a. individuals.

b. animals.

c. businesses.

d. government.

A. **B** – Economics is a social science that analyzes the choices that **individuals**, **businesses**, and **governments** make to allocate resources.

1.2

Give It Up for Opportunity Cost!

Opportunity Cost

Learning Objective

Define and describe opportunity cost, the most important concept in economics.

Main Point

Opportunity cost is the single most important concept both in economics and for making smart choices in life.

Key Terms

opportunity cost

the cost of the best alternative given up

incentives

rewards and penalties for choices

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Discussion or Homework Q&A

1. **Q. You're trying to decide whether to go camping with your friends or spend a quiet weekend at home with your significant other. What incentives (think rewards and penalties), if changed, may influence your decision?**

   A.
   - weather
   - cost of trip (gas)
   - your partner tells you the relationship is over if you go
   - your partner offers to cook for you or take you out to dinner if you stay

2. **Q. Seat belts save lives. Suppose that a city doubles the penalty for being caught driving without a seat belt in attempt to increase seat-belt use among drivers.**

   a. Explain how this policy influences driver behaviour.

   b. Now suppose the city evaluates the policy and finds that the number of fatalities actually increased after the policy was introduced. Can you think of a reason why this may have occurred?

   A. a. The increased penalty represents a rise in the price (or cost) of not wearing a seat belt, which likely motivates more individuals to wear their seat belt.

   b. Drivers adjust their behaviour and drive more dangerously because they think they are now safer wearing a seat belt.

Refresh Q&A

1.2.1 Q. Opportunity cost includes
a. time you give up.
b. energy you spend.
c. money you spend.
d. all of the answer choices are correct.

A. **D –** Opportunity costs are not just financial costs. They also include lost time, pleasure, or any other benefit given up.

1.2.2 Q. In deciding whether to study or sleep for the next hour, you should consider all of the following EXCEPT
a. how much tuition you paid.
b. how tired you are.
c. how productive you will be in that hour.
d. how much value you place on sleeping in that hour.

A. **A –** Since your choice is between studying (possibly higher marks) and

sleeping (benefits of sleep), your tuition is not a facto. It has already been paid and is a sunk cost.

1.2.3 Q. **If the economy slows down and unemployment increases,**
a. opportunity costs of upgrading to a post-secondary degree increase.
b. opportunity costs of upgrading to a post-secondary degree decrease.
c. incentives to drop out of college or university increase.
d. all of the answer choices are correct.

A. **B –** Since the employment opportunities you would give up by attending school have likely decreased, you now give up less to attend school.

1.3

Why Don't You Cook Breakfast?

Gains from Trade

Learning Objective

Describe how comparative advantage, specialization, and trade make us all better off.

Main Point

Opportunity cost and comparative advantage are key to understanding why specializing and trading make us all better off.

Key Terms

production possibilities frontier (*PPF*)

maximum combinations of products or services that can be produced with existing inputs

absolute advantage

the ability to produce a product or service at a lower absolute cost than another producer

comparative advantage

rhe ability to produce a product or service at a lower opportunity cost than another producer

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Discussion or Homework Q&A

1. Q. **France and Germany each produce both wine and beer using a single input: labour. Here are their production possibilities: France has 100 units of labour and can produce a maximum of 200 bottles of wine or 400 bottles of beer. Germany has 50 units of labour and can produce a maximum of 250 bottles of wine or 200 bottles of beer.**

a. Complete this table.

	Bottles produced by 1 unit of labour		Opportunity cost of 1 additional bottle	
	WINE	BEER	WINE	BEER
FRANCE				
GERMANY				

Use the information in part a to answer these questions.

b. Which country has an absolute advantage in wine production?

c. Which country has an absolute advantage in beer production?

d. Which country has a comparative advantage in wine production?

e. Which country has a comparative advantage in beer production?

f. If trade is allowed, describe what specialization, if any, occurs.

A. b. Germany, which can produce more wine (5 bottles) per unit of input, has an absolute advantage in wine production.

c. Neither country has an absolute advantage in beer production, since beer output (4 bottles) per unit of input is the same for both countries.

d. Germany, with the lower opportunity cost (0.8 beer), has a comparative advantage in wine production.

e. France, with the lower opportunity cost (0.5 wine), has a comparative advantage in beer production.

f. The incentive for trade depends only on differences in comparative advantage. Germany specializes in wine production and France specializes in beer production.

2 Q. **Tova and Ron are the only two remaining inhabitants of the planet Melmac. They spend their 30-hour days producing widgets and woggles, the only two goods needed for happiness on Melmac. It takes Tova 1 hour to produce a widget and 2 hours to produce a woggle, while Ron takes 3 hours to produce a widget and 3 hours to**

produce a woggle.

a. For a 30-hour day, draw an individual *PPF* for Tova, then for Ron.

b. Assume initially that Tova and Ron are each self-sufficient. Define self-sufficiency. Explain what the individual consumption possibilities are for Tova, then for Ron.

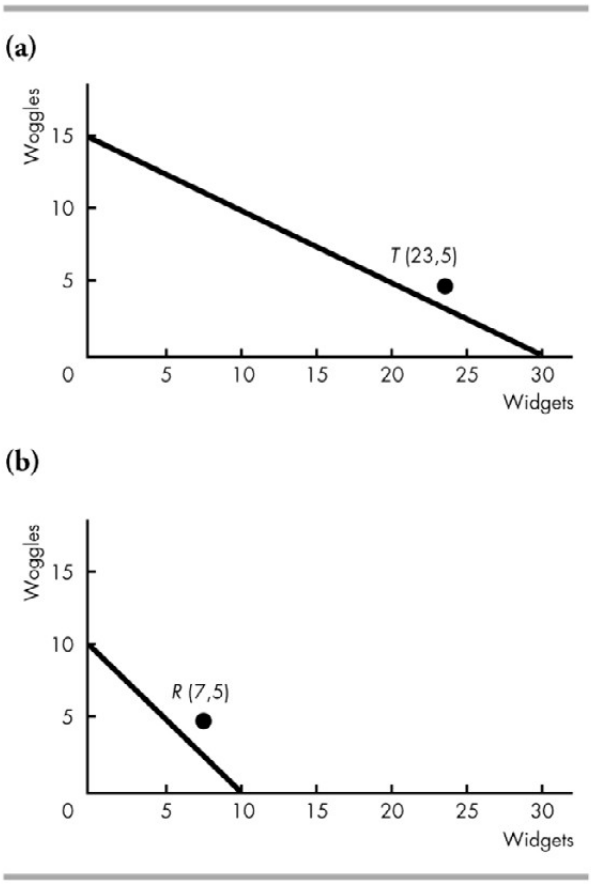
c. Who has an absolute advantage in the production of widgets? of woggles?

d. Who has a comparative advantage in the production of widgets? of woggles?

e. Suppose Tova and Ron each specialize in producing only the good in which each has a comparative advantage (one spends 30 hours producing widgets, the other spends 30 hours producing woggles). What is the total production of widgets and woggles?

f. Suppose Tova and Ron exchange 7 widgets for 5 woggles. On your *PPF* diagrams, plot the new point of Tova's consumption, then of Ron's consumption. Explain how these points illustrate the gains from trade.

A. a. The individual *PPF*s for Tova and Ron are given by figures (a) and (b), respectively.



b. Individuals are self-sufficient if they consume only what they produce. This means there is no trade. Without trade, Tova's (maximum) consumption possibilities are exactly the same as her production possibilities — points along her *PPF*. Ron's (maximum) consumption possibilities are likewise the points along his *PPF*.

c. Tova has an absolute advantage in the production of both widgets and woggles. Her absolute advantage can be defined either in terms of greater output per unit of input or fewer inputs per unit of output. A comparison of the *PPF*s in the figures above shows that, for given inputs of 30 hours, Tova produces a greater output of widgets than Ron (30 versus 10) and a greater output of woggles than Ron (15 versus 10). The statement of the problem tells us that, per unit of output, Tova uses fewer inputs than Ron for both widgets (1 hour versus 3 hours) and woggles (2 hours versus 3 hours). Since Tova has greater productivity than Ron in the production of all goods (widgets and woggles), we say that overall she has an absolute advantage.

d. Tova has a comparative advantage in the production of widgets because she can produce them at lower opportunity cost than Ron (1/2 woggle versus 1 woggle). On the other hand, Ron has a comparative advantage in the production of woggles, since he can produce them at a lower opportunity cost than Tova (1 widget versus 2 widgets).

e. Tova produces widgets and Ron produces woggles, yielding a total production between them of 30 widgets and 10 woggles.

f. After the exchange, Tova has 23 widgets and 5 woggles (point *T*). Ron has 7 widgets and 5 woggles (point *R*). These new post-trade consumption possibility points lie outside Tova's and Ron's respective pre-trade consumption (and production) possibilities. Hence, trade has yielded gains that allow the traders to improve their consumption possibilities beyond those available with self-sufficiency.

Refresh Q&A

1.3.1 Q. Mutually beneficial gains from trade come from

a. absolute advantage.

b. comparative advantage.

c. self-sufficiency.

d. China.

A. **B –** Absolute advantage is the ability to produce a product or service at a lower *absolute* cost than another producer. Comparative advantage is the ability to produce a product or service at a lower *opportunity* cost than another producer. Mutual gains from trade occur when a country specializes in what it has a *comparative advantage* in and

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trades with another country.

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1.3.2 **Q.** **The easiest way to calculate opportunity cost is**

a. give up/get

b. get/give up

c. give up – get

d. get – give up

A. **A –** Opportunity cost is calculated by what you give up divided by what you get. If the value of what you give up rises, so does the opportunity cost.

1.3.3 **Q.** **In one hour, Chloe can bake 24 cookies or 12 muffins. Zabeen can bake 6 cookies or 2 muffins. For mutually beneficial trade, Chloe should bake**

a. cookies because she has a comparative advantage.

b. cookies because she has an absolute advantage.

c. muffins because she has a comparative advantage.

d. muffins because she has an absolute advantage.

A. **C –** Opportunity cost is calculated by what you give up divided by what you get.

The question of whether Chloe should bake cookies or muffins comes down to whether there are gains from trade between her and Zabeen. Gains from trade do not depend on absolute advantage; they depend on comparative advantage. So, to answer the question, we need to know the opportunity costs for both Chloe and Zabeen. For these types of questions, it is always helpful to draw a table like Figure 1.3which would look like this.

	Opportunity Cost of One Additonal Hour of	
	Cookies	Muffins
Chloe	12/24 = 0.5 muffins	24/12 = 2 cookies
Zabeen	2/6 = 0.33 muffins	6/2 = 3 cookies
Comparative Advantage	Zabeen	Chloe

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If we compare opportunity costs — reading down each column — for cookies, Zabeen has a lower opportunity cost (0.33 muffins), so she has a comparative advantage in baking cookies. For baking muffins, Chloe has a comparative advantage (2 cookies). So there are gains from trade if Chloe bakes muffins and Zabeen bakes cookies and they trade afterwards.

1.4

Economists as Mapmakers and Scientists: Thinking Like an Economist

Learning Objective

Explain how models like the circular flow of economic life make smart choices easier.

Main Point

The circular-flow model, like all economic models, focuses attention on what's important for understanding and shows how smart choices by households, businesses, and governments interact in markets.

Key Terms

model

a simplified representation of the real world, focusing attention on what's important for understanding

inputs

the productive resources — labour, natural resources, capital equipment, and entrepreneurial ability — used to produce products and services

positive statements

about what is; can be evaluated as true or false by checking the facts

normative statements

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about what you believe should be; involve value judgments

Discussion or Homework Q&A

1. Q. Suppose your friend, who is a history major, claims that economic models are useless because they are so unrealistic. He claims that since the models leave out so many descriptive details about the real world, they can't possibly be useful for understanding how the economy works. How would you defend your decision to study economics?

A. Models are like maps, which are useful precisely because they abstract from real-world detail. A useful map offers a simplified view, which is carefully selected according to the purpose of the map. No mapmaker would claim that the world is as simple as their map, and economists do not claim that the real economy is as simple as their models. What economists claim is that their models isolate the simplified effect of some real forces (like self-interested smart choices) operating in the economy, and yield predictions that can be tested against real-world data.

Another way to answer your friend would be to challenge him to identify what a more realistic model or theory would look like. You would do well to quote Milton Friedman (a Nobel Prize–winner in economics) on this topic: "A theory or its 'assumptions' cannot possibly be thoroughly 'realistic' in the immediate descriptive sense. … A completely 'realistic' theory of the wheat market would have to include not only the conditions directly underlying the supply and demand for wheat but also the kind of coins or credit instruments used to make exchanges; the personal characteristics of wheat-traders such as the color of each trader's hair and eyes, … the number of members of his family, their characteristics, … the kind of soil on which the wheat was grown, … the weather prevailing during the growing season; … and so on indefinitely. Any attempt to move very far in achieving this kind of 'realism' is certain to render a theory utterly useless." From Milton Friedman, "The Methodology of Positive Economics," in *Essays in Positive Economics* (Chicago: University of Chicago Press, 1953), p. 32.

Refresh Q&A

1.4.1 Q. All of the following are inputs EXCEPT
a. capital equipment.
b. natural resources.
c. governments.
d. labour.

A. **C –** The four types of inputs are labour, natural resources, capital

equipment, and entrepreneurial activity.

1.4.2 Q. **In the circular-flow model,**
a. households ultimately own all inputs of an economy.
b. governments set the rules of the game.
c. businesses are sellers and households are buyers in output markets.
d. all of these answer choices are correct.

A. **D –** The subsection "Economic Models" under the heading "The Circular Flow of Economic Life" shows all of the above are true.

1.4.3 Q. **Which of the following statements is normative?**
a. Economists should not make normative statements.
b. Warts are caused by handling toads.
c. As phone prices fall, people buy more of them.
d. As test dates get closer, students study more hours.

A. **A –** Normative statements involve value judgments or opinionsthings that cannot be factually checked. Normative statements cannot be tested or shown to be true or false. The other three statements can be easily verified by collecting and analyzing data.

1.5

Where and How to Look:

Models for Microeconomics and Macroeconomics

Learning Objective

Differentiate microeconomic and macroeconomic choices, and explain the Three Keys model for smart choices.

Main Point

The Three Keys model summarizes the core of microeconomics, providing the basis for smart choices in all areas of your life.

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Key Terms

microeconomics

analyzes choices that individuals in households, individual businesses, and governments make, and how those choices interact in markets

macroeconomics

analyzes performance of the whole Canadian economy and global economy, the combined outcomes of all individual microeconomic choices

marginal benefits

additional benefits from the next choice

marginal opportunity costs

additional opportunity costs from the next choice

implicit costs

opportunity costs of investing your own money or time

negative (or positive) externalities

costs (or benefits) that affect others external to a choice or a trade

Discussion or Homework Q&A

1. Q. **Back in the old days, professors and students could smoke in the classroom. Today, smoking indoors in public places is illegal.**

   a. Provide an example of an "external cost" that indoor smokers fail to consider when deciding to light up inside the classroom.

   b. Do you think that those who smoked indoors considered the "external cost" in their decision to smoke? Why or why not?

   c. Another way to discourage smoking is to tax the activity. If people respond to incentives, how would we expect smokers to adjust their behaviour in response to an increase in a cigarette tax?

   A. a. Smokers often ignore the cost that non-smokers incur from inhaling their cigarettes. If they considered this cost in their decision-making process, then they might decide that the cost exceeds the benefit.

   b. No — if they did, they wouldn't have smoked indoors because the

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external cost would likely have been high enough to offset personal gains.

c. Since a tax represents a rise in price to the end user, an increase in the tax on cigarettes should cause smokers to reduce the number of cigarette packs they buy, assuming they are sensitive to changes in the price. However, it is possible that some smokers may be addicted to the point where they cannot reduce their consumption.

2. Q. **From a social point of view, external costs should be included in making smart decisions, but sometimes they are not. In each of the following examples, determine whether the market economy (in the absence of government policy) would result in too few or too many products or services being produced. Then describe one policy or program that the government has in place to force individuals to consider these costs or benefits when they make decisions.**

a. pollution levels

b. smoking levels

c. education levels

A. a. too much pollution; carbon taxes, fines for cars that don't pass emission tests

b. too high; cigarette taxes, banning smoking indoors

c. too little education; tuition subsidies, loans

Refresh Q&A

1.5.1 **Q.** **Which of the following is NOT a microeconomic choice for businesses?**

a. what interest rate to set

b. what products to supply

c. what quantity of output to produce

d. how many workers to hire

A. **A –** Interest rate policy is a macroeconomic choice that governments make.

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1.5.2 **Q.** **Which of the following is NOT a microeconomic choice for governments?**

a. increasing tuition rates

b. taxing automobile emissions

c. increasing the value of the Canadian dollar on foreign exchange markets

d. increasing the number of taxi licences

A. **C –** Foreign exchange policy is a macroeconomic choice that governments make.

1.5.3 **Q.** **All of the following should be considered when making smart choices, EXCEPT**

a. external costs and benefits.

b. past costs and benefits.

c. implicit costs.

d. additional costs and additional benefits.

A. **B** – When standing at a fork in the road, don't look back, only look forward. Your previous decisions or the money you already spent are history and can't be undone. The past is the same no matter which fork you choose now, so it shouldn't influence your choice.

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