

## Chapter 3

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### **Issue: What to Do About the Federal Budget Balance?**

- Budget surplus, what should they do?
  1. Let the financial surplus materialize, thereby saving these funds and reducing the public debt by an equivalent amount
  2. Spend the surplus by allocating predicted funds to public expenditures, therefore choosing to run a balanced budget
  3. Spend the surplus through a cut in taxes, in which case federal authorities would also be choosing a balanced budget scenario for the next fiscal year
- An **optimal decision** is one that is the most desirable alternative among the possibilities permitted by the available resources, which are always scarce in this sense

### **SCARCITY, CHOICE, AND OPPORTUNITY COST**

- Basic theme of economics is scarcity: the fact that resources are always limited
- **Resources** - instruments provided by nature or by people that are used to create goods and services
- Natural resources include minerals, soil, water, and air
- Labour is a scarce resource because of time limitations and skilled workers are rare
- Factories and machines are man-made resources - referred to as **land labour** and **capital** - also called **inputs** or **factors of production**
- The scarcity of physical resources is more fundamental than scarcity of funds
- Virtually all resources are scarce, meaning that humans have less of them than we would like
- Therefore, choices must be made among limited set of possibilities, in full recognition of the inescapable fact that a decision to have more of one thing means that we will have less of something else
- Popular definition of economics is study of how best to use limited means to pursue unlimited ends
- **Opportunity Cost** - the value of the next best alternative that the decision forces the decision maker to forgo

### Opportunity Cost and Money Cost

- Connection or difference between an item's opportunity cost and market price
  - The true opportunity cost of a car isn't its market price but the value of the other things that could have been made or purchased instead
- If the market functions well, goods that have high opportunity costs will also have high money costs.
- In turn, goods that have low opportunity costs will also have low money costs
- BUT it's a mistake to treat opportunity costs and explicit monetary costs as identical
- Market doesn't always function well, and hence assigns prices that don't accurately reflect opportunity costs
- Some valuable items may not bear explicit price tags at all (university education)
- Also items that are given away for "free" - you incur no explicit monetary cost to acquire an item that is given away for free. But if you must wait in line to get the "free" commodity, you incur an opportunity cost equal to the value of the next best use of your time

### Optimal Choice: Not Just Any Choice

- When required information is scarce and the necessary research and calculations are costly and difficult, the decision maker will settle on the first possibility that he can "live with" - a choice that promises to yield results that are not too bad, and that seem fairly safe
- Known as **satisficing**
- **Optimal Decision** - one that best serves the objectives of the decision maker. It is selected by explicit or implicit comparison with the possible alternative choice. The term *optimal* connotes neither approval nor disapproval of the objective itself

### **SCARCITY AND CHOICE FOR A SINGLE FIRM**

- **Output** - outputs of a firm or an economy are the goods and services it produces
- **Input** - inputs used by a firm or an economy are the labour, raw materials, electricity and other resources it uses to produce its outputs
- With limited resources at its disposal, the more of one good the firm produces, the less of the other it will be able to make
- Example:
  - If Jones grows only soybeans, the harvest will be 40,000 bushels
  - But if he reduces his soybean production to 30,000 bushels, he can also grow 38,000 bushels of wheat
  - Thus the **opportunity cost** of obtaining 38,000 bushels of wheat is 10,000 fewer bushels of soybeans
  - Put another way, the opportunity cost of 10,000 more bushels of soybeans is 38,000 bushels of wheat
- **Production possibilities frontier** - shows the different combinations of various goods that producer can turn out, given the available resources and existing technology
- Because resources are limited, the production possibilities frontier always slopes downward to the right
- In addition to having a negative slope, it is "bowed outward" - as larger and larger quantities of resources are transferred from the production of one output to production of another, the additions to the second output decline
- Inputs tend to be specialized
- Example:
  - Initially, farmer was using resources for soybean production that were relatively more productive in growing wheat
  - Consequently, their relative productivity in soybean production was low
  - When these resources are switched to wheat production, the yield is high
  - As more wheat is produced, the farmer must utilize land and machinery with a greater productivity advantage in growing soybeans and a smaller productivity advantage in growing wheat
  - As a result, returns continue to decline as wheat production expands
- Slope of production possibilities frontier graphically represents concept of opportunity cost
- As we move upward to the left along the production possibilities frontier (toward more soybeans and less wheat), the opportunity cost of soybeans in terms of wheat increases
- Looking at it another way, as we move downward to the right, the opportunity cost of acquiring wheat by giving up soybeans increases - more and more soybeans must be forgone to per added bushel of wheat and successive addition to wheat output occur

### The Principle of Increasing Cost

- **Principle of increasing costs** - states that as the production of a good expands, the opportunity cost of producing another unit generally increases
- principle based on the fact that resources tend to be specialized - so we lose some of their productivity when those resources are transferred from doing what they are relatively good at to what they relatively bad at (simply asserts that production possibilities frontier is bowed outward)
- More typically, as a firm concentrates more of its productive capacity on one commodity, it is forced to employ inputs that are better suited to making another commodity
- Firm is forced to vary proportions in which it uses inputs because of limited quantities of some of those inputs

### SCARCITY AND CHOICE FOR THE ENTIRE SOCIETY

- The position and shape of the production possibilities frontier that constrains society's choices are determined by the economy's physical resources, its skills and technology, its willingness to work, and how much it has devoted in the past to the construction of factories, research, and innovation
- Example:
  - If most workers are employed in auto plants, car production will be large but the output of ice breakers will be small
  - If the economy transfers resources out of auto manufacturing when consumer demand declines, government can alter the output mix toward production of more ice breakers
  - However, something is likely to be lost in the process because some physical resource may be specialized and not easily transferable from one industry to another, thereby encountering some increasing costs as this transfer of resources is made (rubber tires in car manufacturing isn't very useful in ice breakers)
- The downward slope of society's production possibilities frontier implies hard choice must be made. Unless resources aren't fully utilized, civilian consumption (automobiles) can be increased only by decreasing defence spending.
- Curvature of production possibilities frontier implies that as public spending increases, it becomes progressively more expensive to "buy" additional defence

### Scarcity and Choice Elsewhere in the Economy

- The nature of opportunity cost is perhaps most obvious for a household that must decide how to divide its income among goods and services

### THE CONCEPT OF EFFICIENCY

- **Efficiently** - a set of outputs is said to be produced efficiently, if given current technological knowledge, there is no way one can produce larger amounts of any output without using larger input amounts or giving up some quantity of another product
- Economists define efficiency as the absence of waste
- An efficient economy wastes none of its available resources and produces the maximum amount of output that its technology permits
- The concept of efficiency doesn't tell us which point on the production possibilities frontier is best - it tells us only that any point below the frontier can't be best because any such point represents wasted resources
- Why would a society ever find itself at a point below the frontier? - most important reason is unemployment
- Inefficiency
  - Prime example is assigning inputs to the wrong task - as when wheat is grown on land best suited to soybean cultivation
  - Another important type of inefficiency occurs when large firms produce goods that smaller enterprises could make better because they can pay closer attention to detail (works the other way around as well)
  - Discrimination against women, immigrants, or aboriginal people is another form of waste
  - Each inefficiency means that the community obtains less output than it could have, given the available inputs

### THE THREE COORDINATION TASKS OF ANY ECONOMY

- **Allocation of resources:** refers to the society's decisions on how to divide up its scarce input resources among the different outputs produced in the economy and among the different firms or other organizations that produce those outputs
- In allocating resources, every society must make three decisions:
  1. How to utilize its resources efficiently - find a way to reach its production possibilities frontier
  2. Which of the possible combinations of goods to produce - select specific point on production possibilities frontier
  3. How much of the total output of each good to distribute to each person
- Consumer demands and production costs allocate resources automatically and anonymously through a system of prices and markets

### SPECIALIZATION FOSTERS EFFICIENT RESOURCE ALLOCATION

- Production efficiency - tremendous productivity gains stem from specialization

### The Importance of the Division of Labour

- **Division of Labour (Adam Smith)** - means breaking up a task into a number of smaller, more specialized tasks so that each worker can become more adept at a particular job
- Raises efficiency and productivity

### The Principle of Comparative Advantage

- Adam Smith noticed that *how* goods were produced can make a huge difference to productivity - but so can *which* goods are produced
- People have different abilities
- Two people (or businesses or countries) can generally gain from trade even if one of them is more efficient than the other in producing everything
- **Comparative Advantage** - one country is said to have a comparative advantage over another in the production of a particular good *relative* to other goods if it produces that good less inefficiently than it produces other goods, as compared with the other country
- Theory often used to analyze international trade patterns
  - A country particularly well endowed with a natural resource should specialize in those items, producing more than it wants for its own use
  - The country can then take the money it earns from its exports and purchase from other nations the items it doesn't make for itself
- Even if one country is worse than another country in the production of every good, it is said to have a comparative advantage in making the good at which it is **least inefficient** - compared to the other country
- A country can gain by importing a good from abroad even if that good can be produced more efficiently at home
  - Such imports make sense if they enable the country to specialize in producing those goods at which it is **even more efficient**

### SPECIALIZATION LEADS TO EXCHANGE

- Problem: with specialization, people no longer produce only what they want to consume themselves
- Without a system of exchange, the enhanced productivity achieved by comparative advantage and the division of labour would do society little good - with it, standards of living have risen enormously
- **Voluntary exchange** between two parties must make both parties better off - trading increases production by permitting specialization
- Markets and prices coordinate these activities - Adam Smith

### MARKETS, PRICES, AND THE THREE COORDINATION TASKS

- **Market system** - a form of economic organization in which resource allocation decisions are left to individual producers and consumers acting in their own best interests without central direction
- Market deals with efficiency in production through the profit motive, which discourages firms from using inputs wastefully
- Valuable resources (such as energy) command high prices, giving producers strong incentives to use them efficiently
- Market mechanism also guides firms' output decisions, matching quantities produced to consumer preferences
- A price system distributes goods among consumers in accord with their tastes and preferences, using voluntary exchange to determine who gets what
- Ability to buy goods is hardly divided equally - workers with valuable skills and owners of scarce resources can sell what they have at attractive prices

