



**Module 2: Basic Economic Concepts  
Learner Resource Guide**

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# Chapter 1

## What Is Economics?

Economics is a social science concerned with the production, distribution, and consumption of goods and services. It studies how individuals, businesses, governments, and nations make choices on allocating resources to satisfy their wants and needs, trying to determine how these groups should organize and coordinate efforts to achieve maximum output.

Economics can generally be broken down into macroeconomics, which concentrates on the behaviour of the aggregate economy, and microeconomics, which focuses on individual consumers and businesses.

## KEY TAKEAWAYS

- Economics is the study of how people allocate scarce resources for production, distribution, and consumption, both individually and collectively.
- Two major types of economics are *microeconomics*, which focuses on the behavior of individual consumers and producers, and *macroeconomics*, which examine overall economies on a regional, national, or international scale.
- Economics is especially concerned with efficiency in production and exchange and uses models and assumptions to understand how to create incentives and policies that will maximize efficiency.
- Economists formulate and publish numerous economic indicators, such as gross domestic product (GDP) and the Consumer Price Index (CPI).
- Capitalism, socialism, and communism are types of economic systems.

## Understanding Economics

One of the earliest recorded economic thinkers was the 8th-century B.C. Greek farmer/poet Hesiod, who wrote that labor, materials, and time needed to be allocated efficiently to overcome scarcity. But the founding of modern Western economics occurred much later, generally credited to the publication of Scottish philosopher Adam Smith's 1776 book, *An Inquiry Into the Nature and Causes of the Wealth of Nations*.<sup>1</sup>

The principle (and problem) of economics is that human beings have unlimited wants and occupy a world of limited means. For this reason, the concepts of efficiency and productivity are held paramount by economists. Increased

productivity and a more efficient use of resources, they argue, could lead to a higher standard of living.

Despite this view, economics has been pejoratively known as the "dismal science," a term coined by Scottish historian Thomas Carlyle in 1849.<sup>2</sup> He used it to criticize the liberal views on race and social equality of contemporary economists like John Stuart Mill, though some sources suggest Carlyle was actually describing the gloomy predictions by Thomas Robert Malthus that population growth would always outstrip the food supply.

## **Types of Economics**

The study of economics is generally broken down into two disciplines.

- Microeconomics focuses on how individual consumers and firm make decisions; these individuals can be a single person, a household, a business/organization or a government agency. Analyzing certain aspects of human behaviour, microeconomics tries to explain they respond to changes in price and why they demand what they do at particular price levels. Microeconomics tries to explain how and why different goods are valued differently, how individuals make financial decisions, and how individuals best trade, coordinate and cooperate with one another. Microeconomics' topics range from the dynamics of supply and demand to the efficiency and costs associated with producing goods and services; they also include how labour is divided and allocated, uncertainty, risk, and strategic game theory.
- Macroeconomics studies an overall economy on both a national and international level. Its focus can include a distinct geographical region, a country, a continent, or even the whole world. Topics studied include foreign trade, government fiscal and monetary policy, unemployment rates, the level of inflation and interest rates, the growth of total production output as reflected by changes in the Gross Domestic Product (GDP), and business cycles that result in expansions, booms, recessions, and depressions.

Micro- and macroeconomics are intertwined; as economists gain an understanding of certain phenomena, they can help us make more informed decisions when allocating resources. Many believe that microeconomics' foundations of individuals and firms acting in aggregate constitute macroeconomic phenomena.

## **Schools of Economic Theory**

There are also schools of economic thought. Two of the most common are monetarist and Keynesian. Monetarists have generally favourable views on free markets as the best way to allocate resources and argue that stable

monetary policy is the best course for managing the economy. In contrast, the Keynesian approach believes that markets often don't work well at allocating resources on their own and favours fiscal policy by an activist government in order to manage irrational market swings and recessions.

Economic analysis often progresses through deductive processes, including mathematical logic, where the implications of specific human activities are considered in a "means-ends" framework. Some branches of economic thought emphasize empiricism, rather than formal logic—specifically, macroeconomics or Marshallian microeconomics, which attempt to use the procedural observations and falsifiable tests associated with the natural sciences.

Since true experiments cannot be created in economics, empirical economists rely on simplifying assumptions and retroactive data analysis. However, some economists argue economics is not well suited to empirical testing, and that such methods often generate incorrect or inconsistent answers.

## Functions of an Economic System

Article Shared by **Ritika Muley**

No economy is free from economic problems. Even the richest nation of the world experiences alternating crises. Why? The answer is that the resources to satisfy growing needs of the people are limited in nature. In brief, the answer is '**scarcity**'. That is why an economy has to make a large number of choices. In fact, scarcity and choice go hand in hand.

Scarcity and choice are at the heart of economic activity. One observes interaction between scarce resources and unlimited human wants. Scarcity arises when resources for producing goods and services that people desire are insufficient to meet all our wants. Scarcity is not to be confused with poverty.

Scarcity occurs both among the rich and the poor. "**Scarcity is a fact of life, just as is gravity. And just as physicists did not invent gravity, economists did not invent scarcity.**" Faced with scarcity, an economy has to make a large number of choices among the available alternatives.

All economic choices can be presented in terms of five basic economic questions.

**In other words, every economic system, irrespective of its nature, must carry out the following five functions:**

1. What goods and services are to be produced? This is called '**allocation problem**'.

2. How are these goods and services produced? This is called **‘production problem’**.

3. For whom are these goods and services produced? This is called **‘distribution problem’**.

In short, these three problems are called the **‘What’, ‘How’, and ‘For whom’** questions.

**These problems can be presented in the form of a table:**

**Table 1.1: Three Basic Economic Problems (Questions)**

From the Standpoint of a Country as a Whole	From the Standpoint of a Firm/Industry
1. WHAT goods and services are to be produced? (Allocation problem)	1. The product decision:
2. HOW these goods and services are to be produced? (Production problem)	2. The hiring and firing of workers, purchase of required inputs, capital budgeting decision, etc.
3. FOR WHOM these goods are to be produced? (Distribution problem)	3. The market segmentation decision, i.e., assigning of marketing fields where products are to be sold.

**In addition to this trio, we face two other problems that require to be addressed here:**

4. Are the country’s scarce resources being fully utilized or are some of them lying idle? This is the problem of **‘resource utilization’**.

5. Is the productive capacity of an economy growing or remaining static over time? This is known as the **‘problem of economic growth’**.

The first question is concerned with the allocation of scarce resources among alternative uses. We need variety of goods. Because of resource scarcity, we cannot produce all of them at a time. We must take decisions in accordance with the targets and priorities of needs.

For example, if a country decides to produce more nuclear bombs, given the problem of scarcity of resources, it must give up the production of another commodity, say, and wheat. Hence, a **“trade-off”** is involved.

It may be pointed out here that this allocation problem or the decision of **'what to produce'** is examined in **'microeconomics'**.

The second question is related with the technique of production. There are a variety of methods to produce goods and services. Usually, there are two techniques of production to produce a commodity in certain amount—they are labour-intensive technique, and capital-intensive technique.

Normally, production of simple, unsophisticated consumer goods requires labour-intensive technique of production, while production of iron and steel, etc., demands capital-intensive method of production. But, strict adherence to these rules is neither possible nor desirable.

Therefore, the choice of a right technique of production is crucial since the output has to be maximized or the cost of production has to be minimized. It is suggested that a country must choose that technique of production that can produce goods and service in a **'least possible cost'** manner.

The third problem is connected with the problem of distribution of goods and services among the various members of the society. Given the resource constraint, an economy cannot produce enough goods for all members of a society. Thus, distribution is of great importance.

The economy must specify the mechanism by which goods and services already produced is distributed. Clearly, the distribution of the given output is settled by the purchasing power of the demanders. People with high (low) income have the largest (poorest) purchasing power. Thus, we are interested in determining the incomes or prices of different input services.

People having larger efficiency, skill and knowledge or enjoying a greater amount of properties (or resources) earn more incomes and thus enjoy larger amount of goods and services. Simply, it is said that higher **'money'** votes enable people to consume more goods. In fact, an economy produces more goods and services for people with **'more money'** than people with **'less money'**.

The fourth problem is connected with the utilization of resources. We know that a society does not have adequate resources to produce every kind of goods that a people want, even if these resources are efficiently utilized. But a free

enterprise capitalistic economy may exhibit unemployment or underemployment of resources—men and machines may remain idle.

This means wastage of resources. A capitalist economy can never utilize its resources fully. Resources remain involuntarily unemployed there. This causes national output to decline. In other words, actual production falls short of target or anticipated output.

This is really a problem of macroeconomics. John Maynard Keynes (1883-1946), in the 1930s, searched the causes for unemployment of resources and gave suggestions to control unemployment, mainly through government action.

The fifth problem is associated with the problem of economic growth.

An economy must grow over time. It remains static if national income, investment, employment, price level, etc., grow at the same rate year after year. No economy is a static one. Every economy tries to achieve a higher growth rate hitherto not attained through technological improvement and other means such as increases in the quantity and quality of inputs.

Every economy, irrespective of its nature, must face these problems. There is no escape route to avoid all these problems since scarcity and choice are at the heart of any economic activity. All the economies—primitive economy, feudal economy, customary economy, capitalist economy, socialist economy, or mixed economy—address these problems.

Note that the first three questions are concerned with the allocation of scarce resources, production and distribution of goods and services or income among the members of the society.

Since we are basically concerned with the market economy these basic questions are solved by price mechanism. These questions are handled under the heading “**price theory**”, popularly known as “**microeconomics**”. The last two questions are addressed in “**macroeconomics**”.

### **Illustrating Economic Problems: The Production Possibility Curve (PPC):**

Now we will illustrate these central economic problems in terms of a diagram. A curve— called the production possibility frontier (PPF)—will be used here to show how choice is made among scarce economic alternatives.

Every society has to decide WHAT goods and services are to be produced, HOW to produce, and FOR WHOM to produce—given the stock of resources. Let us consider a hypothetical economy where all resources— land, labour, capital, and organization—are **used to produce two goods**: food and clothing. Various possible combinations of output of these two goods can be represented by the production possibility curve (PPC).

A PPC (or a PPF) shows all the possible combinations of two goods which a country can produce if available resources are fully and efficiently employed. Thus, the PPC has meaning for a full employment, maximum efficiency economy in terms of both the prevailing state of technology and quantity and quality of available resources. This is illustrated in (Fig. 1.1).

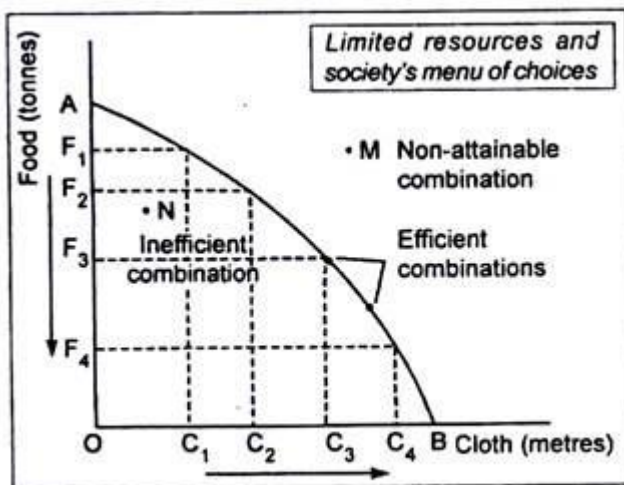


Fig. 1.1: The Production Possibility Frontier

The production of food is measured on the vertical axis and the production of cloth is measured on the horizontal axis. OA amount of food can be produced with all its resources fully employed if no cloth is produced. On the other hand, if the country decides to produce cloth only using all available resources fully, it can produce maximum OB amount of cloth; no food will be produced.

But with the existing stock of resources and the level of technology, a country produces combinations of both the goods. If all the different output combinations of two goods—food and cloth—are joined together, we get the curve AB. AB is the PPC or PPF.

The PPC or PPF itself describes the production or the supply side of an economy. All points on the PPC represent combinations of food and cloth that a country can produce given the full employment of the country's productive

resources and technology. If a country should decide to raise cloth output (from  $OC_1$  to  $OC_2$ ) then the curve AB shows that this could be achieved only by reducing food output (from  $OF_1$  to  $OF_2$ ).

The reduced food output is the opportunity cost of producing more cloth output. The quantity of food that is sacrificed is called the opportunity cost of producing more cloth. The PPC, thus, shows that each increase in the output of one good involves a sacrifice or a decrease in the production of another good, given the full employment situation.

As scarcity involves choices, economists say that **‘there cannot be free lunch’**. One may indeed get **‘lunch’** without paying any price! Your office, after remarkable performance, may provide today’s **‘lunch’** to all staff. Even then, there is a **‘cost’** to someone—ultimately to the society in which we live. An economy unarguably faces resource scarcity that can be used for producing other commodities.

In other words, in making the **‘lunch’** available, either we sacrifice production of food for more cloth output, or we sacrifice cloth output for additional unit of food output. This sacrifice is called **‘opportunity cost’** by economists. To get more of one commodity, we sacrifice the opportunity of getting another commodity.

Now, we can say that the PPC illustrates scarcity and choice. It can explain the WHAT, HOW, and FOR WHOM problems that an economy faces.

The PPC shows the maximum production of two goods with given resources. If the society decides to have more cloth output, it will lie close to point B. If the society plans to produce more food-grains, it will be nearer to point A.

How much food and cloth output will be produced using the available resources greatly depends on the demand for these two items. Production will be made in accordance with the demands for the products. Any production combination below or inside the curve AB is attainable, but it represents an inefficient use of resources.

Point N suggests that as the resources are not fully and efficiently utilized, society enjoys fewer outputs. Consider point M that lies outside the PPC. This is an impossible combination as the nation does not have enough resources to produce those quantities of food and cloth. Thus, the PPC describes what goods and services are to be produced and in what quantities.

All points on the PPC describe that society's resources are optimally utilized. As these points on the curve represent maximum amount that can be produced with full employment of resources, these points describe efficient combinations.

The PPC highlights the second problem—the problem of choosing appropriate technique of production. All kinds of technique do not produce the same level of output. Some techniques are more efficient than others in the sense that the former produces larger quantities at lower costs.

If the technique of production is deemed to be inefficient, resources will not be fully or optimally utilized. Inefficient techniques result in lower output. Point N on the PPC describes inefficient outcome, given the resources available in the economy. If the technique of production is an efficient one, the society will then stay on the curve AB.

However, the choice of a certain technique of production crucially depends on the availability of resources.

In a labour-abundant country, labour-intensive technology may be chosen while, in a capital-rich country, capital-intensive technology may be recommended. However, such clear-cut decisions may not be advisable at face value. Other relevant factors must be taken into account while selecting a right technique of production.

However, the PPC cannot describe the **'FOR WHOM TO PRODUCE'** problem directly.

Let us talk about the fourth problem. Whether an economy's resources are fully utilized or not can be read from the PPF. Any point inside the AB curve indicates lower volume of outputs of both food and cloth compared to points on the curve AB. Point N indicates inefficient use of resources or a failure to use all the resources that are available.

In other words, lesser outputs are available inside the PP curve because of underutilization of resources.

Resources may not be fully employed. Some people may remain unemployed, or some lands may remain uncultivated, or some production facilities may not be optimally used. Further, resources may be used inefficiently. If wrong input

combinations are chosen, an economy may produce less than the full employment output.

The fifth problem can also be explained in terms of PPF. If a country stays on the curve AB drawn in Fig. 1.1, then the productive capacity of the society becomes static. As a result, the problem of scarcity- gets magnified more and more as time progresses. Thus, it cannot move to point M of (Fig. 1.1).

What is required is the increase in production and productivity so that the scarcity problem can be lessened. This means the shifting of the PPC outwards. There are three main ways through which an economy's capacity to produce can be raised.

**These are:**

- (i) Growth of capital stock
- (ii) Improvement in technology
- (iii) Population

With given stock of resources, an economy has the production potential represented by the curve AB in (Fig. 1.2). Suppose, capital accumulation takes place. As a result, the AB curve will shift out to A<sub>1</sub>B<sub>1</sub> indicating larger output of food and cloth.

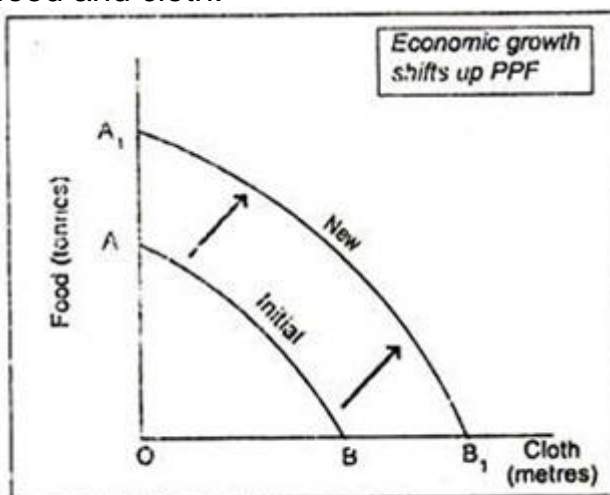


Fig. 1.2: Shifting of the PPF

Similarly, improvement in technology as well as a rise in labour force consequent upon the population growth will shift the entire curve to the

rightward direction. However, there is no reason to believe that the PPC will shift parallelly in the upward direction.

The PPC may also shift downward. Suppose, an earthquake or flood has taken place. As a result of such natural disaster, the economy will experience fewer resources, such as breakdown in transport and communication system. All these will shift PPC downward indicating lower outputs of both the goods.

### **Shape of the PPC:**

The PPF is a bowed out curve or concave from above. This shape is due to the operation of the law of diminishing returns or the law of increasing opportunity cost, that is, the sacrifice of a next best alternative. A small increase in food output indicates a reduction in the output of cloth or a fall in food output is the opportunity cost of a larger cloth output.

However, a society's food output increases because inputs required for the cloth production are transferred to food production. Now, more and more employment of a resource in food output will result in a decline in its marginal productivity. This means an increase in cost. Hence another name of law of diminishing returns is the law of increasing opportunity cost.

Consider point A on the curve AB of (Fig. 1.1). If a nation decides to produce  $OC_1$  of cloth, it should sacrifice  $AF_1$  amount of food output. Production of more cloth demands an additional  $F_1F_2$  amount of food output to be sacrificed, and so on.

As the society decides to produce more cloth, it will have to sacrifice food output. It is clear from the figure that gradually marginal product of input needed for food production declines. This indicates  $F_3F_4 > F_2F_3 > F_1F_2$ . In other words, the rate of substitution between food and cloth is diminishing and, hence, the PPC is concave to the origin.

If the PPC becomes a straight line, it will reflect a fixed rate of substitution between food and cloth. In other words, for a straight line PPC, opportunity cost remains unchanged. This is said to be the case of constant opportunity cost.

The slope of the PPF drawn in (Fig. 1.1) is  $OA/OB$ . It measures the opportunity cost in terms of food of producing 1 extra meter of cloth. The slope of the PPC is often called marginal rate of transformation (MRT) of food into cloth or of cloth

into food. For a straight line PPC, MRT is unchanged, and for a convex PPC, the slope i.e., MRT increases and, hence, opportunity cost increases.

## Types of Economic Systems

Economic systems are defined either by the way that stuff is produced or by how that stuff is allocated to people. For example, in primitive agrarian societies, people tend to self-produce all of their needs and wants at the level of the household or tribe. Family members would build their own dwellings, grow their own crops, hunt their own game, fashion their own clothes, bake their own bread, etc. This self-sufficient economic system is defined by very little division of labor and is also based on reciprocal exchange with other family or tribe members. In such a primitive society, the concept of private property didn't typically exist as the needs of the community were produced by all for the sake of all.

Later, as civilizations developed, economies based on production by social class emerged, such as feudalism and slavery. Slavery involved production by enslaved individuals who lacked personal freedom or rights and existed as the property of their owner. Feudalism was a system where a class of nobility, known as lords, owned all of the lands and leased out small parcels to peasants to farm, with peasants handing over much of their production to the lord. In return, the lord offered the peasants relative safety and security, including a place to live and food to eat.

## Capitalism

Capitalism emerged with the advent of industrialization. Capitalism is defined as a system of production whereby business owners (capitalists) produce goods for sale in order to make a profit and not for personal consumption. In capitalism, capitalists own the business including the tools used for production as well as the finished product. Workers are hired in return for wages, and the worker owns neither the tools he uses in the production process nor the finished product when it's complete. If you work at a shoe factory and you take home a pair of shoes at the end of the day, that's stealing even though you made them with your own hands. This is because capitalist economies rely on the concept of private property to distinguish who legally owns what.

Capitalist production relies on the market for the allocation and distribution of the goods that are produced for sale. A market is a venue that brings together buyers and sellers, and where prices are established that determine who gets

what and how much of it. The United States and much of the developed world today can be described as capitalist market economies.

### **Capitalism Alternatives**

Alternatives to capitalist production exist. Two of the most significant ones developed in the 19th century as a response to what was seen as capitalism's abuses.

#### **Socialism**

is a system of production whereby workers collectively own the business, the tools of production, the finished product, and share the profits – instead of having business owners who retain private ownership of all of the business and simply hire workers in return for wages. Socialist production often does produce for profits and utilizes the market to distribute goods and services. In the U.S., worker co-ops are an example of socialist production organized under a broader capitalist system.

#### **Communism**

is a system of production where private property ceases to exist and the people of a society collectively own the tools of production. Communism does not use a market system, but instead relies on a central planner who organizes production (tells people who will work in what job) and distributes goods and services to consumers based on need. Sometimes this is called a command economy.

### **Participants in an Economic System**

#### **Household sector**

- Households are the major consumers of economic goods and services – they use their income to buy from firms.
- Households are the primary economic participants because they are the owners of the four factors of production.
- Households sell factors of production in the factor market to firms. • Households receive a remuneration from the firms in the form of wages, rent, interest and profit.

You must be able to draw a detailed diagram of a circular flow model. Figure 1.1 is a typical example of an open economy circular flow model.

## **Firms/business sector**

- Firms purchase the factors of production from the household in the factor market
- Firms use the factors of production to produce goods and services.
- Businesses sell goods and services to households, government and the foreign sector.
- Businesses receive an income from the other three participants (households, government and the foreign sector).

## **The state/public sector**

- This refers to local, regional and national government.
- The state provides the households and businesses with public goods and services. • The state receives taxes from households, e.g. income tax.
- The state receives taxes from the business sector, e.g. company tax.
- The state spends money in the economy.

## **Foreign sector**

- There is a flow of goods or imports that flow from the foreign sector and are paid for by the individual households, businesses and the public sector.
- These imports can be seen as expenditure by individual households, businesses and public sector. (A monetary outflow.)
- There is also a flow of goods and services to the foreign sector from businesses (exports). • These exports will result in an income for individual households, businesses and public sector. (A monetary inflow.)

Interaction between participants • Households provide production factors to producers (firms). • Households receive an income (Y) in return – rent, wages, interest and profits. • Households purchase goods and services from firms. • Firms receive income from sales revenue. • Households and firms purchase goods and services from the foreign sector as imports (M). • The foreign businesses receive money from firms and households. • Firms sell goods and services to the foreign sectors, and this is called exports (X). • Households and

firms pay taxes to the government. (T) • The government provides public goods and services to households and firms. • The unexhausted (unspent) part of the household and firms' income earned is saved in the financial sector of the economy. (S) • The money invested by firms and households is known as savings (S). • The funds received by the financial sector are used by firms/ businesses to purchase infrastructure for the production of goods and services. • This flow of money from the financial sector for use by firms is known as investment (I).

### Circular-flow diagram

The circular-flow diagram (or circular-flow model) is a graphical representation of the flows of goods and money between two distinct parts of the economy:

-market for goods and services, where households purchase goods and services from firms in exchange for money;

-market for factors of production (such as labour or capital), where firms purchase factors of production from households in exchange for money.

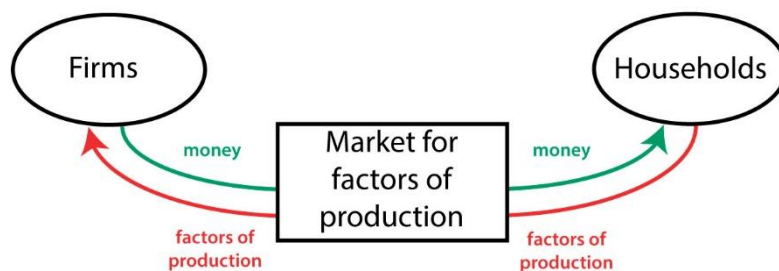
The market for goods and services is the place where households spend their money buying goods and services produced by firms. In other words, is the place where firms sell the goods and services they have produced, receiving a revenue paid by households.

This market represents the place where money and goods are exchanged. In this case, the flow of money (green arrow in the diagram below) goes from households to firms, in exchange for finished products, which flow from firms to households (red arrow).

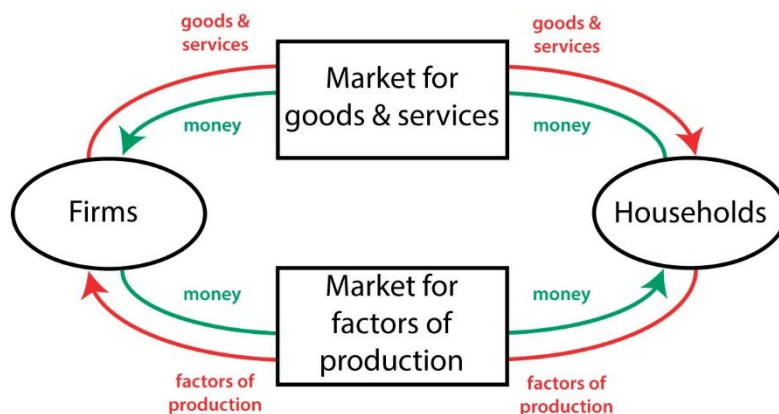


The market for factors of production is the place where households offer their labour, capital and other factors such as land, receiving an income for their use. Firms use these factors in their production.

In this case, money flows from firms to households (green arrow in the diagram below) in the form of wages in exchange for labour, interests for capital and rent for the use of land. Factors of production flow from households (red arrow) to firms, so they can produce more goods and services.



When we combine both diagrams, we get the circular-flow diagram, as shown below. The exchanges made in the economy imply a redistribution of rent according to the diagram, and the creation of value makes the economy grow.



It's worth mentioning that, as usually, diagrams do not shown how the economy actually works. There are a few things that are not showed in this diagram that must be taken into account to really understand how the economy of a country works. For instance, take government intervention. Things such as government spending (in the form of unemployment benefits, for example) or government income (taxes) are not shown in the diagram.

However, this diagram introduces a clear view of how the economy works. The way of measuring all these flows of money is the gross domestic product (GDP). It can be estimated using one of three methods: looking at total expenditure, at total income or using the production approach.

## Chapter 2

### The Economics of Labour, Trade, and Human Behaviour

The building blocks of economics are the studies of labor and trade. Since there are many possible applications of human labor and many different ways to acquire resources, it is difficult to determine which methods yield the best results.

Economics demonstrates, for example, that it is more efficient for individuals or companies to specialize in specific types of labor and then trade for their other needs or wants, rather than trying to produce everything they need or want on their own. It also demonstrates trade is most efficient when coordinated through a medium of exchange, or money.

Economics focuses on the actions of human beings. Most economic models are based on assumptions that humans act with rational behavior, seeking the most optimal level of benefit or utility. But of course, human behavior can be unpredictable or inconsistent, and based on personal, subjective values (another reason why economic theories often are not well suited to empirical testing). This means that some economic models may be unattainable or impossible, or just not work in real life.

Still, they do provide key insights for understanding the behavior of financial markets, governments, economies—and human decisions behind these entities. As it is, economic laws tend to be very general, and formulated by studying human incentives: economics can say profits incentivize new competitors to enter a market, for example, or that taxes disincentivize spending.

#### Economic Indicators

Economic indicators are reports that detail a country's economic performance in a specific area. These reports are usually published periodically by governmental agencies or private organizations, and they often have a considerable effect on stocks, fixed income, and forex markets when they are

released. They can also be very useful for investors to judge how economic conditions will move markets and to guide investment decisions.

### **Gross Domestic Product (GDP)**

Gross domestic product (GDP) is the market value of all final goods and services produced within an economy in a given period of time. This means that we take into account the market value of products of a given country, including nationals and foreigners working in that country. This is the main difference with the gross national product, which considers goods produced only by nationals of a country, without considering their residence.

Note that GDP is calculated over a given period of time, which makes it easy to compare it with other periods or the GDP of other countries. It has also two important implications: goods resold are not considered in the GDP; and goods finalised but not sold are considered as inventory.

We can estimate it using one of three methods. The income approach considers all wages, interests paid, rent and other sources of income to estimate GDP. The production approach estimates gross value and then subtracts intermediate consumption, considered as goods and services used in the making of final goods and services. Finally, there is the expenditure approach, which looks at the demand side.

The expenditure approach considers total expenditure, considering everyone in the economy, such as households, firms and government. GDP (also denoted as  $Y$ , production) can be disaggregated into four big components that classify the nature of the expenditure. These components are consumption ( $C$ ), investment ( $I$ ), government spending ( $G$ ) and net exports ( $NX$ ). With all these variables we can define the following identity:

$$Y = C + I + G + NX$$

Any amount of money spent in an economy can be classified into one of the four components of the identity, taking into account the nature of the product, the buyer and the purpose of the spending.

The evolution during the years of a country's GDP shows the performance of its economy. When GDP is bigger year after year, we can consider it as a sign of a growing economy. Inflation must be considered when analysing gross domestic product, in order to differentiate nominal and real GDP. Nominal GDP

considers only current prices, while real GDP is calculated using prices of a base year, in order to eliminate the effects of inflation

Additionally, if we look at the GDP per capita, dividing the GDP between that country's total population, we can compare the living standards among countries. However, this measure does not completely represent the welfare of a country's population, since other things must be taken into consideration.

## **Retail Sales**

The retail sales report is very closely watched and measures the total receipts, or total value, of all merchandise sold in stores.<sup>4</sup> The report estimates the total merchandise sold by taking sample data from retailers across the country—a figure that serves as a proxy of consumer spending levels. Because consumer spending represents more than two-thirds of GDP, this report is very useful to gauge the economy's general direction. Also, because the report's data is based on the previous month's sales, it is a timely indicator. The content in the retail sales report can cause above-normal volatility in the market, and information in the report can also be used to gauge inflationary pressures

## **Consumer Price Index (CPI)**

The Consumer Price Index (CPI), measures the level of retail price changes (the costs that consumers pay) and is the benchmark for measuring inflation. Using a basket that is representative of the goods and services in the economy, the CPI compares the price changes month after month and year after year.<sup>7</sup> This report is one of the more important economic indicators available, and its release can increase volatility in equity, fixed income, and forex markets. Greater-than-expected price increases are considered a sign of inflation, which will likely cause the underlying currency to depreciate.

## **Government intervention**

Government intervention is any action carried out by the government or public entity that affects the market economy with the direct objective of having an impact in the economy, beyond the mere regulation of contracts and provision of public goods.

Government intervention advocates defend the use of different economic policies in order to compensate the flaws of the economic system that give way to large economic imbalances. They believe the Law of Demand and Supply is not sufficient in order to ensure economic equilibria and government

intervention should be used to assure a correct functioning of the economy. Examples of these economic doctrines include Keynesianism and its branches such as New Keynesian Economics, which rely heavily in fiscal and monetary policies, and Monetarism which have more confidence in monetary policies as they believe fiscal policies will have a negative effect in the long run. On the other hand, there are other economic schools that believe that governments should not have an active role in the economy, and therefore should limit its intervention, as they believe it will have a negative impact in the economy. They believe that the economy should be left to run in a laissez-faire way and it will find its optimal equilibrium. Advocates of none or limited intervention include liberalism, the Austrian school and New Classical Macroeconomics.

As in most imperfect competition markets and especially in monopolistic ones, a firm may practice an abusive behaviour, which will translate into a loss of welfare. In such cases, government intervention will be praised both by consumers and those firms that seek for lower prices and a profitable share of the market. Regulations such as price setting, taxation or subsidies may be used in order to restore and maximise the initial efficiency of natural monopolies.

Nevertheless, the government must be cautious when setting and applying regulations, as an incorrect comprehension of the market structure may bring a higher cost to social welfare instead of the expected benefits. In order to achieve an optimal regulation level, governments should analyse and determine if natural monopolies can be sustained whenever they ensure a lower total cost. If this is the case, the government will have to guarantee that the firm does not make excessive revenues, and that fair prices are maintained. If, on the contrary, the total costs of the industry would diminish if new firms entered the market, the government should regulate their entrance. Essentially, what governments should do is to correctly balance the conflict between the industry's efficiency and its profitability.

## Economic policies

Reducing unemployment and stimulating the economy has been one of the biggest, if not the only, concerns of governments since the dawn of economic



science. Economic policies have been very much theorized, and by many doctrines. As a result, a rich and plentiful literature has been developed on this topic. We will discuss the main economic policies:

### **1. Policies in order to reduce labour supply:**

By reducing labour supply the government is reducing the number of people that are legally suitable to work, what is known as the labour force, and by doing so it indirectly reduces unemployment. This kind of policy is mostly effective when targeted over a group that has a higher unemployment rate than the average. If a country suffers from high unemployment amongst the young population, by increasing the minimum age of employment, governments will decrease unemployment levels. It will also be useful even if the targeted group has a low level of unemployment, as there will be new vacancies that unemployed can fill. Other examples of this policy include retirement age reduction and the increase of military service duration. However, as it can be easily seen, these policies are what Frenchmen would call “trompe-l’oeil”, that is, they reduce or eliminate the symptom (unemployment), but without treating the disease (the economy malfunction).

### **2. Policies to stimulate labour demand:**

There are different policies depending if they affect demand of labour by using demand-side policies or supply-side policies.

-Demand-side policies stimulate the economy by increasing the demand for goods and services, thus incentivising firms to produce more, which will result in firms hiring more workers. Expansive fiscal and monetary policies are the tools that governments can use. This kind of policies is considered by their different advocates (Keynesian economists would implement fiscal policies whilst monetarists would implement monetary policies) to be most effective at reducing cyclical unemployment during economic depression.

-Supply-side policies focus on firms and their production of goods and services, in order to increase the supply (output) of the economy. These policies aim at the costs of labour and the production function. If the cost decreases there will be more money available to increase the workforce. This kind of policies is nowadays regarded by the latest economic doctrines as the only real possibility

to ensure a perdurable economic growth. However, they are less attractive than demand policies since they need time to be implemented and to generate actual effects on unemployment and growth.

### **3. Structural reforms:**

These policies aim at reducing real wages. With lower wages, the firms will be able to hire more workers. Examples of this policy are: minimum wage reduction, unemployment benefit reduction and removing differences between insiders and outsiders.

### **4. Income policies:**

A pact between the firm and its workers allow for reduction of real wages, this way firms can hire more labour force, which reduces unemployment levels.

### **5. Labour distribution policies:**

Employees will work fewer hours, they will earn less, and so a greater amount of employees will be able to be hired. Marginal productivity is also increased by these policies. However, these policies are not really popular.

It is important to notice that not all policies are effective in the same time frame nor their effects remain over the same period. While supply-side policies and structural reforms have an effect in the long term, the rest have an effect in a shorter time, being this the reason why they were thoroughly studied by Keynesians and monetarists. However, contemporary economic doctrines, such as New Classical Macroeconomics and New Keynesian Economics have proven their inefficiency, thus turning back to supply-side policies as the only plausible solution.

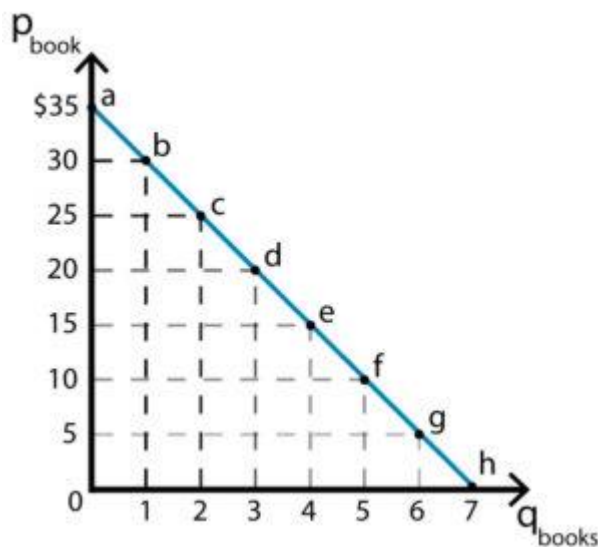
# Chapter 3

## Supply and Demand

Demand and supply are possibly the two most fundamental concepts used in economics. The concept of market is usually defined as a number of buyers and sellers of a given good or service that are willing to negotiate in order to exchange those goods. We will first explain them separately and then jointly to show their interaction.

### Demand:

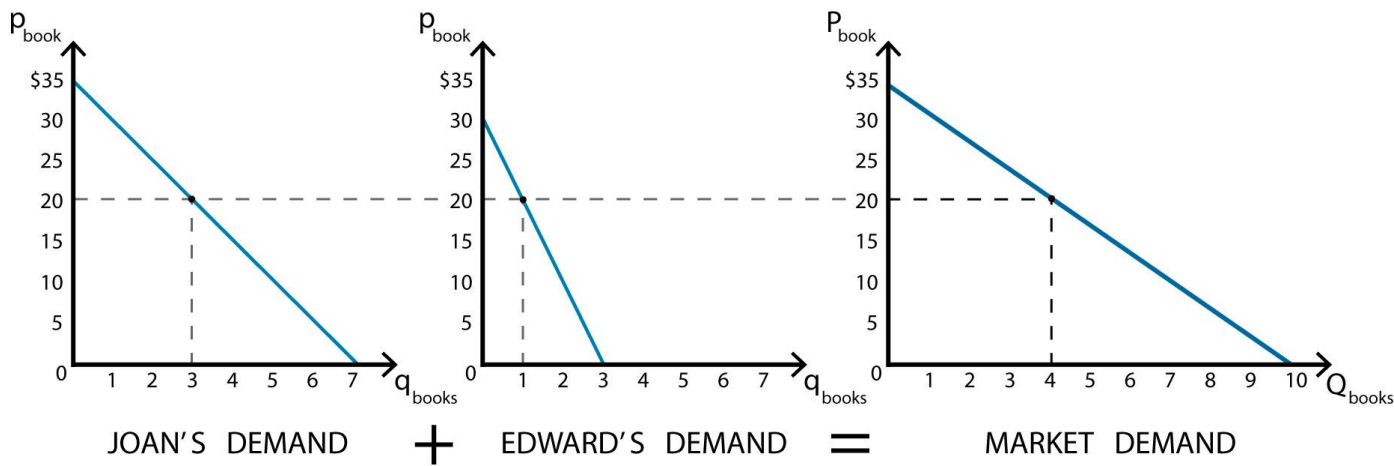
Demand is the global market value that expresses the purchasing intentions of consumers. The demand curve shows the quantity of a specific product that individuals or society are willing to buy according to its price and their income. This curve shows an inverse relationship between price and quantity demanded giving it a downward slope. The reason why this happens is known as the law of demand: *ceteris paribus*, and considering *ordinary goods*, the higher the price the lower the quantity demanded, and vice versa.



We can start by analysing demand from a purely *microeconomic* point of view: a single individual, let's say her name is Joan. Joan's demand for, let's say, books, is such as shown in the adjacent graph. If the price of a book is R35 or more, Joan won't demand any (point a), given her preferences (basically, she would rather spend her money on something else). However, if the price of books goes down to R30, she will want to buy one (point b). If it decreases to

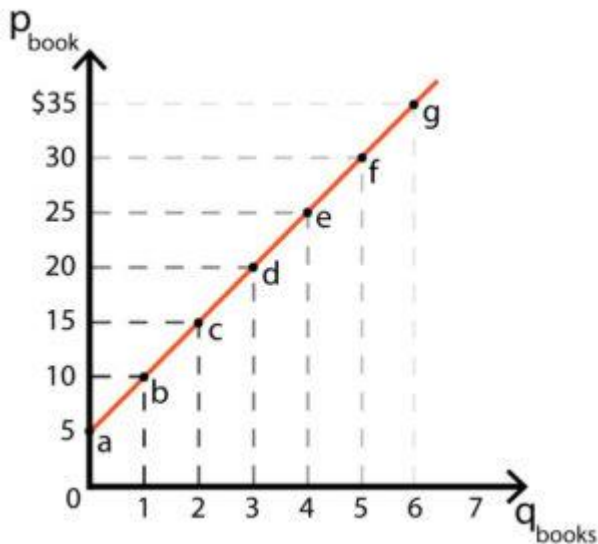
R20, Joan will buy two books (point c), and so on. By joining all the points (a-h), we'll get Joan's demand curve. It's worth mentioning that, for simplicity's sake (though violating monotonicity), we consider that the demand curve ends at the axes.

From a macroeconomic point of view, the demand curve is just the aggregation of all demand curves from all buyers in a particular market. Let's say the market for books has only two buyers: Joan and her classmate Edward. The horizontal sum of Joan and Edward's demand curves will give us the market demand:



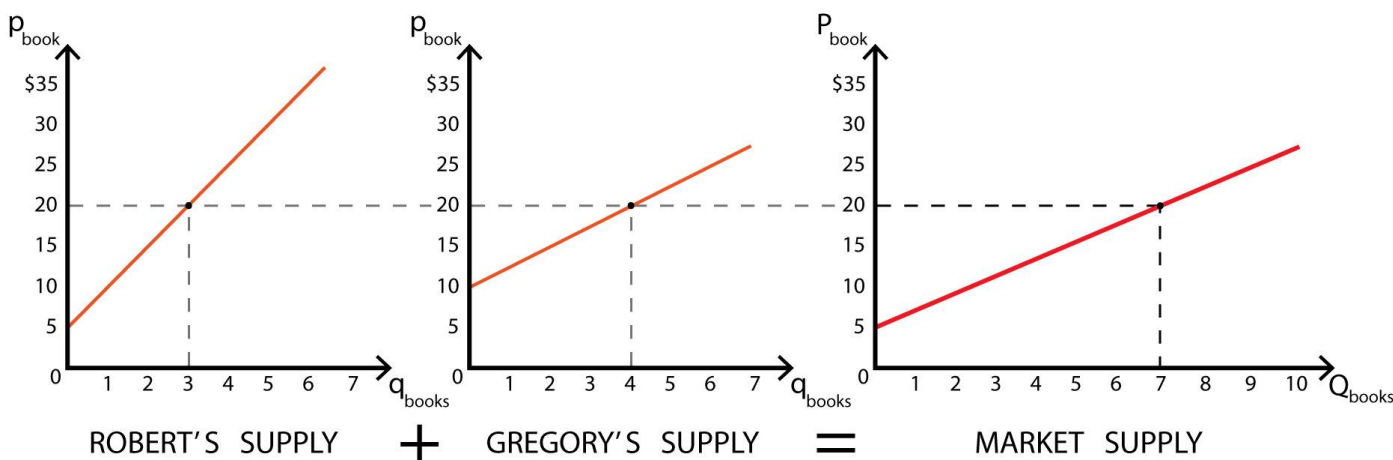
### Supply:

On the other side, supply is the set of offers made in the market for the sale of goods and services. The supply curve records the location of the points corresponding to the amount offered for a particular good or service at the different prices. This curve shows a direct relationship between price and quantity supplied, giving it an upward slope. The reason why this happens is known as the law of supply: *ceteris paribus*, and considering ordinary goods, the higher the price the higher the quantity supplied, and vice versa.



Let's see how the supply curve can be built, starting with an individual's offer, let's say his name is Robert. Robert is willing to supply books for R10 or more, this is, Robert won't supply any books for R5 (point a). However, if the price of books goes up to R10, he will be willing to sell one book (point b). If it increases to R15, Robert will sell two books (point c), and so on. By joining all the points (a-g), we'll get Robert's supply curve. Notice that the supply curve goes up and seems not to have limits, an assumption made for simplicity's sake. Of course, Robert will have troubles to supply more than a certain amount of books, but let's keep it simple and not think about the upper end of the supply curve.

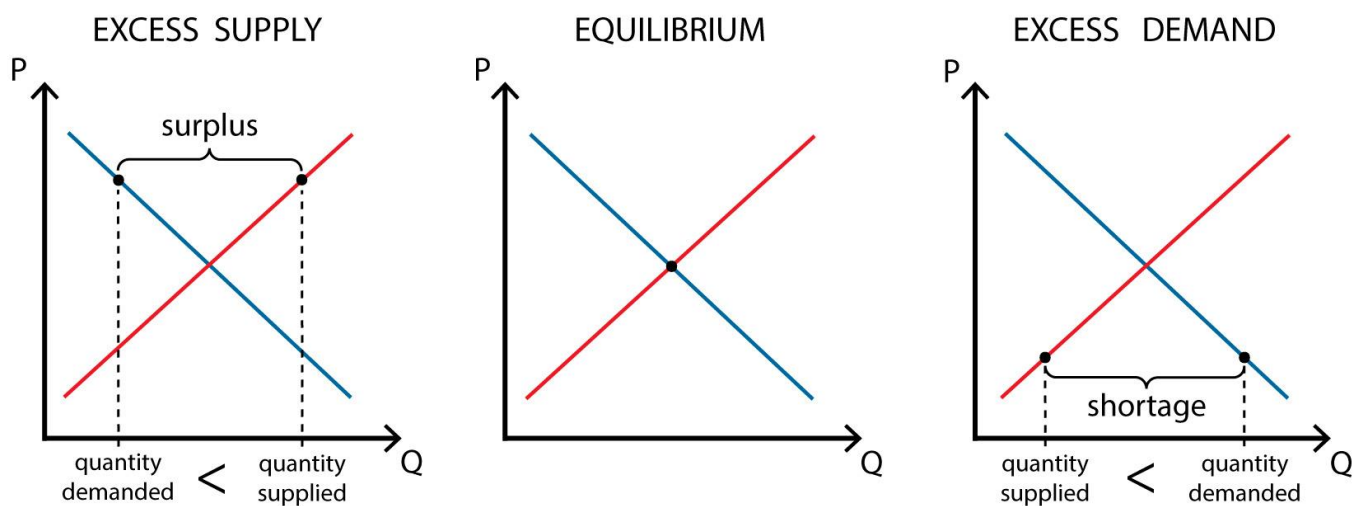
Again, the market's supply curve is just the aggregation of all supply curves from all sellers in a particular market. Let's say the market for books has only two sellers: Robert and the librarian next door, Gregory. The horizontal sum of Robert and Gregory's supply curves will give us the market supply:



## Equilibrium and market clearing:

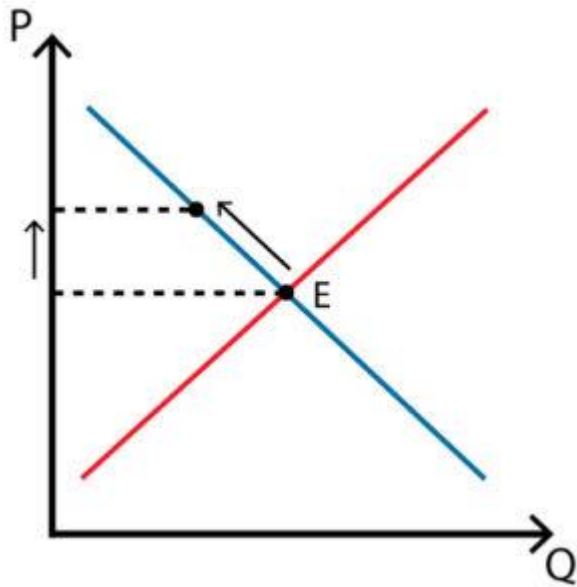
The demand and supply curves define the *market clearing*, that is, where the demand of the products meets its supply. At this point we have what is known as, an equilibrium point, with its corresponding price and quantity of equilibrium.

It is possible for disequilibrium to occur when the amount demanded does not equal the amount supplied. There are a series of scenarios in which this can happen. In situations in which the quantity demanded is higher than the quantity supplied, the market is suffering from an excess demand. When the opposite occurs we will be talking about an excess supply. Prices will have to gradually adjust through different market mechanisms until the equilibrium price is met.



## Movements vs. shifts:

When analysing demand and supply and their respective curves, it is important to distinguish between two aspects: movements along curves and shifts in curves.

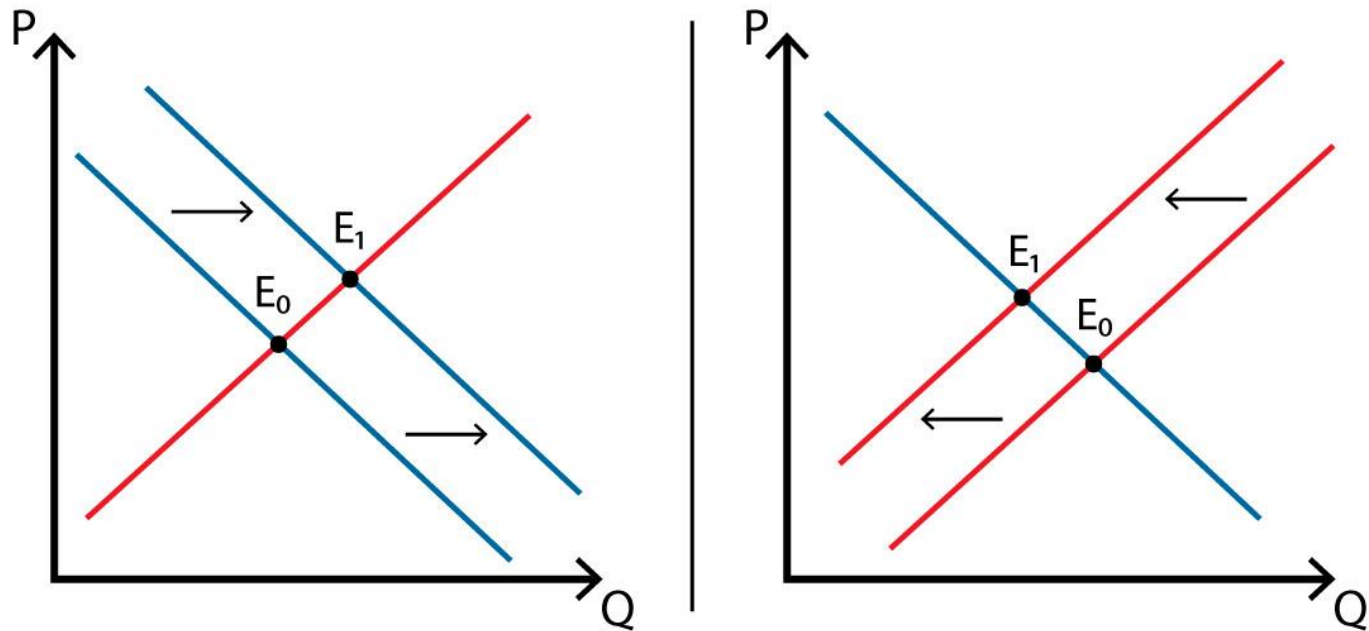


A movement refers to a change in either the demand or supply curve, which occurs when a change in the quantity is caused by a change in price and vice versa. An increase in the price of a good or service would cause a movement along its demand curve, decreasing the amount demanded. In the case of supply curves, as we previously saw, an increase in price would also increase quantity. It's important to understand that movement along the curves does never actually change the equilibrium point, as movements along the curves do not affect it. In the adjacent figure we can see a price increase (let's say, because an increase of VAT), which causes a movement along the demand curve.

Sometimes the market suffers from changes due to a displacement (shift) of the demand and/or the supply curve. This shift in curves will always result in a new market equilibrium. When a shift occurs, the curve moves, meaning that for each price there will be a new different quantity being demanded or offered. This curve shifts can occur in two directions, upwards and downwards, or if preferred, rightwards and leftwards. Depending in what curve we are considering one is equal to another one.

Demand curves may shift for multiple reasons, for example, an increase in the consumers' level of income would increase the aggregate demand of a normal good for each price, and hence shift the demand curve to the right (left figure). Other examples would include changes in the price of competitors (substitute goods), changes in complementary goods, tastes, expectations, number of

buyers, seasonality, etc. Supply curve shifts may be also motivated by a variety of different reasons, such as input prices: an increase on the price of paper would shift the supply curve to the left, since the same quantity would be sold at a higher price (right figure). Other variables that can shift the supply curve include technological progress, expectations, number of sellers, etc.



# Chapter 4

## New Keynesian Economics

DURING THE GREAT DEPRESSION of the 1930s, existing economic theory was unable either to explain the causes of the severe worldwide economic collapse or to provide an adequate public policy solution to jump-start production and employment. British economist John Maynard Keynes spearheaded a revolution in economic thinking that overturned the then-prevailing idea that free markets would automatically provide full employment—that is, that everyone who wanted a job would have one as long as workers were flexible in their wage demands (see box). The main plank of Keynes's theory, which has come to bear his name, is the assertion that aggregate demand—measured as the sum of spending by households, businesses, and the government—is the most important driving force in an economy. Keynes further asserted that free markets have no self-balancing mechanisms that lead to full employment. Keynesian economists justify government intervention through public policies that aim to achieve full employment and price stability.

The revolutionary idea Keynes argued that inadequate overall demand could lead to prolonged periods of high unemployment. An economy's output of goods and services is the sum of four components: consumption, investment, government purchases, and net exports (the difference between what a country sells to and buys from foreign countries). Any increase in demand has to come from one of these four components. But during a recession, strong forces often dampen demand as spending goes down. For example, during economic downturns uncertainty often erodes consumer confidence, causing them to reduce their spending, especially on discretionary purchases like a house or a car. This reduction in spending by consumers can result in less investment spending by businesses, as firms respond to weakened demand for their products. This puts the task of increasing output on the shoulders of the government. According to Keynesian economics, state intervention is necessary to moderate the booms and busts in economic activity, otherwise known as the business cycle.

There are three principal tenets in the Keynesian description of how the economy works:

- Aggregate demand is influenced by many economic decisions—public and private. Private sector decisions can sometimes lead to adverse macroeconomic outcomes, such as reduction in

consumer spending during a recession. These market failures sometimes call for active policies by the government, such as a fiscal stimulus package (explained below). Therefore, Keynesian economics supports a mixed economy guided mainly by the private sector but partly operated by the government.

- Prices, and especially wages, respond slowly to changes in supply and demand, resulting in periodic shortages and surpluses, especially of labour.

- Changes in aggregate demand, whether anticipated or unanticipated, have their greatest short-run effect on real output and employment, not on prices. Keynesians believe that, because prices are somewhat rigid, fluctuations in any component of spending—consumption, investment, or government expenditures—cause output to change. If government spending increases, for example, and all other spending components remain constant, then output will increase. Keynesian models of economic activity also include a multiplier effect; that is, output changes by some multiple of the increase or decrease in spending that caused the change. If the fiscal multiplier is greater than one, then a one dollar increase in government spending would result in an increase in output greater than one dollar.

### **Stabilizing the economy**

No policy prescriptions follow from these three tenets alone. What distinguishes Keynesians from other economists is their belief in activist policies to reduce the amplitude of the business cycle, which they rank among the most important of all economic problems. Rather than seeing unbalanced government budgets as wrong, Keynes advocated so-called that act against the direction of the business cycle. For example, Keynesian economists would advocate deficit spending on labour-intensive infrastructure projects to stimulate employment and stabilize wages during economic downturns. They would raise taxes to cool the economy and prevent inflation when there is abundant demand-side growth. Monetary policy could also be used to stimulate the economy— for example, by reducing interest rates to encourage investment. The exception occurs during a liquidity trap, when increases in the money stock fail to lower interest rates and, therefore, do not boost output and employment. Keynes argued that

governments should solve problems in the short run rather than wait for market forces to fix things over the long run, because, as he wrote, “In the long run, we are all dead.” This does not mean that Keynesians advocate adjusting policies every few months to keep the economy at full employment. In fact, they believe that governments cannot know enough to fine-tune successfully.

## **New Classical Macroeconomics**

New Classical Macroeconomics (NCM) arise from the development of the neoclassical economics principles, such as market clearing and optimization behavior by economic agents, which relate this school to monetarism. Its rise as a doctrine can be traced to the work in the early 1970s of its lead economist Robert Lucas (Chicago School).

Indeed, Lucas developed in 1973 what is known as rational expectations, an improvement on the adaptive expectations hypothesis used by monetarists, which changed the way macroeconomic analysis (and econometric analysis) is undertaken. These rational expectations are still used nowadays in macroeconomics.

Regarding policymaking, the NCM believes that no government intervention concerning demand is beneficial for the economy, not even in the short run. They argue that government can promote growth and stabilize the economy only through supply-side policies.

Economists such as Thomas Sargent, Edward Prescott, Neil Wallace and Robert Barro are amongst the most renowned NCM economists, whose theories are usually opposed to those of the followers of New Keynesian Economics.

## **Fiscal policy**

Fiscal policies are demand-side economic policies through which the government acts over its income and expenditure in order to influence the levels of income, output and unemployment of the economy. The government may do this via income taxes and unemployment benefits, or by discretionary measures, such as taxes on spending and increasing public spending. By



increasing demand, firms are incentivized to produce more and therefore to hire more workers.

Keynesianism believed fiscal policies as the best tool to control the economy of a country, especially to reduce cyclical unemployment. Monetarism and following economic doctrines as New Classical Macroeconomics and New Keynesian Economics consider them to be ineffective in the long run, as demand cannot be increased continually.

## Monetary policy

Monetary policies are demand-side economic policies through which the central bank of a country acts on the amount of money and interest rates in order to influence on the income levels, output and unemployment in the economy, being the interest rate the link binding money and income. The main tools used by monetary policies are open market operations, loans to commercial banks, and the use of reserve requirements. Ceteris paribus, an increase (decrease) in the money supply or a decrease (increase) in interest rates will have a positive (negative) ripple effect on private spending (consumption and investment). This will finally increase (decrease) production and employment. However, this will increase prices, which may lead to rapidly increasing inflation.

Monetarism is the main economic doctrine that defended this kind of policy. However, Keynesianism, New Classical Macroeconomics and New Keynesian Economics, criticize it and do not believe in their effectiveness as it has been demonstrated that increasing money supply will result in inflation and counteracting the positive effects of this policy. As Milton Friedman said, “inflation is always and everywhere a monetary phenomenon”.

## Monetarism

Monetarism, a term first used by Brunner in 1968, can be understood in two ways. The first relates to the economic thought that sees in the quantity of money the major source of economic activity and its disruptions (especially inflation), as well as believing that targeting the growth of money supply is the best monetary policy. Secondly, it refers to a large group of

economists adherent to these thoughts, lead by Milton Friedman and the Chicago School of economics.

This paradigm, which gained popularity in the 1960s, relates closely to neoclassical economics, believing that free flow of credit and interest rates, as well as a laissez faire attitude is the best way to go, since limited public intervention and a competitive economic system will grant better results than those resulting from Keynesian economics. However, since monetarists consider monetary policy more effective, government control over money supply is required. Also, since monetarists believed in the importance of the quantity of money, the equation of exchange regained popularity.

Monetarists view fiscal policy less effective than monetary policy because of the low interest elasticity of money demand. Therefore, when using the IS-LM model, monetarists consider the IS curve more elastic than the one used by Keynesians, and a LM curve more inelastic. This is the reason why, when using the monetarist' IS-LM model, public investment created by fiscal policy creates a crowding out effect over private investment, reducing the effectiveness of public spending. However, even though monetary policy is more reliable, its effects may take a while to be noted in the economy, and therefore its implementation can be difficult.

Concerning the Phillips curve, monetarists criticise the money illusion implied in it, which is the basis for the relationship between inflation and unemployment. They believe that, given an unanticipated higher inflation and the subsequent decrease in unemployment, the trade-off shown in the Phillips curve will hold. However this will not be the case when monetary policies are anticipated, implying that the trade-off between inflation and unemployment does not apply in the long run. This is a clear example of the learning process introduced in the Adaptive Expectations hypothesis, firstly formulated (though not under its widely known name) by Irving Fisher in his article "The Purchasing Power of Money", 1911, and popularized by Phillip Cagan in 1956 and by Friedman, in his paper "The Role of Monetary Policy", 1968, where he also introduced the concept of natural rate of unemployment, which is the rate that the economy will reach after each movement along the Phillips curve. It must be highlighted that, contrary to New Classical Macroeconomics studies and its Rational expectations hypothesis, monetarists believe that the trade off can be systematically exploited in the short run, as long as each policy is unanticipated.



Given the low effectiveness of fiscal policy as well as the risks of high inflation caused by systematic monetary policies, monetarists defend a commitment by the monetary authorities to steady monetary growth, and reject discretionary and politically driven monetary policies, because of the uncertainty they create.

## Unemployment

Unemployment refers to the situation of a jobless worker. The unemployment rate measures the number of unemployed workers as a percentage of the labour force. Massive unemployment levels are the result of situations of economic crisis followed by depressions, and are the result of a large economic readjustment studied in business cycles theory. During the Great Depression, 1929-1939, unemployment insurance benefits were introduced in the U.S. in order to reduce the consequences of high unemployment levels. This measure was introduced to prevent workers' misery, and as a way of maintaining effective demand, as stated by the Keynesians' fiscal policy proposals.

Unemployment can be divided into different types depending on its cause and depending if it is involuntary or voluntary:

### Involuntary Unemployment

Classical unemployment is explained as the situation that exists in the labour market when the number of people able and willing to work at the prevailing wage levels exceeds the number of vacancies available. In simple words, demand and supply do not meet. This occurs when real wages are higher than those corresponding to equilibrium at full employment levels. This type of unemployment was explained by the Classical school (hence its name) as those cases in which certain imperfections prevent unemployed people from reducing their aspirations to lower their wages so that firms will believe it is interesting to create new jobs and hire people.

Frictional unemployment, also referred to as searching unemployment, happens when a person is temporarily unemployed between jobs. This is the unemployment in its theoretical lowest possible level. It occurs even in full employment conditions because a considerable number of people are moving

from one job to another. The only way to reduce this kind of unemployment is for economic institutions to make information more available.

Structural unemployment occurs when people are unable to find jobs in which their skills can be useful because their skills are no longer demanded, and thus creating an excess of labour supply generally at well-defined locations. As structural unemployment is not caused as a result of a general decline in demand, it cannot be softened with reflationary type measures, but instead *ad hoc economic policies* are needed. These types of policy include retraining of workers and reallocation of industries. The main difference between structural and frictional unemployment relies on the time horizon, as the former is a long lasting phenomenon while the latter a short term one.

Seasonal unemployment is generally of short duration and it is generated on a regular basis as a result of the different seasonal activities through the year, especially regarding agriculture activities and tourism.

Disguised unemployment is not actually unemployment. It refers to a characteristic situation of countries that are both underdeveloped economically and highly bureaucratized, in which there is a high number of workers with low levels of productivity that would be employed if the country had a better organisation or better *technology levels*.

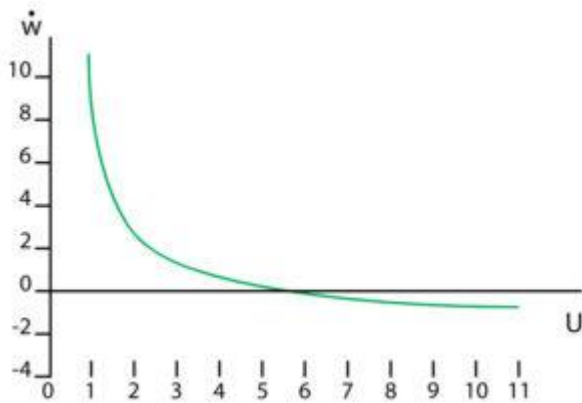
## **Voluntary Unemployment**

Voluntary unemployment consists of workers that are jobless as they are reluctant to work due to economic, sociological or psychological reasons.

## **Phillips curve**

In 1958, A. W. Phillips wrote a paper on *Economica* (London School of Economics), entitled "The Relation Between Unemployment and the Rate of Change of Money Wage Rates in the United Kingdom, 1861-1957". Analysing data concerning money wages and *unemployment* rates in the UK, Phillips managed to draw a curve representing the inverse relation between these variables. It must be said that Irving Fisher had already pointed out a relationship between price levels and unemployment in his paper "A Statistical

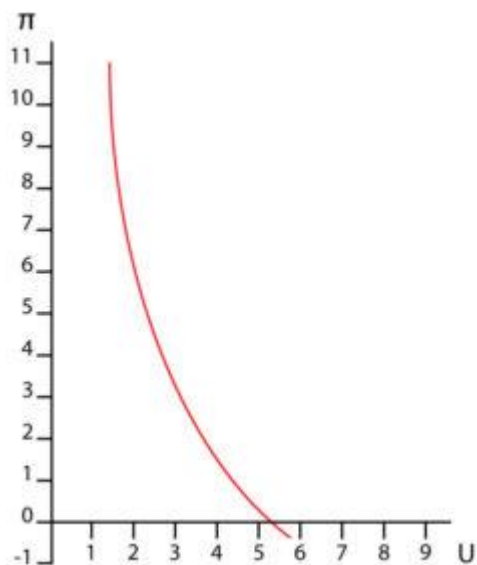
Relation between Unemployment and Price Changes”, 1926 (cleverly renamed later as “I Discovered the Phillips Curve”). The Phillips curve has evolved following other empirical studies, and is widely known nowadays, even though it has also been criticized.



In his article, Phillips drew a curve showing the inverse relation between the rate of change of money wage rates, as a percentage change per year ( $\dot{w}$ ) and the unemployment rate (U).

Two important things must be noted: the point where the curve crosses the abscissa, and the fact that the ordinate seems to work as an asymptote. The importance of the point of crossing must be highlighted (around 5,5%), since it is the rate of unemployment that an economy will have for a zero increase in the money wages. This point will be named, in further developments of the Phillips curve, *Natural Rate of Unemployment* and Non-Accelerating Inflation Rate of Unemployment (*NAIRU*). Regarding the asymptote, as the author pointed out, there was no data of higher rates of change in money wage, nor lower unemployment rates. It can be concluded that unemployment cannot be lowered beyond a certain level.

Two years later, Richard G. Lipsey would publish a paper in the same journal deepening the mathematics regarding the curve, as well as expanding Phillips' research by doing further econometrical tests.



Also in 1960, Paul A. Samuelson and Robert M. Solow, in their “Analytical Aspects of Anti-Inflation Policy”, studied a similar relation, in this case using data from the United States. Although they used inflation ( $\pi$ ) instead of the rate of change in money wages, they came up with similar results. Even though the curve might seem different because of the scale used, the unemployment rate at price stability is the same as at money wage stability (around 5,5%), and there seem to be no way to lower unemployment beyond a certain level (around 1%).

It was in this paper that the Phillips curve was considered a “menu of choice” for the first time. This meant that, concerning policy making, governments would be able to choose between a low rate of unemployment with high inflation, and a higher rate of unemployment with lower inflation. However, as the authors pointed out, this menu had to be used only in the short-run, since certain policies or economic events might change the shape of the curve in the longer run.

In the mid 50s, and until the late 60s, the adaptive expectations hypothesis became popular, especially because of the works by Phillip Cagan and Milton Friedman. This hypothesis would endure almost unquestioned until the late 60s and early 70s, when economist Robert Lucas (among others) brought forward a rational expectations hypothesis, from earlier works by J. F. Muth.

# Article1

## South Africa Economic Outlook

February 25, 2020

The economy likely fell into technical recession in the fourth quarter of last year. Industrial production doubled its pace of contraction in Q4, as unprecedented rolling blackouts hampered mining and manufacturing activities. Moreover, supply shocks likely weighed on capital spending, while slower retail sales in Q4 hint that household spending did not go unscathed. Turning to the first quarter of this year, the economy's woes likely persisted: In addition to souring business confidence in January, power outages are now expected to continue for the next 18 months following Eskom's announcement on 29 January of planned maintenance at its struggling coal power plants. In response, on 13 February President Ramaphosa pledged to cut red tape in order to encourage private-led energy projects.

## South Africa Economic Growth

The economy is expected to expand at a slightly faster pace this year. Household spending is seen picking up and lower interest rates will likely boost fixed investment. A rebound in exports should also support growth. However, fiscal challenges remain high and could worsen if Moody's downgrades the country's last investment-level credit rating in March. FocusEconomics analysts see growth at 0.9% in 2020, which is down 0.1 percentage points from last month's forecast, and 1.4% in 2021.

## South Africa Economy Data

	2014	2015	2016	2017	2018
<u>Population (million)</u>	53.9	55.4	56.3	57.1	57.9
<u>GDP per capita (USD)</u>	6,635	6,022	5,291	6,220	6,137
<u>GDP (USD bn)</u>	358	317	297	350	368
<u>Economic Growth (GDP, annual variation in %)</u>	1.8	1.2	0.4	1.4	0.8
<u>Consumption (annual variation in %)</u>	0.8	1.9	0.6	2.1	1.8
<u>Investment (annual variation in %)</u>	0.7	2.5	-3.5	1.0	-1.4

	2014	2015	2016	2017	2018
<u>Industrial Production (annual variation in %)</u>	0.1	0.0	0.7	-0.5	-
<u>Unemployment Rate</u>	25.1	25.4	26.7	27.5	27.1
<u>Fiscal Balance (% of GDP)</u>	-4.3	-3.7	-3.6	-4.0	-4.2
<u>Public Debt (% of GDP)</u>	47.0	49.3	51.5	53.0	56.7
<u>Inflation Rate (CPI, annual variation in %, eop)</u>	5.3	5.3	6.7	4.7	4.5
<u>Inflation Rate (CPI, annual variation in %)</u>	6.1	4.6	6.3	5.3	4.6
<u>Policy Interest Rate (%)</u>	5.75	6.25	7.00	6.75	6.75
<u>Exchange Rate (vs USD)</u>	11.57	15.50	13.68	12.38	14.39
<u>Exchange Rate (vs USD, aop)</u>	10.85	12.78	14.70	13.31	13.25
<u>Current Account (% of GDP)</u>	-5.1	-4.6	-2.9	-2.5	-3.5
<u>Current Account Balance (USD bn)</u>	-18.1	-15.4	-8.6	-8.9	-12.4
<u>Trade Balance (USD billion)</u>	-6.9	-3.7	2.2	4.8	1.7
<u>Exports (USD billion)</u>	94.9	81.9	77.0	86.6	94.1
<u>Imports (USD billion)</u>	102	85.5	74.8	81.8	92.3
<u>Exports (annual variation in %)</u>	1.7	-13.2	-5.9	12.5	8.6
<u>Imports (annual variation in %)</u>	1.3	-14.1	-12.5	9.4	12.8
<u>International Reserves (USD)</u>	44.3	41.8	42.7	45.3	46.4
<u>External Debt (% of GDP)</u>	40.6	37.2	48.0	48.8	48.5

## Article 2

# Structural Policies: Fixing the Fabric of the Economy

**Monetary and fiscal policies deal with short-term economic fluctuations, but an economy's problems often go deeper**

Khaled Abdel-Kader

ECONOMIES can get out of whack for a variety of reasons. Policymakers, in turn, have a number of ways to try to fix them, depending on what is wrong. For example, when prices are rising too fast and consumers and businesses are buying at a rate that exceeds an economy's underlying ability to produce goods and services—that is, overall demand is growing too fast—policymakers can take steps to reduce demand. Similarly, during economic downturns, when businesses and consumers close their wallets—aggregate demand is shrinking—governments can take steps to encourage them to open their pocketbooks or substitute government spending for diminished private spending. Such government actions are called demand management or stabilization policies. Sometimes an economy's problems are deeper and longer lasting than excessive or inadequate demand, usually as a result of government policies or private practices that impede efficient and fair production of goods and services—that is, supply. Fixing such problems can require changes to the fabric of the economy, called structural policies. Stabilization policies are important in the short run, because it is easier to alter the various components of overall demand for a short time than it is to make a country's resources more productive.

Stabilization policies include taxing and spending actions (see “Fiscal Policy: Taking and Giving Away,” p. 36) and changes to interest rates and the money supply (see “Monetary Policy: Stabilizing Prices and Output,” p. 36). When longer-term, structural changes are required to improve aggregate supply, governments must address specific impediments. This may involve the core structure of the economy, such as how prices are set, how public finance is conducted, government-owned enterprises, financial sector regulation, labor market rules and regulations, the social safety net, and institutions. The recent financial and sovereign debt crises triggered calls for bold structural policies in several euro area countries, while declining growth in many developed and developing countries pointed to a need for fiscal, financial, institutional, and regulatory reforms to enhance productivity and raise growth and employment. Structural policies not only help raise economic growth; they also set the stage for successful implementation of stabilization policies.

Dealing long term Structural policies can zero in on a number of areas.

**Price controls:** Prices in free markets reflect the underlying cost of production. However, governments in some countries set the prices for certain goods and services—such as electricity, gas, and communication services—below production costs, particularly when the goods or services are produced by government-owned companies. These price controls lead to losses that the government must make up—which can cause budget and stabilization problems. Moreover, controls encourage higher consumption than would be the case if the prices of goods and services

reflected the true cost of production. Under-pricing leads to poor allocation of a society's resources. Were controls eliminated, prices would rise to cover costs, which would promote competition and efficiency. Management of public finances: Although governments may briefly have to spend more than they take in during a recession—or collect more taxes than needed for a while to dampen spending in a boom—over the long term spending and taxing should be in synch. But complex tax laws and inefficient systems of tax administration, for example, can make it difficult to raise sufficient public revenue, which often leads to large budget deficits and accumulation of debt (a stabilization problem). That in turn can restrict a government's ability to finance development needs such as health care services, education, and infrastructure projects. Tax reforms can facilitate taxpayer compliance and raise revenue by removing exemptions, requiring advance payment of estimated tax liabilities, and simplifying the tax rate structure. Improved tax administration can also increase revenue. For example, better training and higher salaries for tax collectors could reduce corruption and help retain competent staff. Better management of public expenditures could result in more productive use of public funds. Public sector enterprises: Government-owned enterprises make up a considerable share of the economy in some countries. Some operate efficiently and in the best interest of consumers.

But often, because there is little if any competition, government-owned businesses deliver low-quality goods and services. Public businesses that compete with private firms often operate at a loss because of political influence or higher operating costs (as a result of unneeded workers, for example), and the government must make up the losses. Stabilization problems can arise if these government enterprises have to borrow from commercial banks to cover the losses. The loans are usually guaranteed by the government, which imposes contingent liabilities on the government budget because the government will have to pay if the enterprises don't. Countries with large state-owned enterprises could sell them to private individuals or firms. Or they could maintain public ownership in general, but take such steps as closing enterprises that are inefficient or have losses, changing their management, or reducing the labor force to align it with business needs—with an appropriate safety net to protect the laid-off staff.

**Financial sector:** The financial sector's role is to channel funds from savers to borrowers. A sound financial sector helps ensure that such funds are used in the most productive manner, which leads to higher economic growth and development. However, underdeveloped or poorly regulated financial systems in some developing countries could hamper economic growth and make it more difficult to conduct stabilization policies. For example, central banks generally carry out monetary policy by buying and selling on the open market securities that governments have sold to the public. But if there are no so-called secondary markets for government securities, or if they are poorly developed, central banks could be constrained in their attempts to carry out effective monetary policy and may have to resort to inefficient (or unfair) policy tools, such as credit rationing or interest rate controls. Inadequately regulated banks may engage in risky behavior that leads to banking crises—such as a “run,” when worried depositors rush en masse to take out their funds, or a failure, which is generally the result of bad lending practices. But even sound banks can fail if they get caught up in a systemwide run that exhausts the cash they have to pay depositors. Banking crises can interrupt the flow of funds to borrowers, discourage saving, and lead to higher government deficits if the state guarantees deposits or recapitalizes banks. Policymakers can fix underdeveloped financial systems through the introduction of secondary markets, the development of stock markets, and the privatization of government-owned banks. To mitigate crises, policymakers must shore up the financial system through effective regulation and supervision.

**Social safety nets:** Governments often have programs designed to safeguard a minimum standard of living for the poor and other vulnerable groups. But in many developing countries some costly programs—like fuel and food subsidies—are poorly targeted and benefit the rich more than the poor. In developed countries, pay-as-you-go pension programs have huge unfunded liabilities because more people are retiring than entering the workforce. In addition, generous unemployment benefits often contribute to high unemployment because employers, who pay unemployment insurance premiums, are reluctant to hire new workers. Governments can change social safety nets to target the needy and achieve considerable savings. To focus on the needy, governments could give low-income households vouchers for basic food items or distribute food only in areas where the poor live. The government could also replace food and fuel subsidies with cash transfers. Pension programs can be changed so that benefits are aligned with projected revenues by raising the retirement age or fully funding pension systems.

**Labour market:** Unemployment is prevalent in many countries for a variety of reasons and usually rises when the economy is not doing well. But sometimes the cause of unemployment is deeper than the effects of the business cycle. For example excessive social security contributions or a relatively high minimum wage may so boost the cost of hiring that demand for labour shrinks and unemployment rises. Demand for labour may also fall if workers lack the necessary skills because of inadequate training or education. Reforming education and improving on-the-job training programs can help restore demand for labour.

**Public institutions:** The performance of public institutions can significantly affect a country's economic environment. For example, low government salaries, say in tax administration, can encourage corruption. Also, inefficient legal systems and shortages of courts and judges make it hard for businesses to resolve disputes, which increases costs for businesses and deters investment, especially foreign direct investment—hurting economic growth. Governance and institutions can be improved by simplifying business regulations and licensing, enhancing the country's legal system, streamlining the system of tax administration, and raising salaries for government staff in charge of providing vital services while limiting employment in the public sector to business needs.

### **Hand in hand**

Raising an economy's growth potential requires stabilization and structural policies that complement one another. Stabilization policies lay the foundation for economic growth by helping lower inflation, smooth out consumption and investment, and reduce government deficits. Successful implementation of structural policies is possible only after such macroeconomic imbalances have been resolved. Similarly, though, structural policies enhance the effectiveness of many stabilization measures: promoting competition (a structural policy), for example, can lead to lower prices and, hence, lower inflation (the goal of stabilization policies).

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## Article 3

### Inflation: Prices on the Rise

**Inflation measures how much more expensive a set of goods and services has become over a certain period, usually a year**

Ceyda Oner

IT MAY BE one of the most familiar words in economics. Inflation has plunged countries into long periods of instability. Central bankers often aspire to be known as “inflation hawks.” Politicians have won elections with promises to combat inflation, only to lose power after failing to do so. Inflation was even declared Public Enemy No. 1 in the United States—by President Gerald Ford in 1974. What, then, is inflation, and why is it so important?

Inflation is the rate of increase in prices over a given period of time. Inflation is typically a broad measure, such as the overall increase in prices or the increase in the cost of living in a country. But it can also be more narrowly calculated—for certain goods, such as food, or for services, such as a haircut, for example. Whatever the context, inflation represents how much more expensive the relevant set of goods and/or services has become over a certain period, most commonly a year.

#### Measuring inflation

Consumers’ cost of living depends on the prices of many goods and services and the share of each in the household budget. To measure the average consumer’s cost of living, government agencies conduct household surveys to identify a basket of commonly purchased items and track over time the cost of purchasing this basket. (Housing expenses, including rent and mortgages, constitute the largest component of the consumer basket in the United States.) The cost of this basket at a given time expressed relative to a base year is the consumer price index (CPI), and the percentage change in the CPI over a certain period is consumer price inflation, the most widely used measure of inflation. (For example, if the base year CPI is 100 and the current CPI is 110, inflation is 10 percent over the period.) Core consumer inflation focuses on the underlying and persistent trends in inflation by excluding prices set by the government and the more volatile prices of products, such as food and energy, most affected by seasonal factors or temporary supply conditions. Core inflation is also watched closely by policymakers. Calculation of an overall inflation rate—for a country, say, and not just for consumers—requires an index with broader coverage, such as the GDP deflator.

The CPI basket is mostly kept constant over time for consistency but is tweaked occasionally to reflect changing consumption patterns—for example, to include new hi-tech goods and to replace items no longer widely purchased. Because it shows how, on average, prices change over time for everything produced in an economy, the contents of the GDP deflator vary each year and are more current than the mostly fixed CPI basket. On the other hand, the deflator includes non-consumer items (such as military spending) and is therefore not a good measure of the cost of living.

The good and the bad To the extent that households' nominal income, which they receive in current money, does not increase as much as prices, they are worse off, because they can afford to purchase less. In other words, their purchasing power or real—inflation-adjusted—income falls. Real income is a proxy for the standard of living. When real incomes are rising, so is the standard of living, and vice versa. In reality, prices change at different paces. Some, such as the prices of traded commodities, change every day; others, such as wages established by contracts, take longer to adjust (or are “sticky,” in economic parlance).

In an inflationary environment, unevenly rising prices inevitably reduce the purchasing power of some consumers, and this erosion of real income is the single biggest cost of inflation. Inflation can also distort purchasing power over time for recipients and payers of fixed interest rates. Take pensioners who receive a fixed 5 percent yearly increase to their pension. If inflation is higher than 5 percent, a pensioner's purchasing power falls. On the other hand, a borrower who pays a fixed-rate mortgage of 5 percent would benefit from 5 percent inflation, because the real interest rate (the nominal rate minus the inflation rate) would be zero; servicing this debt would be even easier if inflation were higher, as long as the borrower's income keeps up with inflation. The lender's real income, of course, suffers. To the extent that inflation is not factored into nominal interest rates, some gain and some lose purchasing power. Indeed, many countries have grappled with high inflation— and in some cases hyperinflation, 1,000 percent or more a year.

In 2008, Zimbabwe experienced one of the worst cases of hyperinflation ever, with estimated annual inflation at one point of 500 billion percent. Such high levels of inflation have been disastrous, and countries have had to take difficult and painful policy measures to bring inflation back to reasonable levels, sometimes by giving up their national currency, as Zimbabwe has. Although high inflation hurts an economy, deflation, or falling prices, is not desirable either. When prices are falling, consumers delay making purchases if they can, anticipating lower prices in the future. For the economy this means less economic activity, less income generated by producers, and lower economic growth. Japan is one country with a long period of nearly no economic growth, largely because of deflation. Preventing deflation during the global financial crisis that began in 2007 was one of the reasons the US Federal Reserve and other

central banks around the world kept interest rates low for a prolonged period and have instituted other monetary policies to ensure financial systems have plenty of liquidity.

Most economists now believe that low, stable, and—most important—predictable inflation is good for an economy. If inflation is low and predictable, it is easier to capture it in price-adjustment contracts and interest rates, reducing its distortionary impact. Moreover, knowing that prices will be slightly higher in the future gives consumers an incentive to make purchases sooner, which boosts economic activity. Many central bankers have made their primary policy objective maintaining low and stable inflation, a policy called inflation targeting.

### **What creates inflation?**

Long-lasting episodes of high inflation are often the result of lax monetary policy. If the money supply grows too big relative to the size of an economy, the unit value of the currency diminishes; in other words, its purchasing power falls and prices rise. This relationship between the money supply and the size of the economy is called the quantity theory of money and is one of the oldest hypotheses in economics.

Pressures on the supply or demand side of the economy can also be inflationary. Supply shocks that disrupt production, such as natural disasters, or raise production costs, such as high oil prices, can reduce overall supply and lead to “cost-push” inflation, in which the impetus for price increases comes from a disruption to supply. The food and fuel inflation of 2008 was such a case for the global economy—sharply rising food and fuel prices were transmitted from country to country by trade. Conversely, demand shocks, such as a stock market rally, or expansionary policies, such as when a central bank lowers interest rates or a government raises spending, can temporarily boost overall demand and economic growth. If, however, this increase in demand exceeds an economy’s production capacity, the resulting strain on resources is reflected in “demand-pull” inflation.

Policymakers must find the right balance between boosting demand and growth when needed without overstimulating the economy and causing inflation. Expectations also play a key role in determining inflation. If people or firms anticipate higher prices, they build these expectations into wage negotiations and contractual price adjustments (such as automatic rent increases). This behaviour partly determines the next period’s inflation; once the contracts are exercised and wages or prices rise as agreed, expectations become self-fulfilling. And to the extent that people base their expectations on the recent past, inflation would follow similar patterns over time, resulting in inflation inertia.

## **How policymakers deal with inflation**

The right set of disinflationary policies, those aimed at reducing inflation, depends on the causes of inflation. If the economy has overheated, central banks—if they are committed to ensuring price stability—can implement contractionary policies that rein in aggregate demand, usually by raising interest rates. Some central bankers have chosen, with varying degrees of success, to impose monetary discipline by fixing the exchange rate—tying the value of its currency to that of another currency, and thereby its monetary policy to that of another country. However, when inflation is driven by global rather than domestic developments, such policies may not help. In 2008, when inflation rose across the globe on the back of high food and fuel prices, many countries allowed the high global prices to pass through to the domestic economy. In some cases the government may directly set prices (as some did in 2008 to prevent high food and fuel prices from passing through). Such administrative price-setting measures usually result in the government’s accrual of large subsidy bills to compensate producers for lost income. Central bankers are increasingly relying on their ability to influence inflation expectations as an inflation-reduction tool. Policymakers announce their intention to keep economic activity low temporarily to bring down inflation, hoping to influence expectations and contracts’ built-in inflation component. The more credibility central banks have, the greater the influence of their pronouncements on inflation expectations.

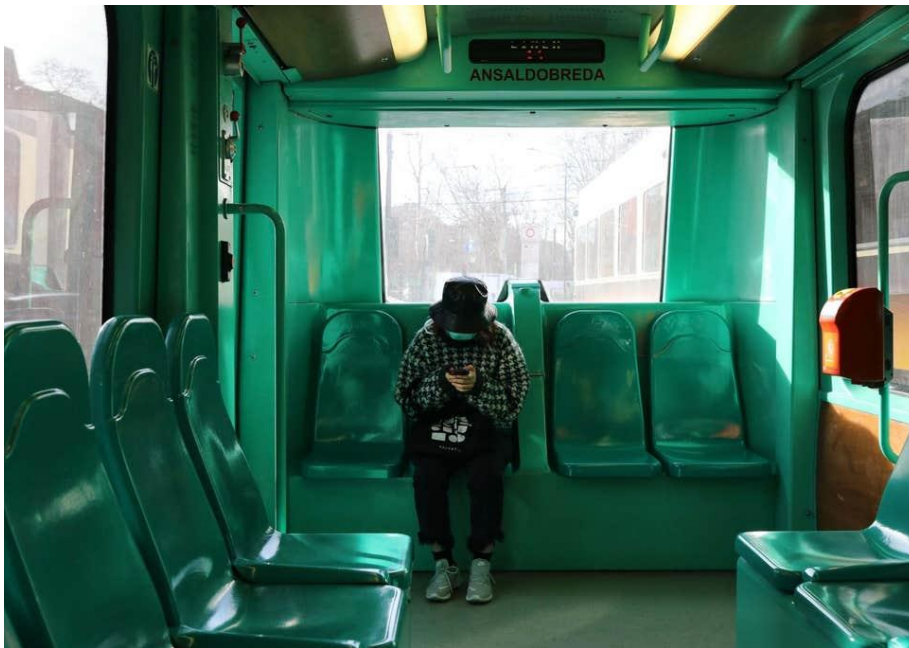
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## Article 4

### Coronavirus: What will it mean for our jobs and livelihoods?

Could it mean mass layoffs as in previous recessions? Should we expect wage stagnation?

- **Ben Chu** Economics Editor [@BenChu](#)
- Friday 13 March 2020 18:10



Italy announced that households' mortgage payments to banks would be suspended after imposing its total lockdown ( *Getty* )

Global economic bodies like the OECD and the International Monetary Fund are slashing their macroeconomic growth forecasts in response to the Covid-19 pandemic.

There's a possibility of a global recession according to some analysts.

But how would that economic damage be experienced in ordinary people's lives?

Could it mean mass job layoffs like in previous recessions? Should we expect wage stagnation?

Or is it possible that, if mortgage repayments are suspended by banks for the duration of the crisis, some people could actually find themselves better off? What about falling oil prices?

How will the economic fallout from the coronavirus impact be experienced?

### **Job losses**

In previous recessions tens of millions were made redundant as consumer and business spending came to a sudden stop and companies went bust as a result.

During the 2008 financial crisis recession the jobless rate in the US doubled from 5 per cent to 10 per cent. In the UK it went from 5 per cent to 8.5 per cent.

Could that happen again? Certainly in theory.

- **Coronavirus means that things will only get worse for the economy**

If you put large populations in lockdown they will be unable to spend and that will place local companies – especially those with debt repayments to make – under severe financial strain and they may well go bust and make their employees redundant.

Firms could also be at risk if their workforces fall sick at the same time.

In the US there are already reports of jobs going in the transport and tourism sectors. In the UK the domestic airline Flybe has gone into administration, threatening 2,300 jobs. Its bosses highlighted a slump of bookings due to coronavirus fears.

The UK government unveiled a raft of business support schemes, from tax relief to direct grants in the Budget earlier this week. Germany did something similar on Friday.

Other countries are very likely to roll out their own schemes.

The question is whether these schemes – never tested before – will be sufficient to prevent a spike in insolvencies and the inevitable ensuing redundancies.

## **Wages**

The post-financial crisis decade has been a bleak one for average wage growth.

In the UK inflation-adjusted wages only recovered their pre-2008 peak at the end of last year.

Things have not been much better for the median worker in the US on the wage front.

Even if governments are able to prevent a wave of redundancies economists will already be revising down the expectations for real wage growth.

Companies that are on the verge of insolvency due to a collapse in custom – or firms plagued by uncertainty about the general business outlook – do not tend to give above-inflation pay settlements to their employees.

## **Deflation**

In a boom inflation – spiralling prices – have historically been the problem.

In recessionary conditions the problem is the opposite: the danger of falling prices as lack of demand leads to discounting by firms.

The 30 per cent collapse in the oil price this week may contribute to falling prices.

### **Show all 10**

Ordinary people may experience this as fuel and groceries being cheaper than normal.

But if their incomes are under pressure from stagnant wages or from losing their jobs, price deflation will not translate into an overall increase in living standards.

## **Mortgage repayments**

This week Italy announced that households' mortgage payments to banks would be suspended after imposing its total lockdown on the country, recognising that if people cannot work they cannot repay their borrowings.

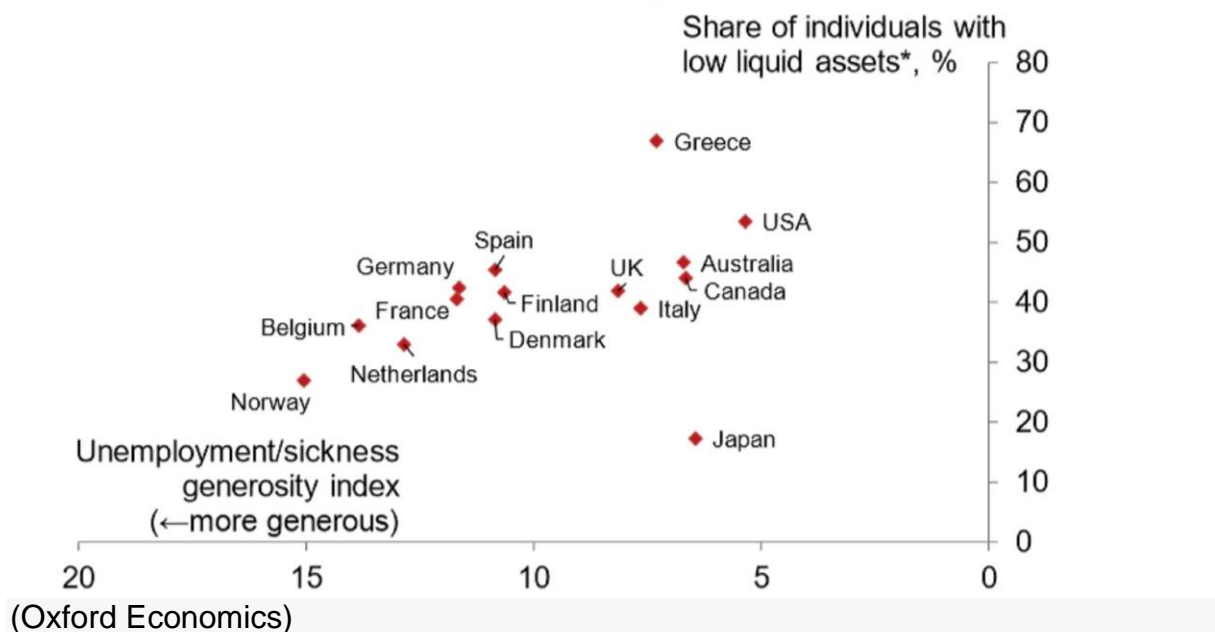
Expect similar policies – with governments putting pressure on banks to offer forbearance for missed payments – to be rolled out in other countries that go down a similar route of lockdown or enforced social distancing.

As with falling prices, though, this will not translate into a rising living standards because, although people might welcome a suspension of their repayments, they will also likely face damage to their incomes.

It's important to bear in mind how many households are already financially vulnerable.

Around 40 per cent of individuals across the developed world countries of the OECD have insufficient money or saleable assets to support themselves at the poverty line for more than three months.

### OECD countries: Vulnerability to income loss



“Many workers will have very limited liquidity buffers to tide them over if they cannot earn,” says Adam Slater of Oxford Economics.

Their livelihoods may well depend on the willingness – and, crucially, ability – of their governments to provide them with welfare and support

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