

# AN INTRODUCTION TO ECONOMICS FOR PAPUA NEW GUINEANS

*Michael Cornish, Nov 2016*

## **Objectives:**

At the end of this unit, students should be able to understand and explain:

1. The economic problem
2. Opportunity cost
3. Economics as a social science
4. Positive analysis and normative analysis
5. Central planning and free market economies
6. Microeconomics and macroeconomics

## **Readings:**

Douglas McTaggart, Christopher Findlay and Michael Parkin, *Economics*, (any edition)

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### **1. The Economic Problem**

At its heart, all the questions in economics are derived from one central problem - we want more than we can get. We want clean air to breathe, and clean water to drink. We want good education and good health care. We want consumption goods like cars, TVs, phones, and laptops. We want to live in peaceful communities, we want to be able to travel, we want time to spend with friends and family.

However, what we can get is limited by our incomes, by how much time we have available, and the prices of the products we wish to buy. We cannot have everything we want. We have limited resources, and we have to decide how we should allocate these resources. We have to make trade-offs; for every product we buy, or every hour we spend doing something, we choose to miss out on something else.

This idea is known as **scarcity**; and it results from the central problem in economics: **unlimited wants versus limited** (or 'scarce') **resources**. This fundamental problem in economics is known as '**the economic problem**'. The question then is - how do we solve the economic problem? Unfortunately, unless the resources available to us become unlimited, or human wants become limited, we will never be able to 'solve' the problem. However, we can learn to manage it, to set priorities, and use what resources we do have more efficiently and effectively.

One way of thinking about how we manage scarcity is to consider the following questions:

- *What* goods and services will be produced?
- *How* will goods and services be produced?
- *When* will goods and services be produced?
- *Where* will goods and services be produced?
- *For whom* will these goods and services be produced?

Another way of thinking about managing scarcity is to think about self interest (or 'private interests') and the social interest ('public interests'). Often these interests can be in competition with each other. If you are from a Papua New Guinean village, and you only have limited resources (time and building materials) to construct one building, should you focus on building a new house for yourself, or should you focus on constructing a building that the entire village can benefit from (such as a community meeting place, or a church)? So in managing scarcity, we must think about how we should balance private interests against public interest. The balance will also be different, depending on what part of the economy we are talking about, and what preferences the society has about how to manage scarcity.

For example, in Western countries, the interests of the individual are generally considered to be more important than they are in developing countries, but their governments are also strong and capable of providing goods and services to those in need. In Papua New Guinea, people rely heavily on their local communities, and perhaps as a result, the importance of local-community interests are usually more important than private interests. However, the Papua New Guinean government is less able to provide good quality education, healthcare and infrastructure than in more economically developed countries.

Sometimes, private and public interests can be satisfied at the same time. For example, imagine in our previous example that it is a pastor who has all of the building materials. It could be in the pastor's private interest, as well as in the public interest, that the materials are used to build a church for the village. Harnessing private interest for the benefit of the public interest is very attractive to most economists, because it helps to solve two problems at the same time!

You can begin to see that how we choose to manage scarcity - how we allocate and use scarce resources - has a huge impact on how communities, societies and even countries function, and how successful they are in advancing the welfare of its citizens.

## **2. Opportunity cost**

If the economic problem requires us to make decisions about how to manage scarcity, then how do we set a value on the resources we have available to us?

One obvious way is simply to look at their price in a market. This is how an accountant would work out the value of the assets that a business has - they would simply add up how much the assets would be worth if they were sold.

However, not all resources can be easily bought and sold, and thus not easily priced or costed. For example, how do you buy and sell your time? Or how do you put a value on happiness? Or a healthy family? Many of things are not only impossible to buy and sell, but we would also not want to be able to buy and sell them! Also, how much *you* value a resource might be different from the price you see in the market. For example, if you absolutely love chocolate, you will value chocolate higher than someone who hates chocolate, and will be willing to pay more for it. And yet, the price in the supermarket is the same for both of you!

One of the central and fundamental concepts in economics is **opportunity cost**. Opportunity cost addresses this issue of how to value resources. Instead of just putting a dollar or kina value on the resources, we can value them by **the next best alternative foregone**. This means that for every resource we using for a particular purpose, we can think about what our next best option for using that resource would have been.

For example, say that you have an hour of time available to you. This hour of time is a resource! You choose to spend the hour studying Foundation Economics. However, let's say that your next best alternative use of that hour - what you would have done with that time if you were not studying - was to sell vegetables at the local market, for which you would expect to earn 5 Kina of profit. Using the idea of opportunity cost - valuing resources by the next best alternative use of those resources - we can conclude that you value an hour of study at *at least* 5 Kina. We know this to be true because given the choice between studying for an hour and selling at the market for an hour, you chose to study.

Opportunity cost is a very valuable tool that helps people to measure the real cost or benefit in choosing to use their limited time and resources in a certain way. It also distinguishes economics from accounting. An accountant may well be able to tell you how much money you are making or losing, but an economist can help you make decisions about how to allocate your scarce resources and use them more effectively!

### 3. Economics as a social science

Economics is what is known as a **social science**. The social sciences is a group of academic disciplines that look at how human society functions, and in addition to economics, includes disciplines such as politics, psychology, anthropology, history and law.

In the natural sciences, we can conduct experiments to prove that natural laws exist - we can use physics to prove that there is gravity, biology to explain how a cell works, or chemistry to understand how chemical reactions work. However, the fundamental difference between the natural sciences and social sciences is that social sciences try to explain how *human behaviour* works, and its outcomes. This makes the social sciences inherently less predictable - it is much more difficult to come up with laws and theories that explain how humans will *always* behave. Sometimes, because of the challenge of explaining human behaviour, economics is known as '**the dismal science**'.

To get around this problem, economists make an assumption about human behaviour to make it more predictable. This assumption is that people always act according to their **rational self-interest**. This means that people are assumed to act in pursuit of their own interests, and that they will do so rationally. One of the major and repeated criticisms of the study of economics is this is an imperfect assumption. However, rational self-interest is not necessarily the same as being selfish - for example, when people help out their friends or family, it is usually because they have a desire and interest to see them succeed. So whilst the critics do have a good point, in practice it is still *almost always* true that people act according to their own rational self-interest.

We must also keep in mind that what appears irrational to one person, is often perfectly rational to another. For example, people from different cultures often have problems understanding why it is that might behave differently in the same situation; however, when you understand the different cultural norms and expectations, it is usually completely understandable. This is because people have different **incentives**. An incentive is a reward that encourages an action, or discourages an inaction. Incentives are often different depending on the situation, or cultural environment.

#### 4. Positive analysis and normative analysis

When we analyse issues in economics, we can split the types of analysis we can make into two different types: positive analysis and normative analysis.

**Positive analysis** is economic analysis based on facts, and not on opinion. Whilst facts may not always be clear or undisputed, we would expect economists that are using the same set of facts to reach identical or at least very similar conclusions. Positive analysis is descriptive analysis, in that it describes, '*what is happening*' or '*what would happen*'.

**Normative analysis** on the other hand is economic analysis based on opinions. It is prescriptive analysis, meaning that it prescribes or argues for '*what **should** happen*'. It is usually used to try and persuade firms to adopt a particular business strategy, or to persuade governments to adopt specific economic policies. However, good normative analysis will still attempt to refer to economic analysis based on facts - positive analysis - to help convince its audience.

For example, by using the supply and demand model, an economist could use positive analysis to predict the effect of a new tax on a market. This analysis would be based on facts about the size of the tax, how much of a product is bought and sold at different prices, and in what locations, and so on. Let us pretend that there is a new 1 Kina tax on vegetables, and positive analysis is able to conclude that this tax will lead to a 20% increase in the price of vegetables.

Normative analysis might be used to argue that this tax is a bad tax, because a 20% increase in the price of vegetables will have a huge impact on poor urban-dwelling people who must buy, rather than grow their food. Alternatively, normative analysis might also be used to argue that the tax is a good tax, because a 20% increase in the price of vegetables is not very much, and the government needs this money to help fund the schools, hospitals and roads it wishes to build and operate across the country.

You can immediately see that economists are much more likely to agree on the conclusions from positive analysis. When there *are* disputes between economists over positive analysis, they are usually due to differences of opinion over the methodology they used, or over the quality of the data they are relying upon to make their conclusions. However, conclusions from normative analysis are rarely in agreement, because they have very different opinions about what 'should' be done in response to economic problems and challenges. Economists, after all, are just like everyone else in society, in that they can (and usually do!) have quite different opinions and ideologies from one another!

So how do you know which economist's opinion you should agree with when they disagree? Ultimately you must make up your own mind, but positive analysis can really help you to understand whether the opinion you are hearing is based on facts or not. For example, if someone claiming to be an expert on the economy was to tell you that the new vegetable tax would lead to a *fall* in the price of vegetables, you could use your positive analysis skills to conclude that they are not the expert they are pretending to be!

In Foundation Economics, you will be concentrating on positive analysis more than on normative analysis. As you advance in economics, the shift tends to be towards more normative analysis, as you are increasingly expected to evaluate business strategies and economic policies, or design better ones.

## 5. An introduction to markets

Markets in some form or another are a key feature of all economies. A **market** is the term we use to describe a group of people who engage in the exchange, usually of money for goods and services. In economics, we usually refer to sellers as '**suppliers**', and buyers as '**consumers**'. Often, markets are physical places - they could be the temporary village marketplaces that you see in rural Papua New Guinea, or more permanent marketplaces you see in Papua New Guinea's major towns and cities. This exchange of money for goods and services can also occur in shops, or by informal sellers; it could be conducted in person, by post, over the phone, or over the internet.

### Did you know?

In countries in which people have good access to the internet, lots of people buy goods over the internet using their credit card details, and the good is then sent by post to their house. Amazon.com is one of the more famous American companies that uses this business model.

You can even buy computer games on the internet, and download them to directly to your computer!

Markets also include the exchange of goods and services for *other* goods and services (rather than money), and this is called **barter**.

Most big markets have many sellers and many buyers, and there is no one central person or company that makes the decisions, such as what the price will be - this is instead determined by **supply** and **demand** (which we return to later in Unit 4). The prices for products and the quantities sold are instead determined by the interactions between lots of different people, with buyers and sellers changing their behaviour in response to how they see other buyers and sellers behave. For example, if you were a seller and you saw a competing seller put their price down, you might choose to also drop your price if you are worried about losing a lot of business to them, or you may keep your price higher if you think that consumers will still come and buy your product instead.

If you are a buyer, you may check the price and quality of a product at a few different sellers before deciding what price you are willing to pay. In none of this process is there any central authority or person that makes all the decisions! This is why a famous economist called Adam Smith once said that markets operated as if they were guided by an **'invisible hand'**.

### Adam Smith and the 'invisible hand'

Adam Smith was a Scottish philosopher who is considered by many as the founder of modern economics, for his groundbreaking work in his most famous book, *The Wealth of Nations*, published in 1776.

Many of his ideas about economics have remained with us to the current day, and one of his most famous phrases was about markets and the 'invisible hand'. When thinking about how markets operate, Adam Smith imagined that it was if an invisible hand (he did not believe in a *real* invisible hand!) was guiding people to their mutual benefit.

Specifically, he argued that when each buyer was allowed to choose freely what to buy, and each seller was allowed to choose freely what to sell (and also how to produce it), the market would settle upon prices and the distribution of production that would be beneficial to all the members of a community.

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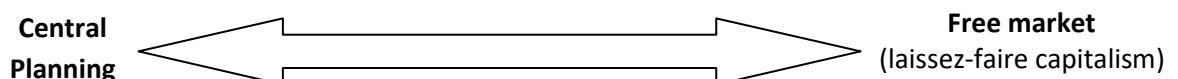
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"I'm terrified I might bite the invisible hand of the market."

A key tension in economics is about whether the government or the market should be the dominant force in an economy. When the government makes most of the decisions in a country's economy, it is described as **central planning**. When the market makes most of the decisions, it is called a **free market**, or laissez-faire capitalism (laissez-faire is French and means 'let it be [free]').

One way to think about this tension is to create a simple spectrum, where we put central planning at one end, and the free market at the other.



Note that, with the possible exception of North Korea, countries do not use only central planning or only the free market in their economies, but a mix of both. Most developed countries are on the more free market side of the spectrum, with developing countries spread across the entire spectrum but generally heading towards more pro-free market economies.

Whilst we can make generalisations about an economy at the country-level, it is usually more useful to think about the role of government or the free market in *each individual market*. For example, most countries maintain strong government control over areas of public interest such as defence, infrastructure, education, and health, but much fewer governments try to control markets for private products such as televisions, haircuts, and cars. Even when a government does not try to directly control the price or quantity of a product in a market, they often can be involved in other ways, such as via government safety regulations, taxation, or by regulating how or when a product can be sold.

#### **Putting countries on the spectrum**

On the central planning / free market spectrum on the previous page, where would you put Papua New Guinea?

What about the United States? Or North Korea? Or China?

## **6. Microeconomics and macroeconomics**

There is one last, but major distinction in economics that all students of economic should be aware of - the difference between microeconomics and macroeconomics. Because 'micro' means small and 'macro' means large, at its very simplest, microeconomics could be said to be about 'small economics', and macroeconomics about 'big economics'... but it is more complex than that!

**Microeconomics** is fundamentally the study of markets. It looks at how suppliers (usually firms) make decisions about production, and tries to answer our five questions we looked at earlier about *what, how, when, where* and *for whom* goods and services are produced. Microeconomics also investigates consumer behaviour - that is, how consumers make their purchasing decisions. It also considers the role of government in markets - when and why a government could or should intervene in a market. You have probably heard of the famous foundational economic model, the supply and demand model. This model is the foundation on which we build our more complex understanding of microeconomics. We will be introducing you to microeconomics in Units 3 to 7.

**Macroeconomics**, on the other hand, is the study of an economy *as a whole*. It looks at concepts such as gross domestic product (GDP), economic growth, inflation, unemployment, inequality, and government policy that affects these variables. It tries to answer questions such as - how can a country improve its economic growth? How can the government manage inflation and economic inequality, and increase employment? How do things like savings, investment, and technology affect an economy? We will be introducing you to macroeconomics in Units 8 to 12.

It used to be that microeconomics and macroeconomics were quite separate sub-disciplines in economics. However, in recent years, there has been a much greater attempt to integrate our understandings in these two areas together, by using our knowledge of microeconomics to build and fuse together a picture of the entire economy. Sometimes economists are criticised for not knowing all the answers to why markets and economies work the way they do, but usually that is because there is still so much to learn in economics!

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**Review questions:**

1. What is economics all about? What is the economic problem?
2. What is the definition of opportunity cost?
3. Why is opportunity cost so important to the study of economics?
4. What makes the study of economics a social science?
5. What do you think about the idea of rational self-interest? Do you think it is a good assumption for economists to make about people? Why / why not?
6. What is the difference between positive and normative analysis?
7. Do you think Papua New Guinea should have a more centrally planned economy, or a more free market economy? Explain the arguments for your choice.
8. What is the difference between microeconomics and macroeconomics?