

schools' *brief*

ECONOMIC REASONING

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While many lay people are quite happy to tell economists where they should go, few commentators actually understand where economists are coming from. This is surprising as the answer is beguilingly simple. So,

- Where are economists coming from?
- Why should one believe an economist?

Where are Economists Coming From?

Economists are interested in scarcity.

In itself, scarcity is neither new nor revolutionary, which begs the question of why economists consider it so important. Interestingly, economists didn't always consider scarcity as the fundamental issue. As Box 1 on the next page shows, interest in scarcity is a relatively recent phenomenon, dating from the mid 1930s.

The implications of resource scarcity are immense. This is illustrated by the following formalised argument.

- Proposition One:* People prefer more to less and generally have unlimited wants.
- Proposition Two:* Resources (land, labour, capital) are found in limited quantities.
- Therefore:* There are not enough resources to satisfy everyone's wants.
- So:* Societies require a system to allocate limited resources between competing users and uses.

This argument is reflected in a formal definition of economics:

Economics is the study of how people and society choose to employ scarce productive resources, which could have alternative uses, to provide various commodities, and the distribution of these commodities among people and groups (Samuelson et. al. 1970).

This rather lengthy definition can be reduced to a more manageable form. This is known as the economic problem:

- What gets made?
- How is it made?
- Who gets it?

To show the importance of the economic problem, consider these questions in relation to the provision of health services.

- Should health agencies produce one extra heart transplant or numerous extra hip replacements?
- Should services be produced in a centralised base hospital, outpatients clinic or within the home?
- Should resources be devoted to elderly or young patients, accident victims or sports injuries?

No doubt, you would obtain a wide variety of answers if you asked your friends these questions. Obviously, if resources are limited, one has to make choices and trade-offs. This is where economic reasoning can be useful.

From the perspective of scarcity, economists divide all goods into one of two categories. Goods are considered either free (or non-economic) or scarce (or economic), in nature.

Free goods are available in unlimited quantities, hence have a zero price. Traditional examples of free goods include fresh air and water. However, air pollution and water restrictions indicate that even free goods can become scarce. This makes them of interest to economists because, as mentioned before, economists are interested in the vast array of goods that are scarce. This includes everything that has – or should have – a non-zero price. If the world had

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Box 1: The Changing Focus of Economic Enquiry

The ancient Greeks gave us the word 'economics' but equated its meaning to 'household management'. During the middle ages, economics was a branch of moral philosophy, but by the 18th century, it had developed into 'political economy'.

In its modern form, economics is an extremely young science, dating from Adam Smith's *Wealth of Nations*, first published in 1776. Smith (1723-1790) is regarded as the 'Yoda' of the economics world. This is because everything which has followed is inextricably linked to the ideas he founded.

As the title of Smith's book suggests, he was interested in the factors that determined national wealth and growth. Smith's ideas influenced an English clergyman (Thomas Malthus) to question whether there were any limits to growth. Malthus's (1766-1834) case was that human populations had the potential to grow faster than productivity and technological progress. He therefore predicted that unless there was the odd war or outbreak of disease to keep population pressures down, the result would be perpetual misery. It's from Malthus' rather apocalyptic vision that economics earned the title of 'the dismal science', and economists gained the reputation of making rather nutty forecasts. Malthus plays the role of C3PO: ever present but depressing.

Between Malthus's *Principles of Population* (1798) and Alfred Marshall's *The Principles of Economics* (1890) the industrial revolution fundamentally changed the economic and social face of most of Western Europe, North America and Australasia. During this period, many of Malthus's ideas on limits and scarcity seemed at odds with reality. In

this environment, economists such as Ricardo (1772-1823) (*Principles of Political Economy*, 1817) investigated how international trade could contribute towards growth; whereas Karl Marx (1818-1883) (*Communist Manifesto*, 1848, *Das Capital*, 1867) (Hans Solo to some, Darth Vader to others....) wrote about social conditions and income distribution. Collectively, these writers (as well as J.S. Mill and Nassau Senior) are known as the classical school.

If Smith is regarded as Yoda, then Alfred Marshall (1842-1924) plays the part of Obe-one. As father of the neoclassical or marginalist school, he provided the analytical framework to the issues posed by the classical school.

Like Marx, Marshall was interested in issues such as poverty and human behaviour. He therefore defined economics as both the 'study of wealth' and 'the study of man'. This analysis gave economics its behaviourist tradition as well as its focus on the maximisation of profits and satisfaction.

By the 1930s, the focus had changed yet again. While John Maynard Keynes was revolutionising one branch of economics with ideas about demand management, other economists started to move back towards questions of scarcity and opportunity cost. For example, Lionel Robbins defined economics as 'a science which studies human behaviour as a relationship between scarce resources that have alternate uses'.

It can therefore be seen that economics is anything but a settled body of thought. It has undergone numerous mutations and is still changing. These issues are considered further in Boxes 4 and 5.

unlimited resources there wouldn't be an economic problem as all wants could be satisfied and everything would be available for nothing.

These ideas about free/economic goods lead to a number of traps for non-economists. Firstly, people confuse 'free' education and health care with free goods. This is quite incorrect. While a service such as education may be provided to the end user without them paying for it directly, this is not the same as it being free. Education absorbs a considerable quantity of society's resources which is paid for out of taxation. It's therefore quite false to claim that government-provided services are free as the resources spent in one area could equally be used elsewhere. This is referred to as opportunity cost and can be illustrated by a production possibility frontier (Box 2, p.60).

A second trap for non-economists is that there is a considerable difference between an economist's definition of scarcity and that of a non-economist. To the non-

economist, scarcity means that there is not enough of something to go around, hence there is a shortage. However, to an economist there is only a shortage at a particular price level. For example, there is no world-wide shortage of new Rolls-Royce motor cars despite the fact that many people would like to own one. Yet, if new Rolls-Royces were sold at the same price as Toyota Coronas, there would be a massive shortage. Thus, to an economist, scarcity tends to be a dynamic and relative concept as against an absolute one.

The implications of resource scarcity, and most particularly 'who misses out', often make economic reasoning extremely controversial (See Box 3, p.60). However, this only underpins just how important the economic problem is.

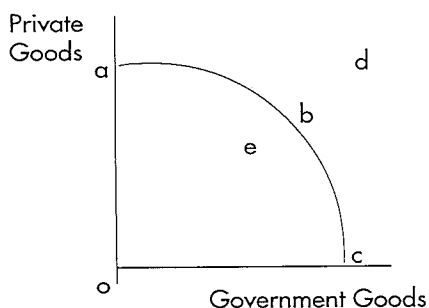
Why Should I Believe an Economist?

The theory of economics does not furnish a body of settled conclusions immediately applicable to

Box 2: The Production Possibility Frontier (PPF)

A PPF illustrates the problems of scarcity and opportunity cost. In a country where there are two types of economic goods, those produced by the government and those made by the private sector, it is impossible to increase production of one without giving up some of the other. Thus, a country can have lots of private goods (point a) but no government goods or vice versa. Point d (where there would be more of both) is impossible to reach with present technology and resource levels. Point e is within the PPF. This is an inefficient location as a point exists (such as b) where society could get more of both.

A PPF Showing Private and Government Goods



Most societies desire a mixture of private and government goods, such as point b.

One point that is important and acts as an antidote to resource constraints is economic growth. For example, if the economy develops more efficient techniques and technologies, the frontier will shift out and towards the right.

Thus, a point such as d may become possible in the future.

policy. It is a method rather than a doctrine, an apparatus of the mind, a technique of thinking which helps its possessor to draw the correct conclusions. John Maynard Keynes (Eatwell 1990).

As Keynes notes, economics is more a system of reasoning than a series of answers. This raises the issue of what can, or should, be considered a 'correct' answer. While some commentators argue that there are never any right or wrong answers, we take a more conservative view by asserting that some solutions are better reasoned and offer far greater insight than others. While this may sound a little 'wishy-washy' to mathematics or physics students, this is a vital issue when evaluating the validity of what an economist is saying.

Traditionally, economists have been loath to make decisions based on value judgments. Instead, they have been happier to make statements based on 'what is' versus

Box 3: No Free Lunches Here

It's an old adage that there is no such thing as a free lunch. Once one considers resource scarcity, it can be seen why economists argue that one can't get something for nothing. The benefits of scarce goods (cars, clothes, overseas holidays, and even information) can only be obtained if someone is willing to exert physical effort to get them and/or they are willing to give up something else. Thus, a central point that drives economic thought is that the provision of any scarce good involves a cost of some variety.

A number of implications can be drawn from this. The first is that if people need to spend money or time to obtain something, they will tend to economise. For example, if someone couldn't tell the difference between two different types of orange juice, yet one was 30% cheaper, most people will choose the cheaper juice and spend the money saved elsewhere. In economics-speak, the individual comparison between goods which yield enjoyment is called 'utility' (utility means the same as 'satisfaction' or 'pleasure'). Utility tends to be a personalised measure, so it's unlikely to be the same across different individuals (for example, while you may like orange juice, I may not). This means that the value of a good or service is often entirely subjective.

In this type of environment, the role of incentives is very important. Incentives influence the way people behave. As the personal benefits (utility) from choosing a particular option increase, so does the likelihood of that person taking that option. The reverse is also true: if you hated economics and knew that even if you received an 'A' for this course, it wouldn't make any difference to your future career prospects, the chances of you reading this sentence are extremely remote. Conversely, if you knew that taking this course would lead to a job that paid three times your existing salary, there is a major incentive for you to do it.

'what ought to be'. The 'what is' statement is known as positive economics. Statements in positive economics are similar to the observations found in other sciences. For example:

'The elderly have much higher individual health costs compared with the rest of the population.'

This statement is factually correct and is also void of any value judgments. This can be contrasted with the next statement.

'The government should pay for all the health-care costs incurred by elderly patients.'

This is a statement based on normative economics. It is impossible to prove normative economics as right or wrong as such statements are either consistent or inconsistent with individual preferences.

While economists often try to keep the two types of economics separate, it often isn't completely possible to

do so. Values still play an enormous role in forming the areas which positive economics evaluates. Different economists tend to ask different questions, and also tend to have different values by which success or failure is evaluated. It is for these reasons, and because of the infusion of normative economics, that economists often seem to disagree with one another. Disagreement is not necessarily a bad thing. It can mark the difference between a scrupulous adviser and a vociferous advocate. Some of these issues are discussed further in Box 4.

Another reason that economists often don't agree is that while 'facts' are derived from models, models are only a simplified perspective of reality, and reality is shaped by individual perspectives. This means that when the perception of the world changes, so will the model and 'facts' derived from the model. In economics, these issues are associated with different schools and paradigm shifts. Box 5 discusses some of the major branches of economic thought.

While we have briefly mentioned models, it is useful to pause for a moment and consider what a model is and why economists use them. An economic model can be compared to a navigator's map. A map deliberately simplifies the real world so that the main points can be examined without undue interference from information that is not

relevant. This allows the navigator to get a clearer idea of where he or she is going, and the economist a better idea of the relationship between the variables being examined (for example, price and demand). Thus, a good model simplifies reality without distorting results. This allows the economist to provide explanations, and sometimes predictions, about issues such as prices, employment, wages and inflation. However, before we test out our predictive skills against the track record of a horoscope line, we need to establish some ground rules.

When economists set ground rules, they call them assumptions. An assumption is when the economist makes a prediction on the basis of a certain proviso behaving in a particular way. For example, an economist may predict that unemployment during a certain period will fall to a lower level provided that something else doesn't change. If this occurs, one has good reason to believe the prediction will be correct.

One of the most common assumptions that economists use is all other things being equal (or *ceteris paribus* for those of you who like dropping Latin terms). 'All other things being equal' effectively freezes all variables in a model except for the ones under consideration. This is best illustrated by an example.

Suppose you wanted to know what the relationship

Box 4: Why Don't Economists Agree?

As noted in Box 1, economics is anything but a settled body of thought. Economics has been typified by a healthy scepticism towards traditional ideas and an open mindedness towards new concepts. It's from these attributes that we are able to see familiar situations in a new way. Remember, there's always more than one explanation of reality.

As alluded to previously, while there may be substantial agreement regarding positive issues, there is often violent disagreement over normative ones. Personal values tend to direct one towards different schools of thought which 'tell the type of stories one likes to hear'. This is best illustrated by the political use of economic ideas. As Keynes (who labelled politicians³ 'madmen in authority') wrote in the late 1930s 'Practical men, who believe themselves to be quite exempt from any intellectual influences, are usually the slave of some defunct economist'. In a New Zealand context, the reforms between 1984-7 were closely associated with the Chicago School and economists such as Friedman and Lucas; while the 1990-92 period had significant inspiration from the Public Choice or the Virginia School. Economists such as James Buchanan and Gordon Tullock figure prominently

here. In earlier periods (the 1950s and 60s) New Zealand followed a Keynesian approach, while Henry George, an American economist specialising in issues relating to land taxes, was very influential to the early Liberals (1890-1912). Thus, with such a wide range of 'authors' to choose from, there is little reason for any of them to be saying the same thing.

A second issue is whether it's either useful or reasonable to expect economists to agree. Interestingly, the answer is no in both cases. For example, it's only through internal debate that new ideas or developments are conceived. This issue is not only important in economics, but all other sciences as well. Physics, medicine, psychology and anthropology are all subject to furious debate. The major difference is that anthropologists are seldom featured on the 6.00 p.m. news.

Thus, while economists often don't agree, this shouldn't be seen as a mark of incompetence. It is important to listen to exactly what he or she is saying and to understand the assumptions from which they are making their comments. It's also important to consider which model they are using, as this will also tend to give different results. You have been warned!

Box 5: Romantic Socialists, Free Market Zealots and Everyone Else in Between

As explained in Box 4, as a discipline, economics is very much 'alive and kicking'. Despite numerous views, many methodological issues are generally accepted by the majority of economists. This is called the 'mainstream approach', and it serves as both an organising framework and as a focus for further intellectual debate.

Within the mainstream, there are a number of sub-groupings. The middle ground is occupied by practitioners who believe that mainstream economic theory is useful, and when used well, extremely powerful. Nevertheless, they realise that economics does have some infuriating limitations.

To one side of this group lies an exuberant band of free-market zealots. They tend to see economic systems in quite simple, and frequently black and white terms, and often fail to understand why others don't see what to them is perfectly obvious. The free-market group is keen to 'get the incentives right' and then 'get the government out of business'. Free-market zealots often divide their time between proselytising for free-market solutions to anyone that will listen and ensuring that all other economics

groups are kept on the straight and narrow.

To the other side of the middle, there's an ill-defined assemblage who are uneasy about the limitations of mainstream economics, but are also deeply suspicious of the free-market zealots, who they believe confuse ideology with methodology. The best of these 'in-house critics' are competent in their use of mainstream economics, which is often improved by a realisation of its limitations. Unfortunately, the remainder of the group offer criticisms that are normally less coherent than what they are criticising.

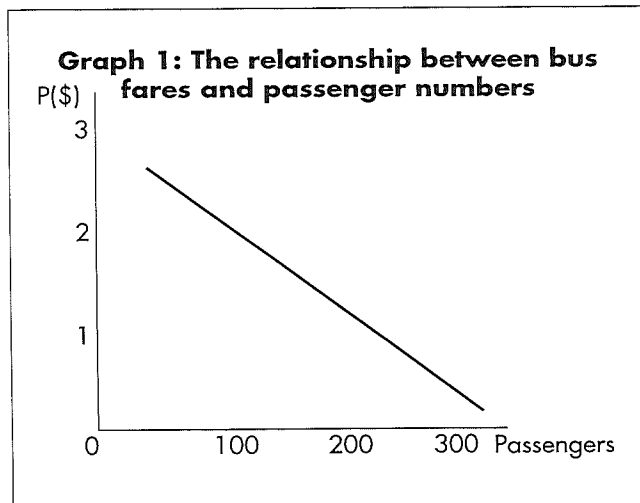
Outside of the mainstream dwell the conspiracy theorists, Marxists and assorted varieties of romantic socialists, with a number of anarchists thrown in for good measure.

We hope it's becoming increasingly clear to you that economics is far from a monolithic body of thought, and has attracted its share of intelligent — and irrational — individuals.

Where do you fit?

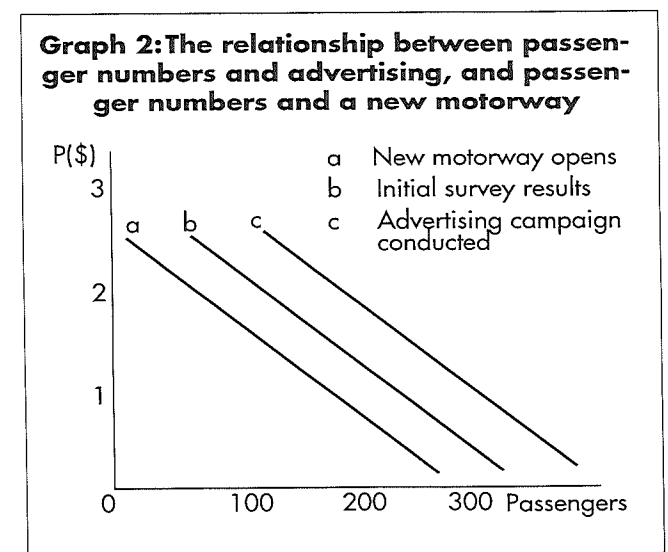
The material above is adapted from Randall 1987, *Resource Economics*.

was between the price of bus tickets and how many people used buses. Suppose further that you conducted a survey which produced the following graph.



Despite being quite sure that factors such as advertising, the price of petrol, and availability of parking will all have an effect on the number of people who use the bus, by temporarily ignoring these factors you can see that there seems to be a relationship between passenger numbers and ticket prices. Assuming all other things are equal,

it appears that the cheaper the tickets are, the greater the number of people who use buses. Let us take this example a little further. We now want to find out if there is a relationship between passenger numbers and a 'take the bus' TV campaign; and passenger numbers and the opening of a new motorway. Imagine that you have re-run your surveys and have obtained the following graph.



What Graph 2 appears to suggest is that all other things being equal, an advertising campaign will increase

Box 6: So, What Can an Economist Actually Do?

Advocates and opponents alike can swing between extremes of what economists can, and can't do. Firstly, while economics can't tell you stories about everything, this isn't the same as economics being unable to tell any relevant stories at all. Economics is good to establish parameters, distinguish relationships, identify issues, clarify options and provide an analytical framework. It can also be useful in providing evidence and arguments instead of assertions and opinions.

Nevertheless, economics isn't a 'one stop shop'. It does have limits, but these are often the result of poorly used models, not poor models per se. While it's quite correct to argue that 'everything depends on everything', in reality this is of little use in making decisions. There is a branch of economics (general equilibrium analysis) which takes this approach, so economists can tell stories on this basis, but it's more likely that the 'all other things being equal' assumptions are used to give more specific answers (this is called partial equilibrium analysis).

While academic economists often don't like being thrust into the role of policy advocacy, economists can establish criteria by which governmental decisions can be made. This minimises dangers of deception, but permits coherence and clarity to be improved. In showing that economics has limits, it's also important to realise (despite what one was told in high school social studies classes) that political systems are imperfect too. Thus, it may be extremely difficult, if not impossible, to get to Keynes's 'correct answers'.

the number of people who use buses at any given price, and that the opening of a new motorway will reduce the number of passengers at any given price. Furthermore, by separating out these individual factors, one can start to draw deductions about the impact of specific factors.

Economists spend much of their time conducting exactly the type of exercise outlined above. As it's impossible to test economic concepts in the real world (for example, we can't go and plunge half an economy into a recession to see what happens to employment levels by comparing our observations with the other half), we use models instead. Thus, modelling different policy choices gives us significant insight into different economic options.

To conclude then, when confronted with a barrage of economic information, you need to realise that while it can help you, all information has its limits. Just as you wouldn't consult a family doctor if you needed heart surgery, don't think that all economists can tell you everything you need to know.

To evaluate the stories that economists provide, ask questions.

- What is the economist actually asking me to believe?
- What model is their story based on?
- Is this story well supported?
- Is the story positive or normative in nature?
- Are the assumptions believable?

When you can respond to the questions above in an informed way, you will understand how economists reason and be better placed to respond to their advice in your decision-making processes.

Policy

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