

What is Opportunity Cost?

Paul Hoang of Sha Tin College, Hong Kong, discusses a number of illustrations of the first concept introduced to a new student of economics.

Exam Board	AS	Unit	A2	Unit
AQA	✓	1(10.1)		
Edexcel	✓	1		
OCR	✓	2881 (5.1.1)		
WEJC	✓	1(A)		
CCEA	✓	1		
Int. Bacc.		Standard 1		



The idea that buying a house is the biggest investment most people are likely to make does not take into account the investment Australian parents make in raising their children.

All you need is love ...and around AUS\$450,000 (*that's over £191,000!*)

Source: AMP (www.amp.com.au), an Australian financial institution

These quotes refer to the economic costs of raising children in today's society. But before we consider this example of opportunity cost we need to define this concept. *Opportunity cost* is defined as the best alternative that is foregone when making a decision. Due to unlimited resources, such as time and money, we are confronted with choices. The study of economics assumes that people are *rational decision makers*, i.e. they choose the option that gives them the most benefit. Opportunity cost differs from 'accounting costs' in that accounting costs do not look at the cost (or value) of foregone choices. For example, if a student decided to go into higher education, the accounting cost would include the tuition fees and other costs associated with studying at university. However, opportunity cost also considers the foregone income that could have been earned had the person chosen to work (the best alternative choice) instead of studying. Of course, the student would hope that by studying for a degree that he or she would earn a higher salary in the future to offset both the accounting and opportunity costs associated with studying. Hence, the concept of opportunity cost is useful when assessing the true costs and benefits of competing choices.

We now look at various applications of opportunity cost.

The economics of children...

Children represent an economic cost. This not only refers to the cost of having and raising children but also the opportunity cost of having children, i.e. what else parents could have done with the money had they chosen the next best alternative. Instead, parents have chosen to spend their time and money on children. Such decisions benefit businesses that are involved in toys, clothing, computer games and accessories, stationery, education and sports. There is a huge market to be exploited and companies such as Toys R Us and Mattel have become major global businesses as a result.

The opportunity costs of children have

become more apparent as can be observed through demographic changes. One demographic change that can be observed in most developed countries is the decline in birth rates. This is largely due to the growing number of women who are choosing to have children at a later age due to their career aspirations. However, the other major reason is to do with the opportunity cost of having and raising children. Some of the expenses that parents might need to fund include a combination of the items in Box 1.

The concept of opportunity cost applies to high income earners as well

as those with low incomes. In fact, those with high incomes may have fewer children because of the high opportunity cost of a working parent spending time on a young child's upbringing. There is a larger opportunity cost to the person (such as famous sports women and female celebrities) as they could have earned a lot of money in their profession.

The opportunity cost of time

The phrase 'Time is money' is of absolute relevance in the business world. For example, there can be a huge opportunity cost of being late for a job interview, delays caused by traffic

Box 1: The economic costs of having children

- ▶ Hospital fees – a private maternal ward at the Matilda Hospital in Hong Kong costs HK\$56,000 for three days (that's over £1,300 per day!). In Portland Hospital, London, the cost is between £7,000 and £10,000 depending on the level of service required.
- ▶ Groceries – from baby nappies and milk powder to lunchboxes for school.
- ▶ Hobbies – many sporting and leisure activities can prove very expensive for participants (and their parents).
- ▶ Private tuition – such as private music lessons or academic tuition for exams.
- ▶ Compulsory Education: kindergarten, primary and secondary. Costs might include: uniforms, stationery and textbooks. According to MoneyCentral.com, the cost of education accounts for 7-11% of the average American household income. Private sector education, in boarding schools say, will obviously inflate the costs for parents. British media sources reported that private schooling costs an average of £71,050 for a day student (who returns home at the end of the school day) and an extra £130,450 for a boarding student (who stays on campus).
- ▶ Tertiary education: University fees and maintenance costs, such as rent. In November 2006, *The Independent* reported that "steep rises in university fees have pushed the average cost of bringing up a child to more than £180,000." University tuition fees were also reported to have increased three times more than the rate of inflation.
- ▶ Deposit for a car/home.
- ▶ Gap year expenses.
- ▶ Holidays – additional cost of flights, accommodation and entertainment. Most airlines will charge for children aged 2 and above for a 'seat ticket'.
- ▶ Health services – a visit to a private doctor costs HK\$350 (approx. £25) for a general consultation that might last no more than 2-3 minutes.
- ▶ Wedding – the average cost of a wedding is AU\$36,234 (£15,400) in Australia (Source: *Bride to be* magazine, Cost of Love Survey 2004) and US\$19,000 (£9,600), excluding the honeymoon, in the USA (Source: *Brides* magazine).



Those who buy stand-by tickets are valuing cost savings more than convenience.

congestion or missing payment deadlines to a bank. Businesses realise that customers do not like to wait. Minimising waiting time is not always feasible, such as queues at a doctor's clinic. Nevertheless, there are plenty of examples of how businesses put the concept of opportunity cost into practice.

- ▶ Mirrors have long been used in places with lifts (elevators), such as in hotels and department stores. Customers do not necessarily notice the waiting time – and hence refrain from being annoyed at the business – as they stare at themselves in the mirror! The same reasoning applies when customers enter the lift – there are mirrors inside too.
- ▶ Music and entertainment is a major feature at many theme parks. The Disneyland Company tries to reduce time-conscious customers by providing music, live entertainment and use of large movie screens to distract customers whilst they wait in line for thrill rides and other attractions. This all helps to provide a better overall experience for their customers.
- ▶ Whilst waiting at the checkouts at any

supermarket, you may notice the 'bins' next to the counter. These are a last minute attempt by the supermarkets to lure customers to buy miscellaneous items (hence the term 'bins') such as confectionery and batteries. The other purpose is, again, to distract people waiting in the queue.

- ▶ In many countries, the multinational Pizza Hut offers their customers free pizza if their order is not delivered within 30 minutes. This practice may give Pizza Hut a competitive advantage over its rivals, initially, but rivals simply copy the idea. Nevertheless, the principle of opportunity cost is again at the centre of this business decision.

Table 1: Interest rates for Halifax Stepped Income Reserve savings accounts, from 1st June 2007

Year 1	4.95%
Year 2	5.20%
Year 3	5.45%
Year 4	5.70%
Year 5	8.00%

Source: <http://www.halifax.co.uk/savings/personalrates>

- ▶ Airline companies often overbook the number of seats of a flight. This is because, statistically, flights are rarely booked at full capacity. However, as a result of the policy, sometimes airlines face the problem of overbooking and will need to 'bump' customers, i.e. to offer them compensation for having to wait for the next available flight. To the person who values time less conscientiously, they may purchase a stand-by ticket which is cheaper but more inconvenient.
- ▶ Public transport has also been targeted by the business world. Television advertising is now quite common on buses and trains. This not only helps the transport companies, such as Virgin Trains, to receive advertising revenue, but may also distract travellers from 'counting the minutes' on a journey, thereby making the experience a little more enjoyable.
- ▶ Women's clothes retailing is a massive business. However, women are often accompanied by their husbands and boyfriends who tend to have less patience in a shopping mall – look out for this trend next time you are out shopping! Marketers have noticed this fact and have responded. Many retail outlets now provide newspapers and male-orientated publications (such as motor vehicle or male fashion magazines) so that the girlfriend or wife can shop in peace! The retail outlets, of course, hope that this strategy will then allow the customers to spend much longer in their shops, thereby increasing the chance of more sales.
- ▶ Banks make their money mainly by lending the deposits from their savers. Hence, they will reward the savers that can 'lend' the bank money for a longer period of time. Savings accounts that are instant access (savers can take their money out without any notice) attract a lower interest than deposits made in a long-term savings account. At the time of writing, a HK\$1,000,000 deposit (approx. £70,000) at HSBC in Hong Kong will give a return of 2.75% whereas the same deposit for two years gives the saver 3.55% per annum. So, time really is money in the business world. Similarly, Table 1 shows the various rates of interest for savings with Halifax plc (one of the UK's largest mortgage providers). As can be seen, the longer someone

saves their money, the greater the return on their money.

- ▶ 7-Eleven stores, the Japanese-owned multinational company, charges higher prices than supermarkets for the same products. The surcharge is 'justified' as most of their stores are open 24-7 and so customers are expected to pay for this convenience and the opportunity cost of having to pay higher wages to staff who work unsociable hours. Customers are also likely to be willing to pay more for their own convenience of being able to purchase items from 7-Eleven when other retail outlets are closed.
- ▶ Opportunity cost also extends to the health care industry. There are huge waiting lists in the National Health Service, which is funded by taxpayers and provided by the public sector. However, if a patient chooses to 'go private' then he or she may even be seen right away by a doctor. This, of course, comes at a price but again the example shows that the concept of opportunity cost is at play.
- ▶ London congestion charging came into effect in February 2003. This meant that drivers entering the controlled zone at peak times in London were charged £5 per day. Within a few months, traffic had fallen by around 20%. The charge (or tax) has since been raised to £8 per day. Motorists, as a result, have to ask themselves whether the congestion charge is a price worth paying. The opportunity cost may be that the £8 could have been better spent on something else, such as a meal – in which case the rational motorist would choose not to drive into Central London. However, if the opportunity cost was delivering valuable stocks to an important client, then the £8 charge may be minuscule.
- ▶ Supermarkets in the UK realised the opportunity cost of being 'closed' on Sundays. It was not until the mid-1990s that supermarkets went against government advice and began to trade on Sundays. They were fined for such actions, as licensing to trade on Sundays had not been enacted, but the fine was so insignificant compared to the revenues that they were earning by opening on Sundays that the supermarkets continued with this practice. Banks in Hong Kong are currently contemplating opening on Sundays.

- ▶ Even governments are waking up to the opportunity cost of neglecting the environment. In February 2006, *The Daily Telegraph* discussed whether parents who use reusable nappies for their babies should receive cash benefits. This could give parents an incentive to switch away from disposable nappies which are not biodegradable. The Republic of Ireland has used a 'plastic carrier bag' tax since 2002. The opportunity cost of not bringing your own bag (i.e. not recycling carrier bags) is the tax paid on each bag issued by a retailer. The BBC reported that this act has led to millions of euros in tax revenues and a 95% fall in the use of plastic carrier bags.

Questions for discussion

1. What is meant by the concept of opportunity cost?
2. Why do children present an opportunity cost to their parents?
3. If opportunity cost cannot be accurately measured, does this mean it has limited use?
4. Why do banks tend to offer higher rates of interest for customers who cannot have instant access to their savings?
5. To what extent does an understanding and awareness of opportunity cost help to reduce environmental damage?

Summary of key points

- ▶ **Opportunity cost is the cost measured in terms of the next best option that is foregone when making a decision.**
- ▶ **Opportunity cost is at the heart of decision making, whether there is a conscious or subconscious awareness of the concept.**
- ▶ **Due to scarce resources, including time and finance, competing decisions need to be made and any decision that involves a choice between options will incur an opportunity cost.**
- ▶ **Children are big business in today's modern society. Parents are more than willing to make sacrifices for their children. These sacrifices represent the opportunity cost of choosing to have children; the money that could have been spent on the best alternative if parents did not have children.**
- ▶ **Knowledge of opportunity cost, even if it cannot be calculated precisely, allows decision makers to gain better insight into the *real* costs of their choices and not just their monetary costs.**



with Chief Examiner,
Robert Nutter

1. Investigate the importance of indifference curves and budget lines in consumer preference theory, and relate them to opportunity cost.
2. The Office of Health Economics has a schools website entitled: *The Economics of Health Care* (www.oheschools.org). Using the site research the importance of opportunity cost in health care and how quality adjusted life years (QALYs) can be used by health professionals to make decisions on treatment.

