

What are services and who provides them?

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Abstract

In this paper we define services and provide an overview of who produces them and why. The first section defines a service as a type of product that can only be consumed while production is taking place. This rests on the concept of inseparability, which refers to the characteristic that the consumption and production of a service are inseparable. The second section provides an overview of the private, the not-for-profit and the government sectors in Australia, with a more detailed description of the economic reasons and mechanisms of government intervention in service markets.

Introduction

The purpose of this paper is to define services and provide an overview of who produces them and why. The first section defines a service and briefly describes the conceptual and practical value in having a distinction between goods and services. The second section introduces service providers by separating them into three sectors: the private sector, the not-for-profit sector and the government sector. This provides an introduction to services and context for more in-depth discussions of service delivery and access in forthcoming State of Regional Australia (SORA) Series publications.

What are services?

A service can be defined as a type of product that can only be consumed while production is taking place. This rests on the concept of *inseparability*, which refers to the characteristic that the consumption and production of a service are inseparable. In contrast goods are *separable*: goods can be separated from, exist and be consumed independently of the production process that created them (Parry et al. 2011). Inseparability means that a service can only be consumed while it is being produced – if production stops, then consumers are unable to consume the service. It is worth noting that this does not work in reverse as the service can continue even though there is no consumption. For example, emergency services are being provided even when there is no emergency to attend.

Categorising products as goods or services provides a valuable distinction because it helps explain why the way in which services are produced is so different from goods. It also helps explain why services cannot be stored and why they are difficult (although not impossible) to trade relative to goods. From these differences we can begin to see why producing a service is different from producing a good and how this may have consequences in terms of who, when, where and how customers have access to services – some of the questions that will be addressed in future SORA series papers on service delivery and access, beginning with *An introduction to where Australians live* (BITRE 2018a) and *The City, Town or Village as a service centre* (BITRE 2018b). An overview of the

definition used in the SORA series can be found in the BITRE staff paper *What is Access?* (Thomson et. al.).

The distinction between goods and services has a long tradition in economics and other social sciences. Historically the division has rested on a definition of goods as *tangible* and *enduring* over time on the one hand, and services as being *intangible* and *perishable* on the other. To put these into concrete examples, imagine an ice-cream cone (a good which is tangible, can be held and exists for a duration (if finite) and a concert by a string quartet (a service which is intangible and only exists while the musicians are performing). Where a good is material and has a definite physical existence, a service is not material and does not necessarily have a definite physical existence. Where a good holds its material existence for at least some period of time *after it has been produced*, a service does not, and when the service ends, it ceases to exist. A critical evaluation of the *Tangible/intangible*, *Enduring/Perishable* and *Separable/inseparable* characteristics can be found in Box 1 (below).

Box I: Historical and modern definitions of a service

Tangible/intangible

In the modern context the tangible/intangible contrast is not sufficient to distinguish goods and services. Services clearly have tangible results: when a cleaner performs the service of cleaning a house a material difference should result, in that the house should be tangibly cleaner. These results may even be accumulated, taking for example education services and the accumulation of learning (human capital) (Gadrey 2000). More problematically, some goods are intangible (i.e. computer software), and all goods have intangible properties which are often more valued by consumers than their tangible properties (Levitt 1981). It would be difficult to explain the fashion industry using the tangible characteristics of clothes and accessories and ignoring the intangible aspect of the products such as signalling membership of a group, status or the attraction of an advertised 'lifestyle' and so on. To the consumer at the time of choosing a product, the product can be thought of as a promise of a bundle of tangible and intangible attributes.

This has led to a view, adopted by many in the marketing profession and widely held in corporate and IT fields, that there is little use in distinguishing between a good and a service (see Levitt 1981). Service-Dominant Logic, or the 'everything is a service' view considers every product a service. Where those products in part involve a durable material object (what might otherwise be called a good), this object is just a means of delivering the service (Vargo & Lusch 2008).

While understandable from a marketing perspective, and to some extent in corporate and IT fields which have limited interaction with tangible goods, there are limitations to this view. First, conceptually proponents generally confound the idea of service with the idea of value – what is referred to as a service in this view could better be referred to as value to the consumer. Second, practically speaking, defining everything as a service loses the distinction between a good and a service, along with any value in that distinction. This view came about because modern marketing perspectives do not need to (and cannot) distinguish between the two based on their respective tangible or intangible nature. While this perspective is certainly correct in observing that the intangible characteristic is unable to meaningfully define services, distinguishing goods from services remains both practical and useful.

Durable/Perishable and Separable/inseparable.

¹ The tangible characteristic of goods is attributed to Nassau Senior (chapter 3 para 75, in Nassau 1854), while the perishable characteristic of services is attributed to Adam Smith (book 2, chapter 3 paras 1 in Smith 1904). Although often cited this section of Smith's work does not refer to services in the modern sense and could be seen as a misattribution.

The second characteristic that has been used historically to define a service is the idea that a service is instantly perishable. We might take the term perishability to refer to the process, or to the result. However, the results of services are tangible and enduring, and in this respect it is difficult to see the difference between the result of a service and a good. That said, there is something in the nature of a performance, like the string quartet mentioned above, that is different from the production of a good. While the results – the feelings inspired, the memories of the performance – remain at least for a short time after the performance, the service itself comes to an end when the quartet stops playing.

Recall from the definition of a service presented at the beginning of this section that we use the characteristic that consumption and production of a service are inseparable. When a string quartet stops playing, a school closes for the day, or a doctor shuts up shop, we observe that the service ends. Both the historical description that a service is perishable, and our own explanation that consumption and production are inseparable, are ways of explaining this phenomenon. Although they are essentially referring to the same observable characteristic, perishable, which is the term coined by Adam Smith, is descriptive and provides no explanation as to why a service instantly perishes. We use the idea of inseparability as the defining characteristic of a service as this provides a useful explanation of this phenomenon and provides insight into the differences between goods and services.

Who provides services?

Service providers can be divided roughly into three sectors: the private sector, the not-for-profit sector and the government sector. Each makes their own contribution to the services available to the community and is motivated by slightly different objectives. An overview and the objectives of each sector are briefly addressed below.

Private providers

The focus for the private sector (for-profit organisations) is to be profitable. Strictly this means to have revenue greater than all the economic costs of production. The private sector primarily contributes to communities by providing services for consumers to purchase, and makes up by far the largest sector of service provision in Australia.

In order to provide services a business needs to be viable and at least cover the costs of providing the service. The services provided result from a market interaction between demand (including the preferences and income of the customers) and supply (the cost structure of the firm). The results often have spatial consequences. What, how much, and how an organisation produces services to satisfy consumers' needs is decided by the organisation itself in a disaggregated market. The mechanism by which markets coordinate activity are described in more detail in Box 2 (below), which provides an overview of the price signal.

We can make a broad observation that the private sector provides fewer services in regional and rural areas than they do in large cities (BITRE 2018b). In relative terms this difference has become more pronounced over time due to a long term shift towards the concentration of economic activity (BITRE 2014). Previously, many towns provided a similar and broad range of services. The focus of activity was local, as transport was expensive for both producers and consumers. However, declining transport costs, for both the producer and consumer has raised competition and extended regional markets. Over the last hundred or so years this has resulted in the exit of firms from smaller towns, and a corresponding growth in the size and number of firms in larger centres – centralising the provision of many goods and services (BITRE 2014).

Box 2: The role of the price signal

The fundamental problem of efficient resource allocation is the fact that the knowledge of who needs which resources never exists in a concentrated or integrated form. Instead, this knowledge exists as dispersed bits of incomplete and perhaps even contradictory knowledge, held by the individuals who make up society. No one source of knowledge exists that shows the resources that each individual wants, and the relative importance of the use that they will put it to. Put simply, the fundamental problem of efficient resource allocation is how to use the knowledge of society to distribute resources, when that knowledge is never available to any one person in its totality.

In a market, prices act to coordinate the separate actions of different people. The most significant contribution of markets to efficient resource allocation is how little each individual participant needs to know in order to be able to make the right decision. In abbreviated form, by a kind of symbol, only the most essential information is passed on. The price system acts as a kind of machinery for registering change, or a system of telecommunications, which enables individual producers and consumers to use a single indicator, as an engineer might watch the hands of a single dial, in order to adjust their activities to changes which they may never know more about than as a movement in the price of a good or service.

These adjustments are probably never "perfect". The marvel of a market is that such a simple mechanism sends an aggregated relative value of the uses to which other people want to put resources without those people ever having to meet or even know of each other's existence.

In contrast, where markets do not exist, usually some central authority is charged with allocating resources (i.e. a government). The cost of centralising decisions is that it is generally not possible to use all of the knowledge of all of the relevant individuals, and it is certainly not possible to costlessly collect this knowledge and then use it immediately. These decision would be better made by the individuals involved. However, to make an efficient decision about using resources the decision maker on the spot needs to know the relative value that other people put on the resources. Without a price signal this is very difficult information to collect, distil and communicate to decentralised decision makers. Instead some central authority makes decisions on the inherently limited information it has available.

This lack of information is a barrier to efficient resource allocation for service providers that do not have a market price for inputs or the services they provide. Consumers of the service have little information on the relative value of the resources they are consuming, as this is not reflected in the price they have to pay. At the same time, the service provider has little knowledge of how much consumers value what they are providing or the value of the non-market resources they use. We can credit the lack of a market price signal as one of the factors that lead to under and over provision and under and over consumption of public services.

(Adapted from Hayek 1945)

Not-for-profit organisations

Not-for-profit organisations provide services for a range of organisation specific objectives. The common link between these organisations is that they principally reinvest any financial surpluses to further their specific goals, such as social, environmental or cultural objectives. Although they may make a profit (in either the economic or accounting sense), the proceeds are directed towards the organisation's goals, rather than returned to the organisation's owners or members.

The sector can be divided into charities and non-charities. Legal charity status in Australia is determined by the Australian Charities and Not-for-profits Commission. To acquire legal charity status, an organisation must:

- · be not-for-profit,
- have a charitable purpose,
- be for the public benefit (other than where the charitable purpose is the relief of poverty).

In legal terms there are four broad charitable purposes:

- relief of the poor, aged and impotent
- advancement of education
- · advancement of religion, and
- other purposes beneficial to the community.

Sources: John 2004, ATO 2017

Although 'charitable purpose' as a legal term is narrower than the way we use the word in common language, both share the idea that a charity is for public rather than private benefit. Examples of charities include religious groups, not-for-profit aged care homes, homeless shelters, disability service organisations, universities and colleges, animal welfare societies and artistic or cultural groups. There are a variety of motivations for the charities sector as shown below.

Percent of all organisations 35 30 25 20 15 10 5 0 Advancing religion Advancing social or public welfare Advancing health Advancing culture Promote or oppose a change to Advancing education public and other analogous to the Advancing natural environment Advancing security or safety of Preventing or relieving suffering of Purposes beneficial to the general Promoting reconciliation, mutual Promoting or protecting human Australia or Australian public respect and tolerance between law, government, policy or groups of individuals charity

Purpose

Figure 1: Purposes of registered charities

Notes: Charities can have more than I purpose. 13,844 charities listed no charitable purpose. Source: Reproduced from Figure 5.1 of Cortis et al 2016, page 34.

Table 1 below provides an overview of the services provided by registered charities, the number of organisations and the number of paid staff.

Table 1: Activities of registered charities

| | Number of organisations | Per cent of all organisations | Number of (paid) employees | Per cent of employment in all charities |
|--------------------------------------------|-------------------------|-------------------------------|----------------------------|-----------------------------------------|
| Aged care activities | 1,465 | 2.9 | 171,863 | 14.1 |
| Animal protection | 474 | 0.9 | 3,514 | 0.3 |
| Civic and advocacy | 450 | 0.9 | 3,340 | 0.3 |
| Culture and arts | 2,225 | 4.4 | 24,890 | 2 |
| Economic, social and community development | 2,268 | 4.5 | 38,261 | 3.1 |
| Emergency relief | 1,573 | 3.1 | 7,669 | 0.6 |
| Employment and training | 520 | 1.0 | 40,188 | 3.3 |
| Environmental activities | 877 | 1.7 | 5,119 | 0.4 |
| Grant-making activities | 2,770 | 5.4 | 2,092 | 0.2 |
| Higher education | 621 | 1.2 | 189,366 | 15.5 |
| Hospital services and rehabilitation | 414 | 0.8 | 104,308 | 8.5 |
| Housing activities | 868 | 1.7 | 12,244 | 1 |
| Income support and maintenance | 202 | 0.4 | 579 | 0 |
| International | 430 | 0.8 | 3,270 | 0.3 |
| Law and legal services | 213 | 0.4 | 5,814 | 0.5 |
| Mental health and crisis intervention | 509 | 1.0 | 10,996 | 0.9 |
| Other | 568 | 1.1 | 1,718 | 0.1 |
| Other education | 4,233 | 8.3 | 86,611 | 7.1 |
| Other health services | 1,846 | 3.6 | 69,557 | 5.7 |
| Other philanthropy | 477 | 0.9 | 1,556 | 0.1 |
| Other recreation and social club | 1,090 | 2.1 | 11,804 | 1 |
| Political activities | 8 | 0.0 | 16 | 0 |
| Primary and secondary education | 4,032 | 7.9 | 200,255 | 16.4 |
| Religious activities | 14,517 | 28.5 | 49,071 | 4 |
| Research | 606 | 1.2 | 14,707 | 1.2 |
| Social services | 3,287 | 6.5 | 139,082 | 11.4 |
| Sports | 288 | 0.6 | 16,385 | 1.3 |
| Unknown | 4,077 | 8.0 | 8401 | 0.7 |
| Total | 50,908 | 100 | 1,222,676 | 100 |

Source: (Figures A.7 and A.13 combined, Cortis et al 2016, page 97 and 101 respective)

The other part of the not-for-profit sector are non-charities. Non-charity not-for-profit organisations are not highly regulated (unlike registered charities), and for this reason there is less information available on their contribution. However, most sporting and recreational clubs and many community service organisations, professional and business associations and social organisations fall into this category. While the objective of the organisation cannot be for-profit, the goal of these organisation is not necessarily public good. Unlike charities the activities of these organisations are generally carried out for the benefit of their members.

The ability of many community groups to provide services rests on volunteers giving resources such as money, time, expertise and facilities. Volunteer labour is a particularly important resource, and in time alone the sector represents the donation of 'more than 3.8 million volunteers' who 'provide \$17.3 billion dollars' worth of labour. Most people volunteer in the areas of Sport and physical recreation (31 per cent), Education and training (24 per cent) and Welfare and community services (21 per cent) (2012–13 cited in Our Community 2014).

The importance of the non-for-profit sector, particularly in small regional communities, should not be underestimated. These activities directly impact on the level and access to many services, not only in terms of direct provision, but also through generating a community identity and spirit.

Public provision and intervention

There are three tiers of government in Australia: the Commonwealth Government, the State and Territory Governments and Local Governments, each of which is involved in service provision. Although the Australian Constitution divides the responsibilities of government between the Commonwealth and the States, and States delegate some responsibility to Local Governments, in practice, overlapping funding, regulation and provision make it difficult to accurately describe the effect of any tier separately. As such this section attempts to provide an overview of the ways in which governments in Australia affect service delivery without delving into each tier.

Why governments intervene

There are many reasons why governments influence service provision, so many that this could easily be the subject of a report on its own. Rather than attempt to explain government decision-making we confine the discussion to a brief, non-exhaustive, introduction to the main economic reasons a government might intervene to improve outcomes for society. In this sense the following section does not attempt to explore the reasons governments intervene in practice.

One of the core justifications of government intervention is misalignment between who gains the benefits of an activity and who suffers the costs. Situations where benefits and costs are borne by those who are not directly involved in an economic activity are referred to as externalities. Many services have positive externalities, for example medical services help more than those who are directly treated for health conditions. Beyond the provider and the consumer, all those who suffered because of the worse health of their family, friend, relative etc. benefit from their improved health. There are also many negative externalities, for example we can think of the noise and other complaints made by people who live near bars and clubs. The residents are not necessarily directly involved in producing or consuming the services, however they do suffer noise and other negative effects from of those who do.

In the case of positive externalities the benefit to those directly involved in the activity is only part of the total benefit to society. The decision of how much to consume or produce, based only on the benefits to those directly involved, does not take into account the total benefit, which is greater. Decisions made on this basis may lead to <u>under</u> consumption or production relative to the amount that would maximise benefit to everyone.

On the other hand, in the case of negative externalities those directly involved in the activity do not bear the full cost of their production or consumption. The decision of how much to consume or produce, based only on the costs to those directly involved does not take into account the total cost, which is higher. Decisions made on this basis may <u>over</u> consume or produce relative to the amount that would maximise benefit to everyone.

The following list provides some categories of reasons for government intervention, many of which involve externalities.

Merit goods (and demerit goods) – Goods and services with positive externalities where the public benefit of consuming them is greater than the private benefit, leading to private individuals consuming less than would be socially optimal.

Some of the ways government attempt to increase consumption are:

- Raising demand through information that encourages consumption, for example promoting exercise to improve health outcomes.
- Directly providing services, for example immunisation programs to raise inoculation rates to stop the spread of disease.
- Subsiding access to services, for example Medicare rebates for health services.

Without government intervention these goods tend to be under-consumed in a free market, but if consumed, they provide positive benefits for society as a whole. In this case there is a positive externality to society of increased private consumption. To continue the example of medical care above, we see a wide range of government interventions, from direct provision of hospitals and medical centres and free or subsidised treatment for consumers (Medicare).

Governments also intervene to reduce the consumption of demerit goods, which are goods where there is a negative externality to society. These are goods considered unhealthy or socially undesirable. Examples are taxes on cigarettes and prohibiting the use of illicit drugs.

Network characteristics – Goods and services that become more valuable the greater number of people using them. Put in more technical terms, there is a positive externality associated with each additional consumer. Often these types of services are also natural monopolies, as it is more efficient to have everyone using the same system. Examples in the past have been railway infrastructure, road provision, and telecommunications. In terms of new technology, social media provides the best example – the value of being on the network is in who you are connected with, which is related to the number of people using that network.

On the other side of the coin there are also clearly some cases of negative externalities in networks, for example congestion on roads. Although the term 'network externalities' are usually used to describe benefits from additional users, congestion is a negative 'network externality', where there is a cost to all other users from an additional user of a network.

Public good attributes – Goods where (1) consumers cannot be prevented from using a good or service and (2) their use does not detract from the use of any other person. Formally these characteristics are:

- 1. Non-excludability of the good or service, as an individual cannot be prevented from consuming the good or service.
- 2. Non-rivalry in the demand for the good or service, as the consumption by one individual does not diminish the consumption of any other.

Examples of public goods include national security, street lighting or fireworks displays. Because these goods are non-excludable it is very difficult for for-profit or self-sustaining not-for-profit organisations to provide the service as there is no way for these organisations to recoup the costs from consumers.

Few goods are strictly public goods. In most cases, they are quasi-public. They resemble some of the characteristics of pure public goods but not all. The characteristics can be partly rivalrous and/or partly excludable. Quasi-public goods also create incomplete markets – one where there are some of the necessary conditions for markets to form, but not all of them. For example, where a good is excludable but nonrivalrous, potential profits attract entrepreneurs, and they only satisfy those who pay for the service. Because more people could be made better off by giving greater access, without making anyone worse off (nonrivalrous), the supply of the service is lower than would be socially optimal.

Information Asymmetry – Situations where one party in a transaction has more information than other parties in a transaction and is able to use this to their advantage at the expense of other parties. Producers often know more about the quality and nature of their products than do consumers. Similarly, consumers often know more about their circumstances and preferences than the producer. Where there is a difference in the information available to the two parties in a transaction (producers and consumers) there is Information Asymmetry. This may lead to situations where there are costs to society and market failure which provoke a government response.

Consumers often have less information than producers when purchasing services. This is more often a problem with services which are bought infrequently and services where the quality is difficult to evaluate before they are bought. Producers often have less information about the specific circumstances in insurance markets, making it difficult for them to correctly evaluate risks and apply appropriate premiums. Although the strategy for intervention may differ depending on whether the producer or consumer has more information, government intervention is common in both circumstances when one party uses that advantage for their own benefit at the expense of the other. For example, the Australian Securities and Investment Commission regulates the information that firms selling financial products must disclose to consumers (i.e. the issuer, benefits, risks, costs, return, dispute resolution and cooling off) and the format in which this information is presented in a *Product Disclosure Statement* to assist consumers to understand the (complex) product they are purchasing.

Monopolies or market power – Markets where providers have the ability to influence prices, often due to the cost structure of production or other barriers to entry. At one extreme are monopolists that have the power to set the market price, generally at a level above what is socially optimal. At the other are firms which have enough market share, although they are not monopolists, to influence the price in the market, again generally at a level above what is socially optimal.

Monopolies are often government operated, particularly natural monopolies which exist because of the cost structure of production or due to network externalities. This has historically been the case for services such as electricity, which operated for many years as state monopolies.

Over time, many government monopolies have been restructured to allow the entry of private enterprises. An important policy initiative for this process was the National Competition Policy (NCP) introduced in 1995. The NCP covered both general and sector-specific reforms, including restructuring public monopolies and operating under the principle that governments should not favour some market participants (specifically government producers) over others, a principle known as competitive neutrality (PC 2005).

Equity – Intervention to ensure those with a similar level of need have similar access and interventions that increase access to individuals that have higher needs or experience greater barriers to access. Often such interventions take the form of ensuring a basic level of service or provide a safety net for the community.

Equity in the economic literature has two elements (PC 2016)

- Horizontal equity is exhibited when services are equally accessible to everyone in the community with a similar level of need.
- Vertical equity is exhibited when services account for the special needs of particular groups in the community and may be needed where geographic, cultural or other reasons mean some members of the community have difficulty accessing a standard service.

Equity is generally a trade-off as costs across groups in society are not usually uniform. In practice governments are constantly balancing supplying a service at least cost by allocating resources to their best effect on the one hand, while maintaining equity objectives to address the distribution of the service across the country on the other.

How governments intervene

Governments have several mechanisms available to intervene in service provision which can be broadly divided into three categories: *regulation*, *direct provision* and *indirect provision*.

First, governments influence and shape the scope of economic activity through *regulation*. In a fundamental sense governments can be seen to intervene in every market, if only by enforcing and often assigning property rights. While this might seem self-evident it is an important point to keep in mind as, often implicitly, most government regulation changes who has the right to undertake an activity.

Regulation takes many forms, including:

- Economic regulation (i.e. price regulation and tax exemptions).
- Transactional regulation (i.e. contracts and grants).
- Authorisation regulation (i.e. licensing and registrations).
- Structural regulation(i.e. physical design).
- Information regulation (i.e. discloser and credit ratings).
- Legal regulations (i.e. codes of practice).

The implicit result is to assign or change the property rights in relation to an externality. Box 3 outlines the most influential theory on property rights and externalities, or Coase theorem, named after the Nobel laureate Ronald Coase.

Second, governments undertake *direct provision* where they directly provide goods and services to communities. To name only a few examples at each tier of government, take the Australian Government's provision of defence and welfare services, the State governments' provision of education, health and public safety services or local governments providing libraries, swimming pools and garbage collection.

Box 3: Coase theorem

The amount produced or consumed of a product that causes an externality will be efficient if the property rights to the externality are assigned and the parties to the externality are able to bargain without any transaction costs.

When we think about regulation it's intuitive to think about the way in which it prevents activity. For example, there are many restrictions on noise that seemingly prevent some forms of economic activity at certain times. A famous example is Sydney Airport curfew which restricts the types of aircraft that can take off, the runways that can be used and the number of flights allowed between 11pm and 6am.

Although on the surface regulation simply prevents activity, an alternative way of viewing regulation is that it assigns property rights. To continue the example above we can conceptualise the externalities of the peace and quiet appreciated by the residents and the noise of the airports' activities as economic goods. When thought of in this way, regulation preventing noisy air traffic after 11pm assigns the property rights to peace and quiet to residents. Reciprocally the right to peace and quiet (or to make noise) is assigned to the airport between 6am and 11pm.

The regulation could be written to assign property rights to either party. In the above example, the property rights could be assigned so that Sydney Airport owns the rights to peace and quiet, or in effect the right to create noise in providing air transport services. The difference between the two is in who gains and who losses, but not the nature of regulation itself.

Like other property rights, the rights assigned by regulation can be bought and sold, at least in theory. Sometimes the ability to buy and sell the rights is integral to regulation, such as a carbon trading system. These systems caps emissions (which create an externality) and assign the rights to pollute up to the cap to the various market participants. The rights to pollute can then be traded in a carbon market, so that those who need the right to pollute most can purchase that right.

Of course, while regulation always implicitly assigns property rights, it does not always lead to economic efficiently. In theory, Sydney Airport could buy the right to make noise after 11 from residents. However, although the rights have been assigned to residents, the transactions costs of successfully bargaining with the thousands of people affected makes this extremely difficult. In the face of huge transaction costs that prevent bargaining, to whom the property rights are assigned is important, not just in terms of who gains and who losses, but also in terms of economic efficiency.

All regulation implicitly assigns property rights, however to achieve economic efficiency through a market not only must the rights be assigned, but the participants must be able to trade unimpeded by transaction costs. As noted above, this is not often the case in practice.

(Adapted from Coase 1960)

Finally, governments can undertake indirect provision, where an agent provides services on behalf of a government. Contracting and outsourcing are two common methods, which have increasingly been used by government. Examples include the contracting of employment services and the outsourcing of 'non-core' services, such as laundering, catering, cleaning and pathology services in the health sector.

The many ways governments are able to influence service provision can make a clear distinction between providers difficult. Depending on the specific service there can be a complex mix of direct provision, indirect provision and regulation. We see services provided jointly between for-profit, not-for-profit and government sectors in cooperation. At the same time we see examples of providers from these three sectors competing against each other.

For most services however, some or all of these diverse providers co-exist and (to a greater or lesser extent) cooperate to form the entirety of the services available to the consumer. For example, what is commonly called the 'health system' is in fact a complex web of public and private services that are formally and informally linked across disciplines and space. Private General Practitioners and public hospitals are at the core of these services. These operate amidst a huge range of related public, not-for-profit and private providers of services as diverse as population and community health, through to acute and specialist care. The mixing and interaction of provider types with their attendant differences in capacity and motivation is a complicating factor in identifying the exact role of government in any given sector.

One of the best examples of a complex system of multiple interventions and multiple providers are primary and secondary education systems. The many government interventions in primary and secondary education are broadly based on equity considerations. Across governments there is broad agreement that all children be provided with primary and secondary level education that meets a minimum quality standard. Following the agreement of the State and Territory governments and the Commonwealth Government this has been enshrined in the Australian Education Act, which sets out principles for the quality and access to education:

"All students in all schools are entitled to an excellent education, allowing each student to reach his or her full potential so that he or she can succeed, achieve his or her aspirations, and contribute fully to his or her community, now and in the future.

The quality of a student's education should not be limited by where the student lives, the income of his or her family, the school he or she attends, or his or her personal circumstances.

The quality of education should not be limited by a school's location, particularly those schools in regional Australia."

Source: Australian Education Act 2013

To ensure the system achieves these goals while respecting parents' and carers' choice to send their children to a particular religious or philosophical school has led to the evolution of a complex mix of regulation, direct provision and indirect provision. Consequently the services themselves are provided by a mix of public, private and not-for-profit organisations.

Regulation is used to ensure that students get an education that meets the required standard and that information on the quality of education is available to parents and careers. For example State and Territory governments require school age children to go to school and directly regulate schools and alternative forms of primary and secondary education. The Australian Government requires schools to administer standardised testing and provides information about school result thorough the MySchool website. In terms of indirect provision, the Commonwealth, State and Territory governments provide funds to non-government schools for use in educating students. Finally, State and Territory governments directly provide education services through Government schools.

Direct provision is necessary because indirect provision by private providers does not ensure a suitable education for all students. At least historically, some religious or philosophical schools have not had resources sufficient to provide at least a base level of education. In this scenario regulation alone would close such schools. At least historically, funding was provided to such schools so that they could provide the required standard of education. Further complicating matters non-government schools are able to choose which students they accept. For this reason indirect provision through non-government providers does not ensure education for all students. To ensure that all students have access to a quality education while allowing parents and carers to choose the provider and

allowing providers to choose who they provide services to means that a quality education for all children requires direct provision.

This is a single example that highlights the complexity of service provision. Although being able to distinguish between sectors and between motivations and methods of government intervention is valuable, the reality for many services is that all of these factors are in play at the same time.

Conclusion

A service is a type of product that can only be consumed while production is taking place. This characteristic of *inseparability* distinguishes services from goods, as goods can be separated from and exist after the production process that created them has finished.

The second section introduced the three sectors of service providers: the private sector, the not-for-profit sector and the government sector. The focus for the private sector (for-profit organisations) is to be profitable, while not-for-profit organisations provide services for a range of organisation specific objectives. The defining feature of not-for-profit organisations is that they reinvest any financial surpluses to further specific organisational goals, such as social, environmental or cultural objectives. In contrast for-profit organisations may distribute profits to their owners.

There are three tiers of government in Australia: the Commonwealth Government, the State and Territory Governments and Local Governments, each of which is involved in service provision. The means of government intervention in service provision can be divided into three main types. First, governments influence and shape the scope of economic activity through regulation, second, they produce services themselves through direct provision, and third, they have agents produce the services on their behalf through indirect provision.

While being able to neatly distinguish between sectors, their motivations and the ways in which governments intervene is conceptually simple, the practice of service provision is highly complex. The three sectors often work together or in competition in a framework of regulations and potentially both direct and indirect government provision.

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© Commonwealth of Australia 2018

ISBN: 978-1-925701-58-6

September 2018

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