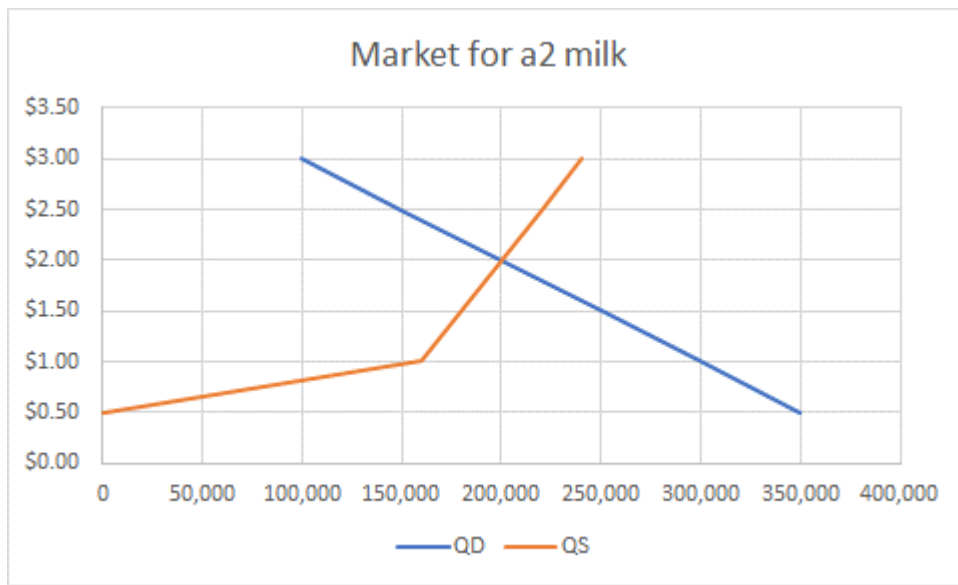


Economic Fundamentals in Australia (8th edition)
Sample responses to questions contained in
Activity Centre: Unit 3 Outcome 1

Practice SAC questions

Activity Centre Unit 3 Outcome 1

Case Study 1 – A2 milk



- a)
- b) Price is \$2 per litre and quantity is 200,000 per week
- c) the demand curve should shift left because the competitor's advertising campaign would shift tastes and preferences away from A2 milk
- d) When the demand for A2 milk shifts to the left, this creates a surplus at the existing price. The suppliers will need to reduce the price to clear excess stock. In doing so they may attract some new consumers as it becomes more affordable (demand expands). The lower price will send a signal to the producers of A2 milk that it is not as profitable anymore and they will look to cut production (supply contracts).
- e) Price elasticity of demand measures the responsiveness of demand to a change in price, expressed as a ratio of the relative percentage changes. Cigarettes usually have a low PED because they contain an addictive substance called nicotine. If the price were to increase by a certain percentage, then demand will probably fall by a smaller percentage (especially in the short run) because, even if the person wants to stop smoking, they may continue to smoke a certain amount due to bounded willpower (their cravings make it hard to make an economically rational decision). Cigarettes also have very few substitutes, so the consumer has little choice if they want to get their nicotine hit (e-cigarettes may be seen as a less than viable substitute).

In contrast, the A2 milk is one of many brands of milk beverages on the market. When a product has a large number of substitutes, the PED tends to be higher because a small increase in price is easily comparable across the many brands and therefore more noticeable. If there are viable substitutes who have not changed their prices, then the increase in prices is likely to lead to a larger decrease in demand when compared to the cigarettes.

- f) Asymmetric arises in a transaction when one party knows more than the other about the product or resource being sold. In this case study, the producers of Dairy Farmers (DF) milk know that their milk contains both A1 and A2 milk proteins and the buyers (who don't take the time to undertake a full study of what they are buying) might be misled by the advertising and make a decision to purchase the milk which does not maximise their wellbeing (due to less than full information). If a person were to purchase the milk thinking that it is A2, then it could be argued that there is an over allocation of resources to a product that clearly isn't what the consumer thinks it is. If, as the case study suggest, it leads to an increase in the number of people having an adverse reaction to the milk, then the buying decision actually leads to a reduction in living standards (worse than not buying milk at all). As a result, allocative efficiency is not achieved and the sick people may have to take time off work (which reduces their productivity and reduces their technical efficiency). There is also the real possibility that, in the long term, consumers reduce the demand for similar products (those claiming special properties over standard products) in the belief that they are being misled. This is inefficient as it has the potential to prevent valuable economic transactions from taking place – ones that can benefit both parties (the producer and the consumer).
- g) Possible solutions include:
- The ACCC could fine DF for engaging in misleading and deceptive conduct which sends a clear message to not only them but may help encourage other firms to provide honest and meaningful information for their potential customers.
 - The Government could mandate that food products sold for human consumption should include both the ingredients list and the nutrition composition. While this might solve the A2 milk problem it does increase the ability of consumers to make fully informed rational decisions.
 - Suppliers who sell faulty products or where it was not suitable for what it was promoted as, the consumer can rightfully receive a refund.

Case Study 2 – Fish stocks

- a) Fish are seen as a common access resource because they have the two defining characteristics of non-excludability (it is difficult to stop people extracting the resource even if they do not pay) and rivalrous (consumption by one person or group, means that there is less available for someone else – in this case, future generations). The source material states that 90% of the world's stocks are now overfished with production expected to increase by 17% by 2025.

When fish have a very low extraction cost (because in a 'free market' boats don't have to pay a fee to access the ocean), the price of fish would tend to be too low which leads to an increase in demand. The rate at which the fish are consumed is deemed to be excessive in relation to the rate at which they can reproduce' so stocks get depleted (and some species become extinct) over time. The unsustainable consumption of fish products could therefore be seen as inter-temporally inefficient as not enough fresh fish will be available to maximise society's needs and wants in the future (current generations are promoting their needs and wants at the expense of future generations).

- b) Types of intervention that might be effective with common access resources:

Some possible examples to deal with common access resources:

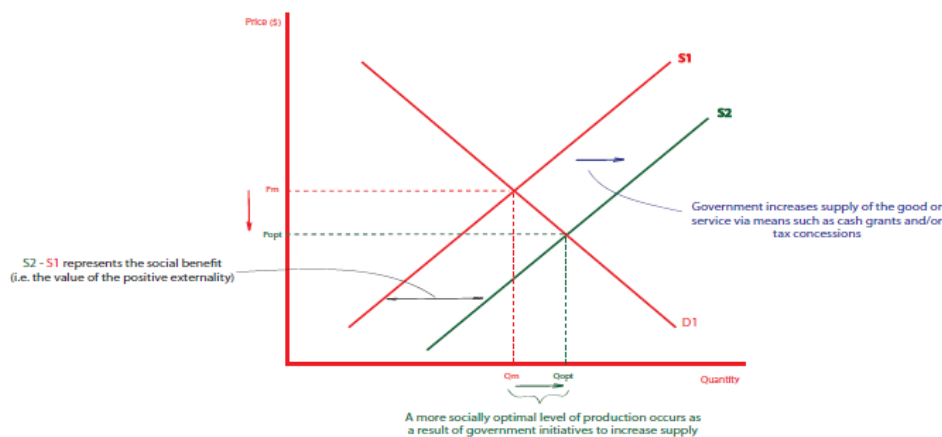
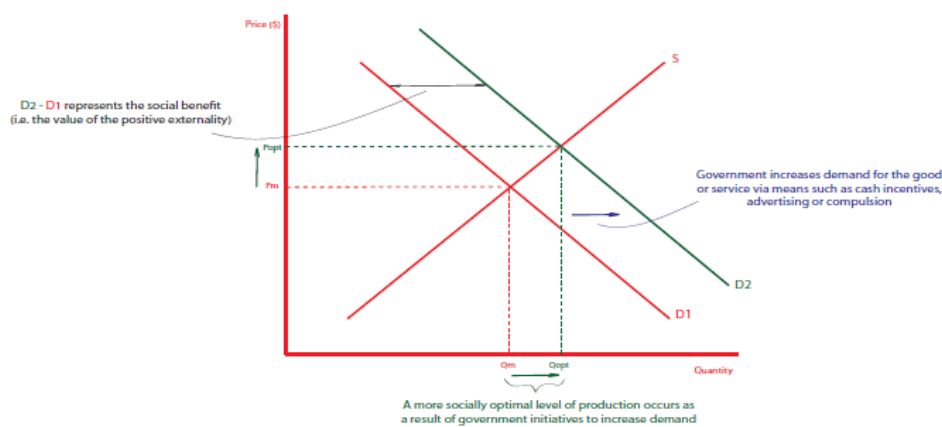
- Regulations that ban or limit the consumption of the CAR (such as the ban on CFCs or restrictions on who can fish in certain areas of the ocean, rivers or bays).
- Licences for fishing which restricts the numbers who can extract fish.
- Carbon taxes that change the structure of relative prices and reduce the incentive to pollute the common access resource of clean air/stable weather patterns.

Specifically in relation to fishing stocks, the government could (and has) implemented changes to fishing arrangements through their legislative powers. In 2016, the Victorian government banned the use of net fishing in Port Phillip and Corio Bays with the hope that this would give the fish stock the opportunity to reproduce. In doing so, the future generation will be able to access this important food source, leading to a more inter-temporally efficient allocation of resources as current consumption makes way for future consumption.

c) Positive externalities are the benefits provided to a third party when there is production and/or consumption of a good or service. Fish is a good source of protein and omega 3 oils (an essential fatty acid that is associated with increased brain function). If people consume fish, then their cognitive abilities may be enhanced, leading to greater innovation and productivity growth in the future. When productivity increases, future generations may be faced with lower prices and they can therefore consume more goods and services.

d) The graph should illustrate that the optimal quantity is not achieved in a free market and that there is an under allocation of resources because the social benefits are greater than the private benefits.

- Subsidies – show how the S curve shifts right due to a decrease in the cost of production
- Regulations that make consumption mandatory or alter incentive– this would shift the demand curve to the right (such as education). No Jab, No Play is framed so that parents feel they have little options when it comes to immunisation (especially if they want their child to attend pre-school activities)
- Advertising/education can be used to alter tastes and preferences and shift the demand curve to the right.



e) The government could provide a subsidy for the producers who are involved in supplying the good or service (second diagram above) which conveys positive externalities (such as education). When the producer receives the subsidy, the cost of production is reduced and this shifts the supply curve to the

right. This creates a surplus at the existing market price so there is downward pressure on prices. The lower prices creates an increase ability to consume the product (it is more affordable) so demand expands and moves the economy to the optimal quantity of consumption (more people can afford to go to school which is more likely to maximise society's wellbeing, both now and in future time periods).

- f) The price elasticity of supply measures the responsiveness of supply to a change in price, typically measured in percentage terms. Fish may be considered to be a product with a reasonably low PES (especially under normal market conditions). For instance, if there was an increase in demand, which causes the price to increase, firms supplying fresh fish might find it hard to meet the increase in demand (i.e. respond to the higher price) immediately because they cannot store the fish (it goes off very quickly). They may be able to meet some of the demand with frozen fish (but this is not seen as a viable substitute by everyone). If the fish stocks become excessively depleted, then it will be almost impossible to increase supply and the PES approaches zero (i.e. perfectly inelastic). Government restrictions, such as fish quotas, also also make it very difficult to increase supply, which necessarily leads to a lower PES.

Another way of looking at it.

Imagine that it was a very unpleasant day (an extreme weather event). One that day, very few people went to the fish market. The decrease in demand would result in a decrease in the price. The fish suppliers would find it difficult to adjust their supply that day (they buy their fish in anticipation for a normal day of demand). So when the price falls, they are unlikely to adjust their supply (they can't store the fish for too long because it will spoil and stink). Therefore, the PES would be considered low

Question 3

- a) NB – this is not a complete answer but some ideas on how to best answer this long and challenging question

Key elements of a good answer:

- A discussion about what a competitive market means
- An explanation (not just an assertion) of why a competitive market leads to an increase in economic efficiency.

Consider the following paragraph:

A competitive market will operate to satisfy the most needs and wants in society because the producers are always looking to maximise their profits (an inherent assumption in the model). Therefore it is in their best interests to constantly monitor changes in demand and changes in relative prices (the price of one good in terms of another). For example, since the advent of MP3 files there has been a decrease in the demand for compact discs containing music. The demand curve for CDs therefore shifted to the left, which initially created a surplus at the original price (the record companies were surprisingly slow to react to this and decided to sue the pirates instead). The surplus meant that record stores had to lower the price to clear stock. In future periods, with lower prices, and less profitability, the producers decided to cut back production so fewer resources were allocated to making a product that wouldn't sell. This freed up resources to be allocated elsewhere. The price of music fell (no matter how one consumed it), so more needs and wants could be met (increased material living standards) and society's wellbeing is likely to have increased.

An increase in competitive pressure is also likely to lead to an increase in technical efficiency. Firms will be striving to maintain market share and will continually be looking for ways to reduce costs and prices. This might include the development/invention/purchase of new technology (or capital) or simply restructuring of their organisations to achieve increases in productivity. To the extent that this helps to reduce costs, it means that any given production volume in the economy is achieved at a lower cost (i.e. technical efficiency is increased). By extension, this reduction in costs, and therefore prices, means that more consumers can be satisfied, which leads to an improvement in allocative efficiency and living standards.

Arguments against the effectiveness of the market to achieve an efficient allocation of resources might include a discussion of one or more of the following:

- When negative externalities exist, the market system will produce too much of the good or service because the producer and/or consumer only consider the private costs and benefits but don't consider the social costs. Good examples included cigarettes and other demerit goods and the production of electricity using coal.
- Goods and services with positive externalities and public goods are under provided (or not provided at all).
- A competitive market would over-exploit common access resources and less would be available for future generations causing inter-temporal inefficiency and a reduction in living standards in the future.
- Decisions made with incomplete information are unlikely to result in an inability to maximise one's wellbeing. When behaviour is changed (moral hazard) when one party in a transaction knows more than the other (such as an employment contract) then technical and allocative efficiency are unlikely to be achieved.
- Competitive markets can actually have a negative impact on efficiency and living standards. For example, if the producers are constantly worried about their competitors' prices, and the workers are always being "encouraged" to increase productivity, then it could increase stress levels, reduce time spent with family and lead to a reduction in living standards.

Your answer should include a meaningful conclusion that synthesises the previous arguments.

- b) Government intervention can sometimes lead to a more inefficient allocation of resources which is referred to as government failure. There are a number of examples of government intervention in Chapter 3 which highlight potential government failure, including price controls (such as the minimum wage), subsidies, protectionism and allocating money for the wrong types of infrastructure.

One obvious (and topical) form of government intervention that leads to an inefficient allocation of the nation's scarce resources is protectionism. This involves the government implementing policies that gives the domestic producers an (artificially) competitive advantage. For example, the government can impose a tariff on imported foods. This makes the domestic goods relatively cheaper and removes some of the competitive pressures that may have encouraged them to lower their costs of production and seek the most productive methods. Therefore, technical efficiency suffers, and local consumers face higher prices. Due to the higher prices they cannot afford as many goods and services, thereby decreasing the ability of the nation to maximise society's wellbeing.

Protectionism also means that resources tend to be tied up in inefficient industries when they could be utilised more efficiently in industries that would add more value (and hence generate more revenue for the nation). While the protection creates jobs in the short run, it comes at the expense of allocative and technical efficiency and reduces the potential for income growth over time.

Question 4

- a) Competitive markets are associated with a large number of buyers and sellers, minimal product differentiation and low barriers to entry and exit. In a competitive environment, producers must pay close attention to the demands of the consumers so that they can (operating in their own self interest) supply those goods and services that best meet the needs and wants of consumers. Failure to do so would mean that market share is lost to another business who might be providing the right types of products. This desire to attract customers therefore promotes allocative efficiency and less resources are wasted on producing goods that no one wants to buy. Competitive markets also promote technical efficiency. To attract customers, businesses need to offer their products for the lowest price possible. It is in their best interests to keep costs low so that they can offer their products at a lower price. One way to reduce costs is to look for measures that increase productivity and therefore promotes better use of the scarce resources. By doing so, consumers face lower prices and may therefore be able to access a greater volume of goods and services.
- b) Market failure occurs when price mechanism results in an allocation of resources that it is inefficient. This means that some goods and services will be overproduced whilst others will be underproduced. Society's satisfaction is not being maximised and there is an alternative combination of goods and services that could be made available that will lead to an increase in the welfare of one or more persons without making others worse off.
- c) The free rider problem exists because when a producer makes a public good available, they cannot exclude anyone from consuming it (even if they don't pay). Therefore, businesses will look to allocate their resources elsewhere because they may not be able to cover their costs if some people choose to consume the product for free (i.e. free ride). The market will therefore tend to underallocate resources to the production of public goods and society's wellbeing will therefore not be maximised.
- d) Governments may intervene in the market for public goods. Given that a free market will tend to underproduce public goods (and assuming that societies still value them), the government will collect taxes from the general public and use some of these funds to provide public goods that increases living standards. The government will usually produce the goods themselves or it might pay a private provider to produce them on behalf of the government. Given that taxes are collected, and the funds are used to produce goods that wouldn't be provided in a free market, the allocation of resource will be altered in such a way that society's wellbeing is improved.

Answers to crossword puzzle:

