

2. "Lemon laws" are laws protecting consumers against defective goods that fail to conform to contract, or meet satisfactory quality or performance standards at the time of purchase, colloquially known as "lemons".

Source: <http://sbr.com.sg>

- (a) Explain, with supporting examples, how information failure might lead to market failure. [10]
- (b) Evaluate the policies currently used by the Singapore government to correct information failure in different types of products. [15]

Suggested answer for (a)

Introduction:

Define market failure → Market failure describes the circumstances in which distortions prevent the price mechanism from allocating resources efficiently, resulting in welfare loss.

Define Information failure → Individuals or firms lack information that is required for them to make economic decisions. In perfectly competitive markets, consumers and firms have perfect information, i.e. perfect knowledge about prices, costs and benefits of goods and services. However, in the real world, there is a great deal of ignorance and uncertainty. As a result, economic agents are unable to equate marginal benefit with marginal cost, such that they are unable to produce and consume at the allocative efficient price and output level.

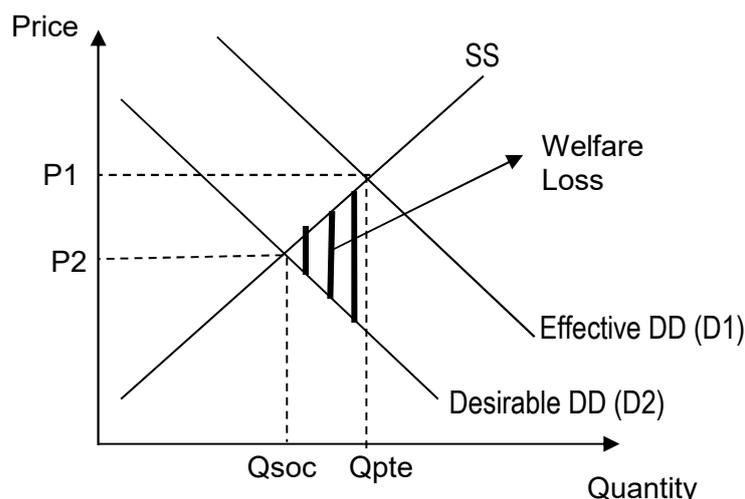
Information failure can be caused by:

- Imperfect information
- Asymmetric information, which in turn leads to the problems of
 1. Adverse selection, and
 2. Moral hazard

Body/Essay Development:

Imperfect information - Underestimation of the true costs / benefits

Using the context of cigarettes, the lack of knowledge of the true costs of cigarette smoking results in overconsumption of cigarettes, as some consumers are not aware of the harmful health effects of cigarette smoking on their bodies, hence they tend to underestimate the true private costs of demerit goods. For example, smokers may not be fully aware of the health risks of smoking or may underestimate the chances of contracting smoking-related illnesses.



As consumers do not fully realise the true harmful effects of the product, demand is registered at D1. Private consumers will consume at Q_{pte}. However, the government feels that because of the undesirable qualities of demerit goods, less should be consumed. The desired level ('correct' level) of demand, as perceived by society, should be at D2. Q_{soc} is the socially efficient level of output. Due to the underestimation of the true private costs, there is an overconsumption of the demerit good resulting in misallocation of resources and hence leading to market failure.

Asymmetric information - Adverse Selection

Adverse selection occurs when a product or service is predominantly demanded by a certain group of economic agents who could offer the lowest level of return for other economic agents.

Using the context of the 2nd hand car market, used car dealers often have more information regarding the condition of the used cars being sold than potential buyers have. For instance, dealers would probably have knowledge of the true mileage of the car, whether the car has met with any road accidents, and if so, how many and to what extent, as well as whether the car has any defects that are unnoticeable by the naked eye. In order to profit from the sale of used cars, used car dealers might have the incentive to hide some of the information that they have about the condition of used cars from potential buyers.

If buyers have the information to distinguish between lemon (low quality car) and gem (high quality car), they could strike fair trades with the respective sellers – the gem-owner receives a high price for the good quality car while the lemon-owner receives a low price for the lower quality car. However, in the real world, there is asymmetric information. As explained above, used car sellers have more information about the condition of their secondhand car as compared to potential buyers. Since buyers cannot spot the quality difference, there will only be one market for all used cars, and buyers will only be willing to pay the average of the prices of lemons and gems. Note that the average price is **below** the minimum that a gem-owner will require, so gem-owners will exit the market as they are unwilling to offer their good quality cars for sale. This will result in a situation where only lower quality cars (lemons) are being sold.

Asymmetric information thus results in the used car market adversely selecting against higher quality used cars, in favour of used cars of a lower quality. This is a distortion of incentives, hence resulting in an inefficient market outcome, where there is a "missing market" leading to market failure – gems are pushed out of the market, leaving only lemons.

Asymmetric information – Moral Hazard

Moral hazard is a situation in which economic agents take greater risks than they normally would, because the costs that result would not be borne by the economic agents themselves. Here, the information asymmetry is due to the fact that the buyer knows more about his/her intended actions than the seller.

Using the context of health insurance, if an individual is not insured, the he/she is more likely to take care of his/her own health, for instance, by exercising, taking health supplements or even going for annual health check and visiting the hospital less frequently. However, if the individual was to insure himself/herself with health insurance at full value by adding on rider payment, he/she would be fully covered, and will not lose out in the event of hospitalization, as he/she will not be required to pay both the deductible and the co-payment. As a result, the individual will have less incentive to take care of his/her health and visiting the hospital over minor ailments. They may even have an incentive to seek more expensive and even riskier services that they would otherwise not require. There is hence moral hazard in that,

because the individual, because of the availability of the health insurance, may be less inclined to take care of himself/herself, since the payment from an insurance company lessens the burden on the individual in the case of an admission to the hospital.

Conclusion:

Justification for government intervention → Government intervention is therefore necessary to solve the market failure caused by information failure so as to improve resource allocation so as to increase welfare of the society. (link to part (b))

Knowledge, Application, Understanding and Analysis		
L3	Good, clear, rigorous explanation of 3 types of information failure as a source of market failure with diagram analysis. Showing clear understanding and application with supporting examples.	7-10
L2	An explanation and illustration of how presence of information failure might lead to market failure. Undeveloped answer that is weak in economic analysis or is lacking in examples. Answer lacks scope in that only 1 of the 2 types of information failure was covered.	5-6
L1	An answer showing some knowledge of the source of market failure (information failure). But analysis is weak and erroneous, showing little / no understanding of how the different form of information failure leads to market failure. No examples at all or examples are irrelevant or inappropriate	1-4

Suggested answer for (b)

Introduction:

Government intervention in the case of information failure aims to improve information flow between consumers and producers, or to help both buyers and sellers value the actual cost and/or benefit of a good or service.

The various policies currently used by the Singapore government to correct information failure in different types of products are:

- Imperfect Information → Education or Campaigns
- Adverse Selection → Legislation – Lemon Law
- Morale Hazard → Co-payment

Body/Essay Development:

Imperfect information – Education & Campaign

To reduce the information failure on merit / demerit goods, the government can through the use of education or campaigns, help the consumers to be more informed of the true costs and benefits of the products they are purchasing so as to allow them to make informed choices. Some examples include education fairs, education on preventive healthcare in schools, and anti-smoking campaigns. Educational campaigns could be held by the government or non-profit organisations to educate people of the negative effects smoking has on oneself. The government could also educate the child while they are in school on the harmful effects of smoking through classroom lessons and educational videos in hope of deterring them from forming the habit since young.

For example, Singapore began her massive anti-smoking campaigns in 2007 such as the “I Quit” campaigns which started in 2011, in which smokers pledged to quit smoking. They would receive daily tips and encouragement via SMS and social media, as well as calls from Health Promotion Board (HPB) counsellors, to monitor their progress. HPB also organise a month-long smoking control campaign annually to focus attention on smoking. Such campaign would aim to coincide with WHO’s annual “World No-Tobacco Day” on 31 May. Singapore has implement ongoing public education on smoking control throughout the years and targets all sectors of society, with emphasis on preventing youths from starting to smoke. Over the years, public education has conveyed a variety of messages. These included information about harmful effects of smoking, passive smoking and the addictive nature of smoking, encouraging youths to stay smoke-free using role models (eg popular TV stars, sportsmen), promoting the benefits of a healthier smoke-free lifestyle and encouraging non-smokers to help a friend or someone close to stop smoking.

However, such educational approach and campaigns are not enforceable by law and mainly serves as an encouragement and its effectiveness is dependent on the receptivity of the recipients coupled with the reinforcement of the message from the family. People may not heed the advice due to ingrained habits that are hard to change, e.g. cigarette addiction. Moreover, financing education and campaigns may be costly and it takes time for campaigns to take effect, so this method does not offer immediate solutions to more pressing, urgent problems.

Asymmetric information: Adverse Selection - Legislation

In the case of complex products such as electronic devices or cars, legislations are imposed to force firms to provide more information to consumers, or to prohibit or restrict false or misleading advertising. This creates a legal incentive to facilitate the flow of information between economic agents between the buyers and sellers.

For example, In Singapore, there is the Consumer Protection (Fair Trading) Act, also known as the lemon law. Lemon Law was imposed to protect consumers against defective goods - for consumers to get their money's worth when purchasing a product. It strengthens upon the existing Consumer Protection and Hire Purchase Acts and helps consumers to receive a standardised solution when they have unintentionally bought a defective product colloquially known as 'lemons'. The new Lemon Law provides a transparent and legal framework for both buyers and sellers when faced with return claims. Under the law, consumers can report a defective item within a period of six months from delivery. Under a two-stage recourse framework, the retailer has an obligation to prove that the reported defect did not exist at time of delivery. The Lemon Law can be applied in two stages. For the first stage, the consumer can request repair for reported problem or parts replacement within a specified time frame. The second stage takes effect if the fault is not fixable, the problem persists even after repair or the repair is not satisfactory. In this scenario, you can request for a price reduction - while keeping the product or returning for a full refund. If the seller does not comply, the issue can be brought up to the Consumers Association of Singapore (CASE), which is a non-profit, non-governmental organisation whose aim is to protect the interest and welfare of consumers.

Lemon Law benefits consumers whom have unintentionally bought a defective or 'lemon' product including second hand cars, and would like a repair, refund or replacement from the seller. Singapore has often been perceived as a shopper's paradise and thus, such a law will assure consumers that products they purchase here are of good quality. This in turn improves the image of the retail industry in Singapore.

However, the use of legislation requires firms to provide more information to consumers will raise their costs of production. They may in turn pass on the higher costs to consumers in the form of higher prices, or compromise on the quality of their services. There is also difficulty in enforcement and ensuring compliance. There are also high administrative costs involved in legislation where high costs are incurred in sending government officials to check and monitor that laws are being followed. Furthermore, reporting a case of a defective good to CASE may incur a transaction cost such as the cost of time and the cost of transport. If the value of the good is low relative to the transaction cost, the buyer may be reluctant to file a report even if the good is found to be defective. Therefore, they may decide to not purchase the good.

Asymmetric information: Moral Hazard – Co-payment

In the case of insurance markets involving moral hazard, it is possible to create insurable risks through the use of co-payment. In such cases, the insured patient will be required to pay an excess before claiming the insurance pay-out so that individuals will still prefer to take care of his/her health to avoid hospitalisation and not seek more expensive and even riskier services that they would otherwise not required, not being hospitalised than the converse but the insurance will still offsets some of the medical bill.

For example, in Singapore, all Singaporeans and Singapore Permanent Residents are covered by MediShield Life from 1 November 2015. MediShield Life is a basic medical expense insurance. It is the national healthcare insurance scheme run by the CPF Board and

can help you with medical expenses from major illnesses and prolonged hospital stays at the Class B2/C level. MediShield Life has claims limits which is the maximum amount you can claim from MediShield Life depends on the claim limit for each type of expense, such as the daily ward charges and the type of treatment or surgery undertaken, and operates on a deductibles and co-insurance basis. Under MediShield Life, the maximum claim limit per policy year is set at \$100,000 with no lifetime limit on claims. The deductible is the fixed amount payable by the insured each policy year (the year following his policy renewal month) before the MediShield Life payout kicks in. It helps to sieve out small claims, which can be paid using Medisave and/or cash, and helps to keep premiums affordable. The deductible is payable only once every policy year. The co-insurance is a percentage of the claimable amount which you have to pay, on top of the deductible. The larger the bill, the lower the co-insurance payable. Under MediShield Life, the co-insurance rate ranges from 10% to 3% as the bill size increases. Such a policy and usage of deductible amounts is an incentive for the insured to cut down on services and to avoid making claims.

However, it must be noted that it is difficult to ascertain the ideal amount of deductible and co-payment to be set in order to prevent moral hazard. As a co-payment clause in an insurance policy will require the insured to pay a proportion of the cost they incur in the event of a claim, it may induce some individuals to be reluctant to buy insurance for their health.

Conclusion:

In conclusion, a range of policies and approaches which seek to bridge the information gap through various platforms is crucial. Consumers will need to be educated on the products prior to purchase and important information regarding the products will need to be explicitly indicated through labelling. Furthermore, consumers can also harness the use of Internet to research and learn more about the products through the official websites and read up on reviews by other consumers who have purchased the products to reduce information failure.

It can be noted that all examples of measures mentioned above to reduce adverse selection and moral hazard can be seen as forms of legislation that are undertaken by Singapore government. Legislation, as compared to other types of policies, ensures certainty of outcomes and this is a major strength of legislation. Mandatory consumption for instance, the MediShield Life, is the best policy as it is able to resolve both moral hazard and adverse selection, with the best certainty in outcome. The success of provision of information to resolve asymmetric information, on the other hand, depends on the ability of firms to collect accurate and updated data. Similarly, despite lemon laws, consumers may not be in the best position to make judgement on the condition of the goods.

Government will also have to consider its budget position when implementing policies to correct information failure especially for education and campaigns which require substantial government funding. For the case of Singapore face with a budget surplus, we have no issue with funding of education and campaign to correct market failure. However, it must also be noted that for a thorough decision-making process, further information will have to be collected on benefits and costs of the next-best alternative use of funds, and will feature as the opportunity cost of introducing the campaigns.

Knowledge, Application, Understanding and Analysis		
L3	Clear and well-developed answer that explains 3 policies (at least 1 policy each for the 3 different types of information failure) that the government can undertake to solve the market failure. Policies explained are thoroughly evaluated with constant use of real world examples applied to the Singapore context.	8 – 10
L2	Good explanation on at least 2 relevant policies that the government can undertake to solve the market failure. Some attempt at evaluation and limited usage of real world examples	5 – 7
L1	Identification of various policies used by the Singapore government. Brief explanation of the given government measures with irrelevancies and errors.	1 – 4
E3	For a well-explained judgement that is supported with economic reasoning.	4 – 5
E2	For an underdeveloped justification of stand made, one that is lacking in economic rigour.	2 – 3
E1	For an unjustified stand/unexplained judgement made. Listing instead of explanation.	1