Raffles Institution
Nurturing the Thinker, Leader & Pioneer

ECONOMICS

Higher 2

Syllabus 9757

DISTINCTION SCRIPTS
YEAR 5 PROMOTIONAL EXAMINATIONS

TEL: 65 6419 9888 ● FAX: 65 6419 9898
http://www.ri.edu.sg ● One Raffles Institution Lane, SINGAPORE 575954

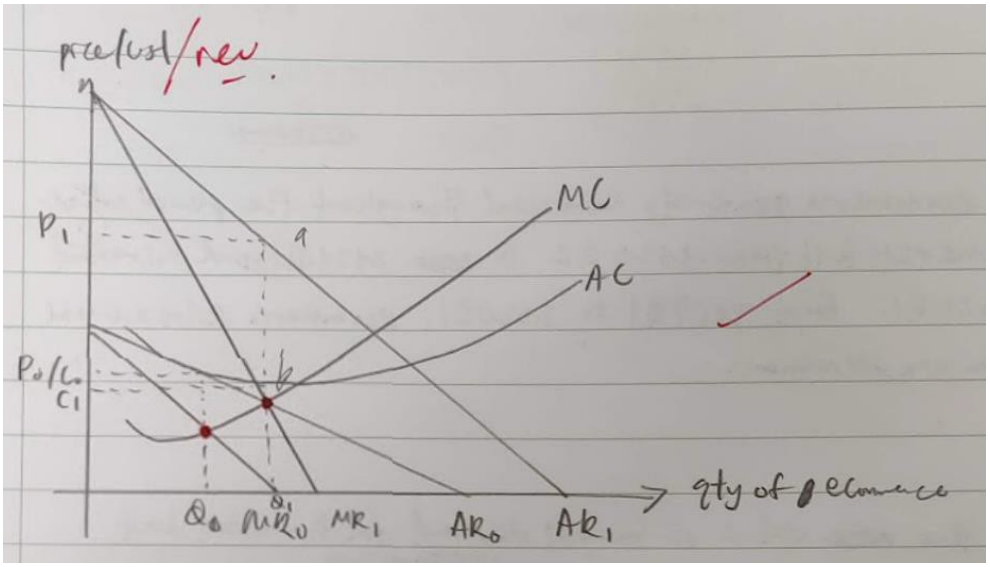
ECONOMICS

Case Study:

(c) Discuss the impact the COVID-19 pandemic has on the profits of an ecommerce company in the US. **[8]**

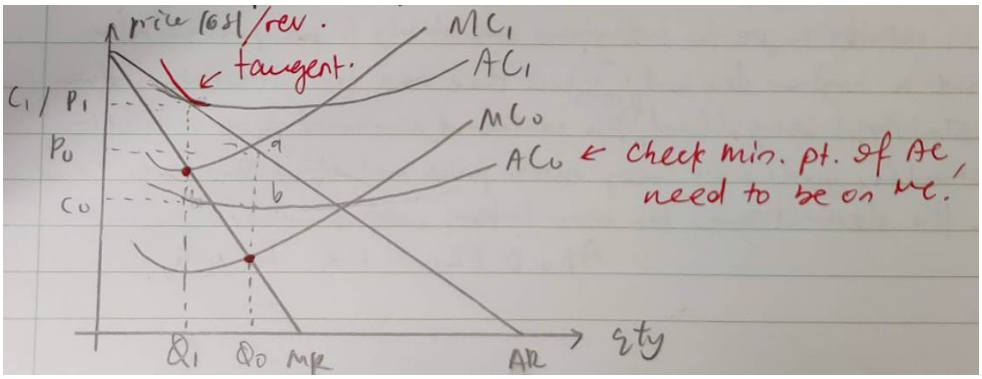
The Covid-19 pandemic has led to an increase in demand for ecommerce sales. This has an impact on the profits of an ecommerce company in the US, where profit is total revenue (TR) – total cost (TC). The company is assumed to want to maximise profits.

The pandemic has led to the temporary closure of many physical stores and restrictions on movement (Ext. 1), which results in more consumers having to shop online for the goods. Since shopping online also reduces the risk of infection in public areas, the taste and preferences of the consumers may shift towards ecommerce (Ext. 1), resulting in greater willingness and ability to purchase online goods and a higher demand. Since there are less alternatives due to physical shops being closed, the reduced number of physical stores results in the demand for goods online being more price inelastic. This leads to a shift in the demand curve from AR0 to AR1, (and shift in MR from MR0 to MR1), ceteris paribus.



Holding cost curves constant, the increase in demand results in a new profit maximising output level Q1 where MC = MR1, up from Q0. At this new equilibrium, price increased from P0 to P1, while average cost falls from C0 to C1. Assuming the firms has been making normal profits before, it now has supernormal profits of area P1abC1. This results in greater profits from the firm, ceteris paribus.

However, costs for the company may also increase due to labour costs. Given that many ecommerce companies, including Amazon and Walmart are hiring over 150,000 workers each (Ext. 2), this leads to an increase in demand for labour. Assuming labour supply remains constant, there is a large shortage that pushes wages up significantly (to incentivise more workers to work). This leads to an increase in workers' wages, which could have an impact on the TC for the firm since they may also need to hire more workers to cope with the additional demand for their goods. Given wage rate of workers is a variable cost, since the firm has to pay more wage costs if workers work longer hours or if it hires more workers (to increase outputs of online sales), this leads to an upward shift of the MC and AC curve to MC1 and AC1, respectively.



Holding demand constant, when MC increases, there is a new profit maximising output level that decreased to Q1. Price increases from P0 to P1 and average cost also increases from C0 to C1. If the firm used to make supernormal profit of area P0abC0, it now makes normal profits, hence there is a fall in profits, ceteris paribus.

Overall, it may be more likely that the rise in revenue outweighs the rise in costs since the rise in labour demand may be offset by a similar rise in supply, since more workers are getting retrenched during the pandemic. Workers who previously worked at physical retail stores that have shut down may move to online retail, hence the increase in TC for an ecommerce firm may not be that significant. However, the increase in demand may also not be as significant (for a firm) as projected as there are additional companies entering the market such as Walmart (Ext. 2) which may offer substitutes for existing ecommerce platforms, making demand lower and more price elastic for incumbent firms, thus leading to fall in profits, ceteris paribus. On the whole, it is still likely that profits will increase, though to a smaller extent, due to the great increase in demand for ecommerce. This profit is likely to be sustained since the accelerated trend seen is projected to continue even after the pandemic (Ext. 1).

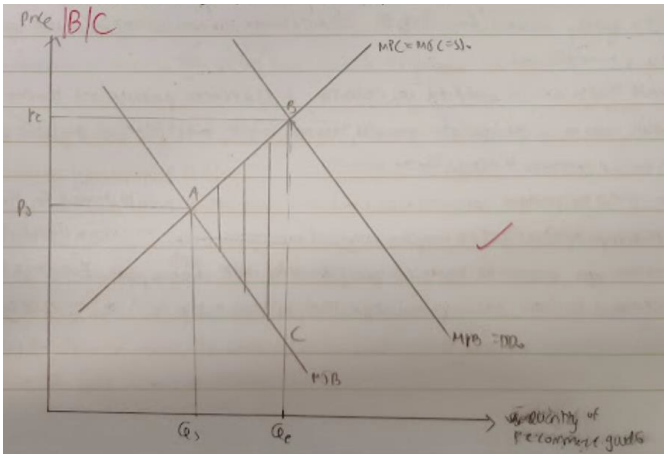
Written by Sasha Poh (22S03H)

(e) (i) With reference to Extract 4, explain why, in the absence of government intervention, resources may not be efficiently allocated in the market for ecommerce. [4]

There are negative externalities of consumption present, leading to market failure where the market fails to allocate resources efficiently to maximise social welfare and achieve social outcomes like equity. Negative consumption externalities occur when there are external costs on third parties due to the consumption of a good or service. This is evident from how self-interested consumers consider their own private benefits where they make many purchases online to increase their own utility and satisfy their needs and wants, like clothes they want to wear or food they need to eat. They also consider their own private costs like the costs of buying the good off online stores. However, they ignore the external costs imposed on third parties; for example, excessive packaging leads to immense plastic pollution. If such plastic is thrown (by the consumers) in the sea and consumed to the fish, human could end up consuming the microplastic instead, leading to negative health impact (on the general public). Therefore, there is a divergence between the marginal social benefit (MSB) and marginal private benefit (MPB) where MSB is lower than MPB. Assuming no production externalities, MSC = MPC.

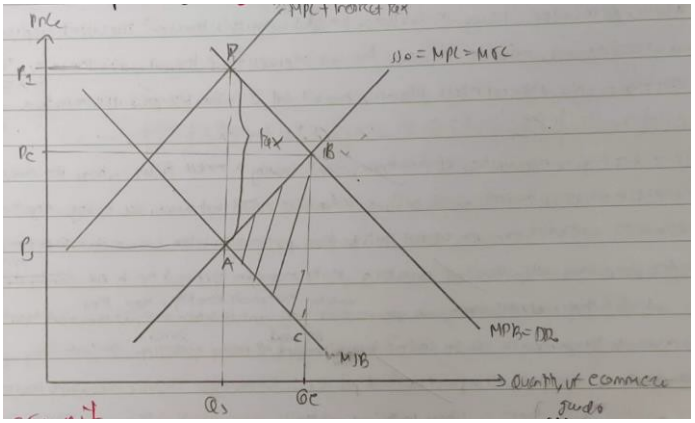
If left to the free market forces, consumers will consume at Qe where MPC = MPB. However, socially optimal level occurs at Qs where MSB = MSC. There is an overconsumption of ecommerce goods by QeQs units, meaning an overallocation of resources to the production and consumption of ecommerce goods. This leads to market failure and there is a deadweight loss of area ABC representing loss of societal welfare or the social benefits derived from consuming QeQs units is less than costs of

producing QeQs quantity of goods to the society. Therefore, resources are not allocated efficiently associal welfare is not maximised.



eii) Evaluate the policies a government can implement in view of the above source of market failure in the ecommerce market.

The government can consider implementing a tax.



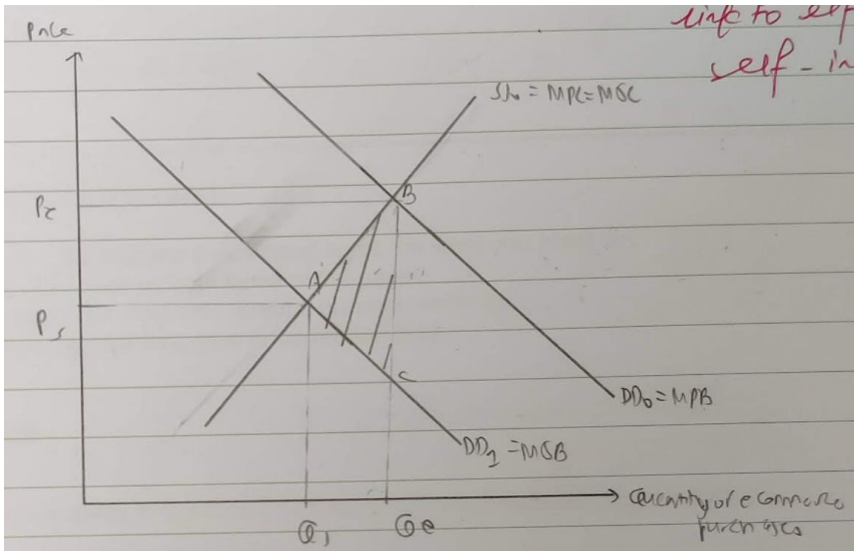
Imposition of a (per unit) indirect taxation on ecommerce retailers equal to the marginal external costs (MEB) (AD) at socially optimal output level Qs leads to a rise in the costs of production, leading to an upward shift in the supply curve from MPC to MPC + indirect tax. There is therefore a decrease in quantity supplied at every price level, ceteris paribus. This also translated into a rise in price for consumers of ecommerce goods, who are now disincentivised and reduce their quantity of ecommerce goods demanded. There is therefore a reduction in quantity consumed from Qe to Qs (where MPB = MPC + indirect tax). At Qs, efficient allocation of resources is achieved as deadweight loss of area ABC is eliminated.

A tax would lead to an immediate reduction in ecommerce purchases and therefore lead to an immediate reduction in pollution generated, thereby solving market failure, as producers of ecommerce goods are forced to internalise the externality.

However, given the pandemic, consumers may now have a very price inelastic demand for ecommerce goods due to high habituality of consumption because of the convenience. Therefore, there is a less than proportionate decrease in quantity demanded with a rise in price. A very high tax must be implemented to reach the socially optimal level, but such a high tax is inequitable and unpopular.

Government can also consider educational campaigns. By increasing consumers' awareness of the high environmental impact of pollution from large number of ecommerce purchases and the damage

caused to others, consumers are more willing to reduce their consumption of the ecommerce goods. There is thus a decrease in consumers' demand from DD0 to DD1.



Therefore, efficient allocation of resources is achieved as quantity consumed decreases from Qe to Qs, the socially optimal level there MSB = MSC (as the new DD1 = SS0). Deadweight loss of area ABC is eliminated.

Information campaigns are effective because consumers that are civic-minded are likely to reduce their consumption willingly to reduce the negative impacts on other members of the society and external parties and consumer sovereignty is maintained.

However, information campaigns may have limited impact because it takes a long time for consumers' mindsets to change and for them to willingly reduce consumption. However, in the longer term, there may be campaign fatigue, reading to reduced receptiveness of the campaigns. Thus, optimal time period for campaign may be uncertain.

[Can improve by elaborating on how education campaigns may make consumers more environmentally conscious, more civic-minded and less self-interested to care about the external costs on environment, as well as, bringing in more contextual elaboration for the limitations of campaigns]

Overall, government should adopt a multi-pronged approach. Taxes are effective in the short term as they offer immediate solutions, but in the longer term, they can be highly unpopular and the high prices (for ecommerce) may exacerbate inequity. Meanwhile, information campaigns can be implemented together with taxes to change consumers' mindsets in the long run. However, it is notable that the government must first have enough financial resources to sustain a long-term information campaign as the government may have other priorities like healthcare (during Covid-19) and education, and not necessarily on environmental pollution. Ecommerce retailers who make supernormal profits may also choose to absorb the higher costs (due to taxation) rather than passing the higher costs to consumers, in order to prevent a fall in demand, so effectiveness (of taxes) also depends on the actions of the retailers.

Written by Tham Yun Xin (22S06D)

Essays: Paper 2

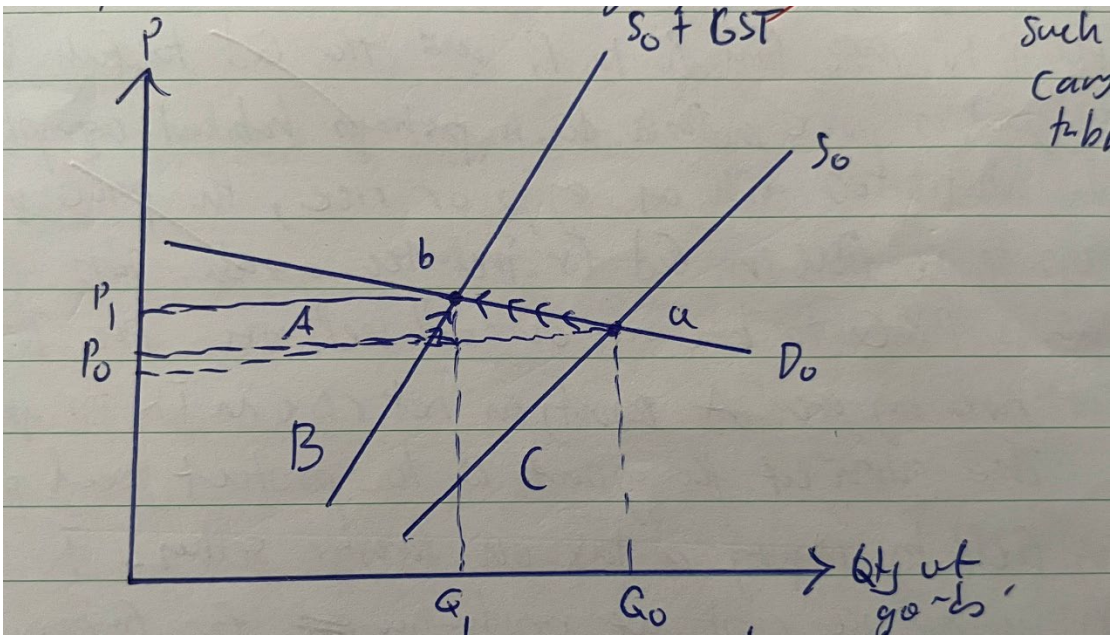
1 Online purchases from overseas retailers have grown as consumers enjoy the convenience and lower prices of shopping for different types of goods from small-ticket items like mobile phone accessories to big-ticket items such as furniture. However, domestic brick and mortar retailers have been hit hard in recent years. To level the playing field for domestic retailers, the government will charge GST on all online purchases from overseas into Singapore.

Explain the differing effects from the imposition of GST on the market for various types of goods purchased from overseas retailers and discuss the effectiveness and desirability of such a policy. [25]

Source: Edric 22S06O

A GST Goods and Services tax is a consumption tax payable by producers to the government for selling goods. GST acts as an ad valorem tax where it is a percentage tax of the price of goods. The tax increases the cost of production for producers and reduces the willingness and ability of producers to supply goods. This causes a leftward and pivotal shift in the supply curve for goods, ie. SS falls.

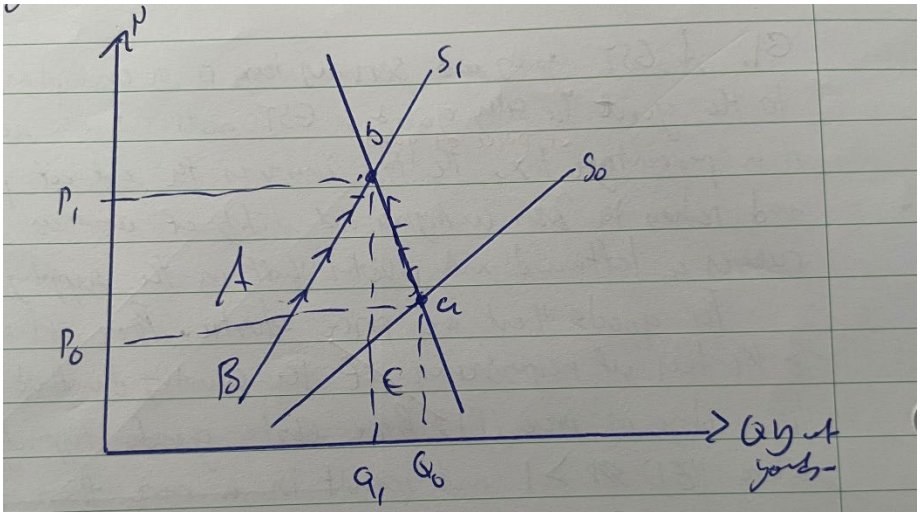
For goods that are price elastic. Price elasticity of demand (PED) refers to the level of responsiveness of the quantity demanded (QD) of a good in relation to a change in price (P). Price elastic goods typically have a PED value greater than one where PED>1 and results in a more than proportionate change in the Qd to a change in price. This leads to the demand curve for price elastic goods to be flatter. When GST is increased there is a pivotal shift leftward in the graph, goods that are Price elastic tend to take a large proportion of income to buy such as cars or tablets.



When the supply curve shifts it generated a shortage which created upward pressure on price and caused consumers to outbid one another. Producers responded by increasing Qs and consumers seeing the increase in price reduced Qd. This caused the equilibrium to shift from a to b where all the shortage was eliminated at the new and higher eqm b. The Qd fell from Q0 to Q1 but the price increased from P0 to P1. Since the good is price elastic the fall in Qd was more than proportionate to the

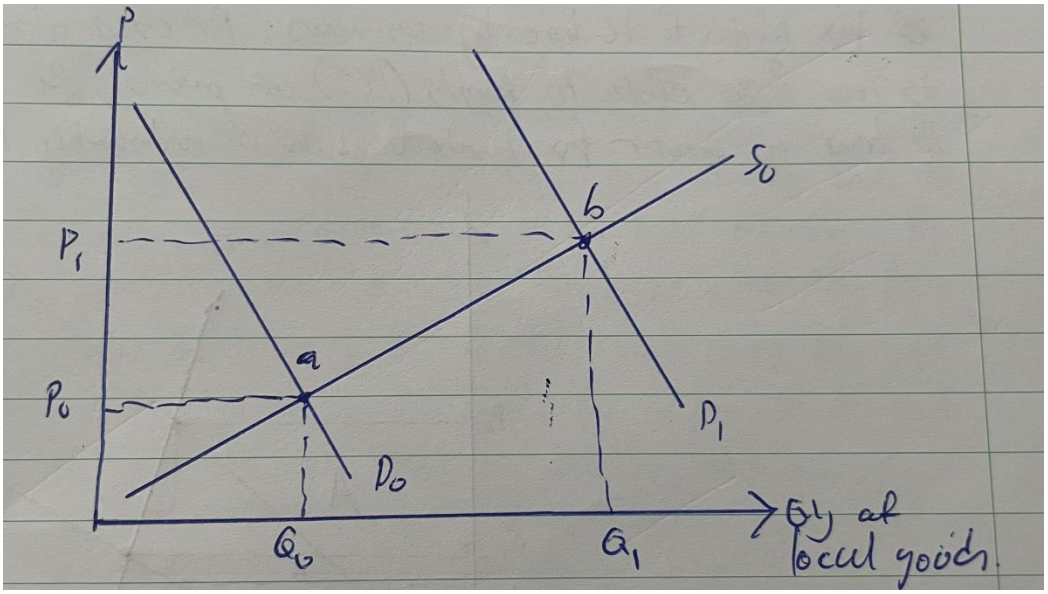
increase in price, the total revenue collected by sellers fell by C but gained by area A resulting in a net fall in TR.

For goods that are price inelastic, they usually have a PED value of PED < 1 which means that Qd will move less than proportionate to a change in price. This causes the demand curve of the good to be steeper. When the supply of the goods shift left due to the GST,



The shift created shortage which placed upward pressure on prices and caused eqm to shift from a to b where all shortage was eliminated. This caused the price to increase from p0 to p1 and the Qd to fall from Q0 to Q1. Since the good is price inelastic due to habitual consumption and availability of few substitutes such as eggs or rice, the price will increase more than proportionate to the fall in Qd for inelastic goods. This would thus cause the TR which is P*Q to have an overall net rise since the TR fell by area C but rose by area A resulting in a net rise in TR for producers.

The aim of the government is to protect local players and to level the playing field by imposing a tax on foreign sellers. To be effective, the tax will increase the cost of production for foreign sellers by making foreign sellers pay taxes to the Singaporean government. By imposing a tax on foreign goods it causes the price of foreign goods to increase as seen in the earlier diagrams from P0 to P1. This increase in price will cause consumers to have a lower willingness and ability to buy foreign goods as they switch to the relatively cheaper local goods. This will lead to a fall in demand for foreign sellers and a rise in demand for local sellers. Since domestic and foreign sellers typically sell the same types or identical goods, the goods provided by local sellers are strong substitutes to foreign goods and thus have a XED > 1 where XED is large due to fulfilling the same want. This causes a more than proportionate rise in the Qd for local goods in relation to a increase in P for foreign goods.

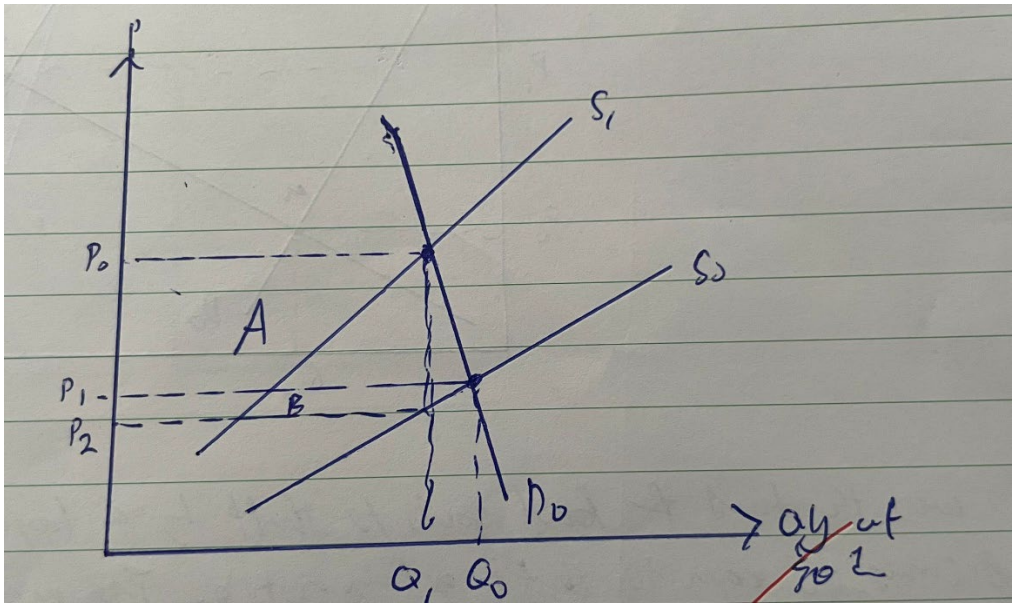


This causes the demand for local goods to shift by a large extent from D0 to D1 and causes the eqm to shift from a to b. This makes the Qd for local goods to increase from Q0 to Q1 and the price to increase from P0 to P1. Since TR = P*Q, the TR collected by local sellers would increase to OP1bQ1 this thus protects local sellers.

However, this policy of increasing GST may not be effective as foreign sellers may have a large cost advantage due to them selling goods at a very low price due to lowered logistic and labour costs overseas. Furthermore, the GST of 7% may not be as significant and may not increase the Price of foreign goods to be higher than local goods. This causes the rise in demand for local goods to be limited since even after the price increased for foreign goods they still retain a price advantage over local sellers. This causes consumers to be unwilling to switch over and this increase in the TR for local sellers will be limited.

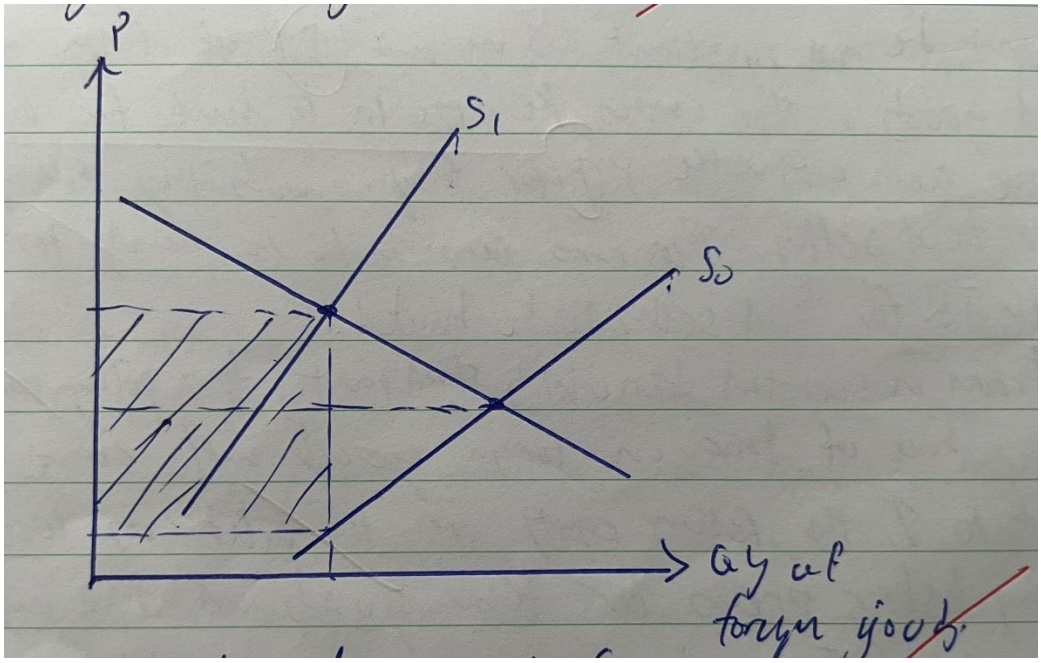
From a societal desirability standpoint, this policy may be undesirable since the importance of tax on foreign goods will cause the Price of foreign goods to increase, this reduces equity in the market as local consumers will have to pay higher prices for their goods and this may reduce equity for consumers. GST is also a regressive tax as the tax takes up a larger proportion of income for lower income consumers which leads to greater inequality in the system.

The imposition of the tax may also be undesirable since the tax may cause incidence of tax burden to be bore by consumers. For cases where the PED of consumers is less price elastic to supply (PES) of producers , the consumers would have to bear a greater tax burden which is undesirable to local consumers.



From the graph, it causes the tax incidence to full more on the consumers where consumers bear area A of the tax burden and foreign producers outside of the society to bear only area B of the tax burden which represents an inequitable outcome for consumers and is not desirable.

Such a policy may end up being desirable since the tax can capture since foreign producer surplus through the increase in government revenue.



Although the area of consumer and producer surplus for foreign goods to fall, the fall in producer surplus went into the gain of government resource which benefits local society and is the shaded area, part of the shaded area and are from foreign producers overseas and will offset some of the DWL to society making it a desirable outcome.

In conclusion, the GST hike against foreign producers is a good policy and to better refine the policy the government should use the new found tax revenue from the GST

hike to fund better loans and support services for local businesses. This can improve credit flows and cash flows for local businesses which help them to survive better by increasing size to better reap IEOS which lowers the cost and increases international competitiveness in the LR. By imposing the tax and protecting local businesses, the govt can also improves macro objectives of reducing unemployment since when they expand they require more workers which local firm will hire more locals to work in. this would reduce the rate of unemployment as a whole and serve to fuel economic growth which is another macro aim of the government. By increasing economic productivity by generating more jobs. Lastly, GST can be improved for poorer income people through direct subsidy or rebates only for local goods which can help to increase the efficiency of market allocation and benefit local businesses by increasing their total revenue which increases demand for local goods through direct subsidy for the people.

2 The original electric vehicle (EV), the Nissan Leaf, has lost its market share despite growing demand for environmentally friendly products. Newer car manufacturers such as Tesla (USA) and BYD (China) have toppled Nissan's lead, and the global computer chip shortage has also created cost concerns given its use in the dashboards of the Nissan Leaf.

Source: CNA.com, 17 July 2021

a) Explain the effect of the above developments on the price and output of an incumbent EV firm such as Nissan. [10]

b) Discuss the factors that Nissan is likely to consider in merging with another car manufacturer. [15]

Source: Faith Ho Enki (22A01A)

2a:

The incumbent EV firm such as Nissan aims to maximise profits. As it has a market share, it has price setting ability and thus makes price and output decisions at the margins, marginal cost (MC) = marginal revenue (MR). The developments are the loss of its market share due to the entrance of newer firms, as well as a global computer chip shortage.

The marginal cost of Nissan Leaf increases. The shortage of global computer chips which is an integral component of Nissan Leaf dashboards means that an upward pressure is exerted on the price of the good, which increases the cost of obtaining this material. It is a variable cost as the output (i.e. number of Nissan EV cars) increases, the cost is incurred and increases. This results in a rightward shift of the MC curve from MC1 to MC2.

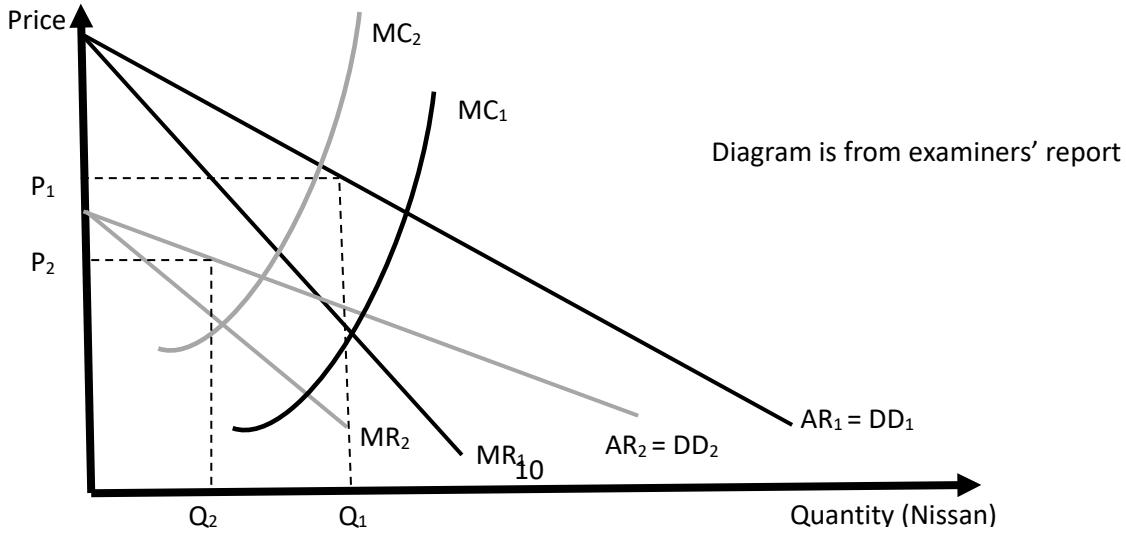


Diagram is from examiners' report

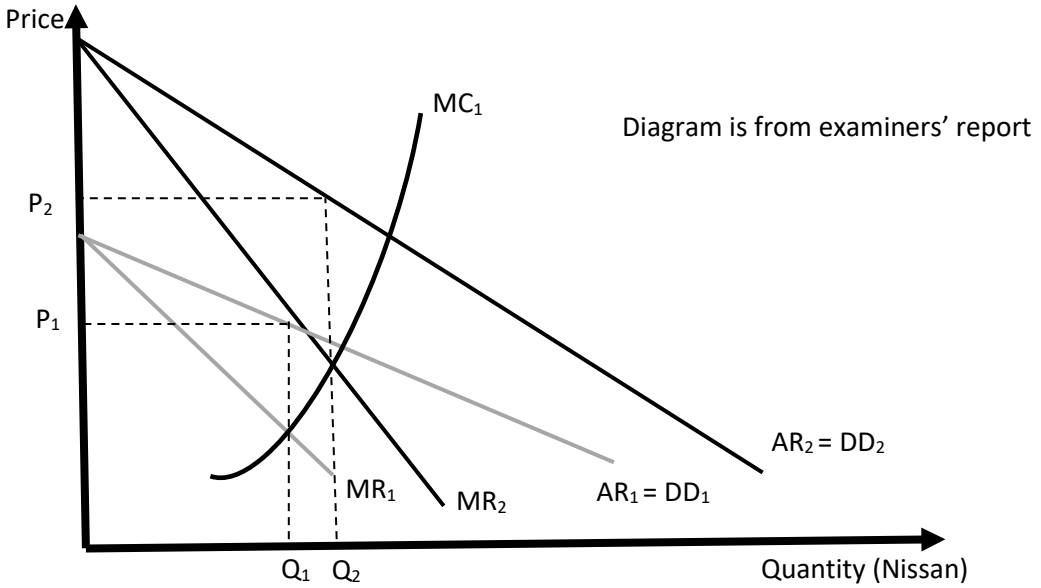
The entrance of newer firms such as Tesla and BYD have decreased market share for Nissan EVs. This results in a reduction of demand for its products and increases the price elasticity of its demand as consumers are more able and willing to switch to the alternatives. This results in a leftward shift of the AR and MR curves and the decrease in gradient to MR2AR2. The reduced market share also reduces its price setting ability and it is less able to set P>MC to a greater extent.

To maximise profits, firms produce quantity of output at MC=MR and set price at profit maximising level, which is a point on the demand (or AR) curve. When MC<MR, firms will increase production as the production of an additional good will increase total profits. However, they will decrease production if MC>MR because production of an additional unit of the good will lend to a fall in total profits. With the developments, firms will change from original output Q1 and P1 to new quantity of output Q2 and price P2, a decrease in both price and quantity (to a large extent).

Q2b

Nissan is a profit maximising firm, where profit is total revenue (TR) = total cost (TC). Merging with another firm refers to horizontal integration, where it combines with a close competitor at a similar stage of production to become a larger firm. In considering whether to merge, Nissan must consider the merger's impact on their profits, and only merge if their profits increase.

They should merge as combining with another car manufacturer will result in greater output and thus increased market share. Thus, they will have greater price setting ability and set P>MC to a greater extent. BY merging with another car manufacturer, Nissan increases the demand for its cars, and decreases the price elasticity of demand as consumers will less readily switch to another manufacturer when they can get all they need from Nissan. This thus results in the rightward shifts of the MR/AR curves from MR1/AR1 to MR2/AR2. Thus, they are able to set P>MC to a greater extent, and quantity increases from Q1 to Q2 while price increases from P1 to P2. The firm thus makes supernormal profits of PqabC2 compared to previous normal profits where their TC=TR.



Furthermore, they will be able to better exploit internal economies of scale with greater scale of production that is a result of the merger. This will result in a shift downwards on the long run average cost curve (LRAC), which represents the cost savings from increased production, and a decrease in average cost and thus total

cost. Such internal economies of scale include technical economies of scale, where applying the idea of factor indivisibility, Nissan is able to invest in more infrastructure such as larger factories and spread such startup costs over a larger amount of output. With an increase in quantity produced and a decrease in cost, Nissan's profits increase. It can also reap managerial economies of scale, as Nissan can combine its HR departments to streamline the process of hiring better and more skilled workers, as well as have managers to improve productivity by overseeing the production process. Thus, with the combined increase in revenue and decrease in costs, Nissan should merge.

However, it can be argued that it should not merge because of possible detrimental effects. Firstly, the merger of two separate car manufacturers into one is difficult due to differing company practices, culture and branding. For example, Nissan EVs are marketed as family-friendly, lower budget environmentally friendly cars, while Tesla is known for flashier, more expensive cars typically for a different demographic. A merger of two companies with vastly different branding will erode the effectiveness of advertising as they can no longer target a particular segment of the population and increase brand loyalty to increase demand and reduce price elasticity (as the "go to" brand). This reduces overall total revenue. The difference in process of merger of production capabilities is also likely to incur costs as they would need to shift factors of production.

Cost is likely to also be incurred with internal diseconomies of scale. The number of managers needed in a larger company may result in an increase in cost that is more than proportional to increase in productivity. The employees may also be less motivated and feel alienated in a larger company, especially if there is a change in company culture due to the merger, reducing productivity and thus costs increase. With a decrease in total revenue and costs, Nissan would reduce profits.

In conclusion, Nissan should still merge with another car manufacturer. In light of its Nissan Leaf (EV) decreasing in market share, it is important for Nissan to increase output and market share to increase its revenue. At the same time, the cost savings will also benefit it. While there are possible drawbacks to a merger, this can be mitigated by Nissan being careful about which manufacturer it should merge with, ideally one with similar branding and production processes, or a smaller one such that it can absorb the production capabilities without diluting its brand image. In the long run, it is likely to benefit from a merger. Alternatively, Nissan can consider alternative measures such as increasing advertising and branding for its goods - targeting a specific sector and demographic to improve brand loyalty - and reducing cost of production through investment in research and development, or sourcing for cheaper variable inputs.

3

a) Explain why governments intervene in the market for health screening services. [10]

b) Discuss the effectiveness of various government policies to address the market failure in the market for health screening services. [15]

Health screening services are a merit good, which is a good determined to be socially desirable by the government and is under-consumed when left to free market forces. Merit goods arise due to imperfect information and positive consumption externalities, hence needing government intervention.

Firstly, imperfect information occurs as consumers are unaware of the complete benefits consuming health screening services brings about, such as early identification of medical problems such as chronic diseases like diabetes or even early stages of cancer. Consumersare unaware of these benefits and hence tend to undervalue and underestimate the benefits, hence under consuming health screening services by QeQs units as shown in Figure 1 below.

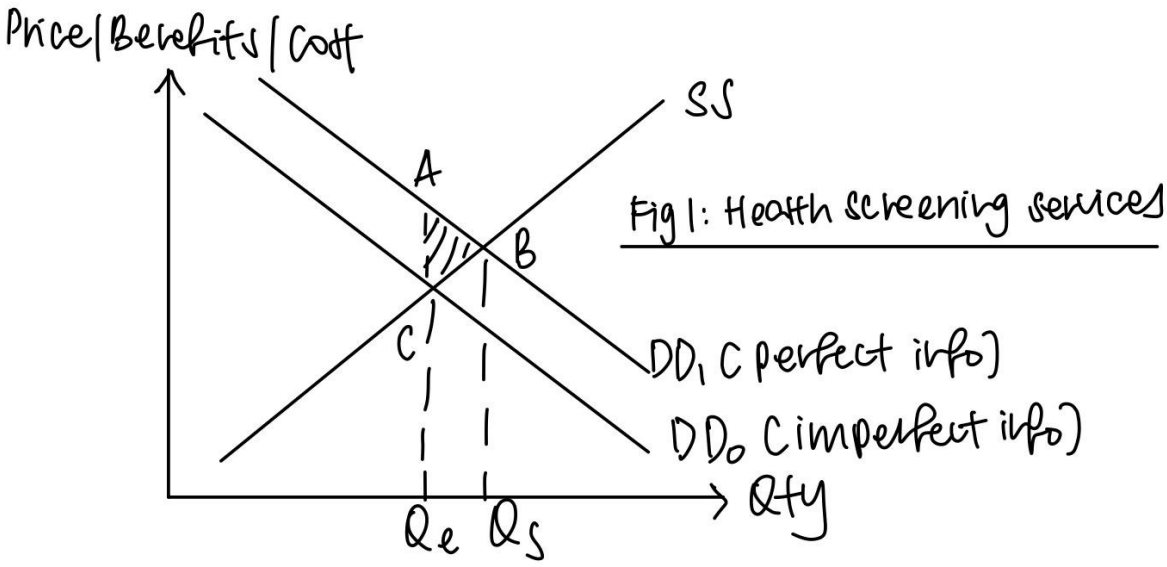


Fig 1: Health screening services

The free market equilibrium output level is at Qe where demand (imperfect info) meets supply. However, with perfect information, the socially optimal level of production is instead Qs, which is much higher than Qe. This overconsumption shows that too little resources are being allocated to the production and consumption of health screening services and there is allocative inefficiency. There is also deadweight loss of area ABC in the diagram as the social benefits gained in consuming additional units of the services are greater than the opportunity cost of producing these services. As allocative efficiency is not achieved and consumer and producer welfare are not maximised, there is market failure, hence requiring government intervention to resolve market failure and achieve allocative efficiency.

Secondly, there are positive consumption externalities arising from health screening services. Positive consumption externalities refer to external benefits gained by third parties by the consumption of the good. In this case, private benefits include the early identification of medical conditions to reduce the long-term medical costs that may be incurred if these conditions were not identified sooner, while the external benefits to third parties are in the form of savings of medical costs for family members looking after the individual. These positive consumption externalities account for the Marginal External Benefit (MEB), which creates a divergence between MPB and MSB as shown in Figure 2 below.

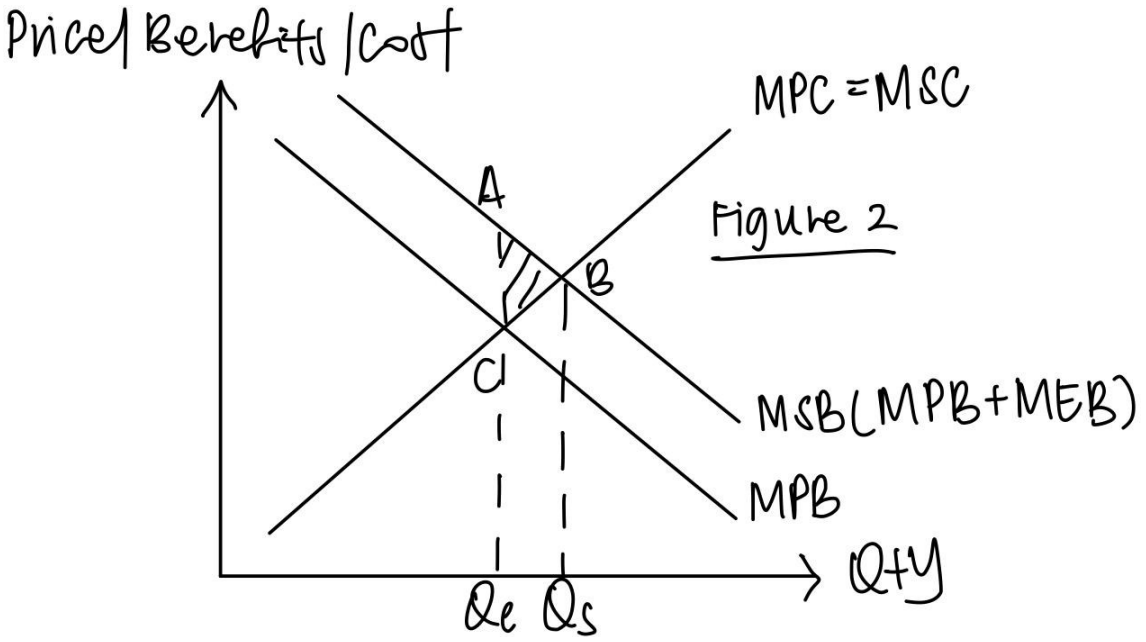


Figure 2

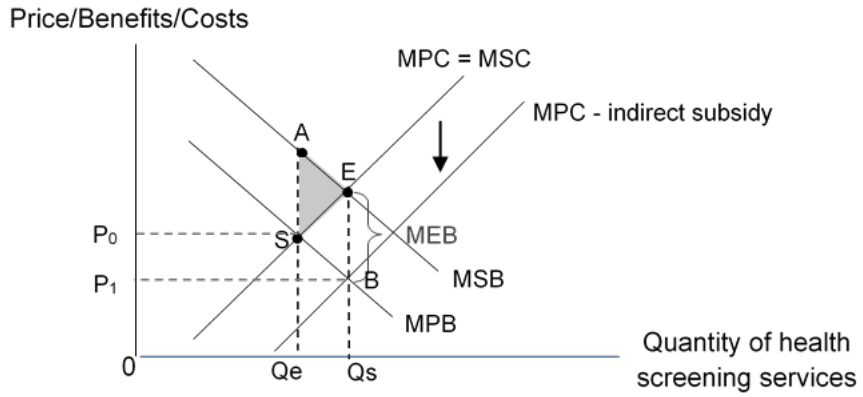
This results in an underconsumption of QeQs units, as the free market equilibrium output level is where MPB=MPC, due to the fact that consumers only consider their own benefits and disregard external benefits in the pursuit of self-interest. As a result, the free market equilibrium output level is much lower than the socially optimal level where MSB=MSC. Thisresults in an under-allocation of resources and also a deadweight loss of area ABC in Figure 2 as the additional benefits gained from consuming health screening services is greater than the opportunity costs incurred from additional production. Hence, there is allocative inefficiency and consumers and producers welfare ware not maximised due to deadweight loss. Thus, government intervention is needed for consumers to internalise these external benefits and for allocative efficiency to be achieved.

Source for 3a: ESTELLA TOK KAI XIN, 22S06L

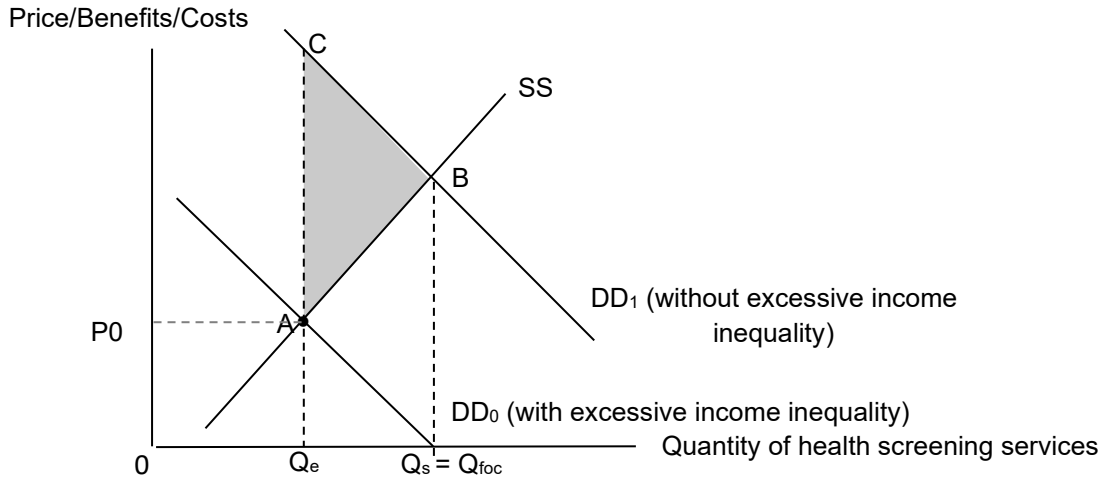
b) Discuss the effectiveness of various government policies to address the market failure in the market for health screening services. [15]

There are currently 3 policies to address market failure: indirect subsidies, direct government provision and education campaigns.

Indirect subsidy is a subsidy granted indirectly by tax authorities to the producers. Indirect subsidies decrease the cost of production, so producers are willing and able to produce more goods (healthcare screenings) at each and every price. The indirect subsidy must equal to the monetary value of MEB at the socially optimum output level. The supply curve shifts right from SS = MPC = MSC, to MPC – indirect subsidy. At the initial equilibrium price there is a downward pressure on price because the quantity supplied exceeds the quantity demanded so produces lower price to sell of surplus units of the product. Price decreases from PE2P2 and output increases from QE2QS. So indirect subsidy is effective in eliminating the did weight loss ABC. It also alleviate the high cost of screenings hence targeting the problem of excessive income inequality by making health screenings affordable.



But the indirect subsidy may also not be effective. It is difficult to quantify MEB at the socially optimum output level. For example it is challenging to calculate the possibility of lives saved due to early healthcare screenings, to assign a monetary value to increased life expectancy or the enjoyment from a longer, healthier life. Under-valuation of MEB means output increases but not enough to reach Qs while over-valuation means output increases beyond Qs. Inaccurate information on MEB will lead to sub-optimal outcomes so social welfare cannot be maximised.



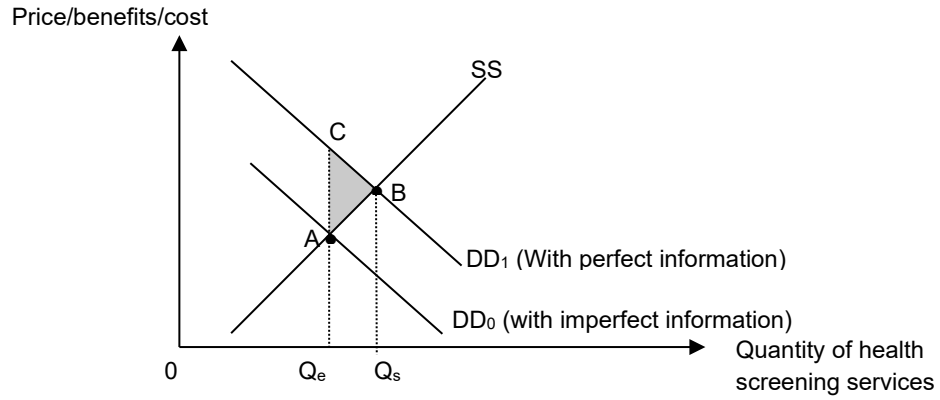
The second policy is the direct government provision of the health screenings. Health screening is a merit good because it is deemed socially desirable by government and is under consumed if left to the free market mechanism. This refers to the government providing all healthcare screenings free of charge.

And so the government sets the price of health screenings to 0 and the quantity increases from Qe to Qfoc which coincides with Qs. The deadweight loss ABC is eliminated. Direct government provision is especially effective in tackling excessive income inequality because it ensures that all citizens have access to healthcare screenings at no cost. It is also easier to implement, rather than incentivising firms to increase production, government mobilises its own resources and has greater certainty over targeted output.

But government provision may not be effective, because even governments have imperfect information about society's MSB and MSC. They don't know fully the behaviour of the people and it's difficult to quantity intangible benefits like longer lives in term of monetary values. Also because unlike firms, the government is not profit-driven so productive inefficiency may occur where due to lack of profit motive, the government engages in wasteful costs, and there is a lack of innovation, poor service quality and productivity. Other undesirable consequences include crowding out private sectors due to unfair advantages. Government

has large funding and can encourage the masses to visit public clinics instead of private facilities using their extensive media reach and credibility. This may lead to loss of profits for private firms.

The last policy is education. People gain accurate information about the true benefits of health screenings like how it prevents diseases from getting worse (e.g. diabetes posters at hawker centres encourage old residents to get screenings early to delay and prevent onset of diabetes that can save lives).



Education campaigns shift demand up from DD with imperfect information to DD without imperfect information so the deadweight loss ABC is eliminated. This is useful because it targets the root cause of imperfect information and teaches the public the importance of healthcare screenings.

However, public education campaigns may not be effective. Education campaigns need a long time to take effect and the outcome may also be uncertain. It is also difficult to change beliefs and mindsets among the masses. For example, elderly patients who strongly believe they don't need to go for health screenings due to false information online, or youths who think it's embarrassing to go for screenings because of things they read on social media. Also there is a risk of possible campaign fatigue, where seeing health screening posters too often in public can reduce its effectiveness too.

In conclusion, no one policy is most suitable to eliminate market failure. Each policy has its benefits and shortcomings so a combination of all 3 policies would be best. For example, even though subsidy may be effective, it requires high government expenditure which can lead to high direct tax rates. There is also an opportunity cost because less resources are available for other development projects like building schools and roads. The suitability of the policy also depends on the country. If citizens are not very well educated, resources could be directed towards education. If there is a big poverty gap, an indirect subsidy or government provision would be best. The presence of market failure justifies government intervention, but sometimes this can also lead to government failure. Bureaucracy: too many people and resources involved in forming the subsidy or educational campaign can lead to productive inefficiency; there may be time lags in identifying the problem, finding a solution and finally implementing it. When the policy is actually implemented, the problem may already be very acute, or economic conditions may have changed so the policy may have to be more radical to correct market failure.