**Types of graphs for market failures**

**1. How negative externality leads to market failures**

Qn: Explain how market failures occur in the road usage? (4)

There is market failure in the road usage industry as there is the presence of negative externalities which will call for government intervention.

1. Overview sentence

2. economic causation (apply the economic principles to the context of the question)

3. draw graph

4.description of graph

5 Analysis

Structure of discussion

In the road usage market, the usage of road, which is termed as a demerit good, causes the rise of negative externality in the form of traffic jam. This gives rise to external cost which is seen in the form of higher cost of traveling which can create a condition of welfare loss like loss of productivity and revenue to the retailing industries as there is delay in traveling to destination to consume. Thus, this implies that the industry to experience market failures as there is no maximization of net social benefit gain due to the presence of deadweight loss.

As seen from the diagram, the market equilibrium is set at QM­ where MPC is equal to MPB without the consideration of negative externality. However, the **presence of negative externality** will lead to the **rise of external marginal cost** which will lead to the **pivotal rise of MPC to MSC (MPC + MEC = MSC),** implying that the social equilibrium of production of cars at QS is lower than the market equilibrium of car at QM. Between Qm and Qs, without government intervention, the economy will experience DWL (shaded area), implying that market failure has occured.

**2. How positive externality leads to market failures**

In the production and consumption of merit goods like education services, it gives rise to positive externality such as the benefit of more productive workers will arise. This leads to the rise of external benefit such as the fall in average cost of production and there is a condition of under-production as the market equilibrium is below the social equilibrium when there is no government intervention. As a result, the society fails to reap the benefit and thus, contributing to deadweight loss (DWL); **welfare loss to society which is the value of external benefit the society fails to reap.**

P0

Qty of Education Services

Cost/Benefit

QS

QM

MSB = MPB + MEB

MSC=MP

MPB

DWL

As seen from the diagram, the **market equilibrium is set at Qm where the MPB is equal to MPC and no externalities have been taken into account. T**he presence of positive externalities will create external marginal benefit that will raise the MPB to MSB (PMB + EMB), causing the market equilibrium of the production education services to be set at Qm which is lower than the social equilibrium level of production education services at Qs where MSB=MSC and there is under-production or consumption. Consequently, the value of deadweight loss will arise between Qm and Qs if there is no government regulation, implying that there is market failure.

3. How over-consumption of demerit good leads to market failures

**7.2 Explain how market failures will occur as a result of over-consumption of demerit good**

In the consumption of demerit goods such as gambling, there will be negative externalities seen in terms of the social problems associated with this good. This will raise the external cost whereby there is higher cost of administration of the social problems. Without any government intervention, there will be a rise in deadweight loss (DWL), which is the cost of loss of investment, production and national income as a result of social and political instability

In this industry, over-consumption occurs where the consumers will consume at a level beyond the social equilibrium as their level of demand represented by PMB (Private Marginal Benefit) is higher than the level of demand deemed socially beneficial to the society represented by the SMB (Social Marginal Benefits). This is because the value of benefit of demerit good is deemed higher by the individuals than the value deemed by the society

MSC= MPC+ MEC

MPB actual

SMB

Qty

Qm

Qs

P­m

Cost/Benefit

(Private benefit)

(Social benefit)

As seen by the diagram, the value of external cost is represented by the SMC which will include the PMC (Private Marginal Cost) and EMC (External Marginal Cost) while the PMB represented the demand of the individuals. As individual perceived the benefit of consumption based on private demand (PMB) to be greater that actual level of benefit of consumption based on social demand (SMB), as there is imperfect market information about the detriments of gambling. The consumption at Qm will experience overconsumption as the quantity at market equilibrium at Qm is higher than the social equilibrium at Qs and thus, there will be occurrence of DWL represented by the shaded portion, as SMC is higher than SMB at production level between Qm and Qs. This indicates that there is an overconsumption of demerit good which contributes to market failures.

**4. How imperfect market information leads to market failures (consumer have lesser information) – underconsumption of merit good**

The consumers are deprived of information about the good as in the purchase of a car and may have greater hidden cost. This leads to consumers to perceived the cost of purchase to be higher and therefore, they believe that they buy at higher price level as the perceived MPC is higher and output is supplied at higher price and lower output, creating a missing market that leads to presence of welfare loss, indicating market failures.

**5. How information inaccuracy leads to overconsumption (overconsumption of merit good) Moral hazard**

In this situation, the consumers are not provided information and may be persuaded by the stakeholder like producers and sales agent of services, to buy excessively beyond the required level of services. Consequently, consumers overconsume at an output level beyond the social equilibrium level of output where welfare loss occurs.

**Diagram**

**Description of diagram**

**6. How misinformation leads to under-consumption of merit goods**

The lack of information about the merit good like vaccination leads to the choice by the consumers to under-consume below the social equilibrium. This causes the society’s failure to reap the external benefit of the good like herd immunity and causes welfare loss as the market equilibrium is below the social equilibrium, contributing to market failures.

Diagram

Description of diagram

7. how taxation solve market failures

Taxation as a form of collection by the government from the consumers attempts to correct consumption and production behaviours lead to rise in cost of production and this decreases the supply. It will raise the price level and reduces quantity in the industry from market equilibrium to social equilibrium, reducing the effects of negative externality and eradicate market failures as welfare is not incurred.

Diagram

Description of diagram

**8. how subsidy to consumers solves market failures**

The provision of subsidy lowers the cost of production to increase the supply of the goods, making it cheaper for consumers to incentivize consumers to increase quantity demanded. In the process, the industry reaps the external benefit and shift production level from market equilibrium to social equilibrium. This enables the industry to reap the external benefits and prevent the rise of welfare loss to contribute to market failures.

**Diagram:**

**Description of diagram**

**9. how subsidy to producer solves market failures**

In the provision of subsidy to consumers, it increases their disposable income and raises the purchasing power of the consumers, shifting their market demand from Do to D1 (MPBo to MPB1). This ensures that the output is at social equilibrium instead of being at market equilibrium. This means that the industry can reap the external benefit to prevent welfare loss and market failures.

**Diagram**

**Description of diagram**

**10. How quota solves market failures**

A quota is economic solution where the output level is fixed by the government and it is often directly set at the output level where output level is set at the social equilibrium to ensure that there is now external cost incurred by stopping the occurrence of beagtive externality. In doing so, the industry produces and consumes ate the social equilibrium where there is no welfare loss, and the next social benefit gain is maximized, preventing the occurrence of market failures.

**Diagram**

**Description of diagram**

**11. how public education solves market failures**

**Public education is used to provide more information of the positive externality or negative externality to ensure that the consumers are aware of the effects of third party effects and impact on them. Theco**

**12. How rules and regulation solves market failures**