2. Evidence has shown that the workers' participation rate for skills upgrading workshops is generally low, mainly due to 'short-sightedness' by both firms and employees. Firms are worried that trained workers quit to join the competitors. Training subsidies provided are also unevenly distributed to different industries.

(a) Explain how the market for skills training may fail. [10]

(b) Discuss the view that government intervention in the skills training market may create more problems than it solves. [15]

Suggested Responses

(a) Explain how the market for skills training may fail. [10]

Question analysis	
Command Word	"Explain" – requires student to explain how the market for skills training allocate resources inefficiently – positive externalities and imperfect information
Context	Skills Training
Concept	Market failure – positive externalities, imperfect information

Introduction:
Consumers behaviour in the demand for skills training, is influenced by their objective of maximising self-interests (satisfaction). With upgrading of skills, there are possibilities of earning higher income, better promotion prospects in their career. From the perspective of employers, they are influenced by their objective of maximising their profits. When employees skills increase, there are possibilities of a higher productivity and higher profits.

<u>Body paragraph/Requirement 1: The market for skills training may fail due to positive externalities</u>

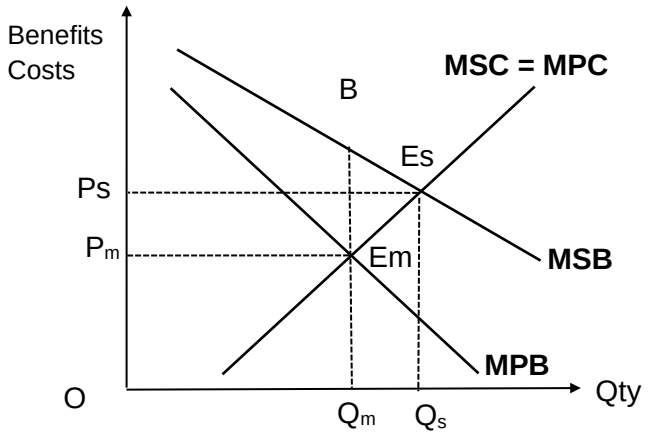
Explaining the market equilibrium (maximising self-interest):
In maximising their satisfaction, consumers only consider their marginal private costs (MPC) and marginal private benefits (MPB).

In this case,

- MPC = payment for skills training courses and opportunity costs incurred e.g. loss of income during the period of skills training.

- MPB = higher income that could be earned upon completion of these skills training programmes

Thus, consumers, based on their own benefits and costs, will decide to consume at the market equilibrium level Q_M, where they equate their MPC to MPB, at the equilibrium price Pm. They totally ignore the benefits to the third party.



Market for skills training

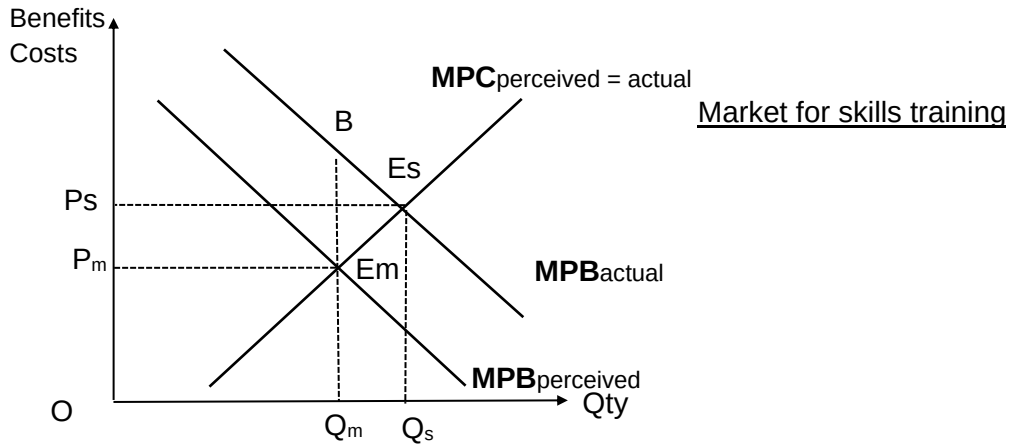
Explaining the benefits to third parties (divergence between MSB and MPB):
The full extent of benefits include benefits to individuals and third parties i.e. firms and economy. Benefits to third parties are termed external benefits. Some examples include:

- Firms benefit from the rise in labour productivity as workers complete their skills training to undertake improved production techniques. These firms, with a more skilful workers, could adopt technology / automation in their production processes, enabling firms to become more efficient and earn higher profit margin.
- (In addition, *Countries with higher productive labour force would also attract overseas investment which would lead to job creation leading to higher economic growth in the country)*
- The full extent of benefits is measured by MSB which includes both MPB & MEB.

Explaining the market failure:
To society, the socially optimal level of consumption of skills training would be where society welfare is maximised. Thus, consumption should be at Q_S where MSC = MSB. For every unit of skills training consumed by worker from Q_M to Q_S, MSB > MSC. Hence there is a net potential welfare gain by society with additional consumption QmQs. For every unit consumed beyond Q_m, society benefits from the potential welfare gain (area B Es Em). Thus, when consumers are left to pursue only their self-interest, there will be under-consumption Q_MQ_S,, resulting in inefficient allocation of resources in the market for skills training.

Body paragraph/Requirement 2: The market for skills training may fail due to imperfect information

Due to imperfect information, consumers' perceived benefits from skills training may be lower than their actual benefits. Consumers may not have the knowledge of how the new / upgraded skills acquired through training (formal or informal) would enable them to have better career progression leading to higher future income. They may only perceive the short-term benefits e.g. how information technology coding courses or management courses would lead to a rise in their current salary. Their actual benefits would include rise in their occupational mobility, employability or even career advancement, promotion to managerial positions with even much higher future income. Their actual benefits of such skills training would thus be much higher than the perceived benefits. Hence when left to pursue their self-interests, workers, will consume at Qm where MPBperceived=MPCperceived. However, the satisfaction would have been maximized at MPBactual=MPCactual at Qs. There is an underconsumption of Qs-Qm, resulting in an efficient allocation of resources in the market for skills training. As they would have benefited more than it costs them every unit from Qm to Qs, a welfare loss of BEsEM.



Market for skills training

OR

Body paragraph/Requirement 2: The market for skills training may fail due to moral hazard

The market for skills training may also fail due to moral hazard. Moral hazard is the situation in which asymmetric information results in economic agents taking greater risks than they normally would because the resulting costs will not be borne by them. In the case of skills training, the employer may not know the actions of the worker during and after training. Unless the employer can observe the workers' progress during the training and worker is bound by a contract, the employer might not know if the worker would skive during training or change the company he/she works at upon completion of training. This is detrimental to the employer's profits. There is a wastage of resources and firms may also be less incentivized to send their workers for skills training, leading to an inefficient allocation of resources.

Knowledge, Application, Understanding, Analysis		
L3	▪ Accurate and clear analysis of two types of market failure o Positive externalities o Imperfect information (either inaccurate information or moral hazard) o ▪ Answer provides relevant examples of market for skills training	**8 – 10**
L2	▪ Undeveloped or some inaccuracies when explaining market failure due to o Positive externalities o Imperfect information (either inaccurate information or moral hazard) Or ▪ Answer only explains one of the above requirements ▪ Answer provides some examples of market for skills training	**5 - 7**
L1	▪ Inaccurate and minimal analysis or descriptive answer ▪ Answer is largely irrelevant	**1 – 4**

(b) Discuss the view that government intervention in the skills training market may create more problems than it solves. [15]

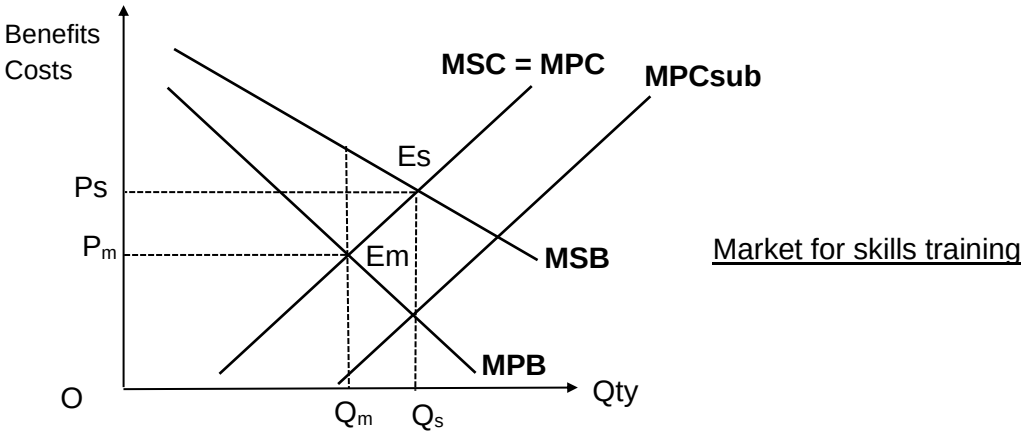
Question analysis	
Command Word	"Discuss" – requires student to analyse the problems that may be created when government intervene in the skills training market and evaluate the extent to which this is likely
Context	Market for skills training
Concept	Government intervention – government failure, unintended consequences of government intervention

Introduction:

Governments aim to maximize society's welfare. Given that the market for skills training fails due to positive externalities and imperfect information, the government has to intervene in order to bring the market to the social equilibrium level. However, due to government failure, this may result in problems and unintended consequences in the market.

Body paragraph/Requirement 1: Government intervention may result in inefficient allocation of resources due to inaccurate information on amount to subsidize

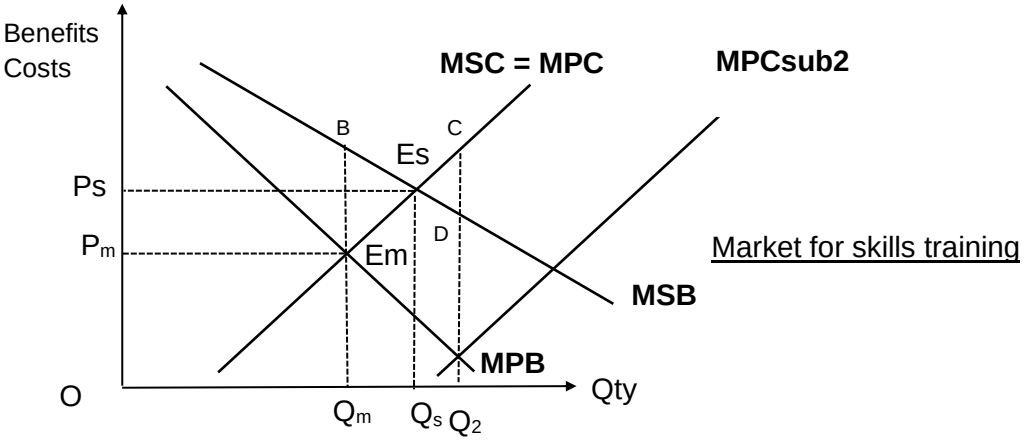
To solve the underconsumption in the market for skills training, the government may intervene by implementing subsidies. Subsidies are pay-outs by government to defray the costs of consuming or producing skills training. This forces consumers to internalise the external benefits (amount of subsidy = MEB at Qs) lowering the MPC to MPCsub, where social equilibrium Qs is reached.



Market for skills training

However, governments may over or underestimate the value of external benefits, resulting in an over or under subsidy. This leads to an efficient allocation of resources. In the market for skills training, it is difficult to value of the external benefits, at is difficult to quantify exactly how much productivity of 3rd parties grow due to the consumption of skills training. Moreover, there are many factors which cause productivity growth in workers, making it challenging to attribute it as external benefits of skills training on 3rd parties alone. In addition, the quality of the skills training would also influence the extent of that benefit.

As a result, the government may over subsidize in the market where MPC increases to MPCsub2. This would cause the market to be at new equilibrium Q2. This means that the market is still not at socially efficient level at Qs and results in a new deadweight loss of triangle EsCD.



Market for skills training

Evaluation: New equilibrium point after intervention may still be better than without intervention/Government may adjust amount of subsidy with more data available over time.

Despite the fact that governments may not subsidize the right amount to reach social efficiency, society might still be better off than without the subsidy in the first place. In the example above, even though the government had oversubsidized and caused an overconsumption in the market, the deadweight loss is still smaller than before the subsidy was implemented (BEsEM vs EsCD). In addition, with more data about the market collected over time, governments can still adjust the level of intervention to reach closer to the social equilibrium point.

Body paragraph/Requirement 1: Government intervention may result in unintended consequences such as income inequality

Government intervention may also result in unintended consequences as they intervene in the market for skills training. For example, government joint provision or subsidies requires a huge budget. This could result in the government having a budget deficit, leading to opportunity costs. In Singapore, spending more on increasing the production and consumption of skills training could mean that there are lesser government revenue to implement policies to cope with the problems of an ageing population (e.g. health policies or elderly friendly infrastructure).

In the pre-amble, it also mentions that the level of subsidies for skills training are of different extents in different industries. Workers in the industries receiving fewer subsidies, may receive less training, resulting in bigger wage differences between income groups, worsening income inequality in Singapore.

Evaluation: Government can complement with other policies

In order to manage some of these unintended consequences, the government can complement them other policies. For example, the government can provide transfer payments to the lower income to limit the effects of income inequality. In addition, the government can use public education to help workers from sunset industries understand the importance of developing new skills in relevant areas and remain employable. As skills training would lead to more potential growth in Singapore due to the improvement in quality of resources, more tax revenue can be collected in the long run.

Summative conclusion:

In summary, government intervention in the market for skills training may potentially cause problems due to government failure. Therefore, it is important to perform market research and analyse the optimal extent of intervention in the market. In addition, with the development of technology and data collection, more precise estimates can be used to refine the level of intervention in the long run. To mitigate the unintended consequences of intervening in markets, governments should consider a myriad of policies to complement and support the market in allocating resources efficiently. Needless to say, much of this also depends on the competence and reliability of the government in addressing the market failure problem.

Knowledge, Application, Understanding, Analysis	
Level	**Description**

L3 (8 – 10m)	• Breadth
	  ○ Explains **two** negative consequences of government intervention in the market for skills training
	• Depth
	  ○ Rigorous and relevant economic analysis used to explain how government failure might result in an inefficient allocation of resource
	  ○ Rigorous and relevant economic analysis used to explain how unintended consequences might result due to government intervention.
	  ○ Well-contextualised to the market for skills training.

L2 (5 – 7m)	• Lacking any L3 criterions.
L1 (1 – 4m)	• Largely irrelevant response. • Largely descriptive response with non-existent or minimal or application of economic concepts or theories. • Serious and pervasive conceptual errors.

Level	**Description**
E3 (4 – 5m)	For an answer that builds on appropriate analysis to evaluate critically and arrives at **well-reasoned judgements*** and decisions using criteria. • Strong evaluative statements about the significance of the problem created by government intervention • Strong concluding paragraph • Strong reasoning to justify the judgement made (including the use of criteria) * in the context of this question, judgement made should be whether more problems are created than solved

E2 (2 – 3m)	• Provides an opinion accompanied with partial substantiation that:
	  ○ May not be entirely convincing.
	  ○ Seems overly reliant on assumptions that may not hold.
	  ○ Lacks relevance to the context of the question.
	• Evaluates at least one of the points covered in the body or provides some insightful opinion(s) but the overall stand in unclear.

E1 (1m)	• Unsupported evaluative statement(s). • Or unsubstantiated / generic conclusion • Or supported with very weak/incorrect/unrealistic/illogical reasoning (therefore making the judgement unconvincing)