

# 2020 VCE Economics examination report

## General comments

In 2020 the Victorian Curriculum and Assessment Authority produced an examination based on the *VCE Economics Adjusted Study Design for 2020 only*. The majority of students performed well in Section A and demonstrated the necessary knowledge and skills by selecting the correct option in the multiple-choice questions.

In Section B, most students attempted all questions, with many students making use of the extra space at the end of the booklet. Students should note that they are allowed to write below the lines.

Key skills and/or specific knowledge that students generally handled well included the following:

- how a lower exchange rate can support (economic) activity and influence the current account balance
- how global economic growth impacts on the exchange rate
- analysis of the effects of contemporary factors on the setting of budgetary policy/budget outcome
- the role of discretionary stabilisers in influencing aggregate demand (AD)
- how spending on training and education / investment in infrastructure influences aggregate supply (AS)
- the conditions for a perfectly competitive market
- the role of relative prices in markets on the allocation of resources
- the weakness(es) associated with the use of 'markets' to allocate resources
- the construction of demand and supply diagram(s).

The main key knowledge and key skills that required a deeper and clearer understanding include the following:

- how a lower cash rate and a higher terms of trade (TOT) influences the exchange rate
- how a lower exchange rate can influence material and non-material living standards
- the role of automatic stabilisers in influencing AD and stabilising the business cycle
- evaluating the effectiveness (e.g. strengths and weaknesses) of AD policies in achieving the goal of full employment during 2020
- explaining the relationship between an efficient allocation of resources and AS
- how spending on training and education / investment in infrastructure influence the goal of strong and sustainable economic growth
- the nature of a perfectly competitive market
- the role of relative prices in markets on the allocation of resources and the effect on living standards
- the strengths associated with the use of 'markets' to allocate resources
- the role and effect of government intervention in the market to address market failure (e.g. indirect taxation, subsidies, government regulations and government advertising)
- the interpretation of demand and supply diagram(s).

Students are advised to look closely at the development of a better understanding of the following terms and concepts:

- the meaning of the TOT
- the difference between the TOT and the Balance on Trade
- the difference between a current account deficit (CAD) and a budget deficit

- the difference between production and productivity
- public debt versus foreign debt
- CAD versus net foreign debt.

## Specific information

The statistics in this report may be subject to rounding resulting in a total more or less than 100 per cent.

### Section A – Multiple-choice questions

The table below indicates the percentage of students who chose each option. The correct answer is indicated by shading.

Question	% A	% B	% C	% D	Comments
1	36	59	3	2	
2	4	12	79	5	
3	2	5	14	79	
4	23	63	5	8	
5	6	3	6	84	
6	81	3	14	1	
7	2	2	2	93	
8	55	13	22	10	
9	9	69	8	14	
10	59	15	19	6	
11	2	90	5	3	
12	1	63	11	24	
13	14	39	16	31	\$25b (Headline surplus) - \$10b (receipts from asset sales) - \$5b (FF earnings) = \$10b underlying surplus
14	■	■	■	■	Invalidated
15	35	11	7	47	Super contributions by employers are equivalent to wages, which add to costs.

### Section B – Written responses

This report provides sample answers or an indication of what answers may have included. Unless otherwise stated, these are not intended to be exemplary or complete responses.

The statistics in this report may be subject to rounding resulting in a total more or less than 100 per cent.

## Question 1a.

Marks	0	1	2	3	4	Average
%	17	16	17	18	32	2.3

This question was generally answered well. Students who scored highly made the necessary link between a lower cash rate and interest rates and described how lower interest rates actually result in a depreciation of the exchange rate. They made reference to key terms/concepts, such as interest rate differentials, capital inflow/outflow and the demand/supply of the Australian dollar on foreign currency markets. They explored how this could increase activity (e.g. production and expenditure) in Australian industries (e.g. exporters and import-competing industries such as education and tourism).

Lower scoring responses tended not to examine how lower cash/interest rates cause a depreciation of the Australian dollar and instead focused on how the depreciation might support activity across a range of industries. Some students included unnecessary information, such as how the Reserve Bank of Australia (RBA) achieves a lower cash rate, which often resulted in insufficient detail being provided for the core parts of the question.

The following is an example of a high-scoring response.

*A lower cash rate implemented by the RBA decreases the return on investment in Australia. As a result, it is likely that overseas investors will be less attracted to the financial return on offer in Australia, leading to less capital inflow into Australia. At the same time, relatively lower cash rates in Australia is likely to mean Australians seek a relatively higher rate of return on investment by investing in overseas markets, increasing capital outflow. The combined effect of less AUD demanded in the foreign exchange market, and more AUD supplied in the foreign exchange market leads to a fall in the value of the currency. A depreciation of the exchange rate helps improve Australia's ability to compete in the global market for goods and services, thus boosting our international competitiveness as our exports become relatively cheaper. This offers benefits to the incomes of those in the export industry, such as mining and tourism. At the same time, a falling value of the AUD makes imports relatively more expensive. Thus decreasing demand for imports, making it more likely Australians will buy local instead of overseas. This helps our import competing industries, such as manufacturing as more Australians are likely to buy locally as they are relatively cheaper compared to imports from overseas.*

## Question 1b.

Marks	0	1	2	3	4	5	6	Average
%	9	14	12	12	13	15	24	3.5

Students generally handled the second part of this question better than the first. In attempting to describe a favourable movement in the TOT for the first scenario, a number of students simply said that a higher TOT means that export prices are higher than import prices. This is technically incorrect as this approach refers to 'the level of prices' rather than the 'movement in prices'. The best performing students were those who clearly articulated that growth in the TOT means that the prices received for exports are 'increasing relative to the prices paid for imports'. There seemed to be an incomplete understanding of what is meant by the TOT, with many students stating that it refers to exports over imports, or the value of exports over the value of imports, or even the price of imports over the price of exports. All of which are not correct.

A number of students incorrectly stated that a favourable movement in the TOT meant that the TOT index increases above 100 (the favourable movement does not require the index to be above 100). When linking the higher TOT to a higher exchange rate, it was not enough to assert that a higher TOT increases the demand for the AUD without explaining why. Some students erred by examining the relationship in the opposite direction by explaining how an exchange rate depreciation may have impacted on the TOT.

For the second part of the question, most students were able to explain how slower global economic growth was expected to contribute to a depreciation of the AUD, with the best-scoring responses identifying the key links, such as a reduced demand for Australia's exports and the related drop in the demand for AUD on foreign currency markets.

The following is an example of a high-scoring response.

*The terms of trade (TOT) is an index measuring the average price received for exports relative to the average price paid for our imports. If there is a favourable movement in the TOT this means that a higher average price is received for any given volume of exports sold. As Australian exports are sold in AUD, this means that there is greater demand for Australian dollars on the foreign exchange market as a greater amount of the currency is needed for any given volume of exports. This places upward pressure on the volume of the exchange rate, causing the AUD to appreciate. A slowdown in global economic growth may be reflective of a fall in industrial production overseas. As Australia's exports such as iron ore and coal help enable these overseas industries to operate, a slowdown in global growth should cause reduced demand for the Australian dollars will fall in the foreign exchange market, placing downward pressure on the exchange rate, causing a depreciation.*

### Question 3c.

Marks	0	1	2	3	4	5	6	Average
%	11	11	10	11	11	18	28	3.7

Students who scored highly clearly articulated how an increase in net exports ( $X-M$ ) flowing from an exchange rate depreciation helps to increase the current account surplus (CAS) or reduce a current account deficit (CAD). Importantly, higher scoring students were able to make clear connections to key components or concepts related to the current account/balance of payments, such as an increase in credits relative to debits, and an improvement in the Balance on Merchandise Trade and/or Balance on Goods and Services.

A number of students attempted to examine the impact on the current account via the net primary income section. While this is not irrelevant, it is less important in Australia's current context given that the vast majority of Australia's foreign liabilities (NFL) are denominated in Australian dollars.

There were some misconceptions about the nature of the current account, with some students confusing the CAD with net foreign debt (NFD) and responding that a lower exchange rate will make it more difficult to pay off NFD.

Many students had difficulty articulating the link between a lower exchange rate and living standards. For material living standards, the best responses linked the growth in net exports to growth in AD and real Gross Domestic Product (GDP) per capita. For non-material living standards, high scoring responses linked the stronger rate of economic growth with damage to the environment (e.g. pollution or CO<sub>2</sub> emissions), while others linked it to benefits related to greater/lower employment.

The following is an example of a high-scoring response.

*A downwards pressure of Australia's exchange ceteris paribus, will lead to foreign importers accessing Aust exports at a relatively lower price. Additionally, the cost to Australians of purchasing foreign currencies increases, which raises the relative price of imports. This ultimately reduces the demand for imports and increases demand for Australian exports. As a result, it is likely to improve the balance on goods and services as credits will rise relative to debits, thus increasing the surplus in the current account.*

*The lower exchange rate is likely to increase the international price competitiveness of Australian producers. Consequently, net injections from Australia's tradeable sectors will rise, leading to a rise real GDP per capita and thus an increase in the output per person. This should equate to greater incomes for Australians as national production equals national income over time, thus improving Australia's access to goods and services and hence raising material living standards. On the other hand, the rise in economic activity from the greater net injections from the external sector should increase derived demand for labour and lower unemployment, thus helping to reduce the social stigma tied to those who were unemployed, therefore positively impacting on non-material living standards.*

## Question 2a.

Marks	0	1	2	3	4	Average
%	21	18	22	18	21	2.0

The majority of students struggled with this question. The highest scoring responses identified two distinct economic reasons or factors that, in the current climate, have made it difficult (or will make it difficult) for the federal government to achieve a surplus, and then explained why. While it was expected that students would make reference to factors like the need to implement discretionary stabilisers and/or the influence of automatic stabilisers during the coronavirus (COVID-19) pandemic of 2020, students were afforded some flexibility. For example, students were awarded for describing any logical economic reason that made it more difficult for the government to achieve a budget surplus, including the existence of natural disasters (e.g. bushfires) in early 2020, rising trade sanctions imposed by China, slow wages growth, weak consumer confidence, a higher household savings ratio, declining world rates of economic growth and the growing government interest bill that is required to service growing levels of public debt.

Examples of misconceptions included:

- confusing budget surplus with the CAS (e.g. referring to the cyclical movement in the current account)
- arguing that the higher level of Australia's NFD made it difficult for the government to achieve a surplus because the debt needs to be repaid to foreign nations. Instead, the students should have referred to higher level of net government debt and then focused on the interest burden, which makes it more difficult for the government to achieve a surplus
- confusing budget deficits with government debt by asserting that the relatively higher budget deficit in the current year would take many years to repay. Students should remember that it is the debt that can be repaid and not the deficit
- focusing on implementation lags (e.g. budget bills needing to pass through parliament) that might delay certain revenue-raising initiatives being passed into law, which is essentially a political or legal rather than an economic reason for the government finding it difficult to achieve a budget surplus.

The following is an example of a high-scoring response.

*The government may struggle to achieve a budget surplus due to falling levels of economic activity across the nation due to the ongoing Covid-19 pandemic. Given that some industries will not recover in many years such as aviation, the budget outcome is likely to deteriorate due to automatic stabilisers. This refers to changes in the budget outcome which occur automatically in response to changing levels of economic activity. Lower levels of economic activity reduces company profits and income levels, reducing the receipts of company and income tax, thus worsening government revenue. This is particularly evident in 2020 due to the Covid-19 pandemic, due to ongoing lockdowns, making it more difficult to achieve a budget surplus in the short to medium term. A second reason the government may find it difficult to achieve a surplus in the near future is the significant outlays expended on discretionary stabilisers, which refer to deliberate charges to the composition of government outlays. The significant cost of some measures such as Jobkeeper (\$101 bn) and Instant Asset Write-Off (\$30 bn) makes it hard for the government to consolidate its finances due to its significant stimulus measures to support the collapse in AD during the Covid pandemic.*

## Question 2b.

Marks	0	1	2	3	4	5	Average
%	18	14	12	20	22	15	2.6

Only a small proportion of students responded well to this question. Students who achieved the highest scores demonstrated an understanding of how the budget (i.e. automatic stabilisers) affected the economy, rather than how the economy affected the budget. They also explained the role of automatic stabilisers in 2020 with reference to both the revenue and expenditure sides of the budget.

In relation to revenue, some students found it difficult to explain the role of the progressive tax system in helping to cushion the decline in disposable income. However, on the expenditure side, most students were able to successfully link the automatic increase in income support payments to the protection of disposable income and the impact on consumption, AD and stabilisation of economic activity. A common and effective approach to this question was to reference the 2020 downturn/recession and then examine the impact that declining tax revenue and increased welfare expenditure had on the budget outcome (e.g. increasing the deficit), and then link this to a more expansionary stance. Equally effective was the approach taken by some students to link declining government revenue to fewer leakages (from the economy), and higher welfare expenditure to greater injections.

Examples of errors and misconceptions noted included:

- When discussing the revenue side of the budget, a number of students argued that reduced income tax collections and/or increased welfare payments result in an increase in disposable income, when they needed to say that it helps to prevent disposable incomes from falling as much (as would have been the case without the operation of automatic stabilisers).
- Students argued that the 'government increased its welfare payments during the recession', which implies that it is a discretionary action on behalf of the government, rather than welfare payments automatically increasing in response to high levels of unemployment.
- Students explained the role of automatic stabilisers in a theoretical context, including the way that the stabilisers work during the boom or peak phase of the economic cycle.

The following is an example of a high-scoring response.

*Automatic stabilisers on components of the budget which vary is a generally counter-cyclical manner in correspondence to changes in the level of economic activity. As such, they occur independently of government decision making. During 2020, the Covid pandemic has led to an unprecedented downturn in the level of economic activity. Consequently, automatic stabilisers or the cyclical component of the budget has changed, helping to support economic activity. For instance, the downturn led to an increase in the*

unemployment rate from about 5% to a approx 7.5% leading to an increase in the amount of Australians eligible to receive unemployment benefits. In addition, many income earners moved into lower tax brackets, which reduced their tax liability to the government. Both these factors helped to protect disposable incomes (or reduces the fall in incomes) for a substantial portion of Australians, which had a favourable influence on both consumption expenditure and AD. As a result, the recessionary trough of the business cycle is likely to be somewhat reduced, which stabilises the business cycle by counter-cyclically increasing injections relative to leakages in the economy and supporting AD and economic activity.

## Question 2c.

Marks	0	1	2	3	4	5	6	Average
%	9	6	11	15	19	23	18	3.7

This question was generally well handled, with most students able to identify two relevant discretionary budgetary policy initiatives, such as those introduced during 2020 to address the COVID-19-induced recession (e.g. the JobKeeper wage subsidy, the temporary coronavirus supplement for JobSeeker recipients, the bringing forward of tax cuts and the cash payments made to some welfare recipients).

Students who scored highly elaborated on the link to AD via one or more of the components, as well as linking it to the achievement of the goal of strong and sustainable economic growth. For this question, students' focus needed to be on the 'strong' component of the goal given that the imperative in 2020 was to stimulate AD and real GDP.

The following is an example of a high-scoring response.

*Strong and sustainable economic growth involves achieving the strongest growth rate possible, consistent with employment growth, but without adding to unacceptable inflationary, external, or environmental pressures often around 3 to 3.5% per annum. A discretionary initiative designed to influence AD and the achievement of the goal is JobKeeper. This is a \$130 billion wage subsidy of \$1500 per fortnight which are designed to allow businesses to retain employees in light of lockdowns and the covid pandemic's economic shock. Hence, it ensures that employees are able to continue to contribute to levels of consumption during this time, increasing levels of AD. Additionally, it reduces the need for any re-employment processes after the pandemic, reducing the potential for immediate labour bottlenecks and skill shortages, as well as allowing AD to rebound more easily and sustainably.*

*Another policy is the instant asset tax write off scheme, allowing firms to claim back the full costs of depreciable assets, such as machinery and equipment. This encourages greater business investment and stimulates AD and real GDP. In addition, by incentivizing businesses to invest, it is likely that new capital will drive down average production costs, encouraging growth in productive capacity or aggregate supply. This helps to reduce prices and encourage further growth in AD, which leads to stronger and more sustainable growth once the pandemic ends.*

## Question 2d.

Marks	0	1	2	3	4	5	6	Average
%	19	16	16	16	15	11	7	2.5

This was the most poorly handled question in the examination. The highest-scoring responses were able to identify and explain one or more factors that may have made monetary policy relatively potent over the course of 2020 in terms of its ability to reduce unemployment, such as the lower implementation lag and/or the flexibility of monetary policy (e.g. the non-traditional expansionary measures employed by the RBA during 2020). They were then able to balance this against the monetary policy weakness(es) evident during

2020, such as the long impact lag, increasing ineffectiveness of the cash flow/cost of credit channels in light of high household debt levels, the ineffectiveness of the exchange rate channel in light of other countries adopting similar expansionary stances, the fact that the banks didn't pass on the full reduction in the cash rates and monetary policy's inability to target structural unemployment. They were then able to prioritise their arguments to arrive at a reasoned conclusion as to the overall effectiveness of monetary policy during 2020.

A large number of students appeared to have misunderstood the question and described instead how monetary policy was implemented during 2020, and then how the more expansionary stance impacted on unemployment via one or more transmission channels. The task word 'evaluate' implied that there was a requirement to discuss at least one strength and one weakness associated with the use of monetary policy to achieve full employment over the course of 2020, a time when the economy was in recession and the cash rate/interest rates were reduced to the lowest level in history.

Common errors included:

- no attempt to link a lower cash rate to lower interest rates
- no attempt to demonstrate an understanding of the goal of full employment
- simply describing how monetary policy was used over the course of 2020
- unnecessarily spending time on describing how the RBA reduced the cash rate during 2020
- simply describing transmission mechanisms/channels of monetary policy
- making no attempt to link the strength and weakness back to the goal of full employment.

The following is an example of a high-scoring response.

*The goal of employment refers to achieving the situation where everyone who wants a job is employed as well as achieving the maximum rate of reduction in unemployment, including the elimination of cyclical unemployment an achievement of a natural (or NAIRU) rate of unemployment of about 4.5%. Given that the unemployment rate has remained well above this rate 2020, it suggests that monetary policy has been ineffective. Despite having an inflationary first target, the current deflationary environment has allowed the RBA to instead focus on 'jobs growth and economic recovery'. However, due to the low levels of consumer confidence and high levels of household indebtedness, the very expansionary monetary policy setting (CR = 0.1%) has largely been ineffective as the higher level of discretionary income of consumers has either been saved or used to repay debt, with relatively little being spent in the economy on goods and services, thereby having a minimal impact on the demand for labour and unemployment. Due to the reduced effectiveness of the cash flow and cost of credit channels, the RBA has adopted less conventional methods, including quantitative easing, with the purchase of government bonds to further increase liquidity in the economy. This highlights a strength of monetary policy as the RBA has the freedom and flexibility to do more than simply reduce the cash rate during a recession in an effort to boost employment and reduce the rate of unemployment. Overall, with the economy experiencing negative economic growth and growing unemployment, it is clear that monetary policy has largely been ineffective at achieving full employment over 2020. In particular, and in stark contrast to budgetary policy, it would not have been able to prevent the rate of unemployment climbing above 10%, because its relatively one-dimensional and blunt nature does not allow it to target specific areas of the economy, such as wage subsidies for employers.*

### Question 3a.

Marks	0	1	2	3	4	Average
%	12	21	27	23	16	2.1

Many students found this question challenging. Most students were able to demonstrate an understanding of an efficient allocation of resources (e.g. one where all the nation's resources are used in the production of goods and services that yields the maximum net benefits for society) and AS (e.g. the total volume or real value of goods and services that has been or can be produced over time). However, many students struggled to make a meaningful connection between the two concepts. The highest scoring responses were able to explain how an increase in at least one type of efficiency (e.g. technical/productive efficiency) could contribute to an increase in the total volume or real value of goods and services that can be produced in the economy. Better-scoring responses also referred to an improved capacity for the economy to produce goods and services and even included an AD/AS diagram and/or production possibility diagram in the space provided below the lines to illustrate the relationship between efficiency and AS.

The following is an example of a high-scoring response.

*An efficient allocation of resources refers to resources being allowed in a way such that national living standards and welfare are maximized in society. This refers to the point where the combination of goods and services yields the greatest possible satisfaction for society. Aggregate supply refers to the total value or volume of goods and services produced in an economy over time.*

*Efficient allocation of resources will usually imply that all of the different types of economic efficiency, such as technical and dynamic efficiency are maximized so that living standards will be at the highest possible level. An improvement in these types of efficiency will mean that productivity increases and this leads to lower production costs for businesses and better supply conditions more generally. Businesses will therefore be more able and willing to supply a greater volume of goods and services than before, which increases productive capacity and/or the aggregate supply of goods and services produced in the economy.*

### Question 3b.

Marks	0	1	2	3	4	5	6	Average
%	5	8	12	17	22	25	12	3.7

While many students were able to obtain high scores for this question, relatively few were able to achieve full marks. High-scoring responses clearly demonstrated how each of the AS policy initiatives worked to increase AS in the economy and extended the response by making a clear connection to the achievement of the goal of strong and sustainable economic growth. Importantly, the highest scoring responses not only demonstrated how economic growth is likely to increase or become stronger but also made the important link to the sustainable aspect of the economic growth goal. These students were able to clearly show that these AS policies can effectively target this macroeconomic goal because they can contribute to an increase in low inflationary economic growth, which makes the growth more sustainable over time.

Many students spent too much time explaining how the given AS initiative contributed to a stronger rate of economic growth on the demand side. For example, when attempting to explain how spending on training and education can assist with the achievement of strong and sustainable economic growth, many students spent some or all of their time elaborating on the link between increased skills (or an improvement in human

capital), the increased ability to gain employment, the higher resulting income and the resulting increase in consumption and AD. Students instead needed to focus on how the improvement in human capital helps to improve supply conditions for business (e.g. via a boost in labour productivity) and then how this helps to achieve a stronger and more sustainable growth.

The following is an example of a high-scoring response.

*Strong and sustainable economic growth represents the highest real GDP growth rate, consistent with employment growth, without running into unacceptable external, inflationary or environmental pressures. Spending on training and education seeks to improve the skillset of the labour force by enhancing the contribution workers can make to the production process, such as the \$1 billion Job Trainer program for vocational training for 340,000 jobseekers or school learners. This aims to improve the quality of human capital through training and reskilling and, as such, improves labour productivity, improving the productive capacity and aggregate supply as lower per unit costs encourages producers to increase output. This helps to improve stronger economic growth without the build-up of inflationary pressures, thus achieving sustainable growth over time.*

*Investment in infrastructure refers to spending in an economy, such as the \$4 bn Roads of Strategic Importance Fund, as part of \$110 bn in infrastructure investment over the next decade. This facilitates speedier transportation of freight, alleviating gridlocks, allowing fuel costs to be reduced, thus minimizing costs of production and improving productivity.*

*This seeks to increase the willingness and ability of producers to produce products, thus allowing an increase to the supply potential and productive capacity of the economy boosting aggregate supply. Once again, this helps to achieve a stronger rate of economic growth without the build-up of inflationary pressures, promoting strong and sustainable growth.*

## Question 4a.

Marks	0	1	2	3	Average
%	5	8	29	58	2.4

Full marks were awarded to students who were able to identify and explain some of the key conditions required for the existence of a perfectly competitive market (e.g. many buyers and sellers, homogeneous products, free entry and exit, and perfect information) and then connect these to the nature of the market (e.g. the market will be characterised by the existence of relatively low prices; no individual firm possesses market power; productive/technical efficiency businesses is likely to be high; and/or consumer wants and needs are likely to be maximised). The simple listing of the conditions or characteristics of perfectly competitive markets was insufficient to achieve full marks.

The following is an example of a high-scoring response.

*The nature of a perfectly competitive market is one where no buyer or seller has the capacity to be a price maker (ie no individual firm has market power). This is a consequence of the existence of a number of hypothetical conditions or characteristics, such as a large number of sellers fighting for market share and the existence of homogenous products that prevents sellers from differentiating their product from those of competitors. Other conditions include perfect information, mobility of resources and no barriers to entry or exit which all help to maintain downward pressure on prices.*

## Question 4b.

Marks	0	1	2	3	4	5	Average
%	10	12	17	21	23	18	2.9

Students who performed well on this question demonstrated a clear understanding of the meaning and importance of relative prices in the context of the question. They then clarified how the change in relative prices ultimately sends important signals to producers/consumers and explained how this causes resources to move from the production of one good to another. High-quality responses also included relevant examples, such as the increased demand and relative price of hand sanitisers and/or face masks during the COVID-19 pandemic.

The highest-scoring responses highlighted that society can be better off when resources are able to flow into the production of those goods and services demanded by consumers (or society more generally), such that consumer satisfaction can be maximised and allocative efficiency is more likely to be achieved.

Understandably, a number of students assumed that the question referred to perfectly competitive markets, and unnecessarily repeated some of the conditions/characteristics that were covered in Question 4a. In some cases, this emphasis on perfectly competitive markets caused some students to focus on the increased supply that occurs in the long run (i.e. supply curve shifting to the right) as there are new entrants into the market, which forces the price back towards its previous equilibrium level. While marks could be awarded for this approach, it was typically not handled well by students, with many forgetting to address how it influences resource allocation.

Many students struggled to make the necessary connection or link to living standards, limiting their response to how a producer or a consumer might be advantaged or disadvantaged by the changing market conditions. In addition, a number of students attempted to link the increased demand for one particular good to a lower rate of national unemployment, and then discussed the implications for both material and non-material living standards. This approach was problematic because, in the context of competitive markets, it ignores the fact that an increase in the demand for (and relative price of) one product means that the relative price for another product is lower, which can result from a lower demand for (and production of) that other product. The net overall impact on production and employment can therefore be ambiguous.

The following is an example of a high-scoring response.

*In a competitive market, an increase in demand for a product lead to upward pressure on its price compared to other products, such as the price of a substitute. This is due to the creation of a shortage in the market which causes producers to raise price in order to eliminate the shortage. This sends a signal to the producers that higher profits can be made by producing this particular product and they then allocate more resources, including labour and capital, to its production. For example, during 2020, the demand for facemasks increased relative to other products which encouraged producers to allocate more resources to the production facemasks. The change in relative prices and the ability for competitive markets to adjust can improve living standards because consumers demands will readily be met. This means that markets will only produce the goods and services that consumers want and changes in relative prices are an important part of this process will help to ensure that allocative efficiency is achieved.*

## Question 4c.

Marks	0	1	2	3	4	Average
%	15	15	18	20	32	2.4

This question was handled well overall. It required students to identify and describe one strength and one weakness associated with the use of markets to allocate resources. The best performing students were

those who demonstrated an understanding of why/how markets are particularly effective at allocating resources (e.g. the ability to satisfy consumer wants/needs and the achievement of allocative efficiency) or the beneficial market outcomes that are likely to exist in a more 'competitive' market, such as higher levels of productive/technical efficiency and lower prices. Many students, however, were unable to achieve full marks because they simply described (again in some cases) how the market allocates resources.

Students were expected to draw on their understanding of market failure and how 'unregulated' markets lead to an inefficient allocation of resources or an allocation of the nation's resources that is suboptimal from a societal point of view. Many students mistakenly stated that a weakness of markets is that shortages and surpluses occur, not appreciating that shortages/surpluses are a natural feature of markets that play a pivotal role in markets transitioning to a new equilibrium.

The following is an example of a high-scoring response.

*One weakness is that one market cannot always capture the social costs relating to a transaction between two economic agents, meaning a cost is imposed on a third economic agent not involved in the exchange. This is referred to as a negative externality and includes events such as second hand smoke from the consumption of cigarettes. Thus, this results in a market failure where living standards are not maximised due to the over-production of goods and services containing social costs that are not reflected in the price. One strength is the comparably optimal level of dynamic efficiency they have relative to a centrally planned economy. Because resources are allocated via price signals, changing tastes and preferences of consumers or needs and wants are quickly reflected by a change in the allocation of resources which helps to ensure that allocative efficiency is achieved.*

## Question 4d.

Marks	0	1	2	3	4	5	6	Average
%	9	12	13	12	14	18	22	3.5

Generally, the quality of a student response within this question was strongly linked to the market failure that was selected. The highest-scoring responses began by briefly describing the nature of the market failure in question. They then clearly explained how the government can intervene, through the use of measures such as taxes and subsidies, to reallocate resources across the economy so that a more optimal allocation of resources results (i.e. one where we are closer to achieving allocative efficiency).

In the context of market failures and the use of demand and supply diagrams, the most straightforward market failures to apply within this question were merit goods and/or positive/negative externalities in production or consumption. This is because the use of subsidies and indirect taxes (e.g. excise on tobacco and alcohol) could readily be illustrated via the shifting of supply and/or demand curves. Students who focused on other market failures – such as public goods, common access resources and asymmetric information – found it challenging to illustrate their response through the use of a demand and supply diagram.

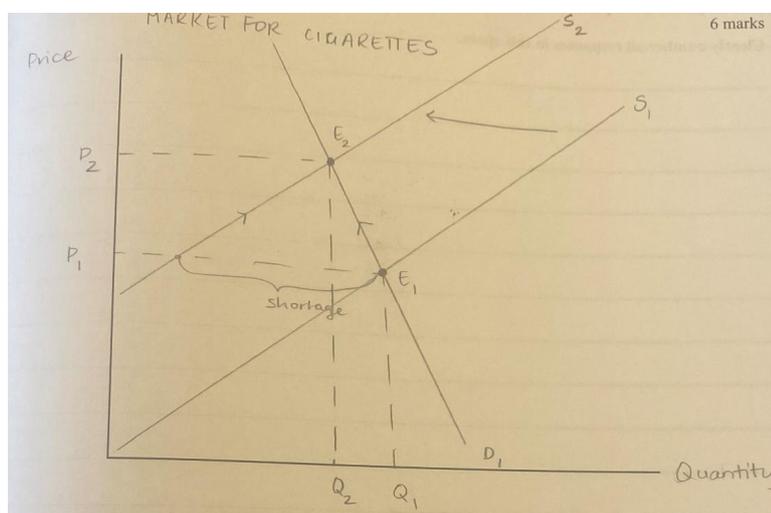
Common errors included:

- elaborating on the nature of a market failure at the expense of providing an adequate explanation of how the government could correct the market failure
- including a diagram but making no attempt to illustrate the response with reference to the diagram, or including an explanation inconsistent with the diagram: for example, explaining that consumer subsidies could be used to increase the allocation of resources to the consumption and production of goods containing positive externalities, but then including a diagram that illustrated the implementation of a producer subsidy
- spending excessive time describing the dynamics of adjustment from one equilibrium point to another and insufficient time focusing on the X axis (i.e. the quantity produced) and how the government

initiative addresses the over- or under-allocation of resources to the production of that good or service that previously existed

- using the appropriate example of indirect taxes imposed on those goods containing negative externalities in consumption (such as cigarettes and alcohol) but shifting the demand curve to the left when attempting to explain how the excise tax causes lower demand and lower production volumes
- confusing public goods with merit goods or goods with positive externalities in consumption and/or production, such as public transport and education (the use of public goods was problematic when illustrating with a demand and supply diagram because public goods do not have a 'market price')
- giving an unclear explanation of 'price controls' by the government and how these could be used to correct a market failure, saying things like price ceilings could be used to restrict production of goods with negative externalities or price floors could be used to increase production of merit goods (students should remember that price ceilings/floors are primarily used by governments to protect incomes of producers or prices for consumers, rather than used to address the market failures listed in the study design)
- inappropriately using an AD/AS diagram to illustrate their response.

The following is an example of a high-scoring response.



*Cigarettes have negative externalities in consumption, as they impose social costs such as increased cancer and other health costs as well as passive smoking when consumed. This reduces society's overall living standards, resulting in a market failure as there will be an over allocation of resources to the production of cigarettes. To combat this, the government introduced an excise tax (levied on cigarette producers) and has been increasing it every year. This has increased cigarette production costs, making suppliers less willing to supply cigarettes, shifting supply to the left from  $S_1$  to  $S_2$ . This causes a shortage at the equilibrium price ( $P_1$ ) causing prices to be raised from  $P_1$  to  $P_2$ . This causes supply to expand, but more importantly it causes demand to contract along the demand curve as consumers are deterred by the higher price. This results in a new equilibrium price and quantity occurring at  $P_2$  and  $Q_2$ , with the lower quantity reflecting the intent of the government. Fewer cigarettes are produced and consumed which means that resources such as labour and capital are allocated away from cigarette production and the nation achieves a more socially optimal allocation of resources. The government has therefore been able to internalise the externality by forcing producers and consumers to take into account the third-party social costs related to cigarette consumption.*