

93402



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SUPERVISOR'S USE ONLY

SCHOLARSHIP EXEMPLAR



NEW ZEALAND QUALIFICATIONS AUTHORITY
MANA TOHU MĀTAURANGA O AOTEAROA

QUALIFY FOR THE FUTURE WORLD
KIA NOHO TAKATŪ KI TŌ ĀMUA AO!

Scholarship 2018 Economics

2.00 p.m. Monday 19 November 2018

Time allowed: Three hours

Total marks: 24

Check that the National Student Number (NSN) on your admission slip is the same as the number at the top of this page.

You should answer ALL the questions in this booklet.

Pull out Resource Booklet 93402R from the centre of this booklet.

If you need more room for any answer, use the extra space provided at the back of this booklet.

Check that this booklet has pages 2–28 in the correct order and that none of these pages is blank.

Question	Mark
ONE	
TWO	
THREE	
TOTAL	

/24

ASSESSOR'S USE ONLY

YOU MUST HAND THIS BOOKLET TO THE SUPERVISOR AT THE END OF THE EXAMINATION.

INSTRUCTIONS: Write an essay in response to each of the three questions in this paper. Question Two is on page 10, and Question Three is on page 18.

QUESTION ONE: TOURIST ACCOMMODATION IN THE INTERNET ERA

Refer to Resources A to D and your knowledge of microeconomic theory to answer this question.

Over the past 10 years there have been significant changes in the tourist accommodation market, in terms of how people learn about travel options, how they book their trips, and where they choose to stay.

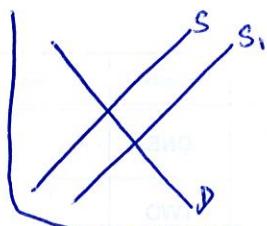
Evaluate the impact of the internet and social media on allocative efficiency in the tourist accommodation market. Use appropriate economic models to support your answer.

In your answer:

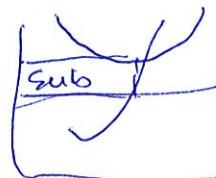
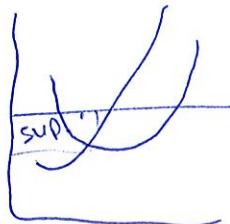
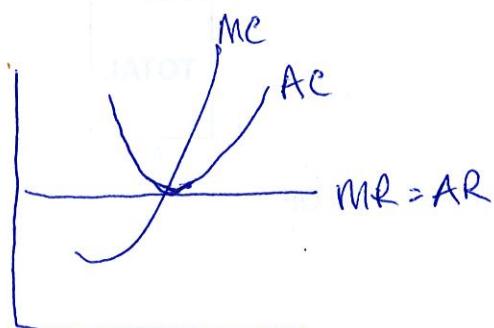
- analyse the impact of the internet and social media on supply and demand
- analyse the impact of the internet and social media on price elasticity of supply and demand
- discuss the impact of the changes within the market on the level and nature of supply, and the type of market structure
- evaluate the overall impact of these changes on allocative efficiency.

Use this space for planning your essay. This plan will NOT be marked.

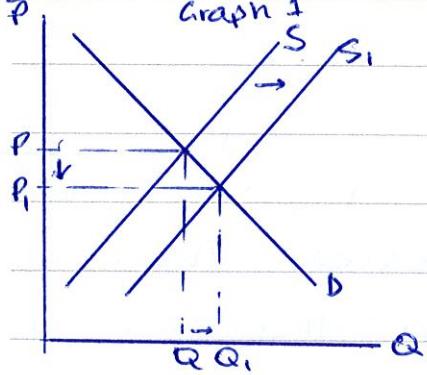
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↑ elasticity of supply



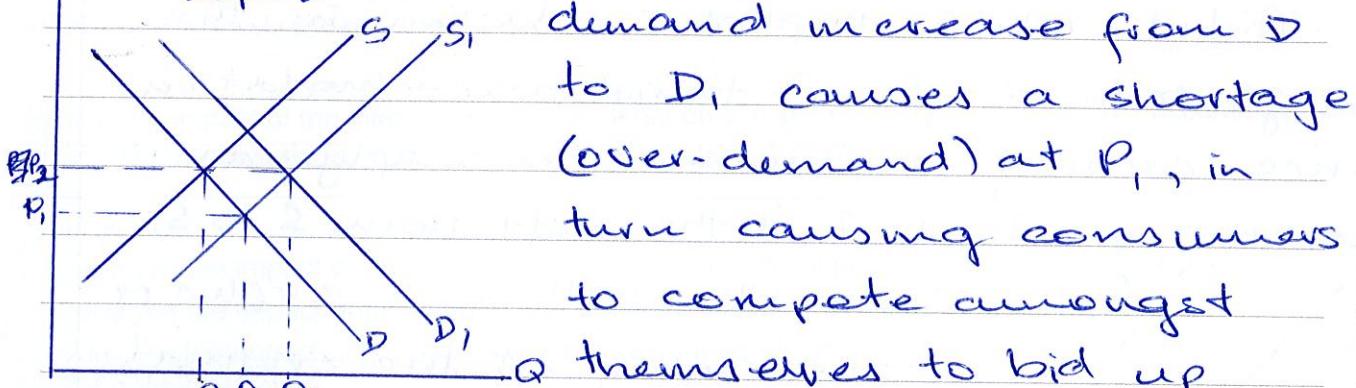
The impact of the internet and social media on the tourist accommodation market has been a significant reduction in the barriers to entry, causing an increase in the market supply. Source A cites the "comparatively low" prices in this market following the evolution of sites such as Airbnb, which implies a reduction in the average costs of offering tourist accommodation, hence causing an increase in supply, as is shown on Graph 1, in the shift from S to S_1 .



Graph 1 illustrates the effect of increased supply. The shift from S to S_1 leads to a lower equilibrium price (P_1) and a higher equilibrium quantity (Q_1). This results in a surplus or over-supply at the original equilibrium price (P). Producers will respond by lowering their prices to clear excess stock. As prices drop, the demand increases, moving the market back towards equilibrium at (P_1, Q_1) . Source B supports this analysis by suggesting that "Airbnb competes with traditional hotels on price".

Further, the 'evolution of tourist demand' (Source C) suggests that the combined effects of ease of access to complements and the potential for greater consumer sovereignty (for example,

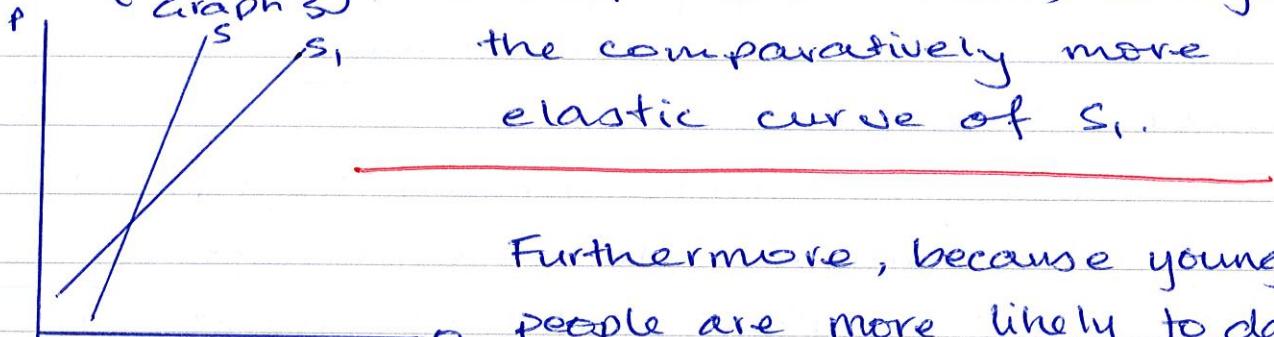
with Trivago enabling greater price discrimination and diverse product options, should the consumer desire them), may also result in a marginal increase in demand (as the marginal utility of consuming tourist accommodation has increased due to the improved 'experience' for example of culture cited by source A). As Graph 2 suggests the market



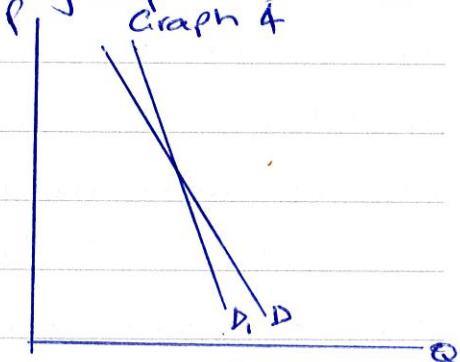
demand increase from D to D_1 causes a shortage (over-demand) at P_1 , in turn causing consumers to compete amongst themselves to bid up prices (moving the price back to P_2) to ensure they get accommodation. Thus, prices increase slightly following the increase in demand. Hence, a new equilibrium is established at P_2, Q_2 .

The effect of social media and the internet has been to make price elasticity of supply more elastic. Source A suggests this when it says that "... service providers... respond more efficiently..." following the integration of social media into the market. This suggests that, although in the short run supply cannot be perfectly elastic (because at least one variable input is fixed), the ability "... to share under-utilised goods..." as Source B puts it,

means that ~~the~~ the fixed variable in the short-run is only fixed for a much shorter period of time, as (for example) producers can contact consumers more quickly, and thus adapt to market forces much more efficiently. In turn, this means that ~~the~~ changes in price result in a proportionately greater change in quantity, as Graph 3 indicates, through the comparatively more elastic curve of S_1 .

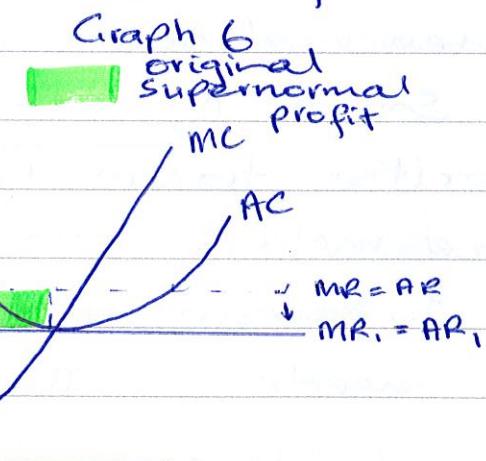
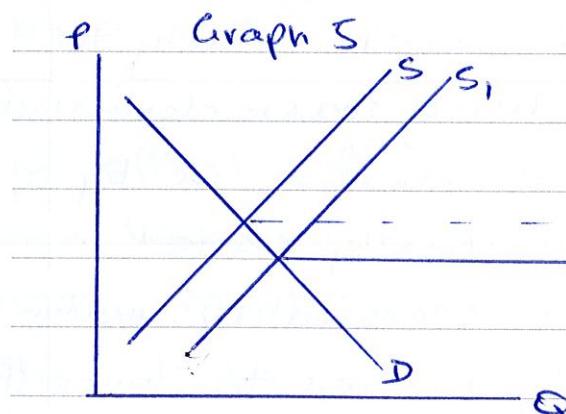


Furthermore, because younger people are more likely to desire travel and have budgeted for it (Source f), the effects of social media (such as the presence of social media on Instagram cited by Source I), are perhaps more likely to prioritise travel, hence making their demand more inelastic as they are drawn in by the "...accommodation specifically suited to their needs...". The ease of accessibility, making the experience better suited, raises the overall utility of travel, thus making the consumers (particularly within this demographic) less likely to change their consumption due to price changes, as the differing elasticities between D and D_1 , in Graph 4 indicate.

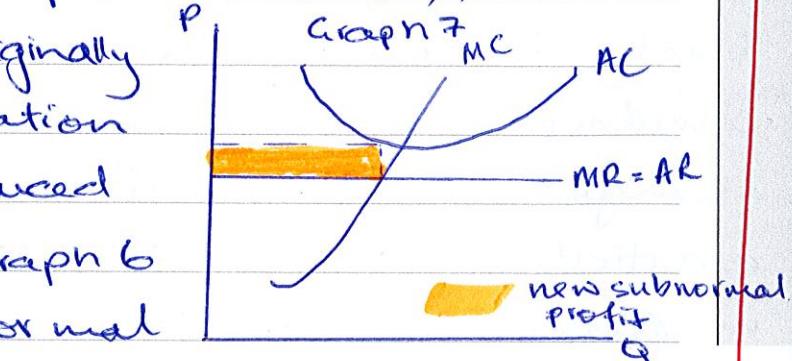


The increase in supply, combined with its increased elasticity indicates that the market has become increasingly characterised by perfect competition; as the lower barriers to entry and exit, greater number of competitors (as Source B suggests), the fact that all these services are ultimately homogeneous and the increasingly perfect information (Source D describes it as increasingly "widely available") suggests.

This increase in supply means that producers (such as traditional hotels) experiencing supernormal profits, will likely be drawn back to experiencing normal ones, as the influx of accommodation suppliers floods the market.

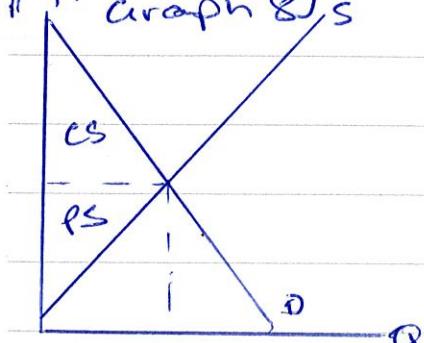


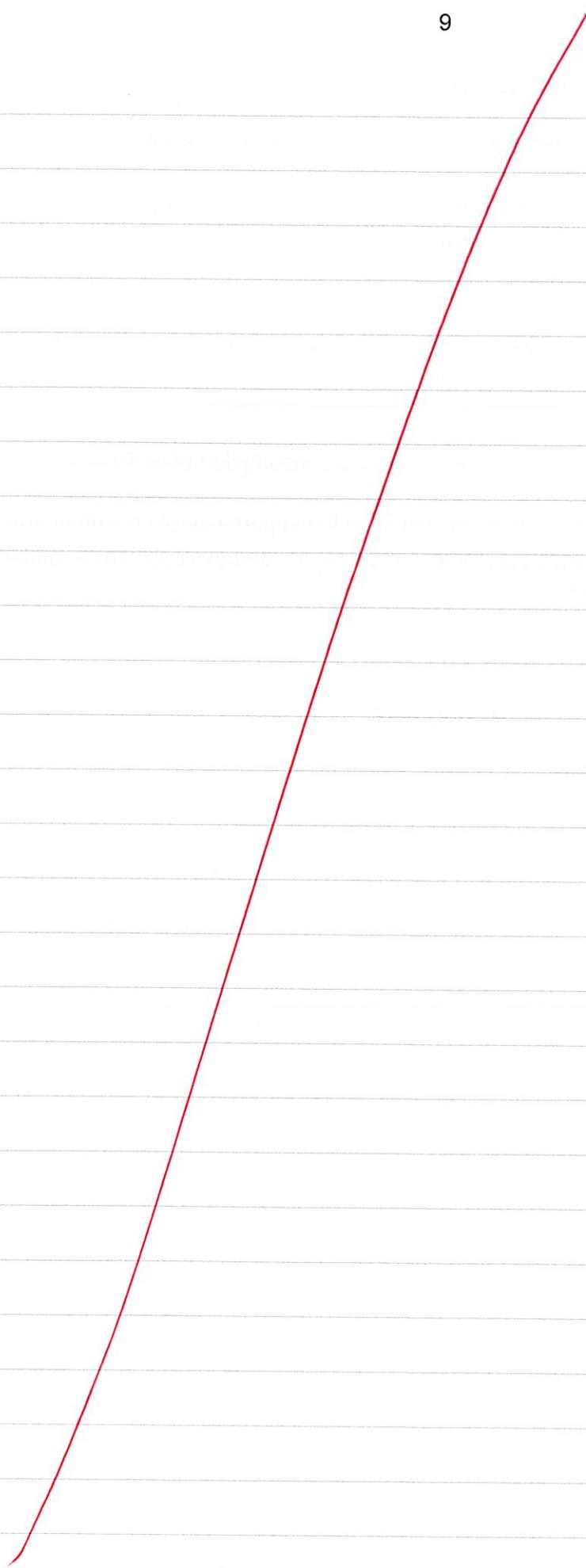
Because any increase in demand is likely to be marginal (as Graph 5 shows), the supernormal profit originally earned by accommodation providers will be reduced to normal profit (as Graph 6 shows) or even subnormal



profit as Graph 7 shows following the new level of price competition in the market. If the latter case is true in the long run, some competitors may leave the market so that normal profits are restored, meaning that the combined increase in and ~~elasticity of supply has~~ resulted in a perfect, ^{normal profit-making} nature of supply (or at least comparatively so).)

The overall result of this is that allocative efficiency in the market is maintained as producers in a perfect competition market structure operate ~~based on~~ in the allocatively efficient position where $MR = MC$, because they are price takers (and hence have no individual control over setting the price or quantities in the market). As a result, allocative efficiency is ^{improved by these changes as the market} ~~maintained~~, and the ^{is more} perfectly competitive sum of the producer surplus and consumer surplus is ~~maximized~~ maintained, meaning that there is no deadweight loss.





5

QUESTION TWO: SINGLE-USE PLASTIC BAGS

Refer to Resources E to K and your knowledge of microeconomic theory to answer this question.

Various groups in New Zealand have called for action to reduce consumption of single-use plastic bags, reflecting concerns about the environmental impact these cause. Others argue that consumer choice is more important.

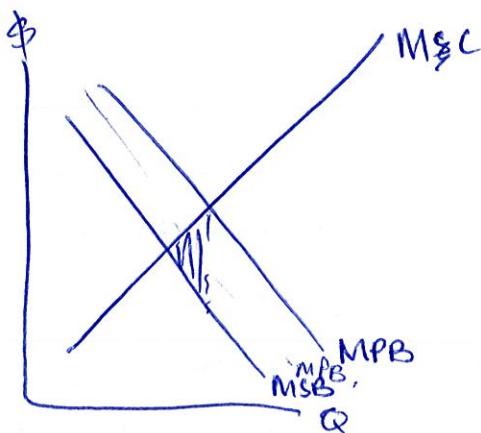
Evaluate the issue of market failure associated with the consumption of single-use plastic bags (SUPBs). Use appropriate economic models to support your answer.

In your answer:

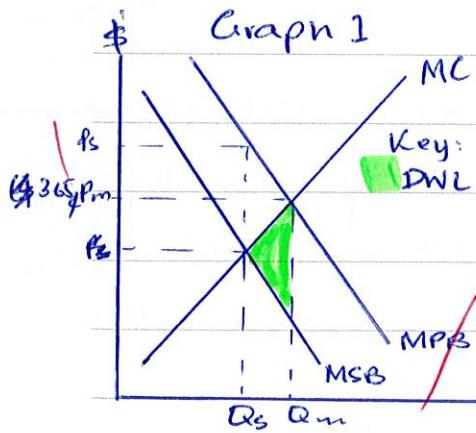
- explain and illustrate the externalities associated with the consumption of SUPBs, and why market failure might occur
- evaluate the case for government intervention, including the importance of consumer sovereignty
- explain and analyse three options for government intervention, and evaluate which option is most likely to achieve allocative efficiency.

Use this space for planning your essay. This plan will NOT be marked.

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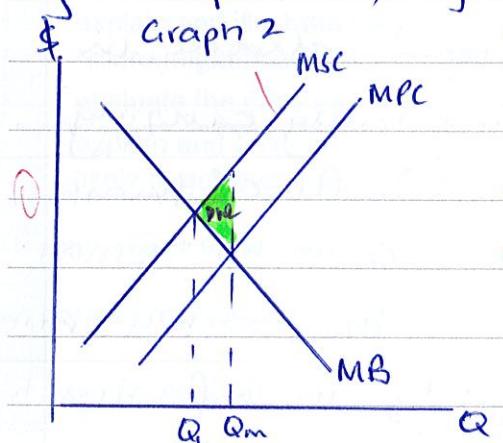
Negative consumption externalities result from the use of single-use plastic bags because they 'do not break down easily' so constitute significant litter in inhabited areas, clogging drainage systems and contributing to flooding. Their consumption and subsequent littering also contributes to an estimated 108,000 marine deaths and ^{they also} enter the human food chain in the form of microplastic, potentially causing future health problems (Source F). All of these factors cause negative flow-over costs or harms to third parties uninvolved in the consumption of plastic bags by costing society in infrastructure (due to drainage and flooding harms), environmental costs and healthcare bills, which are all burdens on the government and broader society. The consequence of this is market failure, as is shown



by the area of deadweight loss on Graph 1. This arises because the marginal private benefit (MPB) vastly exceeds the marginal social benefit (MSB) meaning that plastic bags are over-produced and under-priced/relative to the socially desirable equilibrium, as is shown by the difference in Q_s and Q_m , on Graph 1.

Further, the production process of using

a non-renewable resource such as fossil fuels means it can also be argued that there are negative externalities of production (although they are comparatively small), according to Source F, due to the environmental harms and pollution arising from it; as is shown by Graph 2, by the shaded area of deadweight loss; meaning that the private marginal cost (PMC) is operating a position which exceeds the socially desirable quantity (as is shown by the difference in Q_s and Q_m), as the bags are over-produced and under-priced.



The combined effects of these externalities mean that market failure occurs. This is because there are spill-over costs or harms of the production and consumption of plastic bags for a third party, in this case the government and society, which has to pay for these effects through healthcare infrastructure and environmental spending. This market failure is represented on Graphs 1 and 2 by the areas of deadweight loss, caused by tragedy of the commons, as consumers and producers are ultimately acting in their own self-interest, which is contrary to the interests of the collective as the individual utility of plastic bags

exceeds their perception of the harms to society in the short-run. Ultimately, therefore, market failure arises.

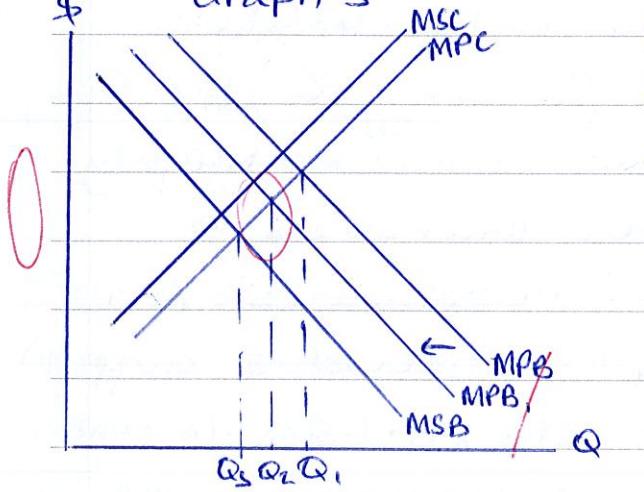
Consumer sovereignty is the principle that consumer preferences determine the goods and services produced in the market. In most markets, it is a particularly important principle and a case against government intervention^(Source K). However, in the single-use plastic bag market, the externalities and consequent market failure in the free market suggest that consumer sovereignty has failed. This means that there is a case for government intervention (as the DWL areas on Graphs 1 and 2 suggest), because without government intervention in some form there is little incentive for consumers of the bags to internalise the externalities they have caused¹ and there is also little incentive for producers of the bags to internalise the externalities they have caused by decreasing the MPC back to MSC on Graph 2. Therefore, to restore the market to a position of allocative efficiency there is a case for government intervention.

There are three options for government intervention in this market: education to consumers,

introduction of tax on plastic bags or banning their usage.

Education will serve to disincentivise demand of plastic bags. A particular advantage of this policy is that it will alter consumer perceptions and attitudes (thus maintaining consumer choice, as source K indicates), while neither taxation or banning the bags are likely to do so. ~~This~~ The effect of this

\$ Graph 3



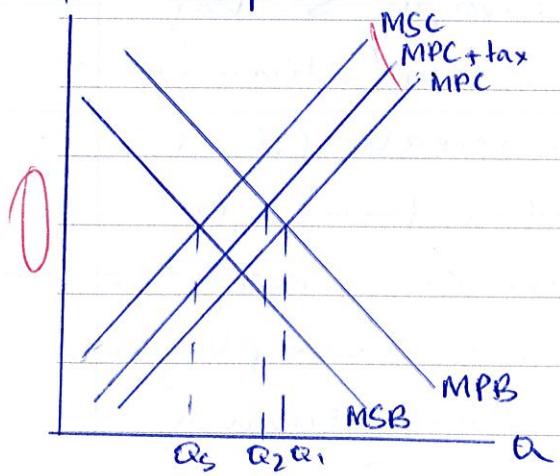
policy is shown on Graph 3, as it will disincentivise demand; thus shifting the MPB curve closer to the MSC curve (as the decreased difference between Q_2 and Q_1 , the socially desirable quantity

indicates. This, when compared with Graph 1, reduces the area of deadweight loss (with the aim of totally eliminating it), hence causing the market failure to diminish. Yet, a key disadvantage of such a policy is that because it relies on changing consumer perceptions, in the short-run it is unlikely to have a large effect; and thus, is only likely to come in to effect in the long-run because there are few tangible incentives for consumers to alter their

behaviour in the short-run. This means that society still has to face the effects of the externalities of consumption, and in the long run the market failure is perhaps unlikely to be totally rectified. Hence, even if the bags are 100% recyclable (source K), consumers may not recycle. Further, because this policy focuses on demand, little is done to reduce the production externalities plastic bags cause. Hence, this option is unlikely to successfully achieve allocative efficiency.

Taxation disincentivises demand by raising production costs and hence ^{increasing} the price of 3.65 cents of plastic bags currently (source I).

\$ Graph 4



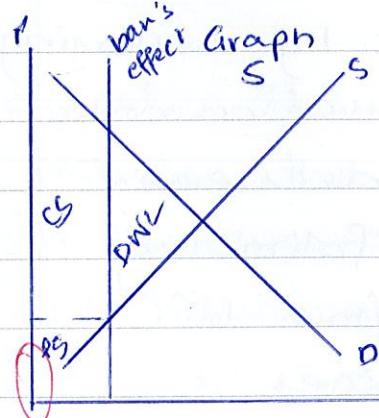
As is shown on Graph 4, this policy reduces supply of plastic bags by increasing prices and production costs.

The resulting decrease in demand following the ~~change~~^{shift} from MPC to MPC + tax causes a

decrease in quantity, bringing the market's equilibrium closer to the socially desirable point of allocative efficiency (as the shift on Graph 4 from Q₁ to Q₂, which is closer to Q_s, indicates). Although consumer sovereignty is overridden by such a policy, it effectively reduces the

area of deadweight loss and shifts the market closer to allocative efficiency by addressing both the negative production externalities, and reducing quantity as a means to eliminate negative consumption externalities (source I). Hence, this is effective in bringing the market back to a position of allocative efficiency.

Meanwhile, a ban seriously infringes on consumer sovereignty by removing a significant part of the market. Dependent on the extent of the ban (with the possibility of a total ban raised in source J), this could either cap demand (creating an inefficiency in the market shown on Graph S by the area of deadweight loss) or eliminate



the market entirely (if it were a blanket ban). This may result in other negative harms such as unemployment within the manufacturing sector (source K). Hence,

this is an ineffective policy in terms of improving allocative efficiency.

Hence, because it fuses quick action by market forces and maintains some consumer sovereignty, a tax is the best option.

6

QUESTION THREE: MONETARY POLICY AND THE RESERVE BANK ACT

Refer to Resources L to O and your knowledge of macroeconomic theory to answer this question.

In March 2018, the Finance Minister and new governor of the Reserve Bank of New Zealand signed a new Policy Targets Agreement (PTA) that added the goal of "supporting maximum levels of sustainable employment within the economy" to the existing goal of price stability.

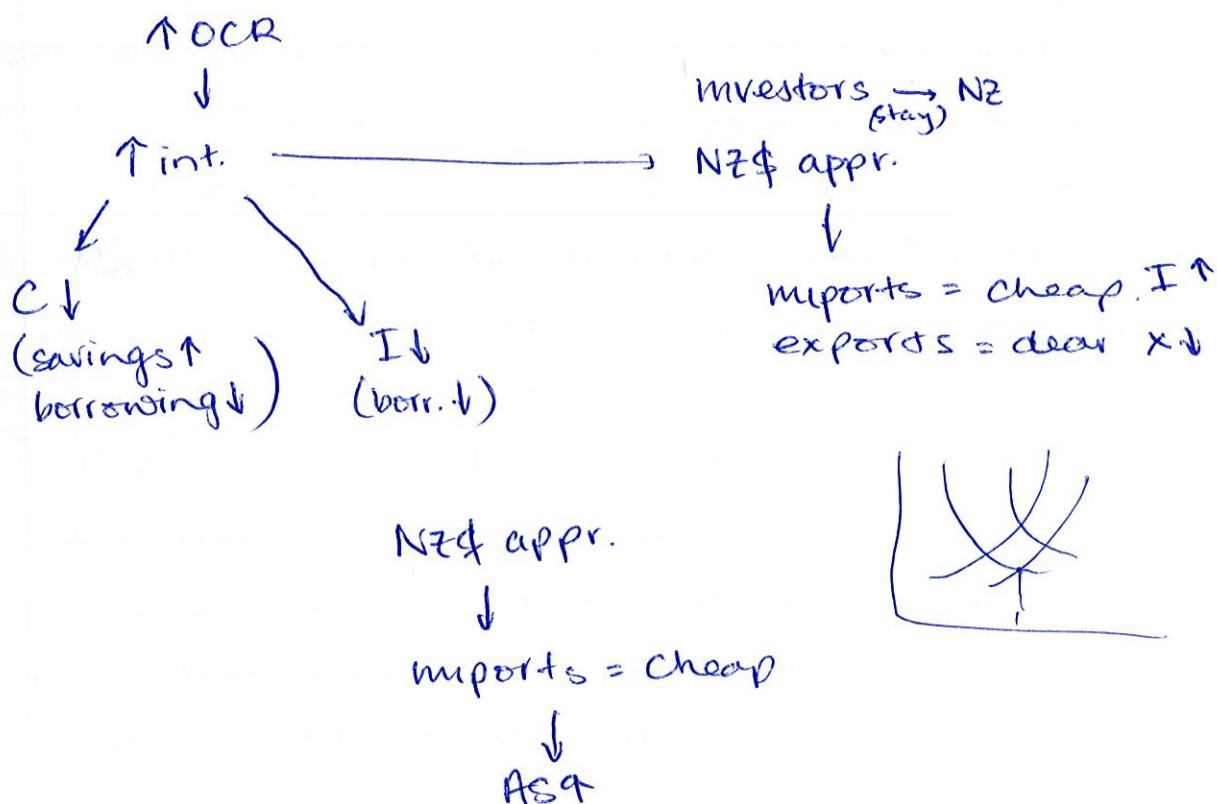
Analyse how monetary policy is currently used to achieve price stability, and evaluate the impact on the New Zealand economy of a change requiring maximising employment to be considered **alongside** price stability in monetary policy decisions. Use appropriate economic models to support your answer.

In your answer:

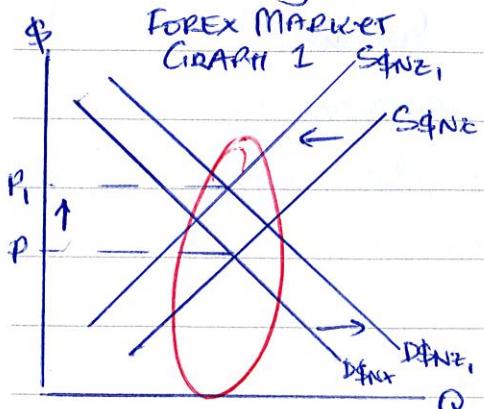
- explain the Policy Targets Agreement, and how monetary policy is currently used to influence the rate of inflation to achieve price stability
- analyse how monetary policy could be used to influence the level of employment in New Zealand
- evaluate the impact the change to monetary policy could have on the New Zealand economy, and on the effectiveness of monetary policy.

Use this space for planning your essay. This plan will NOT be marked.

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The Policy Targets Agreement is an agreement between the Reserve Bank and the government, which is aimed at using the Official Cash Rate to maintain price stability^(source 1), or within the target range of 1 to 3%. Monetary policy is currently used to control inflation by influencing interest rates so as to affect aggregate demand and supply in New Zealand. For example, between 2010 and 2011, inflation spiked (source 0). RBNZ responded by increasing the OCR (Source 0). The effect of this was that retail interest rates increased, causing consumption spending (the C component of AD) to decrease as savings were incentivised and borrowing was disincentivised by the increased costs. The latter effect (on borrowing) also caused investment spending (the I component of AD) to decrease. More lucrative interest rates attracted overseas investors to New Zealand, increasing demand for the NZ\$; and reduced supply for the NZ\$ by disincentivising investment abroad by New Zealand investors. This caused

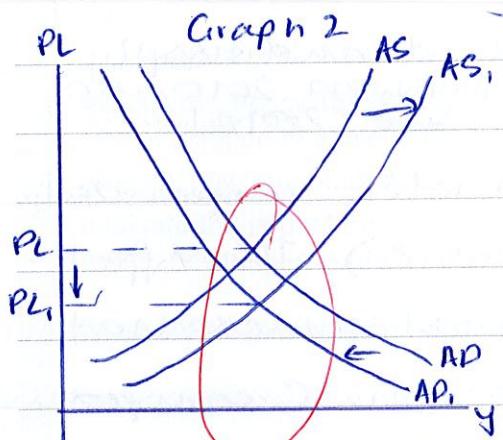


an appreciation of the NZ\$, as is shown on Graph 1.

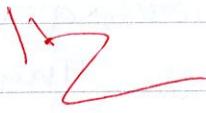
In turn, this made imports relatively more affordable increasing import receipts (the I component of AD)

and exports less affordable (reducing their demand and the X component of AD). Further,

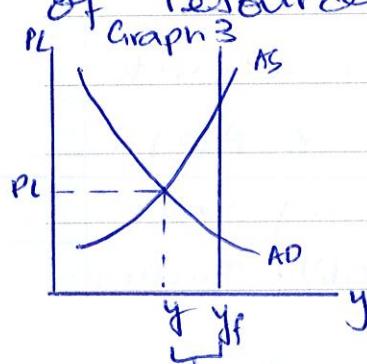
because imports were made more affordable firms' imported production costs ~~were~~ decreased, throughout the economy causing a net increase in AS (which was only slightly offset by the decrease in production from industries struggling against imports).



Graph 2 shows that as shown on Graph 2, this caused deflationary (or at least disinflationary) pressure due to the combined effects of the AD decrease and AS increase, represented by the decrease in price levels from PL to PL_1 .

This brought inflation back within the target range of 1 to 3%. Hence, this is how monetary policy is currently used to manage inflation (the opposite would be true should there be a trough in price levels). 

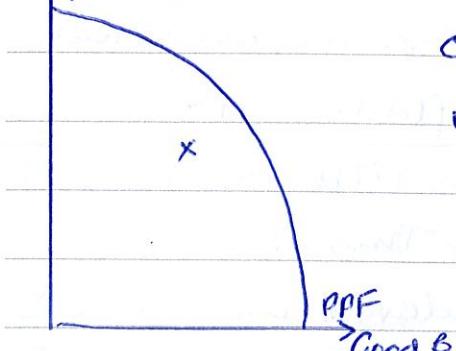
Monetary policy can be used to influence the level of employment in New Zealand by influencing GDP and thus, employment of resources. As can be seen on Graph 3,



at most points in time, the New Zealand economy operates at a point less than full employment (shown at y_f), as is evidenced

by the rate of unemployment shown in Source O. This indicates that there is still some productive capacity under-utilised, or that on the PPF

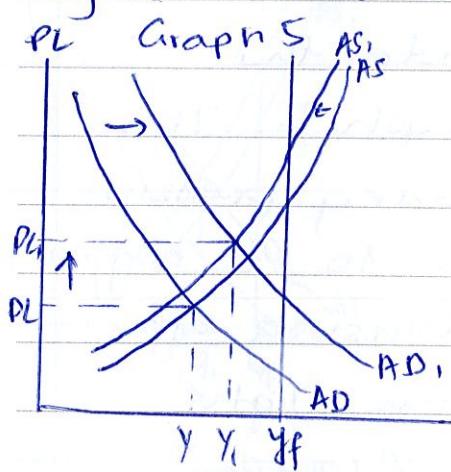
Good A Graph 4



(Graph 4) the economy's point of operation is somewhere within the curve. Thus, by lowering the OCR, the RBNZ can pull the economy closer toward full employment by increasing

its output (by in turn causing C, I and (X-M) to increase, in turn causing AD). Although the increase in AD would likely be offset

by a decrease in AS, ~~the AD~~ as is shown



on Graph 5, the AD change would likely be larger (due to more components changing) thus causing the economy's output to shift from Y₁ to Y₂, and thus closer to full employment reducing

~~the recessionary gap and thus, unemployment.~~ Thus, monetary policy could be used to influence the level of employment in New Zealand in this way. 2

The addition of maximising employment to RBNZ's considerations means that it is now responsible both for ensuring growth ^(which encourages employment) and price stability in the economy. As Graph 5

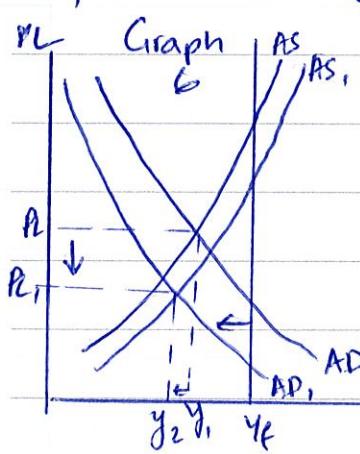
shows, ~~&~~ (in that Y increases to Y_1 , but that PL also increases to PL_1), the maximum employment ~~is~~ is likely to occur at the cost of price stability. In 2010 to 2012, for example, unemployment was comparatively high (at around 6%), yet inflation peaked at over 5% (outside of the RBA goal) during this time also (source O). This indicates that ~~sometimes~~ often the two considerations are at odds with each other.

This consideration means that monetary policy may now become more growth oriented and may be focussed more on OCR lowering ~~to~~ to stimulate the economy, as is shown on Graph 5. This may in turn cause inflationary pressure (as Graph 5's increase from PL to PL_1 suggests which could ~~cause~~ have destabilising effects for the economy in the long-run. Tight monetary policy to control inflation will likewise choke growth and thus, cause unemployment to rise (source M). Therefore, the impact for the New Zealand economy is likely to be moderate and stabilising OCR changes in the future to avoid too significant shortfalls in either the inflation or unemployment goal. This means that ultimately, New Zealand's economy is likely to be kept stable - either

focussing on unemployment or inflation (depending on what is most pressing and likely to be influenced by external forces).

In this respect, the impact on the economy is likely to be a positive one: Resource N implies that managing inflation remains the RBNZ's most "critical" goal, however the addition of this criteria means that the RBNZ now can take a more holistic approach when enacting economic change.

On the other hand, in times of massive inflation, ~~eff~~ the RBNZ made be concerned to



make drastic changes such as those shown on Graph 6 (as a result of increasing the OCR) that will ~~drag~~^{increase} unemployment by reducing output ($y_f \rightarrow y_1$) to decrease inflationary pressure (shown from P_f to P_{f1}).

Thus, the effectiveness of monetary policy is contingent on the RBNZ continuing to prioritize its goal of price stability. Should it fail to do so, this effectiveness may decline. However, because Resource N suggests that these priorities will

Subject	Economics	Standard	93402	Total score	16
Q	Score	Annotation			
1	5	<p>This answer shows a relatively sophisticated analysis in places with a competent level of integration and synthesis and a reasonably logical and clear discussion. For instance,</p> <p>pp 3–4 – detailed explanation of the causes and effect of changes to supply and demand in the tourist-accommodation market integrating information from the resource material. This could have been further enhanced by recognising that the overall result of these changes has been a fall in the market price.</p> <p>pp 4–5 – detailed explanation of the change to price elasticity of supply but weaker explanation of changes to price elasticity of demand. This would have been improved by acknowledging other factors that affect elasticity of demand, particularly the impact of a significant increase in the availability of substitutes and ease of switching between them</p> <p>p 6 – incorrectly identifies the market as becoming perfectly competitive though credit is given for identifying the effect of increasingly perfect information.</p> <p>p 7 – relatively weak discussion regarding the impact on allocative efficiency.</p> <p>Overall this answer merits a 5 due to some strong and detailed analysis in places but with some areas of weaker analysis preventing a higher mark.</p>			

2	6	<p>This answer shows a relatively sophisticated analysis in most places with a competent level of integration and synthesis and a logical and clear discussion in most cases. For instance:</p> <p>pp 11–12 – detailed description of existence of negative externalities of consumption, integrating resource material, and accurate graph work illustrating this. This could have been further enhanced by more detailed explanation of the graph and of the market versus socially desirable equilibrium.</p> <p>p 13 – good discussion of the principle of consumer sovereignty and the contrasting case for government intervention</p> <p>pp 14–15 – sound analysis of the effect of an education campaign and tax, though graphs fail to either identify new area of deadweight loss or new market price.</p> <p>p 16 – weak and limited explanation and graph of the effect of a ban. This explanation needed a greater depth of analysis and correct graph work to illustrate its effect.</p> <p>p 16 – minimal evaluation of the best option.</p> <p>Overall this answer merits a 6 due to the depth of answer provided in most places but to gain higher grade would require an improved analysis of the ban and a justified evaluation as to the best option.</p>
3	5	<p>This answer shows a relatively sophisticated analysis in places with a competent level of integration and synthesis and a reasonably logical and clear discussion. For instance:</p> <p>p 19 – brief explanation of the Policy Targets Agreement though no explanation of the Official Cash Rate</p> <p>pp 19–20 – adequate explanation of the effect of increased interest rates, incorporating resource material, though greater detail would have provided more depth. Relatively sound graph work, though, fails to identify quantity</p> <p>pp 20–21 – sound explanation of how monetary policy could be used to raise employment, integrating the concept of spare capacity. This answer could have been further enhanced by discussion as to the significance of Y_f on the AD/AS graph.</p> <p>p 22 – reasonable discussion of the potential conflict of the dual mandate of the PTA. This could have been further improved by reflecting on the current position of the NZ economy (low inflation and low unemployment) and also on the impact of on-going price stability on long-term growth.</p> <p>Overall this answer merits a 5 due to some strong and detailed analysis in places but with some areas of weaker analysis preventing a higher mark.</p>