Please check the examination details below before entering your candidate information

Candidate surname	Other names
StemUp Model Solution	

Pearson Edexcel Level 3 GCE

Centre Number	Candidate Number

Tuesday 4 June 2019

Morning (Time: 2 hours)	Paper Reference **9EC0/03**

Economics A

Advanced
Paper 3: Microeconomics and Macroeconomics

You do not need any other materials.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- There are two sections in this question paper.
- In Section A, answer **all** questions 1(a) to 1(c) and **one** question from 1(d) or 1(e).
- In Section B, answer **all** questions 2(a) to 2(c) and **one** question from 2(d) or 2(e).
- Answer the questions in the spaces provided
  – *there may be more space than you need.*

Information

- The total mark for this paper is 100.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- Calculators may be used.

Advice

- Read each question carefully before you start to answer it.
- Check your answers if you have time at the end.

Turn over ▶

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SECTION A

Read Figure 1 and the following extracts (A, B and C) before answering Question 1.

Answer ALL Questions 1(a) to 1(c), and EITHER Question 1(d) OR 1(e).

Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

Question 1

Markets for food and drinks high in fat, salt or sugar (HFSS)

Figure 1: UK market share of potato crisps, 2017

Firm	Brand	Size	Market share of firm	Market share of product	Price (£)
Walkers	All Walkers		*55.3%*		
	of which: *Regular Standard*	35 g		28.1%	0.45
	Regular Max	50 g		7.4%	0.63
	Sensations	40 g		2.0%	0.59
	Doritos	40 g		4.7%	0.45
	Other			13.1%	
KP	KP	50 g	*22.7%*		0.52
Tayto	Golden Wonder		*4.2%*		
		<40g		3.1%	0.38
		40g+		1.1%	0.72
Other	Other		*17.8%*		

(Source: adapted from https://academic.oup.com/restud/article/3108825/The-Effects-of-Banning-Advertising-in-Junk-Food 6 April 2017)

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Extract A

The effects of a total ban on advertising of HFSS foods

Food and drinks which are high in fat, salt or sugar (HFSS) tend to be sold in highly concentrated markets. Tough new rules banning advertisements for HFSS products, such as those for confectionery, fizzy drinks and potato crisps, come into effect in July 2017 as a means to reduce consumption. The rules apply to media targeted at under-16s and will mean a major reduction in the number of advertisements children see for HFSS products in posters near schools, in films targeted at children, on catch-up television and in social media if it is directed at children.

There are three main factors that will determine the effectiveness of the intervention: first, whether advertising acts to expand the market share or steal rivals' market share. Secondly, how firms in the market adapt their behaviour in response to the ban. Thirdly, what substitute products do consumers turn to if they opted out of the targeted market.

Results from a recent survey in the UK suggest that the total quantity of crisps sold would fall by around 15% in the presence of an advertising ban, or by 10% if firms respond with price cuts, since the ban acts to make the market more competitive and firms respond to the ban by, on average, lowering their prices.

The survey showed that following a ban, consumers are more likely to switch to another junk food than to a healthy food, which (in addition to the pricing response of firms) acts to partially offset any health gains from the policy.

(Source: adapted from The Effects of Banning Advertising in Junk Food Markets, Dubois, Pierre; Griffith, Rachel, Review of Economic Studies Copyright © 2017, Oxford University Press https://academic.oup.com/restud/article/3108825/The-Effects-of-Banning-Advertising-in-Junk-Food 6 April 2017 and https://www.asa.org.uk/news/tougher-new-food-and-drink-rules-come-into-effect-in-children-s-media.html 30 June 2017)

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Extract B

Taxing HFSS foods and subsidising healthy eating widens inequality

Since low-income groups spend a higher proportion of their income on food and tend to eat less healthily, they are the main targets of taxes on products that are high in fat, salt or sugar (HFSS). Subsidies on healthy food are seen as an alternative policy approach to encourage healthy eating. While data on the impact of such policies are scarce, a recent study on the distributional impacts of HFSS taxes and healthy food subsidies found that these actually widened health and fiscal inequalities. The policies tend to be regressive and favour higher-income consumers. Taxes on unhealthy food increase prices which have a greater impact on low income groups rather than higher income groups. Lower income groups prefer to buy HFSS food.

Subsidies encouraged all income groups to buy more fruit and vegetables. However, those on higher incomes proved more responsive and the average share of budget spent on healthy food actually increased for the higher income groups who were more likely to buy the subsidised healthy food and then spend the savings they had enjoyed on yet more healthy food. The diets of the higher income groups before the subsidy tended to be healthier. The choices of the higher income groups are more responsive to price changes. By contrast, lower income groups, if they responded to lower prices, often used the money saved to buy unhealthy items or something else entirely. The long-term benefits of a healthier diet are harder to grasp for consumers when information gaps exist. Often the immediate boost of a tasty treat is more appealing. Taxes and subsidies do not change that. Other strategies are needed to promote healthy eating, especially education.

(Source: adapted from Economist 5 October 2017 https://www.economist.com/news/finance-and-economics/21730033-study-suggests-lower-income-families-end-up-paying-more-their-food-taxing-fat and https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3031005 The Economic Journal September 2017 Vol 127 Issue 604)

Extract C

Tax on fatty foods in Denmark is an economic disaster

Denmark introduced a specific tax on saturated fat in October 2011. Recognised as a world-leading public health policy, it was abandoned just 15 months later having been both an economic and political disaster.

Indirect taxes of this sort are invariably regressive, disproportionately affecting the elderly and the poor. The specific tax led to prices rising on average 15% for highest-fat products, yielding a total decrease of 5% in the intake of saturated fat from products such as minced beef and cream. 80% of Danish consumers did not change their shopping habits at all. The behavioural change was economically damaging as consumers switched to cheaper brands and crossed the border to Sweden and Germany to do their shopping. Danish tax revenue fell as a result.

(Source: adapted from https://iea.org.uk/in-the-media/press-release/evidence-shows-a-fat-tax-would-hit-poorest-the-hardest 25 May 2013 and https://www.cambridge.org/core/journals/public-health-nutrition/article/effects-of-the-danish-saturated-fat-tax-on-the-demand-for-meat-and-dairy-products/984CF03634C819D50E66C7B5DC5209DA/core-reader)

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1 (a) With reference to Figure 1 and Extract A, explain what is meant by a 'highly concentrated' market for potato crisps (Extract A, lines 2–3).

(5)

(b) Apart from changes in indirect taxes and subsidies, examine **two** causes of income inequality within a developed economy such as the UK.

(8)

(c) In Extract A, lines 15–16, it was suggested that some firms may respond to the advertising ban by cutting the prices of their products.

Using game theory and the information provided in Figure 1 and Extract A, discuss the effects **on firms** of cutting prices in an oligopolistic market.

(12)

EITHER

(d) Evaluate the microeconomic and macroeconomic effects of increased government spending on education to promote healthy eating in the UK.

(25)

OR

(e) Evaluate the likely microeconomic and macroeconomic effects of imposing a tax on HFSS foods.

(25)

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(a) With reference to Figure 1 and Extract A, explain what is meant by a 'highly concentrated' market for potato crisps (Extract A, lines 2–3).

(5)

A highly concentrated market is one in which a few large firms account for a large share of total sales, so the market is an oligopoly rather than a competitive market. Figure 1 shows that Walkers alone has 55.3% of the UK crisp market, giving it monopoly power (over 25% market share). The two-firm concentration ratio is 55.3% + 22.7% = 78.0%, and the three-firm ratio is 78.0% + 4.2% (Tayto) = 82.2%.

Because a few firms dominate, they are interdependent and have the power to set prices above the competitive level. Extract A says the advertising ban will make the market 'more competitive', implying that it is currently uncompetitive with high prices. Heavy advertising of multiple brands, such as Walkers, Doritos and Sensations, acts as a barrier to entry, so the market has low contestability.

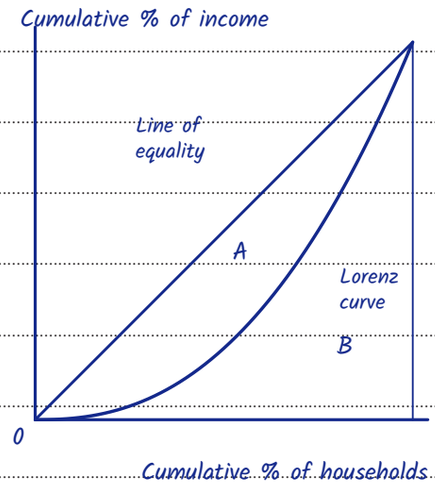
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(b) Apart from changes in indirect taxes and subsidies, examine **two** causes of income inequality within a developed economy such as the UK.

(8)

Income inequality is the unequal distribution of income between households. It is measured by the Gini coefficient, which is about 0.34 for disposable income in the UK. On the Lorenz curve diagram the Gini coefficient is area A divided by (A + B); the further the Lorenz curve lies from the line of equality, the greater the inequality.



One cause is differences in education and skills. Workers with degrees and scarce skills have a high marginal revenue product and the supply of such labour is limited, so their wages are high, while unskilled labour is in plentiful supply and earns close to the National Living Wage. For example, an economics graduate earns far more over a lifetime than a worker with no qualifications. With university fees at £9,250 a year, fewer students from low-income households may go to university, so the wage gap is passed on to the next generation.

A second cause is the weakened power of trade unions combined with globalisation. Union membership in the UK has fallen sharply since the 1980s, so many low-paid workers can no longer bargain collectively for wages above the free-market rate. At the same time globalisation has moved low-skilled manufacturing jobs to countries with cheaper labour, increasing the supply of low-skilled workers in the UK and pushing their wages down, while top executives and financial sector workers gain from global markets. Zero-hours contracts and underemployment also reduce incomes at the bottom.

However, the significance of these causes depends on government action: the

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National Living Wage and transfer payments such as universal credit narrow the gap, and a progressive income tax means disposable income is more equal than original income. The effect of education takes many years to unfold, and wealth inequality, driven by house prices and inheritance, may be a more significant problem than income inequality. Overall, differences in skills are probably the most important cause, as they also explain why globalisation hits low-skilled workers hardest.

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(c) In Extract A, lines 15–16, it was suggested that some firms may respond to the advertising ban by cutting the prices of their products.

Using game theory and the information provided in Figure 1 and Extract A, discuss the effects **on firms** of cutting prices in an oligopolistic market.

(12)

An oligopoly is a market dominated by a few interdependent firms, so each firm must consider how its rivals will react before changing its price. Game theory analyses this strategic behaviour. In the crisp market Walkers (55.3%) and KP (22.7%) together hold 78.0% of sales (Figure 1), so their decisions are clearly interdependent.

The advertising ban removes the main form of non-price competition, so firms may turn to price competition to protect or steal market share. The payoff matrix shows hypothetical profits. If both firms keep prices high (Walkers' standard bag at £0.45 and KP's at £0.52), they earn the joint profit maximising outcome of £60m and £25m. However, each firm has an incentive to cut its price: if KP holds its price, Walkers earns £70m by cutting, and if KP cuts, Walkers still does better by cutting (£50m rather than £45m). Cutting price is the dominant strategy for both firms, so the Nash equilibrium is that both cut and earn only £50m and £20m. This is a prisoners' dilemma: acting in their own self-interest, the firms reach a worse outcome than if they had colluded.

Price cuts therefore reduce revenue and profits for the industry. Extract A expects the quantity of crisps sold to fall by 10% even with price cuts, so firms sell less at lower prices and their supernormal profits are competed away. Smaller firms such as Tayto (4.2%), with higher average costs, may make losses and be forced out, while Walkers, with economies of scale, can survive and gain share. Incumbents could also use low prices as limit pricing to deter new entrants, who may find the market more contestable once the advertising advantage of established brands is removed.

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The kinked demand curve model suggests that if one firm cuts its price, rivals will match it, so demand is inelastic below the current price, price cuts gain little market share and may start a price war.

Payoffs: profit £m (Walkers, KP)

Walkers \ KP	Hold price	Cut price
Hold	60, 25	45, 30
Cut	70, 15	50, 20

Nash equilibrium

However, the effects may be limited. Walkers has strong brand loyalty built up by years of advertising, so consumers may not switch even if rivals cut prices, and firms may prefer tacit collusion or price leadership to keep prices stable. The price cuts are a response to regulation, not to rivals' actions, so there may be little real interdependence. The ban applies only to media aimed at under-16s, so firms can still advertise to adults and need not rely on price competition. A 10% fall in sales is smaller than the 15% fall without price cuts, so cutting prices protects some revenue. Overall, the main effect is likely to be lower profits for all firms, with the largest firm best placed to gain market share.

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EITHER

(d) Evaluate the microeconomic and macroeconomic effects of increased government spending on education to promote healthy eating in the UK.

(25)

OR

(e) Evaluate the likely microeconomic and macroeconomic effects of imposing a tax on HFSS foods.

(25)

Indicate which question you are answering by marking a cross in the box ☒. If you change your mind, put a line through the box ☒ and then indicate your new question with a cross ☒.

Chosen question number: **Question 1(d)** ☒ **Question 1(e)** ☒

Write your answer here:

Option 1(d)

Healthy food is a merit good with positive externalities in consumption: a healthier population reduces NHS costs and raises productivity, benefits that fall on third parties. Because of information failure, consumers underestimate the long-term private benefits of a healthy diet; Extract B notes that 'the immediate boost of a tasty treat is more appealing'. As a result healthy food is under-consumed.

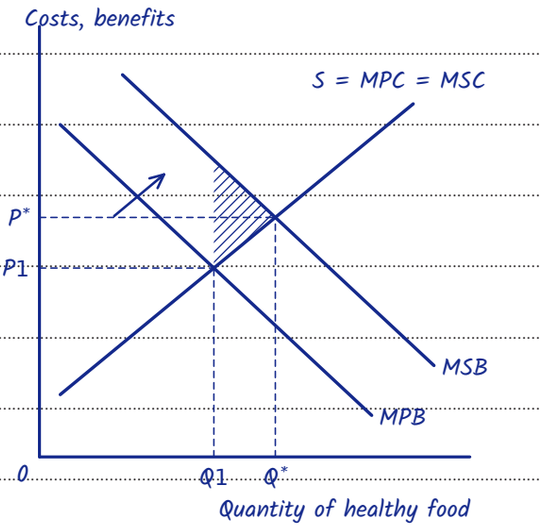
Government spending on education, such as cookery and nutrition lessons in schools and public information campaigns, corrects this information failure. In the diagram, the MPB of healthy food shifts right towards the MSB, so consumption rises from Q1 towards the social optimum Q^*, where MSB = MSC, and the shaded welfare loss is removed. Demand for fruit and vegetables increases, raising their price and producer surplus, while demand for HFSS products falls.

This affects firms. Producers of healthy food gain higher revenue and profits, while firms such as Walkers, with 55.3% of the crisp market, face falling demand and lower supernormal profits. They may reformulate products with healthier ingredients, which raises average costs, or cut prices, as Extract A suggests. In the labour market, a healthier, less obese workforce takes fewer sick days and has a higher marginal product,

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so wages may rise. Unlike taxes, education is not regressive: Extract B shows lower income groups respond least to price signals, so changing preferences directly may reduce health inequality.



At the macro level, government spending is a component of AD, so higher spending on teachers and campaigns shifts AD right and, through the multiplier, raises real GDP and employment, with some demand-pull pressure on the price level if the economy is near full capacity. In the long run, better health raises the quality and quantity of labour, shifting LRAS right and allowing non-inflationary growth. Lower obesity also reduces NHS spending, improving the fiscal position.

However, the effects depend on how the spending is financed. If it is funded by higher taxes or cuts elsewhere, such as in health spending, there is an opportunity cost and no net rise in AD; if funded by borrowing it adds to the budget deficit and debt and could crowd out private investment by raising interest rates. The magnitude is also likely to be small: healthy eating education is a tiny share of government spending of over £800 billion, so the multiplier effect on GDP would be negligible.

Secondly, education may not be effective. Information alone may not change behaviour because consumers are not fully rational: present bias means people value the immediate pleasure of a treat over distant health benefits, and Extract B shows that low income groups who saved money often spent it on unhealthy items. Firms can still advertise to adults, outweighing public campaigns. There is a risk of government failure if campaigns are poorly targeted, and the benefits take many years to appear.

Thirdly, education works best alongside other policies, such as the advertising ban in Extract A, which give an immediate incentive, while education reduces the regressive

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effects of taxes seen in Extract C.

Overall, the microeconomic effects, correcting information failure and moving consumption towards the social optimum, are more significant than the macroeconomic effects, which are small in the short run and only meaningful in the long run through a healthier, more productive workforce. The policy is worthwhile, but mainly as part of a wider package targeted at children and low-income households, where information gaps are greatest.

Option 1(e)

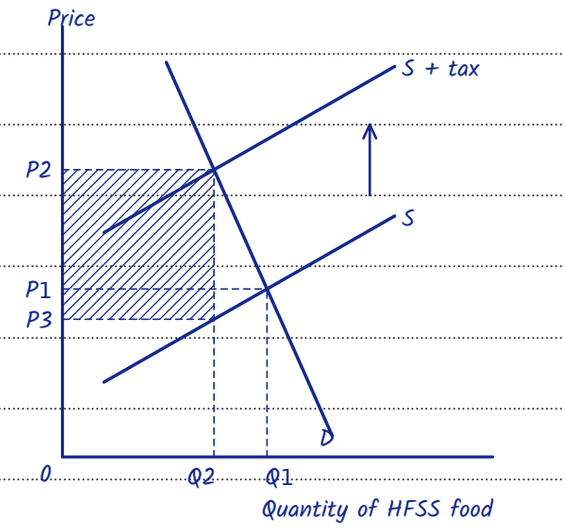
An indirect tax on HFSS foods, such as Denmark's specific tax on saturated fat (Extract C), aims to correct market failure: HFSS foods are demerit goods with negative externalities in consumption, such as obesity-related NHS costs, which consumers ignore because of information failure.

In the diagram, a specific tax shifts supply vertically upwards from S to S + tax. Price rises from P1 to P2 and quantity falls from Q1 to Q2. Because demand for food is price inelastic, most of the incidence falls on consumers (P1 to P2) and only a small part on producers (P1 to P3). In Denmark prices of the highest-fat products rose by about 15%

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but saturated fat intake fell only 5%, implying a PED of about −0.3. The government gains revenue equal to the shaded area.



Consumer surplus falls and consumers switch to substitutes. If healthy foods are substitutes, cross elasticity means demand for them rises, but Extract C shows Danes switched to cheaper brands and crossed the border to Sweden and Germany. Producers of HFSS foods lose revenue and profit as costs rise and demand falls; firms with market power such as Walkers may absorb some of the tax to protect market share. Employment may fall in HFSS manufacturing and rise in healthy food production. The tax is regressive: low-income households spend a higher proportion of income on food and buy more HFSS food (Extract B), so their real incomes fall most.

At the macro level, the tax causes a one-off rise in the price level, shifting SRAS left and creating cost-push inflation that cuts real wages; in Denmark food prices rose in a year when real wages fell by 0.8%. Lower real incomes reduce consumption, so AD and real GDP may fall slightly, and cross-border shopping raises imports, worsening net exports. However, the government gains revenue that could fund the NHS or subsidies for healthy food, and in the long run a healthier workforce raises productivity and shifts LRAS right. Income inequality widens because the tax is regressive.

However, effectiveness depends on PED. Since demand is inelastic and 80% of Danish consumers did not change their shopping habits at all (Extract C), the tax raises revenue rather than changing behaviour, so health gains are small. Even revenue may fall: cross-border shopping meant Danish tax revenue fell, a Laffer curve effect, and the tax was abandoned after just 15 months.

Secondly, consumers may substitute towards other unhealthy or lower quality products, as

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Extract A found with the advertising ban, offsetting health gains, and the tax may encourage smuggling and counterfeit goods. The outcome also depends on whether firms respond by cutting prices or reformulating.

Thirdly, the regressive effect depends on how the revenue is used: if it funds subsidies for healthy food or education in low-income areas, the net effect on the poor may be positive. The magnitude also matters: a few pence on a £0.45 bag of crisps is a small share of income, so effects on inflation and GDP will be very small.

Overall, the microeconomic effects are more significant: the tax raises prices, reduces consumer and producer surplus and hits low-income groups hardest, while the macroeconomic effects are small and one-off. A tax works best if it is large, cannot be avoided by shopping abroad and is combined with education and subsidies, as Denmark shows that a narrow tax on its own may fail.

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(Total for Question 1 = 50 marks)

TOTAL FOR SECTION A = 50 MARKS

SECTION B

Read Figures 2, 3 and the following extracts (D to F) before answering Question 2.

Answer ALL Questions 2(a) to 2(c), and EITHER Question 2(d) OR 2(e).

Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

Question 2

Mozambique

Figure 2: Interest rates (bank rate of the central bank) and inflation rates of selected African countries, 2017

Selected country	Central bank rate of interest	Inflation rate (CPI measure)
Congo (D.R.)	14%	13.8%
Ghana	21%	9.1%
Kenya	10%	10.1%
Malawi	18%	21.4%
Mozambique	**21.75%**	**18.0%**
Nigeria	14%	21.1%

(Source: official government websites, and other news sources, July 2017)

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Extract D

Rising debt levels in Africa

Increases in national debt have brought several African governments towards a debt-servicing crisis when the repayment of debt and interest become unsustainable. Between 2010 and 2015, many sub-Saharan countries raised debt totalling more than £20 billion. Back then, with commodity prices soaring and foreign loans available at very low interest rates, everyone agreed that borrowing was the way to grow an economy with expansionary fiscal policy. Since 2015, some African governments – beneficiaries of big debt write-offs at the start of the century – have taken to private debt markets too eagerly, leaving them with heavy repayment schedules at a time of lower commodity prices.

Until recently, the International Monetary Fund (IMF) has played down African debt concerns, pointing to better management of public resources and greater transparency. But it was shaken by Mozambique's default on more than £2 billion of secret loans used to purchase a non-existent tuna-fishing fleet, raising fears of hidden debt in other African countries with similar levels of corruption. The median level of debt in sub-Saharan Africa had risen sharply from 34% of gross domestic product in 2013 to 48% in 2017. Although that is low by international standards, analysts said debt burdens were heavier than they appeared because of most African countries' low tax base. "The real thing to look for is debt to revenue, or debt-service as a percentage of government spending," said John Ashbourne, Africa Economist at Capital Economics. In several countries, he said, debt payments were above 20% of government revenue, with an opportunity cost in terms of government spending.

(Source: adapted from African debt worries intensify as levels near tipping point by David Pilling © Financial Times 2017 https://www.ft.com/content/939808dc-b4d8-11e7-a398-73d59db9e399)

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Extract E

Mozambique's economic stability is being put to the test

The economy of Mozambique, which gained independence from Portugal in 1975, has continued to under-perform. Large-scale emigration, especially of skilled workers, economic dependence on South Africa, a severe drought, a prolonged civil war and political tensions have hindered the country's development. More than half of Mozambique's 26 million people continue to live below the poverty line.

GDP growth declined to 3.6% in 2016 due to fiscal tightening and a slowdown in foreign direct investment. A weak manufacturing sector employs just 3.2% of the population, and is made up of small enterprises (90%), many of which were set up with the aid of microfinance. Traditional export earnings dropped due to depressed global demand. In addition a wide-scale drought seriously affected agricultural production. Foreign currency inflows have weakened – as large-scale gas projects were put on hold, and 14 external lenders suspended direct budget support, as a lesson to be learned from the tuna-fleet scandal. The state budget deficit was 10.7% of GDP in 2017. High interest rates have reduced aggregate demand, and import costs added to inflation following further depreciation of Mozambique's currency, the *metical*, to a new low of 100 meticals to £1.

Mozambique needs urgently to improve its investment environment and confidence in its institutions. The World Economic Forum's global competitiveness ranking placed Mozambique 136 out of 137 countries.

Longer term, Mozambique's economic prospects are promising. There has been progress in talks on restoring international confidence in the government's running of the economy, leading to a lasting and sustainable agreement between rival political groups. The development of gas fields off Mozambique's coast discovered in 2011 is set to transform the economy, coming into production in the 2020s. A rise in coal and electricity exports should help growth to increase. But in the short term, it remains uncertain whether Mozambique can deliver badly needed economic stability.

(Source: adapted from http://www.africaneconomicoutlook.org/en/country-notes/mozambiqua and https://www.chathamhouse.org/expert/comment/mozambique-s-stability-being-put-test 6 October 2017 Dr Alex Vines OBE)

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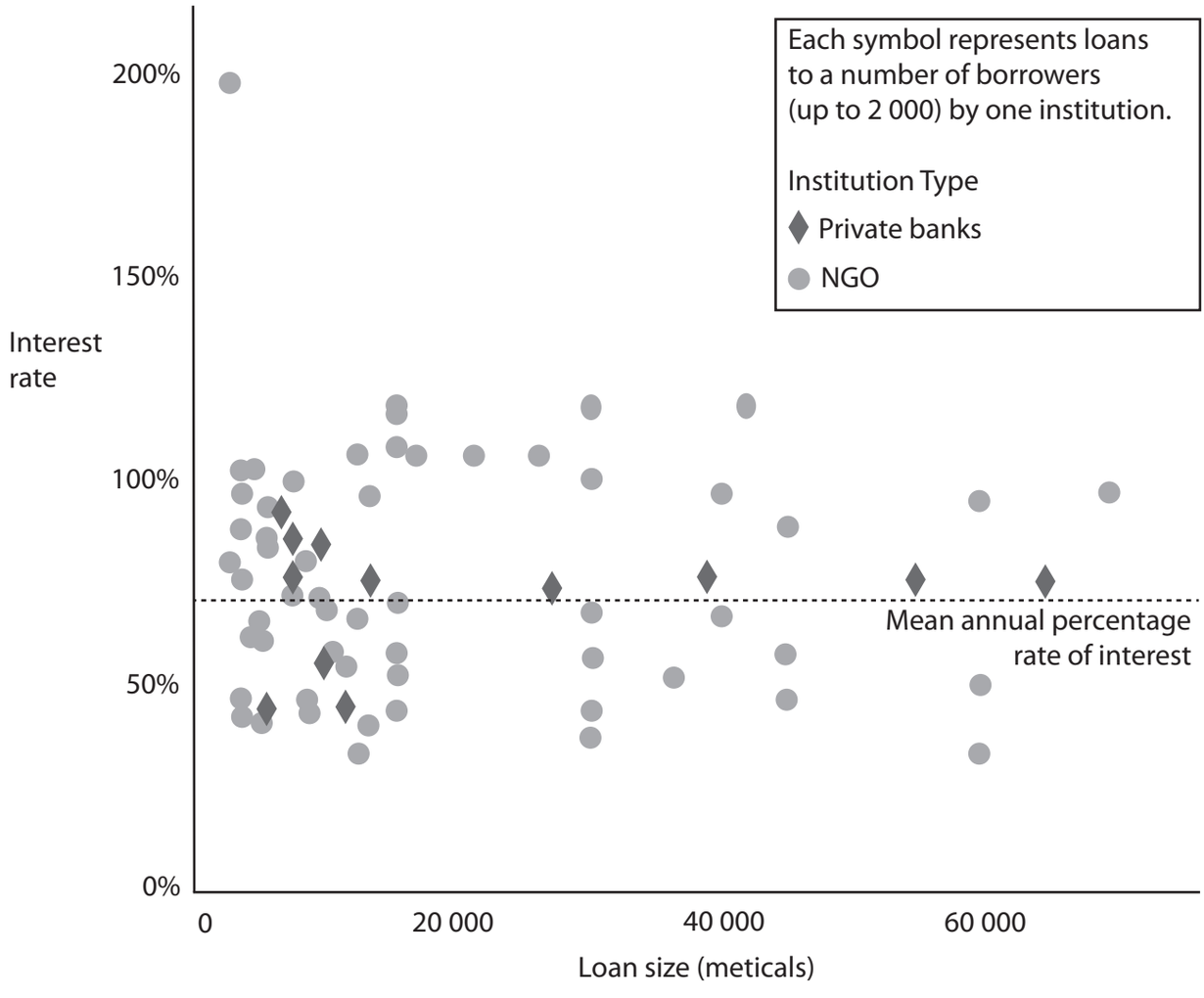
Extract F

Microfinance in Mozambique

Microfinance in Mozambique started in the late 1980s through projects initiated by international relief organisations. The sector has expanded to include many private banks and non-government organisations (NGOs), see Figure 3. This has resulted in wider use (over 100 000 borrowers) and many new business start-ups which could not have gained finance from any other source. Evidence suggests that there is unfulfilled demand for microfinance and a large potential for expansion.

(Source: adapted from http://www.mftransparency.org/microfinance-pricing/mozambique/)

Figure 3: The cost of microfinance loans in Mozambique, 2015



(Source: http://www.mftransparency.org/microfinance-pricing/mozambique/)

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2 (a) With reference to Extract D line 21, explain why 'opportunity cost' is a problem for governments of developing countries when servicing debt.

(5)

(b) Examine **two** reasons, apart from access to finance, why 90% of the manufacturing sector in Mozambique 'is made up of small enterprises' (Extract E, line 9).

(8)

(c) Discuss whether borrowers benefit from microfinance. Make reference to Mozambique in your answer.

(12)

EITHER

(d) Evaluate the microeconomic and macroeconomic factors, apart from access to credit and banking, influencing growth and development in Mozambique.

(25)

OR

(e) Evaluate the likely microeconomic and macroeconomic effects of relatively high inflation rates in many African countries.

(25)

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(a) With reference to Extract D line 21, explain why 'opportunity cost' is a problem for governments of developing countries when servicing debt.

(5)

Opportunity cost is the next best alternative forgone when a choice is made. Servicing debt means paying the interest and repaying the minimum capital due each year, which governments must do to avoid default and a loss of confidence. Extract D shows that in several countries debt payments are above 20% of government revenue, so money paid to foreign lenders cannot be spent on health, education or infrastructure. This is a particular problem for developing countries because they have a low tax base, so revenue is small, while more than half of Mozambique's 26 million people live below the poverty line (Extract E) and rely on public services. With the median debt level in sub-Saharan Africa rising from 34% of GDP in 2013 to 48% in 2017, and heavy repayment schedules at a time of lower commodity prices, the opportunity cost is rising: governments must cut spending on poverty reduction or risk default, as with Mozambique's default on more than £2 billion of secret loans.

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(b) Examine **two** reasons, apart from access to finance, why 90% of the manufacturing sector in Mozambique 'is made up of small enterprises' (Extract E, line 9).

(8)

One reason is the small size of the market. More than half of Mozambique's 26 million people live below the poverty line (Extract E), so domestic demand for manufactured goods is low, and traditional export earnings have dropped due to depressed global demand. With a small market, firms cannot sell enough output to benefit from economies of scale such as bulk buying and specialisation, so there is little incentive to grow. Low barriers to entry in simple products also mean the market is close to monopolistic competition, with many small firms each earning only normal profit in the long run.

A second reason is the lack of skilled labour and a poor business environment. Large-scale emigration of skilled workers (Extract E) means firms lack the managers and technicians needed to run large plants, and only 3.2% of the population works in manufacturing. Mozambique is ranked 136 out of 137 for competitiveness, and high interest rates (a central bank rate of 21.75%, Figure 2) raise the cost of borrowing, while the depreciation of the metical to 100 meticals to £1 raises the cost of imported machinery and materials. Higher costs and uncertainty reduce the expected return on investment, so firms stay small, and the FDI that could create large plants has slowed.

However, staying small may partly be a choice: small firms can stay close to customers and meet local needs with low risk. The situation may also be temporary, as long-term prospects are 'promising': the gas fields coming into production in the 2020s and a lasting political agreement could 'transform the economy', raising incomes and demand so that firms can grow. The small market is probably the more significant reason, since even well-run firms cannot grow without customers.

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(c) Discuss whether borrowers benefit from microfinance. Make reference to Mozambique in your answer.

(12)

Microfinance is the provision of small loans, often a few hundred pounds, to people on low incomes who lack collateral and a credit history and so cannot borrow from commercial banks. In Mozambique the sector has grown to over 100 000 borrowers, with loans from both private banks and NGOs (Extract F, Figure 3).

Borrowers benefit because they can finance the start-up costs of a business, such as equipment or stock, and many new businesses 'could not have gained finance from any other source' (Extract F). By becoming self-employed, borrowers earn an income, can invest in their children's education and health and escape the poverty trap, so their living standards rise. Microfinance also helps plug the savings gap in the Harrod-Domar model: low incomes mean low savings and low investment; microfinance raises investment, which increases output and incomes, allowing further saving. 90% of Mozambique's manufacturing firms are small enterprises, many set up with microfinance (Extract E), showing that it creates jobs. Borrowers own their businesses without the stigma of aid or dependence on FDI, and small, regular repayments over a short period encourage business planning, often with advice from the lender. Most borrowers are women, so microfinance empowers them and raises household income.

However, the cost of borrowing is very high. Figure 3 shows a mean annual interest rate of about 75%, with some loans close to 200%, far above Mozambique's central bank rate of 21.75% (Figure 2). Borrowers must earn very high returns to repay, so many become over-indebted, borrowing from one lender to repay another. Most microenterprises are in highly competitive markets with low barriers to entry, such as food stalls, so profits are close to normal and many fail. With more than half the population below the poverty line, demand for their products may be weak, and

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poor infrastructure limits access to wider markets. Some loans are used for consumption rather than investment, creating debt without income.

The benefit also depends on the lender: NGO interest rates vary far more widely than private bank rates (Figure 3), and banks may be more cautious and give better advice. Overall, borrowers do benefit when loans fund productive businesses with access to markets, and the unfulfilled demand in Extract F shows they value it, but microfinance cannot provide the large-scale finance needed for economies of scale, so its benefits are limited without wider development policies.

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EITHER

(d) Evaluate the microeconomic and macroeconomic factors, apart from access to credit and banking, influencing growth and development in Mozambique.

(25)

OR

(e) Evaluate the likely microeconomic and macroeconomic effects of relatively high inflation rates in many African countries.

(25)

Indicate which question you are answering by marking a cross in the box ☒. If you change your mind, put a line through the box ☒ and then indicate your new question with a cross ☒.

Chosen question number: **Question 2(d)** ☒ **Question 2(e)** ☒

Write your answer here:

Option 2(d)

Economic growth is an increase in real GDP, while development is a broader improvement in living standards, measured by the HDI, which includes health, education and income. Mozambique's growth fell to 3.6% in 2016 and more than half of its 26 million people live below the poverty line (Extract E), so both growth and development are weak.

A key microeconomic factor is human capital. Large-scale emigration of skilled workers (Extract E) reduces the quality of the labour force, lowering labour productivity. Firms cannot find skilled managers and engineers, so they stay small, which helps explain why manufacturing employs just 3.2% of the population. Poor education and health also directly hold back development.

Secondly, Mozambique depends on primary products such as agriculture and coal. Demand and supply of commodities are price inelastic, so prices are volatile, and lower commodity prices have cut export earnings and government revenue. The severe drought seriously reduced agricultural production and farmers' incomes. In the long run, the Prebisch-Singer hypothesis suggests primary producers face declining terms of trade. Poor infrastructure, weak property rights and corruption, shown by the £2 billion secret loans for a non-existent tuna fleet, raise firms' costs and deter investment; Mozambique ranks 136

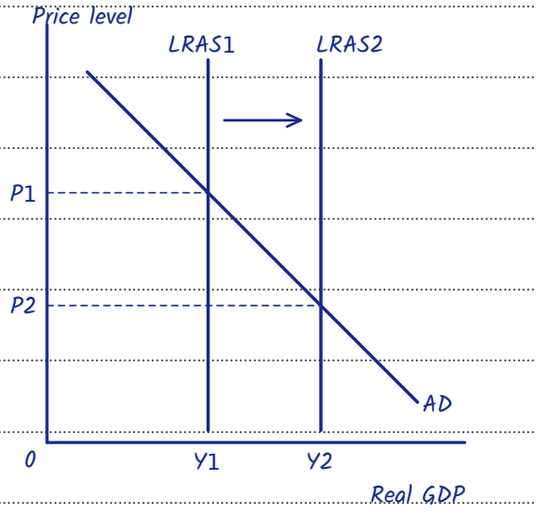
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out of 137 for competitiveness.

At the macro level, FDI has slowed, large gas projects were put on hold and external lenders suspended direct budget support after the tuna scandal. Lower investment reduces AD in the short run and limits growth of the capital stock and LRAS in the long run.

Debt servicing also has an opportunity cost: with a budget deficit of 10.7% of GDP, the government must cut spending on infrastructure, health and education, damaging development.

Macroeconomic instability is a further barrier. Inflation is 18.0% and the central bank rate is 21.75% (Figure 2). High interest rates have reduced AD and investment, and the fall of the metical to 100 meticals to £1 raises import costs, adding to cost-push inflation and eroding the real incomes of the poor. Civil war, political tensions and dependence on South Africa add to uncertainty. In the diagram, if these barriers were removed, for example through gas field development, LRAS would shift from LRAS1 to LRAS2, raising potential output from Y1 to Y2 and lowering the price level.



However, some factors are temporary. The drought and low commodity prices are cyclical, and long-term prospects are promising: gas fields discovered in 2011 will come into production in the 2020s and could 'transform the economy', while rising coal and electricity exports should raise growth. Progress in political talks could restore confidence, reviving FDI and budget support.

Secondly, growth may not bring development. Gas revenue could be captured by elites through corruption, and capital-intensive gas extraction creates few jobs, so the poorest may not benefit; there is also a risk of Dutch disease and a resource curse. Data on

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hidden debt are unreliable, so the size of some effects is hard to judge.

Thirdly, some factors, such as natural disasters, are inevitable, while corruption and instability can be tackled by policy, possibly with IMF support. Although access to credit is excluded, firms' reliance on microfinance shows that finance interacts with these factors.

Overall, the most significant factors are macroeconomic instability and weak institutions, because they deter the investment needed for both growth and development, with human capital the key long-run microeconomic factor. Whether gas brings development will depend on governance, so improving institutions should be the priority.

Option 2(e)

Inflation is a sustained rise in the general price level. Figure 2 shows relatively high inflation in many African countries in 2017: 21.4% in Malawi, 21.1% in Nigeria, 18.0% in Mozambique and 13.8% in Congo (D.R.), far above the 2% target typical of developed economies.

For households, inflation reduces the purchasing power of money. People on fixed incomes and workers whose wages do not keep pace see real incomes fall, increasing poverty, and the poor are hit hardest as they spend a high share of income on food. Savers lose when inflation exceeds the interest rate: in Nigeria inflation of 21.1% exceeds the 14%

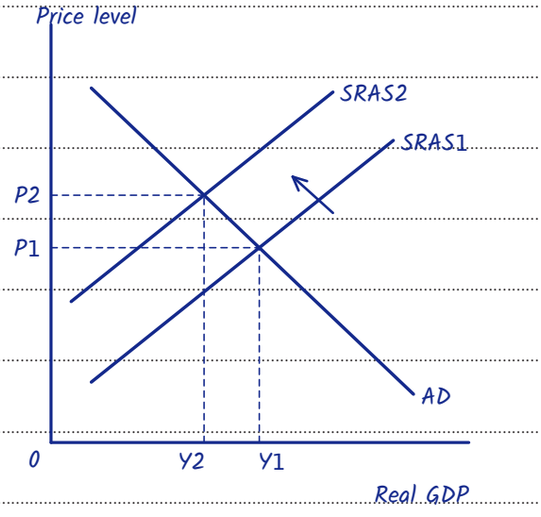
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bank rate, a real interest rate of −7.1%, while borrowers gain as the real value of their debt falls. Workers may work longer hours to maintain living standards.

For firms, rising costs of raw materials and imports cut profit margins if they cannot pass them on in higher prices, and menu costs and uncertainty make planning harder.

Central banks respond with high interest rates, 21.75% in Mozambique and 21% in Ghana, raising firms' borrowing costs and reducing investment and profits. Governments with debts gain, as inflation erodes the real burden of debt, lowering the opportunity cost of debt servicing.

At the macro level, if African prices rise faster than those of trading partners, exports become less price competitive and imports cheaper, so net exports fall, worsening the current account and reducing AD. Uncertainty deters investment and FDI, limiting growth in LRAS. Higher interest rates reduce consumption and investment, shifting AD left; Extract E says high interest rates have reduced AD in Mozambique. Where inflation is cost-push, caused by depreciation raising import costs, SRAS shifts left, as in the diagram, so the price level rises from P1 to P2 while real GDP falls from Y1 to Y2: stagflation. Inflation also redistributes income and wealth from savers to borrowers and asset owners, which may widen inequality.



However, the effects depend on the cause and duration of inflation. Cost-push inflation from commodity prices or depreciation may be a one-off, and only sustained inflation does serious damage. Figure 2 covers a single month, July 2017, so time series data are needed to judge persistence, and rates vary widely, from 9.1% in Ghana to 21.4% in Malawi.

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Secondly, the effect on competitiveness depends on trading partners. Where African countries trade with neighbours that have similar or higher inflation, such as Nigeria and Malawi, relative competitiveness is unchanged, and depreciation may offset higher inflation. If demand for commodity exports is price inelastic, export volumes may not fall much.

Thirdly, the effect on households depends on whether wages rise in line with inflation and on asset prices. Many poor people work in the informal sector or subsistence farming and are partly protected, and where real interest rates are positive, as in Ghana (21% against 9.1%), savers are protected and expectations may fall.

Overall, relatively high inflation is likely to harm growth and development mainly through uncertainty, lower investment and falling real incomes of the poor, and very high interest rates add to the damage. The size of the effect depends on whether inflation is temporary and cost-push or persistent, so the microeconomic effects on the poor may matter more than the effects on competitiveness.

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(Total for Question 2 = 50 marks)

TOTAL FOR SECTION B = 50 MARKS
TOTAL FOR PAPER = 100 MARKS

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