



Oxford Cambridge and RSA

Monday 20 May 2024 – Afternoon

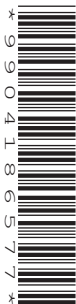
A Level Economics

H460/02 Macroeconomics

Time allowed: 2 hours

You can use:

- a scientific or graphical calculator



Please write clearly in black ink. **Do not write in the barcodes.**

Centre number

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Candidate number

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First name(s)

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Last name

StemUp Model Solution

INSTRUCTIONS

- Use black ink. You can use an HB pencil, but only for graphs and diagrams.
- Write your answer to each question in the space provided. If you need extra space use the lined pages at the end of this booklet. The question numbers must be clearly shown.
- Answer **all** the questions in Section A, **one** question in Section B and **one** question in Section C.

INFORMATION

- The total mark for this paper is **80**.
- The marks for each question are shown in brackets [].
- Quality of extended response will be assessed in questions marked with an asterisk (*).
- This document has **20** pages.

ADVICE

- Read each question carefully before you start your answer.

Section A

Read the stimulus material and answer **all** the parts of Question 1.

Changing economic conditions in Kenya

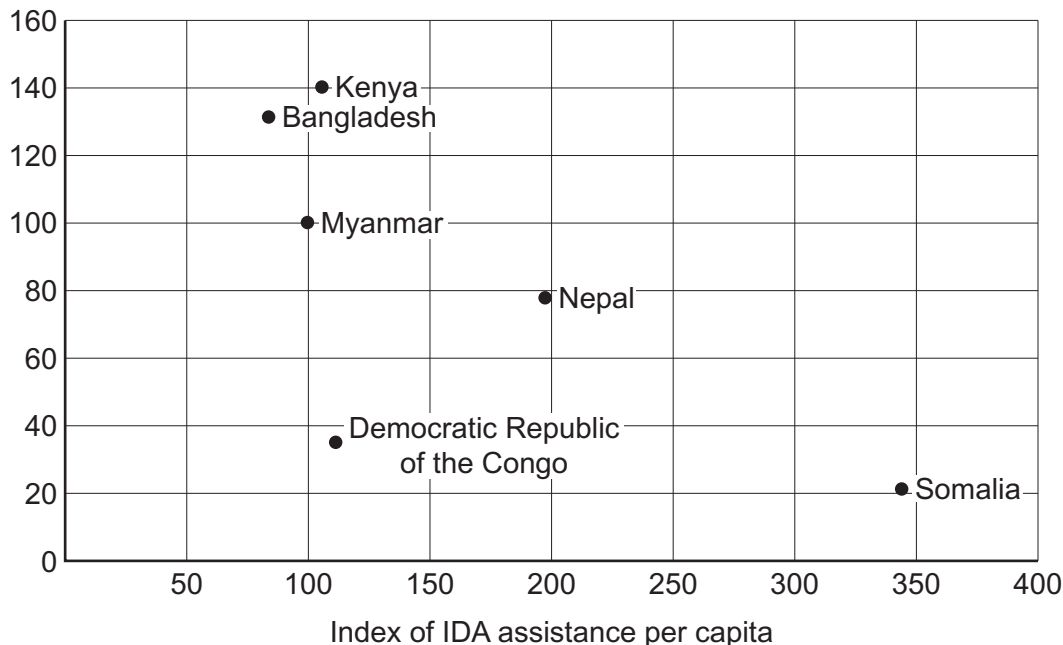
At the start of the 2010s, Kenya experienced high and unstable inflation. The inflation rate peaked at 14.2% in 2011. This rapid rise in the price level reduced the amount of goods and services that Kenyans' households disposable income could buy. It also reduced the international competitiveness of the country's products, decreasing net exports.

At the end of the 2010s, Kenya's inflation rate was lower and more stable. It was 5.2% in 2019 and 5.4% in 2020. The country's relative export prices had also fallen. In 2019, Kenya's export price index was 146.2 and its import price index was 215.0.

Kenya's economic growth rate and its government's attempts to raise the living standards of its citizens have been restricted by poor infrastructure. The country has received financial assistance from the International Development Association (IDA). This part of the World Bank is the world's largest multilateral source of concessionary financing for low- and lower middle-income countries. It provides development loans, grants and guarantees to these countries to help them increase their economic growth and development. In 2020, the IDA lent \$306 billion to 76 countries Fig. 1 shows the IDA assistance per capita received by six of those countries and their GDP per capita in 2020 expressed in terms of index figures.

Fig. 1
Index figures for the IDA assistance per capita and GDP per capita 2020

Index of GDP
per capita



The Kenyan government has raised its spending on education in recent years. Education can have an impact on life expectancy. Table 1 shows mean years of schooling and life expectancy in the six countries shown in Fig. 1.

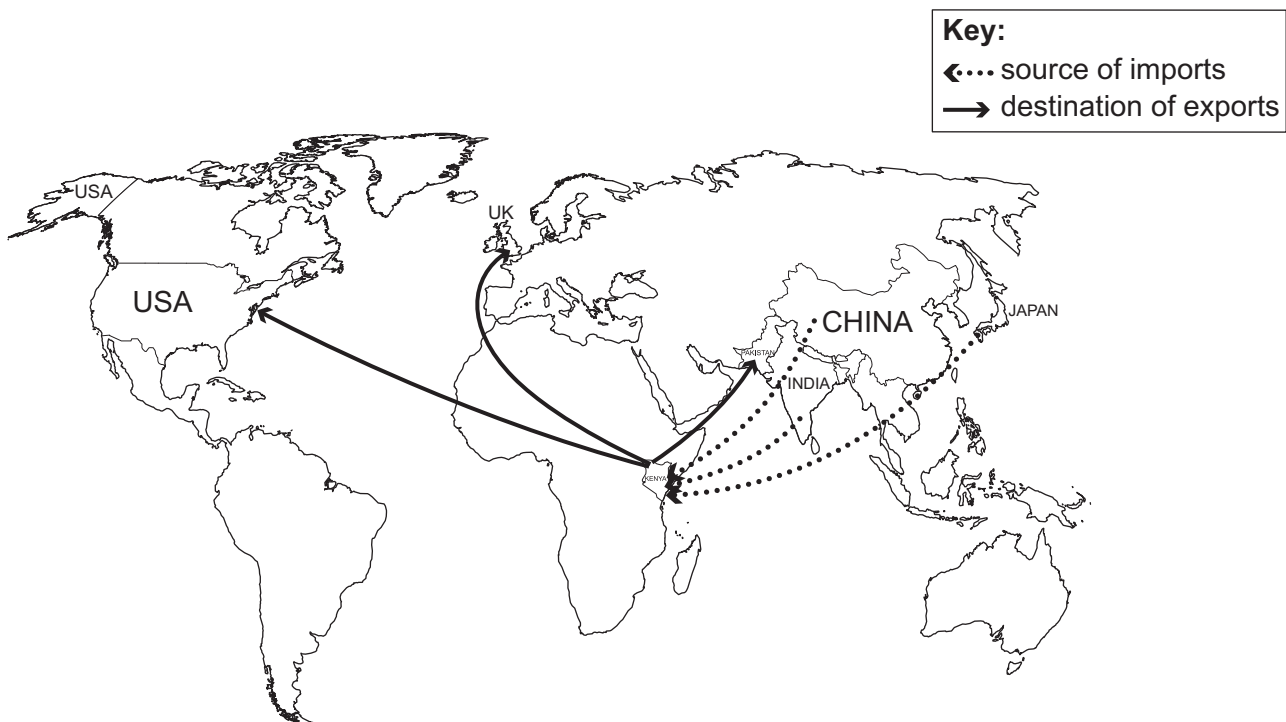
Table 1
Mean years of schooling and life expectancy 2019

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As well as increases in spending on education, the Kenyan government has spent more on health care, infrastructure projects and subsidies given to farmers and tourist firms. It is expected that this increase in government spending will affect Kenya's international trade position. However, it is uncertain whether it will reduce or increase Kenya's government budget deficit.

Kenya's main exports include tea and cut flowers. Fig. 2 shows Kenya's main trading partners.

Fig. 2
Kenya's main trading partners 2020



Kenyans are affected by opportunities and challenges created by globalisation. In recent years, the prices of some products bought by Kenyans have fallen and their quality has increased. The gap between the pay of skilled and unskilled workers in the country has widened. Unemployment is high in the country although some Kenyans have gained employment in foreign multinational companies operating in Kenya.

1

- (a) Using information from the stimulus material, identify **two** components of Kenya's aggregate demand.

Component 1 *Government spending (on education, health care and infrastructure)*.....

.....

Component 2 *Net exports (exports minus imports)*.....

.....

[2]

- (b) Using information from the stimulus material, calculate to one decimal place Kenya's terms of trade in 2019.

Terms of trade = (export price index / import price index) × 100 = (146.2 /

215.0) × 100 = 68.0..... [1]

- (c) Explain if the relationship in **Fig. 1** between IDA assistance per capita and GDP per capita is the expected one.

Yes, largely the expected inverse relationship. The IDA gives concessionary finance.....

to low-income countries, so the poorest should receive the most assistance per.....

head. Somalia has the lowest GDP per capita index (about 20) and receives the.....

most assistance (about 345), while Kenya and Bangladesh have the highest GDP.....

per capita and receive the least. However, Nepal receives more assistance than the.....

Democratic Republic of the Congo despite a higher GDP per capita...... [3]

(d) Using **Table 1**, explain the relationship between mean years of schooling and life expectancy.

There is not a strong relationship, although it is generally positive.

Some evidence supports a positive link: Somalia has the lowest mean years of schooling and also the lowest life expectancy. This is because more schooling is likely to increase incomes and knowledge of health and nutrition.

However, the Democratic Republic of the Congo has the highest mean years of schooling but the second lowest life expectancy. There is not much difference in mean years of schooling between the countries, yet there is a 14.6 year difference in life expectancy. Nepal is also an outlier, with the 5th lowest mean years of schooling but the 2nd highest life expectancy. This suggests other factors, such as income and health care, affect life expectancy apart from mean years of schooling.

[4]

Question continues on the next page

- (e) Using information from the stimulus material, evaluate whether the increase in Kenya's government spending is likely to increase the government's budget deficit.

A budget deficit occurs when government spending is greater than tax revenue. The Kenyan government is spending more on education, health care, infrastructure projects and subsidies to farmers and tourist firms. If this extra spending is not matched by higher tax revenue, or by cuts in other areas, the gap between spending and taxation will widen and the deficit will increase, at least in the short run. It may also rise if the increase in spending is greater than the assistance received from the IDA. Some spending creates future commitments: higher spending on health care may raise life expectancy, increasing the need to spend on pensions and health care. Subsidies may reduce the pressure on farms and tourist firms to be efficient, so they may lose sales and pay less corporation tax. However, government spending is a component of aggregate demand and an injection into the circular flow, so it can cause a multiple increase in GDP. Higher incomes and employment raise income tax and indirect tax revenue and reduce spending on unemployment-related benefits. In the long run, spending on education and health care may raise productivity and employment, while spending on infrastructure, which is currently poor in Kenya, may reduce firms' costs, increase profits and so raise corporation tax revenue. Overall, the extra spending is likely to increase the deficit in the short run but may reduce it in the long run. The outcome depends on whether it generates extra tax revenue, the size of the multiplier and how well the money is spent and monitored. If the deficit causes financial crowding out, higher interest rates could reduce AD and tax revenue and worsen the deficit.

[8]

- (f)* Using information from the stimulus material, evaluate whether Kenyans are likely to benefit from globalisation. [12]

Globalisation involves the world becoming one market through the greater freedom of movement of products and firms and, to a lesser extent, workers. Lower transport costs and trade liberalisation have increased Kenya's trade and brought more foreign multinational companies (MNCs) into Kenya. Kenyan consumers are likely to benefit as they have a greater range of products to choose from and greater competition lowers prices and raises quality: the stimulus states that the prices of some products bought by Kenyans have fallen and their quality has increased. This raises real incomes. Kenyan firms that import raw materials and capital goods from China and India may experience lower costs of production. Firms that export, such as tea and cut flower producers, can sell to a much larger market. This suggests Kenya has a comparative advantage in these products, and higher export sales can raise output, employment and wages. Foreign direct investment by MNCs also helps. Some Kenyans have gained employment in foreign MNCs, which may pay higher wages, provide training and transfer new technology. This raises productivity and can increase economic growth, exports and tax revenue. However, the benefits are not shared equally. Globalisation raises demand for some products while lowering demand for others, so workers have to be occupationally and geographically mobile to switch jobs. The gap between the pay of skilled and unskilled workers has widened, and unemployment remains high. Those with skills in internationally competitive industries gain high wages, while unskilled and immobile workers may have no choice but to work in low paid jobs or be unemployed. MNCs may also replace more labour-intensive domestic firms and cause pollution. In the long run, Kenyan consumers may lose out if foreign firms drive domestic

firms out of business and gain monopoly power. Poor infrastructure may mean
 Kenyan firms' costs are higher than those of foreign rivals, so some may need
 protection.

Overall, Kenyans are likely to benefit on balance, especially as consumers, but
 the gains depend on the group: skilled and adaptable workers gain more than
 unskilled workers. The effect on growth and employment will depend on
 whether Kenyan firms can compete in more integrated markets, whether
 incomes rise in the USA, UK and Pakistan, which Kenya exports to, and
 whether MNCs make a positive contribution to GDP, exports, employment,
 technology and tax revenue.

Section B starts on the next page

Section B

Answer Question 2 or Question 3.

- 2* Finland and the Philippines are experiencing rapid advances in technology. In 2021, they both had an unemployment rate of 8.7%.

Evaluate, with the use of an appropriate diagram(s), whether advances in technology will help a government to achieve its macroeconomic policy objectives. [25]

OR

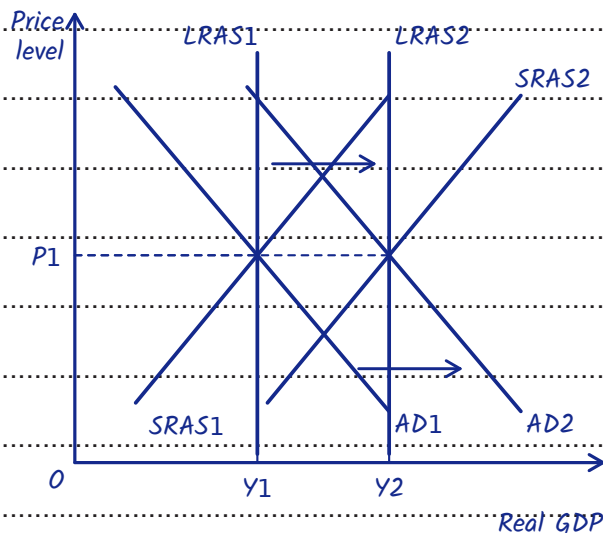
- 3* In recent years, household and business surveys have revealed improved economic expectations in many African countries.

Evaluate, with the use of an appropriate diagram(s), whether improved economic expectations will benefit an economy. [25]

Question No. ...2.....

Advances in technology involve improvements in the way products are produced, through new capital equipment and production methods, and the creation of new products. A government's main macroeconomic policy objectives are sustainable economic growth, full employment, low and stable inflation (such as the UK's 2% CPI target) and a sustainable balance of payments on current account. Finland and the Philippines are both experiencing rapid advances in technology, and both had an unemployment rate of 8.7% in 2021, so they would want technology to reduce unemployment as well as raise growth.

Advances in technology are likely to help achieve economic growth. Investment is a component of aggregate demand, so firms buying new technology increase AD. With innovation, new and better products such as smart home hubs may also increase consumer expenditure. At the same time, more efficient technology increases productivity and productive capacity, shifting LRAS to the right, and lowers costs of production, shifting SRAS to the right. As my diagram shows, AD shifts from AD1 to AD2 while SRAS and LRAS shift from SRAS1 and LRAS1 to SRAS2 and



LRAS2. Real GDP rises from Y_1 to Y_2 while the price level stays at P_1 , so the economy achieves both actual and potential growth without inflationary pressure.

Technology also helps price stability. Higher productivity lowers unit costs, which reduces cost-push inflation, and lower costs of production can reduce prices.

Because LRAS increases, the economy can grow faster before reaching full capacity, which reduces the risk of demand-pull inflation.

It can also reduce unemployment. Lower prices increase sales and output, encouraging firms to take on more workers, and higher demand reduces cyclical unemployment. The use of more advanced technology can increase the efficiency of education and training, so the skills and occupational mobility of workers increase and structural unemployment may decline. Better infrastructure and communications, such as online job sites, increase geographical mobility and the sharing of information, reducing frictional unemployment. This could help Finland and the Philippines reduce their 8.7% unemployment rate.

Finally, technology may improve the current account. Lower costs make products more internationally price competitive, and new products may be created that can be exported, raising export revenue. Improved internet connections make it easier for firms to keep in contact with consumers and overseas branches, which supports service exports such as the business process outsourcing industry in the Philippines.

However, there are reasons why technology may not help. There may be an initial high cost of new technology, which in the short run increases firms' costs of production. The supply-side effects on LRAS take time, while the increase in investment raises AD immediately, so in the short run advances in technology may be inflationary if the economy is close to full capacity. Some small firms and industries may be eliminated, which may reduce output in the short run. The biggest risk is technological unemployment. New capital equipment and production methods can replace workers: online banking has reduced the number of bank branches and bank workers, and driverless cars may eliminate the job of taxi driver. Technology also changes the skills needed for jobs, for instance GPS technology in farming requires farm workers to develop IT skills. Workers who are occupationally immobile become structurally unemployed, so unemployment could rise above 8.7%, especially in the Philippines where many workers are less skilled and call centre jobs could be automated.

The balance of payments effect is also uncertain. Other countries may experience more rapid advances in technology, so international price and quality competitiveness may fall. New technology is often imported, and higher incomes increase spending on imports, which could worsen the current account in the short run.

Overall, advances in technology are likely to help a government achieve the objectives of economic growth and price stability, as they increase both AD and AS. The effects on unemployment and the balance of payments are more uncertain and there may be a trade-off between objectives in the short run. Over time, technology has changed the pattern of employment, ending some jobs but creating others, so the long run effect is usually positive. The outcome depends on how quickly workers can be retrained, which makes supply-side policies such as education and training important alongside technology.

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Section C starts on the next page

Section C

Answer Question 4 or Question 5.

- 4* Nearly half of South Africa's population was considered to be living in poverty in 2021. The South African government uses fiscal policy measures to reduce poverty.

Evaluate whether fiscal policy can reduce poverty.

[25]

OR

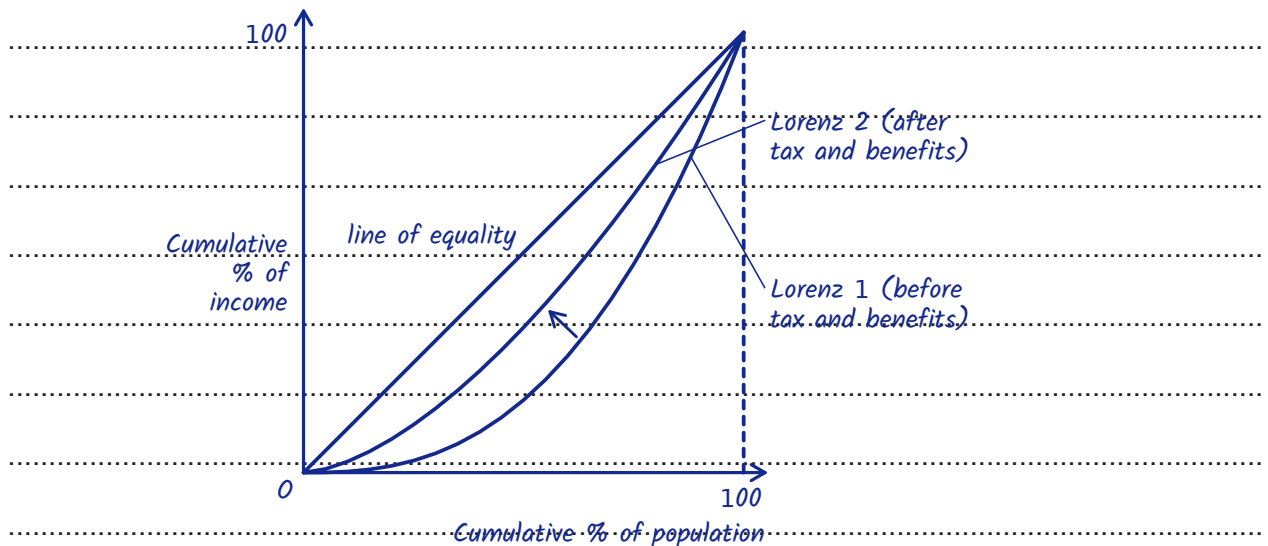
- 5* In 2021, the Economic Affairs Committee of the House of Lords in the UK published a report which questioned whether the Bank of England was addicted to using quantitative easing as a monetary policy measure.

Evaluate whether quantitative easing is an effective monetary policy measure.

[25]

Question No. ...4.....

Fiscal policy is government decisions on government spending and taxation. Absolute poverty is a lack of access to basic necessities such as food, shelter and clean water, while relative poverty is having an income below, for example, 60% of the median income. Nearly half of South Africa's population was living in poverty in 2021, and South Africa also has very high unemployment, so its government uses fiscal policy measures such as social grants to reduce poverty. Government spending on benefits can reduce absolute poverty by providing income to the unemployed, sick, disabled and old. Unemployment, ill health, disability and old age are the main causes of poverty, so transfer payments such as South Africa's child support grant and old age pension directly raise the incomes of the poorest households. Progressive taxation, where the proportion of income paid in tax rises as income rises, combined with benefits targeted at the poor, reduces the gap in income between the rich and the poor and may reduce relative poverty. As my diagram shows, this redistribution moves the Lorenz curve from Lorenz 1 towards the line



of equality, to Lorenz 2, so the Gini coefficient falls.

Government spending on education may help the children of the poor escape poverty by increasing their skills and qualifications and so their opportunities to earn a high wage. Spending on training can reduce structural unemployment, while spending on health care and housing provides basic necessities to the poor and increases their productivity. These policies tackle the causes of poverty rather than just its symptoms, so they can reduce poverty in the long run.

Expansionary fiscal policy, such as higher government spending on infrastructure, increases aggregate demand and, through the multiplier, creates jobs. This reduces cyclical unemployment and the poverty that it causes, which is important in South Africa where unemployment is a main cause of poverty.

However, fiscal policy may not always reduce poverty. Spending on benefits may reduce the incentive for the unemployed to search for employment and for people to work past the retirement age, which may reduce their potential income and create a poverty trap, where people lose benefits as they earn more. Redistributing income through high tax rates may also reduce incentives to work and invest, which may lower growth and the incomes of the poor in the long run.

Some forms of government spending on education and health care may benefit the rich more than the poor, for example spending on university education, which is

mainly used by students from higher income families. In addition, regressive taxation, such as VAT, takes a higher proportion of the income of the poor and is likely to increase relative poverty. Direct taxation tends to be progressive while indirect taxation tends to be regressive, so greater reliance on indirect taxation may not reduce poverty.

Contractionary fiscal policy, such as cuts in benefits and public services to reduce a budget deficit, can increase both relative and absolute poverty. Governments with a large national debt, such as South Africa, may have limited ability to raise spending, and money may be lost through corruption or poor targeting, so it does not reach the poor. There is also a time lag before spending on education reduces poverty.

Overall, fiscal policy can reduce poverty, but whether it does depends on the type of policy pursued. Expansionary fiscal policy, well-targeted benefits, progressive direct taxes and spending on education and health care are likely to reduce poverty, while contractionary policy and reliance on regressive indirect taxes are likely to increase it. Benefits reduce absolute poverty quickly, but in the long run spending on education, training and job creation is more effective because it reduces poverty without reducing incentives.

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END OF QUESTION PAPER

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18
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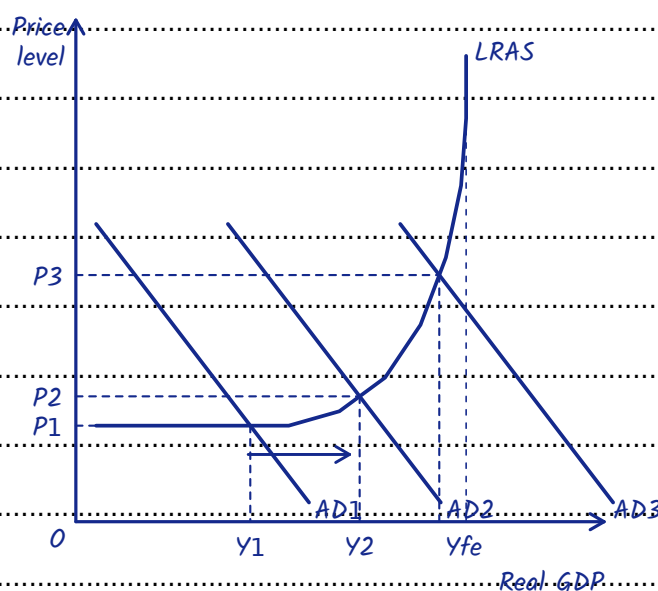
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ADDITIONAL ANSWER SPACE

3

An economy benefits if it achieves its macroeconomic objectives: sustainable economic growth, low unemployment, low and stable inflation and a sustainable balance of payments. Economic expectations are the views of households and firms about future incomes, jobs, sales and profits. Consumer expectations affect consumption and business expectations affect investment. Surveys in many African countries show improved expectations. Improved consumer confidence is likely to increase consumer expenditure. Households expecting higher incomes and greater job security in the future save less and may spend a higher proportion of their income. This increases



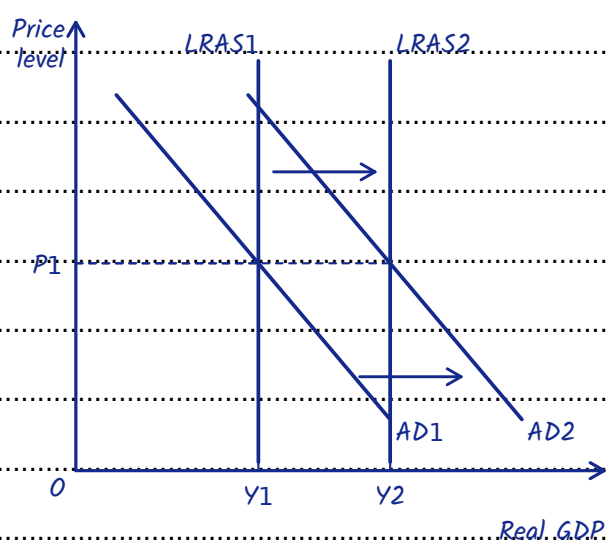
the marginal propensity to consume, which increases the size of the multiplier, so any injection has a larger final effect on national income. Higher consumer expenditure increases aggregate demand. This benefits an economy if it is initially operating with a negative output gap. In Diagram 1, AD shifts from AD1 to AD2 in the spare capacity range of the LRAS curve, so real GDP rises from Y_1 to Y_2 with only a small rise in the price level from P_1 to P_2 . If firms are more optimistic about future sales and profits, they are likely to invest more. The rise in demand for consumer goods may cause a larger

ADDITIONAL ANSWER SPACE

percentage rise in investment through the accelerator effect, as firms need more capital to meet higher demand. Investment increases both AD and AS.

In Diagram 2, AD shifts from AD1 to AD2 and the extra capital shifts LRAS from LRAS1 to LRAS2, so real GDP rises from Y_1 to Y_2 with no rise in the price level. This means the economy can grow without inflationary pressure even when there is no negative output gap.

Higher AD and output increase the derived demand for labour, so cyclical unemployment falls. More economic activity also raises tax revenue, and some



of this may be spent on education and health care, increasing labour productivity and so aggregate supply. For an African economy with high unemployment and low living standards, these benefits could be significant.

However, if AD increases by more than AS, the rate of inflation will increase. If the economy is already close to full employment, a rise in AD to AD3 in Diagram 1 mainly raises the price level to P_3 rather than real GDP, which reduces real incomes and international competitiveness. Consumers may also spend much of their extra income on imports, which reduces the effect on domestic AD and may worsen the current account of the balance of payments. The larger the marginal propensity to import, the smaller the multiplier.

ADDITIONAL ANSWER SPACE

Firms may not be able to access finance to increase investment. If improved confidence has been boosted by higher government spending financed by borrowing, this may cause financial crowding out, raising interest rates and reducing private investment. Expectations can also change quickly: a short-term improvement may be followed by pessimism, and if households increase borrowing based on over-optimistic expectations, the economy may become destabilised, with a boom followed by a bust.

Overall, improved economic expectations are likely to benefit an economy, but how much depends on the initial state of the economy. If there is a negative output gap, as in many African countries with high unemployment, higher confidence raises output and employment with little inflation. The larger the multiplier, the greater the impact is likely to be. The most lasting benefit occurs if higher investment increases LRAS as well as AD, so growth is sustainable rather than inflationary.

ADDITIONAL ANSWER SPACE

5 Quantitative easing (QE) involves a central bank increasing the money supply by buying long-term securities, such as government bonds and corporate bonds, from financial companies and pension funds, using newly created money. It is expansionary monetary policy. The Bank of England used QE during the financial crisis, after the Brexit vote and during Covid-19, when its asset purchases reached £895 billion, which is why the House of Lords committee questioned whether it was addicted to QE.

QE is used when a country is experiencing low or negative economic growth and the rate of interest is already very low, so it cannot be cut further. The Bank of England's Bank Rate was only 0.1% in 2020. QE increases commercial banks' liquid assets, replacing some of their long-term assets with more liquid assets such as reserves, so their ability to lend increases. This was useful when there was a lack of commercial bank lending.

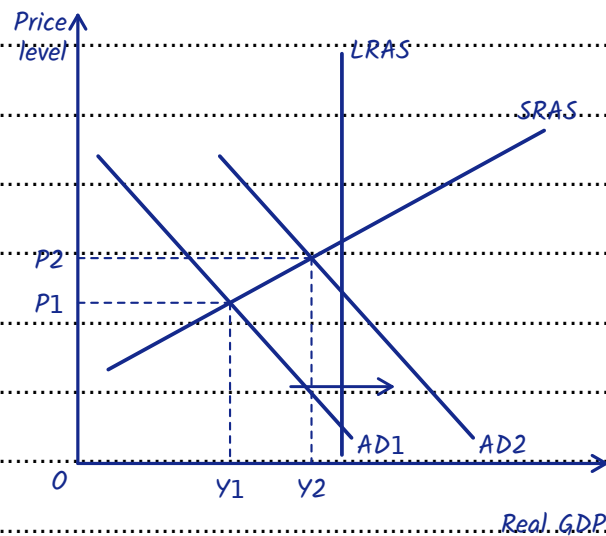
The purchase of long-term government bonds raises their price and reduces their yield, so the long-term rate of interest falls because the supply of loanable funds increases. This encourages firms to borrow to invest rather than save, and households to borrow to spend. The purchase of corporate bonds increases the funds firms have to invest, reducing the effects of financial crowding out. A lower rate of interest may also increase share prices, creating a wealth effect and making it easier for firms to raise finance for investment.

As my diagram shows, lower interest rates stimulate consumption, investment and net exports (if the exchange rate falls), so AD shifts from AD1 to AD2. With a negative output gap, real GDP rises from Y1 to Y2, increasing employment, while the price level rises only from P1 to P2, which helps avoid deflation and keeps inflation close to the 2% target.

However, QE is not always effective. Even with more liquid assets,

ADDITIONAL ANSWER SPACE

commercial banks will not be able or willing to lend more if there is a lack of suitable borrowers, and those who want to borrow may be considered too



high a risk. Households and firms are unlikely to want to borrow more if they are pessimistic about the future, so confidence matters more than the cost of credit. In this case, much of the money stays in bank reserves and AD hardly increases, which is why some economists argue that QE has diminishing returns.

QE can also have unintended consequences. More funds are available to financial institutions such as pension funds, which may use them to buy shares, increasing share and house prices. This redistributes wealth towards commercial banks, shareholders and property owners, so it is most likely to benefit the rich and results in a more uneven distribution of income and wealth.

According to the quantity theory of money ($MV = PT$), an increase in the money supply causes inflation if the velocity of circulation and output are fixed. Some economists argue that QE during Covid-19 contributed to UK inflation reaching 11.1% in 2022. In a situation of rising inflation, central banks use contractionary policy instead, raising interest rates and reducing the money supply: the Bank of England is now conducting quantitative

ADDITIONAL ANSWER SPACE

tightening by selling bonds. Ending QE can also be difficult, and the central bank may face losses on its bond holdings, which are a cost to taxpayers.

Overall, QE can be an effective monetary policy measure, but only in particular economic conditions. It is effective when the economy has low or negative growth, a negative output gap, low inflation and interest rates that cannot be cut further, as in 2009 and 2020, when it helped stabilise financial markets and supported bank lending. It is not appropriate during periods of high growth and inflationary pressure. Even then, its effect depends on confidence, as banks may be reluctant to lend and firms unwilling to borrow if confidence is low. A central bank may find an interest rate cut or a lower exchange rate more effective where possible, and QE works best alongside expansionary fiscal policy.