



Rewarding Learning

ADVANCED SUBSIDIARY (AS)
General Certificate of Education
2023

Economics

Assessment Unit AS 2
assessing
Managing the National Economy



SEC21

[SEC21]
MONDAY 22 MAY, MORNING

TIME

1 hour 30 minutes.

INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number on the Answer Booklet provided.
Answer **all** questions in Sections **A** and **B** and **one** question in Section **C**.
You are permitted to use a calculator in this paper.

INFORMATION FOR CANDIDATES

The total mark for this paper is 80.

- Section A: 25 Marks
- Section B: 35 Marks
- Section C: 20 Marks

Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.

ADVICE TO CANDIDATES

You are advised to take account of the marks for each part question in allocating the available examination time. In questions involving calculations, you are advised to show your workings. Quality of written communication will be assessed in Questions **5(b)**, **6(b)**, **(c)** and **(d)**, **7** and **8**. Quantitative skills will be assessed where appropriate.

Section A (25 marks)

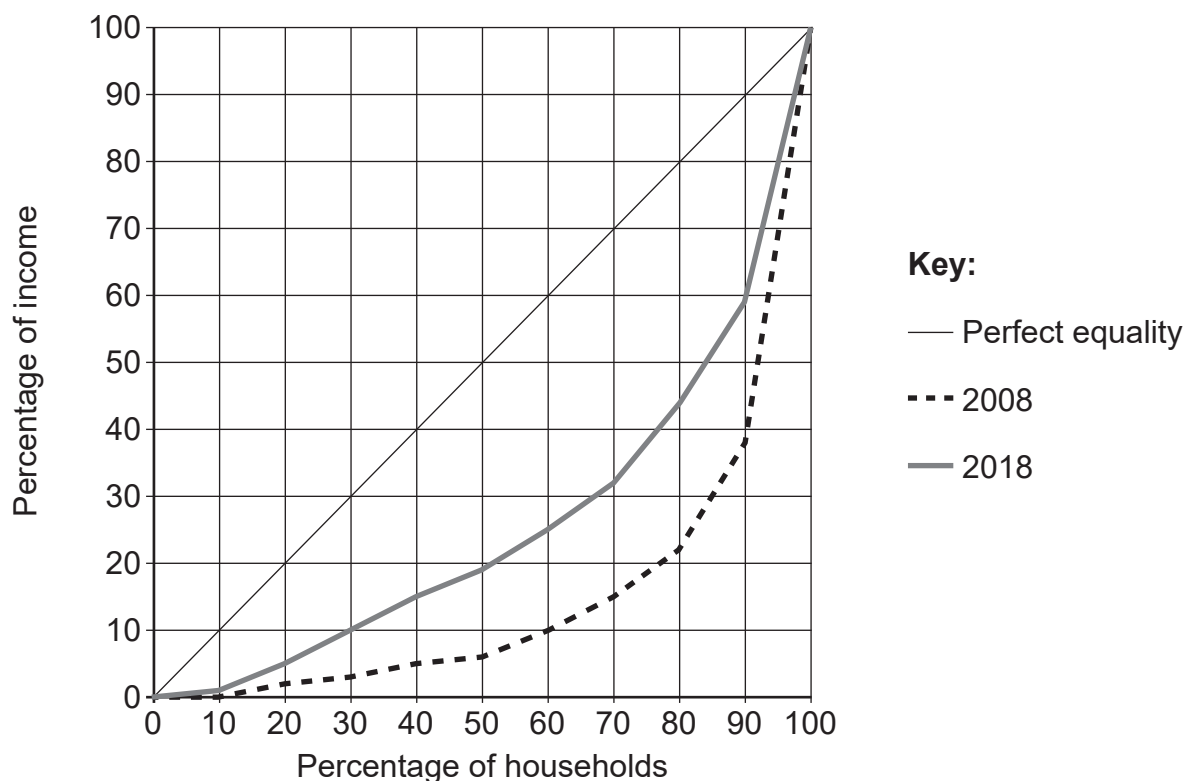
Answer all questions

- 1 The table below shows the percentage change in real GDP of the four regions of the United Kingdom in the last quarter of 2019 and the first quarter of 2020.

Region	Q4 2019	Q1 2020
England	0.0%	-2.5%
Wales	-1.1%	-2.4%
Scotland	0.1%	-2.5%
Northern Ireland	-1.0%	-4.5%

- (a) Explain what is meant by the term real GDP. [4]
- (b) With reference to the data above, explain why the Northern Ireland economy could be considered to be in recession at the beginning of 2020, but the Scottish economy could not. [3]

- 2 The chart below shows Lorenz curves for the distribution of income in a country in 2008 and 2018.



Using the information in the chart above, explain what has happened to the distribution of income in this country between 2008 and 2018. [3]

- 3** The table below shows the Consumer Prices Index (CPI) for the UK between January 2010 and January 2015.

Year	CPI
2010	89.4
2011	93.4
2012	96.1
2013	98.5
2014	99.6
2015	100.0

(a) Explain what is meant by the term inflation. [2]

(b) Using the information in the table above, calculate the rate of inflation between January 2010 and January 2011. [2]

- 4** Figures from the Office for National Statistics showed that UK labour productivity fell by 20% in the second quarter of 2020 compared to the same period in 2019.

Explain how labour productivity is measured in the UK. [3]

- 5** On 17 March 2020, £1 bought US\$1.16 on the foreign exchange markets while £1 was worth €1.06. By January 2021 the pound had risen to \$1.37 and €1.12 respectively.

(a) Using the information above, calculate the value of one euro in US dollars on 17 March 2020. [2]

(b) With the aid of an appropriate diagram, explain the likely impact on the UK economy of a rise in the value of the pound against the euro and US dollar. [6]

Section B (35 marks)

Answer all questions

The following article was written in January 2021. Read it carefully and answer the questions which follow.

6 UK economy to remain in intensive care

2020 was a grim year for the UK economy. The UK recorded the worst recession in 300 years, interest rates were slashed to the lowest level in history, and the government posted its highest ever peacetime budget deficit.

1

The UK economy will begin 2021 still in intensive care as a new wave of coronavirus infections and the outworking of the UK's withdrawal from the EU limit the chances of a rapid recovery. The UK has a huge hill to climb because its economy suffered more than most during the early stages of the pandemic, with GDP falling by over 20% in the first six months of 2020 as shown in **Fig. 1** below.

2

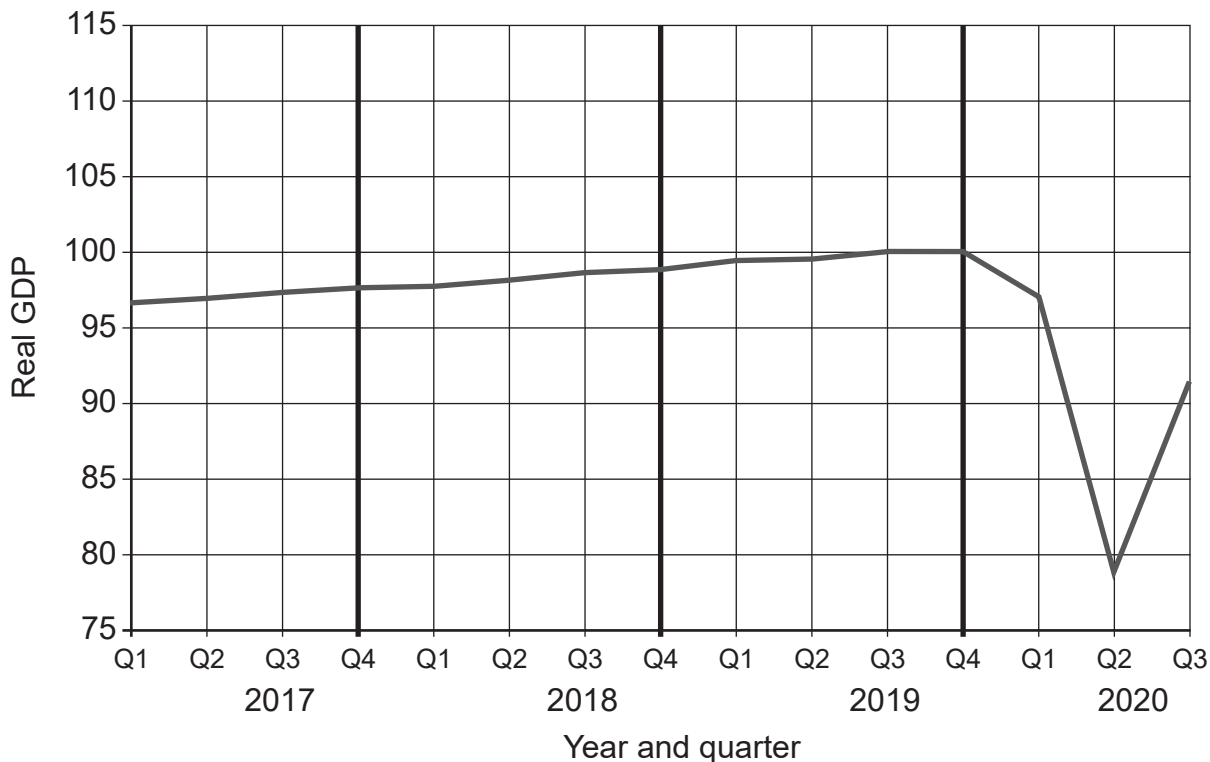


Fig. 1: Quarterly index real GDP 2017 to Q3 2020 (Q4 2019 = 100)

Economists are predicting that it will take at least another 18 months for the UK to return to its pre-pandemic size, with many predicting that it will be the last of its peers to do so. Charlotte Blair, an independent consultant, claimed that there were a number of factors that would be likely to limit the UK's potential to bounce back quickly in 2021. "A second wave of lockdowns in early 2021 will reduce spending in and by the UK's large services sector. At the same time the UK's withdrawal from the EU will cause significant disruption to external trade. When you factor in the record number of redundancies already announced for 2021, it is difficult to see aggregate demand increasing significantly any time soon."

3

These gloomy predictions come despite the best attempts of the Treasury and the Bank of England to boost the economy. The Chancellor has borrowed record amounts to fund his furlough scheme and other support to businesses, while the Bank of England has slashed interest rates to 0.1% and pumped an extra £450 billion into the economy. Treasury and Central Bank officials believe that these expansionary fiscal and monetary measures will be enough to kick-start demand and get the economy growing again. A government spokesperson stated that “as the vaccines roll out in the first quarter of 2021, we should see society and the economy return to normality, which will allow the government to gradually reduce the support in place and allow our fiscal and monetary stances to return to more ordinary levels”.

4

However, some economists argue that rather than rush to see government spending drop to more normal levels, the government should avail of the historically low interest rates and use fiscal policy to address the inequalities exposed by COVID-19. Charlotte Blair stated that “the pandemic had a disproportionate impact on deprived groups and highlighted the scale of inequality in the UK. It has presented the government with a once in a lifetime opportunity to prioritise reducing income and wealth inequality over all other macroeconomic considerations”.

5

- (a) Using the information in **Fig. 1**, describe the trend in UK GDP over the period shown. [5]
- (b) Explain why some economists felt that aggregate demand was unlikely to increase significantly in 2021 (para 3). [6]
- (c) With the aid of an appropriate diagram, analyse the likely impact of expansionary monetary and fiscal policies on the UK economy. [9]
- (d) Critically examine the view that reducing income and wealth inequality should be the government’s number one economic priority. [15]

Section C (20 marks)

Answer one question

- 7 Supporters of ex-US President Donald Trump highlight the US economy's pre-pandemic performance as evidence that his supply side policies of tax cuts and deregulation were "making America great again". Opponents, however, argue that these policies led to an erosion of workers' rights, higher inequality, and the destruction of the environment.

Critically examine the view that supply-side policies benefit large firms at the expense of ordinary workers and the environment. [20]

- 8 In October 2020, unemployment in the UK stood at 4.9%, up from 3.7% in the same month in 2019. While the increase in the unemployment rate was widely seen as a cause for alarm, some economists expressed even greater concern about the UK's high rate of economic inactivity, which was 20.7% in October 2020.

Critically examine the view that the UK government should be more concerned with reducing economic inactivity than unemployment. [20]

THIS IS THE END OF THE QUESTION PAPER

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Surname	<i>StemUp Model Solution</i>
Answer booklet	Write the question number in the left-hand margin at the start of each answer.

Question
number

1(a)

GDP (Gross Domestic Product) is the total value of all goods and services produced within the domestic boundaries of a country over a given time period, such as a quarter or a year, whether the producer is domestically or foreign owned. 'Gross' means no deduction has been made for capital consumption (depreciation).

Real GDP is GDP adjusted for inflation, i.e. measured at the constant prices of a base year, so changes in real GDP show changes in the volume of output rather than changes in the price level.

1(b)

A recession is usually defined as two consecutive quarters of negative economic growth (falling real GDP).

Northern Ireland's real GDP fell by 1.0% in Q4 2019 and by a further 4.5% in Q1 2020: two consecutive quarters of negative growth, so it was in recession at the beginning of 2020.

Scotland's real GDP grew by 0.1% in Q4 2019 and only fell (by 2.5%) in Q1 2020, so it had only one quarter of negative growth and was not in recession.

2

Income has become more evenly distributed, i.e. income inequality has fallen, because the 2018 Lorenz curve lies closer to the line of perfect equality than the 2008 curve.

For example, in 2008 the poorest 50% of households received only 6% of total income, but by 2018 this had risen to 19%. The poorest 90% received 40% of income in 2008 but 60% in 2018, so the share of the richest 10% fell from 60% to 40%.

The area between the line of equality and the Lorenz curve is smaller in 2018,

so the Gini coefficient has fallen.

3(a)

Inflation is a sustained rise in the general level of prices in an economy over a period of time, which leads to a fall in the value (purchasing power) of money.

3(b)

$$\begin{aligned}\text{Rate of inflation} &= (93.4 - 89.4) \div 89.4 \times 100 \\ &= 4.0 \div 89.4 \times 100 = 4.47\%\end{aligned}$$

4

Labour productivity measures output per unit of labour input. In the UK, output is measured by real GDP (or gross value added), while labour input is measured either by the total number of hours worked or by the number of workers in employment.

Labour productivity = real GDP $\div$ total hours worked (output per hour), or

Labour productivity = real GDP $\div$ number of people in employment (output per worker).

The ONS publishes both measures (output per hour is its headline measure) and compares them over time, e.g. Q2 2020 with Q2 2019.

5(a)

$$£1 = \$1.16 \text{ and } £1 = €1.06, \text{ so } €1.06 = \$1.16$$

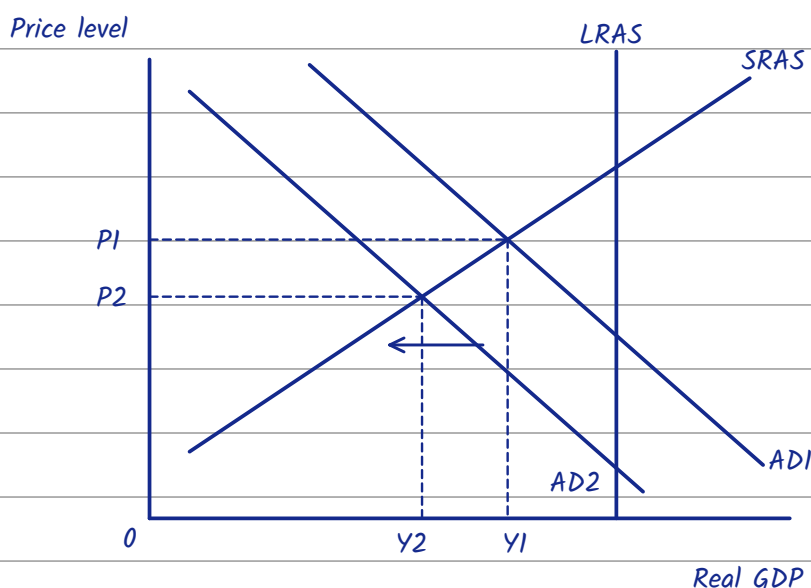
$$€1 = \$1.16 \div 1.06 = \$1.09 \text{ (to 2 d.p.)}$$

5(b)

Between March 2020 and January 2021 the pound appreciated by 18.1% against the dollar (\$1.16 to \$1.37) and by 5.7% against the euro (€1.06 to €1.12). An appreciation makes UK exports more expensive in foreign currency and imports cheaper in pounds. For example, a £10 000 UK machine rises in price in the US from \$11 600 to \$13 700, while a \$1000 US good falls in price in the UK from about £862 to £730.

Assuming demand for exports and imports is price elastic (the Marshall-Lerner condition), UK exports become less price competitive and their value (X) falls, while spending on imports (M) rises, so net exports fall and the current

account balance worsens. This matters because the US and the Eurozone buy over half of UK exports. As net exports are a component of $AD = C + I + G + (X - M)$, AD shifts left from AD1 to AD2.



As the diagram shows, real output falls from Y_1 to Y_2 and the price level falls from P_1 to P_2 . Lower output means firms need fewer workers, so unemployment rises, especially in export industries such as manufacturing, and economic growth slows; through the multiplier effect, lost export income reduces consumption further. However, inflation falls: cheaper imported raw materials and energy reduce firms' costs (shifting SRAS right) and cheaper imported consumer goods directly reduce the CPI, so UK consumers gain higher real incomes while UK exporters lose competitiveness and profits.

6(a)

Between Q1 2017 and Q4 2019 UK real GDP grew slowly but steadily, from an index of about 96.6 to 100, a rise of about 3.5% ($(100 - 96.6) \div 96.6 \times 100$) over almost three years, i.e. just over 1% a year. Growth was faster in 2018 than in 2017 but slowed in 2019, with GDP flat at 100 between Q3 and Q4 2019.

In 2020 GDP collapsed: it fell to about 97 in Q1 and then to about 78.8 in Q2, a total fall of 21.2% in six months, the deepest recession on record. GDP then recovered strongly to about 91.4 in Q3 2020, growth of 15.9% in one quarter

$((91.4 - 78.8) \div 78.8 \times 100)$, but it was still 8.6% below its pre-pandemic peak.

6(b)

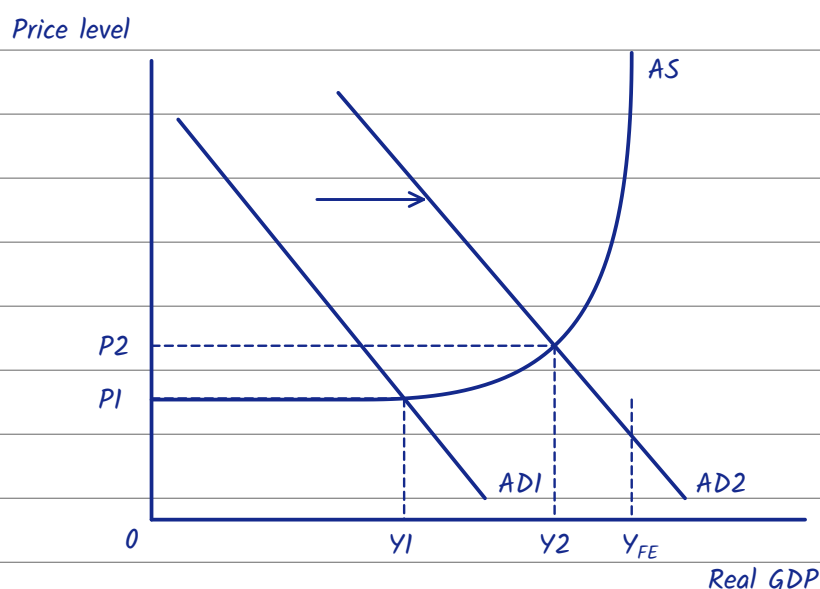
Aggregate demand is the total planned spending on an economy's goods and services at a given price level: $AD = C + I + G + (X - M)$. Charlotte Blair gives three reasons why AD was unlikely to rise significantly in 2021 (para 3). Firstly, a second wave of lockdowns in early 2021 would close shops, hospitality, leisure and travel, which make up much of the UK's large services sector. Consumers would be unable to spend, reducing consumption (C), the largest component of AD. With lower revenues and uncertain future demand, business confidence would fall, so firms would postpone investment (I). Secondly, the UK's withdrawal from the EU brought new customs checks, rules of origin and paperwork, raising the cost of and delays in trading with the EU, the UK's largest trading partner. UK exports (X) to the EU would therefore fall, reducing net exports. Higher import prices could also raise the price level, reducing real disposable income and therefore consumption. Thirdly, the record number of redundancies announced for 2021 would cut the incomes of those losing their jobs, reducing their consumption. Fear of unemployment would also reduce consumer confidence, so even those still in work would save more (precautionary saving) and spend less. These falls in C, I and X would be magnified by the negative multiplier effect, as one person's lower spending is another's lower income, so AD would struggle to recover.

6(c)

Fiscal policy is the use of government spending and taxation to influence aggregate demand. Monetary policy is the use of interest rates, the money supply and credit, controlled in the UK by the Bank of England's Monetary Policy Committee, to influence AD and meet the 2% CPI inflation target. In 2020 the government used expansionary fiscal policy: it borrowed record amounts, creating its highest ever peacetime budget deficit (para 1), to fund

the furlough scheme, which paid up to 80% of workers' wages, and other support such as business grants and Eat Out to Help Out (para 4). Higher government spending (G) increases AD directly, while furlough protected household incomes and so maintained consumption (C).

At the same time the Bank of England used expansionary monetary policy, cutting Bank Rate to a record low of 0.1% and pumping an extra £450 billion into the economy through quantitative easing (QE), buying government bonds with newly created money (para 4). Lower interest rates reduce the cost of borrowing and the reward for saving, so households borrow and spend more on credit-financed goods such as cars and houses, and mortgage repayments fall, raising disposable income. Firms find more investment projects profitable, so I rises. QE lowers long-term interest rates and raises asset prices, creating a wealth effect, and lower rates may depreciate the pound, raising net exports.



As the diagram shows, the rise in C , I , G and $(X - M)$ shifts AD to the right from AD1 to AD2, and the initial injection is multiplied as extra spending becomes others' income. Because the UK had a large negative output gap after GDP fell by 21.2% in 2020, there was plenty of spare capacity, so AS is relatively elastic: real GDP rises strongly from $Y1$ to $Y2$ with only a small rise in the price level from $P1$ to $P2$. Firms need more workers, so unemployment falls (or redundancies are avoided) and the recovery is speeded up.

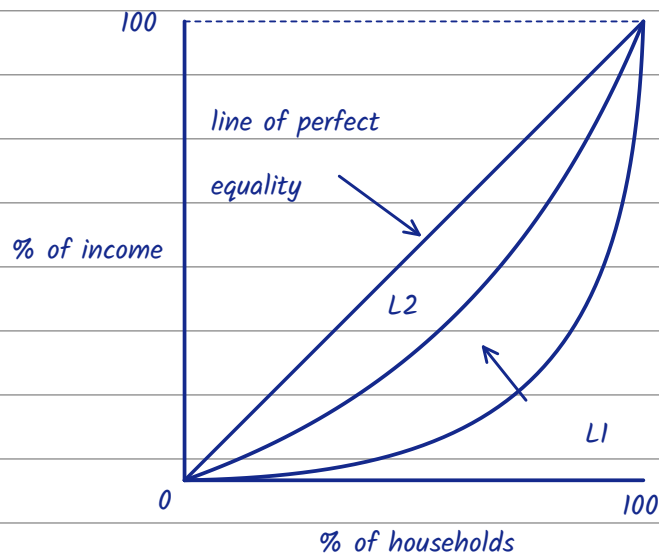
However, the impact depends on several factors. Low confidence and lockdowns may mean households save rather than spend, weakening the multiplier, and at 0.1% there is little room for further rate cuts (a liquidity trap). As the economy approaches full capacity (Y_{FE}), further increases in AD would mainly cause demand-pull inflation on the steep part of the AS curve. Higher borrowing also increases the national debt and future debt interest payments, which may require higher taxes later. Nevertheless, these policies prevented a much deeper fall in output and a surge in unemployment.

6(d)

Income inequality is the unequal distribution of income (flows such as wages, rent, interest and benefits) between households, while wealth inequality is the unequal distribution of the stock of assets such as property, shares and savings. Inequality is shown by the Lorenz curve and measured by the Gini coefficient.

The government also has other macroeconomic objectives: sustainable economic growth, low unemployment and economic inactivity, low and stable inflation (the 2% CPI target), a sustainable budget deficit and national debt, a satisfactory balance of payments and protecting the environment. The issue is whether reducing inequality should rank above all of these.

As Charlotte Blair argues, COVID-19 had a disproportionate impact on deprived groups (para 5): low-paid workers in hospitality and retail were more likely to be furloughed on 80% pay or made redundant, could not work from home and lived in more crowded housing. High inequality is linked to social problems such as crime, poor health, addiction and lower educational attainment, which impose external costs on society and higher costs on the NHS and the welfare system. Redistribution can also increase total welfare. Because of the diminishing marginal utility of income, an extra £1 gives more utility to a poor household than to a rich one, so transferring income from rich to poor through progressive taxes and benefits can raise total welfare. As the diagram shows, this shifts the Lorenz curve from L1 towards the line of perfect equality (L2), reducing the Gini coefficient.



Reducing inequality can also support the recovery. Low-income households have a higher marginal propensity to consume than the rich, so transferring income to them raises consumption and AD by more, giving a larger multiplier effect and raising growth and employment when AD was weak (para 3). Spending on education and training for deprived groups would raise human capital and productivity, shifting LRAS right in the long run. Moreover, with interest rates at a historic low of 0.1% (para 4), the government can borrow very cheaply to fund these measures, a 'once in a lifetime opportunity'.

However, there are strong arguments against making it the number one priority. Policies to reduce inequality, such as higher income tax rates on high earners, wealth taxes and more generous means-tested benefits, may reduce incentives. Higher marginal tax rates may discourage work effort, enterprise and investment and lead skilled workers and firms to move abroad, while generous benefits may create an unemployment or poverty trap. This could reduce LRAS and economic growth, so the economic 'pie' shrinks.

Secondly, the government already posted its highest ever peacetime budget deficit in 2020 (para 1). Borrowing more to fund redistribution would increase the national debt further, and if interest rates rise in future, debt interest payments could become very costly, requiring higher taxes or spending cuts later. There is also an opportunity cost: the money could fund the NHS or the

vaccine rollout.

Thirdly, there are policy trade-offs and other urgent priorities. In January 2021 the UK faced a second wave of COVID, Brexit disruption and record redundancies (para 3). Many argue the top priority should be restoring economic growth and reducing unemployment, since unemployment is itself a major cause of poverty and inequality, so getting people back into work may be the most effective way to reduce inequality. Growth also raises tax revenue, which can fund redistribution later. By contrast, reducing the deficit could conflict with redistribution in the short run.

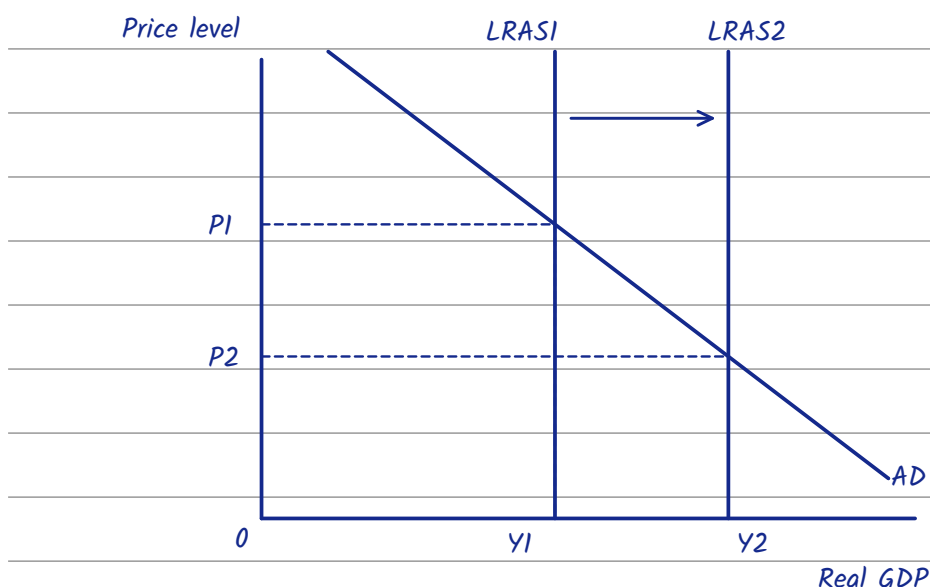
Overall, whether reducing inequality should be the number one priority depends on the policies used, the size of the redistribution and the time scale.

Redistribution through high marginal tax rates risks weakening incentives and growth, but targeted measures, such as investing in education, skills and jobs in deprived areas and raising the incomes of the low paid, can reduce inequality while also boosting AD, productivity and growth, so there need not be a trade-off. In early 2021, with GDP still 8.6% below its peak, the immediate priority should be recovery and protecting jobs, but with borrowing so cheap the government should design its recovery measures to reduce inequality. Therefore reducing inequality should be a key priority, but not 'over all other macroeconomic considerations' as Charlotte Blair suggests.

7

Supply-side policies are government policies designed to increase the productive potential of the economy by improving the quantity and quality of the factors of production and the efficiency of markets, shifting the LRAS curve to the right. They can be market-based, such as cutting income and corporation tax, deregulation, privatisation and reducing trade union power, or interventionist, such as spending on education, training and infrastructure and subsidies for research. President Trump's main supply-side policies were the Tax Cuts and Jobs Act of 2017, which cut the federal corporation tax rate from 35% to 21% and cut income tax, and widespread deregulation, including environmental rules.

As the diagram shows, if supply-side policies work, LRAS shifts right from LRAS1 to LRAS2, so real GDP rises from Y_1 to Y_2 while the price level falls from P_1 to P_2 . In theory this brings higher economic growth, more jobs, lower inflation and more competitive exports, benefiting everyone. Before the pandemic US unemployment fell to about 3.5%, a 50-year low, which Trump's supporters cite as evidence.



However, critics argue that the gains went mainly to large firms and their shareholders. The cut in corporation tax directly raised post-tax profits, and much of it was used for share buybacks and dividends rather than investment or higher wages, so the benefits went to shareholders, who are mostly wealthy, increasing inequality.

Market-based supply-side policies can also harm ordinary workers. Labour market deregulation, such as weakening employment protection, makes it easier and cheaper for firms to hire and fire, reducing job security and encouraging zero-hours contracts and the 'gig economy'. Reducing trade union power weakens workers' bargaining position, so wages may be held down and working conditions worsen, and relaxing rules on maximum working hours means workers may be pressured to work long hours for fear of losing their job. Privatisation and contracting out of public services often lead to job losses as private firms cut costs to raise efficiency and profit, and to worse pay and pensions than in the

public sector. Labour markets become more flexible, but at the cost of an erosion of workers' rights.

Supply-side policies can also damage the environment. Removing environmental regulations, as the Trump administration did by rolling back limits on emissions and withdrawing from the Paris climate agreement, lets firms cut costs by polluting. Their private costs fall but the external costs borne by society rise: marginal social cost exceeds marginal private cost, so too much is produced and there is market failure. More generally, faster growth in output increases the use of energy and natural resources, raising carbon emissions and depleting non-renewable resources, which harms future generations.

On the other hand, many supply-side policies benefit ordinary workers. Lower corporation tax increases the incentive for domestic firms and foreign multinationals to invest, which creates jobs and raises labour productivity; since real wages tend to rise with productivity in the long run, workers can share the gains. Income tax cuts raise workers' disposable income and the incentive to work. Flexible labour markets may also reduce unemployment, as firms are more willing to hire when it is less costly to adjust their workforce, and unemployment is a major cause of poverty.

Interventionist supply-side policies benefit workers directly. Spending on education, training and apprenticeships increases human capital, helping the unemployed find work and the employed get better paid jobs, which reduces occupational immobility and inequality. Grants and subsidies can help individuals start their own businesses and create jobs, and childcare support helps people move into work.

Supply-side policies can also protect the environment. Subsidies for research and development in green industries, such as renewable energy and electric vehicles, encourage innovation in clean technology, while investment in public transport and energy-efficient infrastructure increases productive capacity and reduces pollution. Greater efficiency can also mean fewer resources are used per unit of output.

The impact therefore depends on the type of supply-side policy. Market-based policies such as corporation tax cuts and deregulation are more likely to benefit large firms at the expense of workers and the environment, while interventionist policies such as training and green subsidies can benefit all three. It also depends on the time scale: any benefits to workers through higher investment and productivity take years to appear, whereas the gains to shareholders are immediate, and US business investment rose only briefly after 2017. Much of the strong pre-pandemic US performance may also reflect the long recovery since 2009 and the boost to AD from the larger budget deficit, rather than supply-side effects. Finally, it depends on which regulations are removed: cutting unnecessary red tape lowers costs without harm, but removing protections for workers and the environment imposes real costs.

In conclusion, the view is largely correct for the market-based policies that Trump emphasised: cutting corporation tax and deregulation mainly boosted the profits of large firms and their shareholders, while eroding workers' rights, increasing inequality and harming the environment, with only limited 'trickle down'. However, supply-side policies as a whole do not necessarily benefit firms at the expense of workers and the environment. Well-designed interventionist policies, such as investment in education, training and green technology, can raise productive capacity while improving the prospects of ordinary workers and protecting the environment, so governments should choose a mix of policies that shifts LRAS right in a sustainable and inclusive way.