



Rewarding Learning

ADVANCED SUBSIDIARY (AS)
General Certificate of Education

Economics

Assessment Unit AS 2
assessing
Managing the National Economy



SEC21

[SEC21] Assessment

TIME

1 hour 30 minutes.

Assessment Level of Control:

Tick the relevant box (✓)

Controlled Conditions	
Other	

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**, **6(b)**, **(c)** and **(d)**, **7** and **8**. Quantitative skills will be assessed where appropriate.

Section A (25 marks)

Answer all questions

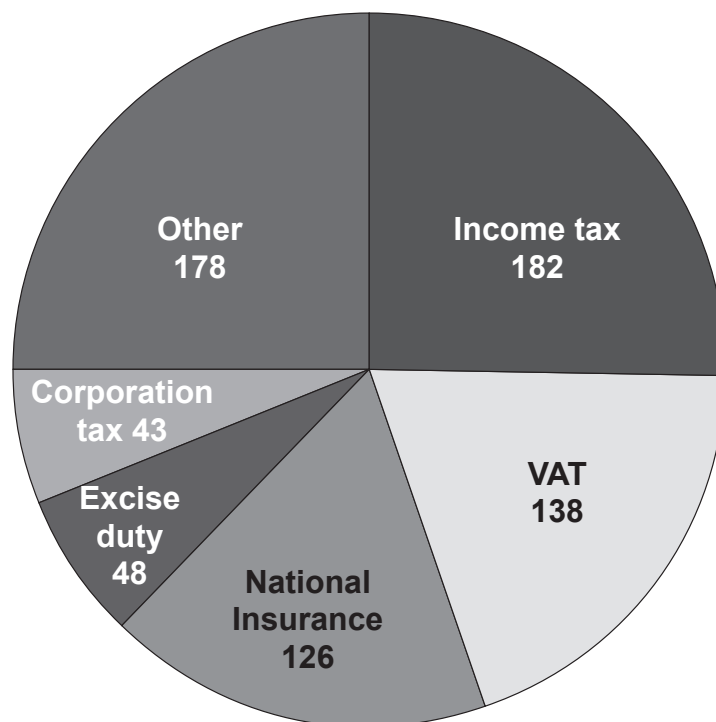
- 1 The table below shows estimates for the population of the Dungannon area in 2002, 2010 and 2018.

Year	Population
2002	48 125
2010	57 640
2018	62 169

Convert the data for 2018 into index number form using 2002 as the base year.

[3]

- 2 The chart below shows estimates of UK tax receipts by category in the 2017–18 financial year.



Tax Revenue (£billion)

With reference to the chart above, explain the difference between direct and indirect taxation.

[4]

- 3 The table below shows selected information from the July 2018 labour market bulletin published by the Office for National Statistics (ONS). For simplicity, the data is rounded to the nearest thousand. Use the information in the table to answer the questions below.

Labour market data		Number of people (thousands)
Number of people in work		32 399
Number of people unemployed	by ILO (International Labour Organisation) method	1 411
	by Claimant Count method	898

- (a) Calculate the economically active population for the UK in July 2018. [2]
- (b) Calculate the ILO rate of unemployment for the UK in July 2018. [2]
- (c) Explain two reasons why the ILO unemployment figure in the UK is higher than the claimant count unemployment figure. [4]

- 4 The table below gives figures for Gross Domestic Product (GDP) and Retail Prices Index (RPI) for a country in 2017 and 2018.

Using the information in the table below, calculate the percentage change in real GDP between 2017 and 2018. [4]

Year	Nominal GDP(bn)	Retail Prices Index
2017	£790	110
2018	£1,037	125

- 5 During 2018 the Gross Domestic Product (GDP) of the USA was growing by 4.1%, its fastest rate in five years. In the same period, unemployment in the USA fell to its lowest level in 11 years. Some economists claim that these impressive figures are a direct result of President Trump's supply side reforms, such as deregulating energy supply and implementing corporate and income tax cuts.

With the aid of an appropriate diagram, explain why neoclassical economists consider supply side policies to be so effective in helping an economy meet its macroeconomic objectives. [6]

Section B (35 marks)

Answer all questions

The following article was written in August 2018. Read it carefully and answer the questions which follow.

6 The UK productivity puzzle

A new report warns that British businesses need to up their game and become more productive or risk going to the wall. The report comes as figures published by the Office for National Statistics (ONS) show just how poor UK productivity is compared to other major economies.

UK productivity, as measured by output per hour worked, is approximately 25% behind our main EU competitors such as France and Germany, meaning that it takes a British worker five days to produce what French and German workers achieve in four.

In 2017, the last year for which figures are available, UK productivity actually increased by 0.6%, its highest rate of growth since 2011. However, this rate was still well below our own long-term trend and below the rates of growth achieved in the US and elsewhere.

Fig. 1 below compares productivity growth in the G7 nations before and after the financial crisis, and illustrates just how poorly the UK has performed since 2008.

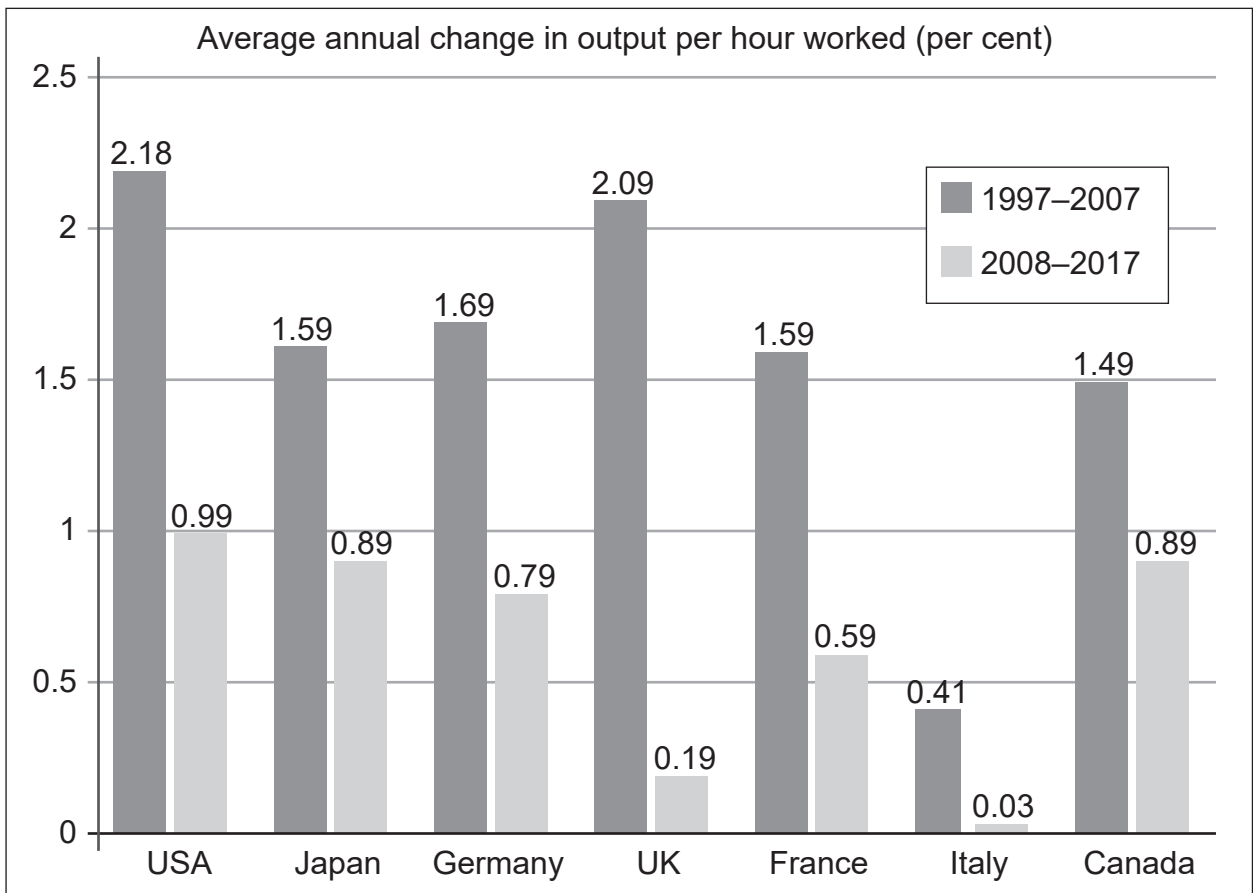


Fig. 1: Productivity growth in the G7 before and after the financial crisis

Economic commentator Richard Murray said that “politicians and business leaders have become increasingly worried about the poor productivity figures because rising productivity leads to increases in GDP, real wages and ultimately living standards. The absence of productivity growth since the financial crisis means that the millennium generation does not have a higher income than the generation before – the first time this has happened since the Second World War.”

Hal Varian, chief economist at Google, argued that we should not read too much into the productivity figures. He claimed that the output of a country is notoriously hard to measure, not to mention the number of hours worked. So if, for example, GDP is underestimated then so too will productivity.

Richard Murray, however, argued that it is naïve to dismiss the productivity figures as meaningless. “The UK’s poor productivity figures are not a reflection of accounting difficulties,” he said. “Rather they are a reflection of low levels of investment by the private sector, infrastructure bottlenecks and a poorly functioning education system which does not equip workers with the skills required by businesses. Closing the productivity gap should be the government’s number one economic priority as it is the only way we can ensure that we reverse the fall in living standards that has occurred since 2008.”

- (a) Using the information in **Fig. 1**, compare the growth in productivity in the UK before and after the 2008 financial crisis with that of the other G7 economies. [5]
- (b) Explain why it might be difficult to accurately measure the productivity of a country such as the UK. [6]
- (c) Analyse some of the reasons for low productivity in the UK. [9]
- (d) Critically examine the view that increasing productivity should be the UK government’s number one economic priority. [15]

Section C (20 marks)

Answer one question

- 7 In July 2015 the pound was trading on the foreign exchange markets at €1.44. By July 2018 its value had fallen to €1.12, with many commentators expecting it to drop further by the end of the year. While this change gave some comfort to exporters, it offered little comfort to UK holidaymakers.

Critically examine the likely impact on the UK economy of a fall in the value of the pound against the euro. [20]

- 8 Since 2013, the Bank of Japan has been introducing a variety of traditional and unorthodox measures to boost the country's inflation rate above the 2% target. These measures are a result of concerns that the economy may well be slipping back into a deflationary spiral similar to that experienced at the turn of the century.

Critically examine the view that deflation is a far greater economic problem than inflation. [20]

THIS IS THE END OF THE QUESTION PAPER

Sources:

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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	<i>Index number = (value in given year ÷ value in base year) × 100</i> <i>2018 index = (62 169 ÷ 48 125) × 100 = 129.18 (2002 = 100)</i>
2	<i>A direct tax is a tax levied on the income or wealth of an individual or organisation, and the person or firm on whom it is levied pays it directly to the government (HMRC). In the chart, income tax (£182 billion), National Insurance (£126 billion) and corporation tax (£43 billion) are direct taxes.</i> <i>An indirect tax is levied on spending on a good or service, so it is collected by the seller and the burden can be passed on to the consumer in higher prices. In the chart, VAT (£138 billion) and excise duty (£48 billion, e.g. on fuel, alcohol and tobacco) are indirect taxes.</i>
3(a)	<i>Economically active = employed + ILO unemployed</i> <i>= 32 399 000 + 1 411 000 = 33 810 000 people</i>
3(b)	<i>ILO unemployment rate = (ILO unemployed ÷ economically active) × 100</i> <i>= (1 411 000 ÷ 33 810 000) × 100 = 4.17%</i>
3(c)	<i>Firstly, the ILO measure (from the Labour Force Survey) counts anyone without a job who is actively seeking and available for work, whether or not they claim benefits. Many such people are not entitled to claim, for example people whose partner works more than 24 hours a week, or people with savings of over £16 000, so they appear in the ILO figure but not in the claimant count.</i> <i>Secondly, some groups choose not to claim or are ineligible, such as students looking for part-time or vacation work and people who left their job voluntarily</i>

(who may be sanctioned). They are counted as unemployed by the ILO survey but not by the claimant count, so the ILO figure (1 411 000) is higher than the claimant count (898 000).

4

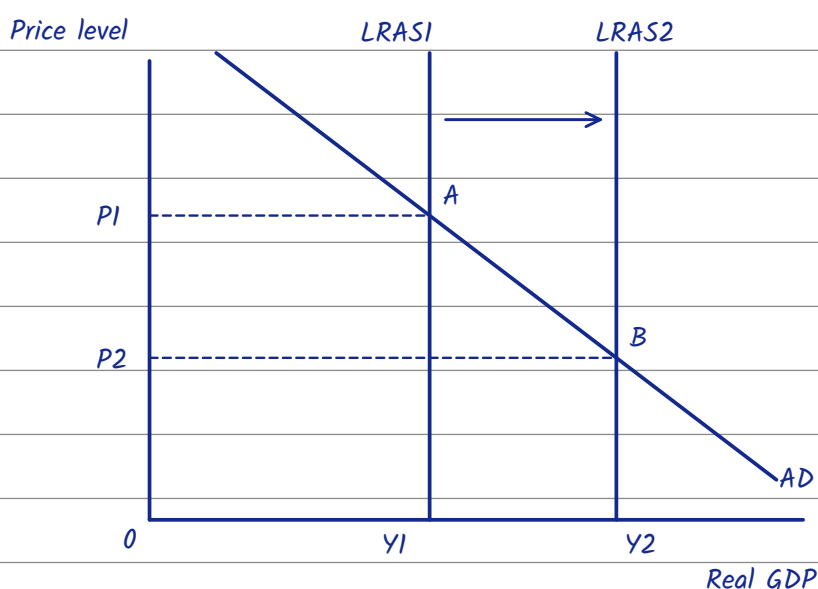
Real GDP 2018 at 2017 prices = nominal GDP $\times$ (2017 RPI $\div$ 2018 RPI)
= £1 037bn $\times$ (110 $\div$ 125) = £912.56bn

% change in real GDP = $(912.56 - 790) \div 790 \times 100$
= $122.56 \div 790 \times 100 = 15.51\%$

5

Supply side policies are government policies that aim to increase the productive capacity of the economy by improving the quantity and quality of the factors of production and the incentives in markets, e.g. deregulating energy supply and cutting corporate and income taxes, as Trump did. Neoclassical economists believe the LRAS curve is vertical at the full employment level of output, so in the long run real GDP is determined only by supply, not by AD.

Income tax cuts raise the reward for working, increasing incentives to work and the size of the labour force, while corporate tax cuts and deregulation raise post-tax profits and lower costs, encouraging investment and enterprise. This shifts LRAS1 to LRAS2 in the diagram below.



As the diagram shows, the economy moves from A to B: real GDP rises from Y1

to Y2, so the US can achieve sustainable economic growth (4.1% in 2018), and because more output is produced, more labour is demanded and unemployment falls (to an 11-year low). At the same time the price level falls from P1 to P2, helping to achieve low and stable inflation, and lower prices make US goods more competitive internationally, improving the current account of the balance of payments.

This is why neoclassical economists see supply side policies as so effective: unlike demand side policy, which in the long run only raises the price level when LRAS is vertical, they allow all the macroeconomic objectives to be met at the same time without conflict, although the effects take time to appear in the long run.

6(a)

All the G7 economies experienced a fall in productivity growth after the 2008 financial crisis, but the fall was most significant in the UK.

Before the crisis (1997 to 2007) UK productivity grew by 2.09% a year, the second highest in the G7, only 0.09 percentage points behind the USA (2.18%) and 0.4 percentage points above Germany (1.69%) and 0.5 above Japan and France (1.59%).

After the crisis (2008 to 2017) UK productivity growth fell to just 0.19% a year, a fall of 1.9 percentage points, the largest in the G7 (compared with falls of only 0.6 points in Canada and 0.7 in Japan). The UK is now second from bottom, above only Italy (0.03%), and 0.8 percentage points behind the USA (0.99%), 0.6 behind Germany (0.79%) and 0.7 behind Japan and Canada (0.89%).

6(b)

Productivity measures the amount of output produced per unit of labour input.

The output of a country is measured by its GDP, while labour input is normally measured either by total hours worked or by the number of workers in employment. Fig. 1 uses output per hour worked, so it is $GDP \div \text{total hours worked}$. There are two key reasons why this is difficult to measure accurately.

Firstly, it is difficult to measure the GDP of a country accurately. The UK has a relatively large services sector and a large public sector. Much public sector output, such as NHS treatment or education, is not sold at a market price, so its value is hard to measure and is often recorded at the cost of inputs. In services it is hard to capture improvements in quality, and free digital services such as Google search are not counted at all, as Hal Varian suggests. The hidden economy is also left out. If GDP is underestimated, productivity will be underestimated too.

Secondly, it is difficult to measure the number of hours worked accurately. The figure comes from surveys in which people may misreport their hours, unpaid overtime and work done at home or on mobile devices may not be recorded, and the hours of undocumented workers and those in the gig economy are hard to estimate.

Since productivity is a ratio of output to hours, if either the GDP figure or the hours worked figure is inaccurate, then so too will the productivity figure be, which makes international comparisons such as Fig. 1 less reliable.

6(c)

Productivity is output per hour worked, and UK productivity is about 25% behind France and Germany and grew by only 0.19% a year after 2008. There are several reasons for this.

Firstly, low levels of private sector investment. New machinery, equipment and technology make each worker more productive (capital deepening), but UK firms have been slow to invest, particularly since 2008, as uncertainty and weak demand reduced business confidence. Some economists argue that immigration kept labour costs low, which made capital relatively less attractive than hiring cheap labour. The UK also spends a smaller share of its GDP on research and development than most other G7 nations, so fewer new processes and products are developed.

Secondly, infrastructure bottlenecks. Successive governments have underinvested in road, rail and airport capacity and broadband, particularly around the south

east. Congestion and delays raise firms' costs and waste working hours, so output per hour is lower.

Thirdly, a poorly functioning education system, as Richard Murray argues. Britain has relatively high rates of adult functional illiteracy, fewer workers with degree-level skills than the US and fewer with intermediate and vocational skills than Germany and Japan, so workers lack the skills firms need (low human capital). Weak management and organisational skills also mean resources are used inefficiently.

Fourthly, low interest rates since 2008. Very low rates may have allowed inefficient 'zombie companies' to survive, slowing the process of creative destruction by which resources move to more productive firms, which drags average productivity down.

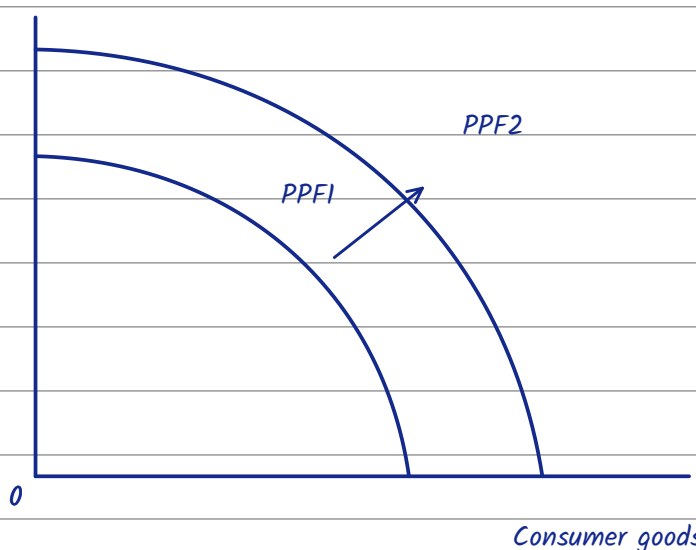
Other reasons include difficulty for small firms in accessing finance for investment, a lack of competition in some industries which reduces the pressure to cut costs and innovate, over-regulation according to free market economists, and the UK's relatively large public sector, where the absence of a profit motive means productivity growth tends to be slower than in the private sector.

Overall, the most important reasons are probably low investment in physical and human capital, since these determine how much each worker can produce.

6(d)

Productivity is output per worker or per hour worked. Some economists argue that raising it should be the government's number one economic priority because it means the economy can generate more output from the same inputs, increasing productive capacity and shifting the PPF outwards, as shown below, or the LRAS curve to the right.

Capital goods



Firstly, higher productivity lowers unit labour costs, so UK firms become more price competitive in global markets. Exports rise and imports fall, improving the current account of the balance of payments.

Secondly, lower average costs can be passed on to consumers as lower prices, reducing inflation without the need for higher interest rates and raising real disposable incomes.

Thirdly, efficiency gains raise profits, which can be reinvested in new capital and R&D, supporting the long-term growth of firms. Fourthly, if workers produce more, firms can afford to pay higher wages without raising prices, so real wages rise. As Richard Murray says, together these lead to higher GDP, real wages and living standards, and without productivity growth the millennium generation is no better off than its parents. In the long run productivity growth is the main source of sustainable economic growth, and higher GDP also raises tax revenue for public services.

However, there are strong arguments against making it the number one priority.

Firstly, ordinary citizens are often more concerned with unemployment and income inequality than with an abstract concept like productivity. Unemployment brings social costs such as poverty, crime and ill health, and reducing it may give greater social benefits in the short run. Indeed, higher productivity can cause unemployment in the short run if firms replace workers with machines, so

the objectives may conflict.

Secondly, the benefits of higher productivity may not be shared fairly. If the gains go mainly to profits and highly skilled workers, inequality may widen.

Thirdly, inflation and the balance of payments may need attention first: if inflation is high, as it was in 2017 after the fall in the pound, controlling it may take priority.

Fourthly, as Hal Varian argues, productivity is notoriously hard to measure, especially in services and the public sector, so it is difficult to target, and the 'puzzle' may partly be a measurement problem. Finally, policies to raise productivity, such as investment in infrastructure, education and R&D, are expensive and take many years to have an effect, so a government facing high debt may prefer to focus on other objectives.

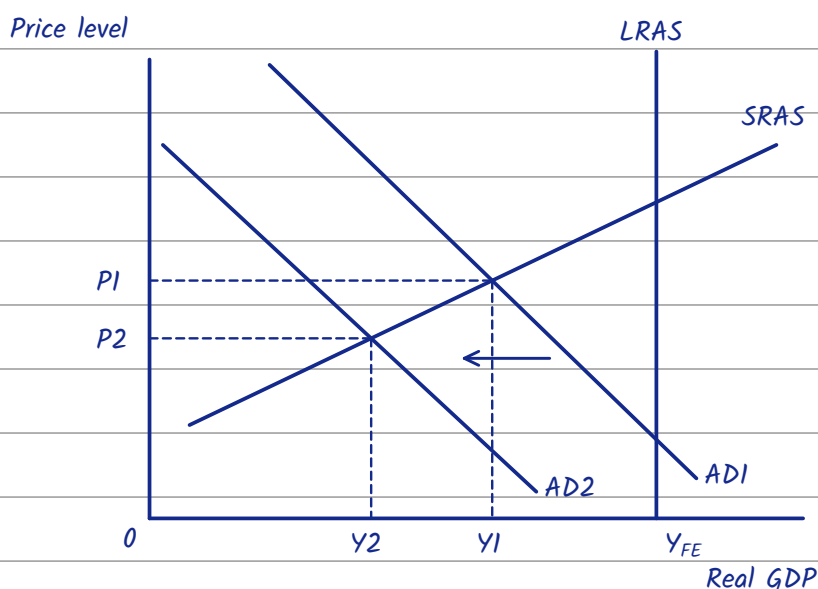
Whether productivity should be the top priority therefore depends on the time scale, on the state of the economy (in a deep recession with high unemployment, boosting AD is more urgent) and on whether the gains will be spread widely.

In conclusion, productivity growth is the only way to raise living standards sustainably in the long run, and with UK growth of only 0.19% a year since 2008 it is a serious weakness. It should be the government's main long-term priority, but not at the expense of other objectives in the short run: the government must still manage unemployment and inflation and use policies such as training to ensure the gains are shared.

8

Inflation is a sustained rise in the general price level, measured in the UK by the CPI, while deflation is a sustained fall in the general price level, i.e. a negative inflation rate. Because high inflation is regarded as a problem, some believe falling prices must be good. However, deflation can cause serious problems, as Japan experienced in the 1990s and early 2000s, which is why the Bank of Japan has used traditional and unorthodox measures such as negative interest rates and quantitative easing to push inflation above its 2% target.

Firstly, falling prices encourage consumers to delay purchases, particularly of big-ticket items such as cars and houses, as they expect goods to be cheaper in the future. Consumption is the largest component of AD, so AD falls from AD1 to AD2, as shown below.



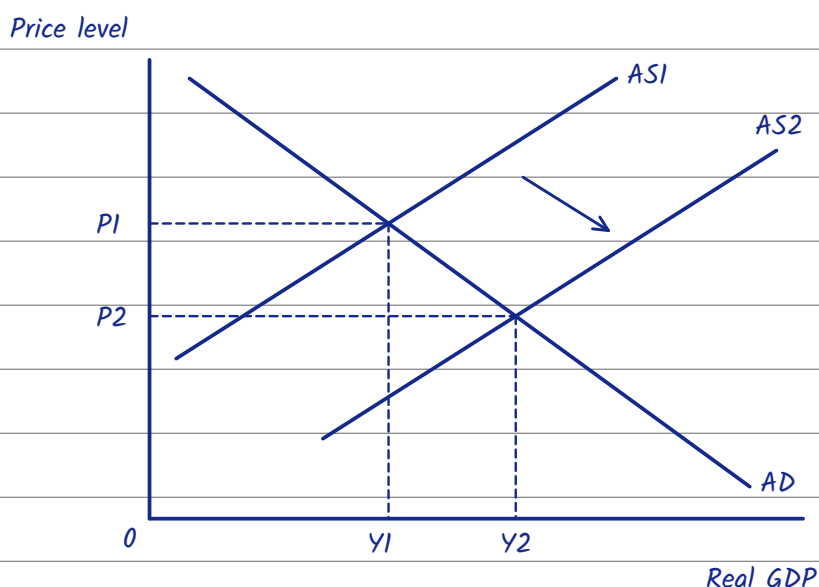
As the diagram shows, the price level falls from $P1$ to $P2$ and real GDP falls from $Y1$ to $Y2$, widening the negative output gap, so growth slows and demand deficient unemployment rises. Firms then cut prices and wages further, which reduces incomes and spending again, creating a deflationary spiral.

Secondly, deflation raises the real rate of interest (nominal rate minus inflation). Since nominal rates cannot easily fall below zero, deflation acts as an unintended tightening of monetary policy, reducing investment and consumption and so AD, employment and growth. This also makes monetary policy ineffective, as Japan found.

Thirdly, deflation increases the real value of debt. Households, firms and governments with large debts find them harder to service, so they cut spending, and some default, which can harm banks. Fourthly, since nominal wages are 'sticky' downwards, deflation raises real wages, and classical economists argue this causes real wage unemployment.

However, inflation also causes serious problems. Higher inflation than in other countries makes domestic goods less internationally competitive, so exports fall

and imports rise, causing a current account deficit. This is a withdrawal from the circular flow which reduces AD, employment and growth. Inflation creates uncertainty, which reduces investment by firms, lowering AD and also shifting LRAS to the left in the long run. It redistributes income unfairly: people on fixed incomes, such as pensioners, suffer a fall in real income, and savers lose as real interest rates fall and the real value of their savings is eroded. People may feel worse off even when they are not, reducing consumer confidence, and firms face menu costs of changing price lists. In extreme cases such as hyperinflation in Zimbabwe, money loses its function and the economy collapses. Moreover, deflation is not always harmful. If one country has deflation while others have inflation, its goods become more competitive: Japan's deflation in the early 2000s was accompanied by a sharp rise in exports. And if deflation is 'benign', caused by an increase in efficiency or lower costs (e.g. new technology or cheaper oil), aggregate supply shifts to the right, as shown below.



Here the price level falls from P_1 to P_2 while real GDP rises from Y_1 to Y_2 , so consumers gain higher real incomes and employment can rise. This is the opposite of the harmful demand-led deflation shown earlier.

Whether deflation is a far greater problem than inflation therefore depends on several factors. It depends on the cause: demand-led deflation is very damaging, but supply-led deflation can be beneficial, just as cost-push inflation is more

harmful than mild demand-pull inflation. It depends on the magnitude and duration: a brief, mild fall in prices, as in the UK in 2015, did little harm, whereas persistent deflation becomes embedded in expectations. It depends on the level of debt in the economy, and on the rate of inflation it is compared with: low, stable inflation of around 2% is harmless and even helpful, but high or hyperinflation is clearly more damaging than mild deflation.

In conclusion, I would agree that persistent, demand-led deflation is a greater problem than low or moderate inflation, because it is self-reinforcing and much harder to cure: interest rates cannot be cut far below zero, so policy loses its power, as Japan's 'lost decades' show. Inflation can be controlled by raising interest rates. However, it is not true in every case, since benign deflation can be beneficial and very high inflation is extremely harmful, so deflation is a far greater problem only when it is caused by falling demand and expected to persist.