



GCE AS/A LEVEL

2520U20-1



S23-2520U20-1

MONDAY, 22 MAY 2023 – MORNING

ECONOMICS – AS unit 2
Economics in Action

2 hours

2520U201
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ADDITIONAL MATERIALS

In addition to this examination paper, you will need:

- a calculator;
- a WJEC pink 16-page answer booklet.

INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen.

You may use a pencil for graphs and diagrams only.

Answer **all** questions.

Write your answers in the separate answer booklet provided.

INFORMATION FOR CANDIDATES

The number of marks is given in brackets at the end of each question.

You are reminded of the necessity for good English and orderly presentation in your answers.

Answer **all** questions.

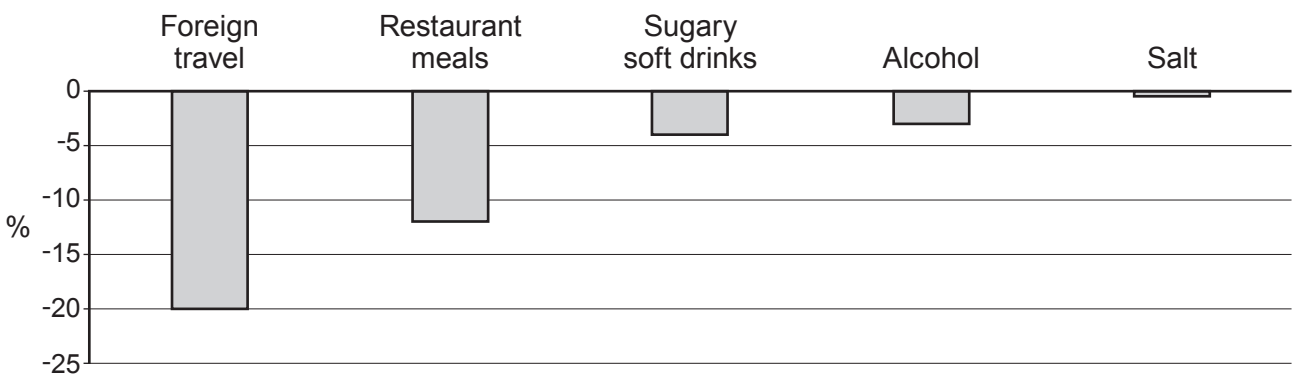
1. SIN CITY

Many governments use indirect taxes to discourage people from consuming goods that result in negative externalities, such as alcohol. These are sometimes called sin taxes. In recent years, some politicians have also turned their attention to sugar.

Obesity is on the rise across the world. For example, 40% of people in the US today are obese, up from around 15% in 1980. A number of cities in the USA such as Philadelphia have introduced taxes on sugary soft drinks in order to try to reduce the growing obesity crisis. The hope is that these taxes will both raise revenue and reduce how much sugar people consume. But do sin taxes even work?

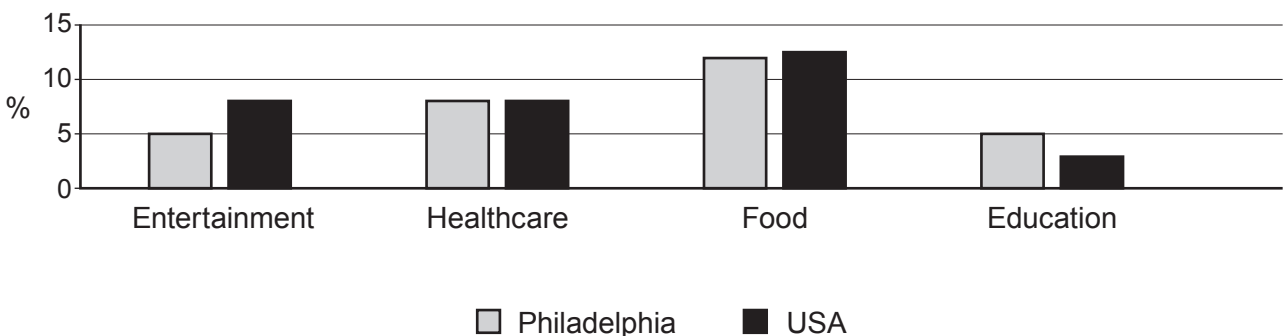
Several academic studies have tried to calculate the responsiveness of demand for various goods to a 5% increase in price. The results of those studies are shown in **Figure 1**.

Figure 1: US estimated % change in sales associated with a 5% increase in price



Philadelphia is a large city situated on the east coast of the USA. It is the sixth most populous city with 6.2 million people living in the metropolitan area and it has an estimated GDP of \$432 billion. Philadelphia's three largest industries are financial services, healthcare and biotechnology so it is not surprising that its GDP per capita is much higher than the overall US GDP per capita of \$57 467.

Figure 2: Percentage of average household expenditure spent on selected categories of goods and services: Philadelphia compared with the USA as a whole



In the USA, cities are able to set their own tax rates. Philadelphia has recently introduced new taxes on alcohol and sugary soft drinks. These are shown below in **Table 1**.

Table 1

Alcohol tax	Sugary soft drinks tax
10% of the sale price	\$0.015 per fluid ounce (there are 12 fluid ounces in a regular can of soft drink)

- (a) Using the data in **Figure 1**, calculate the estimated price elasticity of demand (PED) for the following goods **and** state whether they have price elastic or price inelastic demand.
- (i) Foreign travel [2]
- (ii) Sugary soft drinks [2]
- (b) (i) Using the data, calculate Philadelphia's GDP per capita. Give your answer to the nearest whole number. [1]
- (ii) With reference to the data, outline why entertainment could be considered an inferior good. [3]
- (c) To what extent does the consumption of alcohol **and** sugary soft drinks result in negative externalities? [10]
- (d) (i) Identify **one** ad valorem tax from the data and draw a diagram to illustrate its effect on the market supply curve. [2]
- (ii) Using a mathematical example, discuss whether indirect taxes are always regressive. [10]
- (e) Consider whether the imposition of an indirect tax on sugary soft drinks raises revenue for the government **and** reduces the amount of sugar that people consume in Philadelphia. Use an appropriate diagram in your answer. [10]

2. THE WELSH ECONOMY

1 The construction industry in Wales

Welsh Gross Domestic Product (GDP) increased by 0.4% in the second quarter of 2019. Over these three months, the agriculture and services sectors grew by 3.8% and 2.0% respectively, while the construction sector's output fell by 6.7%. The Construction Industry Training Board (CITB) had previously estimated that the construction sector would achieve an average annual growth rate of 4.6% in Wales during the years 2019 to 2024. This was because at the time of the forecast, interest rates were low, banks were lending and there was a clear need for housing. However, the Managing Director of a house-building company based in Denbighshire did say: "The problem we have is just getting enough supply of land. If we can't get more land, we can't grow further."

Approximately 8% of the Welsh workforce are employed in construction in a large variety of jobs that offer very different incomes:

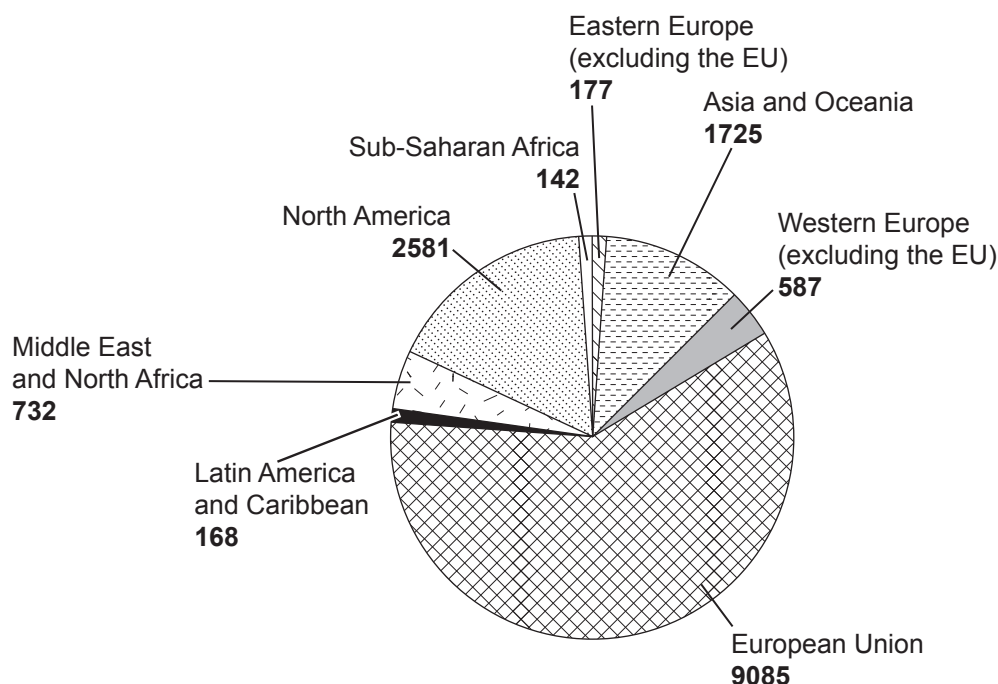
Table 1: Annual income ranges for selected jobs in the construction industry

Job	Income range (£)
Labourer	13 000–26 000
Carpenter	17 000–28 000
Plumber	18 000–34 000
Architect	18 000–50 000+
Building Surveyor	21 000–60 000+
Civil Engineer	23 000–50 000+

Welsh exports

The value of exports for Wales in 2021 was £15.2 billion, up 12.4% compared with the previous year. Germany continued to be Wales' top export destination, while exports to the USA were up 22.3% compared with the previous year, and exports to the Republic of Ireland – worth £1.7 billion – had risen by 45.3%.

To some extent, this was as a result of the pound having lost around 10% of its value against the euro and US dollar since the UK voted to leave the EU in 2016.

Figure 1: Destination of exports from Wales, £ million, 2021

20 Other economic indicators

The annual Consumer Price Index (CPI) inflation rate for the UK was 5.4% in December 2021, having climbed sharply from a figure of 0.6% in December 2020. The unemployment rate in Wales was 3.1% for the three months to December 2021. This was 0.7 percentage points down on the previous quarter and 1.4 percentage points down on the previous year. Overall, Wales had a trade deficit of £0.9 billion in 2021.

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- (a) (i) Define the term **Gross Domestic Product (GDP) growth**. [2]
- (ii) The data states that the construction sector is likely to ‘achieve an average annual growth rate of 4.6% in Wales during the years 2019 to 2024’ (lines 5–6). Evaluate the factors that could have caused high growth in this industry. [6]
- (iii) Discuss the likely causes of wage differentials between construction sector jobs in Wales as shown in **Table 1**. [8]
- (b) (i) With reference to **Figure 1**, calculate the percentage of total exports from Wales that went to the European Union over the period shown. Give your answer to two decimal places. [2]
- (ii) Evaluate the likely effects of ‘the pound having lost around 10% of its value against the euro and US dollar since the UK voted to leave the EU in 2016’ (lines 18–19) on Welsh households **and** firms. [10]
- (iii) To what extent might an improvement in Wales’ trade balance contribute to the attainment of other government economic policy objectives? [12]

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