4.3 Inflation and unemployment

Name: _____ Class: _____ Date: _____ **Total: 14 marks**

KEY WORDS consumer price index • Fisher equation • Phillips curve

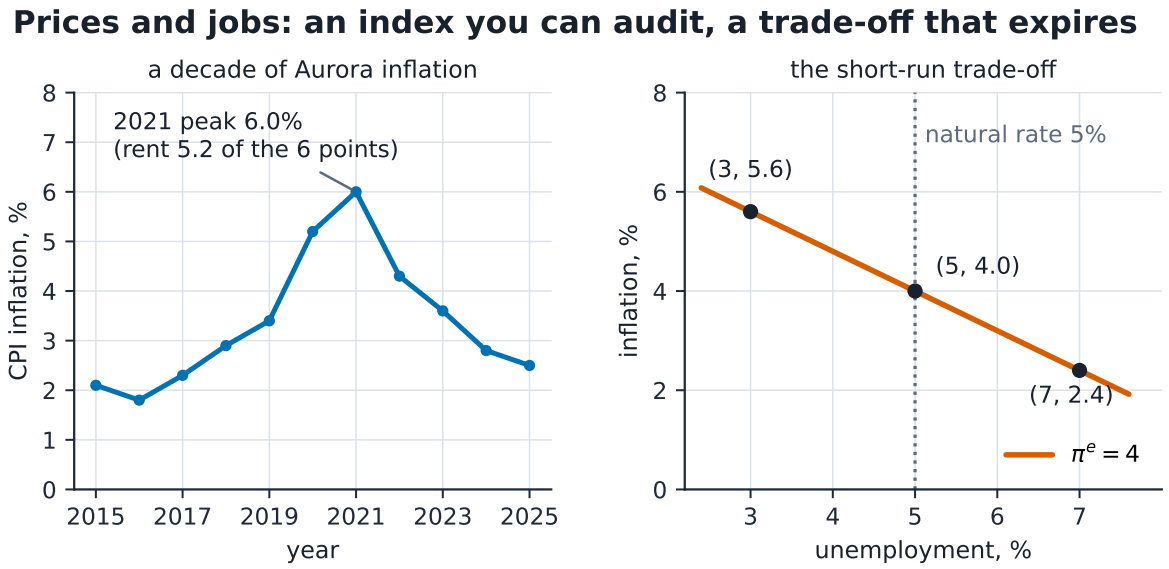
Objective

Compute a price index from a basket and attribute the headline to items; apply the Fisher equation; read the Phillips trade-off and the labour statistics honestly.

1 Key knowledge and worked examples

■ The index, the equation, the trade-off

CPI = cost of the fixed basket relative to base 100; contributions are weighted item rates. **Fisher** : $(1+i) = (1+r)(1+\pi)$. **Phillips** : $\pi = \pi^e - \beta(u - u^n)$ – a lease, not a deed.



An index you can audit item by item; a trade-off that expires when expectations move

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■ **Worked example. Aurora's basket**

Basket 920 → 975: CPI 106.0, inflation 6.0% ✓; rent contributed 5.22 of the 6 points ✓. Fisher at 5% nominal, 3% inflation: real = $1.05/1.03 - 1 = 1.94\%$ ✓. Phillips ($\pi^e = 4$, $\beta = 0.8$, $u^n = 5$): u = 3 → $\pi = 5.6$ ✓.

2 Practice

A country's basket: 12 loaves at £1.50 (now £1.65), one month of rent at £600 (now £672), 30 bus rides at £4 (now £4.20).

2.1 Compute the basket cost in both years, the CPI, and inflation. [3]

2.2 Compute each item's rate and weight, and attribute inflation to the three items in points. [4]

2.3 A deposit pays 8% and inflation is 5%. The Fisher real rate (two decimals)? And the naive subtraction answer? [2]

2.4 With $\pi = 3 - 0.7(u - 4)$: compute inflation at u = 6 and at u = 4, and state what u = 4 is called. [3]

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2.5 Unemployment falls from 6.2% to 5.8% while participation falls from 63.0% to 61.5% of working-age adults. In two lines, say why the "improvement" may not be one. [2]

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