

Commentary on the retail price index exercises

The key calculations are shown in Table 1a:

Table 1a	Alcohol and tobacco	Leisure services	Clothing and footwear	Other items	All items	Henrietta (nstsah)	Real price of clothing & footwear
Weights	12	10	7	71	100		
1994	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1995	105.6	103.2	100.2	103.5	103.5	103.2	96.8
1996	110.7	107.0	99.4	105.7	106.0	105.1	93.8
1997	115.9	112.2	100.2	108.7	109.3	107.9	91.6
1998	123.0	117.1	99.6	112.1	113.0	111.0	88.1
1999	132.6	121.9	96.9	112.5	114.8	111.1	84.4
2000	138.1	127.9	93.3	115.9	118.2	113.9	78.9

- 1 The All items index is calculated by multiplying each component price by its weight, adding these up, and dividing by the sum of the weights. For example, for 1995, the calculation is $105.6 \times 12 + 103.2 \times 10 + 100.2 \times 7 + 103.5 \times 71$, all divided by 100.
- 2 Henrietta's price index is the weighted average of the Clothing and footwear and "other items" prices. For example, for 2000 the calculation is $93.7 \times 7 + 115.9 \times 71$, all divided by 78 = 113.9.
- 3 The final column in Table 1a shows a real price index for clothing and footwear. So, for 1999 the calculation is $100 \times 96.9 / 114.8 = 84.4$. It is clear that the real price of clothing has fallen quite substantially during this period, finishing more than 20% lower in 2000 than in 1994. This is not very different from what has actually been happening in the UK in this period.
- 4 Figure 1 plots the results of the calculations for inflation. The decline in the real price of clothing is readily apparent. Notice also that Henrietta consistently experiences lower inflation than the "representative" person, and does especially well in 1999. When we think about the All items Retail Price Index, we must remember that it is only an average, and that not all groups within society will

experience inflation at the same rate. Of course, I have designed the exercise such that Henrietta does really well.

- 5 (a) Using the 2000 weights, we get a value for the aggregate price of breakfast items as being 97.85 (i.e. $(96.5 \times 20 + 101.0 \times 20 + 90.9 \times 10 + 101.2 \times 10) / 100$)
- (b) ... but using 2001 weights, the result is 100.55.
- (a) The results indicate that the cost of the 2000 breakfast has fallen by 2.15%, but the 2001 breakfast is more expensive in 2001 than 2000 – albeit only 0.55% higher. This demonstrates that the weights do matter. The Retail Price Index is based on calculating the changing cost of a fixed bundle of goods. But if consumers drastically change their consumption patterns in response to changing relative prices, then the RPI will not be a reliable indicator of the cost of living. In other words, the RPI does not take into account the substitution effects, which is one of the coping strategies for dealing with changing prices. This also helps to explain why the RPI measure of inflation (which is a *Laspeyres index*) can sometimes give different results to the GDP deflator, which is a current-weighted (*Paasche*) index. The RPI weights are changed annually to try to overcome the difficulty.

Figure 1: Inflation

