Case study 1: OTI issue

Product description	Previous price	Current price
International student fees – Bachelor of Business at AUT	$14 300	$15 800

This item is priced from a publication “Study in New Zealand” which is published annually by Education New Zealand.

In the 2003 publication there is no Bachelor of Business degree but there is a Bachelor of Commerce degree. The Bachelor of Business degree was a 4 year full time course in the previous year’s publication, whereas the Bachelor of Commerce degree is a 3 year full time course in the 2003 publication. No mention was made of any changes to the content of the course.

This component feeds into the OTI services index.

HOW WOULD YOU DEAL WITH THIS?

ANSWER TO CASE STUDY 1:

The respondent phoned me back and explained that the course itself and what the student gets out of it is not different but **the content was downsized a bit to bring it in line with other universities. The credits were lowered to make the course a three year course.** He also advised that the students do **commercial law, business economics and e-business in addition to the subjects I mentioned.** He doesn't think we should be making any adjustment on the content but should account for the period because in effect the student now pays $15 800 p.a. over three years ($47 400) instead of $14 300 p.a. over four years ($57 200). (Assuming the price don't change again).

Solution:
So this quarter we should show the saving over the total period of $10 200 which equates to a fall of 17.13% ((47300/57200)-1*100). To get this decrease we should have a backprice of $19066 for the 2002 year (calculated as 15800/0.8287). This will give us a fall of 17.13% for the year (calculated as (15800/19066-1)*100).

If we decide to adjust the price for the fall in the quality of the course because they had to lower the credits per course (and the contents have been downsized), we should add a percentage for this again. (Based on the logic that if something fell in quality (assuming no price change) the consumer feels he is paying more than he should and is in effect experiencing a "price increase").

The respondent said on 19/05/2003 that the credits are not linked to the fees. This course has 120 credits per year and therefore the credits were lowered from 480 to 360. We decided to show: the price increase from $14300 to $15800 and adjust it down again with the amount saved since the course is now only 3 years instead of 4. That gives us an increase of 10.5% minus 17.13% = minus 6.63% price movement. We sort of account for the fall in quality but don't believe the fall in quality is worth the full fall in total fees.

Sonia 4/6/2003: We decided to develop questionnaires for all the uni's in December 2003.

Case study 2: BPI (vertical (dis)integration of firms)

Product description	Previous price	Current price
Vanilla Essence – artificial Standard pack 4kg Vanilla flavour N.I. Price per Kg ex factory	$32.00	$18.64

On the question for reasons for change, the respondent mentioned: “now supplied to distributor who requires margin for market development and maintenance. “

This item feeds into both the outputs indexes and inputs indexes in the PPI.

HOW WOULD YOU DEAL WITH THIS?
What sort of questions would you ask the respondent?

ANSWER TO CASE STUDY 2:

QUESTIONS TO ASK:

Who are your main customers?
What types of vanilla essence products do you manufacture and sell?
Can you provide a breakdown of the different products, showing the customer, volumes and prices?
Is this product still sold directly to manufacturers or only to the distributor?
How different is the price to different customers?

Based on the answers to these questions a decision will be made whether the product should be replaced with another one that is still sold directly to other manufacturers or whether an additional respondent needs to be surveyed for the input price.

Solution under normal circumstances.

Split the pricing for the output and input components by surveying two outlets – one outlet for the output price of manufacturing (from the current respondent) and the new distributor for the input price (which should be at a higher price to account for the margin for market development and maintenance).

If this additional transaction captures a large part of the wholesale market it might be necessary to create an additional wholesale sub-index and adjust the weights of the sub-indexes of the wholesale industry. Else just leave the adjustment until the indexes are re-weighted during its normal cycle (approx every 5 years). In this case the weight is only 25 out of 10 000 so it would not warrant a re-weight of the industries.

What really happened:

Discussing further with the respondent (16/6/2003; 1620), another solution was found.

The price of the product in question was being marketed to a minor customer. This is the side of things that has been divested. The respondent continues to supply the bulk of this product to ice-cream manufacturers. This is the product that should be surveyed. A correct back price for this product was obtained and the description was adjusted to account for this change.

Case study 3: Items used in both inputs and outputs indexes.

Product description	Previous price	Current price
Imported synthetic sewing thread F743/120 core spun synthetic cotton, Coated on 7 000 metre cones. Coloured. Ex Australia. Landed cost per 100 cones.	$603.44	$866.64

On the question for reasons for change, the respondent mentioned: “Supplier’s or manufacturer’s price

This item feeds into both the outputs indexes and inputs in the PPI.

It also feeds into the manufacturing deflators we provide to Christchurch.

HOW WOULD YOU DEAL WITH THIS?
(clue: “use of the price in different indexes)
What sort of questions would you ask the respondent?
(clues : “Ex Australia”, “landed cost”)

ANSWER TO CASE STUDY 3:

It is clear from the information that the price of this product is not used correctly in the indexes. This is the price for an imported product, which surely can't fit into an outputs index. After further investigation it was found that the original item was replaced a long time ago and when the replacement was done, the use of the price was not properly investigated.

QUESTIONS TO ASK:

Why is the supplier's price higher?
Are all the specifications of the product still the same (specification of the cotton, colour, size of cone, number of cones)?
Is this representative of all cotton imported into NZ?
Did the mode of transport of the product to NZ change?
Are there any other additional costs included in this price which wasn't in the previous price (insurance, freight etc)
Is the product still imported from Australia?

It was established that the specifications are all unchanged, the product is still mainly imported from Australia but that instead of shipping the product, it was sent by courier (air freight) and that additional insurance had to be paid because of product being sent by air freight.

IDEAL ANSWER:

1. The price should be removed from the outputs indexes and the other items feeding into those indexes should be re-weighted.
2. If the item is representative of all imported cotton thread, the specifications should be fixed to reflect mode of transport, all costs (insurance and freight). The use of the item in the indexes should be established since an OTI index measures items at CIF whereas an inputs PPI measures items ex factory costs (which excludes any transport, insurance etc.) The latter items (transport, insurance) are measured as additional items in the PPI inputs indexes and if the cost of the item includes these you will have double counting.

Case study 4: Wholesale vs retail values:

Product description	Previous price	Current price
Toyota Hi-lux 4x4 3.0 C/C M - Ex-plant – comp10008944 - Wholesale price excluding excise duty – comp 10008945 - All prices excluding GST – comp 10008946	 $22 598.66 $31 908.89 $36 888.89	 $24 253.04 $31 908.89 $36 888.89
Assembly fee per vehicle: Toyota Hi-lux 4x4 3.0 diesel – comp 10004973	$374.66	$1852.04

On the question for reasons for change, the respondent mentioned: "The majority of changes to assembly fee, CIF + landed cost and wholesale price excluding excise duty is due to minor spec changes/new face lift models for Echo, along with new local costs reflecting the new 2003 fiscal year. An example of this is Corolla where components cost are down due to decreased audio costs. Hilux 4x4 has had air conditioning included as standard. "

(Note we also ask for prices of the Echo and Toyota on the same questionnaire but these products are not part of this example).

HOW WOULD YOU DEAL WITH THIS?
What sort of questions would you ask the respondent?

ANSWERS TO CASE STUDY 4:

IF WE ASSUME NOTHING ELSE CHANGED FOR THE 4X4 EXCEPT THE ADDITION OF THE AIR-CONDITIONING UNIT:

Outlet 2158
Components: 10004973; 10008944; 10008945; 10008946

The Toyota Hi-Lux model is now sold with air conditioning as a standard feature.

The air conditioning unit and some other minor features are added in New Zealand; the rest of the vehicle is assembled overseas.

The assembly fee per vehicle (i.e. modifications in New Zealand) has risen from 374.66 to 1,852.04.

The total price ex. plant has risen from 22,598.66 to 24,253.04. Part of this increase reflects the air conditioning; the other part reflects changes in supplier costs.

Toyota New Zealand has decided to absorb the cost of installing the air conditioning. Their rationale is that this makes the vehicle more competitive in a difficult market. Thus neither the wholesale nor retail price has changed.

Proposed resolution:
Starting at the end of the "Stage of Production" chain, at the retail end, it is clear that there has been a quality improvement and it is necessary to show a price decrease.

<u>Component 10008946 - Retail trade : retail price Toyota Hi-lux</u>
Feeds to CGPI transport equipment (CEPQ.S2EC).
Feeds to Retail Outputs (PPIQ.SUG)
Feeds to Wholesale trade output (PPIQ.SUF)
Feeds to Mining inputs (PPIQ.SNB)
Feeds to Mining outputs (PPIQ.SUB)
Feeds to Manufacturing outputs (PPIQ.SUC)
Using the traditional quality change model for vehicle adjustments and an assumed perceived (client) value of $1,500 ($1,333 excl. GST) for the air conditioning, a back price of $38,221.89 is assumed for the retail price.

<u>Component 10008945 - Wholesale price</u>
Feeds to nothing.
The problem becomes trickier for the wholesale price. A mark-up of 15.6% (31,908 to 36,888) is still in place for the vehicle dealer. It would seem reasonable to apply this to the back wholesale price. Thus 38,221.89 less a 15.6% mark-up is 33,063.91.

<u>Component 10008944 - Ex. plant price</u>
Feeds to Inputs to public administration and defence (PPIQ.SNM)
What of the ex. plant cost to Toyota New Zealand? According to Toyota New Zealand this price has risen from 22,598.66 to 24,253.04. However, this is the cost of an improved vehicle. Clearly, as an input to this index, the price change should reflect the greater quality. Thus a traditional vehicle adjustment will be effected following

the production cost method. The total cost of the air-conditioning unit will be deducted which is assumed to be1,654.38 (24,253.04 – 22,598.66) and the price will show no change.

Component 10004973 - Assembly fee

Feeds to Retail trade inputs.

Here we should assume no change, for the reason that, on the output side, the price change has been spliced out. If we assume a price change on the input side then we have created a change in profit margin that has no basis in reality. Thus the assembly fee remains constant at 1,852.04