

---

# Producers Price Index

for

# Air Passenger and Freight Transport Services

by

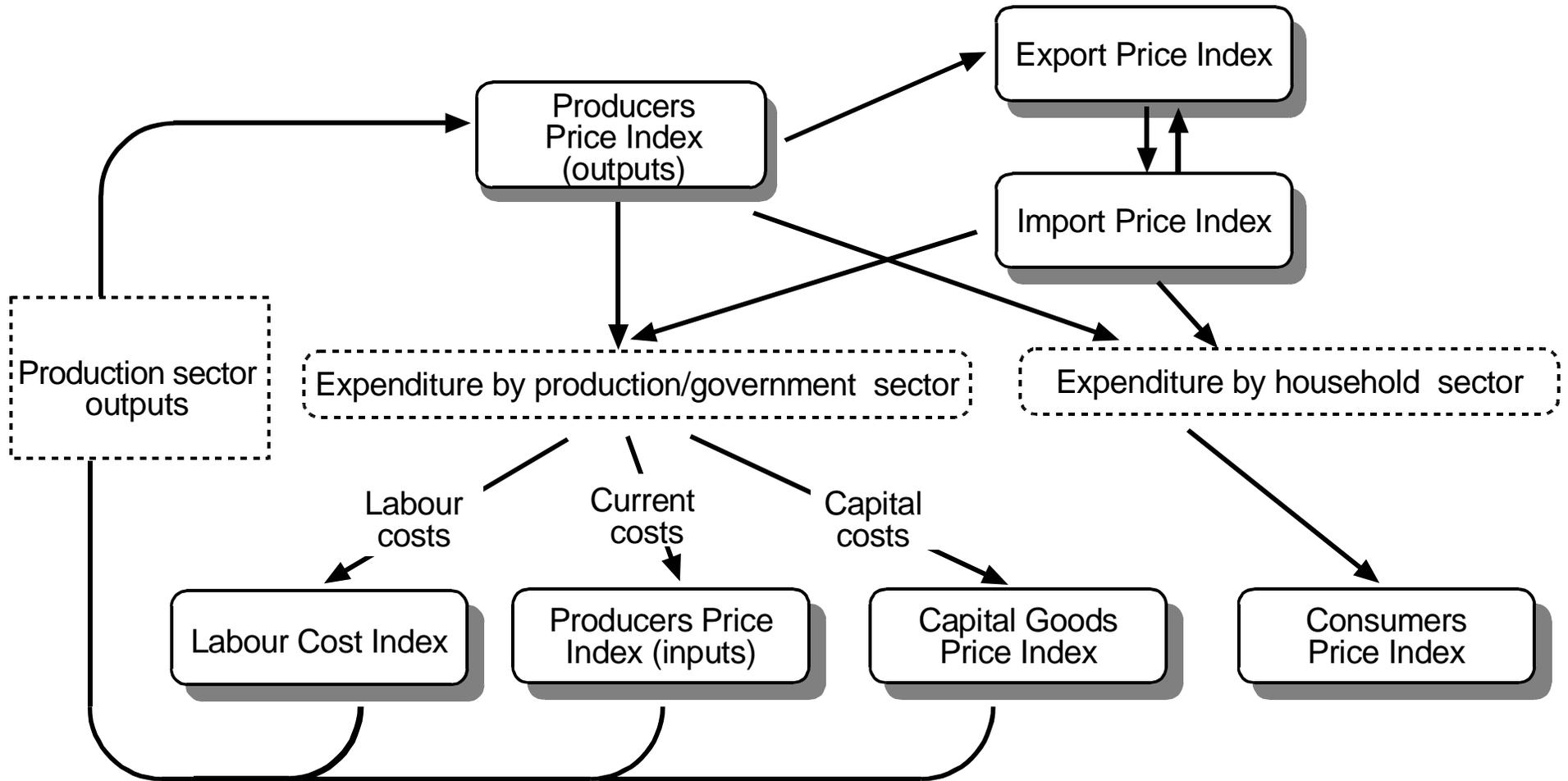
Sonia Collins

# Overview of Presentation

- Use of indexes
- Conceptual base: PPI
- Redevelopment project
- Industry structure
- Classifications
- Data model
- Sample design
- Technical concerns
- Survey vehicle
- Questions / Answers



# Use of indexes



# Conceptual Base: PPI

- **Outputs: Gross output (SNA93)**
  - *Theoretical base 1: basic prices = factory gate (IMF PPI manual); or*
  - *Theoretical base 2: producers' prices (SNA93)*
- **Inputs: Intermediate consumption (SNA93)**
  - *Theoretical base: purchasers prices (IMF PPI manual)*
- **Theoretical difference – inputs vs outputs if same transaction**
  - *Margins*
  - *Non-deductible taxes*
  - *Transport costs*
  - *Subsidies*



# Conceptual Base: PPI Outputs Indexes

- “Gross Outputs”- practical base

Inclusions	Exclusions
Primary Products	Interest and dividends
Manufactured Goods	Royalties and patent fees
Revenue from renting and leasing	Receipts from insurance claims
Provision of Services	Government cash grants and subsidies
Own account capital formation	GST and other indirect taxes
Margins on goods purchased for resale	

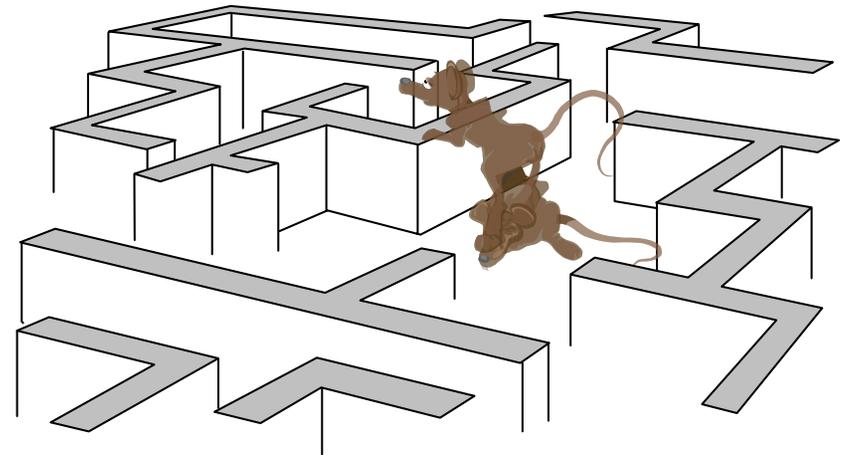
# Conceptual Base: PPI Inputs Indexes

## ● “Intermediate Consumption” – practical base

Inclusions	Exclusions
Materials	Wages and salaries
Fuels and electricity	Capital expenditure
Transport and communication	Rates
Commission and contract services	Royalties, patent fees
Rent and lease of land, buildings, plant etc.	Bad debts and donations
Business services	Accident Compensation Corp levies and other government charges
Insurance premiums less claims	

# PPI redevelopment project: 2004-2008

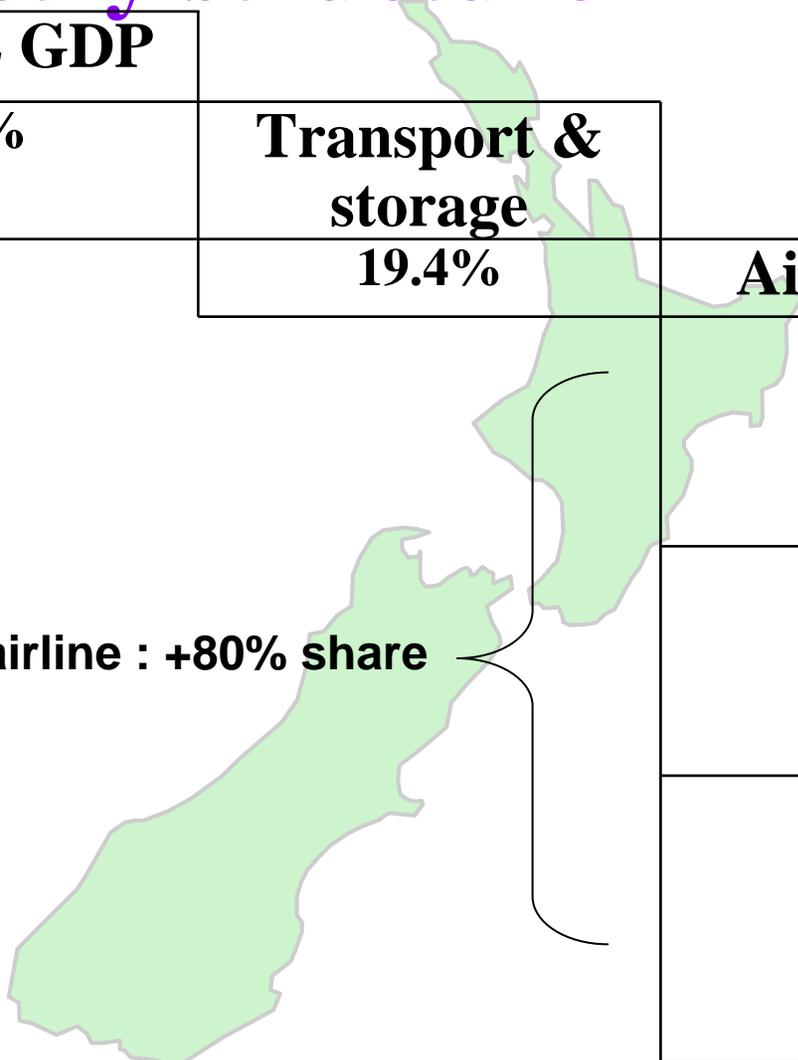
- **Collins review in 2002**
- **Focus: Commodity indexes**
  - *New set of commodities*
  - *Reweight, rebase*
  - *New respondent sample*
  - *New items-to-price sample*
    - ◆ *Methodologies – best practise*
- **Transport and storage industry**
  - *September 2005*
- **Other industries**



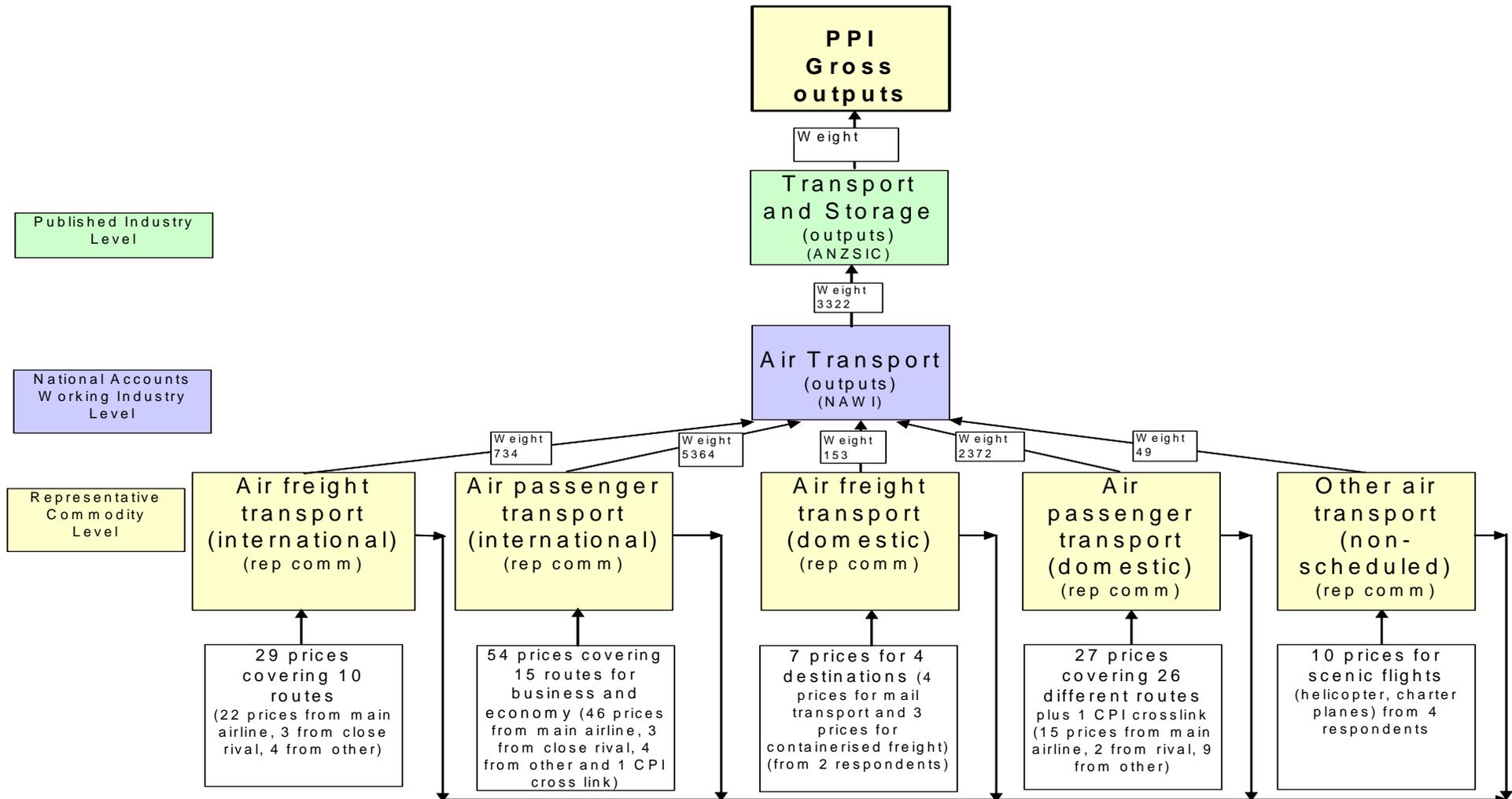
# Industry structure

<b>TOTAL GDP</b>			
<b>5.0%</b>	<b>Transport &amp; storage</b>		
	<b>19.4%</b>	<b>Air transport</b>	
		<b>84.0%</b>	<b>International scheduled passenger &amp; freight</b>
		<b>12.0%</b>	<b>Domestic scheduled passenger &amp; freight</b>
		<b>4.0%</b>	<b>Non-scheduled domestic &amp; international passenger &amp; freight</b>

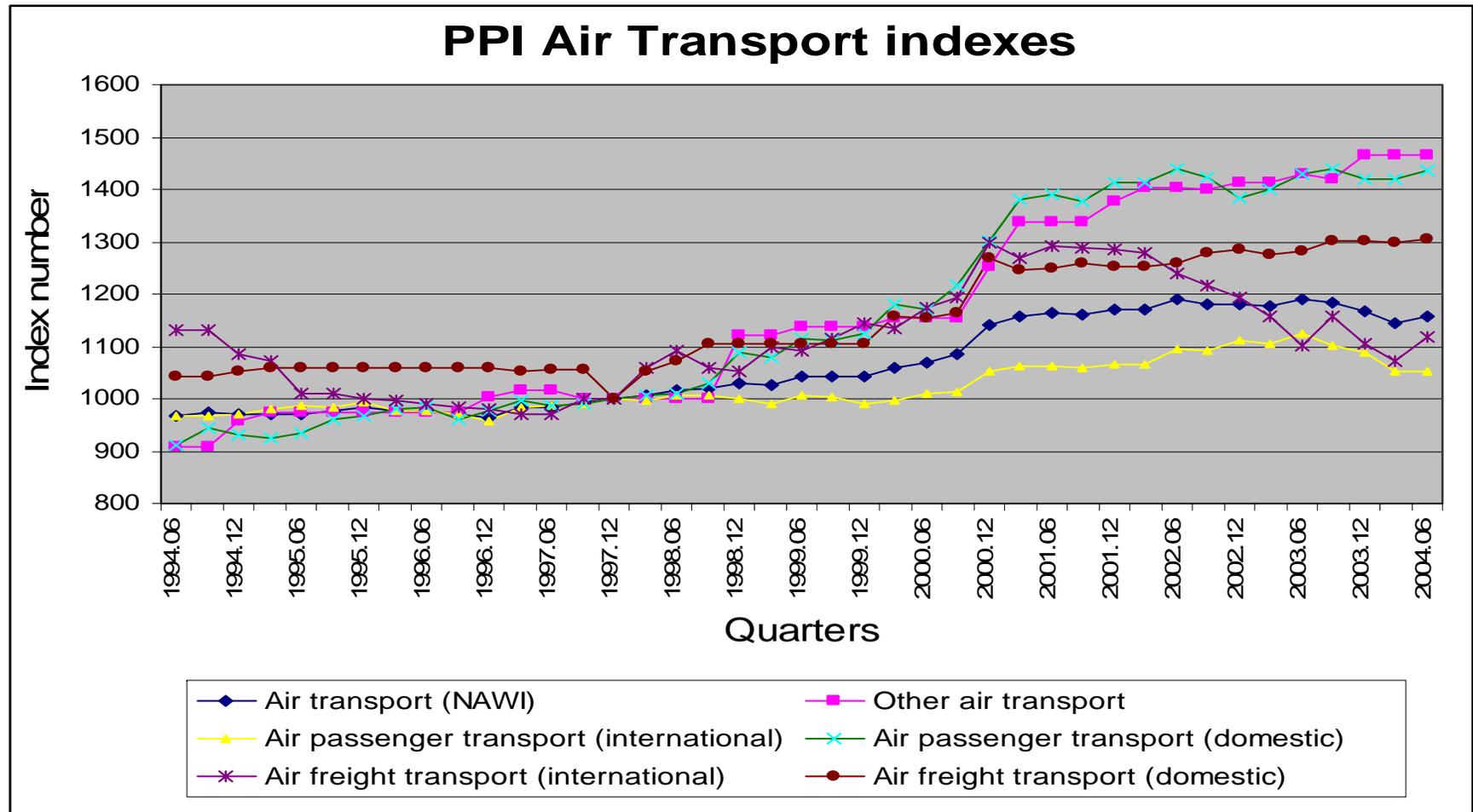
One airline : +80% share



# Flow diagram: Air transport



# Graphs: Index series - Air transport



# Classifications

<b>ANZSCC96 (draft CPC)</b>	<b>ANZSPC01 (final CPC)</b>
<b>73 Air transport services</b>	<b>66 Air transport services</b>
<b>731 Passenger transportation by air</b> <b>731.10 Scheduled passenger transportation by air</b> <b>731.20 Non-scheduled passenger transportation by air</b>	<b>661 Air transport services of passengers</b> <b>6611 Scheduled air transport services of passengers</b> <b>6612 Non-scheduled air transport services of passengers</b>

# Classifications

<b>ANZSCC96 (draft CPC.v3)</b>	<b>ANZSPC01 (final CPC.v3)</b>
<b>732 Freight transportation by air</b> <b>732.10 Mail transportation by air</b> <b>732.20 Transportation of containerised freight by air</b> <b>732.90 Transportation of other freight by air</b>	<b>662 Air transport services of freight</b> <b>6620 Air transport services of other freight</b> <b>66200 Air transport services of other freight</b> <b>6620010 Transportation services of dry/solid bulk freight by air</b> <b>6620020 Transportation services of liquid bulk freight by air</b> <b>6620030 Transportation services of containerized freight by air</b> <b>6620040 Transportation services of livestock by air</b> <b>6620090 Transportation services of other freight by air</b>

# Classifications (cont)

<b>ANZSCC96 (draft CPC)</b>	<b>ANZSPC01 (final CPC)</b>
<b>733 Transportation via space</b>	<b>663 Transport services via space</b>
<b>734 Rental services of aircraft with operator</b>	<b>664 Rental services of aircraft with operator</b>

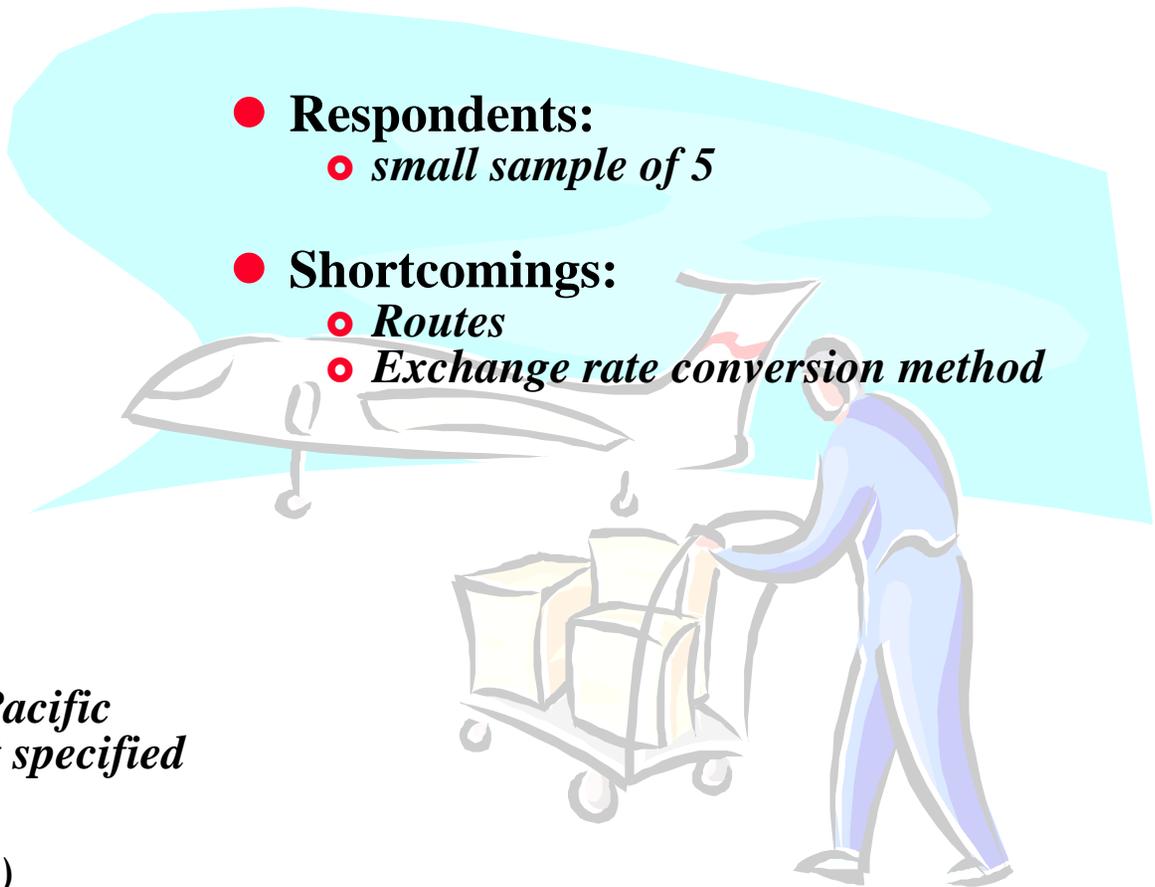
# Classifications (cont)

<b>ANZSIC96 (ISIC rev3)</b>	<b>ANZSIC06 (NAICS, ISIC.r4)</b>
<b>I – Division – Transport and Storage</b>	<b>I – Division – Transport, Postal and Warehousing</b>
<b>I64 – Subdivision – air and space transport</b>	<b>I49 Air and space transport</b>
<b>I640 Group – air and space transport</b>	<b>I490 Air and space transport</b>
<b>I6401 Class – scheduled international air transport</b>	<b>I4900 Air and space transport</b>
<b>I6402 Class – scheduled domestic air transport</b>	
<b>I6403 Class – non-scheduled air, space transport</b>	

# Data model: Air freight transport (international)

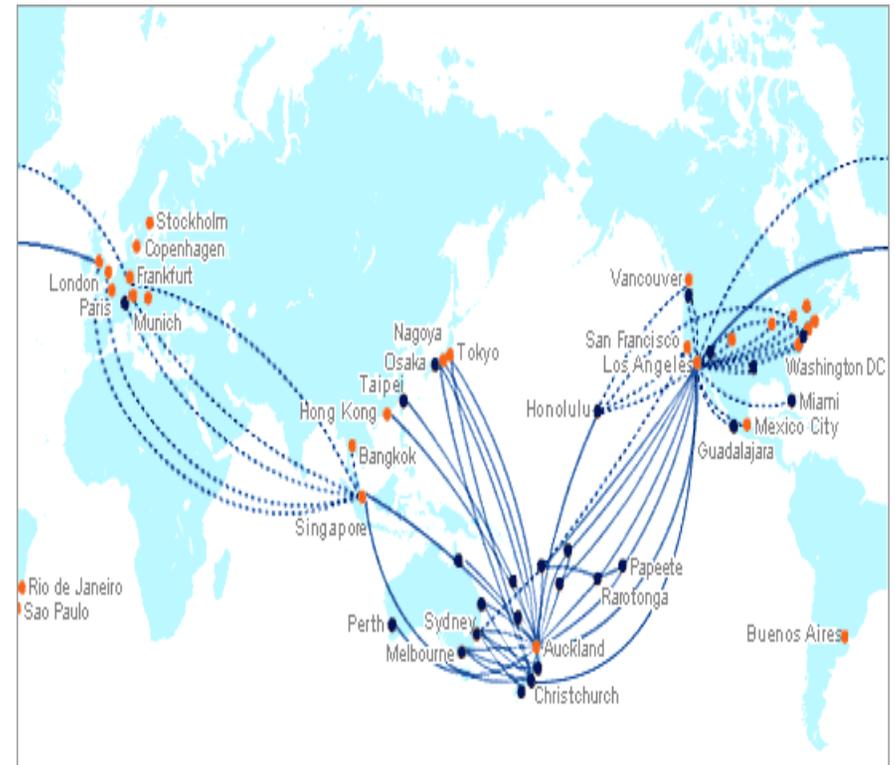
- **Routes:**
  - *Pacific*
  - *Tasman*
  - *Rest of the world*
- **Methods:**
  - *29 prices weighted together*
  - *Combination list and model*
  - *NZ\$ or foreign currency*
- **Price specs:**
  - *General cargo*
  - *Specific items eg lobster to Pacific*
  - *Cost per kilo with or without specified weight*
  - *Per container or pallet*
  - *Specified number (eg horses)*

- **Respondents:**
  - *small sample of 5*
- **Shortcomings:**
  - *Routes*
  - *Exchange rate conversion method*



# Data model: Air passenger transport (intern)

- **Routes:**
  - *Tasman*
  - *Pacific*
  - *Rest of the world*
- **Methods:**
  - *53 list prices with one CPI link*
  - *Businesses (weighted) – 90%*
  - *Households (weighted) – 10%*
- **Price specs:**
  - *Different seasons – high, low*
  - *Different classes – economy, business, first*
  - *Different conditions – time*
  - *Different types – epic, tsaver*
  - *Return and single*
- **Respondents:**
  - *Small sample of 4*
- **Shortcomings:**
  - *Weights (respondents, items, classes)*
  - *CPI price base*
  - *Routes*



## Key

- Air New Zealand
- ..... Key Air New Zealand codeshare partners
- Star Alliance hub cities

Routes shown operated by key Air New Zealand codeshare partner airlines are subject to change without notice. Not all routes of partner airlines are shown.

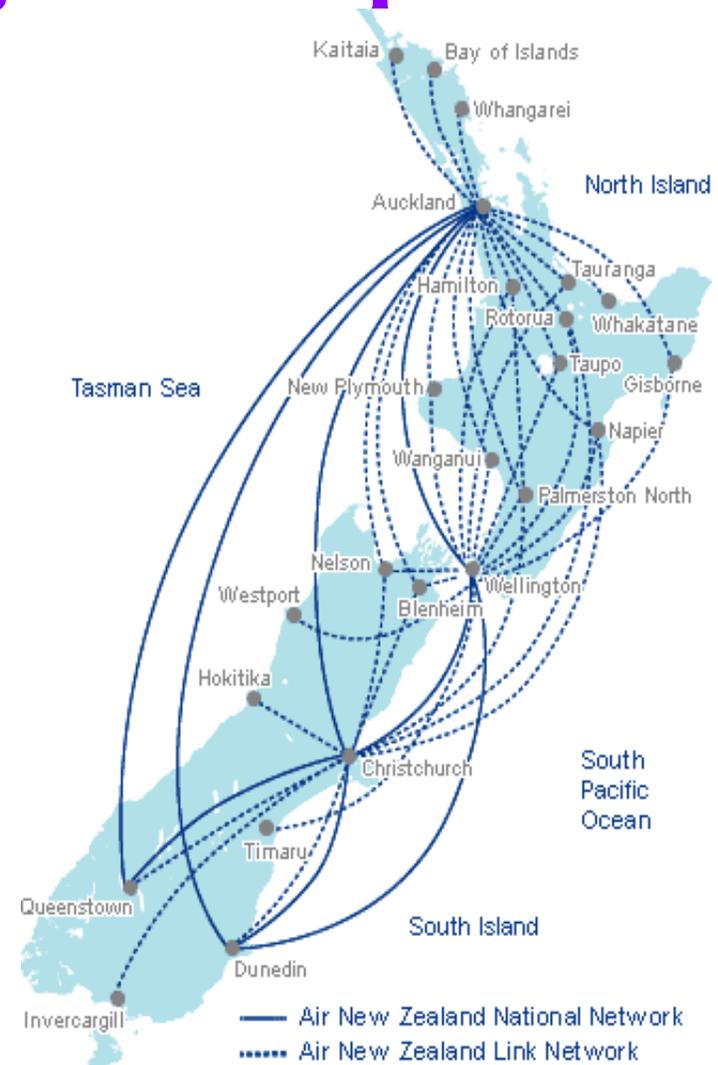
# Data model: Air freight transport (domestic)

- **Routes:**
  - *Four airports (Auckland, Wellington, Christchurch, Palmerston North)*
- **Methods:**
  - *7 prices weighted together*
  - *Combination of list and model*
- **Price specs:**
  - *Per kg with/without specific weight*
  - *Special conditions eg overnight*
  - *Rate per hour*
  - *Per container or pallet*
- **Respondents:**
  - *Only 2*
- **Shortcomings:**
  - *Very small part of the industry.*
  - *Survey company classified to another industry*



# Data model: Air passenger transport (domestic)

- **Routes: 24 routes**
- **Methods:**
  - *27 list prices with one CPI link (30 %)*
- **Price specs:**
  - *Different fare types within one class*
  - *Mostly one way fares*
- **Respondents:**
  - *small sample of 6 respondents – 3 part of main airline*
- **Shortcomings:**
  - *Bundling – multi modal*
  - *Not enough specs to quality control*
  - *Weights for routes – equal*
  - *Market sensitive information –*
    - ◆ *suggested average price (derived)*



# Data model: Other air transport

- **Methods:**

- *10 prices for specialised air transport services*
- *Combination of charge-out rate and model service*

- **Price specs:**

- *Hourly charge-out rate*
- *Model eg “Mt Cook spectacular – 40 minutes with snow landing”*

- **Respondents:**

- *Small sample of 4*



# Sample design:

## ● Population:

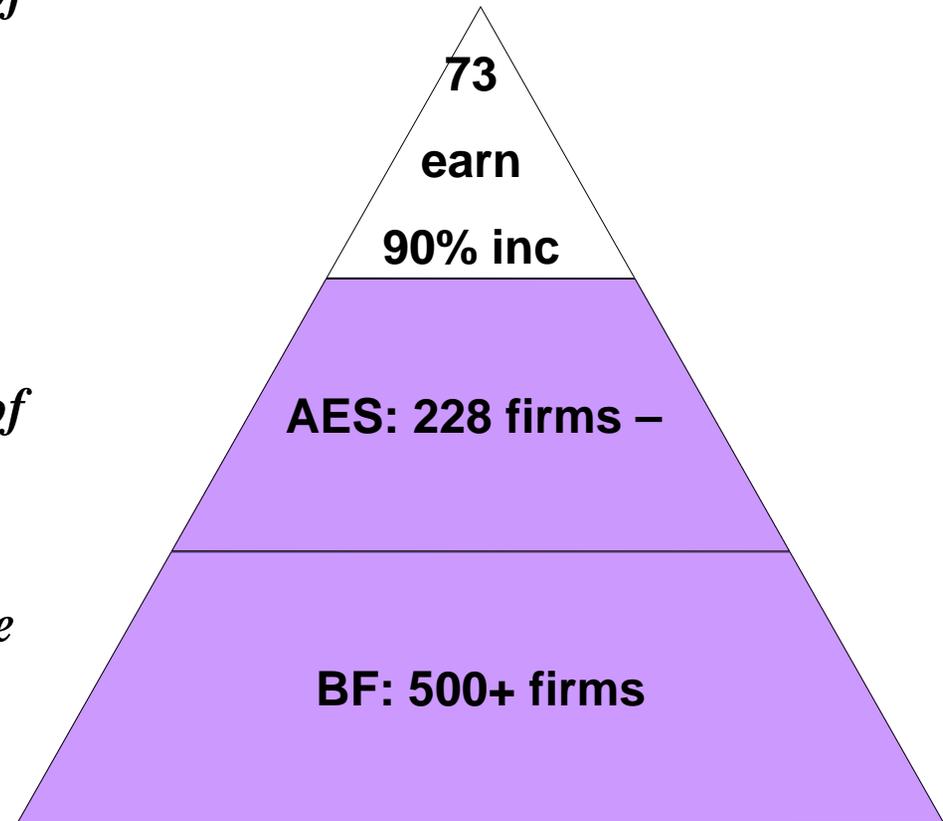
- *Scheduled international: 9 (85% of total income)*
- *Scheduled domestic: 15 (12% of total income)*
- *Non-scheduled: 49 (3% of total income)*

## ● Sample units:

- *Scheduled international: 4 (85% of income for this sub-class)*
- *Scheduled domestic: 5 (85% of income for this sub-class)*
- *Non-scheduled: 2 (15% of income for this sub-class)*

## ● Respondent burden:

- *Small number of large players – little rotation possible*



# Technical concerns

## ● Quality adjustments

### ○ *Characteristics of service*

- ◆ *Change in tracking system – freight*
- ◆ *Change in booking conditions*
- ◆ *Change in on-flight service*
  - ◆ *Meals, baggage, seat space*

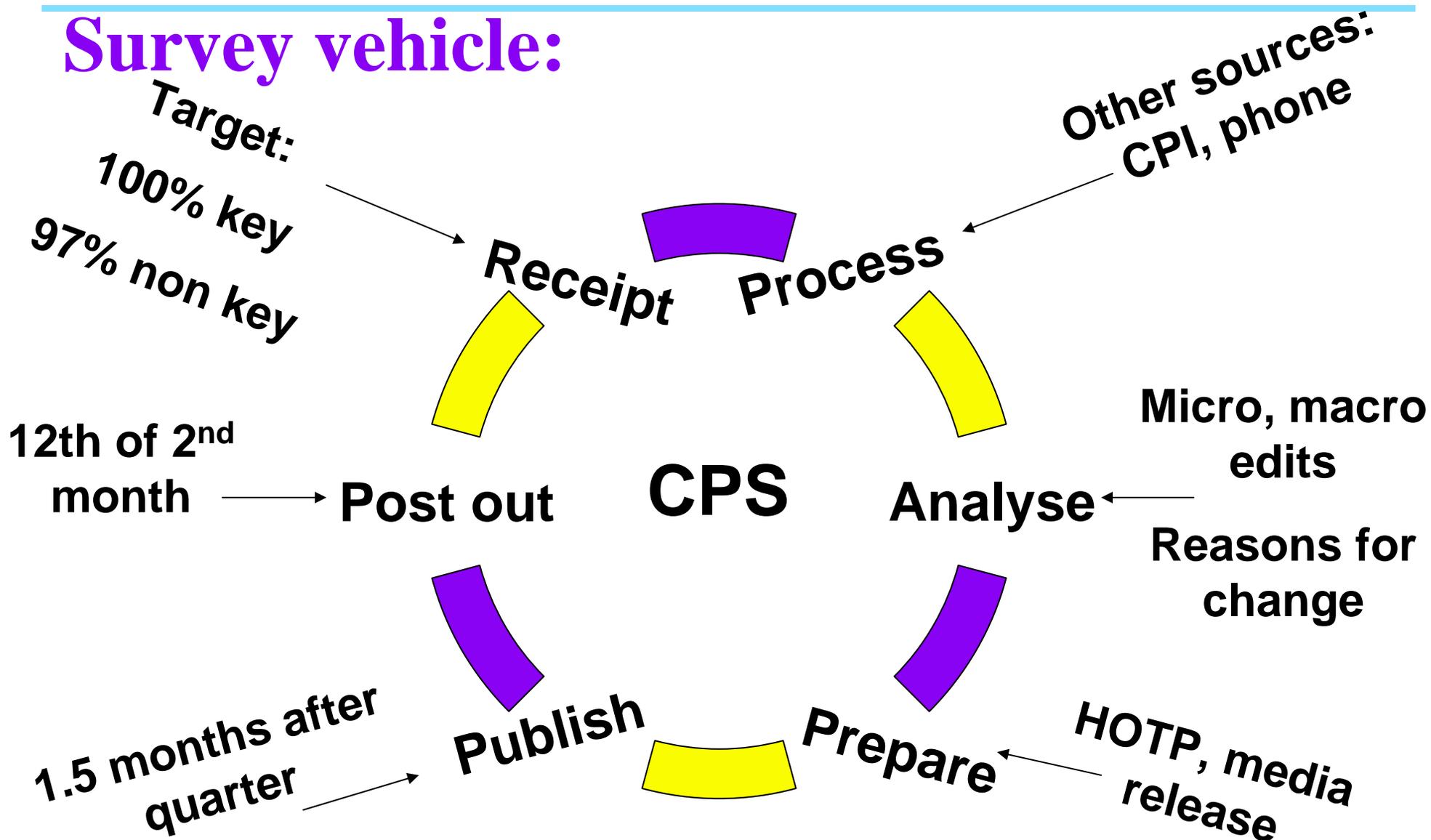
### ○ *CPI user-value vs producers cost*

## ● New item bias

### ○ *Over- or understate price movement*



# Survey vehicle:



---

# Questions

