

# Statistics New Zealand & Statistics Norway

## *CPI comparison project*

## CPI benchmarking project

- Include indicators of impact of additional effort expended on the index
- Focus on the ‘hows’ rather than the ‘whats’
- Assist to identify the optimum quality level with respect to new technologies and data sources that can be used in our CPI

# New Zealand and Norway



## Country comparison – 2005

	Norway	New Zealand
Population (000)	4,640	4,099
Land area (000 km <sup>2</sup> )	324	269
Foreign-born residents %	7	20
One-person households %	38	22
Live births (000)	57	56
Deaths (000)	41	27
Fertility rate	1.8	2.0

## Country comparison – 2005, cont.

	Norway	New Zealand
CPI (2006)	2.3	3.4
Real GDP per capita (OECD=100, at 2002 price level)	144	86
Employment rate	75.2	74.6
Source: Statistics New Zealand, Statistics Norway, OECD		

## Findings (main differences)

- Underlying concept; an inflation index versus a COLI
- Owner occupied housing; net acquisitions versus rental equivalence
- Data collection; use of price collectors versus postal questionnaires as the main source for the local price collection
- Explicit quality adjustment versus the use of implicit methods
- Frequency of the publication; quarterly versus monthly
- Reweighting every three years versus annually chaining
- Source(s) of weighting information; HES and a wide range of other supplementary data versus only the HES and some scanner barcodes.

## Conceptual approach and CPI objective

- **Statistics New Zealand**  
Net acquisition index for inflation
- **Statistics Norway**  
Uses index to approximate Cost of Living Index (COLI).

# Treatment of owner-occupied housing

- Statistics Norway
  - Rental equivalence based on 2000 tenants each month
  - Small, but active rental market
  - Expenditure weights in the CPI: 12.6 %
- Statistics New Zealand
  - Net acquisition of housing based on constructors of standard-plan houses
  - Expenditure weights in the CPI: 4.7 %



## Price collection

- Data collection (in order of significance)
  - Statistics Norway: Questionnaires, scanner data, electronic sources, internet, telephone, email
  - Statistics New Zealand: Field collection, postal questionnaires, internet, email
  - Key differences: Use of scanner data, collection of information for quality assurance and adjustment.

## Quality management

- Quality adjustment
  - Statistics New Zealand uses explicit and implicit, while Statistics Norway only uses implicit
- Data validation
  - Statistics Norway are more streamlined in their processes.

## Specific goods and services

- Clothing and footwear
- Audio-visual equipment
- *Insurance*
- *New and used cars.*

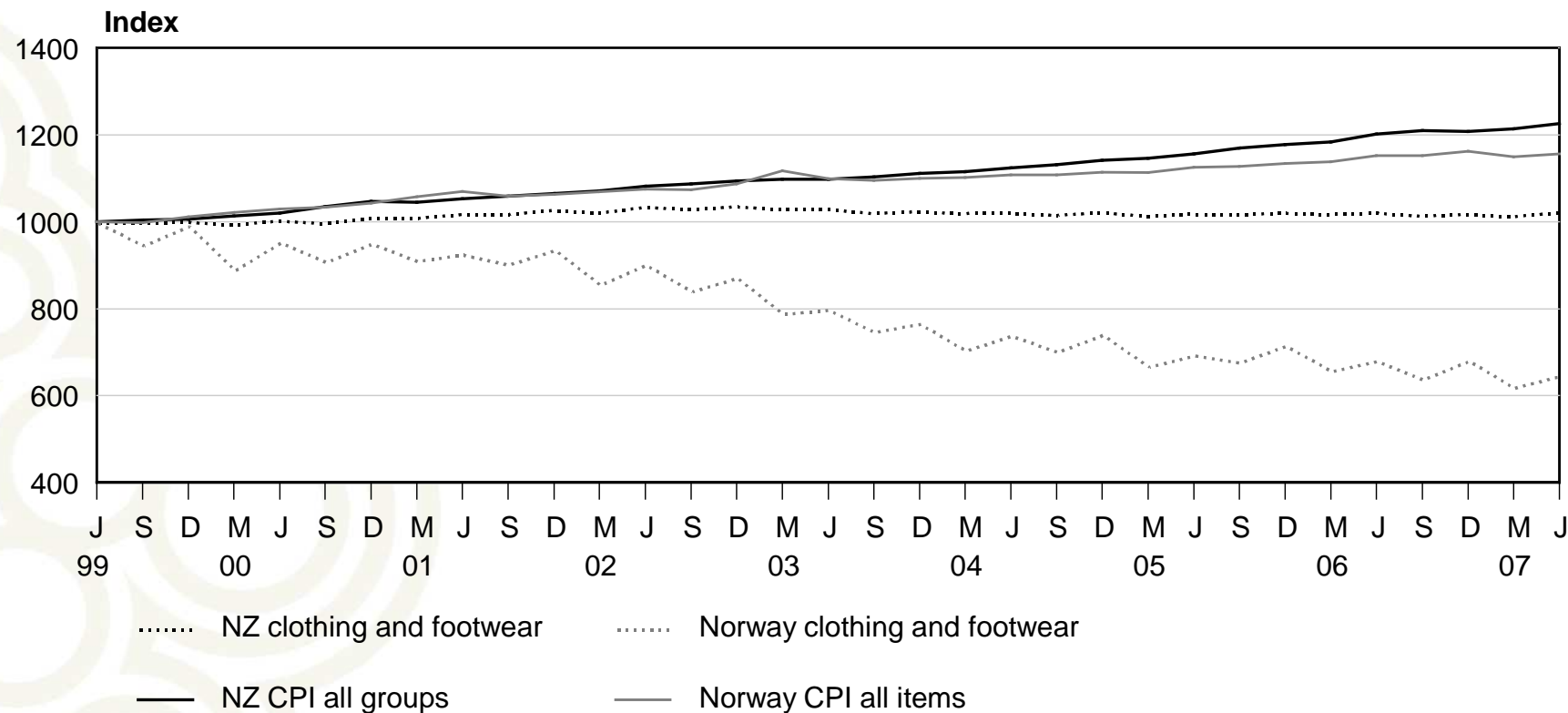
## Clothing and footwear

- New Zealand and Norway:
  - winter and summer basket
- New Zealand:
  - explicit quality adjustment practices
  - Carry forward out of seasonal item prices
- Norway:
  - implicit quality adjustment practices
  - Impute out of seasonal item prices from like items.

# Clothing and footwear, cont.

## Clothing and Footwear and All Groups New Zealand and Norway – quarterly indexes

Base: June 1999 quarter (=1000)



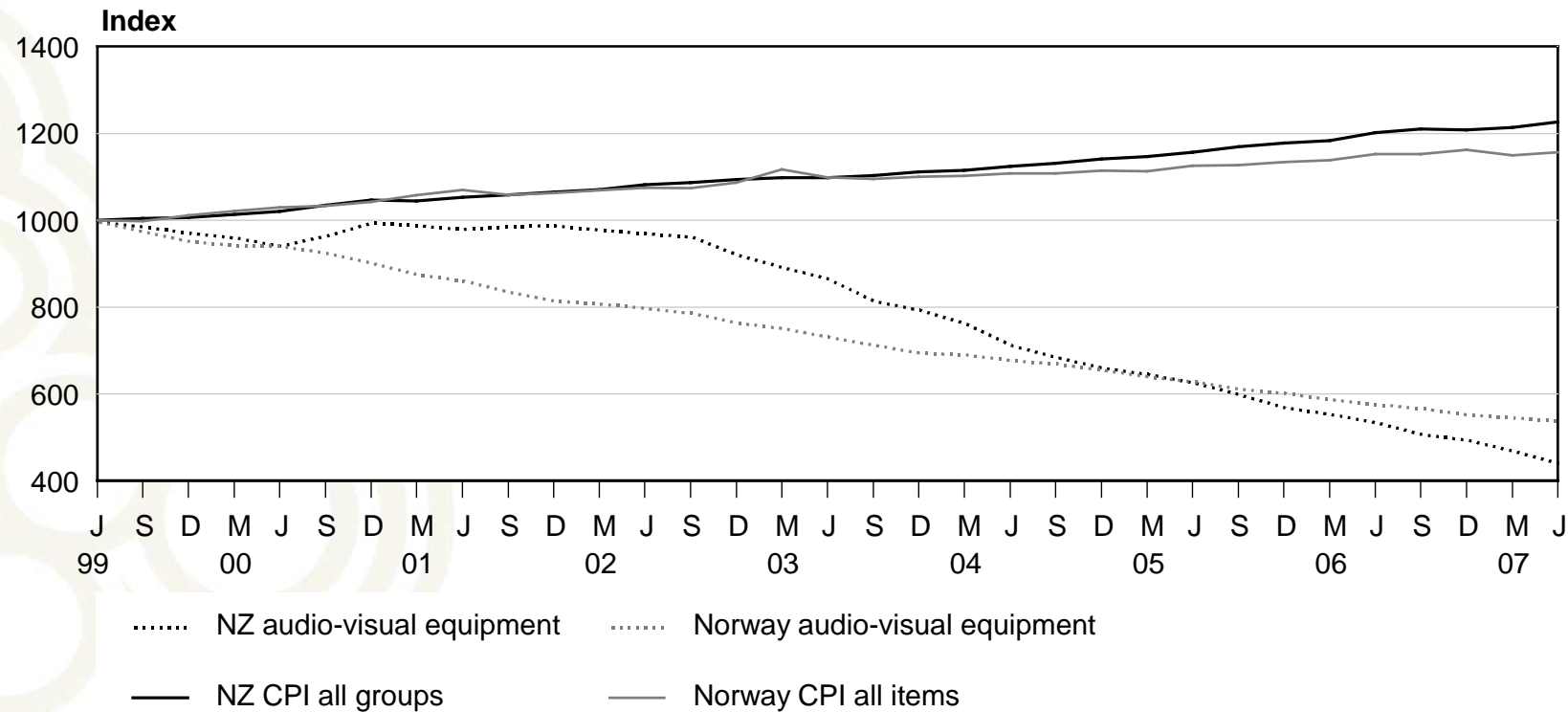
# Audiovisual equipment

- New Zealand:
  - electronic data to maintain the product specifications
- Norway:
  - information from business sector to maintain the product specifications
- New Zealand:
  - explicit quality adjustment practices
- Norway:
  - implicit quality adjustment practices.

# Audiovisual equipment, cont.

## Audio-visual Equipment and All Groups New Zealand and Norway – quarterly indexes

Base: June 1999 quarter (=1000)



# Main recommendations

- Norway
  - User cost for OOH
  - Explicit quality adjustment practices (eg hedonic regression for new cars)
  - investigate the impact of quality adjustment
  - price collectors for clothing, footwear and electronic equipment
  - Increase the coverage of insurance.
- New Zealand
  - More efficient price collection (scanner data, administrative data, handheld devices)
  - Investigate the impact of quality adjustment
  - Greater automation of data editing and validation
  - Random selection of outlets and sample rotation.



## Resources

- Staff
  - Statistics New Zealand has 26 FTEs working on the CPI
  - Statistics Norway has 18.5 FTEs working on the CPI
- Training
- Information systems
- Knowledge management

## Scope, coverage and index construction

- Both agencies adhere to international best practice regarding:
  - coverage
  - classification (COICOP)
  - Reweighting within ILO guidelines
  - elementary aggregates – Jevons and Dutot

## Weighting review and methodology

- Source of expenditure weights
  - Statistics New Zealand
    - Household Economic Survey (HES) 66%
    - Alternative sources 34%
  - Statistics Norway
    - HES ~ 100%
- Time to reweight
  - Statistics New Zealand – 3 yearly
  - Statistics Norway – Annually.

## Periodic and ongoing review of methodology

- Use of advisory committees
  - Statistics New Zealand convenes a Revision Advisory committee every six or so years
    - Principle purpose and methodology discussed
    - Advisory Committee on Economic Statistics provides guidance and user input in between years.
  - Statistics Norway holds a committee meeting annually
    - Purpose is to review the CPI work programme and provide user input.

## Challenges, limitations and opportunities

- **Scanner data**
  - Greater use of scanner data for pricing purposes
- **HICPs and other international price comparisons**
  - Statistics New Zealand and Statistics Norway involved in the OECD Purchasing power Parities programme
  - Statistics New Zealand also part of the ICP Friends of the Chair group.