New Zealand: a case study

Big data for CPI

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Introduction

• New Zealand an early adopter of big data for CPI
• Hedonic methods since 2000 (used cars)
• Import price index - import data for mobile phones and TVs since 2013
• Scanner data for consumer electronics since 2014
• Tenancy bond data for rental index introduced 2019
• Actively researching online data for food price index
Paradigm shift: traditional to big data

Traditional data
- Designed sample surveys

Big data
- Found digital footprints

Target population
- Data available
Integrating economic statistics in monitoring the 2030 Agenda

Online data trial:
Coverage of top 20 outlet types

- Supermarket: Available
- Fuel: Available
- Catering: Available
- Motor: Available
- Department: Available
- Hardware: Available
- Clothing: Available
- Electrical: Available
- Convenience: Available
- Takeaway: Available
- Non-store: Available
- Private: Available
- Internet: Available
- Pubs: Available
- Sports: Available
- Pharmacy: Available
- Furniture: Available
- Liquor: Available
- Meat: Available
- Fruit and veg: Available
- Book: Available
- Specialised: Available
- Bakery: Available
- Footwear: Available

Proportion of expenditure (where outlet type is identified), percent

Source: Stats NZ | PriceStats
Some key points

• An initial focus on methodology paid dividends - no need for characteristics (FEWS)

• Collaboration (Netherlands, Australia, Ottawa Group, EMG, UNECE/ILO, UN GWG)

• Production process important and non-trivial

• Documentation important - black boxes don’t work for long

• Ongoing developments (eg online data from PriceStats, scanner data for supermarkets)