Issues in International Benchmarking: the case of telecommunications

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Purpose

- **Organisational Performance**
- **Market/Industry/Regulatory Performance**

Issues

- **Consumer Prices as Indicators**
- **International Comparability**
- **Index Number Measurement and Welfare**
- **Non-linear & Flexible Pricing**
- **Bundles of Services**

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Price Index

- Economic Definition (p* relative to p)
  least expenditure at prices p* that yields the same welfare as prices p
- Requires assumptions on preferences to implement
- Functional form should satisfy certain rules
  see Diewert (various including multi-lateral)

Price Comparison:
Cross Country vs Cross Time

- Relevant Factors
  - Prices
  - Income
  - Preferences
  - Country Characteristics
- Key:

  cross country has (much) larger differences

  & different unit of account

International Comparability

- Prices at Nominal Exchange Rates
- Prices at Purchasing Power Parity
  - Different forms of PPP
  - Countries are different and this has implications for PPP interpretations

The HAI Telecommunications Model

- Forward looking cost optimisation model
- Used by AT&T, MCI etc etc
- Application to wire local loop service
- Sensitive to certain expectational inputs
- Useful for estimating relative costs

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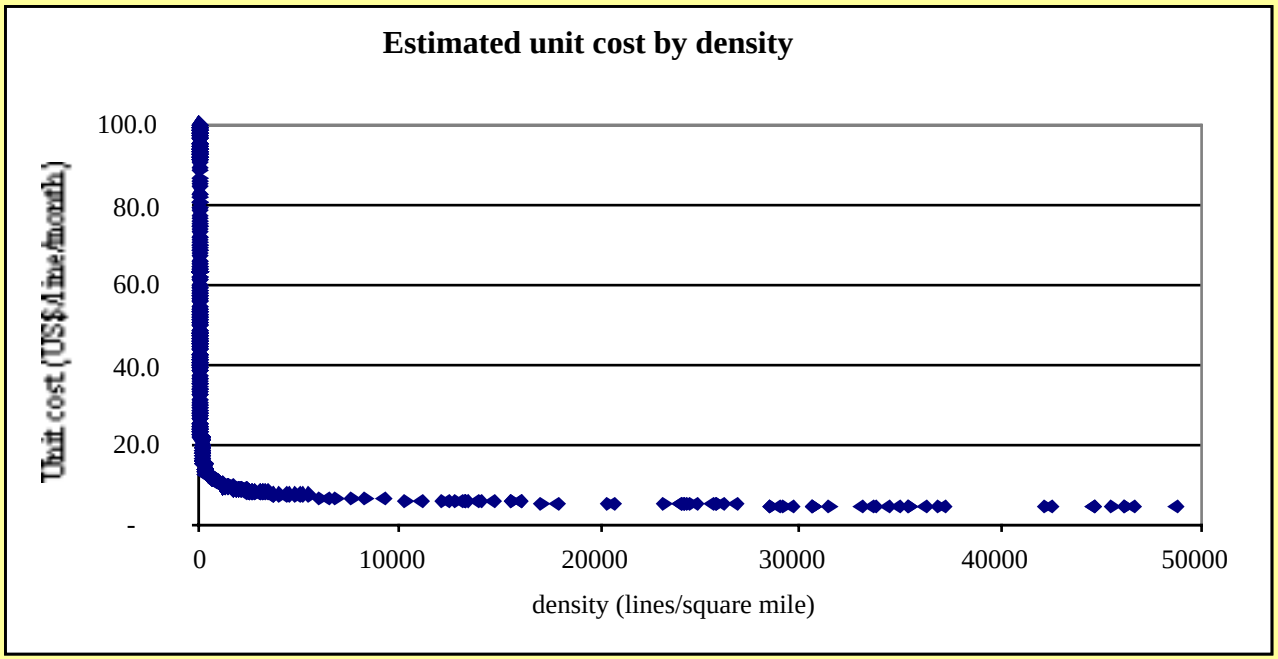
Economies of Density



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Telephony Lines Costs
Relative to the USA

- Australia + 10-14%
- New Zealand + 15-20%
- Sweden + 23-27%
- UK - 19-22%

Implications of Economy Density Differentials

- For Low Density (almost) full coverage
  - On a PPP basis telecommunications should be relatively expensive
  - Telecommunication revenue/GDP and prices on a PPP basis may be relatively high
- International performance comparisons should recognise this.

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Consumption Bundles

- Indirect utility function known => carry out price and income comparisons directly,otherwise need a consumption bundle

- Candidate Bundles

  Country A or B or some average of A and B

- Key Problem: prices and therefore bundles are very very different

Different Prices -> Different Bundles

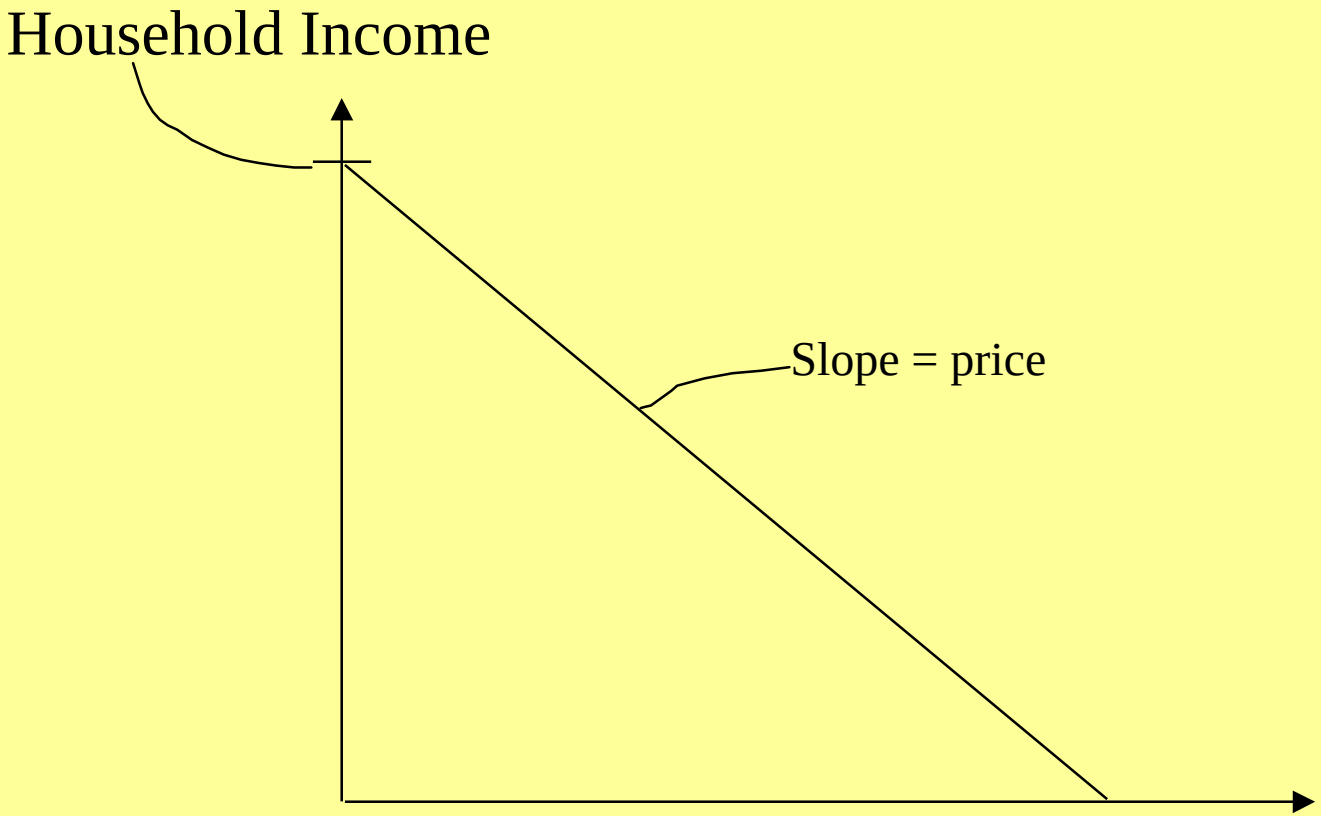
- Example

	Price of extra local call	H.H. No. of calls/month*
Australia	A$.25	70
New Zealand	0.00	130

(* approx)

- Nonlinear Prices
  - Multi-part tariffs
  - Price caps
  - More common in de-regulated regimes

Standard Budget Set



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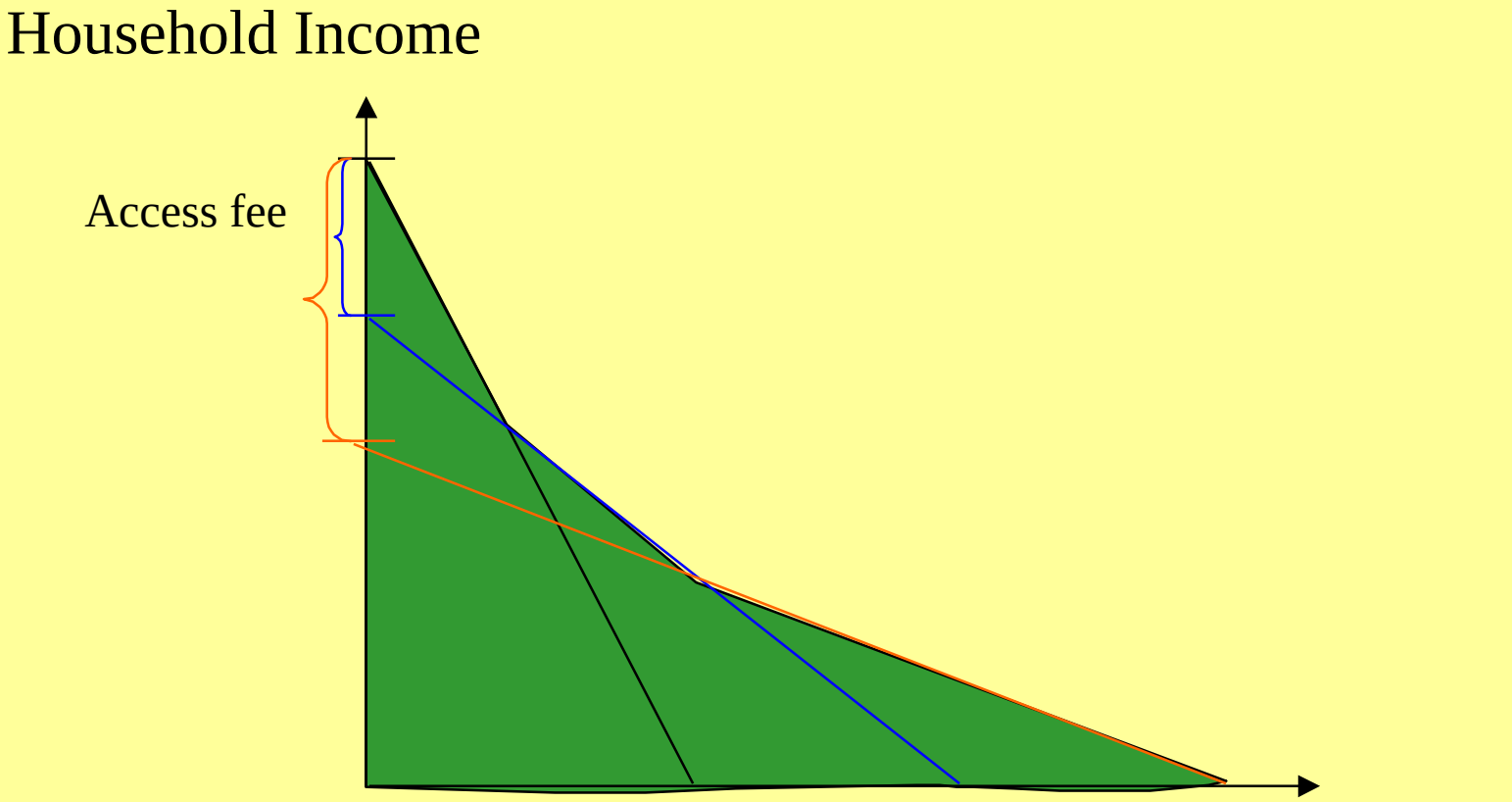
Addition of Two Two-part Tariffs



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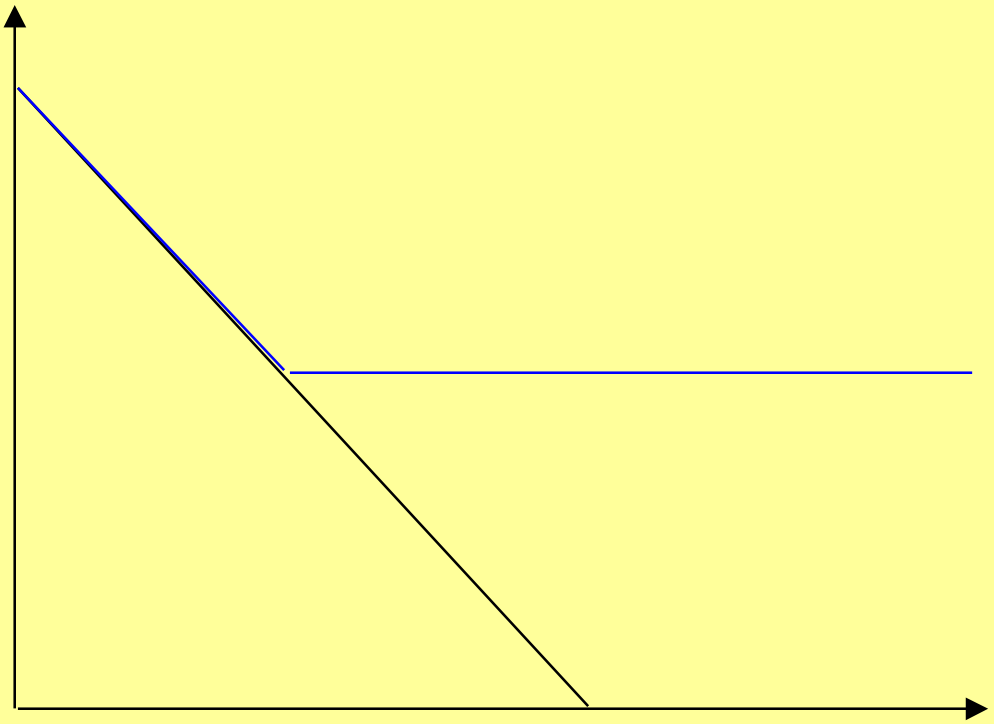
Capped Calls - No Access Fee

Household Income



Minutes/calls

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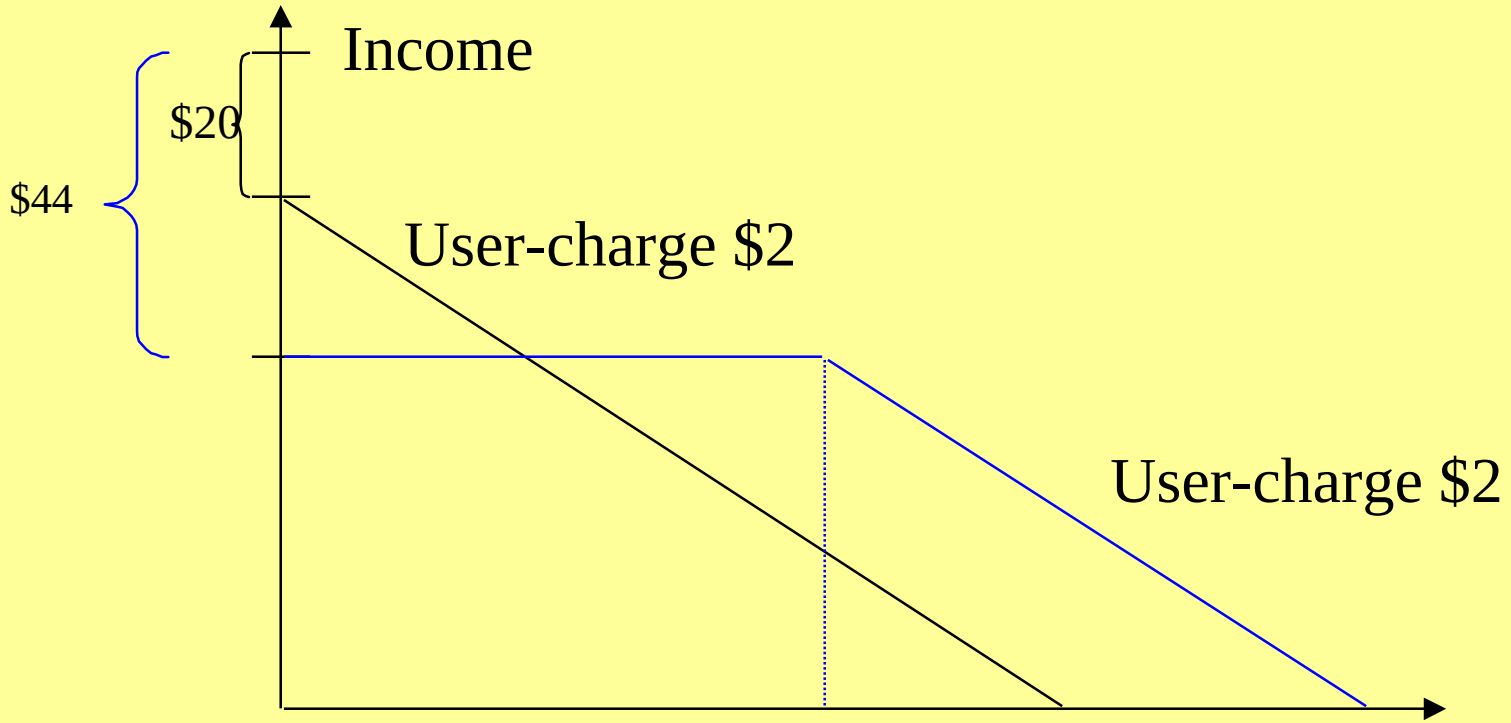
Practical Example
IPROLINK:internet charges



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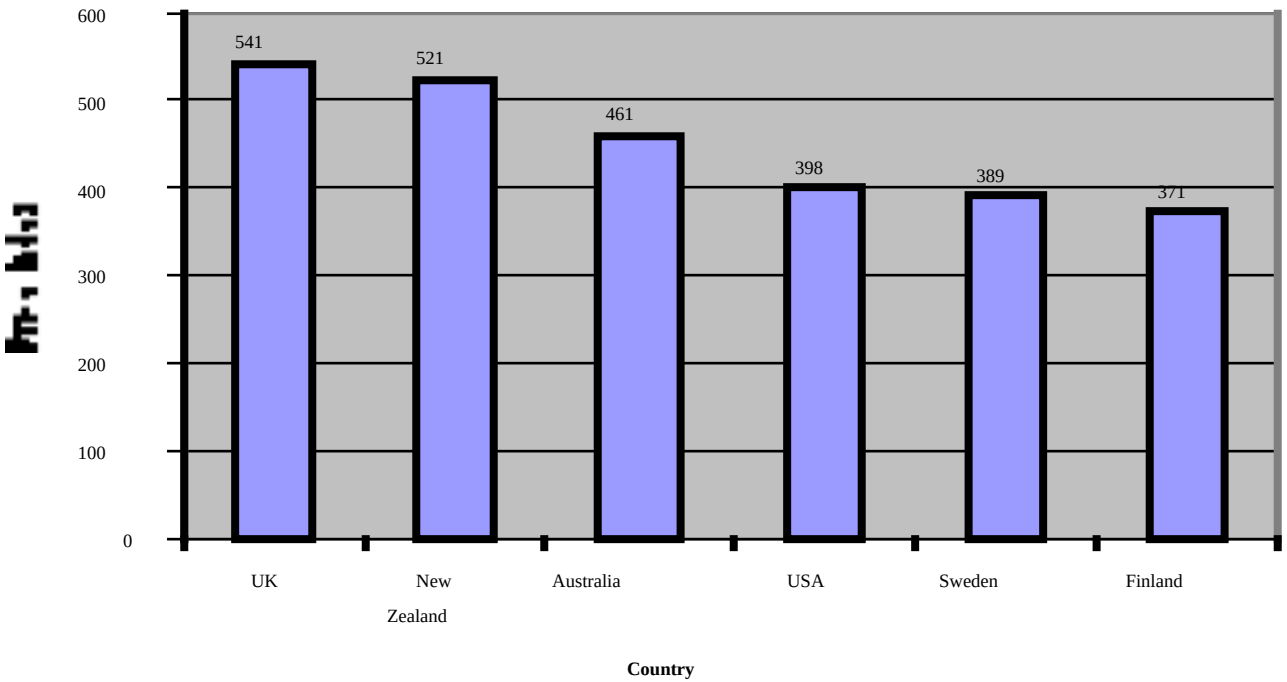
Comparison of HH Welfare Under Two-Part Tariffs A and B

	Access Cost		Usage Cost	Average Cost	Welfare
•	A " B	&	A " B	A < B ?	A > B
•	A > B	&	A < B	?	?
•	A < B	&	A > B	?	?

TOTAL RESIDENTIAL PSTN
SERVICE: OECD BASKET
SOURCE APC



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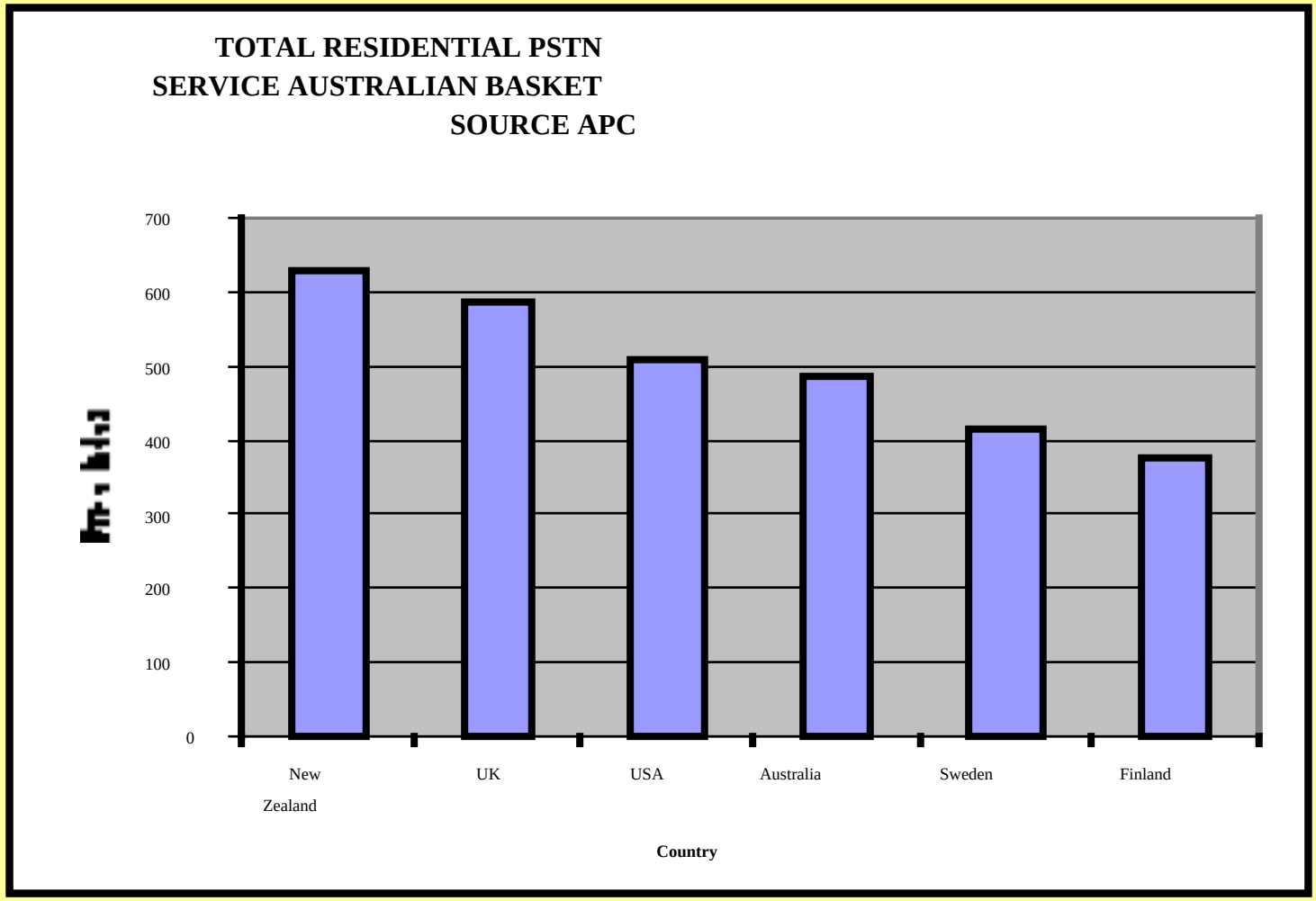

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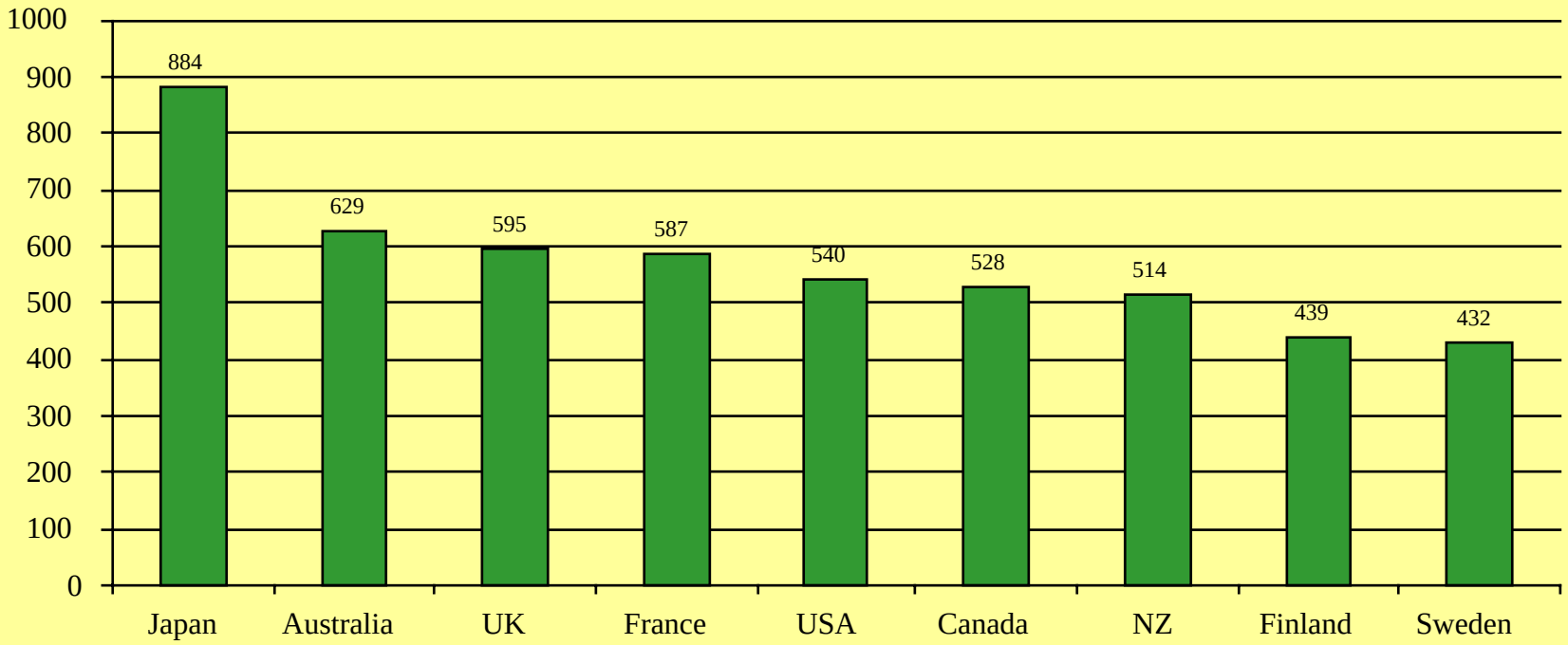
PSTN COSTS: RESIDENTIAL NEW ZEALAND BASKET AND DISCOUNTS: SOURCE NECG REVISED APC



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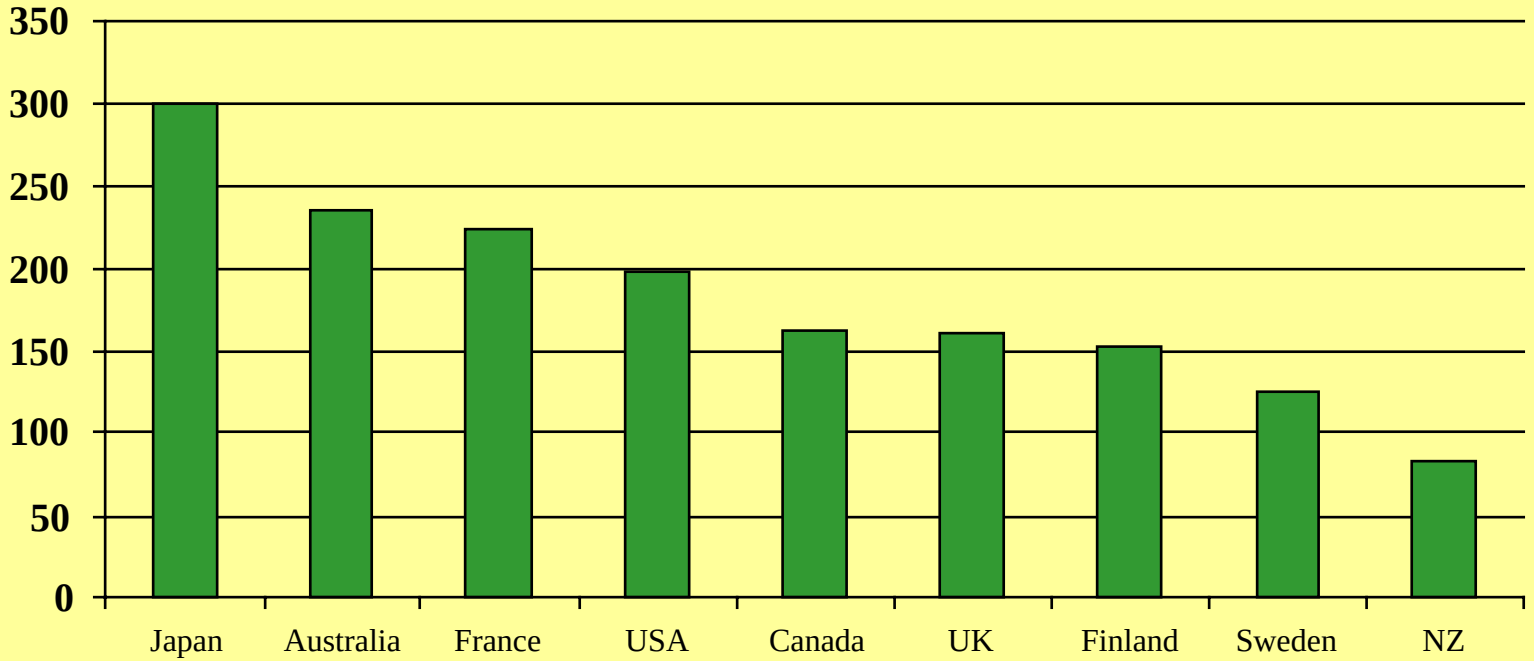
NATIONAL CALL COSTS RESIDENTIAL: NEW ZEALAND BASKET AND DISCOUNTS: SOURCE NECG REVISED APC



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Bundles and Pricing Matter

As a result of ignoring discounts (such as capped calls), APC has overestimated NZ prices for International calls by an average 58% and for National calls by an average of 43% (NECG, 1999).

Findings Relative Residential Costs/Prices

- Finland and Sweden at low end on all baskets
- Australia and NZ switch with baskets:
  NZ particularly low cost with own basket and price tariffs
- UK (surprisingly) high on all baskets (not UK)
- Low Cost Sweden/Finland/NZ least regulated

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Other Issues

- The “New Good” problem
- Quality: value-added services

Summary

- Country characteristics differ in ways that will affect prices on a PPP basis
- Tariffs and consumption bundles differ substantially
- Where cost rankings vary with the bundle, welfare and state of the market is ambiguous
- Multiple tariffs and discounting are most likely in de-regulated countries -> biased comparisons

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