

Pricing domestic telecommunication services to reflect costs

**Dr Tim Kelly, ITU
Seminar on Cost-based
Tariffing, Delhi,
16-18 February 1999**



The views expressed in this paper are those of the author and do not necessarily reflect the opinions of the ITU or its Membership. Dr Kelly can be contacted by e-mail at Tim.Kelly@itu.int



Agenda

- **Supply and demand**
 - ⇒ Approaches to pricing
 - ⇒ Approaches to costing
 - ⇒ TRAI tariff study
- **Tariff rebalancing**
- **Tariff comparisons**
- **Price regulation**
- **Structure of presentations and background reading**

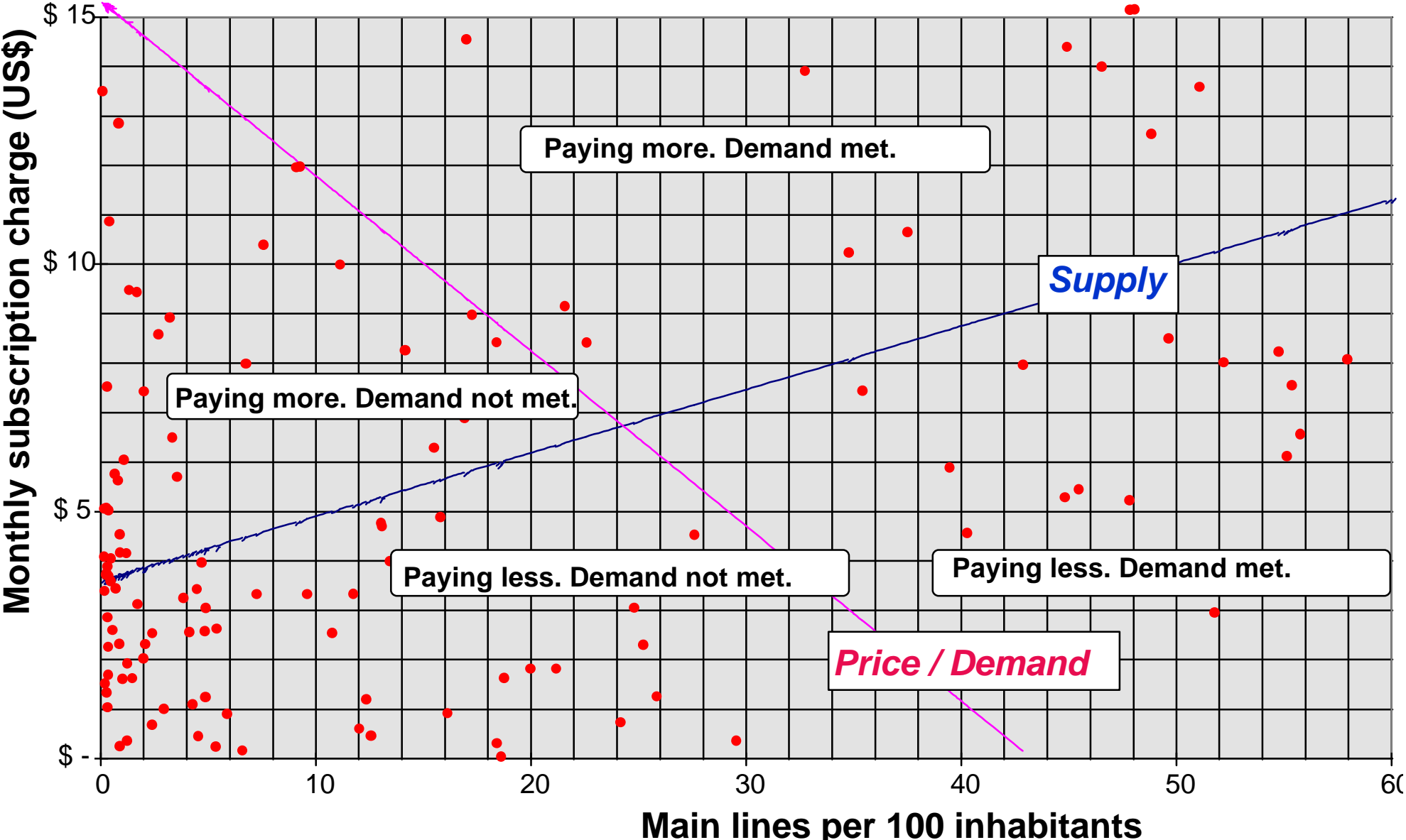


The functions of pricing

- **To forge a link between supply and demand**
- **To generate revenues and cover costs of providing service**
- **To convey information to customers concerning the service**
- **To provide a platform for competition**

Demand is a function of price

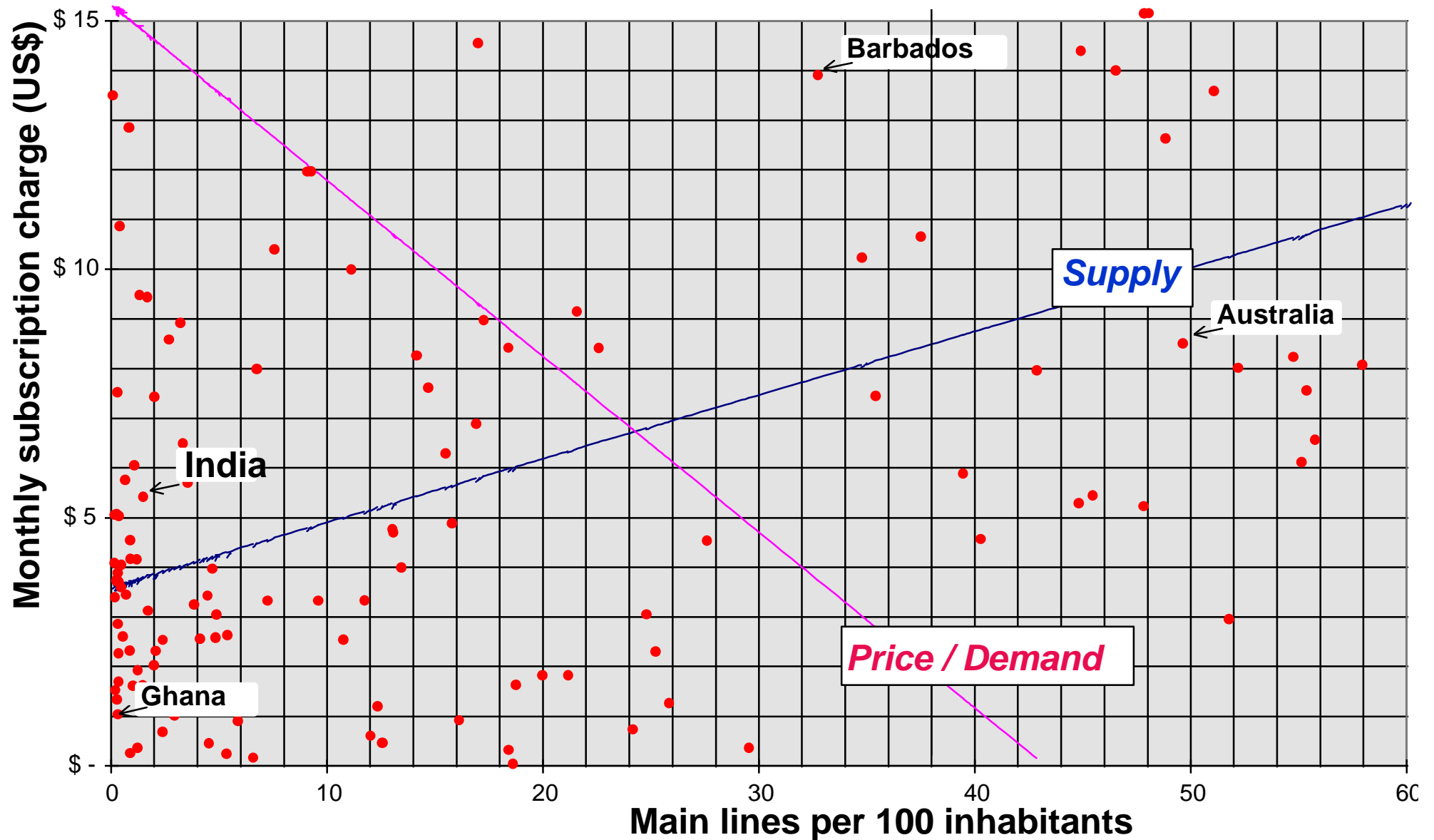
Teledensity and monthly residential telephone rental (US\$)



Source: ITU "World Telecommunication Development Report, 1998: Universal Access"

Pricing strategies, selected countries

Teledensity and monthly residential telephone rental (US\$)



Source: ITU "World Telecommunication Development Report, 1998" (forthcoming).



Approaches to pricing

● Demand-based pricing

- ⇒ Pricing according to what the customer is able to pay
- ⇒ May be required by politicians (monopoly environment)

● Cost-based pricing

- ⇒ Pricing according to what the service costs to supply
- ⇒ May be required by regulators (regulated environment)

● Market-based pricing

- ⇒ Pricing in order to compete with other suppliers in the marketplace
- ⇒ May be required by shareholders (competitive market)



Reasons for cost-based pricing

- To cover the full costs of providing the service
- To recognise cross-subsidies between services and between users
 - ⇒ to eliminate them
 - ⇒ to make them explicit, e.g., for Universal Service
- To prepare for competition
- To prevent abuses of competitive position



Approaches to costing

- **Fully-allocated pricing models (e.g., TAS cost model)**
 - ⇒ **total costs for providing service (including historical, depreciated investment costs) divided by the volume of service provided (e.g., minutes of use, number of subscribers)**
- **Incremental pricing models (e.g., LRIC)**
 - ⇒ **marginal cost of providing an additional unit of service (e.g., next minute of traffic, next subscriber)**
- **1001 different flavours of the above**



TRAI tariff study: Objectives

- Encourage access to and use of the network
- Cater to social objectives (e.g., targeted subsidies)
- Cost-based prices
 - ⇒ as preparation for competition
 - ⇒ so that benefits are shared by all users
- Maintain profitability for all operators



Traditional pricing structures

- **Cross-subsidies to network access**
 - ⇒ Connection charges cover only a fraction of costs
 - ⇒ Low-cost monthly rental
- **Cross-subsidies to local loop**
 - ⇒ High-cost international and long-distance charges
 - ⇒ Free, unmetered or low cost local calls
- **Geographical and social averaging of costs**
 - ⇒ Uniform charges for connection & rental
 - ⇒ “One price fits all”



Market-oriented pricing structures

- **Cost-oriented**

- ⇒ **Connection charges reflect real underlying costs**
- ⇒ **Monthly rental includes only a small element of usage**

- **Reflecting technology trends**

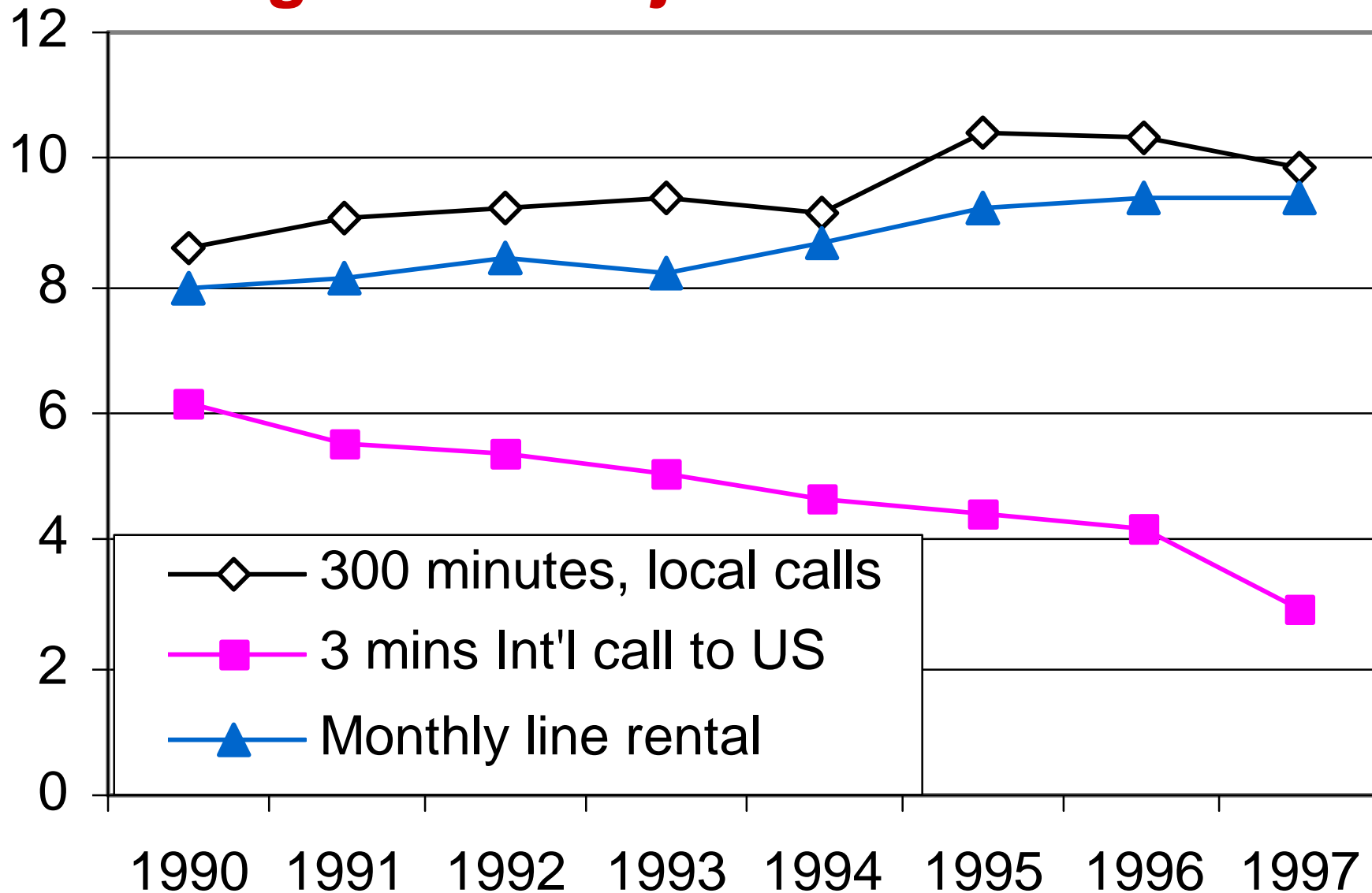
- ⇒ **moving towards distance-independent tariffs**
- ⇒ **biggest price cuts in international call charges**

- **Market-driven**

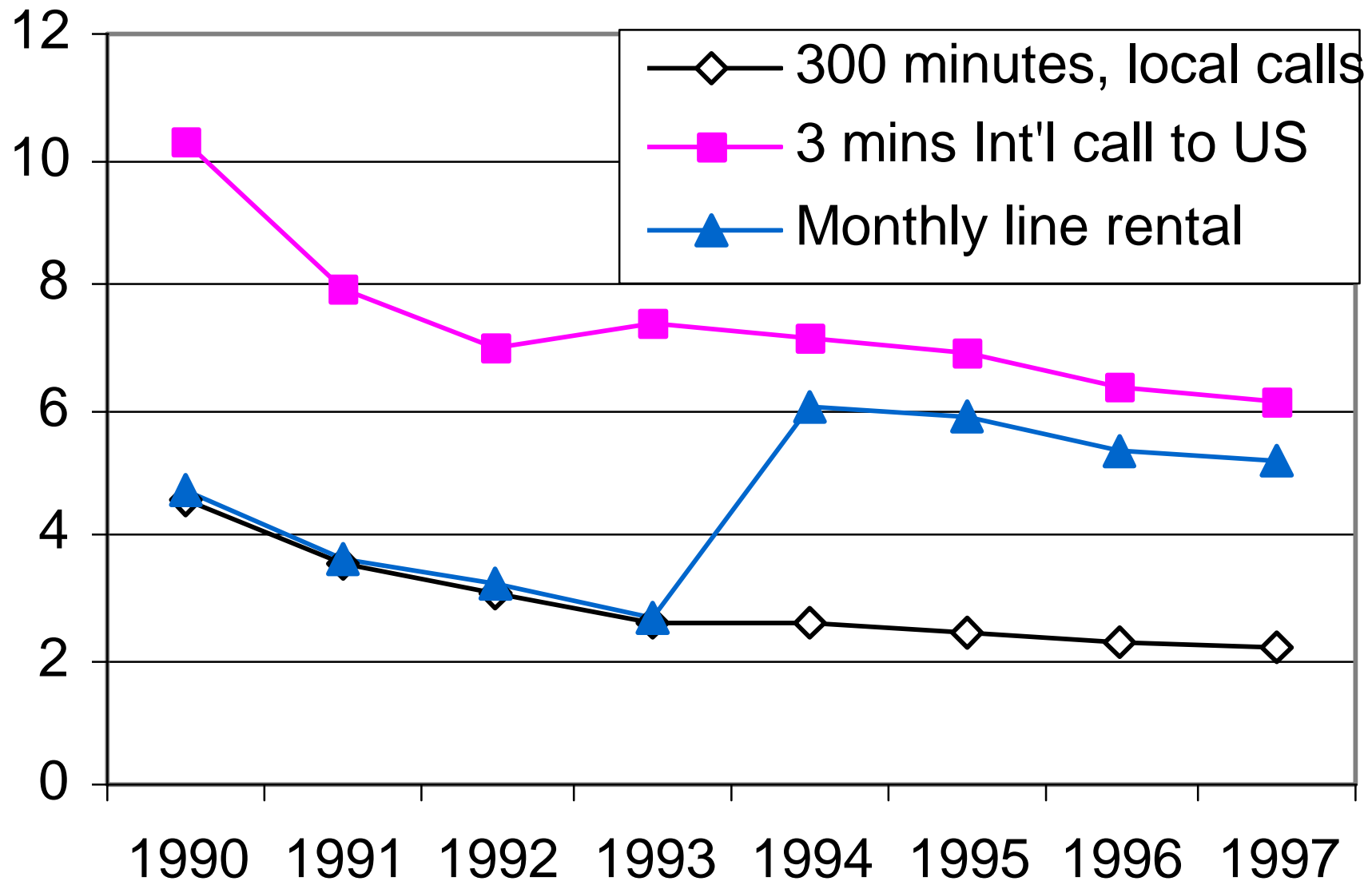
- ⇒ **Tariff options for different user groups**
- ⇒ **Discounts, special offers, promotional prices**

Tariff rebalancing trends, in US\$

Average of 39 major economies



Tariff rebalancing trends, in US\$ For India





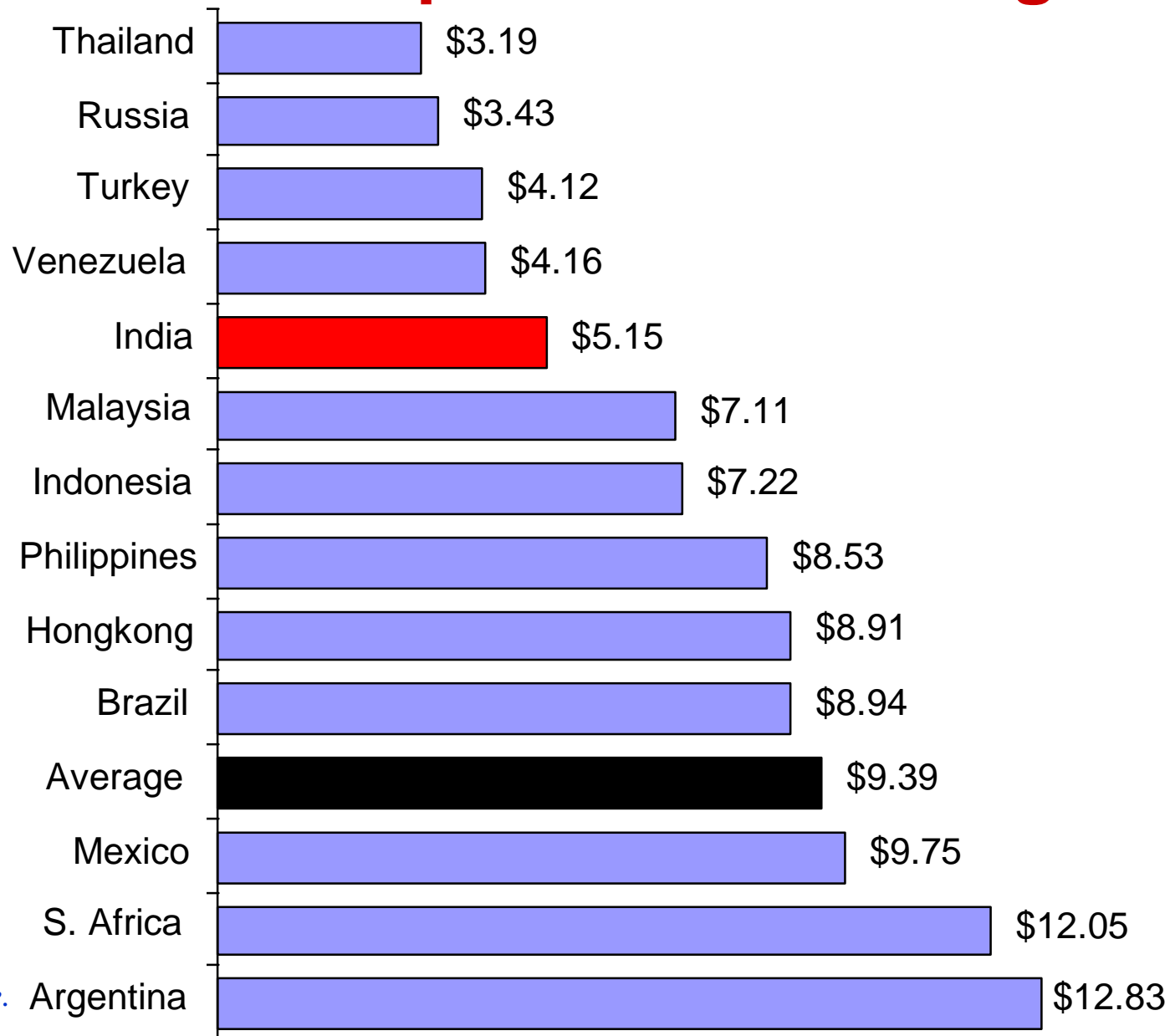
Typical evolution in monthly subscription charge

Social

- Monthly fee kept well below cost
- Monthly fee includes free local calls plus rental of handset plus services
- Unbundling of monthly subscription
 - ⇒ handset rental;
 - ⇒ local calls
 - ⇒ extra services, e.g., Directory inquiry
- Split between residential and business subscriptions
- Progressive rise towards costs

Cost-based

Monthly residential subscription, in US\$: Selected countries plus World average



Source: ITU World
Telecommunication
Indicators Database.



Typical evolution in local call charges

- Social*
- “Free” local call charges included in monthly subscription
 - Limited number of free calls included in subscription, others charged
 - Local calls timed and metered
 - Size of pulse unit shortens
 - Size of local call zone shrinks

Cost-based

Existing and proposed local call charges, India

<i>No. of bi-monthly calls</i>	<i>Existing per call charge, rural areas</i>	<i>Existing per call charge, urban areas</i>	<i>Proposed per call charge, all areas</i>
Up to 120	Free	Free	Free
121-150	Free	Free	1.30
151-250	Free	0.80	1.30
251-450	0.60	0.80	1.30
451-500	0.80	0.80	1.30
501-1'000	1.00	1.00	1.30
1'000-2'000	1.25	1.25	1.30
2'001 plus	1.40	1.40	1.30

Source: TRAI Consultation Paper on telecom pricing, September 1998.



Typical evolution in long distance prices

Social

- Highly distance sensitive charges.
Long distance call >100 times cost of local call

- Introduction of off-peak rates

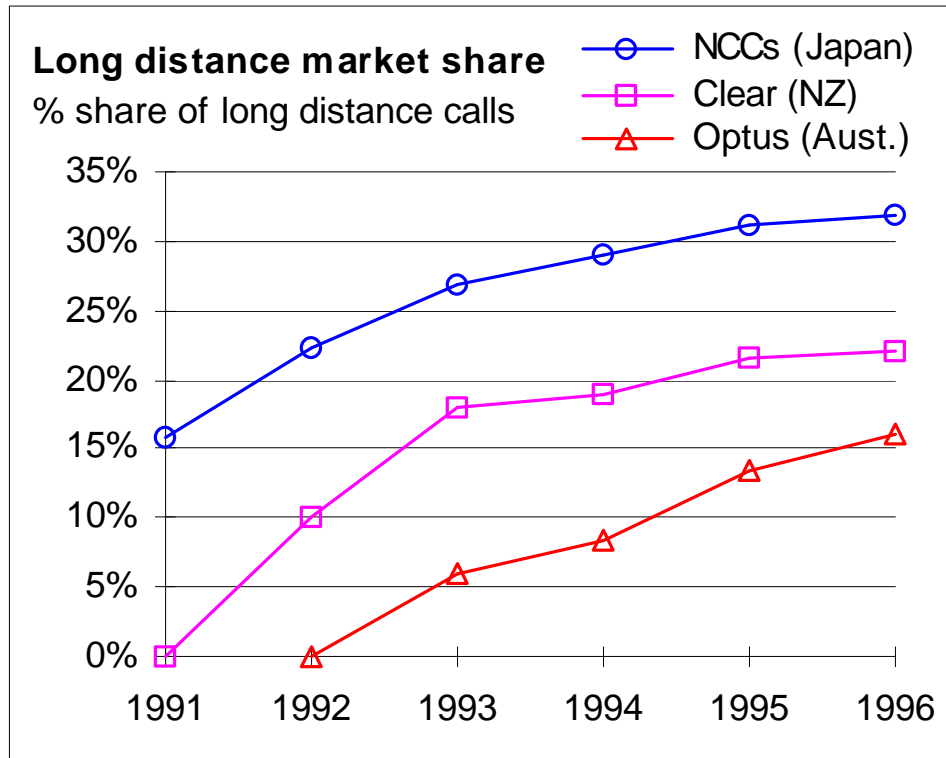
- Reduction in number of bands

- Reduction of distance and duration elements

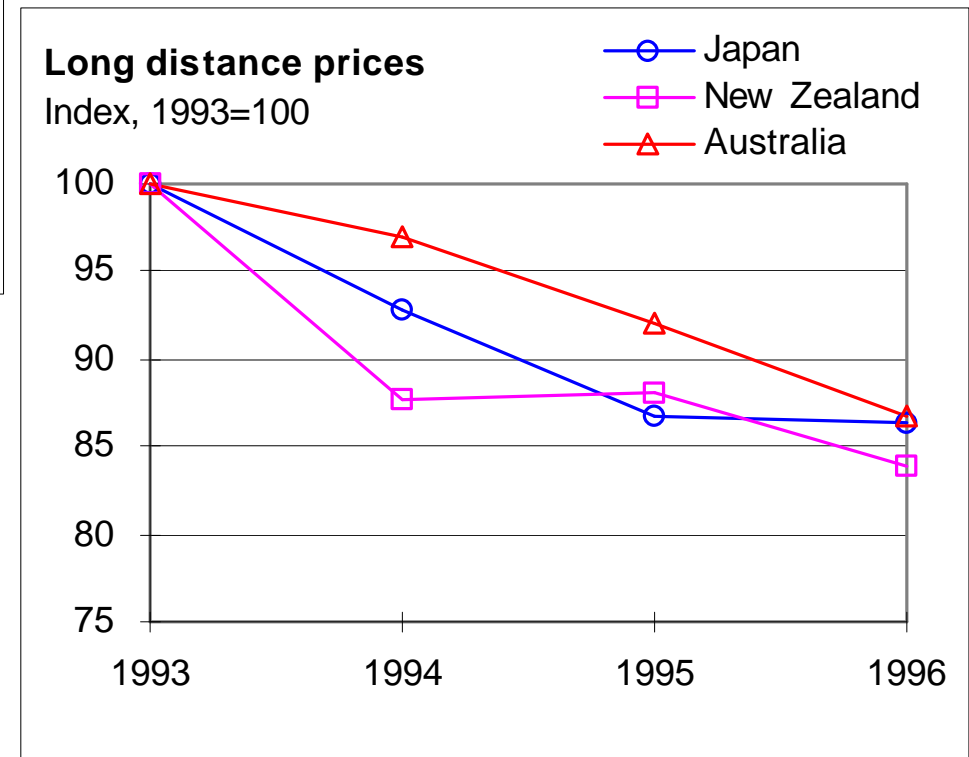
Cost-based

- Long-distance call <3 times cost of local call

As competitors gain market share ...



Long distance prices come down ...



Source: ITU Asia-Pacific Telecommunication Indicators, 1999.



Tariff comparisons: What for?

- To carry out benchmarking between operators in similar countries
- To track effects of tariff rebalancing over time
- To provide comparative information for managers, regulators, users
- To create “baskets” of different services to compare like with like



Different types of tariff comparison

- Individual rate comparisons (e.g., installation charge, local call rate)
- Composite basket with fixed components (e.g., Siemens basket)
- Composite basket with variable components (e.g., OECD Tariff Comparison basket)
- Variations over time in same indicator

OECD tariff baskets:

Then and now ...

Six baskets defined:

- Business telephony
- Residential telephony
- International telephony
- Mobile communications
- X.25 data communications
- Leased lines at 9.6 kbit/s, 56/64 kbit/s and 1.5/2.0 Mbit/s

Comparisons between countries

- Additional telephony baskets to take account of usage discounts (e.g. small businesses, multinationals, elderly)
- Combined national and international telephony basket
- Additional baskets needed for Internet, ISDN, digital mobile (roaming), PCS, ATM etc

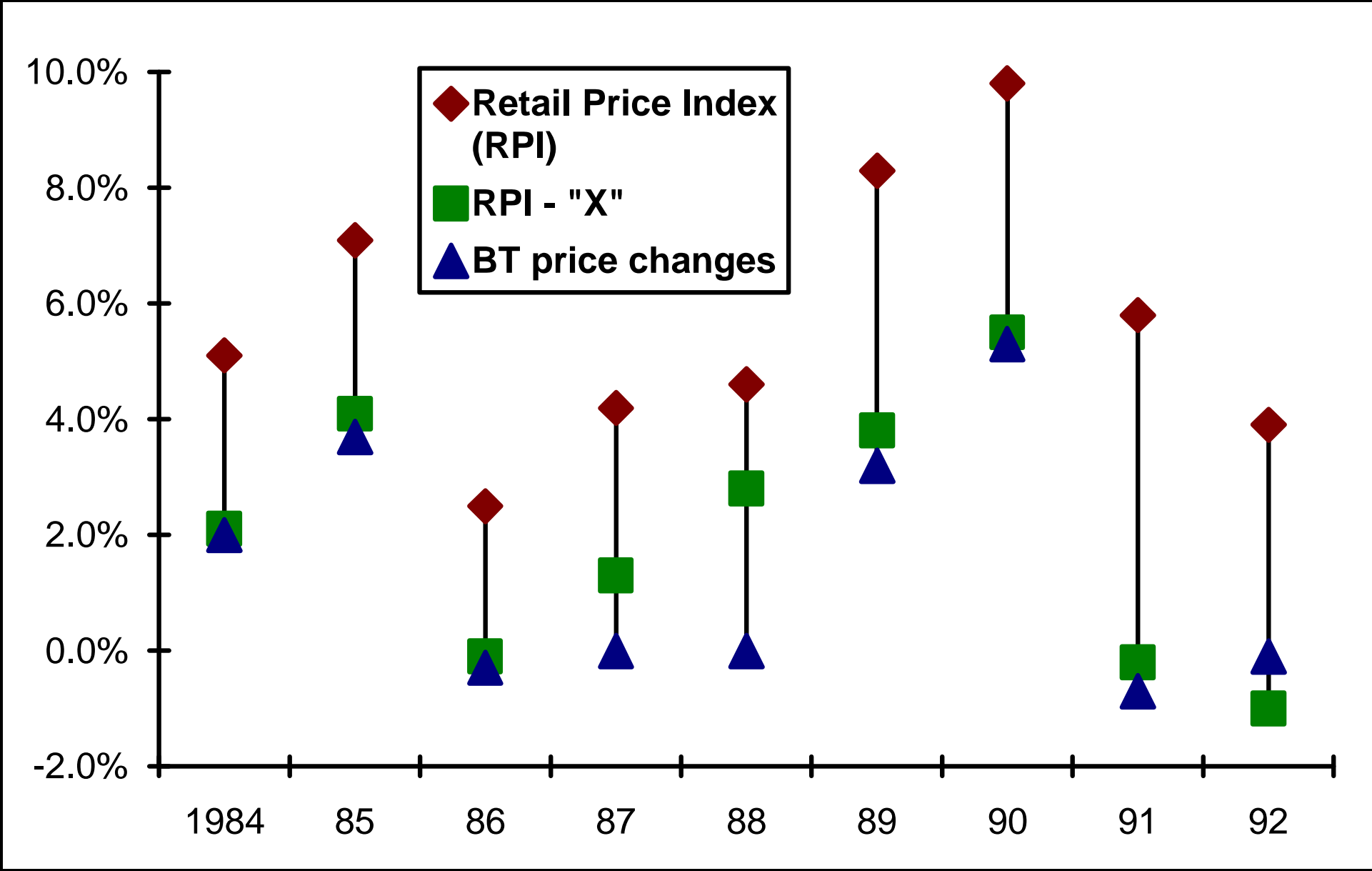
Comparisons between operators within countries



Price regulation: Why?

- To ensure that the benefits of competition and technological change are shared by all users
- To protect the interests of specific user groups (e.g., low volume users, rural areas)
- To ensure that incumbent operator does not abuse its dominant position
- To regulate specific services
 - ⇒ e.g., Interconnect price for competitive operators
 - ⇒ e.g., Leased line charges for Internet Services

Price regulation of BT, 1984-92





TRAI's proposed price regulation regime

<i>Service</i>	<i>Price cap principle</i>	<i>Comment</i>
Rental	Below cost price	Cost-based rental would reduce access
Local calls	Cost without margin	Upper limit of estimated cost taken as price
Long-distance	Cost-plus	To provide cross-subsidy for rentals, local calls
International	Cost plus	To provide cross-subsidy for rentals, local calls
Other	Mainly cost-based or reporting requirement only	Depending on service and degree of competition



Structure of presentations and background reading

- Pricing domestic services to reflect costs
- Pricing strategies to achieve Universal Service / Universal Access
 - ⇒ Chapter 2 from WTDR98: “Pricing Access”
- Pricing int’l services towards costs
 - ⇒ Chapter 6 from DoT96: “Future pricing ...”
- Impact of the Internet on pricing
 - ⇒ Chapter 6 from Challenges99: “Internet for PTOs”
- India Country Case Study
 - ⇒ ITU/Phillips Tarifica/IIM case study of India