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Title: **Measuring affordability of telecoms (PowerPoint presentation)**

Measuring affordability of telecoms

World Telecom/ICT Indicators Meeting
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Presentation reflects a consumer viewpoint – building on a series of ITU Asia-Pacific annual conferences on telecoms policy for consumer representatives (the latest two held in conjunction with Consumers International).

See http://www2.itu.or.th/consumer/ for conference reports and papers.

Also underlines the importance of household surveys – mentioned in several other presentations at this meeting.

Parallel with other presentations relating to gender – vital to achieve focus on disadvantaged groups if there is to be a chance of reducing their disadvantage; in this case, the focus is on low-income groups.

Outline of presentation

- What is affordability?
- Why measure affordability of telecoms?
- Some approaches to measuring affordability
- Focus on proportion of income approach
- Proposals for ITU and country statisticians

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Pleased to be in touch with anyone wishing to improve on these tentative proposals or to work in this area.

What is affordability?

- We all know intuitively what affordability means. Includes elements of:
  - ability to pay a price without suffering hardship
  - degree of need for what is bought
- Hard to pin down objectively because of:
  - big variation in people's needs as well as resources
  - poor correlation between affordability and acquisition
- Widely accepted that basic telecoms should be affordable, but what this means in practice is rarely defined (far less measured)

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Easy to see that affordability of telecoms can't be taken for granted in low-income countries.

But telecoms is no longer a luxury – it is classed as a basic necessity even by many poor people (eg after shelter, clean water and electricity).

Wrong to assume that affordability can be ignored in high-income countries, even if it has become a minority phenomenon – eg latest Oftel research shows 3% of the UK population as "disadvantaged by cost" of telecoms services.

http://www.oftel.gov.uk/publications/about_oftel/2002/manp1202.htm#sum

Disadvantaged by cost, 3% homes, 2/3 million

Essence – want to make greater use of telecoms but cost barriers to doing so. Ability to control and manage costs is vital. Have only a mobile or no phone at all, but would like more. Few have Internet at home but a third use it elsewhere – cost barriers to home access. The ability to control and manage costs is the main issue for this group and they will pay a premium in order to retain this flexibility and control.

Who - mainly young, working in low paid jobs or unemployed, low income, DE social groups, living in rented accommodation (largely state), in deprived urban areas, single and/or with young children

Why measure affordability?

- *Affordable service/access for all* is part of practically every country's sector goals/policy
- Traditional monopolies often provided *low price* service but only to the lucky few; increasing recent emphasis in policy circles on *access* rather than *affordability*
- There are tensions between access and affordability:
  - Competition can increase access but often means price rebalancing ie higher prices for some
  - In a commercial environment prices must recover costs as well as being affordable
- Neither access nor affordability is meaningful without the other; need to measure both to gauge success of policy

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US Telecommunications Act 1996: "quality services should be available at just, reasonable, and *affordable* rates"

EU Directive 2002: "Member States shall ensure that the services set out in this Chapter are made available at the quality specified to all end-users in their terrritory, independent of geographical location, and, in the light of specific national conditions, at an *affordable* price".

TRAI tariff review consultation 2002: "One of the principal objectives of tariff rebalancing exercise for basic services is to promote efficiency in the supply of telecommunication services and at the same time provide basic telephone service (POTS) at *affordable* prices, to the consumers."

http://www.trai.gov.in/consultbasicpaperframe.htm

ITU 1998: Universal service (a phone in every home) is unaffordable for nearly half the world's population [on assumptions of 5% income available to spend and "average costs"] World Telecoms Development Report 1998 chapter 2

NB: price rebalancing for fixed services tends to raise rentals while lowering international and long distance call charges. This benefits high users but can put prices up overall for low users, who probably include those who find it hardest to afford the phone. In theory, everyone will eventually benefit through efficiency improvements and innovation – but it can be several years before this happens.

Therefore must look at universal access (affordable telephone service within reasonable distance for everyone)

WB 2000: "Affordability is not such a large barrier: if service is available it is used"

WIK study for EU on USO in the accession countries: must consider what society as a whole can afford before imposing USO for affordable service at the individual household level.

http://europa.eu.int/information_society/topics/telecoms/international/universal_service/execsum_30jun01.pdf

ITU/CTO 2002: rural costs per line are 6 to 10 times higher than in urban areas, and prices should reflect this. Prices 4 times urban levels will still result in reasonable usage (say 2% of community income).

http://www.itu.int/ITU-D/treg/Events/Seminars/2002/GSR/Documents/08-USModel_part2_doc.pdf

The fact that there is a public phone in a location, and that it is used, does not demonstrate that the service is affordable. Lower call charges might increase both the population who ever use the phone and the average amount of usage by those already using it.

Some approaches to defining affordability

- Operational approach – don't define affordability but try to achieve it anyway
  - Use competition to bring down costs and prices
  - Introduce concessionary tariffs for specific groups, if necessary
  - Provide facilities enabling users to control expenditure
- Political approach – define in terms of current or earlier low user prices (this is or was accepted, so keep prices no worse in real terms)
- Consumer-focused approach - ask people about expenditure priorities and what they think is affordable
- Income-based approach - look at percentage of income spent for given usage (or per unit of use)

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Consumer surveys are important and enlightening, but results are not really comparable between countries.

Percentage of income spent on telecoms can be measured and compared between countries.

ITU already accepts this approach in principle (Telecoms Tariffs table includes line rental as % of GDP per capita)

Definitions of affordability in EU

1998 BEUC study showed:

- 3 member countries had no definition
- 6 had non-specific definitions
- 2 defined in terms of prices at 1/1/98 (static)
- 3 defined in terms of prices at 1/1/98 (dynamic)
- 1 has specific low-user price caps

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BEUC – Bureau Européen des Unions des Consommateurs

Universal Service in Telecommunications: European Consumers' Rights to Telecommunications Services

BEUC/341/98, November 1998

Affordability: consumer research

- Research among low-income groups in various high-income societies shows:
  - lump sums (connection charges, deposits) are a big problem, but call charges are usually not
  - frequent billing at predictable levels is important
  - voluntary access restrictions or bill limits have some support
  - helpful handling of debt and disconnection is vital
- Recent Papua New Guinea survey: 77% of public telephone users find the rates expensive - and service quality poor

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For selected references see bibliography at end of Chapter 5 on *Universal Access* in Trends in Telecommunications Reform 1999, ITU, Geneva; also

http://www.callineb.com/affordability.htm

For Papua New Guinea and other consumer views and survey results, see reports and papers of Asia-Pacific regional annual meetings of consumer societies and user groups of the telecoms sector, 1999-2002, at http://www2.itu.or.th/consumer

Income based approach

- Ideally would like to measure how much of their income people have to pay for “necessary” telecoms usage
- What income to measure?
  - National income/household income (or expenditure) statistics usually available (latter may not be annual)
  - If quintile/decile data not available, can estimate by distribution fitting using mean and Gini coefficient; or use average/minimum wages
- What expenditure to measure?
  - Surveys measure actual telecoms expenditure. Usage is unknown and may be more or less than “necessary”
  - What is “necessary” keeps changing and is not cross-border comparable
  - Suggest standardised “reasonable” baskets of use

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Well known that price paid per unit of use (taking account of all payments, eg including initial and periodic charges) falls dramatically with volume of use. So low users (who have a big overlap with low income users) pay much higher unit prices than high users.

For more on concept of “necessary” telecoms use, see this author’s paper

Meeting basic needs in telephony: a new focus for universal service objectives? paper in Universal Service Obligations in a Competitive Telecoms Environment, proceedings of Expert Symposium, Analysys Ltd, Cambridge, 1995.

For distribution fitting technique, see this author’s paper

Affordability of basic telephone service: an income distribution approach, in Telecommunications Policy, volume 24 (2000), 907-927.

Cross-country comparison so far

- Patterns of household expenditure on communications analysed from around 15 countries with a wide spread of GDP/capita
- Limited to publicly available data; different breakdowns provided (eg only Botswana and Lithuania do urban/ rural)
- Looked where possible at breakdowns by age, education, household size, rural/urban; always income level seems to matter most
- Need more country data to validate patterns and permit sensible predictions for countries without data

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General characteristics of household expenditure on telecoms

- Higher income groups spend more on telecoms in absolute terms, but less in percentage terms, than lower income groups who have telephone access
- Households with phones spend more on telecoms than households without phones
- Overall average household expenditure on telecoms is in range 1% to 5% in all countries studied so far, similar to percentage of telecoms revenues in GDP
- Percentage of expenditure devoted to telecoms is growing for all income groups

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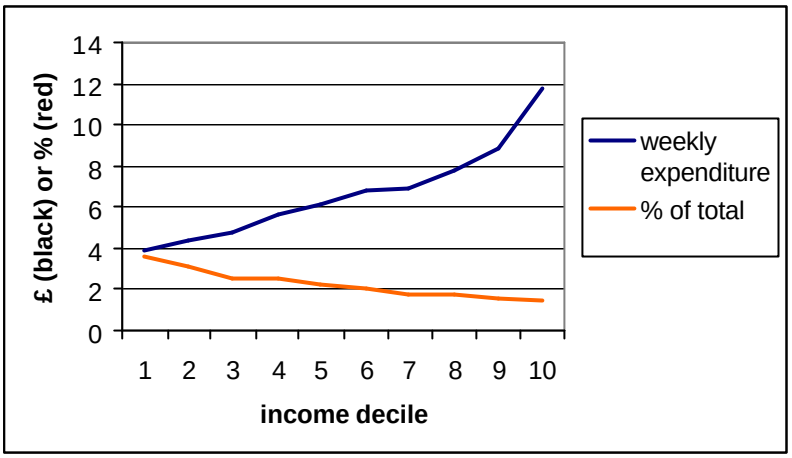
Based on findings so far, there do seem to be some general patterns.

UK FES figures 1998-9



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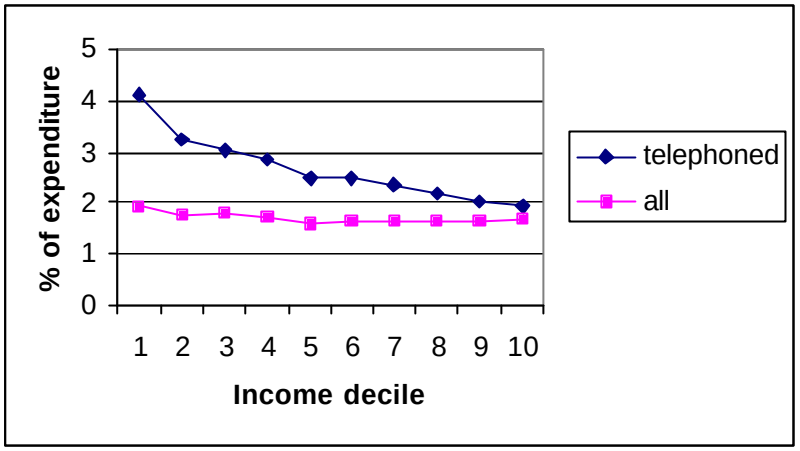
Hungary: 1997 household expenditure on telecoms by decile



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These and 14 other countries' statistics are provided in the paper cited earlier.

Australia: telecoms expenditure as % of household income

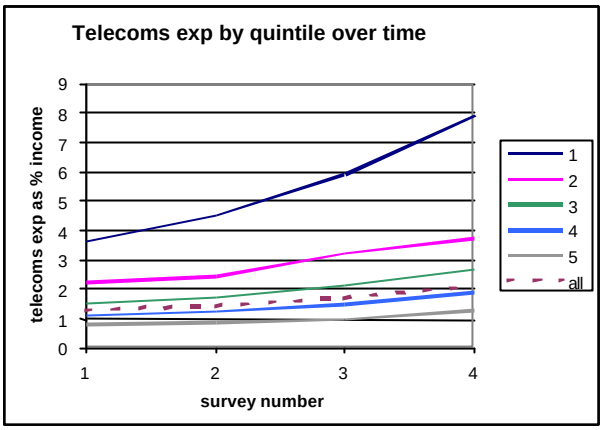
Survey years

1 1984

2 1988-9

3 1993-4

4 1998-9



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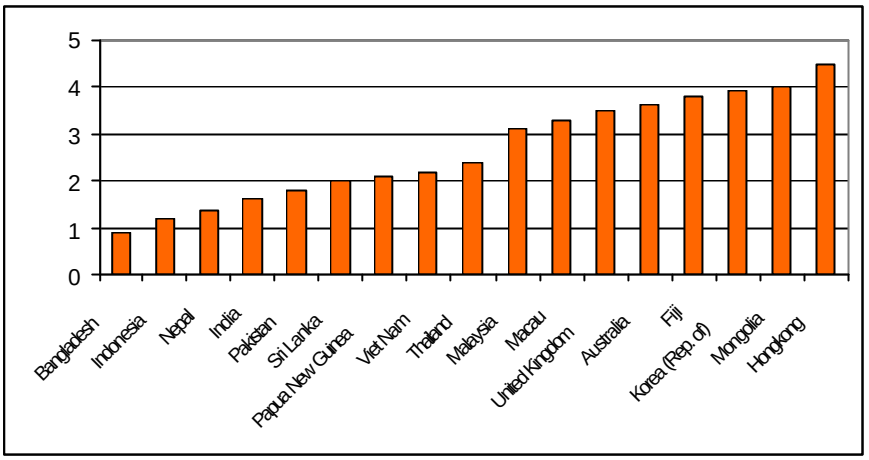
Lowest quintile increase must reflect:

•Higher teledensity in this segment

•Tariff rebalancing

Increasing usage among those already connected earlier in the period may or may not be a factor – more analysis needed to tell.

Telecoms expenditure as % of GDP



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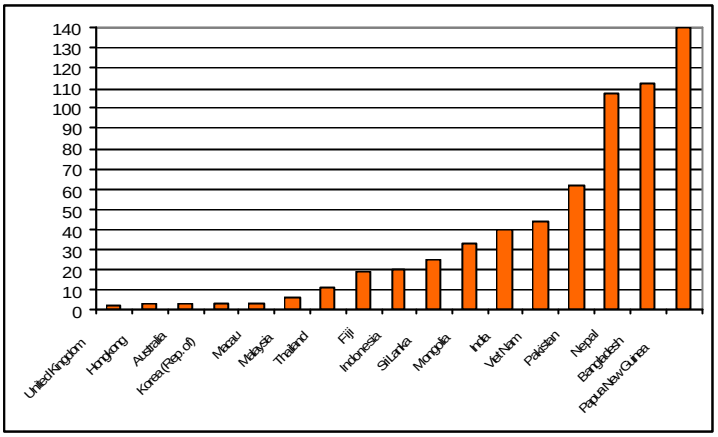
From latest ITU published data. Relatively small spread, around 1% to 4%.

Average telecom expenditure per line as % of GDP per capita



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This is simply the ratio of two existing indicators:

•Telecoms revenues as a % of GDP (see previous slide)

•Teledensity

It may serve as a rough indicator of affordability – or rather, of unaffordability! – as it compares actual expenditures per line with average income levels.

That may be seen as an approximation to measuring necessary usage as a percentage of income, using actual usage per line as a "rough and ready" proxy for necessary usage per line.

Huge spread, from around 2% to 140%.

NB:

•all telecoms revenues are included – both business and residential

•Income comparison is per capita not per household

Teleaffordability table proposal for ITU (1)

- Define “reasonable” moderate, low and very low usage baskets, publish prices and rate of change for each basket (fixed and mobile) eg
  - 1000 mixed national/local mins/month from own line,
  - 100 local mins/month from own line,
  - 10 local mins/month from payphone or prepay mobile
- Compare each basket price with an appropriate income level,eg show
  - moderate basket price as % of median household income (or average wage) eg Vietnam 24%
  - low basket price as % of lower quartile household income (or minimum wage) eg Vietnam 19%
  - very low basket price as % of lowest decile income (or survival income)

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To match current “teleaccessibility” tables.

A recent EU paper (part of the Cardiff Process of economic reform), p 12 onwards, adopts a similar approach:
http://europa.eu.int/comm/internal_market/en/update/economicreform/cardiff-03-full_en.pdf

Here the baskets used are:

•220 calls for households in the bottom income quintile

•1000 calls for households around median income.

Findings are presented for 12 EU member countries for which both income distribution and price data are available. Results are mainly in the range 0.5% to 1.5% of income, though nearer 4% for Portugal.

NB prices in Vietnam are still low in dollar terms. Rentals and local call charges are very likely to increase with liberalisation.

Hypothesis: 5% of income is normally around the maximum that people will spend on comms (figure used in South Africa) except in special circumstances such as:

•Extensive substitution for other expenditure, eg this may be starting in Australia with substitution of on-line for off-line entertainment

•Connection sharing or resale, eg in Peru one low-income household may have a phone which is used by many neighbours (with payment for calls)

See also the ITU’s treatment of affordability in

"Cost, Tariff and Interconnection Rate Calculation Methodology and Application to Case Studies", volume 1 of ITU's Trends in Economics and Finance, October 2001, by Pape Gorgui Touré. 50 Swiss Francs

http://www.itu.int/ITU-D/finance/work-cost-tariffs/publications/affordability.html

Teleaffordability table proposal for ITU (2)

- Also show average telecom expenditure per line as % of GDP/capita
- Longer term, collect and publish:
  - Teledensity rates by household income quintile
  - % of household expenditure on telecoms, overall and by quintile
- Not forgetting (back to access)
  - % of population within (say) 5km of a public payphone

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The household expenditure figures are of interest from other points of view besides assessing affordability.

Countries will probably want to look at regional patterns.

Household surveys need to include both availability in the household of fixed/mobile/internet access, and the expenditure on them (exploration of reasons for this expenditure, eg family, leisure, personal business) would also be of great interest).