

# Universal Service Obligations in Emerging Economies

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# Structure of the presentation

- What is universal service?
- Conceptual issues
- The scope of universal service
- Affordability
- Costing and financing
- Institutional issues
- Conclusions / recommendations

# What is universal service?

- A policy designed to provide basic telecoms service to as many people as possible at prices they can pay.
- It is an obligation which a fully efficient profit seeking operator may only be able to fulfill at a loss.
- Can be quite different from country to country depending on the scope of the USO and the way it is financed.
- Universal service (US) is not industrial policy, i.e. not:
  - to provide for economic development,
  - to encourage the introduction of new technologies.

# Conceptual issues (1)

- Arguments that explain US:
  - (1) Appeal to economic efficiency, i.e. the policy is meant to correct for network externalities - a form of market failure.
    - Network externalities arise because the value of the network for each existing customer increases with the number of subscribers.
  - (2) It involves the provision of a merit good.
    - Where there is a social agreement that there is something special about a good or service that makes it socially desirable that people should consume more of it, or that it is fundamental to our way of life and warrants an official policy to encourage its consumption.

## Conceptual issues (2)

- (3) A wish to redistribute society's resources:
  - Need not favour the poor in middle income countries, as they are less likely to have a phone
- (4) To avoid divisive disputes between interested groups,
  - e.g. leads to tariff averaging.
- (5) To shift costs away from voters,
  - e.g. leads to cross-subsidisation of residential services with revenues from high priced services used by businesses.
- (6) To provide visible benefits with invisible costs,
  - concerns the transparency in the way subsidy taxes are raised.

## Conceptual issues (3)

- In debates about universal service, where (1) and (2) are missing, we always reject (3) in favour of state *income support*.
- It has been shown that people are quite adept at making economic decisions themselves.
- We say, therefore, that people should have *consumer sovereignty*.

## Conceptual issues (4)

- (1) and (2) are often referred to as reasons for a USO policy, but (4), (5) and (6) are also typically present:
  - (4), (5) and (6) are tied up with institutional issues which are addressed in slides 21-23.
- Where network externalities persist the usual policy recommendation is for lower (targeted) prices to be offered to non-subscribers.
  - The recommendation is based on the assumption that
    - a USO can be designed and operated on its merits,
    - the economy-wide costs of funding net USO costs can be kept within reasonable limits.

## Conceptual issues (5)

- As regard *merit goods*, over longer time horizons, poor people may be too concerned with meeting their basic needs to make rational long-term decisions.
- This justifies the exception in regard to consumer sovereignty when the state supports a limited number of safety-net services.
- Merit goods arise out of societal preferences and the political process. Whether something is a merit good or not cannot be determined through economic analysis.



## The scope of universal service (1)

- USO scope has traditionally applied to basic telephone service only.
- Services discussed as possible additions are:
  - e-commerce, surfing (WWW), IP telephony and IP fax.
    - No evidence of significant market failure in the provision of these types of services.
  - e-mail, multi-cast, interactive educational and video-conferencing.
    - There are externalities with these services but subsidies are not required as existing incentives are strong to price internet services at very low levels, and the market is not stagnating..

## The scope of universal service (2)

- There is no basis (in market failure or merit good arguments) for requiring that internet services to schools should be subsidized.
- Why, as it appears meritorious?
  - The state is both the buyer of the services and the one making the policy as to how much should be consumed by students or public institutions.
  - To require services to be provided at less than cost is to transfer the funding of education (or other public services) from the state's budget to the industry.
  - It shifts financing from a less inefficient to a more inefficient tax.
  - The tax cannot be seen by those who pay it.
  - Gives the impression that it does not cost anything.

## **The scope of universal service (3)**

- There is some interest in seeing mandated investment programs included in the USO.
- Unless investors are certain that they will be adequately compensated (which seldom applies), such programs tend to be counter-productive to US development.
- Mandated investment programs are highly risky:
  - The authorities, neither have the information about demand or investment costs, or incentives to properly consider the down-side risks of investing.

## The scope of universal service (4)

- Universal access is a policy designed to have payphones accessible to all citizens / villages.
- Problems of rural access are typically caused by unremunerative regulated prices and an environment which does not give rise to properly structured investment proposals.
- Can assign obligations to provide rural payphones by auction, with the bid requiring the least subsidy winning the auction and receiving the subsidy in return for providing the service.

## The scope of universal service (5)

- Using auctions involves complex policy and economic issues.
- Problems include:
  - contract design to minimise incompleteness,
  - pre-emptive value of existing assets
  - attracting sufficient bidders
  - avoiding collusion
  - making monitoring manageable
- There is very limited international experience. Chile successfully auctioned non-exclusive franchises for the provision of payphones in specified regions.

## The scope of universal service (6)

- The auction objects were divided into small lots:
  - Enabled the objects to be more accurately specified and monitored than in the case of more complex service provision, leaving much less room for gaming by auction participants.
  - For each lot, the subsidy determined through the auction was relatively small (a few hundred to a few thousand Euro), too small for a subsidy winner to want to spend time later gaming the process in an attempt to secure easier terms, or a proportionately larger subsidy payment.

# Affordability (1)

- Expenditure on telecoms is highly correlated with income.
  - Income distribution explains telephone subscription within a country, and per capita GDP explains differences between countries.
- Low subscription rates in many countries are partly caused by prices being too low to cover costs.
  - The problem occurs disproportionately in rural areas because access prices are nationally uniform, and this rate is set too low.

## Affordability (2)

- Typical experience from South America:
  - Competition lowers costs, improves management performance, and is associated with higher teledensity
  - Rapid growth in subscriptions and rural network development followed rebalancing, liberalisation and privatisation.
- *Affordability* must be subservient to *cost orientation*, with targeted assistance at the margins being the exception.
  - Empirical evidence indicates that in middle income countries when line rental ↑ then teledensity ↑.
- Self-select schemes which offer cheaper reduced services are an efficient way of dealing with US.
  - They will often cover LRICs (no cross subsidies).
  - Common costs can be recovered from full fee paying customers.



## Costing and financing (1)

- Where a USO imposes a net cost which an operator could have avoided absent the USO, the service is subsidised. All such subsidies impose a financial burden.
- A tax to distribute the burden needs to be broadly defined to make it as competitively, technologically and content neutral as possible.
- Three options are:
  - (1) To fund US out of the state budget
  - (2) To fund via a USO VAT tax
  - (3) To fund by a tax on telecoms firms, typically based on their share of total wholesale telecoms revenues.

## Costing and financing (2)

- The idea of a USO fund should to distribute the total amount of the USO burden over all contributors in a fair and efficient way.
- An industry firm-financed fund (3) would, however, also impose different tax rates on different contributory firms.
- Such a tax raises operators' costs in a discriminatory way.
- Operators would have to recover those taxes through charging higher prices to customers.

## Costing and financing (3)

- Raising USO taxes indirectly from end users by first levying them on operators also suffers from a lack of taxation transparency for those who pay them.
- This creates a bias in favour of the political process transferring the funding of non telecoms services to the telecoms industry, and increasing the level of USO taxes beyond that which voters would on average approve of.

## Costing and financing (4)

- Where formal USO schemes operate, the VAT scheme offers the most transparency.
  - Could in principle tax business more highly than residential subscribers.
  - It would require USO tax costs to be specified as an item on users' telephone bills.
  - It provides better democratic accountability and improved likelihood that the amount actually spent on universal service equalled the amount preferred by voters.

## Institutional issues (1)

- USO policies and regulations are conceptually complicated and information intensive to design and operate in order that benefits are not dwarfed by costs. Reasons include:
  - The information which is needed to design, adopt and/or operate the policy cost-effectively may not be available.
  - The skills needed in order to design and/or operate the policy cost-effectively are not available.

## Institutional issues (2)

- Policy design and implementation are determined through a bargain among particular interest groups, such that the available experts are sidelined.
  - In this case the outcome may bear only a passing relationship to the original 'paper' argument in favour of a particular universal service policy.
- The agendas of those involved with universal service policy design adoption and implementation diverge from what voters would prefer.
  - Universal service policies may not be correctly targeted and may not be cost-effective.

## **Institutional issues (3)**

- The short to medium term focus of the political process may mean that the necessary changes to be applied to existing prices and/or poorly designed universal service related policies are not possible.
- The parliamentary system and associated institutions are immature implying a relatively high risk that a new government will reverse guarantees given by a previous government, guarantees that business needs in order to invest.

## Conclusions and recommendations (1)

- US should be seen as an element of a country's social safety-net, rather than an instrument to accelerate network development.
  - Latter best accomplished through liberalisation and privatisation.
- In rich countries universal service has been seen as a policy intended to provide basic service to those on the margin.
  - In middle income countries perhaps it should mainly focus on universal access.



## Conclusions and recommendations (2)

- Expanding the scope of US tends to result in taxation shifting from the state budget to an inefficient and non-transparent industry tax paid by subscribers.
  - State can encourage internet provision to schools without shifting tax liability from itself.
- The concept of affordability should not be divorced from the cost of supply.
- Net USO costing is a difficult task with few people having the skills and experience to do it.
- Make any USO taxes transparent to prevent unseen tax rises.

## **Conclusions and recommendations (3)**

- Competitive entry and investment are strongly correlated with the level of attainment of US.
- For middle income countries, try to avoid setting up a formal USO scheme until after liberalisation and market based solutions have evolved.
- Consider institutional reforms that might be needed to prevent regulation and US policies from becoming too expensive.