

Making Regulation Pro-Poor Regulatory System Design: Lessons from Telecom

Rohan Samarajiva, LIRNE.NET, Sri Lanka
samarajiva@lirne.net

For too long in Asia, regulation has been seen solely as a means of protecting consumers. In conditions of limited access to infrastructure services, consumers tend to be the relatively privileged. Having no access to infrastructure services, the poor were excluded from the protections offered by regulation. In addition, this form of regulation tended to create disincentives to network rollout. Making regulation pro-poor requires attention to the fundamental problem of increasing supply of infrastructure services through greater investment. Attracting private investment to infrastructure services necessitates the creation of appropriate incentives. Good regulatory system design can produce incentives that will not only ensure increased supply of infrastructure services, but can direct such supplies toward the poor. The purpose of this presentation is to illustrate how this has been done in the telecom sector. More than with other infrastructures, competitive supply is possible in telecom. Therefore, regulatory design in this sector may be a little easier than in others. However, the basic principles are generalizable.

Telecom services include communication, information retrieval and information dissemination over distance. The focus here will be on real-time voice communication, or plain telephony. Over the past century in most countries, the supply of voice telephony has been disproportionately skewed toward the rich and the urban areas. Recent experience in several countries has shown that the bias against the rural poor may be reduced by careful regulatory design. Designing incentives to ensure the connection of the urban poor is somewhat more difficult.

Traditionally the integrated monopolies that supplied voice telephony charged for the service of call origination and offered call termination as a bundled “free” service. Because each “free” call reception was accompanied by a revenue-generating call origination elsewhere on the network, this made sense in an integrated environment. However, the economic viability of connections tended to be measured solely in terms of origination revenues. Those who do not originate many calls (a group that includes most of the poor), appear “uneconomical” though they may be generating income for the overall network through the reception of calls. This perception may be changed through regulatory design that ensures the implementation of cost-oriented interconnection based on measured compensation, as opposed to the simpler sender-keeps-all regime. Because costs are higher in geographical areas where the network is less dense, cost orientation requires that termination rates in low-density parts of the network, such as rural areas, be higher than in high-density, urban areas. In Chile, a country that achieved dramatic improvements in rural connectivity, the cost of terminating a call in a rural area was 18.7 times that of terminating a call in the city. Ratios as high as this can dramatically change the revenue perceptions of rural connectivity.

In addition to making visible the revenue stream from call termination and ensuring that it is cost-oriented through an asymmetric measured compensation

interconnection regime, regulation can make the supply of rural connectivity attractive to investors by allowing cost-reflective call origination charges. In Chile, the retail prices of the rural service suppliers were very lightly regulated: only within-region calls were subject to price regulation. Averaging of origination prices across the country contributes to the perception that rural services are uneconomical.

Allowing an incumbent to cross-subsidize rural services as is the case even now in India, precludes new entrants from entering those markets and in effect compels them to “cream skim” in the urban areas. In India, the regulator set the retail tariffs for the incumbent, but explicitly stated that they were ceilings. Lower prices were allowed and encouraged for the rural areas. Lacking the incumbent’s sources of cross-subsidy, the new entrants were effectively precluded from entering the rural areas by the below-cost prices sanctioned by regulation.

Even if investors can be assured of significantly higher operational revenues through asymmetric interconnection and cost-reflective call-origination prices, they may still be unwilling to go into rural areas because of higher capital costs. Here, the solution is smart or “least-cost” subsidies. In Chile and Peru, areas with higher costs and significant unmet demand were identified, and projects developed for bidding out through auction. The bidder who asked for the least subsidy was granted a non-exclusive license, along with assured access to the required spectrum. In Chile, the process resulted in six private dollars being invested for each dollar of subsidy. In Peru, each subsidy dollar attracted one private dollar. The existence of a sender-keeps-all interconnection regime in Peru at that time may have contributed to the greater reliance on subsidy. The mobilization of private investment through least-cost auctions or competition for the market yields several benefits. It creates incentives for the bidders to use the most efficient methods of supplying services, and serves as a discovery mechanism for identifying the true cost of supply. The commitment of private capital creates the conditions for continuous supply of the basic service and the introduction of additional services.

The Chile and Peru initiatives were based on multiple rounds of bidding that were open to locally established operators as well as newcomers. The desires of new entrants to gain a toehold and the incumbents wish to preclude that led to zero-value bids being made in the first round in Chile. However, the number of bidders decreased and the subsidies that were requested increased substantially in the later rounds. Their experience suggests that there is potential for improvement of auction design through incorporation of insights from game theory.

The Chilean and Peruvian initiatives allowed for the participation of multiple suppliers through the bidding out of relatively small geographical areas. In the one instance of least-cost subsidies being attempted in Asia, around one-third of Nepal was put up for bid as a single parcel. The bid was withdrawn at the last minute due to political uncertainty. It is worth considering whether the project would have been less vulnerable had the more participatory approach of the Latin American initiatives been adopted in Nepal.

Currently, Sri Lanka is planning an e-Sri Lanka initiative to dramatically increase access to and use of information-communication technologies among its people, especially in the hitherto under-served areas, including the war-affected areas. In keeping with its success of achieving one of the world's highest network rollout rates through market mechanisms, Sri Lanka intends to use smart subsidies to build out a broadband backbone and local networks. In addition to the normal origination revenue streams, efforts will be made to ensure termination revenues through an effective interconnection regime and to pay for the delivery of e-government services supplied through the new networks and the access facilities that will be established in the under-served areas. The size of the geographical parcels that will be bid out and whether the subsidies will be issued in multiple rounds or not have yet to be decided. The Sri Lankan initiative is not limited to infrastructure; the development of e-government services in the three official languages and the related transaction, authentication and payment services will be a major component. The delivery of e-government services will be a good thing in itself; but, in addition, it will create reasons for people to start using the access centers, provide a platform and functionalities for other applications such as e-commerce, e-banking, etc. and provide a reliable revenue stream for the service providers.

The key to pro-poor regulatory design is thinking like an investor, or even like a banker (because investors may have to obtain capital from them). Effective regulatory design must be premised on an understanding of why private investors have not hitherto supplied services to the poor. Once those reasons are understood, it is possible to design incentives within the context of market mechanisms (competition in the market and competition for the market) to ensure that the necessary investments will be made to provide the required services. If the provided services are likely to be out of the reach of the poor, it is possible to bring down the prices by the provision of one-off smart subsidies. Ideally, continuing subsidies should be avoided.

The Chilean and Peruvian models provide valuable lessons on how to enhance access to infrastructure services by the rural poor. These solutions rest on the ability to target the rural poor through the identification of geographical spaces (e.g., the rural areas or low-density networks). This is not possible for the urban poor who live interspersed among the rich and the middle class. The only solutions to the problems of enhancing the access of the urban poor so far have come from entrepreneurs, not regulators or policy makers. Pre-paid cards have provided access to millions of the urban poor worldwide, by removing barriers such as the possession of an address and creditworthiness and by allowing the user to manage the communication expenditures. Communication bureaus and cyber cafes have brought international communication and the Internet within the reach of many of the urban poor. While more work must be done to devise effective regulatory means to improve services to the urban poor, the short-term response must be that of letting the entrepreneurial process work its way. Caution must be exercised with regard to excessive regulation of pre-paid services, communication bureaus and cyber cafes.