



Affordability of basic telephone service: an income distribution approach

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Abstract

Liberalisation usually requires price rebalancing. In low-income countries, this often leads to residential rentals being priced much higher than before, which can threaten the affordability of basic telephone service. A quantitative model is provided for assessing the likely effects of price changes on affordability, using local data. Representative data from a range of countries are provided. Using illustrative parameters, the model is applied to show the effects on telephone take-up of economic growth, different pricing strategies, and different degrees of inequality in income distribution. It is also used to estimate price elasticities of demand for lines in low-income environments. © 2000 Elsevier Science Ltd. All rights reserved.

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1. Introduction

All over the world, countries that are liberalising their telecoms industries face a dilemma. Price rebalancing tends to raise residential rentals, often very substantially; while making basic service affordable points to keeping rentals low. The notion that basic telephone service should be affordable has received widespread assent, but this has not generally been backed up by policy guidelines designed to achieve affordability.¹

In a competitive market, prices will reflect underlying costs. Incumbent telephone companies therefore need to “rebalance” their tariffs to a pattern which will enable them to meet competition, and which at the same time will permit efficient competitive entry. Overall, rebalancing should be revenue neutral, so that customers as a whole do not lose out. Of course, liberalisation itself should

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¹ Laszlo (2000) analyses a range of approaches for affordable energy in transition economies.

eventually deliver major customer benefits. However, rebalancing inevitably favours some customer groups over others. In particular, it usually favours high (typically business) users, especially those who make international calls, over low (typically residential) users.² Often, the level of residential rental that would be needed to cover the cost of line provision is several times higher than the existing rental. Existing customers may be unwilling or unable to pay for line rental at a cost-recovering level. This can have major political and commercial repercussions.

The higher the level of national per capita income, the easier it is to deal with this dilemma. Most early liberalising countries have been relatively affluent OECD countries. In general, they have handled the problem by a combination of:

- Restraints on the speed of rebalancing,³ and
- Special tariff schemes to make service affordable to low-income users.⁴

But now we are seeing the spread of liberalisation to many countries with moderate or low levels of per capita income. For them the problem is much more acute. Hard cost data are scarce, but overall there is little reason to expect that per line costs will be much less than in richer countries. Typically, labour costs are lower, but capital costs may be higher, and of course line densities and economies of scale may be much lower.⁵

Historically, rentals have been set at levels that were within reach of the target market at the time (first the affluent, then the middle classes), so as to permit line take-up and market growth.⁶ Because of the prevailing low level of income even for professionals, these rentals are typically very low. Overall, domestic tariffs have often been kept below cost through subsidies from inbound international settlement payments. Suddenly, the subsidies are disappearing and much higher, cost-related, tariffs are necessary. How can a rapid transition be managed without alienating existing customers and slowing down network growth? Mass defections from the network are in nobody's

²In principle, low usage groups might be more than compensated for these losses by savings in other areas of expenditure, because of the reduced cost of telecommunications as an input. Such indirect effects can, however, only be quantified if detailed data are available covering both the expenditure patterns of different usage groups, and the telecommunications inputs of the various goods and services purchased. Data of this kind for the state of Pennsylvania were analysed in the papers from Cronin and Herbert (1994) and Cronin, Colleran, Miller, and Raczkowski (1997). The earlier paper concluded that, taking account of both direct and indirect effects, low-income groups had been faring especially badly from changes in telecoms; while the later paper concluded that tariff restructuring was overall to the advantage of low-income groups. This suggests that specific analysis of these issues is likely to be necessary to reach a valid view in any country at any time.

³For example, for many years BT in the UK was prevented from raising its rentals by more than two percentage points above the rate of inflation. Sixteen years after liberalisation, it claims that its residential rentals are still below cost.

⁴For example, Lifeline (often measured-service) schemes which are offered in nearly every state of the US.

⁵Indigenous equipment manufacture may permit significant reductions in capital costs in some lower-income countries; however, such savings are not yet widely available. Given the scarcity of published data on line costs, the modelling in this paper uses illustrative figures of \$150 and \$200 a year, which are believed to be reasonably representative of the cost levels likely to be found in a range of countries. These may be thought of as fully allocated costs.

⁶This is of course the identical strategy that was adopted by nearly all today's high income, high teledensity countries during their earlier phases of network growth. (Finland may be the exception.)

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