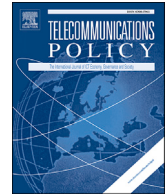


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Welfare effects of the Telecommunication Reform in Mexico

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ABSTRACT

The telecommunication sector in Mexico was highly concentrated until 2013. The sector was mostly composed by a dominant player, a rationed market (low density of services), a poor institutional design, high tariffs, and weak regulation agents. The Herfindahl-Hirschman (HHI) index was 5333 for mobile telephone and 7,029 for fixed telephone services—among the highest scores in the world. In order to promote competition in the sector, Congress approved a reform in 2013 to establish a new regulator empowered to impose asymmetrical rules in the case of the predominance of a single firm. A declaration of preponderance of the dominant player was issued, promoting free interconnection rates and the mandatory sharing of its passive and active infrastructure with the rest of the firms in the industry. The new institutional design led to increased competition in the sector, decreasing the mobile and fixed telephone prices while increasing the coverage and penetration of these services. In this article, an applied general equilibrium model for the Mexican economy is employed to assess the impact of the Telecommunication Reform in Mexico in the telephone sector, consumer welfare, and income distribution. The model is static, encompassing 10 types of consumers (rural and urban and the five income quintiles) and 40 sectors (of which four are disaggregate telecommunications industries). It assumes fixed wages and capital rental prices as well as idle resources. The main results indicate that the effects of the reform are not minor; the drop in telephone prices would reduce the general consumer price index by almost 2%, and the value added would increase by more than 3%, benefiting mainly households in the highest income quintiles.

1. Introduction

After being controlled by the state, Mexico telecommunication sector was opened through private initiative with the privatization of TELMEX (the former state telephone company), followed by the opening of the long-distance market in 1996. However, as of 2014, more than 15 years later, the results remained largely disappointing: The market was highly concentrated in virtually all services, rationing the quantity, quality, and variety. In addition, the company charged high prices to consumers compared with marginal costs (Landa, 1997; Shefrin, 1993). Indeed, a polemic study from the OECD (2012) estimated the average loss in the consumer surplus in the sector of the order of USD 25 835 million PPP (1.8% of Mexican GDP) from 2005 to 2009, due to the high concentration in the telecommunication

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sector.¹

In order to introduce more competition in the telecommunications sector, a new constitutional reform was approved in June 2013 by the Mexican Congress and a new federal law was enacted in June 2014. These efforts aimed to establish a new regulator, which would impose asymmetrical rules in the case of the predominance of a single firm (i.e., a firm with a market share of 51% or more). A declaration of preponderance of the dominant player, América Móvil, was issued promoting free interconnection rates and the mandatory sharing of its passive and active infrastructure with the rest of the firms in the industry. The new institutional design is inducing more competition in the sector, decreasing the interconnection rates, motivating the entry of new players, and promoting price competition among the operators in the sector. This study estimates the effects of the rate reduction in the telecommunications sector in Mexico by using a general equilibrium framework. In other words, we simulate the change in prices, income, and real consumption of 10 family groups (based on their income and whether they live in urban areas or not) and 40 economic sectors as a result of regulatory improvements that increased the competitiveness of the sector.

In the following section, we review the telecommunications market structure in Mexico and its recent evolution, as well as the key components of the reform. In the third section, we describe the model and the parameter calibration. Finally, we present the simulation results and the conclusions.

2. Telecommunications market in Mexico: evolution, concentration, and prices

The telecommunications sector in Mexico suffered from an unsuccessful regulatory environment that combined a failed institutional design and a powerless regulator that avoided making substantial decisions in order to foster competition.

After the privatization of TELMEX, Shefrin (1993) and Landa (1997) anticipated failures in the early reform that prevented competition. Mariscal and Rivera (2005) remarked that Mexican telecommunications policy promoted a vertically integrated operator and a national champion policy, in contrast to Brazil, for instance, which encouraged a competitive sector with many players. Moreover, Ortiz and Rodriguez (2005) documented how the anticompetitive practices of the Mexican telecommunication sector's dominant player were at the heart of the Mexico–United States disputes in the World Trade Organization (WTO).

The lack of competition was reflected in the market performance. In virtually all segments (long distance, local, fixed, broadband, mobile, CATV), there was a high concentration, with a significant market share by only one firm. In all cases, the companies with the largest market share belonged to the same economic group (América Móvil: TELMEX and TELCEL), which made the regulatory environment even more complex.

Fig. 1 shows the progress of the three services considered in this study—namely, fixed and mobile telephony (millions of lines) and the Internet (millions of people with access to the Internet). Recent developments indicate the expansion of fixed telephony, which occurred after the TELMEX privatization finished in 2005, while mobile telephony and broadband Internet access grew at annual average growth rates of 10.2% and 37%, respectively, from 2005 to 2015.

Even when the number of users of telecommunication services increases, the growth in coverage has been lower than in the rest of the world. Compared to international standards, the coverage of telecommunications services in Mexico remains limited; for example, teledensity in fixed telephony in Mexico equaled 44% of households in 2015 (Instituto Federal de Telecomunicaciones, 2015a), while it

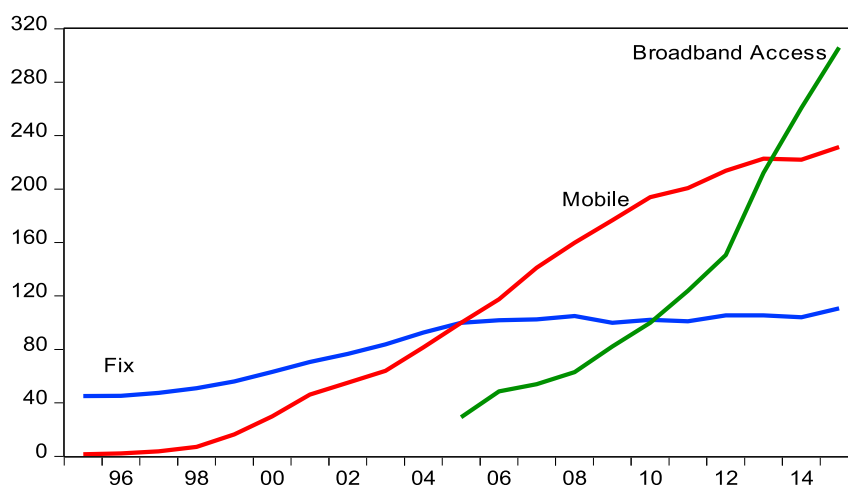


Fig. 1. Index of telephone user lines and broadband access in Mexico (2005 = 100).

Source: Instituto Federal de Telecomunicaciones (2016)

¹ However, we must alert the reader that the study has been severely criticized by industry experts and academics. For example, Ten Kate (2014) showed that the real welfare loss was wrongly calculated; hence, the real one could be in the order of 0.2 of the one the OECD estimated.

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