Chapter 7

Telecommunications’ Impact on Latin America’s Economy: A Close Up of Guatemala

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ABSTRACT

The present chapter analyzes the importance of telecommunications and its economic effects by identifying the relation between the amount of telephone lines, both fixed and mobile, and the economy of Latin America as a region since year 1975 to 2015. The relation is demonstrated using a linear regression model. The case of Guatemala is analyzed in more in detail, where telecommunications have developed at an important pace since the privatization of the former public telco operator along crucial regulatory reforms.

INTRODUCTION

Since the invention of the telegraph in 1836 by Samuel Morse and the invention of the telephone, the world entered a new era. But it was until the 1970’s when most Latin American countries introduced fixed lines into their infrastructures. As Gutierrez (2002) stated almost two decades ago, “the transformation of telecommunications markets is occurring at a rapid pace around the world, with new technological developments, changing market structures, privatization of former public telecom operators (PTOs) in developing countries, convergence of services, and globalization of telephone operators along with the world economy”. Nowadays this statement still holds true as markets are very dynamic and technology seems not to stop or even decelerate its development.

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Even though the transition from state-owned telco operators into private and multinational operators had some difficulties in Latin America, the effect of PTO privatizations along the regulation reforms in each country, were crucial for the opening and development of the telecommunications markets in the region (Gutiérrez, 2002).

This advances in technology had its implications not only in the social area but also in the economies of the Latin American countries. This study analyses the relationship between teledensity and GDP per capita in Latin America, since the introduction of fixed copper lines in the region to year 2015. The study offers a close up into Guatemala where the industry is very busy and dynamic.

**Brief History of the Telephone**

The optic telegraph is considered to be the ancestor of the telephone (Huurdeman, 2003). On March 7th 1876, the U.S. Patent Office issued to Alexander Graham Bell, a young inventor, a patent named “improvements in telegraphy”, which demonstrated the basic principles involved in a telephone. On the same day, Elisha Gray filed a caveat (preliminary patent document) for a similar instrument. This coincidence ignited one of the many debates around Bell’s questioned invention. Johann Phillipp Reis developed a version of the artifact in the early 1860’s, but his claim was defeated in court by Bell’s lawyers (Coe, 2006).

Also in 1871 Antonio Meucci, Italian engineer, also filed a caveat for his design of a “talking telegraph”. For economical reasons, Meucci could not renew his caveat. Later he started a long legal battle. The United States House of Representatives passed a Resolution on June 11, 2002, honoring the work of Meucci.

By the end of 2014 the fixed and mobile telecommunications industry sector was very important generating around US$1.5 trillion of revenue. There are over seven billion mobile users and over 650 million fixed lines (Vodafone, 2014).

**Table 1. Worldwide distribution of telephony at the end of the 19th century**

<table>
<thead>
<tr>
<th>Year</th>
<th>US</th>
<th>Europe</th>
<th>Rest of world</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1880</td>
<td>47.900</td>
<td>1.900</td>
<td>-</td>
<td>49.800</td>
</tr>
<tr>
<td>1885</td>
<td>147.700</td>
<td>58.000</td>
<td>11.800</td>
<td>217.500</td>
</tr>
<tr>
<td>1890</td>
<td>227.000</td>
<td>177.000</td>
<td>31.500</td>
<td>435.500</td>
</tr>
<tr>
<td>1900</td>
<td>1.355.000</td>
<td>800.000</td>
<td>100.000</td>
<td>2.255.000</td>
</tr>
</tbody>
</table>


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