THE IMPORTANCE OF THE RURAL TELEPHONE LINE SATELLITE IN MEXICO

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ABSTRACT

This work is aims to study the importance of the rural telephone line satellite in Mexico, for the period comprising the year 2000-2012. The rural telephone line satellite service is provided by the government and private companies. The work is focused on the service provided by the Federal government for Mexican localities whose population density is in the range of 60-499 people, where cellular and fixed service does not exist. This has been achieved by targets set in the National Development Plan, 1995-2000. First, data was obtained from the Secretariat of Communications and Transportation (SCT) which shows as has been for the rural telephone line satellite in the years mentioned above, and based on the data performed a first hypothesis which states that this service has decreased because rural areas have declined. Information was taken from the National Institute of Statistics and Geography (INEGI) which showed that rural areas in the country have increased over time. This data was included from the years 1995 to 2010, so our hypothesis was rejected. Following the refuted hypothesis, we made a second scenario on which we are working, in which it is argued that rural telephony has declined due to commercial phone penetration (mobile and fixed).

Keywords: satellite telephony, rural telephony, Mexico, rural commercial telephony.

INTRODUCTION

Satellites have been used with a variety of technological, scientific, military, comunications, goals, etc. (1). These have the ability to cover a very large land area to provide voice and video data. Three geostationary satellites are enough to cover the land (2). Satellite phone service is provided by the Mexican government and private companies, using earth stations in Tulancingo, Hidalgo. Iztapalapa, Mexico City [3]. Satellite services began in Mexico in the year 1968 due to the need to transmit the Olympics, Mexico became a signatory to the International Telecommunications Satellite Organization (INTELSAT) [4].

According to the National Development Plan, 1995-2000, in regard to the Sector for the Communications and Transport development program, it was necessary to achieve better coverage and penetration of telecommunications services, because it would provide more opportunities for development in the country, improve quality and increase the diversity of the services at prices more affordable for the benefit of a greater number of users. The Communication and Transport development program sector in regard to rural telephony was aimed at:

- Increasing the coverage and penetration of rural telephony via satellite to population centers of between 60 and 499 people who lacked phone service [5].

The work is aimed at analyzing the importance and tendency of the rural telephone line satellite in Mexico.

The mission of the Communications and Transport Sector is to assist in the modernization of the country through a modern effective and sufficient infrastructure, to enable economic growth and promote regional integration and social development to ensure an adequate level for goods and people [6].

Before 1997 there were 4 000 478 rural localities connected by Telefonos de Mexico (Telmex) with multiple access radio technology [7].

In 1997 the Mexican government began this service with geostationary satellites that were placed at a height of about 37,000 Km. above the Ecuador. Solidaridad 1 and Solidaridad 2 used the L-band to communicate to localities whose terrain prevented them achieve cellular coverage. The L Band frequency was limited and finite so in 2000 using the Ku band for a wider coverage of this service was begun. The rural telephone line satellite is provided through the Federal government operations center called Mexico Telecommunications (TELECOMM) [8].

ANALYSIS

Characteristics of rural telephone line satellite in Mexico:

•Allows people to communicate anywhere in the country and abroad, thereby reducing the isolation of the poorest of the nation.

•Expand opportunities for development in these towns.

•Assurance of supply for locations.

•Medical care emergencies and disease outbreaks.

•Emergency care generated by natural disasters such as earthquakes, cyclones, volcanic activity, river flooding and forest fires.

•Cost accessible to the community.

•The service is accessible since it is located at a public access site in the community.

•Conduct business and shopping.

•Telephone equipment is easy to install and suitable, in adverse conditions.

•The rural telephone agent will get a work bonus with 15% of the total charge for calls made and received.

•There is no charge for the monthly rent service.

Bringing this service to rural communities is not a source of revenue for the Ministry of Communications and Transport, or where appropriate, to the profit as to is a social function [7]. For this service, TELECOMM is responsible for installing the rural terminals and the service operation, maintenance and preservation of equipment [9]. Below is a study of the trend of rural telephone line satellite comprising the year 2000-2012, with data obtained from the Secretariat of Communications and Transportation (SCT).

Satellite Rural Telephone in Mexico

Table No. 1 shows the number of rural satellite phone user from 2000 to 2012.

Table 1 shows the user with rural telephone line satellite service for the period, 2000-2012 (SCT).

Concept	Año 2000	Ag/01	Ag/02	Ag/03	Ag/04	Ag/05	Ag/06	Ag/07	Ag/08	Ag/09	Ag/10	Ag/11	Ag/12
Ridership Rural Thelephony Satellite	12,424	12,400	12,484	12,856	13,269	13,836	14,365	14,780	14,778	13,747	13,094	12,901	12,850

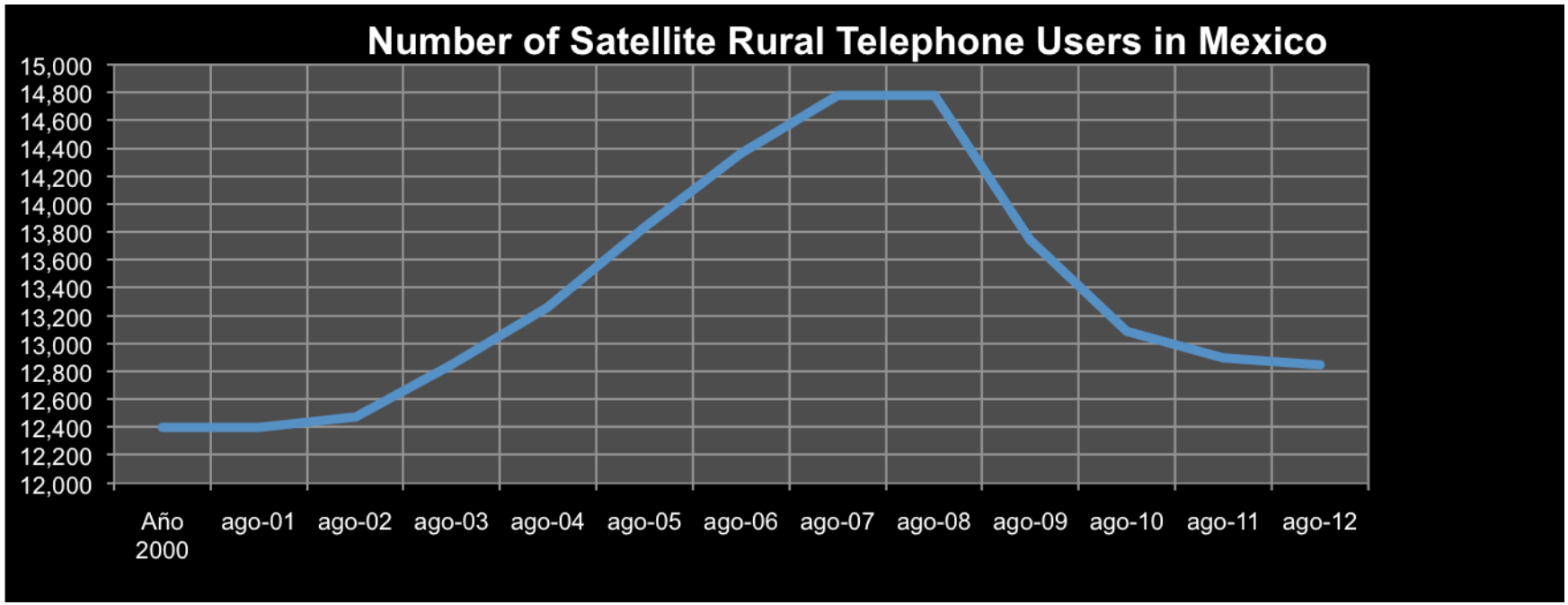

Figure 1. Graph service rural telephony behavior satellite for, 2000-2012.

As seen in Figure 1 for the trend comprising the period of 2000-2007 the service increased. From August 2007 to August 2008 remained constant in 2008-2012 decreased.

RESEARCH QUESTIONS

1. ***Why has the rural telephone line satellite failed in México?***

FIRST HYPOTHESIS

The rural telephone line satellite has declined because of the increased population and they are not within the range of between 60-499 inhabitants.

To ensure that rural areas in Mexico have declined, we took random samples from three states of the republic, to watch the trend of rural localities. The data shown below was obtained from INEGI. The states were Baja California, Guanajuato and Quintana Roo.

Table 2. Number of rural areas in the states of Baja California, Guanajuato and Quintana Roo, 1995-2010.

Concept	year 1995 (INEGI)	year 2000, (INEGI)	year 2005, (INEGI)	year 2010, (INEGI)
Baja California	1,213	3,937	3,807	4,345
Guanajuato	4,820	7,946	7,669	7,827
Quintana Roo	365	2,057	1,699	1,858

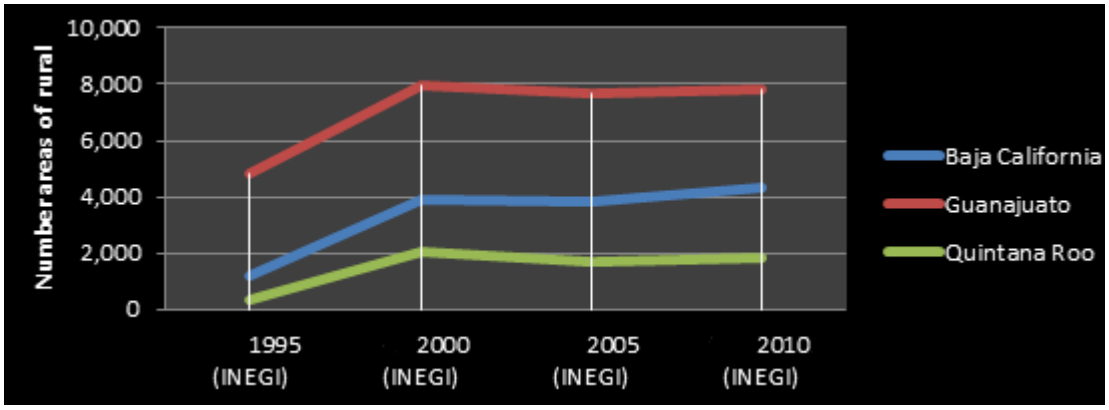

Figure 2 Graph shows rural behavior in the states of Baja California, Guanajuato and Quintana Roo, 1995-2010.

As shown in Figure 2 rural areas have increased.

The trend showing that the hypothesis (rural telephone line satellite has declined because the population has increased and they are beyond the range of 60-499 inhabitants), is false. Rural communities have increased rather than decreased.

CONCLUSIONS

It is necessary to have more evidence of increased rural communities and declining rural telephone line satellite and we are working on question 2 and the second hypothesis:

2. Why if rural communities have increased the rural telephony line satellite has declined?

SECOND HYPOTHESIS

The rural telephone line satellite has declined due to commercial phone penetration (mobile and fixed).

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