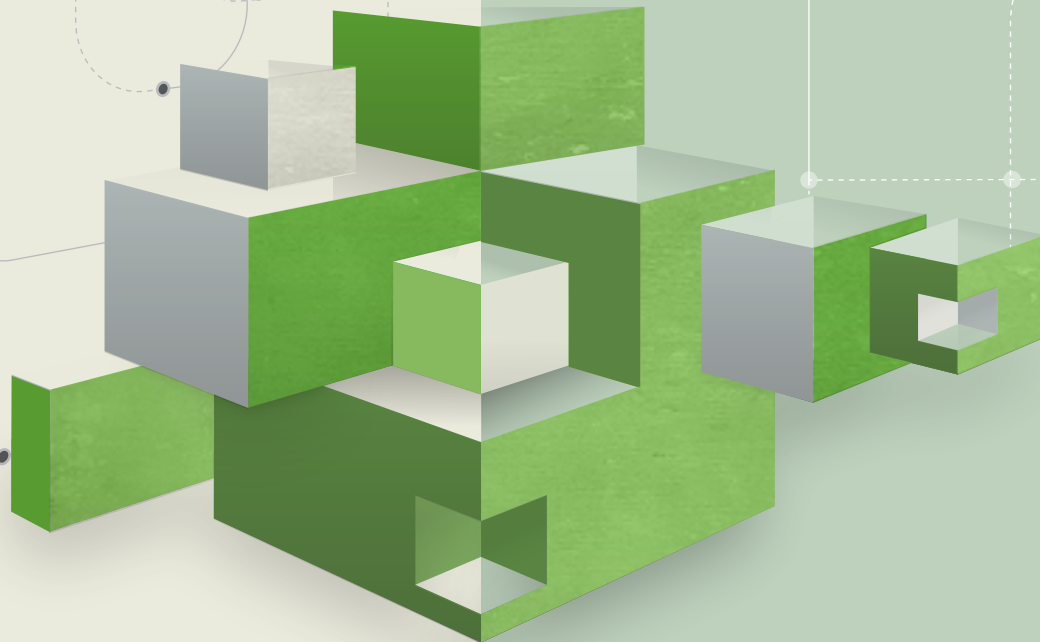


# STATISTICAL YEARBOOK 2015



# STATISTICAL YEARBOOK 2015

INSTITUTO FEDERAL DE TELECOMUNICACIONES

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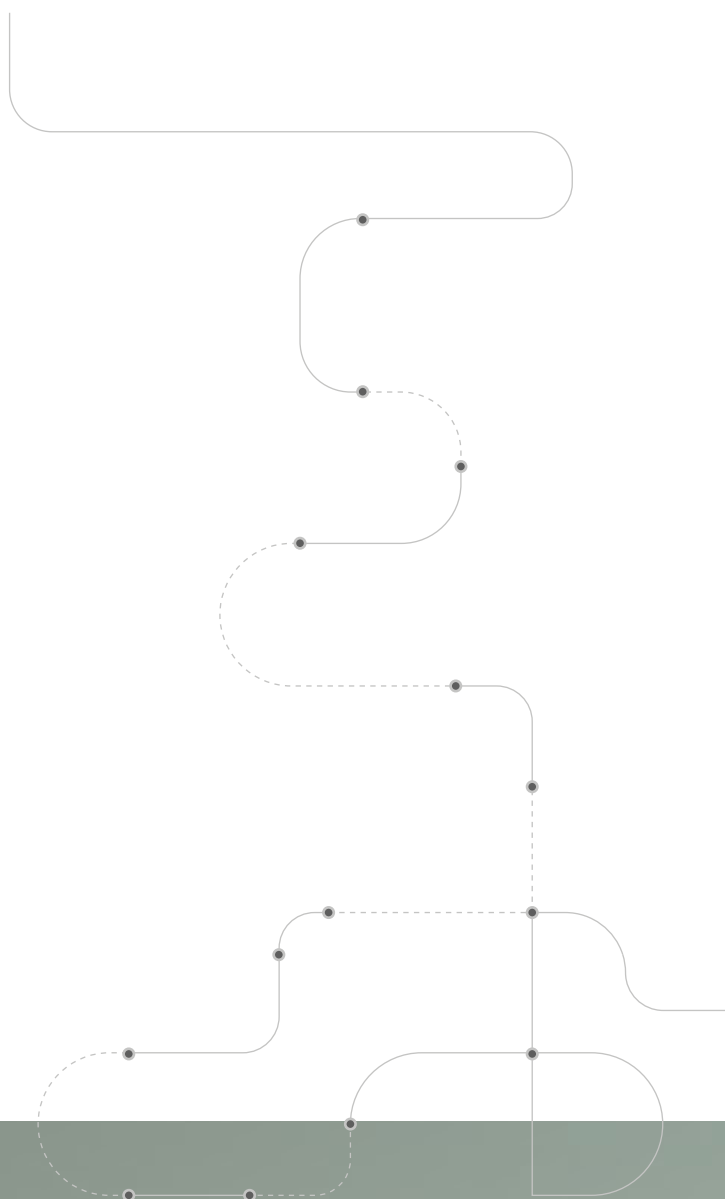
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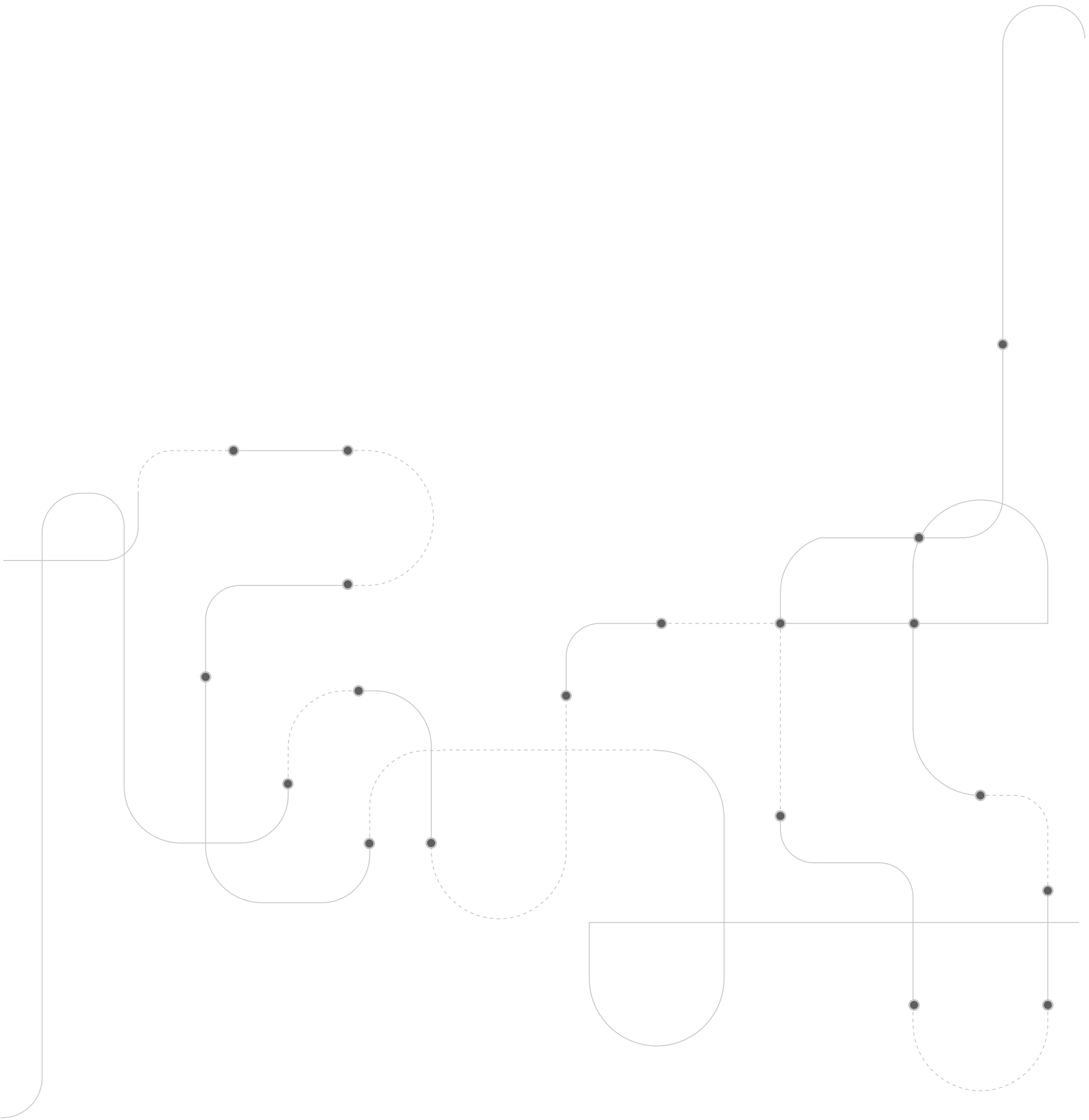
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STATISTICAL YEARBOOK 2015:

## LEGAL GROUNDS

In accordance with the Article 15, Section L and Article 177, Section XVIII of the Federal Broadcasting and Telecommunications Law, and the Article 73, Section VII, of the Statutory Charter of the Federal Telecommunications Institute (IFT by his Spanish acronym), the Statistics Division of the Strategic Planning Bureau of the IFT published this Statistical Yearbook 2015, which is based on information provided by the operators in the Mexican telecommunications sector, and by the National Institute of Statistics and Geography. The information reported herein may be reviewed and amended following any changes that operators may make to the figures originally reported.

Additionally, the section "Radio and Television Consumption" was produced by the Media and Audiovisual Content Unit of the IFT using sample data compiled by Nielsen IBOPE México S.A. de C.V. (Nielsen Ibope) and Investigación de Mercados INRA, S.C. (INRA), therefore these information should be regarded as estimates. To allow for a reliable interpretation of this document, we advise the reader to refer to Annex IV: Definitions. The analysis and interpretation of the information contained in this Statistical Yearbook 2015, was carried out by the IFT using the audience information of Nielsen IBOPE México, S.A. de C.V. Moreover, Nielsen IBOPE México, S.A. de C.V. has confirmed to the IFT that the information on television audiences contained in this report coincides with the databases licensed to the IFT by Nielsen IBOPE México, S.A. de C.V. in accordance with the terms of contract for the licensing of television audience databases.

The IFT reminds the reader that, when analyzing the information contained in this publication, it is important to consider on the drawn conclusions that there are several factors that may influenced the television market and the audience numbers carried out by Nielsen IBOPE México. Besides, the IFT shall not be held responsible for any third-party interpretations of the published data. We invite the reader to refer to the recommendations on the use of information owned by Nielsen IBOPE México, S.A. de C.V., as appear in the Guide on Using Audience Data from Nielsen IBOPE México", which can be downloaded (in Spanish) at <https://www.nielsenibope.com.mx/>



## STATISTICAL YEARBOOK 2015: PRESENTATION

The Federal Telecommunications Institute (IFT by his Spanish acronym) is an autonomous regulator created as a result of the 2013 constitutional reform in broadcasting and telecommunications matters. With the formation of the Institute, an unprecedented institutional overhaul was carried out to provide the IFT with a structure that enable him to discharge his authority.

This restructure led to the creation of a dedicated statistics area responsible for all metrics in the broadcasting and telecommunications (B&T) sectors. Since then, the Institute has implemented a series of measures in order to count with information needed to efficiently regulate the different B&T markets, and provide the industry and wider society, including academics, research centers and investors, with official information to enhance the decision making process, and thus reduce the information asymmetry that was widespread before 2013.

Within the implemented measures on B&T metrics, and in addition to the robust information formats and electronic systems currently being implemented for the collection, process and data analysis, the IFT has signed an agreement with the National Institute of Statistics and Geography (INEGI by his Spanish acronym) that enables the use of household surveys to obtain information that otherwise would be impossible to get through telecommunications operators. Moreover, the Institute has adhered to the international standards on telecommunications metrics, recommended by the International Telecommunication Union (ITU) and the Organization for Economic Co-operation and Development (OECD).

In this sense, until 2014 the published telecommunications statistics were aggregated, without detailed information such as official data on each operator's market share. Nevertheless, since the 3Q 2014 there was radical change in how this information was published, through the Quarterly Statistical Reports which include information that provides clarity in the regulated sectors. Additionally, the IFT made an effort so that these reports satisfy visually impaired access requirements, and have a user-friendly format, with available open data, based on the principles of information access and transparency.

Finally, the above efforts are further consolidated by the publication of the first Mexican Statistical Yearbook, which presents a comprehensive summary of the development observed at the regulated sectors during 2015. In this edition, besides publishing key indicators related to several B&R services, the Yearbook presents disaggregated information for each Mexican state, in order to reveal improvement opportunities and promote regulatory public policies aimed to boost the regional development of Mexican B&R sectors.



## STATISTICAL YEARBOOK 2015: INTRODUCTION

The Statistical Yearbook 2015 presents key indicators for the Broadcasting and Telecommunications (B&R) sectors from two perspectives: geography and user type. The former refers to a geographical assessment that considers an analysis at both nationwide and state-by-state level, emphasizing on detailed information for each of 32 Mexican states. Meanwhile, the latter refers to an analysis per user type that provides information for the telecom services, differentiating by households, inhabitants and economic units (business).

In this sense, the Yearbook complements the series of indicators already published on the Quarterly Statistical Reports by providing key information for the development of the Mexican B&R sectors. The indicators presented in this analysis can be categorized into five groups: a) Economic B&R analysis; b) Broadcasting infrastructure; c) Fixed telecommunications in households and economic units; d) Mobile telecommunications; and e) Radio and television consumption.

The first group looks at gross domestic product (GDP); number of employees; foreign direct investment (FDI); operator investment; revenues, margins and expenditure; consumer price indexes; market concentration indexes; and average consumption of telecommunications services in 2015. The second group relates to the number of AM/FM radio and broadcast television stations. The third group looks at the distribution of radio, computer, and digital/analog television equipment; penetration of fixed telecommunications services: landlines, fixed broadband and pay television; and the distribution of the technologies used to provide fixed broadband services in households and economic units; besides, the analysis includes the average monthly expenditure of economic units on communication services compared to other key services. The fourth group analyzes the teledensity of mobile phone and internet services per 100 inhabitants. Finally, the fifth group picks out indicators such as exposure to radio and television, programming hours per genre, and ratings obtained across nationwide television channels.

In addition to these indicators, the study also presents nationwide figures on the radio spectrum distribution per operator for the mobile telecommunication segment, the distribution of expenditure as a percentage of income, and penetration of fixed and mobile telecommunications in Mexican households by income decile. Moreover, the document includes features maps comparing state-to-state distribution of AM/FM radio and broadcast television stations, fixed telecommunications penetration per 100 households and 100 economic units, and teledensity of mobile phone and internet services per 100 inhabitants.

The information used to construct these report was primarily sourced from the data reported by operators and concessionaires in the telecommunications sector, and must be consider on review as of the date of this publication. It also uses the information compiled and published by the National Institute of Statistics and Geography (INEGI by his Spanish acronym) and the Mexican Population Council (CONAPO by his Spanish acronym), which was used both directly to construct the indicators presented in this Yearbook, and indirectly to disaggregate the information reported by telecommunications operators and concessionaires.

# KEY PERFORMANCE INDICATORS

## DEMOGRAPHICS DATASET

## BROADCASTING AND TELECOM: GDP AND EMPLOYMENT

## BROADCASTING INFRASTRUCTURE

### STATE

	Households	Inhabitants	Population Density per km <sup>2</sup>	Average Age	Median Quarterly Income per Household	Population with at least highschool education	GDP in million MXN	Broadcasting and Telecom GDP Contribution	Broadcasting Employees	Telecom Employees	AM Radio Stations	FM Radio Stations	Open TV Stations
<b>Nationwide</b>	32,550,416	121,566,781	62	30	\$26,879	29%	\$14,110.10	3.3%	50,239	182,188	391	1,328	811
<b>Aguascalientes</b>	337,803	1,295,222	231	29	\$31,291	30%	\$163,67	2.3%	369	1,863	3	21	7
<b>Baja California</b>	1,015,831	3,506,610	49	30	\$35,652	33%	\$383,15	3.2%	1,697	7,199	28	43	24
<b>Baja California Sur</b>	219,419	774,491	10	29	\$36,428	36%	\$97,99	2.6%	212	865	8	30	21
<b>Campeche</b>	249,155	914,144	16	30	\$28,205	30%	\$610,92	0.3%	770	689	7	14	12
<b>Coahuila de Zaragoza</b>	822,109	2,976,429	20	30	\$32,268	31%	\$453,74	1.7%	1,624	4,727	8	90	36
<b>Colima</b>	210,652	728,995	130	31	\$31,922	32%	\$79,81	3%	374	1,048	3	18	14
<b>Chiapas</b>	1,270,353	5,282,044	72	27	\$13,990	19%	\$234,97	1.8%	1,122	2,270	9	52	46
<b>Chihuahua</b>	1,075,350	3,726,144	15	30	\$26,204	29%	\$384,10	4%	1,058	5,625	23	70	36
<b>Mexico City</b>	2,578,062	8,840,480	5,915	34	\$41,466	47%	\$2,255,60	7.9%	11,905	35,993	29	33	14
<b>Durango</b>	464,550	1,772,434	14	30	\$23,967	26%	\$158,86	2.3%	331	2,060	7	22	15
<b>Guanajuato</b>	1,443,682	5,837,391	191	29	\$24,895	22%	\$556,45	3.6%	2,245	5,623	12	50	64
<b>Guerrero</b>	900,369	3,575,936	56	29	\$17,626	22%	\$196,76	2.6%	445	1,862	17	37	23
<b>Hidalgo</b>	768,645	2,893,879	139	30	\$21,181	25%	\$215,66	1.5%	236	2,405	9	23	15
<b>Jalisco</b>	2,082,350	7,971,782	101	30	\$32,199	29%	\$849,80	3.1%	3,469	16,042	33	67	24
<b>State of Mexico</b>	4,474,822	16,982,065	760	30	\$27,142	31%	\$1,206,55	2.2%	8,542	23,453	14	22	11
<b>Michoacan de Ocampo</b>	1,207,353	4,609,948	79	30	\$20,036	22%	\$317,96	2.4%	586	5,433	17	67	48
<b>Morelos</b>	534,241	1,930,773	396	31	\$23,508	30%	\$157,25	3.1%	360	4,860	1	25	5
<b>Nayarit</b>	339,583	1,234,195	44	30	\$25,688	29%	\$87,78	2.6%	436	1,873	5	20	12
<b>Nuevo Leon</b>	1,383,362	5,118,973	80	31	\$41,576	35%	\$999,94	3.1%	2,209	14,158	27	40	47
<b>Oaxaca</b>	1,039,634	4,023,005	43	30	\$15,885	20%	\$208,85	1.8%	862	2,191	12	68	61
<b>Puebla</b>	1,580,129	6,220,741	181	29	\$19,683	25%	\$424,71	3.5%	1,073	9,404	13	39	8
<b>Queretaro</b>	535,271	2,017,702	173	29	\$31,398	30%	\$292,10	3.6%	805	1,304	2	19	7
<b>Quintana Roo</b>	460,286	1,595,217	36	28	\$33,849	32%	\$214,31	2%	696	2,485	8	25	16
<b>San Luis Potosi</b>	714,251	2,764,269	45	30	\$22,412	26%	\$257,91	2.2%	1,153	2,186	5	30	19
<b>Sinaloa</b>	805,509	2,995,771	52	31	\$28,977	34%	\$276,88	2.6%	1,878	3,304	10	54	17
<b>Sonora</b>	814,657	2,950,874	16	30	\$33,844	34%	\$394,62	2.8%	1,196	4,612	25	98	91
<b>Tabasco</b>	647,521	2,394,398	97	29	\$24,498	30%	\$435,28	0.9%	447	1,699	3	30	15
<b>Tamaulipas</b>	1,025,792	3,561,097	44	31	\$27,366	31%	\$413,83	2.7%	537	6,739	30	58	36
<b>Tlaxcala</b>	317,859	1,286,294	322	29	\$21,523	28%	\$73,19	2%	259	935	1	5	7
<b>Veracruz de Ignacio de la Llave</b>	2,237,549	8,072,607	112	31	\$18,995	26%	\$676,26	1.9%	2,798	4,786	13	106	32
<b>Yucatan</b>	575,017	2,131,396	54	31	\$26,270	28%	\$195,70	4%	496	3,420	7	31	10
<b>Zacatecas</b>	419,249	1,581,476	21	30	\$18,958	22%	\$126,43	2.2%	371	1,078	2	21	18

Source: IFT with Telecom operator's data as of December 2015, as well as information of CONAPO and INEGI.

Note: GDP at constant prices of 2008. The nationwide GDP corresponds to 2015 information, whereas the state by state data corresponds to preliminary information of 2014.

The state by state GDP's contribution corresponds to the Massive Media Information industry, whereas at nationwide level, the GDP contribution only includes the Broadcasting and Telecom sectors. The number of households as of December 2015 was estimated via a linear interpolation of the CONAPO's published information.

The Inhabitants number corresponds to CONAPO's published information as of January 2016, the average age was calculated based on this information.

The Median Quarterly Income per Household was calculated based on INEGI's National Survey of Income and Expenditure Household 2014.

## Residential Fixed Telecommunications

State	Residential Fixed Telecommunications Penetration per 100 households			ICT Adoption per each 100 household						Distribution of Residential Fixed Telecom Services				Residential Fixed Broadband by Technology			
	Fixed Broadband Penetration	Fixed Telephone Penetration	Pay TV Penetration	Digital TV	Computer	Analog TV	Radios	3 Services	2 Services	1 Service	Non	Coaxial Cable	DSL	Fiber	Other Technologies		
	Nationwide	40	44	55	47	45	70	66	18.6%	13.2%	39.3%	28.9%	36%	52%	10%	2%	
Aguascalientes	37	47	55	49	54	78	81	21.9%	13.2%	40.7%	24.2%	23%	61%	9%	6%		
Baja California	54	47	69	54	58	64	64	27.9%	18.2%	35.2%	18.6%	50%	44%	4%	2%		
Baja California Sur	45	42	79	45	57	68	51	27.5%	12.3%	49.6%	10.6%	21%	64%	14%	1%		
Campeche	31	25	76	45	44	66	46	16.7%	9.8%	66.8%	6.7%	46%	52%	0.1%	2%		
Coahuila de Zaragoza	45	46	54	50	48	77	68	22.4%	13.1%	33.1%	31.4%	34%	55%	7%	4%		
Colima	44	46	65	56	55	65	66	23.8%	13.9%	43.4%	19.0%	32%	64%	2%	1%		
Chiapas	12	12	43	22	23	64	55	5.5%	4.2%	34.8%	55.5%	26%	70%	3%	1%		
Chihuahua	40	42	48	48	48	68	71	18.3%	12.9%	39.3%	29.5%	39%	52%	5%	3%		
Mexico City	76	95	63	59	64	59	85	34.0%	22.1%	30.3%	13.6%	36%	39%	23%	2%		
Durango	31	33	55	40	39	80	59	12.8%	11.8%	45.7%	29.7%	40%	53%	3%	4%		
Guanajuato	35	45	54	61	40	74	66	16.8%	10.6%	42.7%	29.9%	38%	53%	6%	3%		
Guerrero	24	31	46	27	25	67	43	8.9%	7.2%	44.7%	39.2%	27%	69%	1%	2%		
Hidalgo	23	26	55	44	34	66	66	14.5%	3.8%	55.0%	26.6%	27%	65%	4%	4%		
Jalisco	49	59	60	60	56	72	73	23.0%	18.0%	39.7%	19.4%	32%	53%	14%	1%		
State of Mexico	42	46	44	46	49	73	70	17.3%	18.1%	32.4%	32.2%	25%	64%	10%	0.4%		
Michoacan de Ocampo	30	35	59	51	32	77	60	12.9%	8.7%	46.9%	31.5%	44%	52%	2%	2%		
Morelos	48	54	56	47	42	69	64	20.4%	14.8%	31.1%	33.7%	39%	51%	8%	2%		
Nayarit	35	36	61	41	44	73	58	16.0%	11.5%	47.9%	24.6%	38%	60%	1%	1%		
Nuevo Leon	62	78	70	68	59	67	68	30.8%	18.2%	37.4%	13.6%	45%	34%	19%	3%		
Oaxaca	17	20	38	24	25	65	58	7.5%	6.4%	30.5%	55.6%	30%	68%	2%	1%		
Puebla	33	40	44	39	38	76	65	12.9%	9.6%	33.6%	43.9%	30%	61%	6%	3%		
Queretaro	50	46	73	57	51	69	69	23.1%	14.0%	32.2%	30.7%	47%	42%	8%	3%		
Quintana Roo	41	28	69	43	47	61	53	15.9%	19.5%	47.3%	17.3%	51%	38%	6%	5%		
San Luis Potosi	31	38	59	51	39	68	67	16.9%	8.2%	55.6%	19.3%	21%	64%	10%	5%		
Sinaloa	45	32	66	41	48	78	49	16.1%	14.6%	46.7%	22.6%	47%	49%	3%	2%		
Sonora	47	35	69	39	59	77	63	23.4%	17.6%	42.0%	17.0%	55%	41%	3%	1%		
Tabasco	19	18	60	39	42	65	52	12.1%	5.6%	43.2%	39.1%	26%	65%	4%	5%		
Tamaulipas	40	40	64	56	48	62	58	22.1%	12.6%	47.9%	17.4%	27%	65%	1%	7%		
Tlaxcala	29	33	49	34	32	78	69	10.6%	8.5%	40.4%	40.4%	23%	75%	0%	1%		
Veracruz de Ignacio de la Llave	28	28	49	36	31	67	69	14.3%	7.3%	37.6%	40.9%	37%	58%	2%	2%		
Yucatan	33	30	62	43	43	75	61	15.3%	11.5%	58.1%	15.2%	46%	38%	12%	4%		
Zacatecas	29	32	56	39	36	80	72	15.2%	7.5%	55.8%	21.5%	36%	60%	1%	3%		

Source: IFT with Telecom operator's data as of December 2015, as well as information of INEGI's National Survey of Availability and Usage of Information Technologies in Homes 2015.

Notes: Fixed Telecommunications includes Fixed-telephone, Fixed-broadband and Pay TV.

Fixed Telephone is measured by lines, whereas Fixed-broadband and Pay TV are measured by subscriptions.

The number of households as of December 2015 was estimated via a linear interpolation of the CONAPO's published information.

The Distribution of Residential Fixed Telecom Services was calculated based on INEGI's National Survey of Availability and Usage of Information Technologies in Homes 2015.

For Fixed broadband connections, Other Technologies includes satellite and terrestrial wireless connections.

State	Non Residential Fixed Telecommunications										Mobile Telecom	
	Non Residential Fixed Telecommunications Penetration per 100 Economic Units					Non Residential Fixed Broadband by Technology					Average Monthly Expenditure	
	Fixed Telephone	Fixed Broadband	Pay TV	Coaxial Cable	DSL	Fiber	Other technologies	Communications Services	Mobile Telephone	Mobile Broadband	Mobile Telecommunications Teledensity per 100 Inhabitants	
Nationwide	129	41	3	15%	67%	14%	4%	\$1,604	89	53		
Aguascalientes	136	49	3	20%	56%	14%	10%	\$2,539	104	65		
Baja California	158	76	5	14%	73%	9%	4%	\$2,641	103	69		
Baja California Sur	118	70	8	5%	75%	16%	4%	\$1,009	101	67		
Campeche	66	35	4	8%	85%	0%	7%	\$1,013	83	56		
Coahuila de Zaragoza	167	57	4	12%	71%	10%	7%	\$3,458	82	51		
Colima	93	53	5	14%	78%	2%	5%	\$1,166	93	61		
Chiapas	41	20	2	9%	80%	8%	3%	\$316	56	24		
Chihuahua	133	54	4	16%	71%	8%	5%	\$3,312	83	49		
Mexico City	401	72	5	13%	49%	34%	3%	\$4,729	132	90		
Durango	94	38	5	25%	65%	3%	7%	\$1,024	80	46		
Guanajuato	84	36	3	16%	71%	9%	4%	\$1,090	72	39		
Guerrero	42	20	2	18%	74%	4%	4%	\$255	60	26		
Hidalgo	52	25	2	0%	90%	3%	7%	\$419	68	38		
Jalisco	148	47	3	15%	71%	12%	3%	\$1,323	100	67		
State of Mexico	64	25	2	17%	70%	12%	1%	\$1,006	108	61		
Michoacan de Ocampo	50	26	2	18%	76%	3%	3%	\$666	62	31		
Morelos	101	33	3	24%	59%	12%	4%	\$714	84	49		
Navarrit	99	37	5	22%	72%	1%	5%	\$565	87	53		
Nuevo Leon	398	78	6	10%	56%	30%	5%	\$4,610	116	86		
Oaxaca	34	18	2	18%	76%	4%	3%	\$283	59	29		
Puebla	60	25	3	16%	71%	8%	5%	\$644	71	34		
Queretaro	169	65	4	13%	67%	15%	5%	\$2,182	96	53		
Quintana Roo	153	85	9	28%	58%	11%	4%	\$1,358	103	73		
San Luis Potosi	89	36	3	1%	78%	14%	7%	\$2,654	79	46		
Sinaloa	179	53	6	23%	67%	6%	4%	\$1,144	92	56		
Sonora	115	58	7	21%	72%	4%	3%	\$1,989	95	62		
Tabasco	76	35	2	0%	85%	7%	8%	\$847	75	38		
Tamaulipas	146	51	3	9%	82%	2%	7%	\$2,068	81	53		
Tlaxcala	36	15	2	0%	91%	0%	9%	\$616	85	44		
Veracruz de Ignacio de la Llave	72	33	3	17%	75%	5%	3%	\$693	72	40		
Yucatan	64	29	3	14%	61%	20%	6%	\$801	98	71		
Zacatecas	59	30	2	9%	81%	1%	10%	\$676	64	35		

Source: IFT with Telecom operator's data as of December 2015, as well as INEGI's Economic Census 2014.

Notes: Fixed Telephone is measured by lines, whereas Fixed-broadband and Pay TV are measured by subscriptions.

For Fixed broadband conections, Other Technologies includes satellite and terrestrial wireless connections Fixed

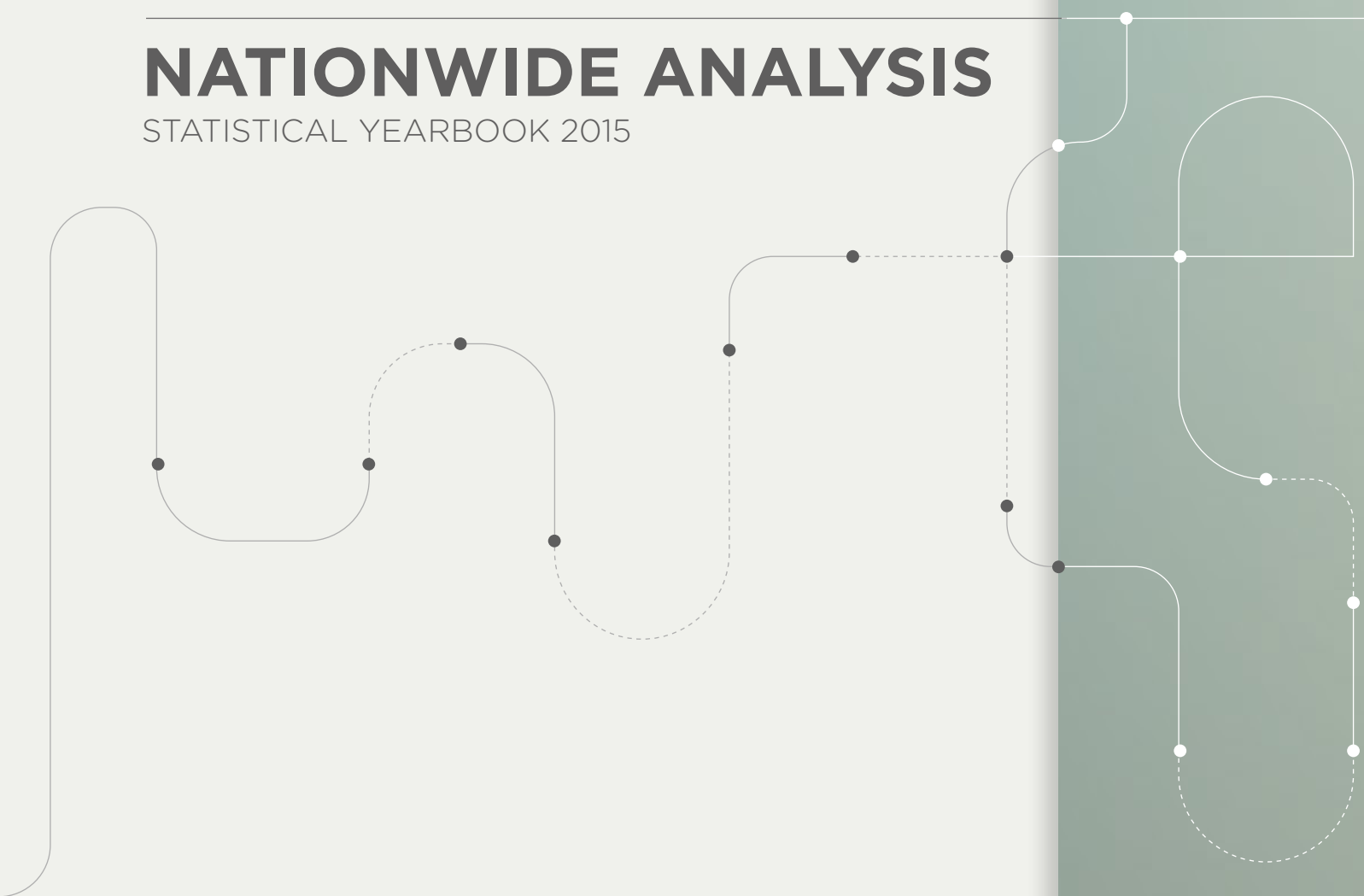
For Communications Services, the Average Monthly Expenditure includes messenger services costs and corresponds to INEGI's Economic Census 2014.

The mobile telephone teledensity disaggregation per state was estimated based on the Telecom operator's data and INEGI's data from the ENDUTIH 2015.

# 01

## NATIONWIDE ANALYSIS

STATISTICAL YEARBOOK 2015







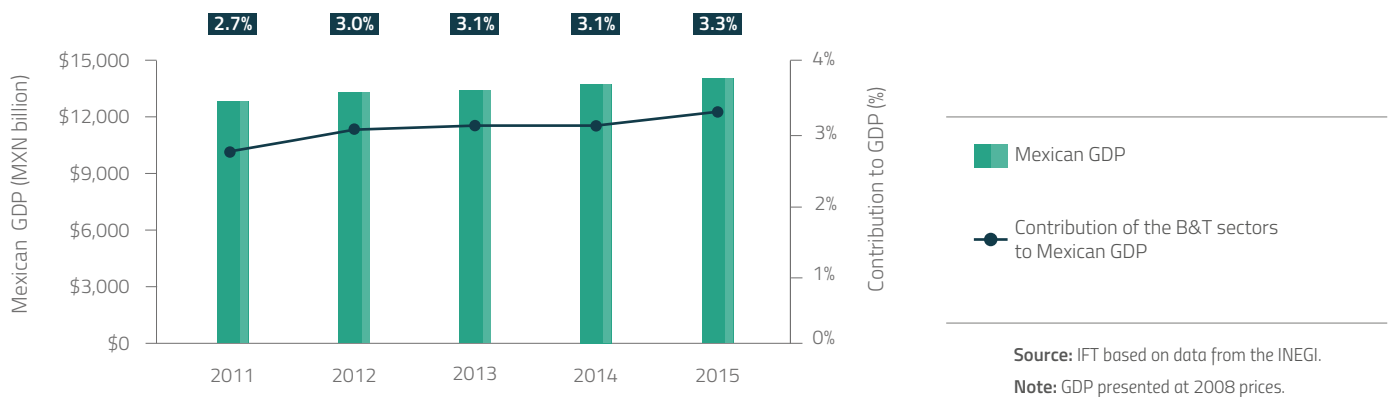
# STATISTICAL YEARBOOK 2015 NATIONWIDE ANALYSIS

## 1.1 Economic Analysis for B&T sectors

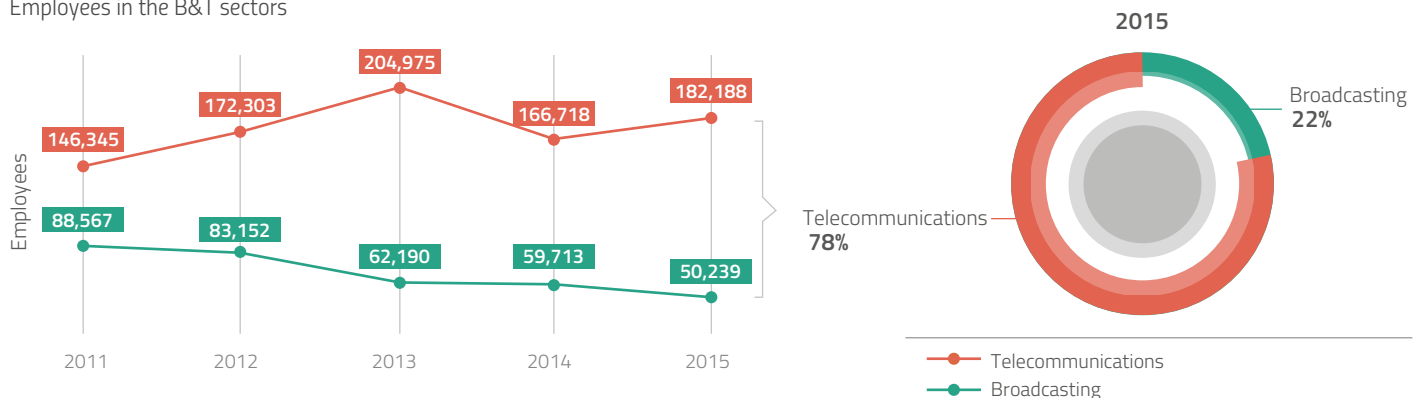
The Gross Domestic Product (GDP) generated by the B&T sectors in 2011 was just over MXN 342 billion, whereas in 2015 it was MXN 471 billion, which implies an average annual growth rate of 8.3% in the regulated sectors, higher than the 2.3% average annual growth obtained by the overall Mexican GDP in the same period. Hence, the contribution of both sectors to the national GDP increased from 2.7% in 2011 to 3.3% in 2015 (see Figure 1.1.1).

On the other hand, employment trends in these sectors presented a different behavior, whereas in the Telecommunication sector were an average of 8,961 new employees per year between 2011 and 2015, the broadcasting sector actually experienced a downward employment trend. Thus, in 2015 both sectors combined employed more than 232,000 people, of whom 78% worked in telecommunications and 22% worked in broadcasting (see Figure 1.1.2).

**FIGURE 1.1.1**  
Contribution of the B&T sectors to Mexican GDP



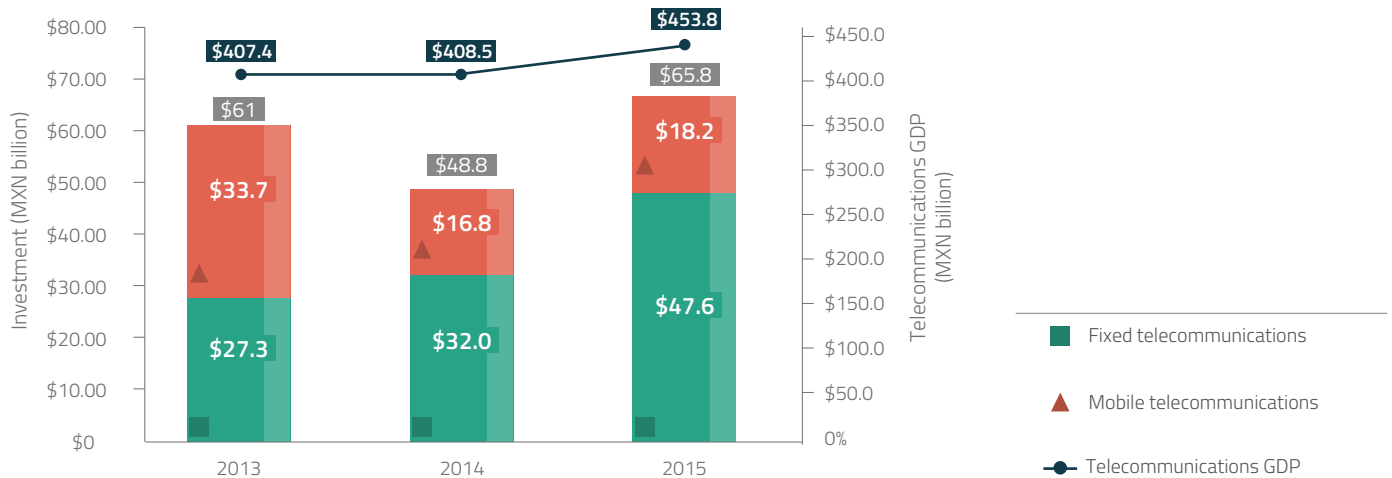
**FIGURE 1.1.2**  
Employees in the B&T sectors



The investment reported by telecommunications operators in 2015 overcame by almost 35% that of 2014, a yearly growth rate higher than the 11% observed on the telecommunications-sector's GDP in the same period. Moreover, the contribution of mobile telecommunications operators to the gross investment was 55% in 2013, 34% in 2014 and 28% in 2015, whereas the remaining 72% of the 2015 telecommunication investment came from fixed telecommunications operators (see Figure 1.1.3).

Additionally, in 2015 the B&T sectors reached the second highest cash flow of foreign direct investment (FDI) in the country, with 9% of nationwide FDI (equivalent to USD 2.725 billion), only behind the manufacturing industries, which accounted for half of all the Mexican FDI (see Figure 1.1.4).

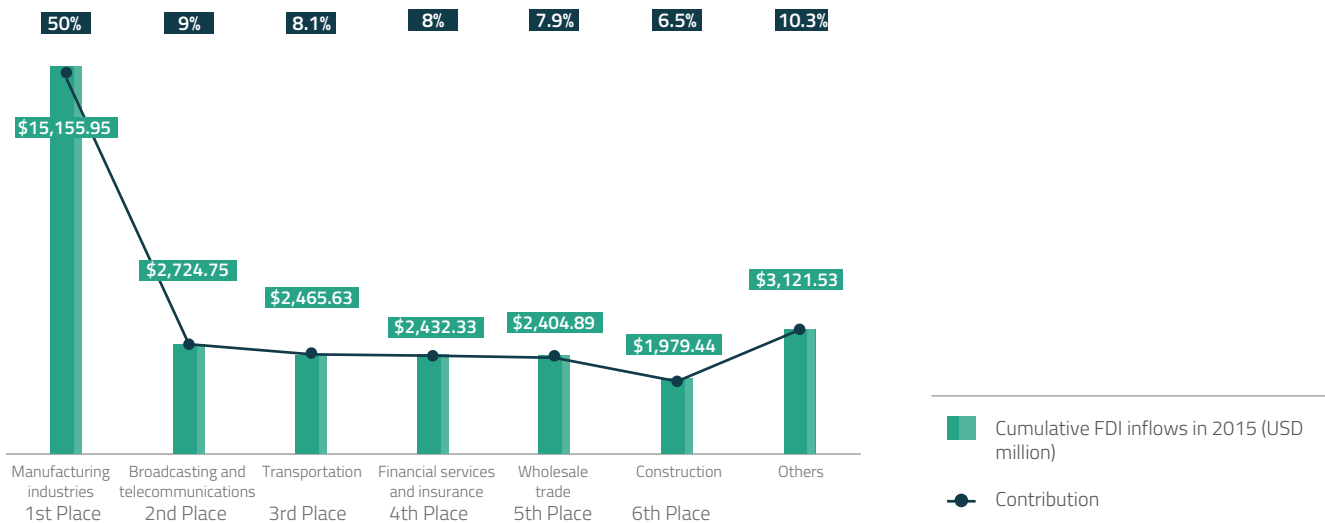
**FIGURE 1.1.3**  
Investment vs Telecommunications GDP



Source: IFT based on Telecom operator's data as of December 2015 and INEGI's data.

Notes: GDP presented at 2008 prices. The figures take into account only the investment retail services operators, without the investment made by other companies to whom services are leased. Telcel modified the reported investment in mobile telecommunications for 2013, therefore, the mobile telecommunications investment increased from MXN 10.266 billion to MXN 22.021 billion.

**FIGURE 1.1.4**  
Cumulative FDI inflows in 2015



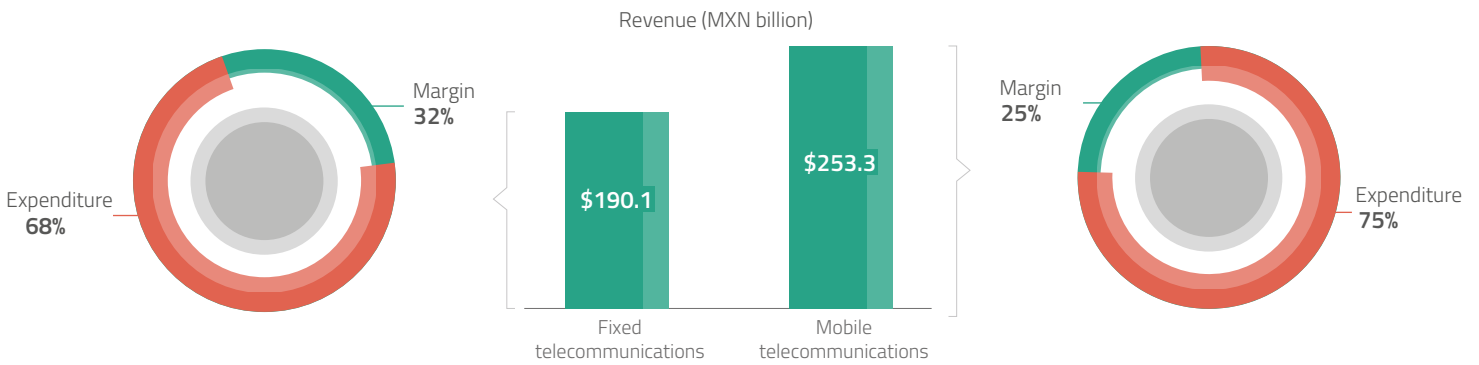
Source: IFT based on data from the Ministry of the Economy, retrieved on July 5, 2016.

Note: For comparative purposes, the Broadcasting and Telecommunications sectors were kept separate from the Massive Media Information sector, as per in the North American Industry Classification System. These are preliminary figures and may therefore vary from information published subsequently by the IFT.

The cumulative revenues reported by telecommunications operators reached more than MXN 443 billion in the cutoff year, 43% of which relates to revenues reported by fixed telecommunications operators and 57% relating to mobile telecommunications operators. Besides, the fixed telecommunications margin was seven percentage-points above the 25% margin obtained by mobile telecommunications operators (see Figure 1.1.5).

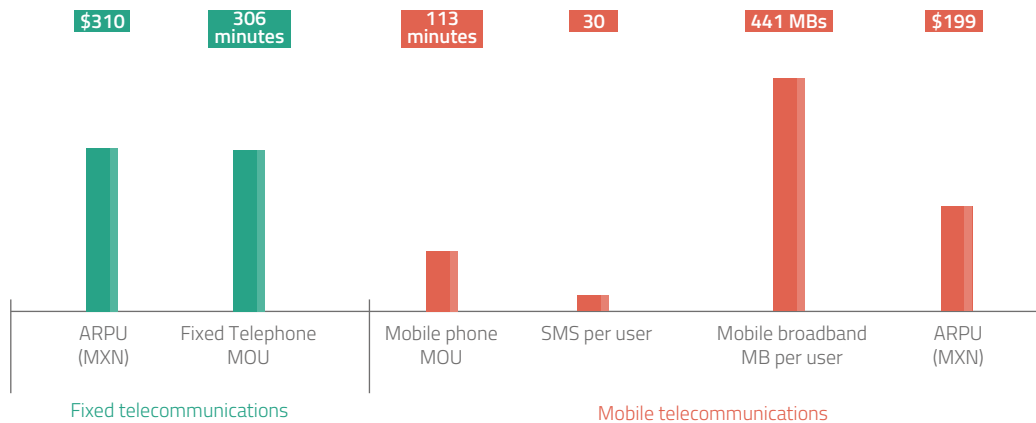
Thus, the monthly average revenue per user (ARPU) in 2015 was higher for fixed telecommunications operators (MXN 310)<sup>1</sup> than for mobile telecommunications operators (MXN 199). Meanwhile, the monthly average minutes of use (MOUs) for fixed telephone lines was 306 minutes, 171% greater than the MOUs for mobile telephone lines. Finally, the monthly average traffic per fixed broadband subscription was above 400 MB (see Figure 1.1.6).

**FIGURE 1.1.5**  
Cumulative telecommunications revenue, expenditure and margin in 2015



**Source:** IFT based on Telecom operator's data as of December 2015.  
**Nota:** Telcel's revenue for the Q115 was estimated based on IFT's information and América Móvil's quarterly report (<http://www.americamovil.com/amx/es/cm/investor/repQ.html?p=2&s=13>)

**FIGURE 1.1.6**  
Average monthly telecommunications consumption in 2015



**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The indicators used are the average from the four quarters of 2015, except for "Mobile broadband MB per user", which was calculated on the basis of the last three quarters of 2015 only.

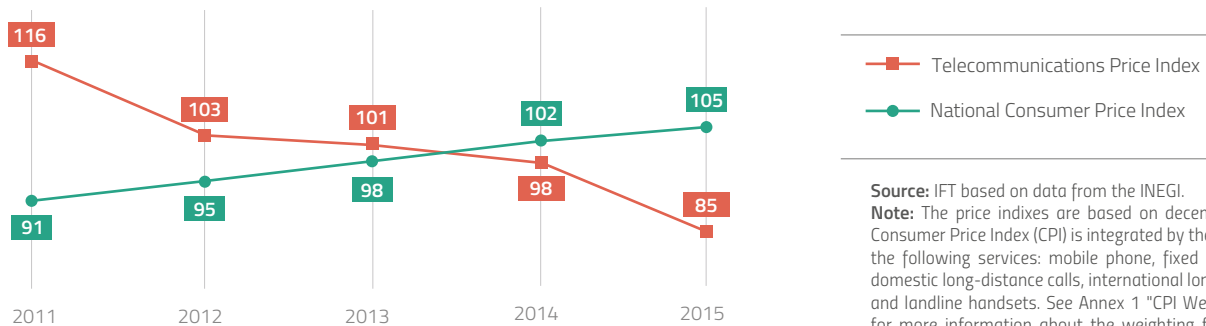
<sup>1</sup> The presented ARPU includes the gross revenue and subscriptions by fixed telecom operators, hence it is considering telephone, broadband and pay TV services.

The GDP's growth in 2015 was accompanied by a downward trend in telecommunications prices, which was reflected in a 13% fall in the Communications Price Index during the same period, in contrast to the slight upward trend shown by the the National Consumer Price Index (INPC by his Spanish acronym) (see Figure 1.1.7).

On the fixed telephone services both indexes reduced during 2015, with a 6.6% diminution on the HHI index and a 4% diminution on the price index, whereas on the fixed broadband services the HHI fell by 10% and the price index increased on 1% (see Figure 1.1.8).

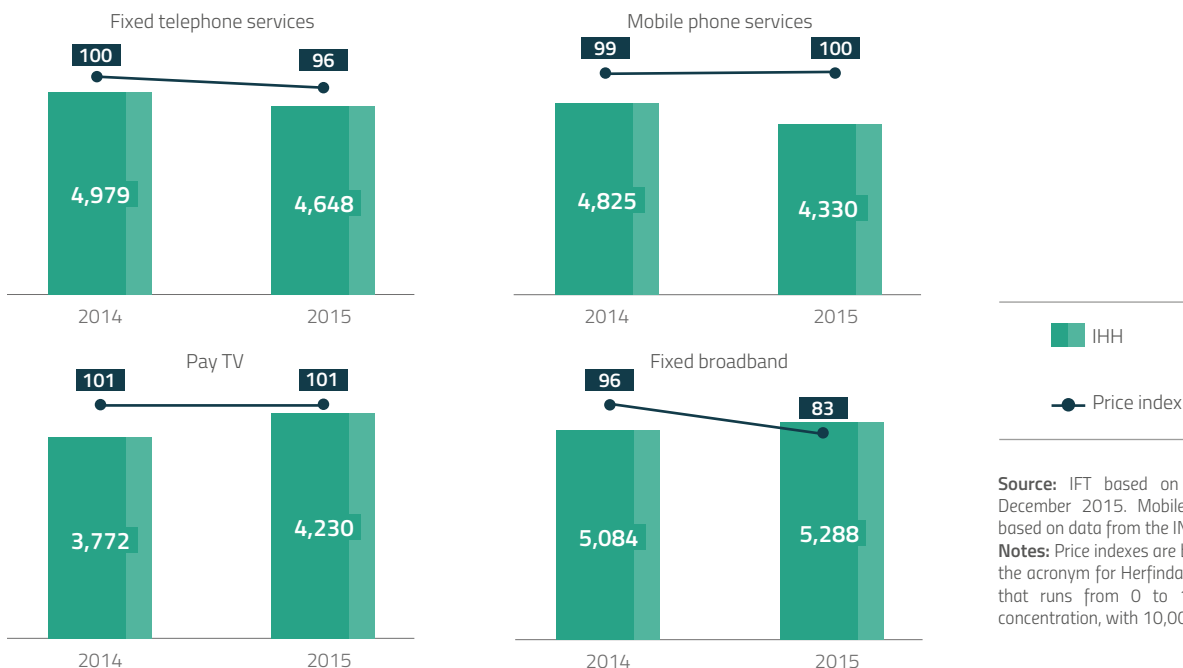
For mobile phone and pay TV services, the Herfindahl-Hirschman Index (HHI)<sup>2</sup> reflected an increase on the market concentration during 2015, but this did not affect the price indices for those services. Actually, the price index for mobile phone services reduced on average a 14%, whereas it remained stable for the pay TV services.

**FIGURE 1.1.7**  
Price Indexes



**Source:** IFT based on data from the INEGI.  
**Note:** The price indexes are based on december 2013. The Consumer Price Index (CPI) is integrated by the price indices of the following services: mobile phone, fixed phone, internet, domestic long-distance calls, international long-distance calls and landline handsets. See Annex 1 "CPI Weighting Factors" for more information about the weighting factors used for telecommunications services CPI.

**Figure 1.1.8**  
Market concentration and price indexes of telecommunications services



**Source:** IFT based on operator data current as of December 2015. Mobile phone price indices compiled based on data from the INEGI.

**Notes:** Price indexes are based on December 2013. HHI is the acronym for Herfindahl-Hirschman Index, an indicator that runs from 0 to 10,000 and measures market concentration, with 10,000 indicating a monopoly.

<sup>2</sup> HHI was calculated based on the methodology published on the AGREEMENT WHEREBY THE IFT ISSUES THE TECHNICAL CRITERIA FOR CALCULATING AND APPLYING A QUANTITATIVE INDEX TO DETERMINE THE LEVEL OF MARKETS AND SERVICES CONCENTRATION FOR THE BROADCASTING AND TELECOMMUNICATIONS SECTORS.



## 1.2 Broadcasting Stations

By the end of 2015, the broadcast television infrastructure in Mexico was formed by 811 stations, giving a nationwide average of 25 stations per state. However, there were notable differences in state-by-state distribution, with approximately 56% of states having 20 or fewer stations, whereas the other 44% more than 20 broadcast television stations.

Sonora, Guanajuato and Oaxaca made up the top three states with 91, 64 and 61 stations respectively. By contrast, Aguascalientes, Queretaro, Tlaxcala and Morelos had fewer than eight stations each (see Map 1.2.1).

**MAP 1.2.1**  
Broadcast TV stations



Source: IFT based on data as of December 2015.

In the case of FM radio infrastructure, as of December 2015 in Mexico there were 1,328 stations, giving an average of 42 stations per state, above both broadcast TV and AM radio infrastructure stations.

The state with the highest number of FM stations was Veracruz with 106, followed by Sonora and Coahuila with 98 and 90 stations, respectively. On the other hand, the states with the fewest FM stations were Colima, Campeche and Tlaxcala, with 18, 14 and 5 stations, respectively (see Map 1.2.2).

**MAP 1.2.2**  
FM radio stations



Station ranges		
<span style="color: red;">■</span> 20 or fewer	<span style="color: orange;">■</span> 21 to 35	<span style="color: yellow;">■</span> 36 to 50
<span style="color: lightgreen;">■</span> 51 to 65	<span style="color: mediumgreen;">■</span> 66 to 80	<span style="color: darkgreen;">■</span> 81 or more

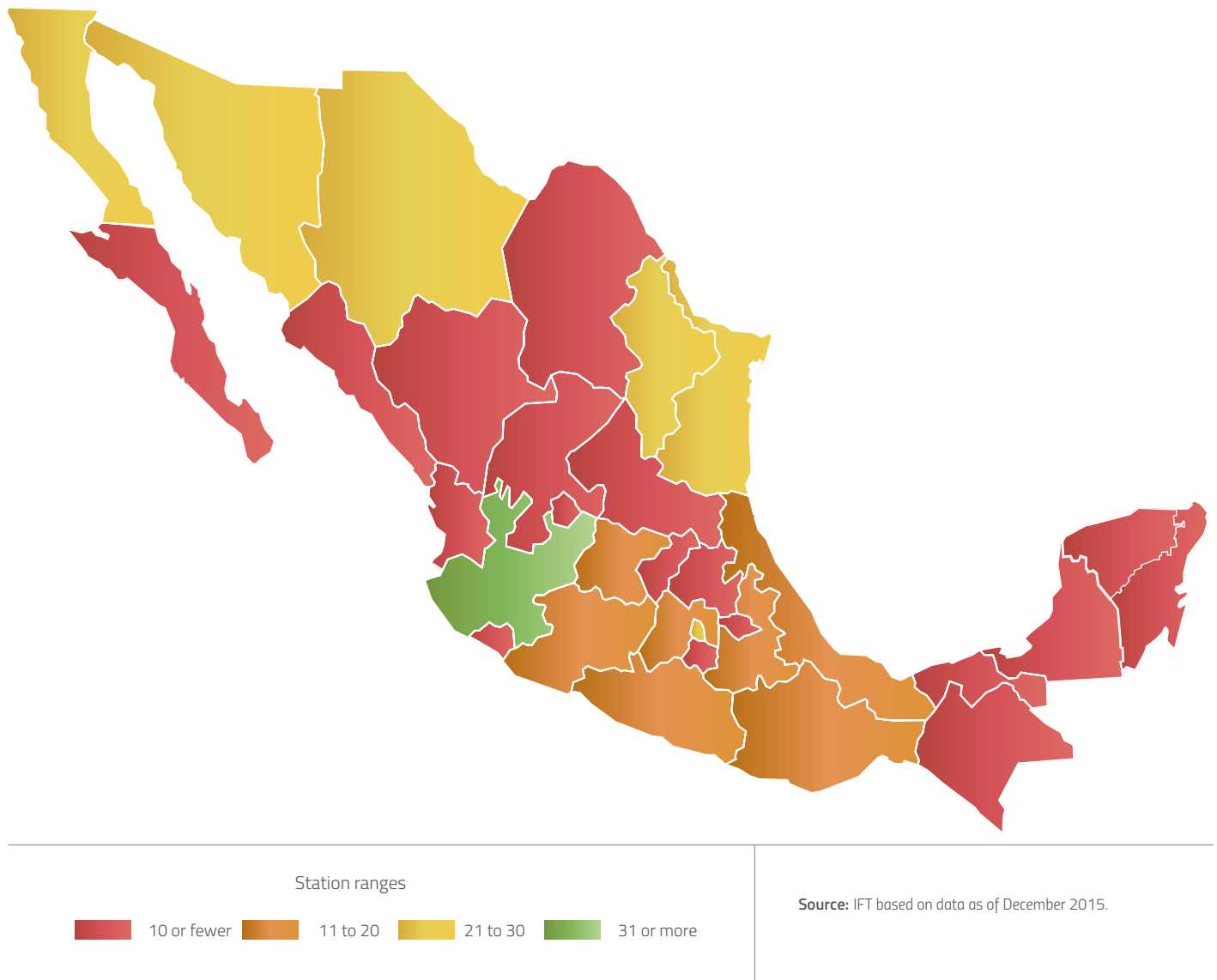
Source: IFT based on data as of December 2015.



AM radio infrastructure in Mexico was formed by 391 stations, giving an average of 12 stations per state. In other words, just 22% of radio stations in Mexico were AM stations, with the other 78% corresponding to FM radio stations

The state with the largest number of AM stations was Jalisco with 33, followed by Tamaulipas and Mexico City with 30 and 29 stations, respectively. On the other hand, the states with the fewest stations were Colima with three stations, Zacatecas and Queretaro with two, and Morelos and Tlaxcala with one (see Map 1.2.3).

**MAP 1.2.3**  
AM radio stations



## 1.3 Fixed Telecommunications and ICT Equipment

### 1.3.1 Fixed telecommunications and ICT equipment in households

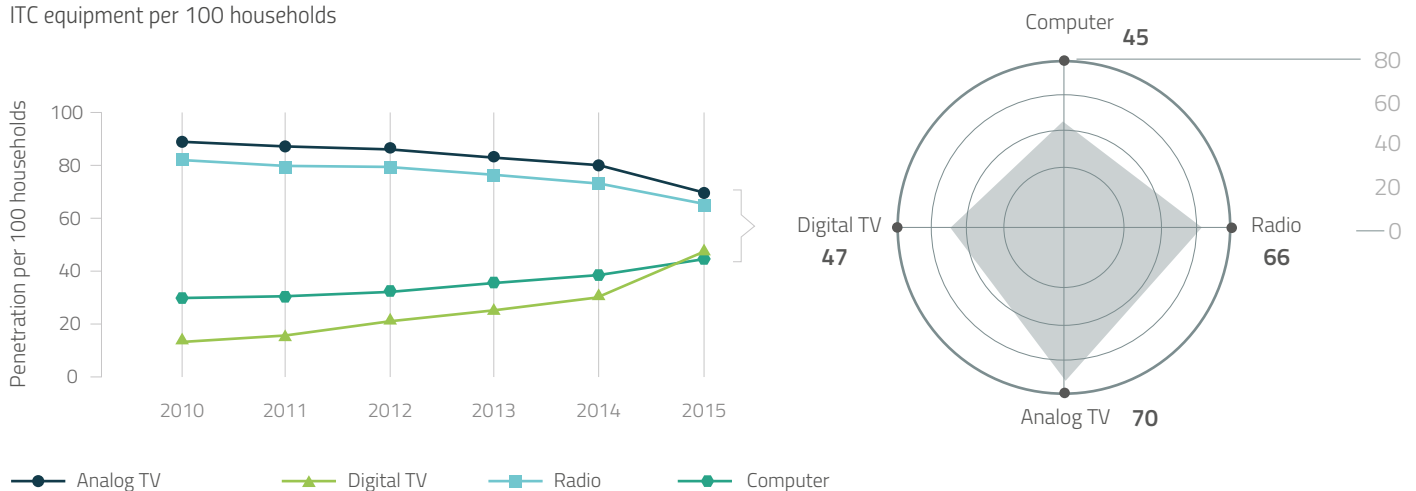
The adoption of analog sets (radio and television) showed a marked downward trend since 2011 and in both cases the decline was higher in 2015. In the case of analog TV, the observed decrease in the equipment adoption can be associated to the nationwide campaign to implement the Digital Terrestrial Television (DTT), which led to the shutdown of commercial analog TV signals and the welcome to digital TV signals<sup>3</sup> on the country.

Consistent with this technological change, between 2011 and 2014 digital TV sets adoption increased at a yearly average of four new TV sets per 100 households, whereas in 2015 this number was 14 new digital TV sets per 100 households.

In the same line, between 2011 and 2014 the adoption of computers in households increased on average by two new computers per 100 household, whereas in 2015 the increase was seven new computers per 100 households.

Thus, in 2015 the ICT equipment per 100 households was as follows: 45 computers; 66 radio sets; 70 analog television sets; and 47 digital television sets (see Figure 1.3.1.1).

**FIGURE 1.3.1.1**  
ITC equipment per 100 households



Source: IFT based on data from INEGI's surveys: MODUTIH 2010-2014 and ENDUTIH 2015

<sup>3</sup> The data shown was gathered by the INEGI during the second half of 2015, whereas the nationwide analog shutdown began in 2013, and was completed in regions of Central Mexico in December 2015.



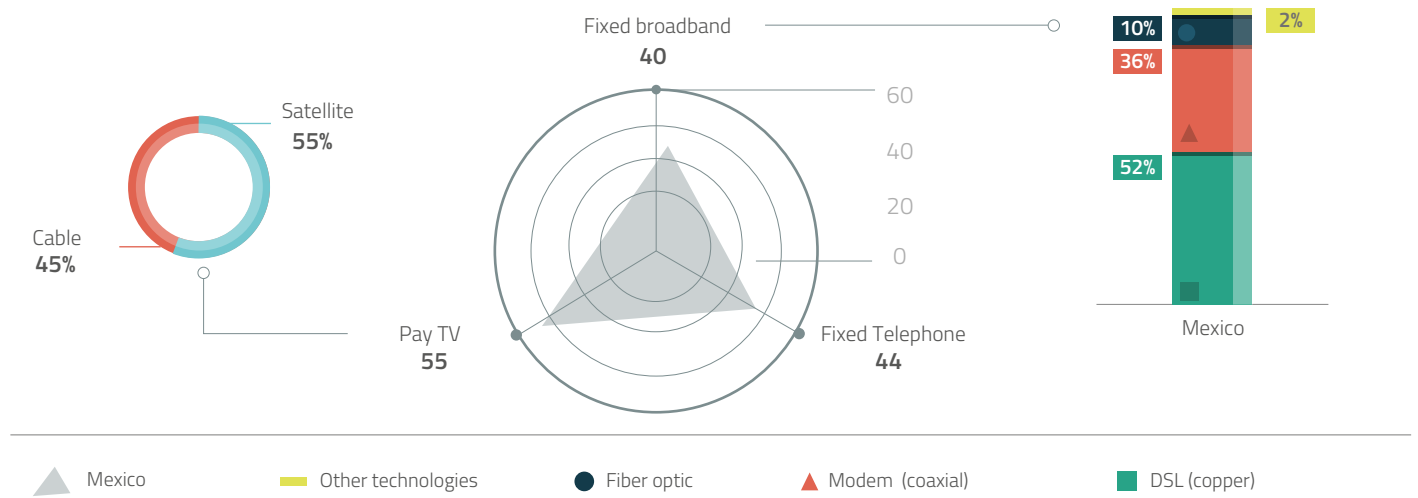
The fixed telecommunications services penetrations per 100 households in Mexico were as follows: 55 TV subscriptions, 44 fixed lines, and 40 fixed broadband subscriptions.

In the case of pay TV services, the technological distribution was 55% of subscriptions for satellite technology and 45% via terrestrial technology such as coaxial cable, microwave and IPTV.

In the case of fixed broadband services, 52% percent of the subscriptions were via DSL (copper), 36% via modem (coaxial), 10% via fiber optic, and the remaining 2% via fixed wireless satellite and terrestrial technologies (see Figure 1.3.1.2)

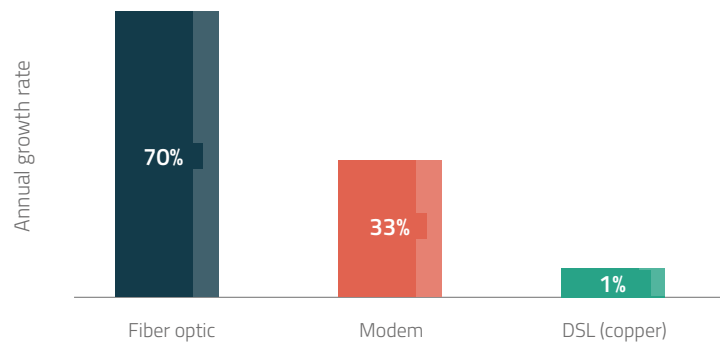
Additionally, between 2014 and 2015 the fiber-optic fixed broadband subscriptions grew at a yearly rate of 70%, whereas the modem connections grew at 33% rate in the same period (see Figure 1.3.1.3).

**FIGURE 1.3.1.2**  
Fixed telecommunication services penetration per 100 households and broadband distribution per connection technology



**Source:** IFT based on Telecom operator's data as of December 2015.  
**Notes:** The distribution of residential and non-residential pay TV subscriptions was estimated based on Telecom operator's data and INEGI's data from the ENDUTIH 2015. The number of households as of December 2015 was estimated via a linear interpolation of the CONAPO's published information. The "Other Technologies" category includes fixed wireless and satellite connections. The "Cable" category includes cable, microwave and IPTV subscriptions, with the latter two categories accounting for less than 2.5% of all subscriptions in Mexico. Fixed telephone service is measure by number of lines, whereas fixed broadband and pay TV services are measure by number of subscriptions.

**FIGURE 1.3.1.3**  
Yearly growth rate of residential fixed broadband connections by technologies

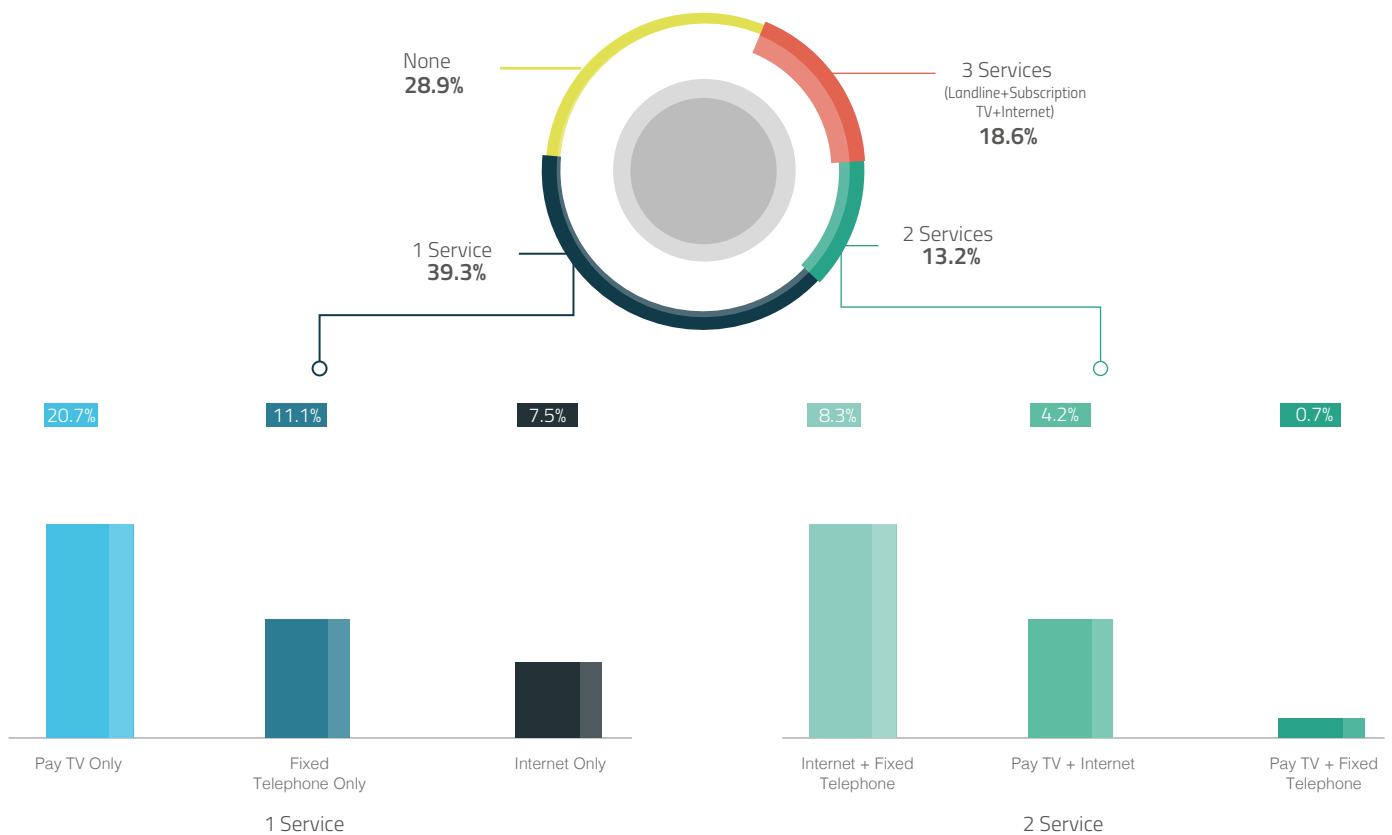


**Source:** IFT based on Telecom operator's data as of December 2015.

In terms of the consumption of fixed telecommunications services, in 2015 19% of Mexican households had three services: fixed telephone, pay TV and internet; 13% had only two of those services; 39% had only one of those services; and 29% had none of those services.

Moreover, for those households with two services, the most common service combination - 8.3% of households – was internet and fixed telephone services. On the other hand, of those households with just one service, the most common service was pay TV with 21% of the Mexican households (see Figure 1.3.1.4).

**FIGURE 1.3.1.4**  
Distribution of fixed telecommunications services in households



Source: IFT based on INEGI's ENDUTIH 2015.



Although the nationwide penetration of residential fixed telephone services was 44 fixed lines per 100 households, the figures vary considerably from state to state. For instance, in Mexico City, Nuevo Leon and Jalisco, penetration was as high as 95, 78 and 58 fixed lines per 100 households, respectively.

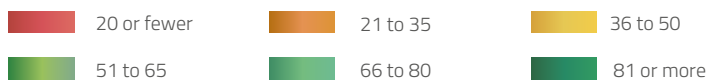
On the other hand, penetration in Oaxaca, Tabasco and Chiapas was just 20, 18 and 12, respectively, therefore, the fixed telephone penetration across Mexico ranged from 12 to 95 landlines per 100 households (see Map 1.3.1.1).

### MAP 1.3.1.1

Residential fixed telephone penetration per 100 households



Landlines per 100 households



**Source:** IFT based on Telecom operator's data as of December 2015.

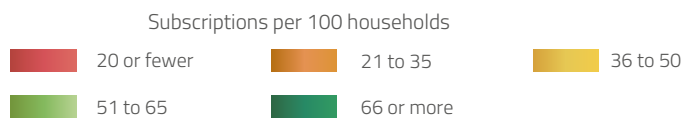
**Note:** The number of households as of December 2015 was estimated via a linear interpolation of the CONAPO's published information.

In the case of residential fixed broadband services the nationwide penetrations as of December 2015 was 40 subscriptions per 100 households, and just like the fixed telephone services, the indicator's levels by state ranged from 12 to 76 subscriptions per 100 households.

For instance, in Mexico City, Nuevo Leon and Baja California, the penetration reached 76, 62 and 58 subscriptions per 100 households respectively, whereas in Tabasco, Oaxaca and Chiapas the penetration was just 19, 17 and 12 subscriptions, respectively (see Map 1.3.1.2).

**MAP 1.3.1.2**

Residential fixed broadband penetration per 100 households



**Source:** IFT based on Telecom operator's data as of December 2015.

**Note:** The number of households as of December 2015 was estimated via a linear interpolation of the CONAPO's published information.



Satellite pay TV penetration showed less variations on the state by state segmentation than the other services, with the 75% of states between 25 and 35 subscriptions per 100 households. In this case, the states with the greatest penetration were Tabasco (47), Nuevo Leon (42) and Baja California Sur (41).

On the other hand, the states with the lowest penetration were Sonora, Morelos and Coahuila, each with 27 subscribers per 100 households; followed by Michoacan, Zacatecas and Puebla with 26 subscribers per 100 households; and finally Chiapas with 22 subscribers per 100 households (see Map 1.3.1.3).

### MAP 1.3.1.3

Residential satellite pay TV penetration per 100 households



Subscriptions per 100 households

■ 25 or fewer ■ 26 to 35 ■ 36 to 45 ■ 46 or more

**Source:** IFT based on Telecom operator's data as of December 2015.

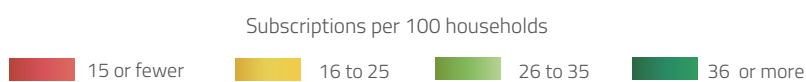
**Notes:** The distribution of residential and non-residential pay TV subscriptions was estimated based on Telecom operator's data and INEGI's data from the ENDUTIH 2015. The number of households as of December 2015 was estimated via a linear interpolation of the CONAPO's published information.

Cable pay TV penetration, including other microwave technologies and IPTV<sup>4</sup>, showed variations in their state-by-state segmentation. In this sense, the states with the higher penetration level in the country were Campeche with 48 subscriptions per 100 households, Queretaro and Sonora both with 41 subscriptions per 100 households and Baja California Sur with 38 subscriptions per 100 households.

On the other hand, the states with the lower penetration levels were Tabasco, Guerrero and Oaxaca with 13, 12 and 9 subscriptions per 100 households, respectively. Therefore, the penetration for cable pay TV services in the country ranged from 9 to 48 subscriptions per 100 households (see Map 1.3.1.4).

**MAP 1.3.1.4**

Residential cable pay TV penetration per 100 households



**Source:** IFT based on Telecom operator's data as of December 2015.  
**Notes:** The distribution of residential and non-residential pay TV subscriptions was estimated based on Telecom operator's data and INEGI's data from the ENDUTIH 2015. The number of households as of December 2015 was estimated via a linear interpolation of the CONAPO's published information.

<sup>4</sup> These technologies account for less than 2.5% of all subscriptions in Mexico.



By taking into account the above technologies (satellite, cable, microwave technologies and IPTV), the pay TV penetration in Mexico ranged from 38 to 79 subscriptions per 100 households, with a nationwide average of 55 subscriptions per 100 households and approximately 59% of states above the national average.

Additionally, the states with the higher penetration were Mexico City, Nuevo Leon and Baja California, with 79, 76 and 58 subscriptions per 100 households, respectively; whereas, the states with the lower penetration levels were Puebla, Oaxaca y Chiapas, with 44, 43 and 38 subscriptions per 100 households, respectively (see Map 1.3.1.5).

### MAP 1.3.1.5

Residential pay TV penetration per 100 households



Subscriptions per 100 households



**Source:** IFT based on Telecom operator's data as of December 2015.

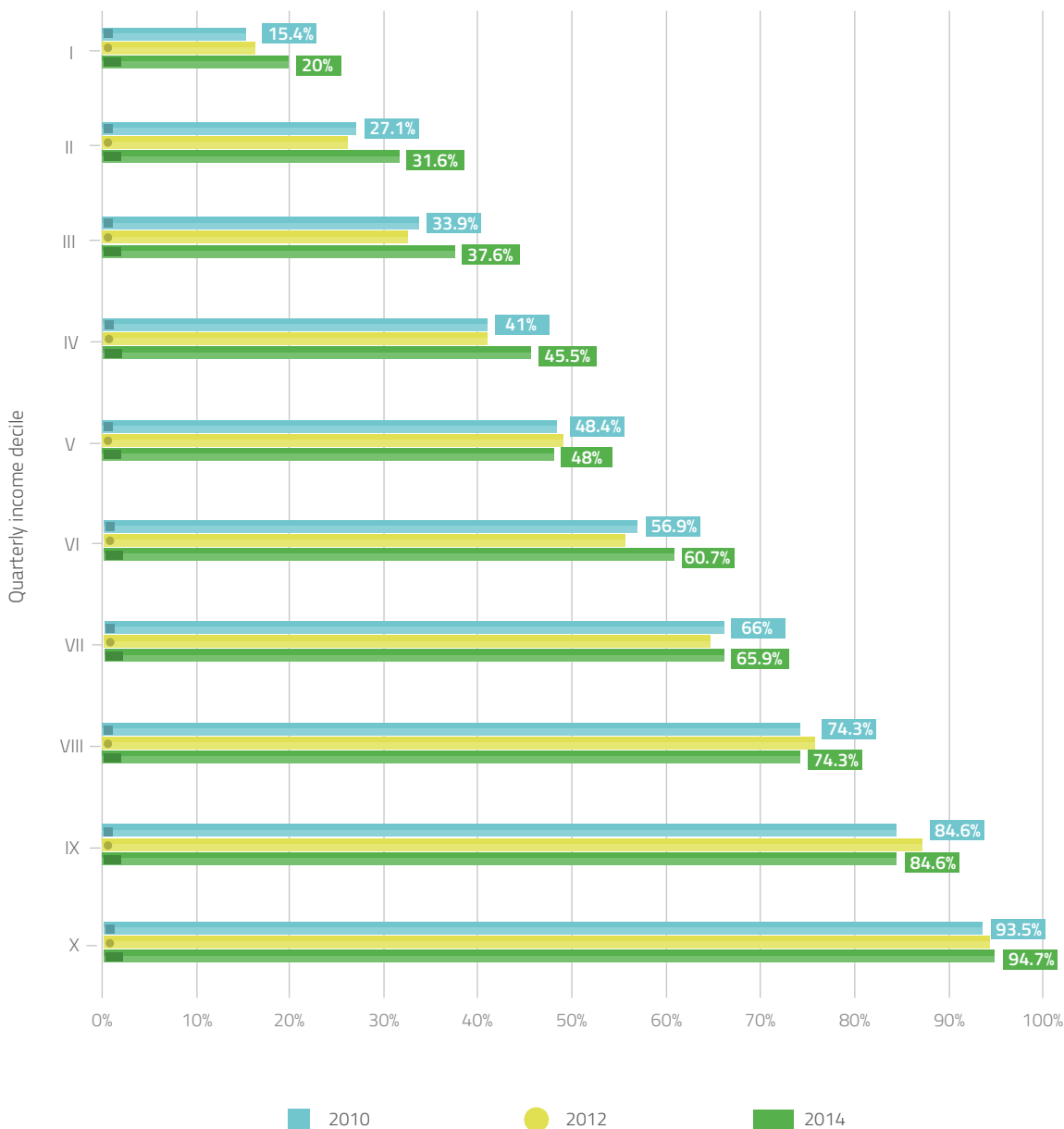
**Notes:** The distribution of residential and non-residential pay TV subscriptions was estimated based on Telecom operator's data and INEGI's data from the ENDUTIH 2015. The number of households as of December 2015 was estimated via a linear interpolation of the CONAPO's published information.

The fixed telecommunication services adoption per quarterly income decile had presented an interesting behavior from 2010 to 2014, since the penetration in the lowest income group has grown more than 30% during that period.

Moreover, the penetration per income decile pattern, observed during the past four years, confirms the positive relationship between fixed telecommunications services adoption and household income level (see Figure 1.3.1.5).

Even more, income deciles II, III, IV and VI also presented an increase above 6% in at least one of the fixed telecommunications services, which is reflected on the penetration indicator. Meanwhile, all other income deciles remained largely unchanged during that period.

**FIGURE 1.3.1.5**  
Percentage of households with fixed telecommunications services by income decile



Source: IFT based on INEGI's National Expenditure and Income in Households Survey.  
Note: Includes households with at least one Fixed Telecommunications service.

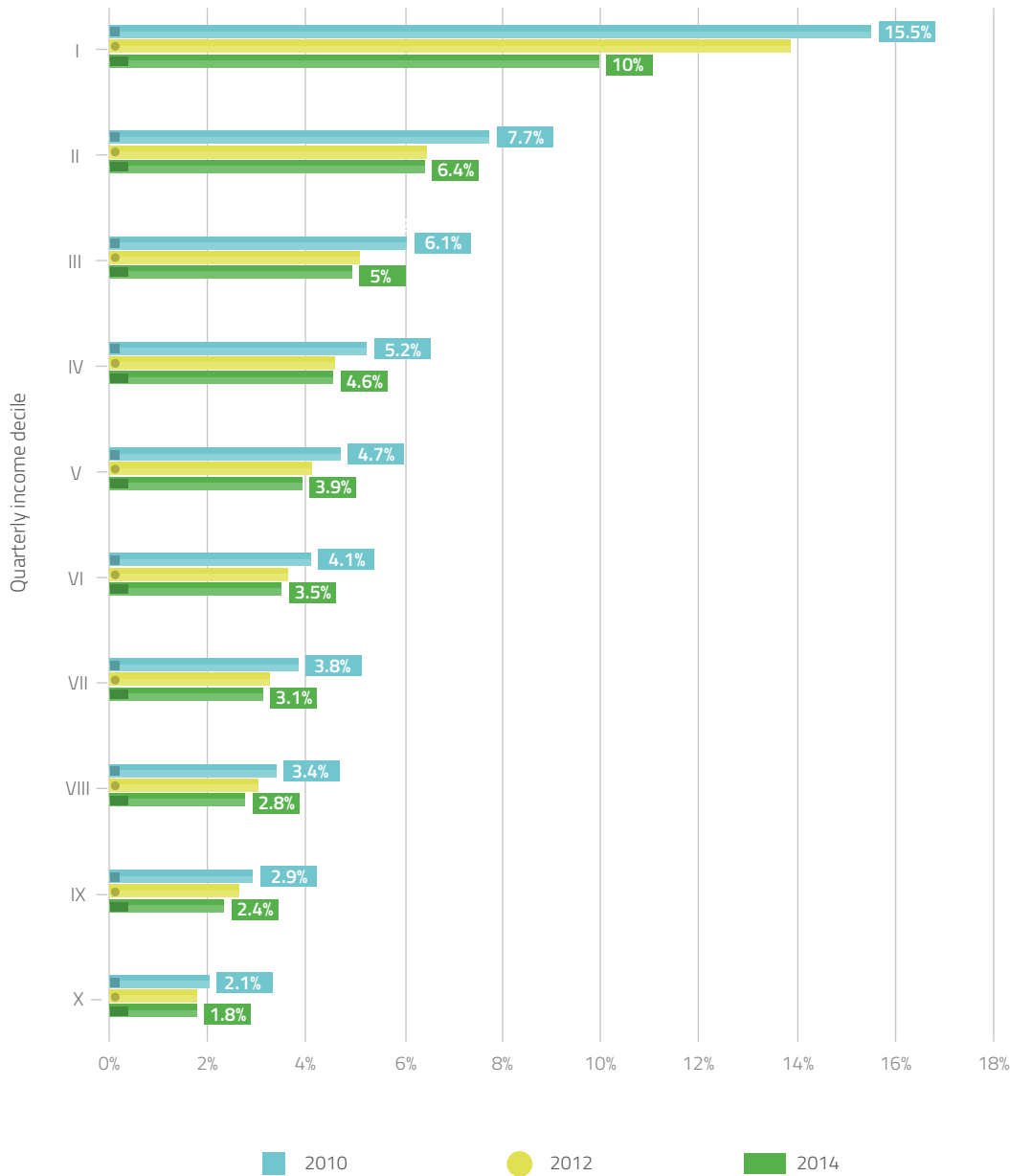




On the other hand, the expenditure on fixed telecommunications services, as a proportion of the quarterly household income, presented an overall reduction from 2010 to 2014, with a remarked decrease on the expenditure of the decil I, the lowest income segment, which passed from almost 16% in 2010 to 10% in 2014.

In other words, the lowest-income households segment reduced the expenditure on fixed telecommunications services by almost 36% during the last four years; meanwhile, all other income segments also experienced a reduction in the percentage of the income spent on fixed telecommunications services, although decreasing rate was lower as the household purchasing power was higher (see Figure 1.3.1.6).

**FIGURE 1.3.1.6**  
Average expenditure on fixed telecommunications as a percentage of household income



Source: IFT based on INEGI's National Expenditure and Income in Households Survey.  
Note: Includes households with at least one Fixed Telecommunications service.

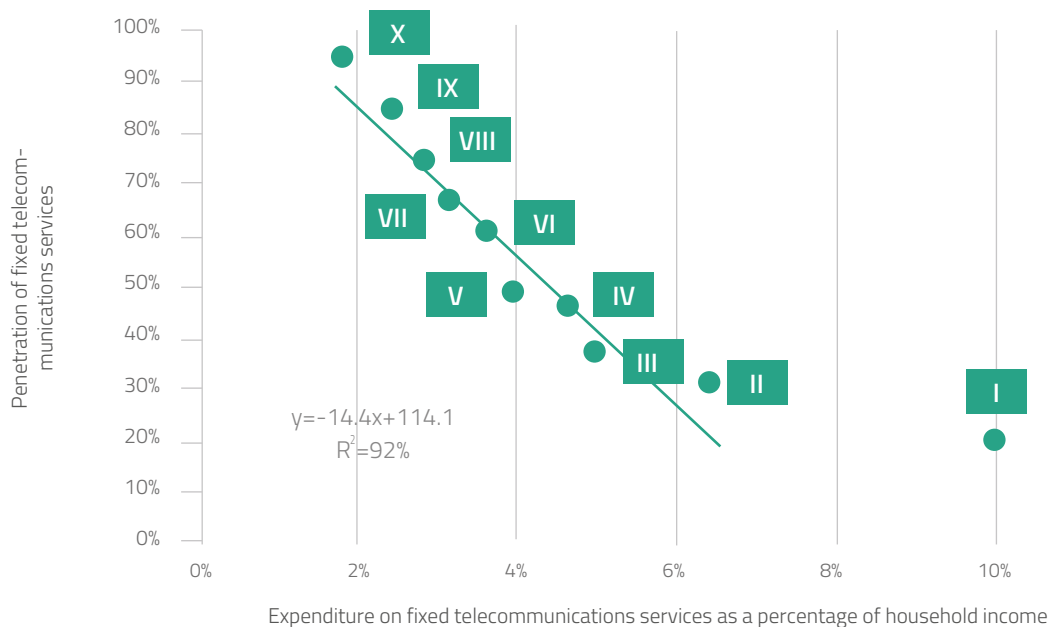
It is interesting to compare the fixed telecommunications services penetration per income decile with the expenditure, as a proportion of the household income, on these services since there is a negative relationship between these two variables. For instance, whereas the penetration among the highest-income segment, decile X, was almost 95% and the expenditure on fixed telecommunications services was 2% of income, in the lower income segments such as decile II, the penetration was approximately 38% and the expenditure on fixed telecommunications services was 5% of income.

The lowest income segment, decile I which includes approximately 10% of the Mexican households, is considered an exception to the above linear trend because of the proportional expenditure on fixed telecommunications services level, which can be associated with the households low income levels among this group (see Figure 1.3.1.7).

Furthermore, the dispersion chart presented a graphic evidence of the strong relationship among the two reviewed variables. Moreover, by taking into account the data from deciles II to X, it can be inferred that for every point by which the proportional expenditure on fixed telecommunication services increases, the penetration increases by more 14%.

**FIGURE 1.3.1.7**

Relationship between fixed telecom penetration and expenditure on fixed telecommunications services as a percentage of household income by income decile



Source: IFT based on INEGI's National Expenditure and Income in Households Survey 2014.

Note: Includes households with at least one Fixed Telecommunications service.

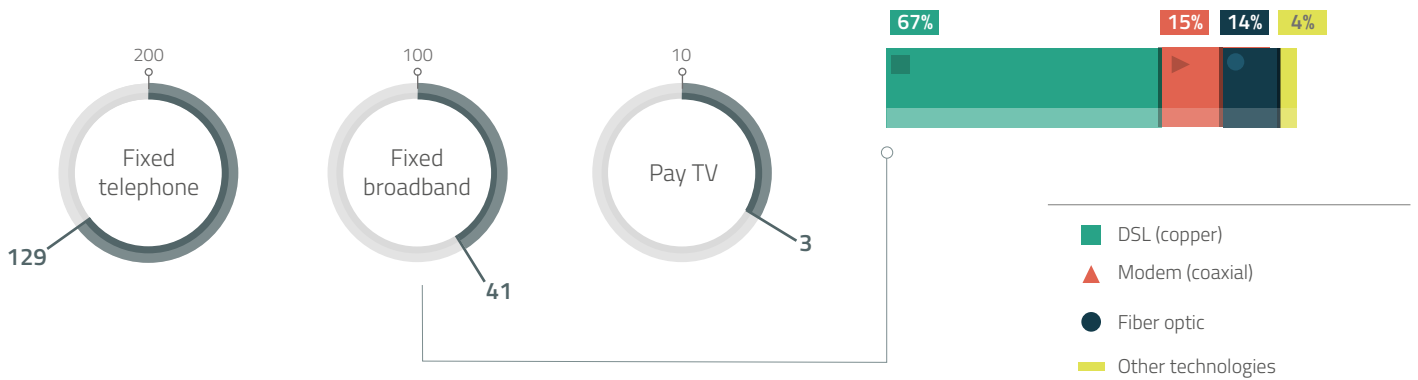
### 1.3.2 Fixed telecommunications and ICT equipment in economic units (business)

In the economic units segment, nationwide penetration per service was as follows: 129 fixed telephone lines per 100 economic unit; 41 fixed broadband subscriptions per 100 economic units; and 3 pay TV subscriptions per 100 economic units.

Moreover, on the fixed broadband segment, the subscription distribution by technology type showed that, although cable (copper) had the greatest proportion (67% of non-residential subscriptions), fiber optic and modem (coaxial) fixed broadband services had practically the same share, with 15% and 14%, respectively (see Figure 1.3.2.1).

Besides, in the broadband segment there was an important technological change from 2014 to 2015, reflected on a 106% annual growth on the number of modem (coaxial) connections, a 52% annual growth on the number of fiber optic connections and 3% annual decrease on the number of DSL (copper) connections (see Figure 1.3.2.2).

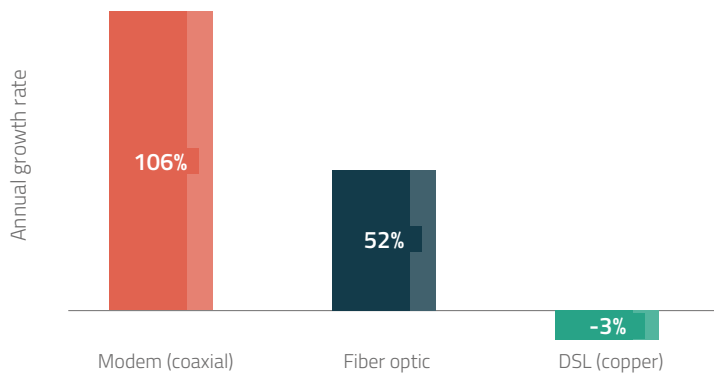
**FIGURE 1.3.2.1**  
Penetration of fixed telecommunication services per 100 economic units



Source: IFT based on Telecom operator's data as of December 2015.

Notes: The distribution of residential and non-residential pay TV subscriptions was estimated based on Telecom operator's data and INEGI's data from the ENDUTIH 2015. The number of economic units is taken from INEGI's Economic Census 2014. The "Other Technologies" category includes fixed wireless and satellite connections.

**FIGURE 1.3.2.2**  
Yearly growth rate of non-residential fixed broadband connection by technologies



Source: IFT based on Telecom operator's data as of December 2015.

Despite as of 2015 nationwide non-residential fixed-telephone penetration was 129 fixed-telephone lines per 100 economic units, the penetration levels vary considerably from state to state. For instance, in Mexico City, Nuevo Leon and Sinaloa, penetration was as high as 401, 398 and 179 fixed-telephone lines per 100 economic units, respectively.

Whereas, penetration in Chiapas, Tlaxcala and Chiapas was just 41, 36 and 34 fixed-telephone lines per 100 economic units, respectively. Therefore, the fixed-telephone penetration in business across Mexico ranged from 34 to 401 fixed-telephone lines per 100 economic units, making it the indicator with the greatest variation range at the end of 2015 (see Map 1.3.2.1).

**MAP 1.3.2.1**  
Non-residential fixed telephone penetration per 100 economic units



Landlines per 100 Economic Units					
<span style="color: red;">■</span>	50 or fewer	<span style="color: orange;">■</span>	51 to 70	<span style="color: yellow;">■</span>	71 to 90
<span style="color: lightgreen;">■</span>	91 to 110	<span style="color: olive;">■</span>	111 to 130	<span style="color: teal;">■</span>	131 or more

**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The number of economic units is taken from the INEGI Economic Census 2014.



Like fixed telephone segment, fixed broadband segment presented a considerable variation on the state by state penetration levels. For instance, although nationwide penetration was 41 subscriptions per 100 economic units, in Quintana Roo, Nuevo Leon and Baja California the penetration level reached 85, 78 and 76 subscriptions per 100 economic units, respectively.

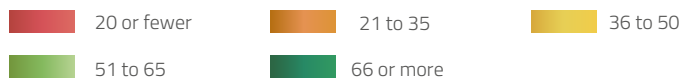
On the other hand, penetration in Guerrero, Chiapas, Oaxaca and Tlaxcala was just 20, 20, 18 and 15 subscriptions per 100 economic units, respectively. Therefore, the fixed-broadband penetration in business across Mexico ranged from 15 to 85 subscriptions per 100 economic units (see Map 1.3.2.2).

### MAP 1.3.2.2

Non-residential fixed broadband penetration per 100 economic units



Subscriptions per 100 Economic Units



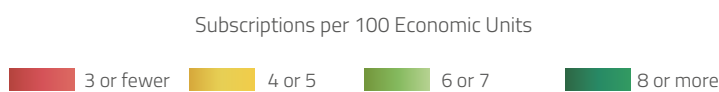
**Source:** IFT based on Telecom operator's data as of December 2015.

**Note:** The number of economic units is taken from the INEGI Economic Census 2014.

In the non-residential pay TV segment, the penetration had the lowest state-to-state variation, but there still significant differences between states. For instance, in Quintana Roo, Baja California Sur and Sonora, the penetration level reached 9, 8 and 7 subscriptions per 100 economic units, respectively.

Whereas, in Tabasco, Zacatecas, Michoacan, State of Mexico, Hidalgo, Guerrero, Chiapas, Oaxaca and Tlaxcala the penetration level was just 2 subscriptions per 100 economic units. Therefore, pay TV penetration in business across Mexico ranged from 2 to 9 subscriptions per 100 economic units, with a nationwide level of 3 subscriptions per 100 economic units (see Map 1.3.2.3).

**MAP 1.3.2.3**  
Non-residential pay TV penetration per 100 economic units



**Source:** IFT based on Telecom operator's data as of December 2015.

**Notes:** The distribution of residential and non-residential pay TV subscriptions was estimated based on Telecom operator's data and INEGI's data from the ENDUTIH 2015. The number of economic units is taken from the INEGI Economic Census 2014.

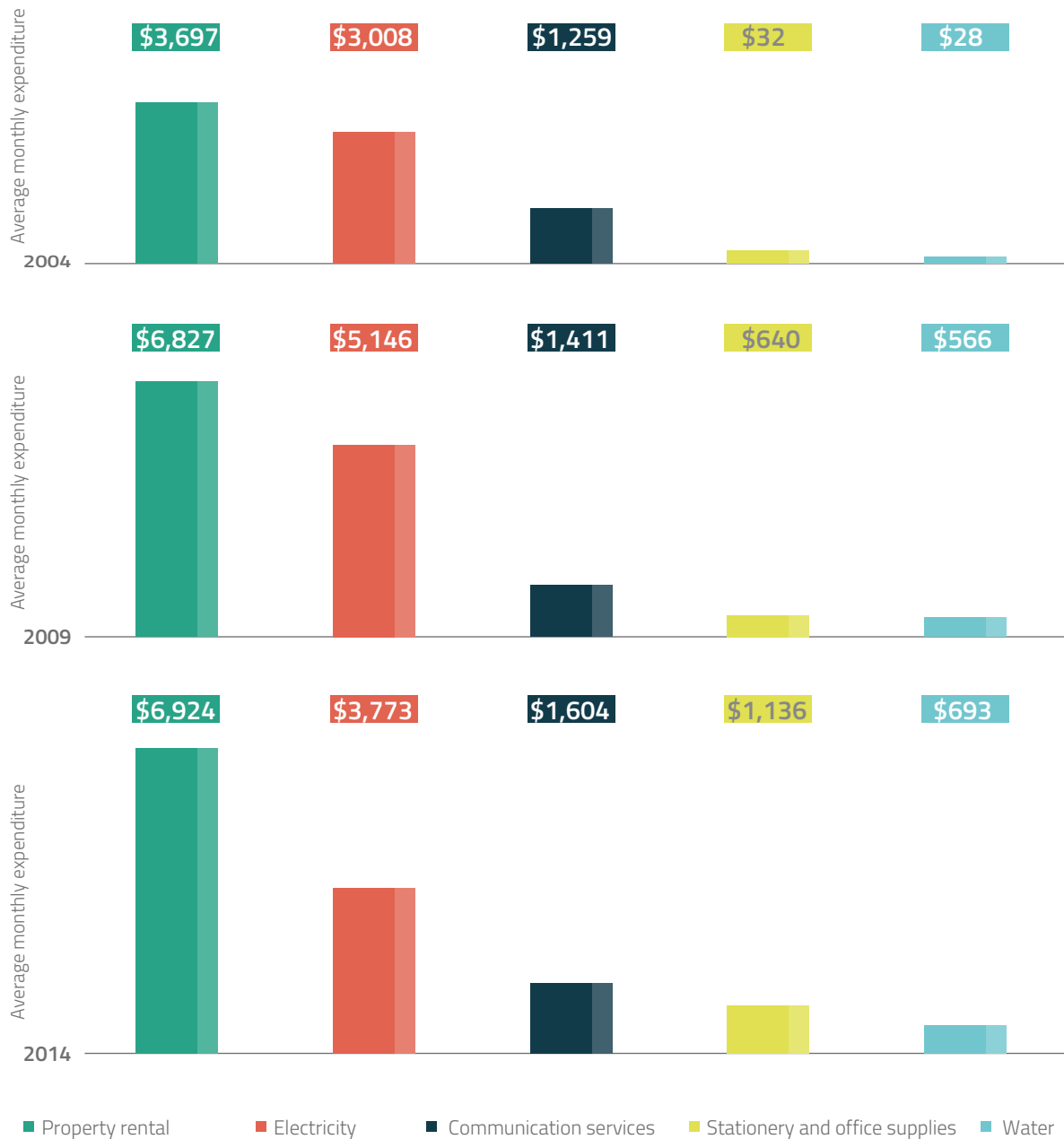


On the other hand, the average monthly expenditure of companies on communications services had remained largely stable, with a slight upward trend, between 2004 and 2014.

In this sense, in 2014 the average monthly expenditure of companies on telecommunication services in Mexico was approximately MXN 1,600, which is under other frequent business expenditures such as property rental and electricity, but above other expenditures such as office supplies and water (see Figure 1.3.2.3).

**FIGURE 1.3.2.3**

Average monthly expenditure of economic units by service type



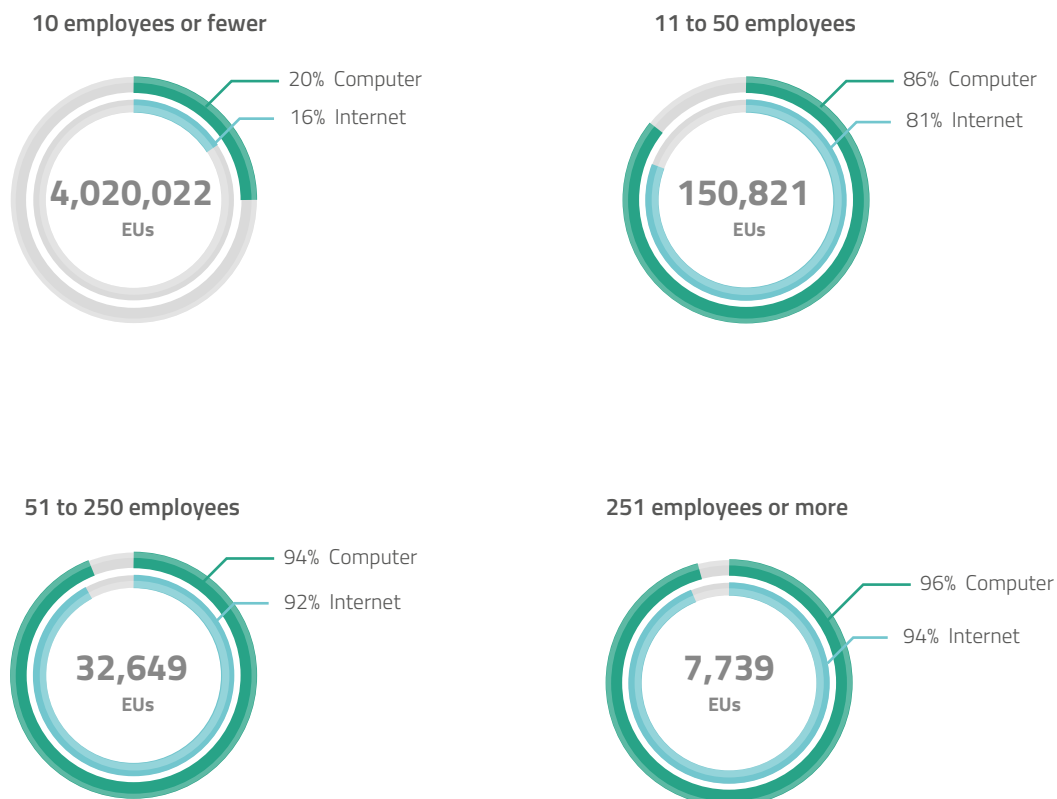
Source: IFT based on INEGI's Economic Census.

Note: The amounts do not include tax. For 2014 data, the "Communication Service" category also included courier fees.

Finally, as of 2014 there was approximately 4.2 million economic units in Mexico, from which the micro-business segment (10 employees or fewer) accounted for 95% of all companies and was the group with the lower computer and internet adoption rate, with only 20% of these economic units using computer and 16% using internet as part of their business as usual.

However, the rates change markedly for companies with more than 11 employees (small, medium and large companies), for which the computer and internet adoption rates were at least 80%. Thus, there is a positive relationship between ICT adoption rates as part of the business as usual operations and the economic units size measured through the number of employees (see Figure 1.3.2.4).

**FIGURE 1.3.2.4**  
Computer and internet adoption by economic unit (EU) size



Source: IFT based on INEGI's Economic Census 2014.



## 1.4 Mobile telecommunications

### 1.4.1 Radio spectrum distribution

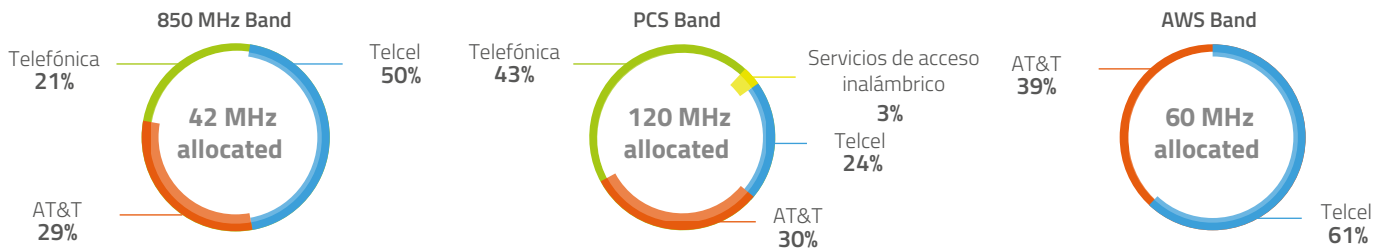
Radio spectrum holdings per operator on the 850 MHz band was distributed as follows: Telefónica 21%, AT&T 29%, and Telcel 50%.

On the other hand, radio spectrum on the 1,900 MHz (PCS) band was distributed among the operators as follows: Servicios de Acceso Inalámbrico 3%; Telcel 24%; AT&T 30%; and Telefónica 43%.

Finally, the 1,700 MHz and 2,100 MHz (AWS) bands were shared between Telcel and AT&T with a 61% and 39% share, respectively (see Figure 1.4.1.1).

**FIGURE 1.4.1.1**

Radio spectrum holdings on phone and mobile data bands by operator



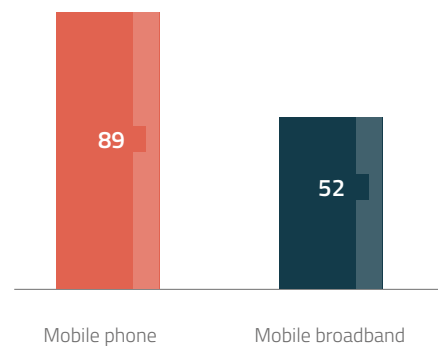
Source: IFT based on data as of December 2015.

### 1.4.2 Mobile telecommunication services

As of December 2015, mobile-phone nationwide penetration was 89 subscriptions per 100 inhabitants, whereas mobile-broadband penetration was 52 subscriptions per 100 inhabitants, which means that approximately 58% of inhabitants with mobile-cellular services also had broadband internet services. In this sense, by the end of 2015 in Mexico there were 107.7 million mobile phone subscriptions and 63.6 million mobile broadband subscriptions (see Figure 1.4.2.1).

**FIGURE 1.4.2.1**

Mobile telecommunications teledensity per 100 Inhabitants



Source: IFT based on Telecom operator's data as of December 2015.

Note: The number of inhabitants is taken from the data published by CONAPO as of January 2016.

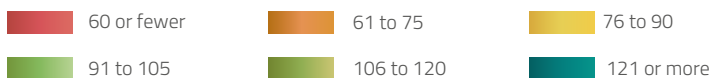
Mobile phone teledensity across Mexico ranges from 56 to 132 subscriptions per 100 inhabitants, with a national average of 89 subscriptions per 100 inhabitants.

Moreover, Mexico City, Nuevo Leon and the State of Mexico were the states with the higher teledensity levels, with 132, 116 and 108 subscriptions per 100 inhabitants, respectively. On the other hand, Guerrero, Oaxaca and Chiapas were the states with the lower teledensity level, with just 60, 59 and 56 subscriptions per 100 inhabitants (see Map 1.4.2.1).

**MAP 1.4.2.1**  
Mobile phone teledensity per 100 inhabitants



Subscriptions per 100 inhabitants



**Source:** IFT based on operator data current as of December 2015.  
**Note:** The number of inhabitants is taken from the data published by CONAPO as of January 2016. The teledensity desagregation per state was estimated based on the Telecom operator's data and INEGI's data from the ENDUTIH 2015.



Mobile internet teledensity per 100 inhabitants varies even more greatly than for mobile-cellular services, with significant differences in state-to-state teledensity. For instance, in Mexico City, Nuevo Leon and Quintana Roo, teledensity was as high as 90, 86 and 58 subscriptions per 100 inhabitants, respectively.

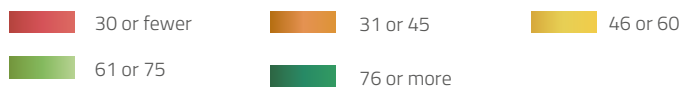
On the other hand, in Oaxaca, Guerrero and Chiapas the teledensity levels were just 29, 26 and 24 subscriptions, per 100 inhabitants, respectively. Therefore, the mobile internet teledensity across Mexico ranged from 24 to 90 subscriptions per 100 inhabitants, with a national average of 53 subscriptions per 100 inhabitants (see Map 1.4.2.2).

### MAP 1.4.2.2

Mobile internet teledensity per 100 inhabitants



Penetration per 100 inhabitants

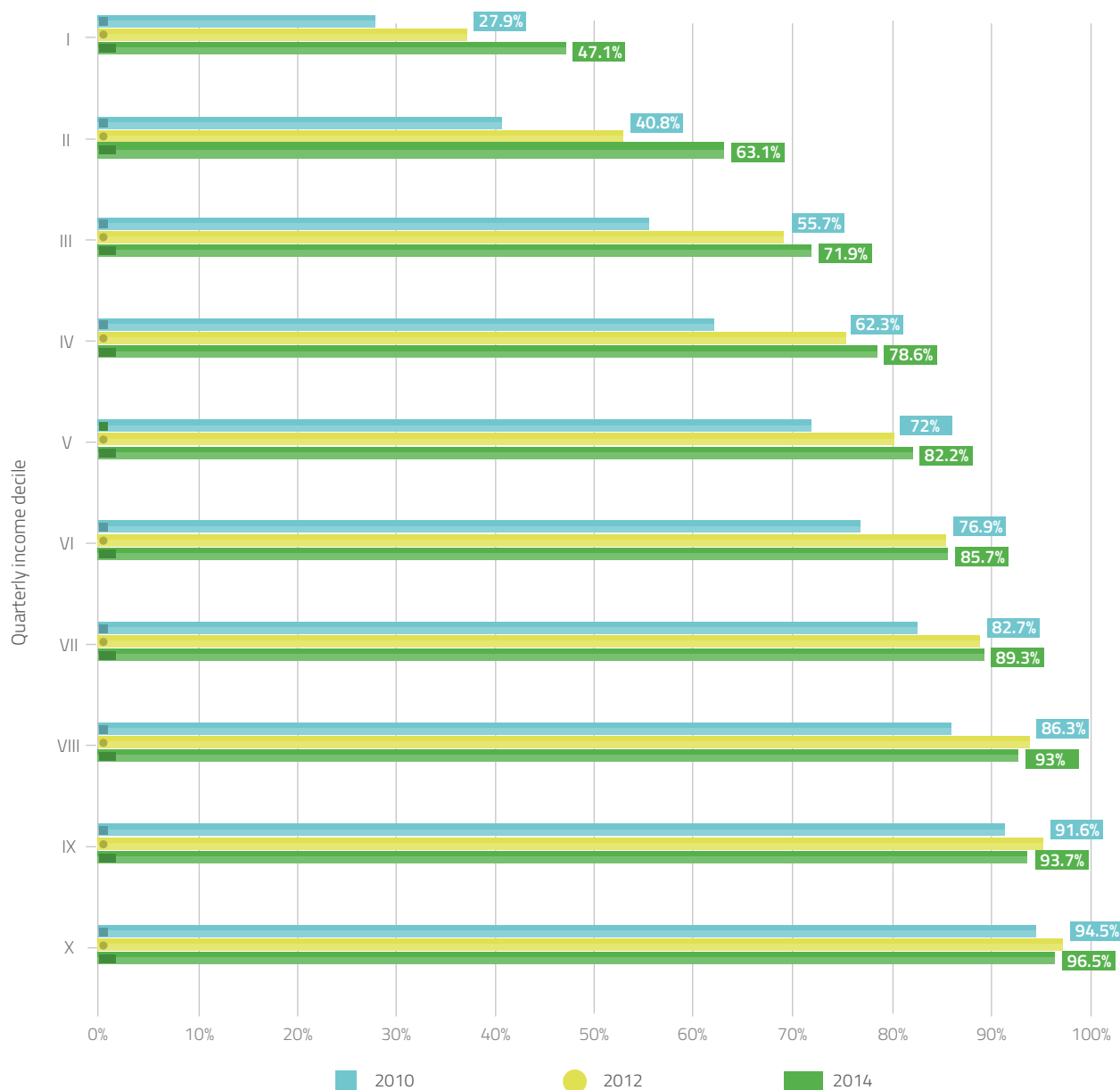


**Source:** IFT based on operator data current as of December 2015.  
**Note:** The number of inhabitants is taken from the data published by CONAPO as of January 2016. The teledensity desagregation per state was estimated based on the Telecom operator's data and INEGI's data from the ENDUTIH 2015.

Just like fixed telecommunication services, mobile telecommunication services adoption per quarterly income decile had presented an overall increasing trend from 2010 to 2014, especially in the lower income segments such as deciles I and II, where the services adoption rates during the period were 69% and 55%, respectively.

Moreover, the results observed during the past four years confirm the positive relationship that exists between mobile telecommunication access and the household income level (see Figure 1.4.2.2).

**FIGURE 1.4.2.2**  
Households with mobile telecommunications services by income decile



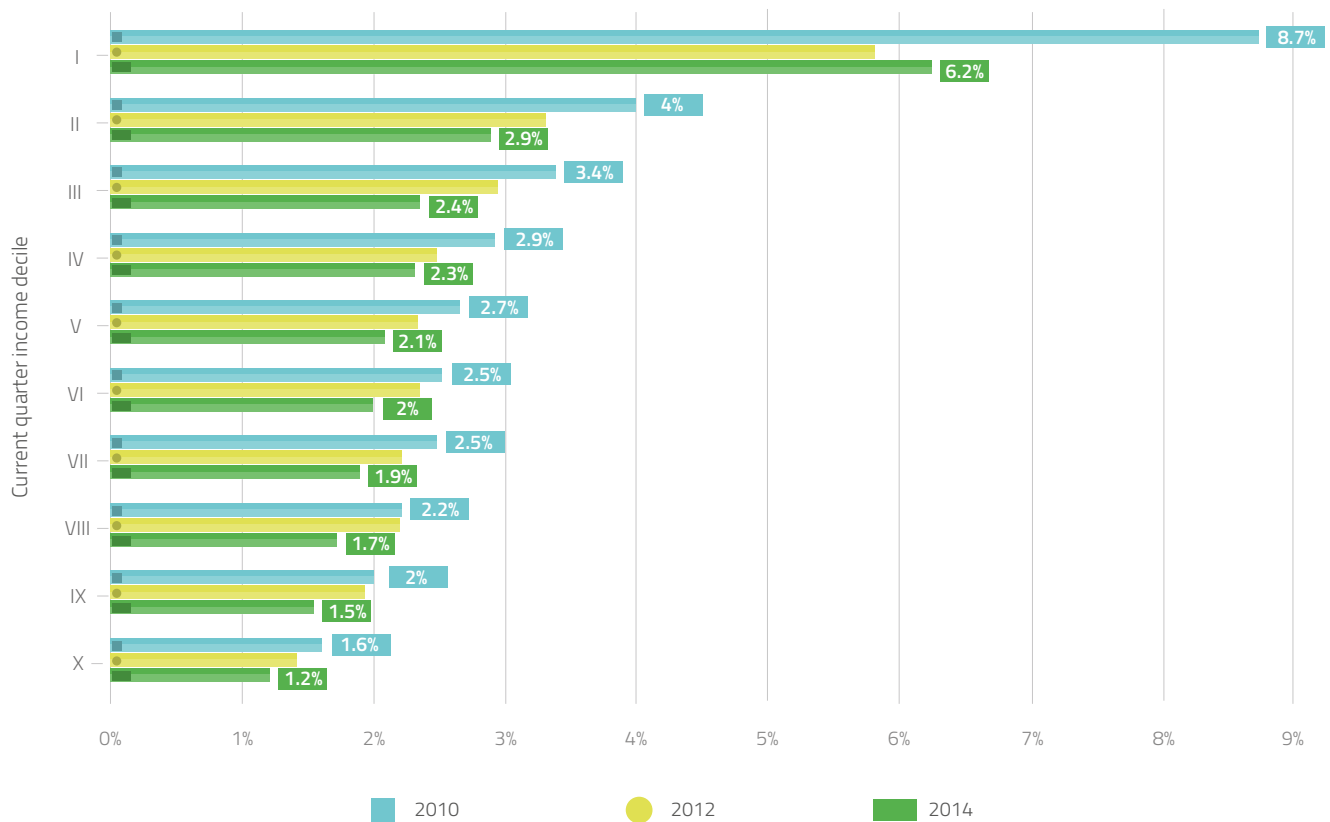
Source: IFT based on INEGI's National Expenditure and Income in Households Survey.



On the other hand, the expenditure on mobile-telecommunication services, as a proportion of the quarterly household income, presented an overall reduction from 2010 to 2014, with a remarked decrease on expenditure of the lowest income segment (decile I), which passed from almost 9% in 2010 to approximately 6% in 2014. Furthermore, also on the decile II and III there were significant diminutions on the proportional expenditure on mobile telecommunication services.

In other words, for the three lower income households segments (30% of Mexican households) there were reductions above 27% on the mobile telecommunication expenditure; whereas, for the other income segments the reductions were at least 20% (see Figure 1.4.2.3).

**FIGURE 1.4.2.3**  
Average expenditure on mobile telecommunications as a percentage of income



Source: IFT based on INEGI's National Expenditure and Income in Households Survey.

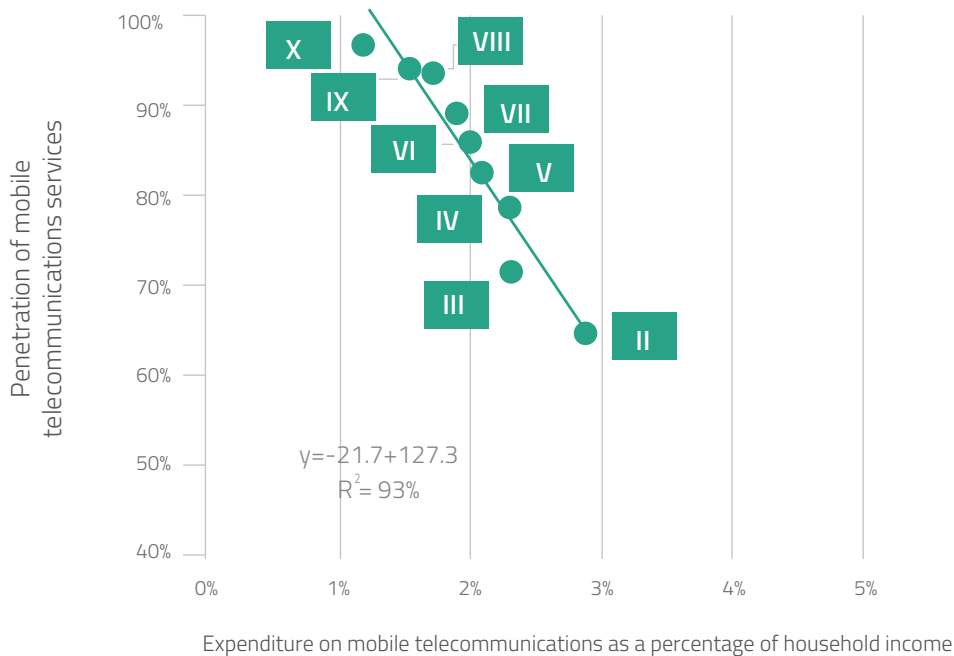
Just as the fixed telecommunications services case, the comparative between mobile telecommunication adoption and the expenditure, as a proportion of the household income, in these services revealed a negative relationship among the two variables. For example, whereas the mobile phone adoption among decile X, highest income group, was around 97% and the expenditure on mobile services was slightly higher than 1%, the adoption rate on the lower income segments such as decile II was above 63% and the expenditure on mobile-telecommunication services was near to 3% of income.

Additionally, the lowest income segment, decile I which includes approximately 10% of the Mexican households, is also consider an exception to the above linear trend because of the proportional expenditure on mobile telecommunications services level, which can be associated with the households low income levels among this group (see Figure 1.4.2.4).

Furthermore, in this case the dispersion chart presented a graphic evidence of the strong relationship among the two reviewed variables too. Moreover, by taking into account the data from deciles II to X, it can inferred that for every point by which the proportional expenditure on mobile telecommunication services increases, the adoption rate increases by almost 22%.

**FIGURE 1.4.2.4**

Relationship between mobile telecom penetration and expenditure on mobile telecommunications services as a percentage of household income by income decile



Source: IFT based on INEGI's National Expenditure and Income in Households Survey.



## 1.5 Radio and TV consumption

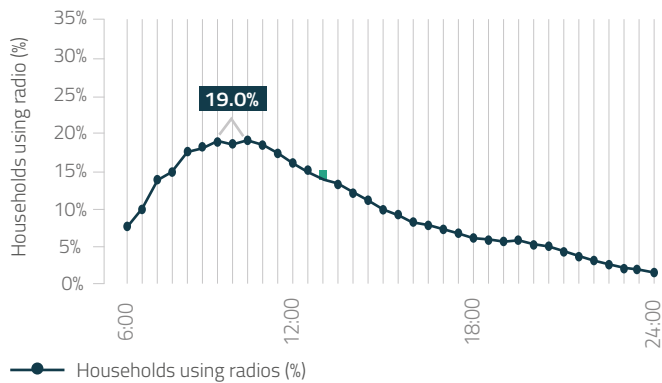
Television exposure is measured as the average number of people using a TV set during a certain time interval. Based on the sampled data analyzed by the IFT, on average more than 14% of people were using their TV set at any given time within a 24-hour period during 2015. However, this percentage changes significantly depending on the time of day, reaching more than 30% between 9:30 pm and 10:00 pm.

In the same way as television, the number of people using radios measures the radio exposure levels of the population analyzed at any period of time. Based on the sampled data analyzed by the IFT, on average of 9.8% of people were using their radio at any given time

between 6:00 am and 12:00 am from Monday to Friday. However, unlike television, radio exposure reached its top level between 10:00 am and 10:30 am, when the number of people using their radio reaches approximately 19% (see Figures 1.5.1 and 1.5.2).

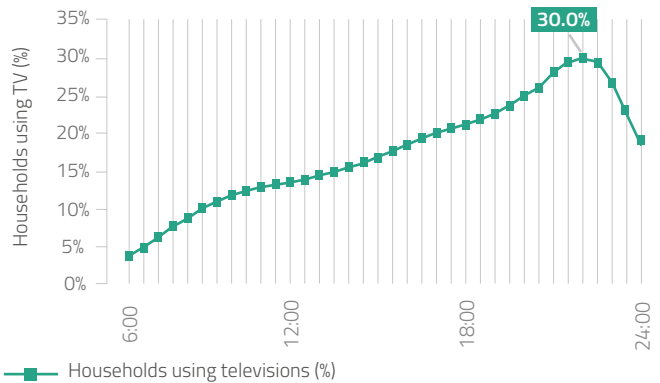
The genres with the highest consumption levels on national television channels are telenovelas and serial dramas, despite these programs not enjoying the highest number of programming hours on these channels. This indicates that they are profitable on terms of audience to airtime. The genres with most programming hours are marketing, movies and magazine shows (see Figure 1.5.3).

**FIGURE 1.5.1**  
Average radio exposure per hour



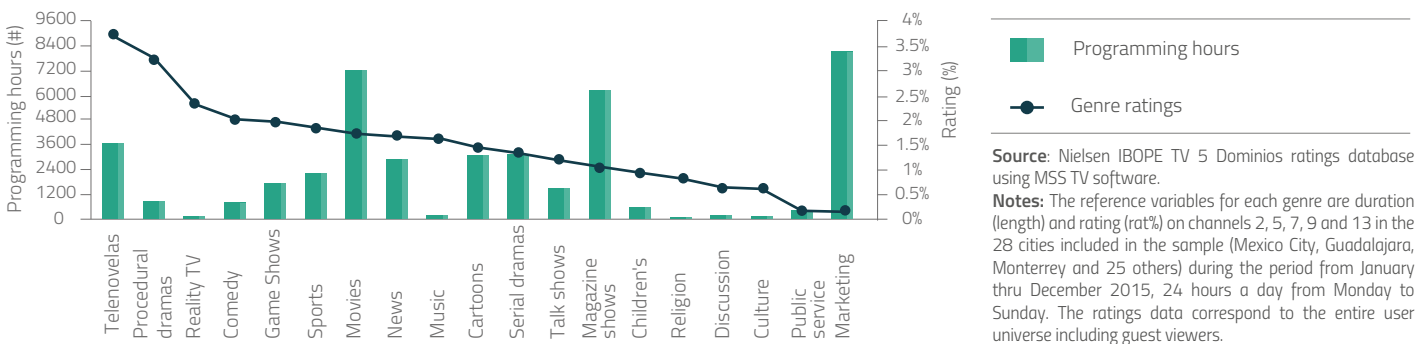
**Source:** INRA database using INRAMEDIOS software.  
**Notes:** The data correspond to the period from January 1 thru December 31, 2015. The reference variable is households using radio (HURS), which includes AM/FM radio stations. The regions included in the data were Mexico City, Guadalajara and Monterrey. The target was men and women aged between 8 and 45+ years, of all socioeconomic levels. Reference time was 6:00 AM to 12:00 AM from Monday to Friday.

**FIGURE 1.5.2**  
Average television exposure per hour



**Source:** Nielsen IBOPE TV 5 Dominios ratings database using MSS TV software.  
**Notes:** The reference variable is households using television (HUTS) on all channels in 28 cities (Mexico City, Guadalajara, Monterrey and 25 others) during the period from January thru December 2015, 24 hours a day from Monday to Sunday. The reference data correspond to the entire user universe including guest viewers.

**FIGURE 1.5.3**  
Programming hours and average ratings on Mexican television channels by genre

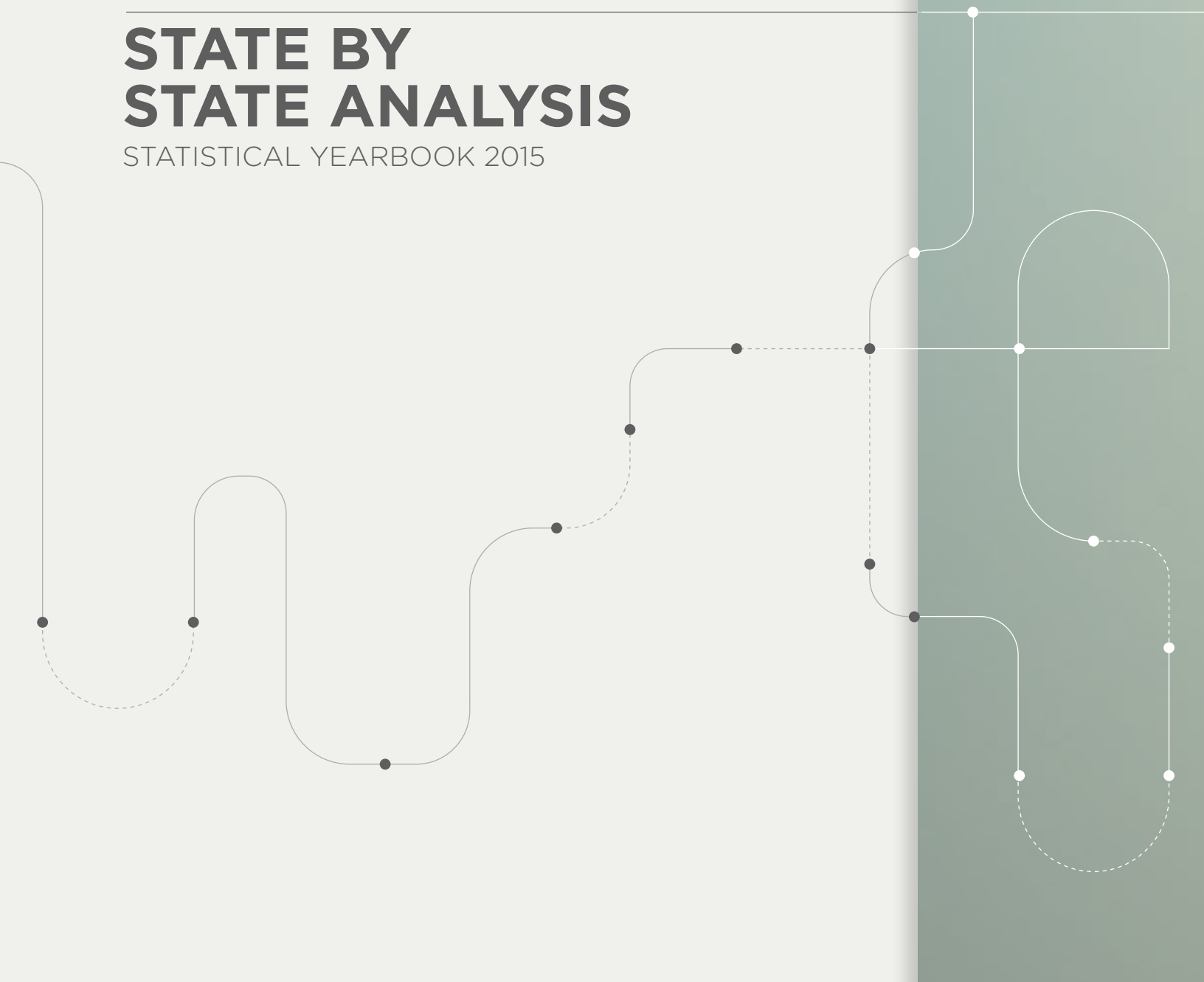


**Source:** Nielsen IBOPE TV 5 Dominios ratings database using MSS TV software.  
**Notes:** The reference variables for each genre are duration (length) and rating (rat%) on channels 2, 5, 7, 9 and 13 in the 28 cities included in the sample (Mexico City, Guadalajara, Monterrey and 25 others) during the period from January thru December 2015, 24 hours a day from Monday to Sunday. The ratings data correspond to the entire user universe including guest viewers.

# 02

## STATE BY STATE ANALYSIS

STATISTICAL YEARBOOK 2015







STATISTICAL YEARBOOK 2015:

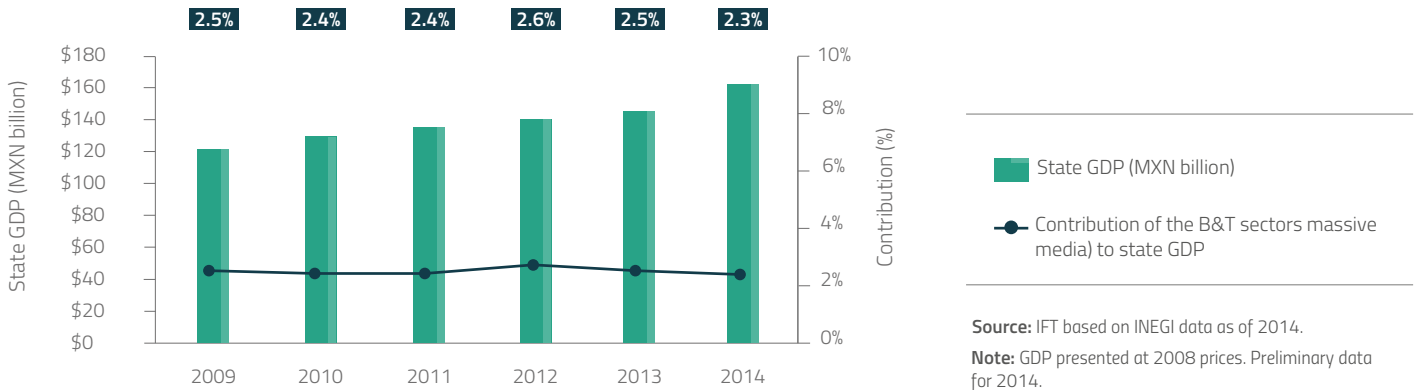
## 2.1 AGUASCALIENTES (AGS)

### General Overview

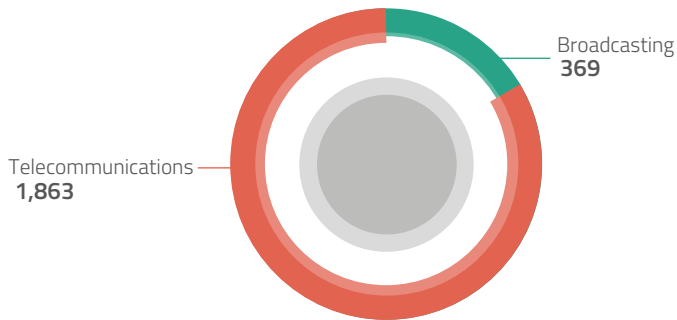
- ▶ From 2009 to 2014 Aguascalientes's GDP showed an average annual growth rate of 6.13%. Additionally as of 2014 the massive media sector<sup>1</sup> contributed with 2.3% to the overall state's GDP, equivalent to MXN 3.72 billion.
- ▶ In 2015, the telecommunications sector approximately employed 1,900 people, whereas the broadcasting sector employed 400 people. In terms of broadcasting infrastructure, at the end of 2015, Aguascalientes had 24 radio broadcasting stations (21 FM stations and 3 AM stations) and seven broadcast television channels.
- ▶ In terms of fixed telecommunications services, by the end of 2015 Aguascalientes had the highest penetration in pay TV services with 55 subscriptions per 100 households, compared to 47 fixed telephone lines per 100 households, and 37 fixed broadband subscriptions per 100 households. Moreover, by mid 2015 according to ENDUTIH's results, 75.8% of households had at least one of these services.
- ▶ In terms of mobile telecommunications services, the state's mobile phone teledensity as of December 2015 was 104 subscriptions per 100 inhabitants, which implies that there were some Aguascalientes residents with more than one mobile phone, whereas mobile internet reached 65 subscriptions per 100 inhabitants, ranking the state, in terms of mobile telecommunications penetration, on top 4 out of 32 Mexican states.
- ▶ Regarding to ICT equipment adoption in Aguascalientes, radio equipment had the highest penetration level, with 81 radios per 100 households; followed by analog television sets with 78 TV sets per 100 households, computer equipment with 54 computers per 100 households and finally digital television, with 49 television sets per 100 households (this figure does not include households with an analog television set connected to a digital decoder, or households with pay TV services).
- ▶ As in most states, as of 2014 property rental was the principal expenditure incurred by economic units (business) in Aguascalientes, standing at an average near to MXN 7,000 per month. On the other hand, expenditure on telecommunications services was MXN 2,539 per month, higher than other typical company expenditures such as water (MXN 863 per month) and office supplies (MXN 1,443 per month).
- ▶ Additionally, the fixed telecom services penetrations in Aguascalientes's economic units (business) segment were 136 fixed telephone lines per 100 economic units (business), 49 fixed broadband subscriptions per 100 economic units (business); and three pay TV subscriptions per 100 economic units (business).
- ▶ Finally, in 2014 there were registered 47,434 economic units (business) in the state and of those who had 10 employees or less, only 28% used computers as part of their operations, whereas only 22% used internet. Nevertheless these figures were above 80% for economic units (business) with 11 employees or more, which proves that there is a positive relation between company size and the telecommunications services adoption as a part of the business as usual processes.

<sup>1</sup> According to the SCIAN, the Broadcasting and Telecommunications subsectors form part of Sector 51 Massive Media Information, and contributed 94% to the sector's nationwide GDP in 2015

**FIGURE 2.1.1.1**  
Contribution of the B&T sectors (massive media) to state GDP

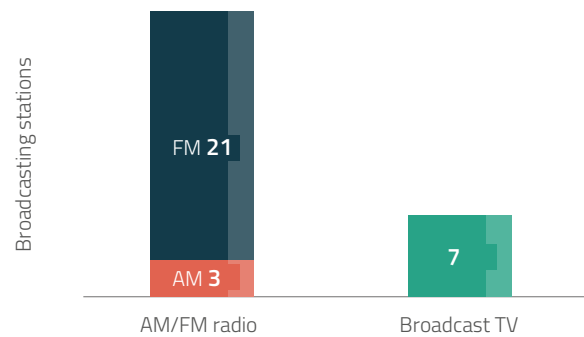


**FIGURE 2.1.1.2**  
Employees in the B&T sectors



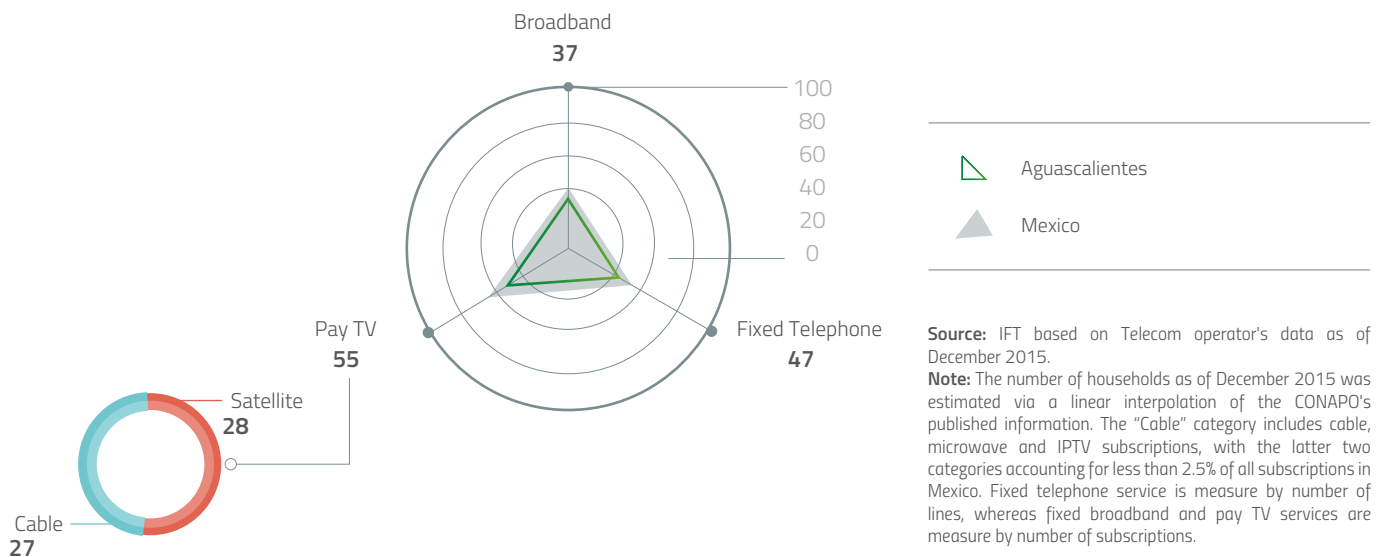
Source: IFT based on data from INEGI's quarterly National Occupation and Employment Surveys.

**FIGURE 2.1.1.3**  
AM/FM radio and broadcast TV stations

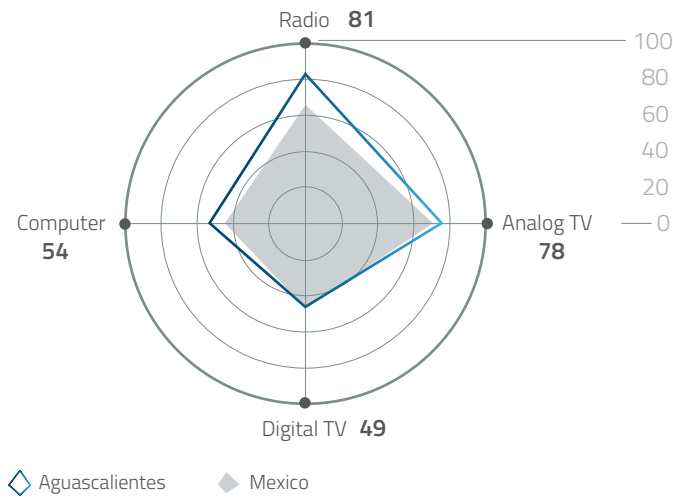


Source: IFT based on data as of December 2015.

**Figure 2.1.2.1**  
Fixed telecommunications services penetration per 100 households

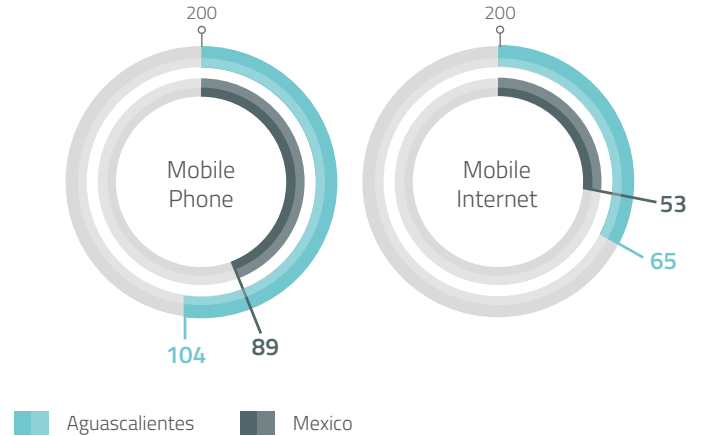


**FIGURE 2.1.2.2**  
ICT equipment per 100 households



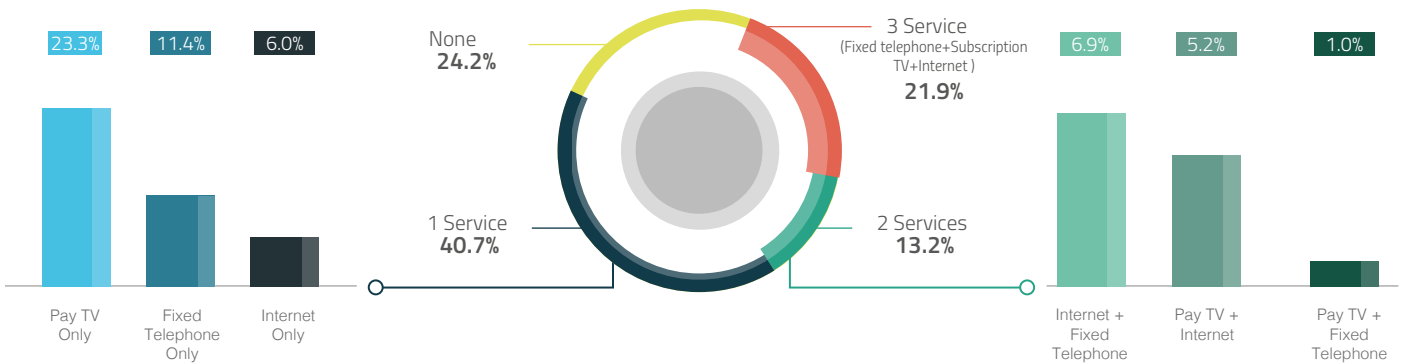
Source: IFT based on data from ENDUTIH 2015.  
Note: The figure for Digital TV does not include households with an analog television set and digital decoder, or households with pay TV services.

**FIGURE 2.1.2.3**  
Mobile telecommunications teledensity per 100 inhabitants



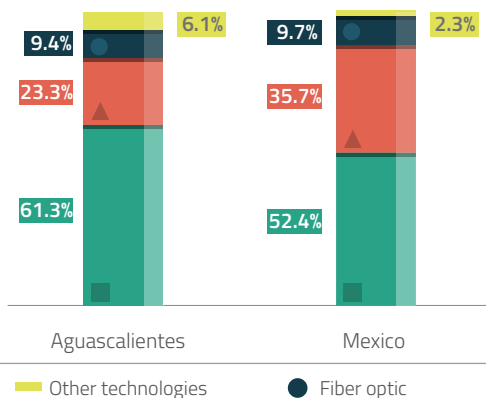
Source: IFT based on Telecom operator's data as of December 2015.  
Note: The number of inhabitants is taken from the data published by CONAPO as of January 2016. The teledensity desagregation per state was estimated based on the Telecom operator's data and INEGI's data from the ENDUTIH 2015.

**FIGURE 2.1.2.4**  
Distribution of fixed telecommunications services in households

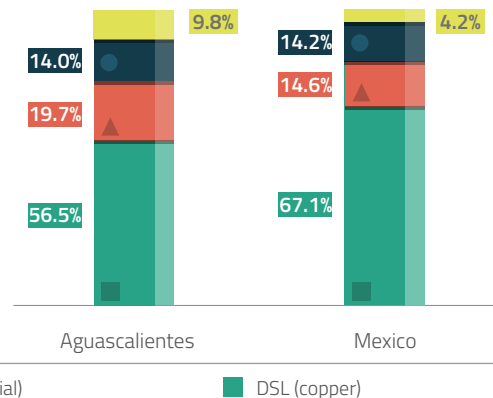


Source: IFT based on INEGI's ENDUTIH 2015.  
Note: Due to the rounding of data in the figure tags, the sum of the values shown in the bar charts may vary from those shown in the pie chart.

**Figure 2.1.2.5**  
Distribution of residential fixed broadband subscriptions per connection type

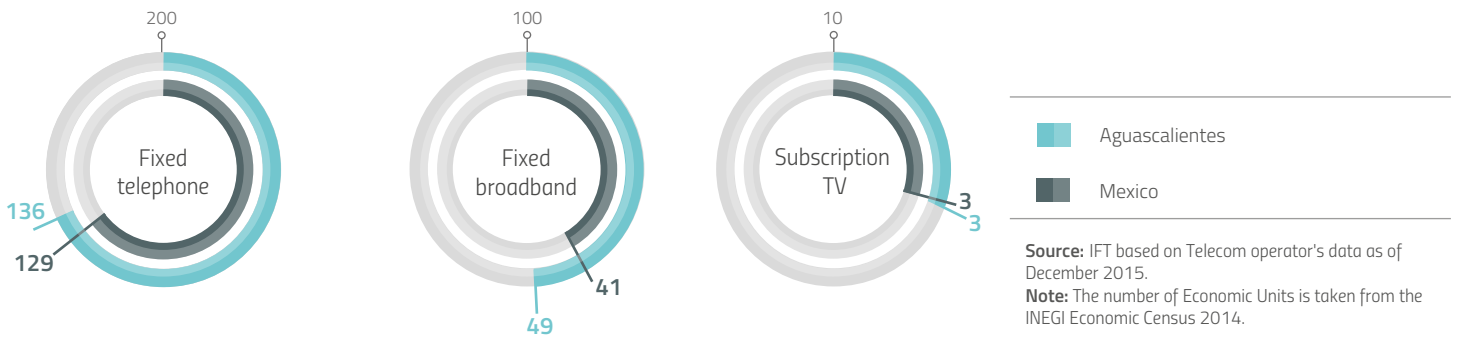


**Figure 2.1.3.1**  
Distribution of non-residential fixed broadband subscriptions per connection type

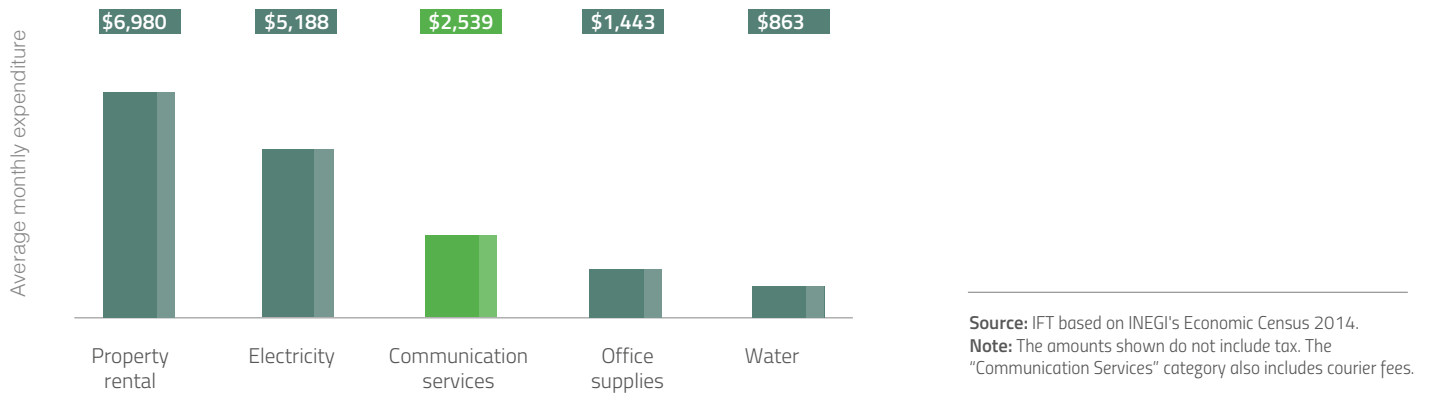


Source: IFT based on Telecom operator's data as of December 2015.  
Note: The "Other Technologies" category includes fixed wireless and satellite connections. Due to the rounding of data in the chart tags, the figures shown may not add up to 100%.

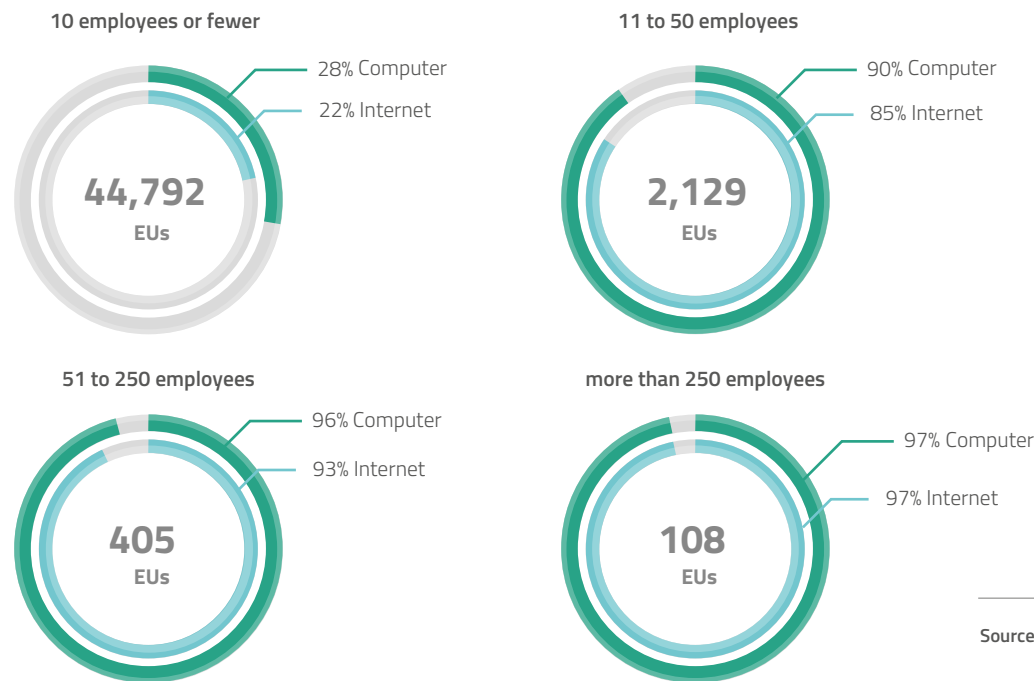
**FIGURE 2.1.3.2**  
Fixed telecommunications services penetration per 100 economic units



**FIGURE 2.1.3.3**  
Average monthly expenditure of economic units by service type



**Figure 2.1.3.4**  
Computer and internet adoption by economic unit (EU) size





## STATISTICAL YEARBOOK 2015:

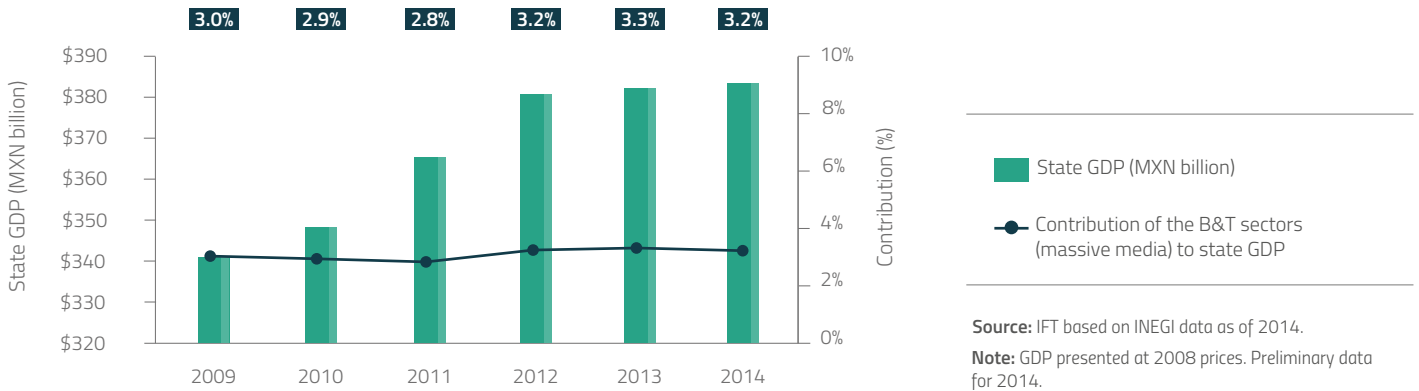
# 2.2 BAJA CALIFORNIA (BC)

## General Overview

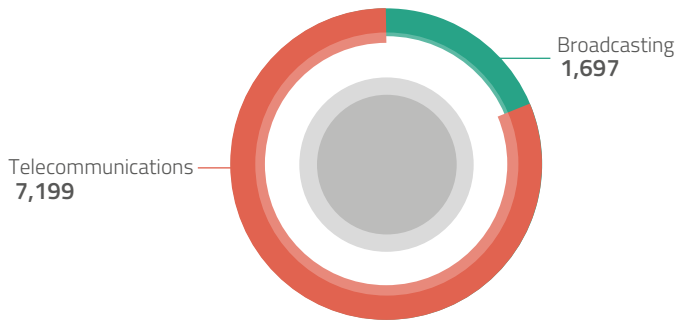
- ▶ From 2009 to 2014 Baja California's GDP showed an average annual growth rate of 2.4%. Additionally as of 2014, the massive media sector<sup>2</sup> contributed with 3.2% of the overall state's GDP, equivalent to MXN 12.350 billion.
- ▶ In 2015, the telecommunications sector employed more than 7,000 people, whereas the broadcasting sector employed approximately 1,700 people. In terms of broadcasting infrastructure, at the end of 2015, the state had 71 radio broadcasting stations (43 FM stations and 28 AM stations) and 24 broadcast television channels.
- ▶ In terms of fixed telecommunications services, by the end of 2015, Baja California had the highest penetration in pay TV services with 69 subscriptions per 100 households, compared to 54 fixed broadband subscriptions per 100 households, and 47 fixed telephone lines per 100 households. Moreover, by mid 2015 according to ENDUTIH's results, 81.4% of households had at least one of these services.
- ▶ In terms of mobile telecommunications services, the state's mobile phone teledensity as of December 2015 was 103 subscriptions per 100 inhabitants, which implies that there were some Baja California residents with more than one mobile phone, whereas mobile internet reached 69 subscriptions per 100 inhabitants, ranking the state, in terms of mobile telecommunications penetration, on top 5 out of 32 Mexican states.
- ▶ Regarding to ICT equipment adoption in Baja California, radio and analog television sets had the highest penetration level, with 64 radios and television sets per 100 households; followed by computer equipment with 58 computers per 100 households and finally digital television, with 54 television sets per 100 households (this figure does not include households with an analog television set connected to a digital decoder, or households with pay TV services).
- ▶ As in most states, as of 2014 property rental was the principal expenditure incurred by economic units (business) in Baja California, standing at an average over MXN 10,500 per month. On the other hand, expenditure on telecommunications services was MXN 2,641 per month, higher than other typical company expenditures such as water (MXN 1,515 per month) and office supplies (MXN 1,381 per month).
- ▶ Additionally, the fixed telecom services penetrations in Baja California's economic units (business) segment were 158 fixed telephone lines per 100 economic units (business), 76 fixed broadband subscriptions per 100 economic units (business); and five pay TV subscriptions per 100 economic units (business).
- ▶ Finally, in 2014 there were registered 95,628 economic units (business) in the state and of those who had 10 employees or less, only 33% used computers as part of their operations and 28% used internet. Nevertheless, these figures were above 80% for economic units (business) with 11 employees or more, which proves that there is a positive relation between company size and telecommunications services adoption as part of the business as usual processes.

<sup>02</sup> According to the SCIAN, the Broadcasting and Telecommunications subsectors form part of Sector 51 Massive Media Information, and contributed 94% to the sector's nationwide GDP in 2015

**FIGURE 2.2.1.1**  
Contribution of the B&T sectors (massive media) to state GDP

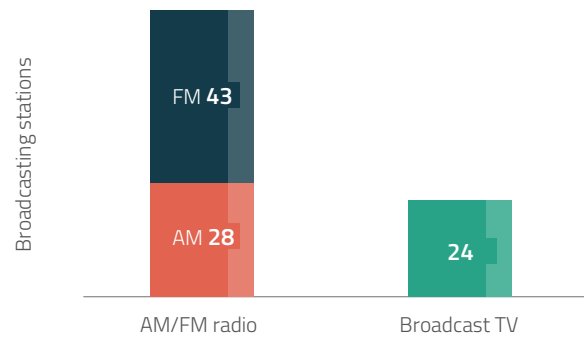


**FIGURE 2.2.1.2**  
Employees in the B&T sectors



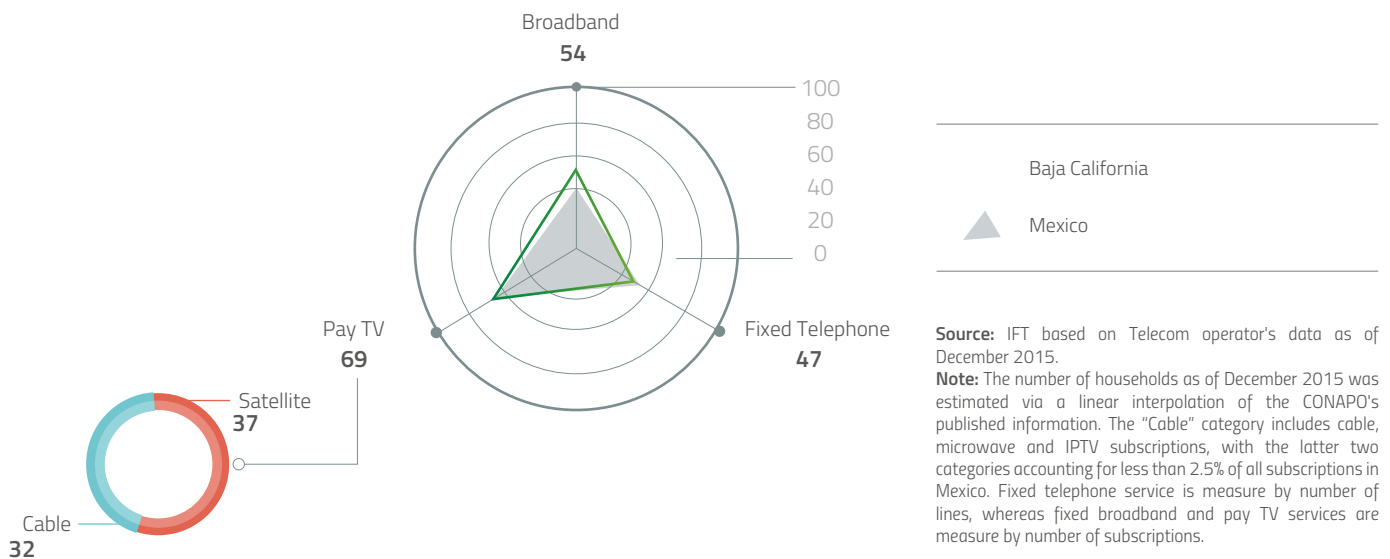
**Source:** IFT based on data from INEGI's quarterly National Occupation and Employment Surveys.

**FIGURE 2.2.1.3**  
AM/FM radio and broadcast TV stations

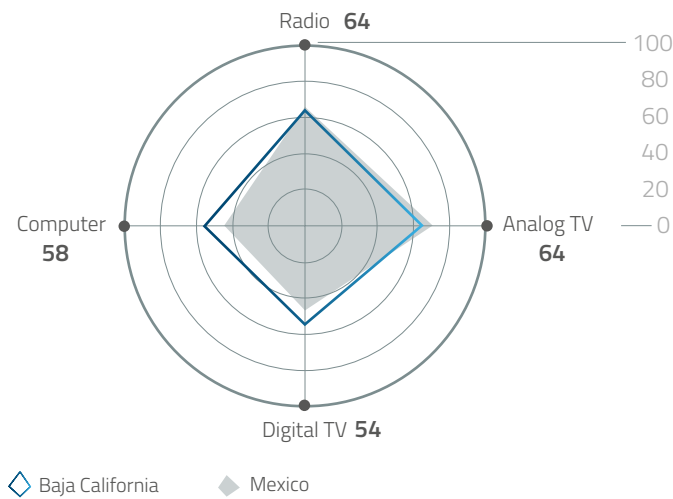


**Source:** IFT based on data as of December 2015.

**Figure 2.2.2.1**  
Fixed telecommunications services penetration per 100 households

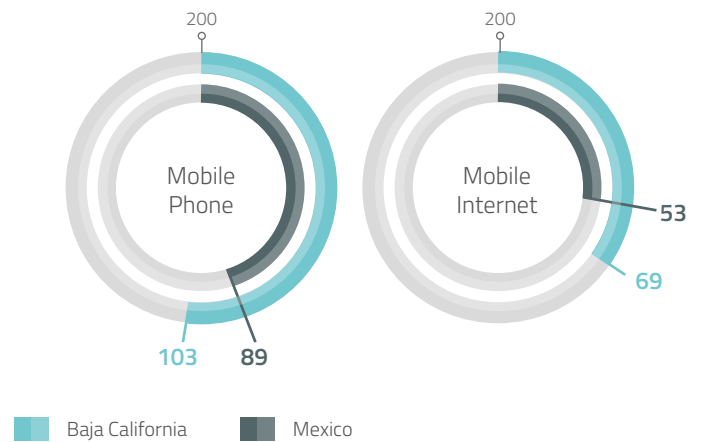


**FIGURE 2.2.2.2**  
ICT equipment per 100 households



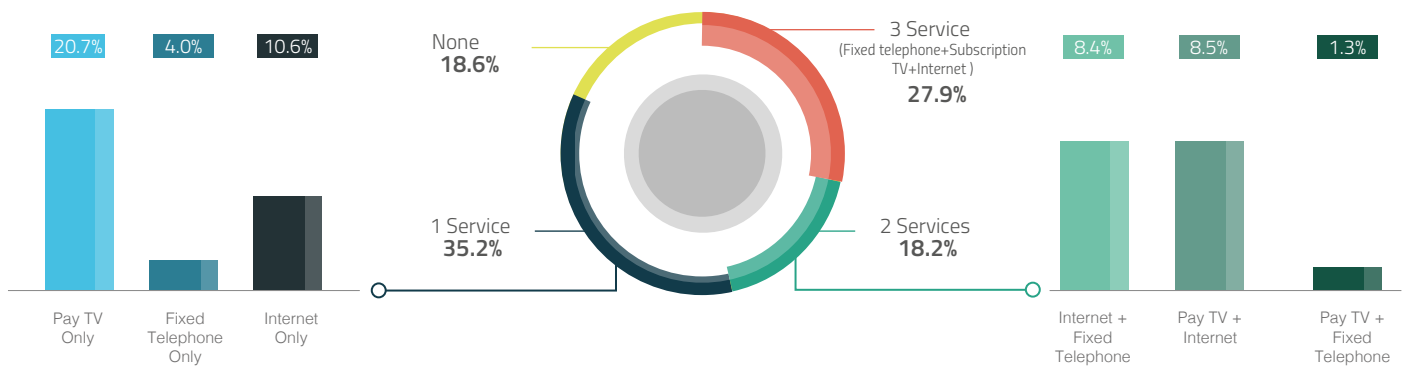
**Source:** IFT based on data from ENDUTIH 2015.  
**Note:** The figure for Digital TV does not include households with an analog television set and digital decoder, or households with pay TV services.

**FIGURE 2.2.2.3**  
Mobile telecommunications teledensity per 100 inhabitants



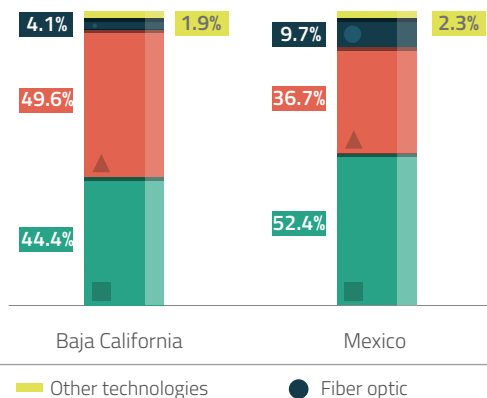
**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The number of inhabitants is taken from the data published by CONAPO as of January 2016. The teledensity desagregation per state was estimated based on the Telecom operator's data and INEGI's data from the ENDUTIH 2015.

**FIGURE 2.2.2.4**  
Distribution of fixed telecommunications services in households

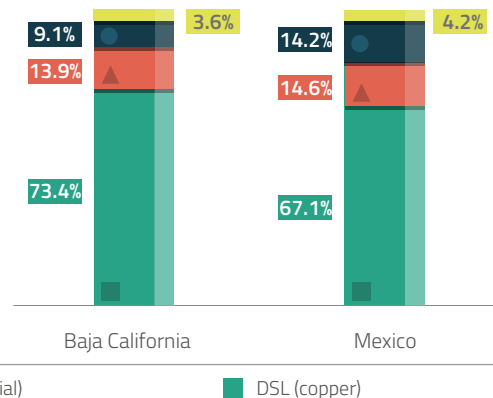


**Source:** IFT based on INEGI's ENDUTIH 2015.  
**Note:** Due to the rounding of data in the figure tags, the sum of the values shown in the bar charts may vary from those shown in the pie chart.

**Figure 2.2.2.5**  
Distribution of residential fixed broadband subscriptions per connection type

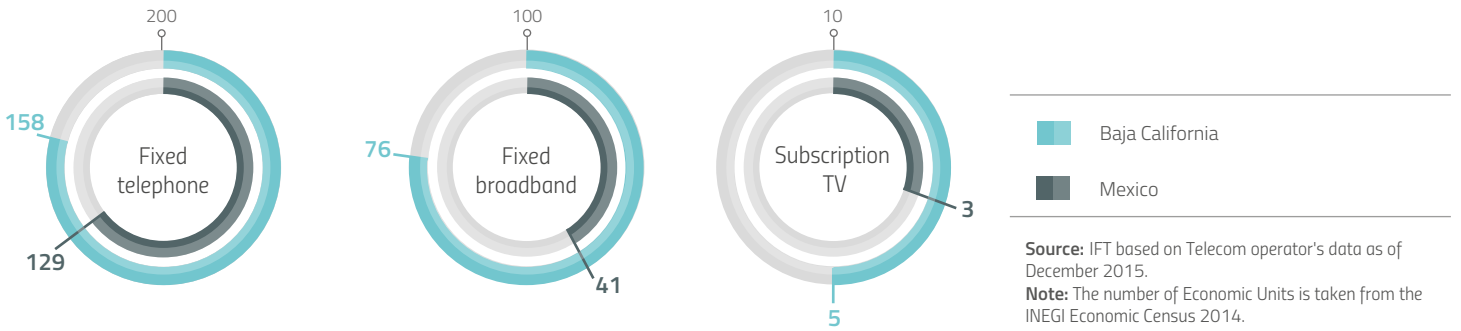


**Figure 2.2.3.1**  
Distribution of non-residential fixed broadband subscriptions per connection type

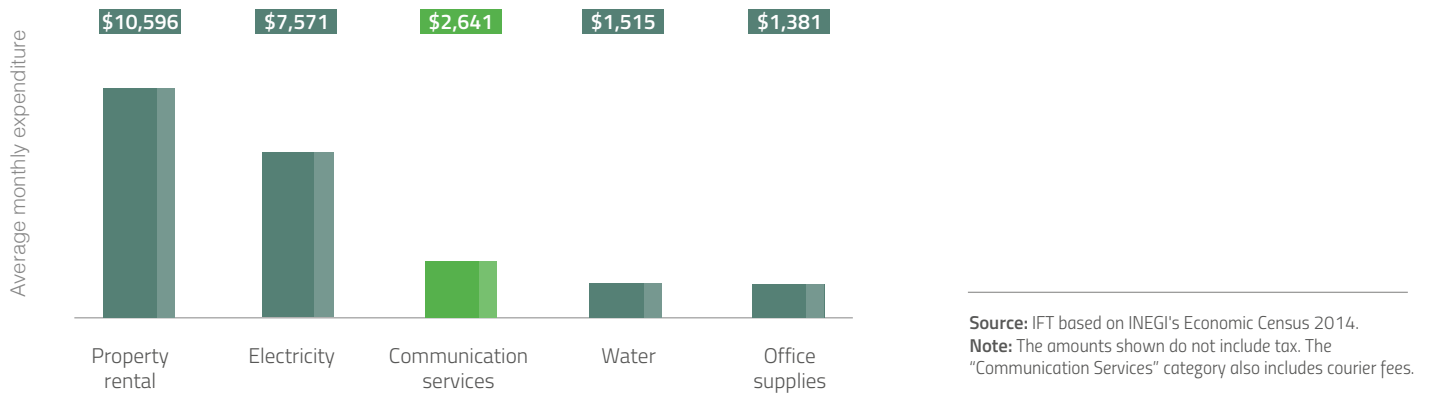


**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The "Other Technologies" category includes fixed wireless and satellite connections. Due to the rounding of data in the chart tags, the figures shown may not add up to 100%.

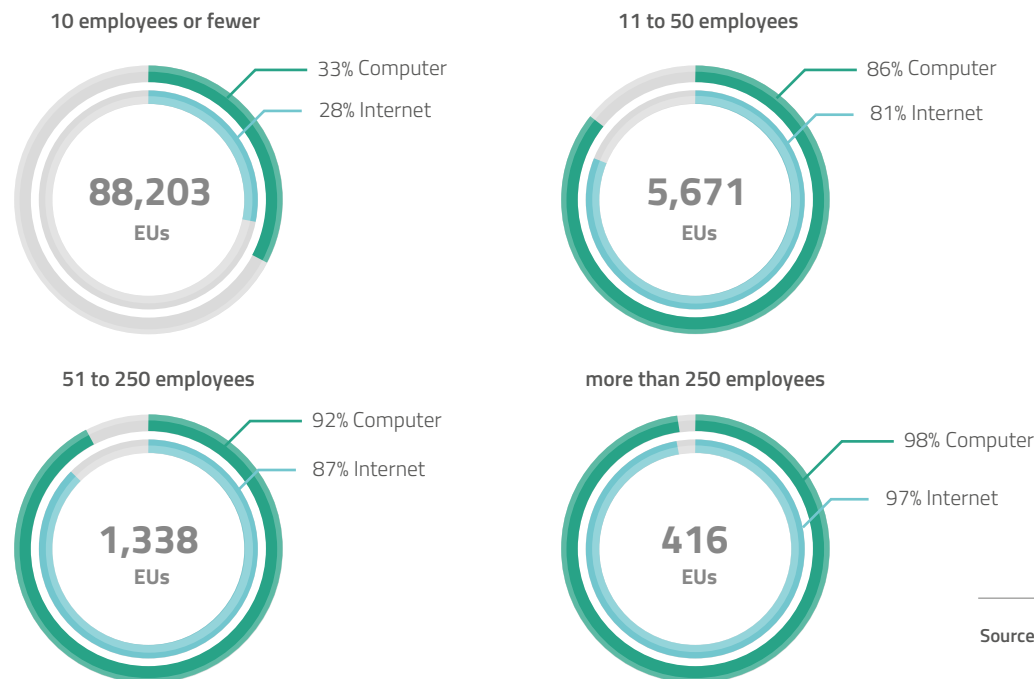
**FIGURE 2.2.3.2**  
Fixed telecommunications services penetration per 100 economic units



**FIGURE 2.2.3.3**  
Average monthly expenditure of economic units by service type



**Figure 2.2.3.4**  
Computer and internet adoption by economic unit (EU) size







STATISTICAL YEARBOOK 2015:

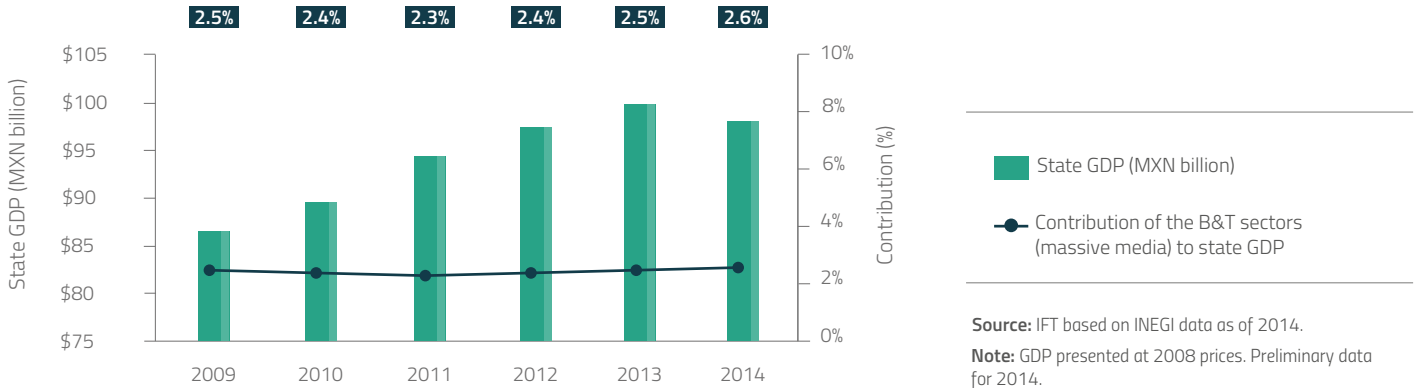
## 2.3 BAJA CALIFORNIA SUR (BCS)

### General Overview

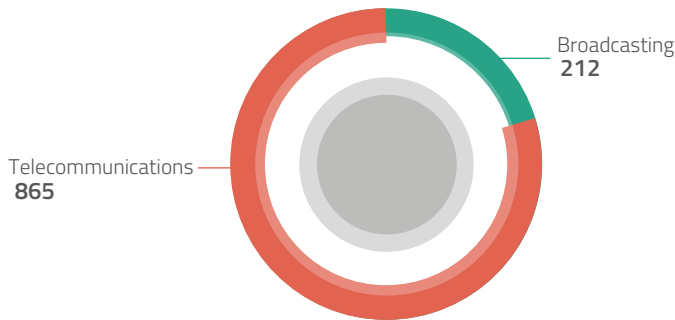
- ▶ From 2009 to 2014 Baja California Sur's GDP had an average annual growth rate of 2.5%. Additionally as of 2014 the massive media sector<sup>3</sup> contributed with 2.6% to the overall state's GDP, equivalent to MXN 2.530 billion.
- ▶ In 2015, the telecommunications sector employed more than 860 people, whereas the broadcasting sector employed 212 people. In terms of broadcasting infrastructure, at the end of 2015, Baja California Sur had 38 radio broadcasting stations (30 FM stations and 8 AM stations) and 21 broadcast television channels.
- ▶ In terms of fixed telecommunications services, by the end of 2015 Baja California Sur had the highest penetration in pay TV services with 79 subscriptions per 100 households, compared to 45 fixed broadband subscriptions per 100 households and 42 fixed telephone lines per 100 households. Moreover, by mid 2015 according to ENDUTIH's results, 89.4% of households had at least one of these services.
- ▶ In terms of mobile telecommunications services, the state's mobile phone teledensity as of December 2015 was 101 subscriptions per 100 inhabitants, which implies that there were some Baja California Sur residents with more than one mobile phone, whereas mobile internet reached 67 subscriptions per 100 inhabitants, ranking the state, in terms of mobile telecommunications penetration, on top 7 out of 32 Mexican states.
- ▶ Regarding to ICT equipment adoption in Baja California Sur, analog TV sets had the highest penetration level, with 68 television sets per 100 households, followed by computer equipment with 57 computers per 100 households, radio equipment with 51 radios per 100 households and finally digital television, with 45 television sets per 100 households (this figure does not include households with an analog television set connected to digital decoder, or households with pay TV services).
- ▶ As in most states, as of 2014 property rental was the principal expenditure incurred by economic units (business) in Baja California Sur, standing at an average near to MXN 6,400 per month. On the other hand, expenditure on telecommunications services was MXN 1,009 per month, higher than other typical company expenditures such as water (MXN 842 per month) and office supplies (MXN 953 per month).
- ▶ Additionally, the fixed telecom services penetrations in Baja California Sur's economic units (business) segment were 118 fixed telephone lines per 100 economic units (business), 70 fixed broadband subscriptions per 100 economic units (business) and eight pay TV subscriptions per 100 economic units (business).
- ▶ Finally, in 2014 there were registered 27,444 economic units (business) in the state and of those who had 10 employees or less only 34% used computers as part of their operations, whereas only 29% used internet. Nevertheless, these figures were above 80% for economic units (business) with 11 employees or more, which proves that there is a positive relation between company size and the telecommunications services adoption as part of the business as usual processes.

<sup>3</sup> According to the SCIAN, the Broadcasting and Telecommunications subsectors form part of Sector 51 Massive Media Information, and contributed 94% to the sector's nationwide GDP in 2015

**FIGURE 2.3.1.1**  
Contribution of the B&T sectors (massive media) to state GDP

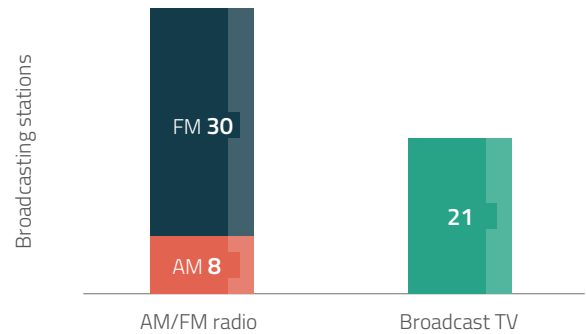


**FIGURE 2.3.1.2**  
Employees in the B&T sectors



Source: IFT based on data from INEGI's quarterly National Occupation and Employment Surveys.

**FIGURE 2.3.1.3**  
AM/FM radio and broadcast TV stations

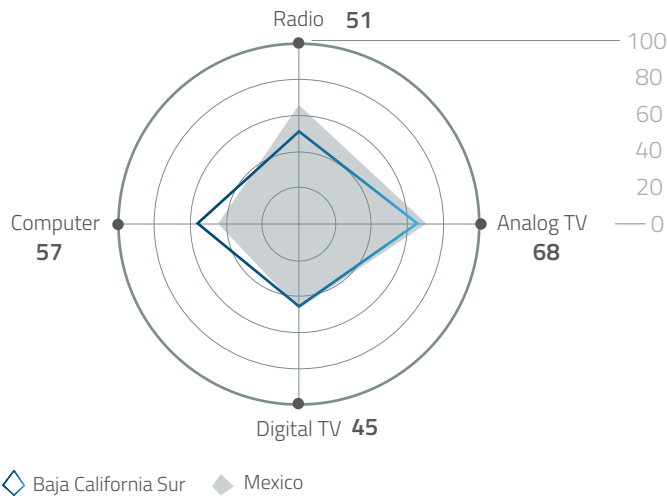


Source: IFT based on data as of December 2015.

**Figure 2.3.2.1**  
Fixed telecommunications services penetration per 100 households

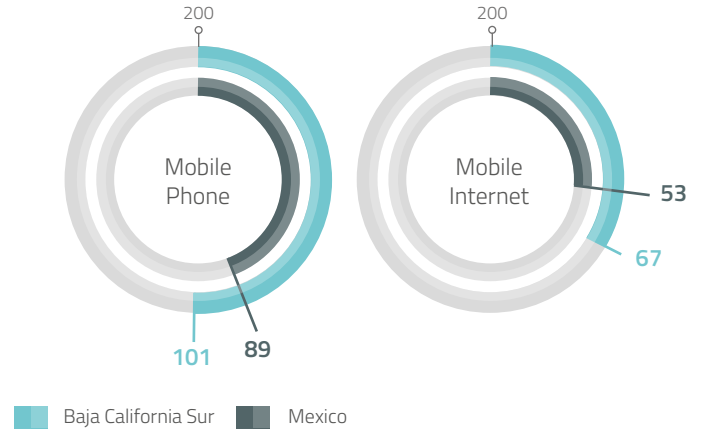


**FIGURE 2.3.2.2**  
ICT equipment per 100 households



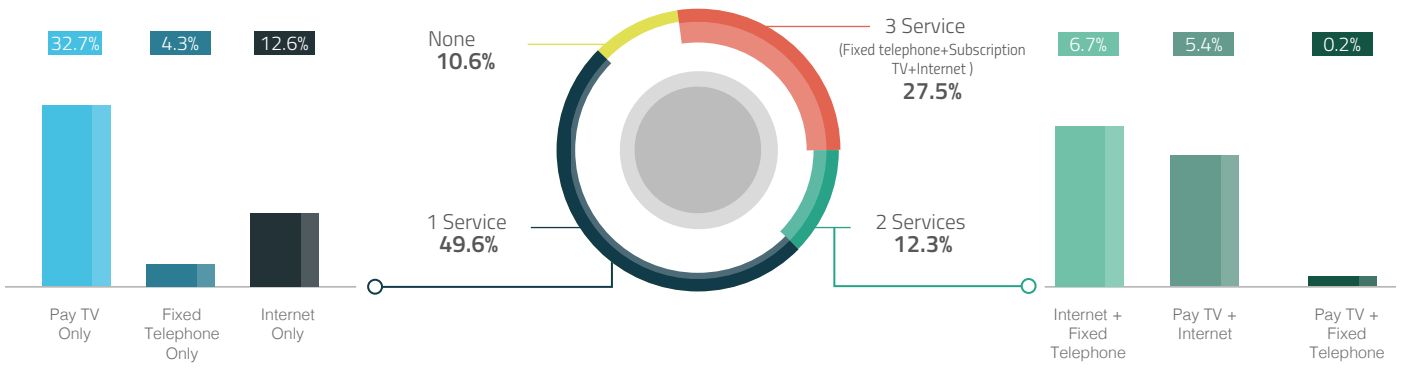
Source: IFT based on data from ENDUTIH 2015.  
Note: The figure for Digital TV does not include households with an analog television set and digital decoder, or households with pay TV services.

**FIGURE 2.3.2.3**  
Mobile telecommunications teledensity per 100 inhabitants



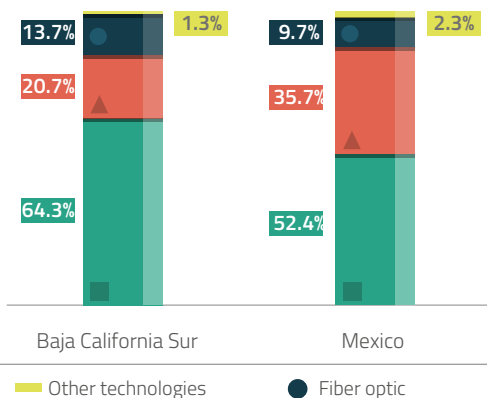
Source: IFT based on Telecom operator's data as of December 2015.  
Note: The number of inhabitants is taken from the data published by CONAPO as of January 2016. The teledensity desagregation per state was estimated based on the Telecom operator's data and INEGI's data from the ENDUTIH 2015.

**FIGURE 2.3.2.4**  
Distribution of fixed telecommunications services in households

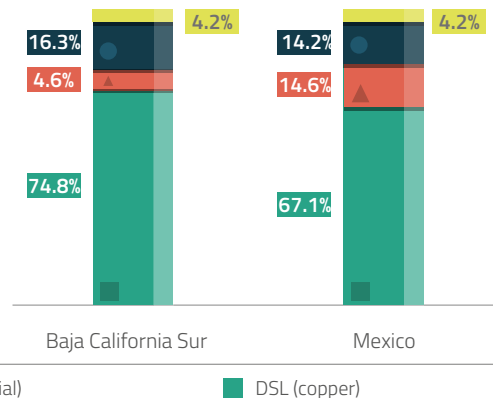


Source: IFT based on INEGI's ENDUTIH 2015.  
Note: Due to the rounding of data in the figure tags, the sum of the values shown in the bar charts may vary from those shown in the pie chart.

**Figure 2.3.2.5**  
Distribution of residential fixed broadband subscriptions per connection type

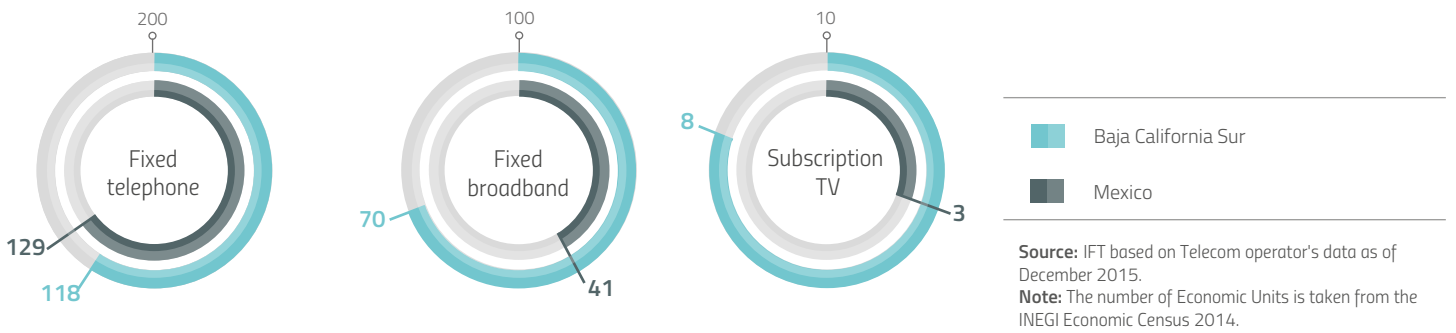


**Figure 2.3.3.1**  
Distribution of non-residential fixed broadband subscriptions per connection type

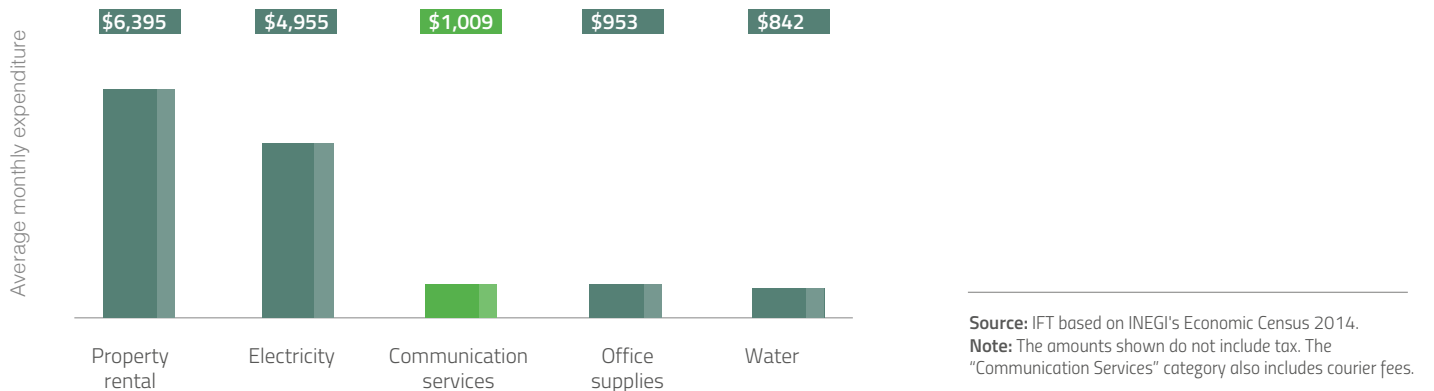


Source: IFT based on Telecom operator's data as of December 2015.  
Note: The "Other Technologies" category includes fixed wireless and satellite connections. Due to the rounding of data in the chart tags, the figures shown may not add up to 100%.

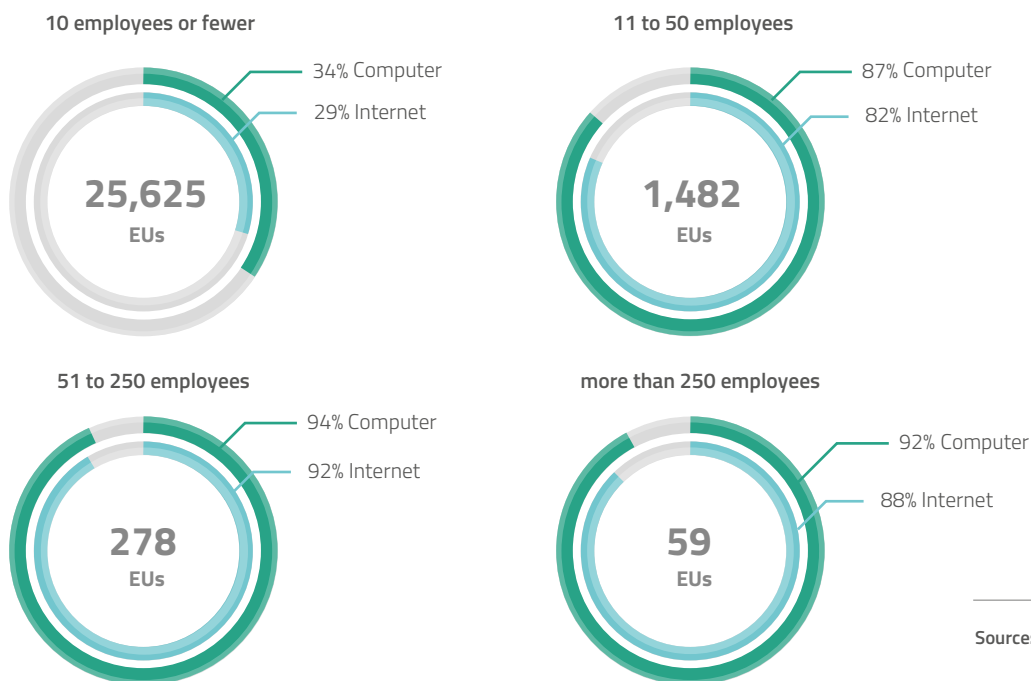
**FIGURE 2.3.3.2**  
Fixed telecommunications services penetration per 100 economic units



**FIGURE 2.3.3.3**  
Average monthly expenditure of economic units by service type



**Figure 2.3.3.4**  
Computer and internet adoption by economic unit (EU) size





STATISTICAL YEARBOOK 2015:

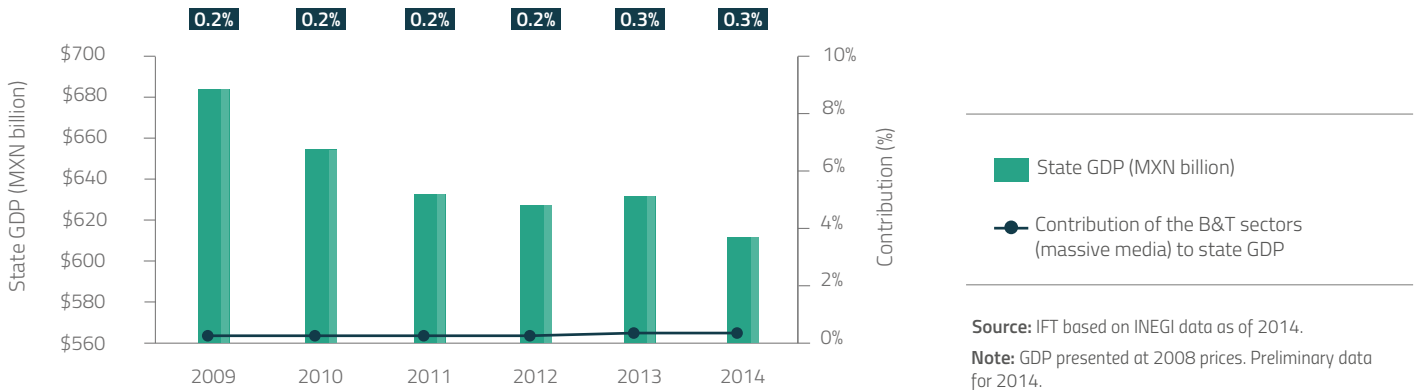
## 2.4 CAMPECHE (CAMP)

### General Overview

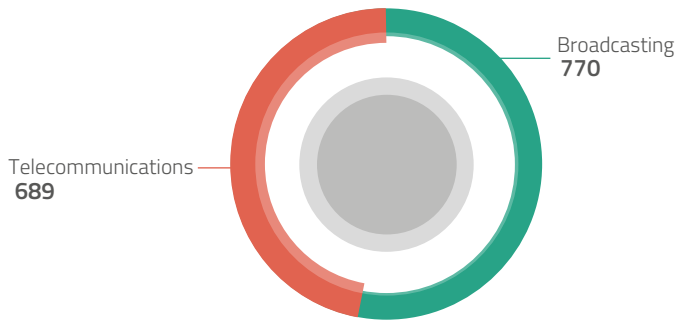
- ▶ From 2009 to 2014 Campeche's GDP had an average annual growth rate of -2.2%. Additionally, the massive media sector<sup>4</sup> contributed with 0.3% to the overall state's GDP, equivalent to MXN 1.690 billion.
- ▶ In 2015, the telecommunications sector employed approximately 800 people, whereas the broadcasting sector employed approximately 690 people. In terms of broadcasting infrastructure, at the end of 2015, Campeche had 21 radio broadcasting stations (14 FM stations and 7 AM stations) and 12 broadcast television channels.
- ▶ In terms of fixed telecommunications services, by the end of 2015 Campeche had the highest penetration level in pay TV services with 76 subscriptions per 100 households, compared to 31 fixed broadband subscriptions per 100 households, and 25 fixed telephone lines per 100 households. Moreover, by mid 2015 according to ENDUTIH's results, 93.3% of households had at least one of these services.
- ▶ In terms of mobile telecommunications services, the state's mobile phone teledensity as of December 2015 was 83 subscriptions per 100 inhabitants, whereas the mobile internet teledensity reached 56 mobile internet subscriptions per 100 inhabitants, ranking the state, in terms of mobile telecommunications penetration, on top 16 out of 32 Mexican states.
- ▶ Regarding to ICT equipment adoption in Campeche, analog TV sets had the highest penetration level, with 66 television sets per 100 households, followed by radio equipment with 46 radios per 100 households, digital television with 45 television sets per 100 households (this figure does not include households with an analog television connected to a digital decoder, or households with pay TV services), and finally computer equipment with 44 computers per 100 households.
- ▶ As in most states, as of 2014 property rental was the principal expenditure incurred by economic units (business) in Campeche, standing at an average near to MXN 6,400 per month. On the other hand, expenditure on telecommunications services was MXN 1,013 per month, higher than other typical company expenditures such as water (MXN 720 per month) and office supplies (MXN 853 per month).
- ▶ Additionally the fixed telecom services penetrations in Campeche's economic units (business) segment were 66 fixed telephone lines per 100 economic units (business), 35 fixed broadband subscriptions per 100 economic units (business); and four pay TV subscriptions per 100 economic units (business).
- ▶ Finally, in 2014 there were registered 31,729 economic units (business) in the state and of those who had 10 employees or less only 21% used computers as part of their operations, whereas only 17% used internet. Nevertheless, these figures were above to 80% for economic units with 11 employees or more, which proves that there is a positive relation between company size and the telecommunications services adoption as part of the business as usual processes.

<sup>4</sup> According to the SCIAN, the Broadcasting and Telecommunications subsectors form part of Sector 51 Massive Media Information, and contributed 94% to the sector's nationwide GDP in 2015

**FIGURE 2.4.1.1**  
Contribution of the B&T sectors (massive media) to state GDP

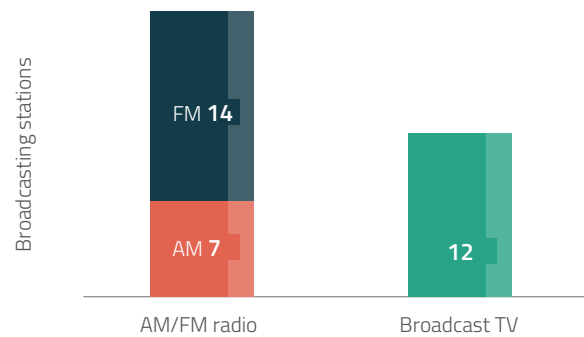


**FIGURE 2.4.1.2**  
Employees in the B&T sectors



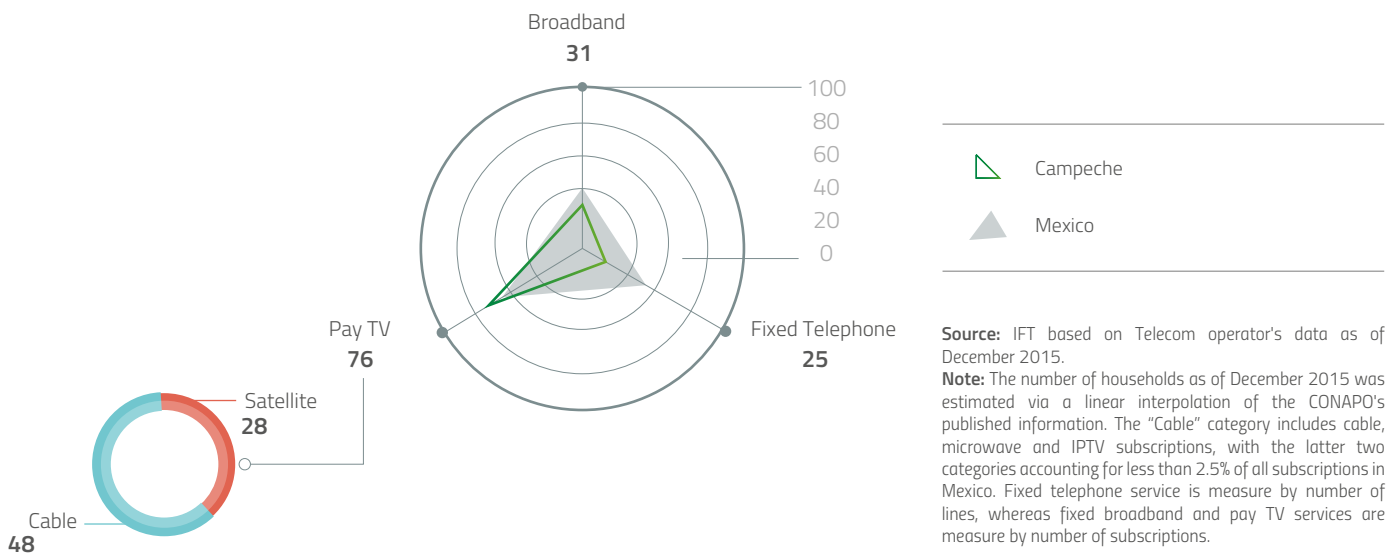
**Source:** IFT based on data from INEGI's quarterly National Occupation and Employment Surveys.

**FIGURE 2.4.1.3**  
AM/FM radio and broadcast TV stations

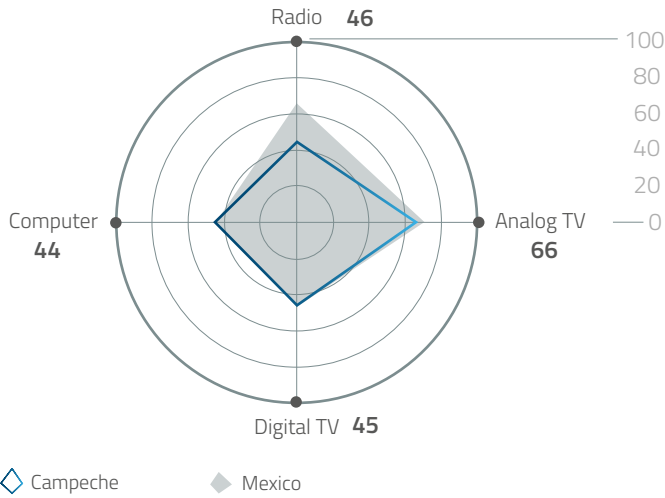


**Source:** IFT based on data as of December 2015.

**Figure 2.4.2.1**  
Fixed telecommunications services penetration per 100 households

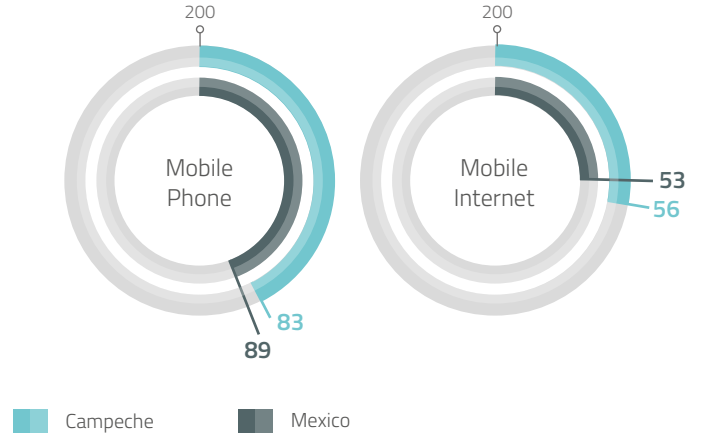


**FIGURE 2.4.2.2**  
ICT equipment per 100 households



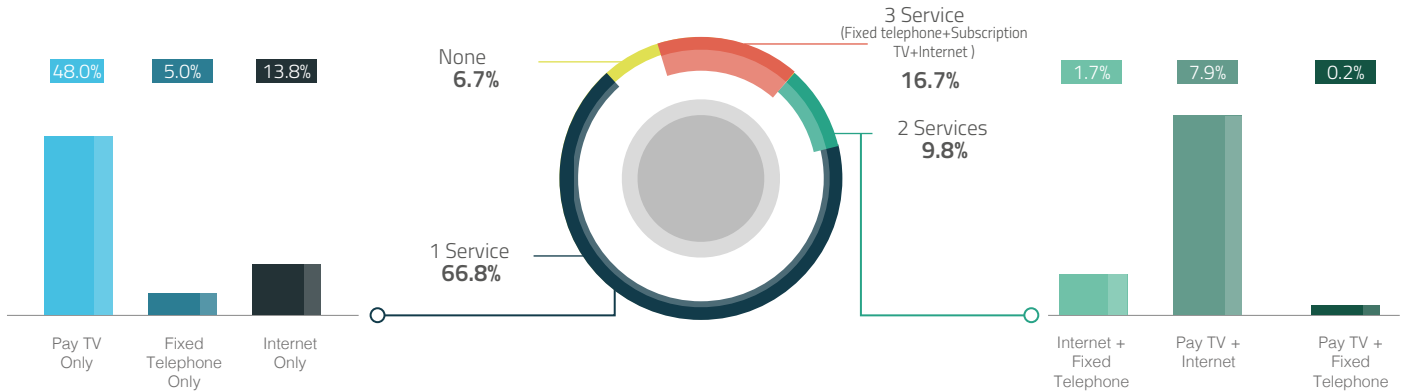
Source: IFT based on data from ENDUTIH 2015.  
Note: The figure for Digital TV does not include households with an analog television set and digital decoder, or households with pay TV services.

**FIGURE 2.4.2.3**  
Mobile telecommunications teledensity per 100 inhabitants



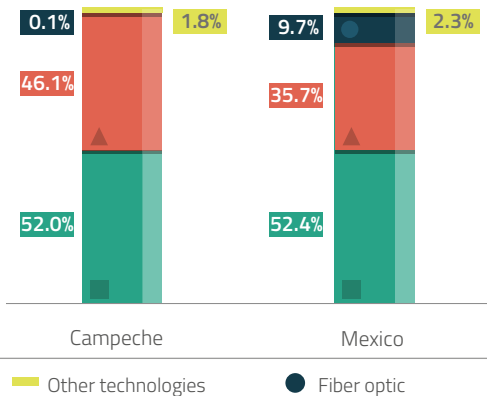
Source: IFT based on Telecom operator's data as of December 2015.  
Note: The number of inhabitants is taken from the data published by CONAPO as of January 2016. The teledensity disaggregation per state was estimated based on the Telecom operator's data and INEGI's data from the ENDUTIH 2015.

**FIGURE 2.4.2.4**  
Distribution of fixed telecommunications services in households

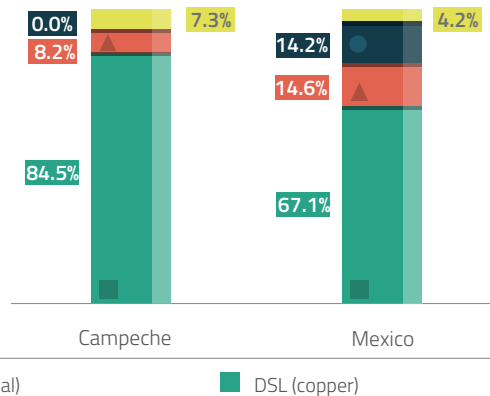


Source: IFT based on INEGI's ENDUTIH 2015.  
Note: Due to the rounding of data in the figure tags, the sum of the values shown in the bar charts may vary from those shown in the pie chart.

**Figure 2.4.2.5**  
Distribution of residential fixed broadband subscriptions per connection type

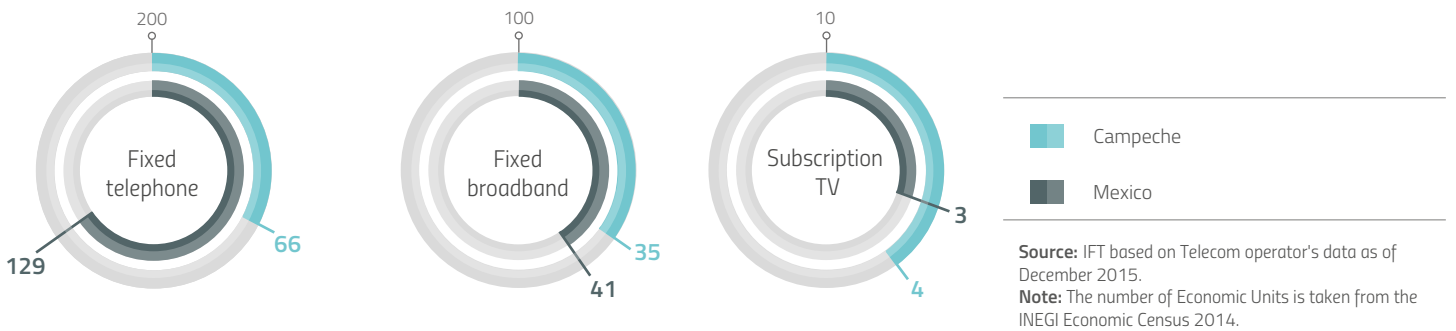


**Figure 2.4.3.1**  
Distribution of non-residential fixed broadband subscriptions per connection type

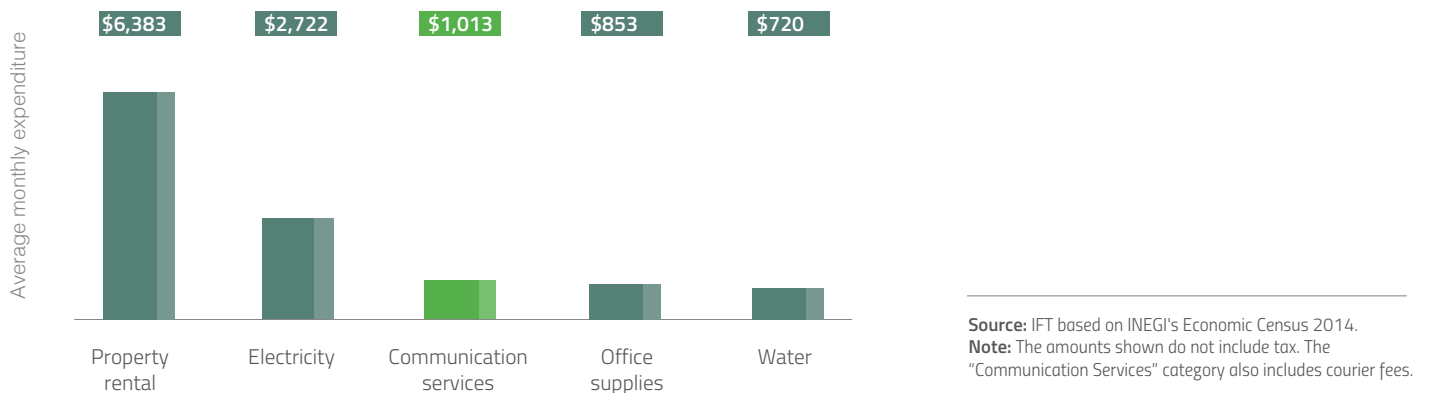


Source: IFT based on Telecom operator's data as of December 2015.  
Note: The "Other Technologies" category includes fixed wireless and satellite connections. Due to the rounding of data in the chart tags, the figures shown may not add up to 100%.

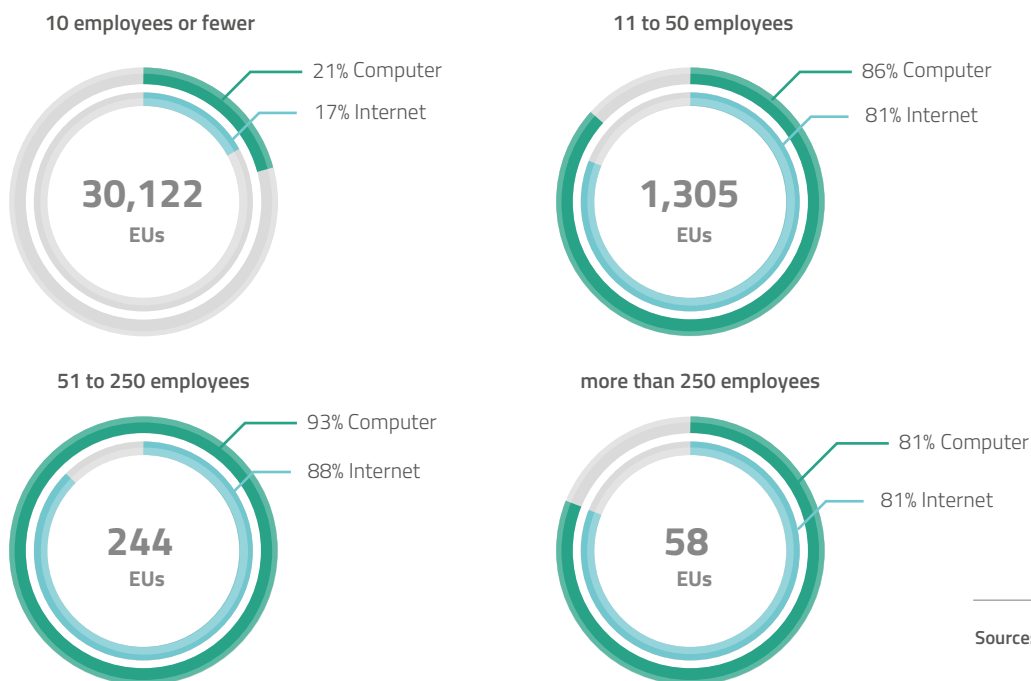
**FIGURE 2.4.3.2**  
Fixed telecommunications services penetration per 100 economic units



**FIGURE 2.4.3.3**  
Average monthly expenditure of economic units by service type



**Figure 2.4.3.4**  
Computer and internet adoption by economic unit (EU) size







STATISTICAL YEARBOOK 2015:

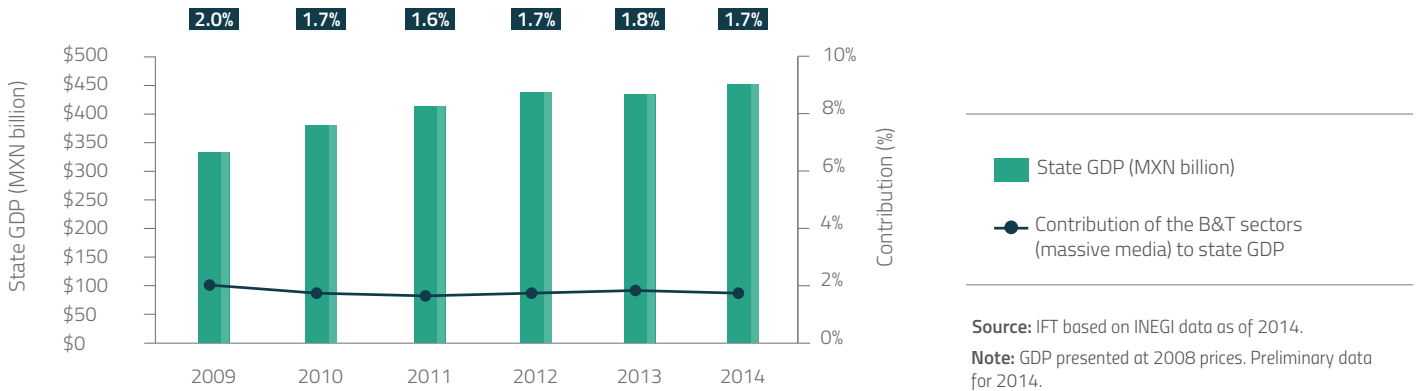
## 2.5 COAHUILA DE ZARAGOZA (COAH)

### General Overview

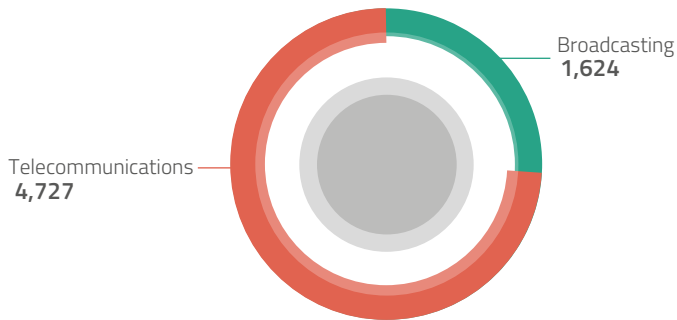
- ▶ From 2009 to 2014 Coahuila de Zaragoza's GDP showed an average annual growth rate of 6.4%. Additionally as of 2014 the massive media sector<sup>5</sup> contributed with 1.7% of the overall state's GDP, equivalent to MXN 7.670 billion.
- ▶ In 2015, the telecommunications sector employed more than 4,700 people, whereas the broadcasting sector employed approximately 1,624 people. In terms of broadcasting infrastructure at the end of 2015, Coahuila had 98 radio broadcasting stations (90 FM stations and 8 AM stations) and 36 broadcast television channels.
- ▶ In terms of fixed telecommunications services, by the end of 2015, Coahuila had the highest penetration level in pay TV services with 54 subscriptions per 100 households, compared to 46 fixed telephone lines per 100 households, and 45 fixed broadband subscriptions per 100 households. Moreover, by mid 2015 according to ENDUTIH's results, 68.6% of households had at least one of these services.
- ▶ In terms of mobile telecommunications services, the state's mobile phone teledensity as of December 2015 was 82 subscriptions per 100 inhabitants, whereas the mobile internet teledensity reached 51 subscriptions per 100 inhabitants, ranking Coahuila, in terms of mobile telecommunications penetration, on top 17 out of 32 Mexican states.
- ▶ Regarding, to ICT equipment adoption in Coahuila, analog TV sets had the highest penetration level, with 77 television sets per 100 households, followed by radio equipment with 68 radios per 100 households, digital television with 50 television sets per 100 households (this figure does not include households with an analog television set connected to a digital decoder, or households with pay TV services), and finally computer equipment with 48 computers per 100 households
- ▶ Unlike most states, as of 2014 electricity was the principal expenditure incurred by economic units (business) in Coahuila, standing at an average over MXN 11,000 per month. On the other hand, expenditure on telecommunications services was MXN 13,458 per month, higher than other typical company expenditures such as water (MXN 1,662 per month) and office supplies (MXN 1,439 per month).
- ▶ Additionally the fixed telecom services penetrations in Coahuila economic units (business) segment were 167 fixed telephone lines per 100 economic units (business), 57 fixed broadband subscriptions per 100 economic units (business); and 4 pay TV subscriptions per 100 economic units (business).
- ▶ Finally, in 2014 there were registered 83,627 economic units (business) in the state and of those who had 10 employees or less only 28% used computers as part of their operations, whereas only 23% used internet. Nevertheless, these figures were above to 80% economic units (business) with 11 employees or more, which proves that there is a positive relation between company size and telecommunications services adoption as part of the business as usual processes.

<sup>5</sup> According to the SCIAN, the Broadcasting and Telecommunications subsectors form part of Sector 51 Massive Media Information, and contributed 94% to the sector's nationwide GDP in 2015

**FIGURE 2.5.1.1**  
Contribution of the B&T sectors (massive media) to state GDP

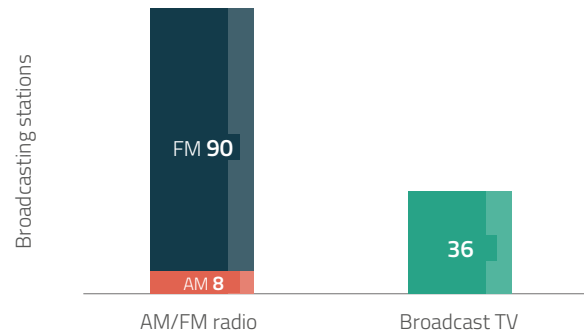


**FIGURE 2.5.1.2**  
Employees in the B&T sectors



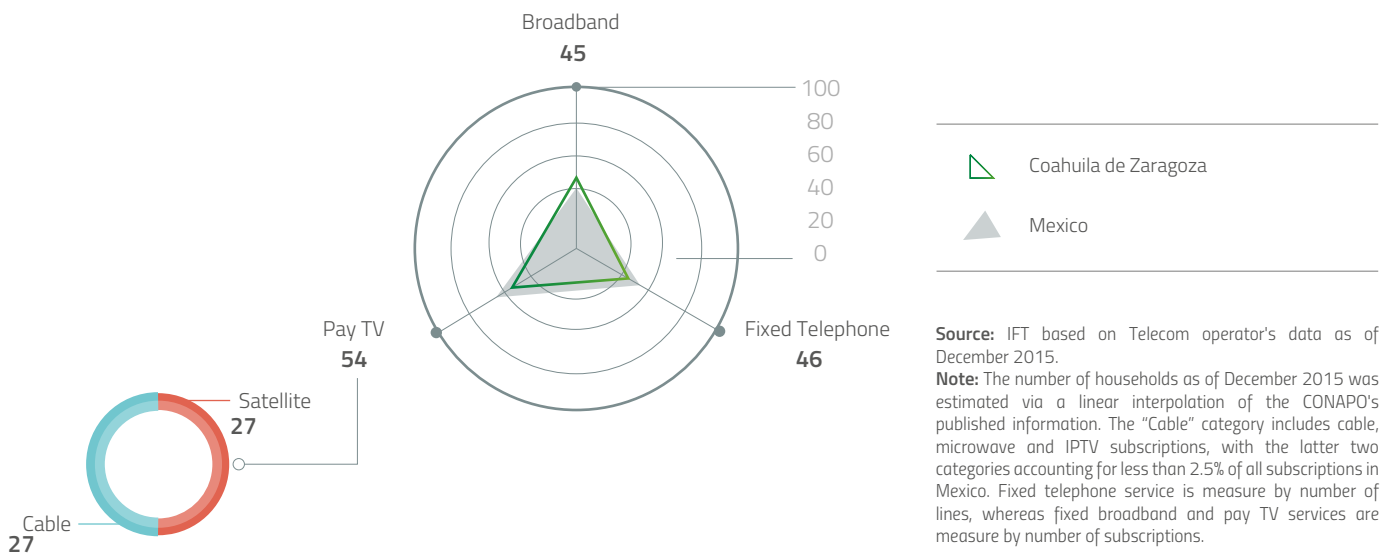
Source: IFT based on data from INEGI's quarterly National Occupation and Employment Surveys.

**FIGURE 2.5.1.3**  
AM/FM radio and broadcast TV stations

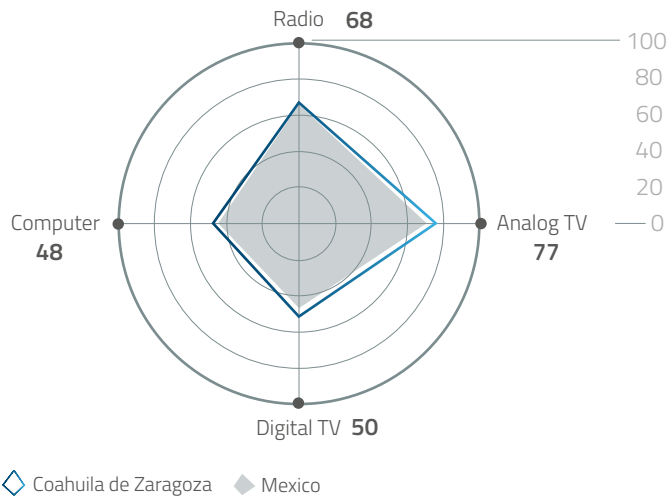


Source: IFT based on data as of December 2015.

**Figure 2.5.2.1**  
Fixed telecommunications services penetration per 100 households

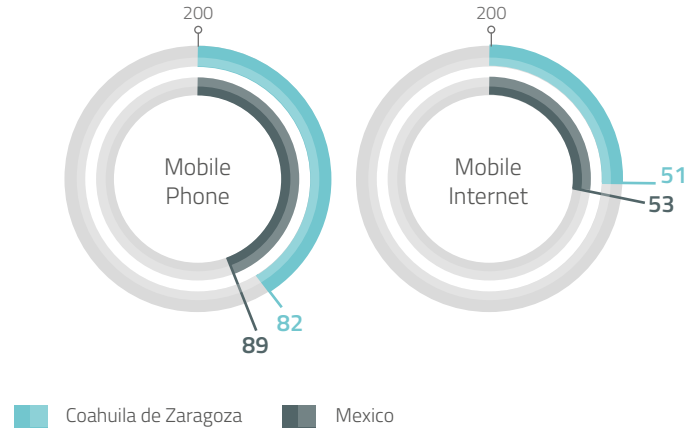


**FIGURE 2.5.2.2**  
ICT equipment per 100 households



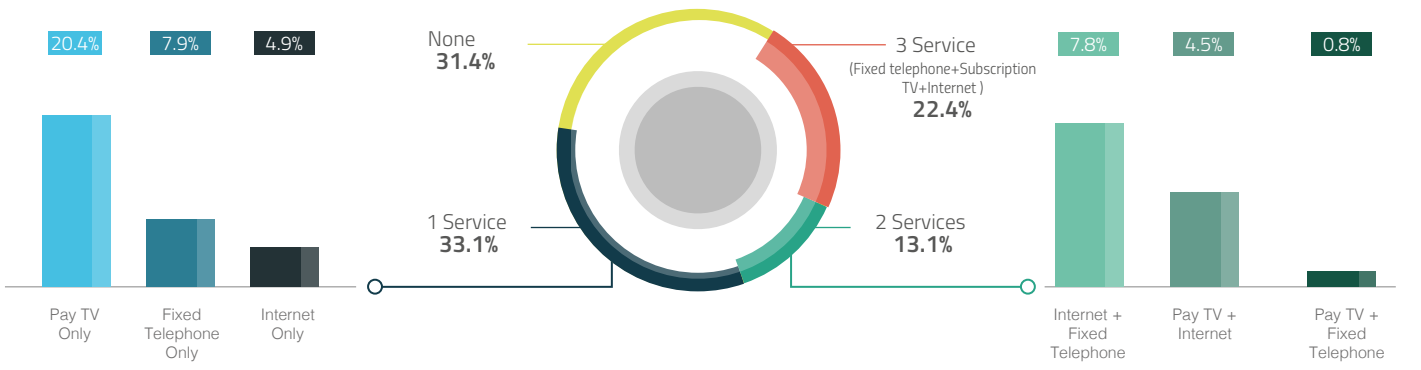
Source: IFT based on data from ENDUTIH 2015.  
Note: The figure for Digital TV does not include households with an analog television set and digital decoder, or households with pay TV services.

**FIGURE 2.5.2.3**  
Mobile telecommunications teledensity per 100 inhabitants



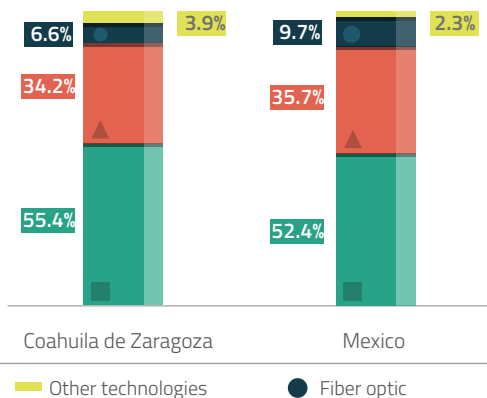
Source: IFT based on Telecom operator's data as of December 2015.  
Note: The number of inhabitants is taken from the data published by CONAPO as of January 2016. The teledensity disaggregation per state was estimated based on the Telecom operator's data and INEGI's data from the ENDUTIH 2015.

**FIGURE 2.5.2.4**  
Distribution of fixed telecommunications services in households

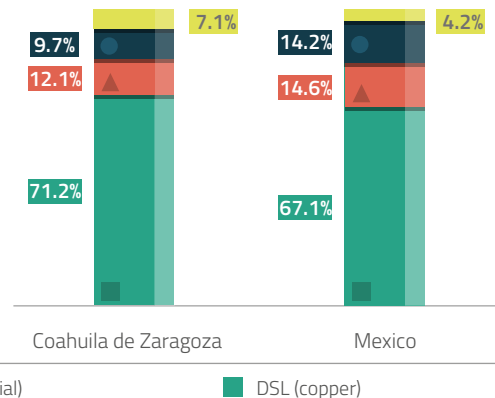


Source: IFT based on INEGI's ENDUTIH 2015.  
Note: Due to the rounding of data in the figure tags, the sum of the values shown in the bar charts may vary from those shown in the pie chart.

**Figure 2.5.2.5**  
Distribution of residential fixed broadband subscriptions per connection type

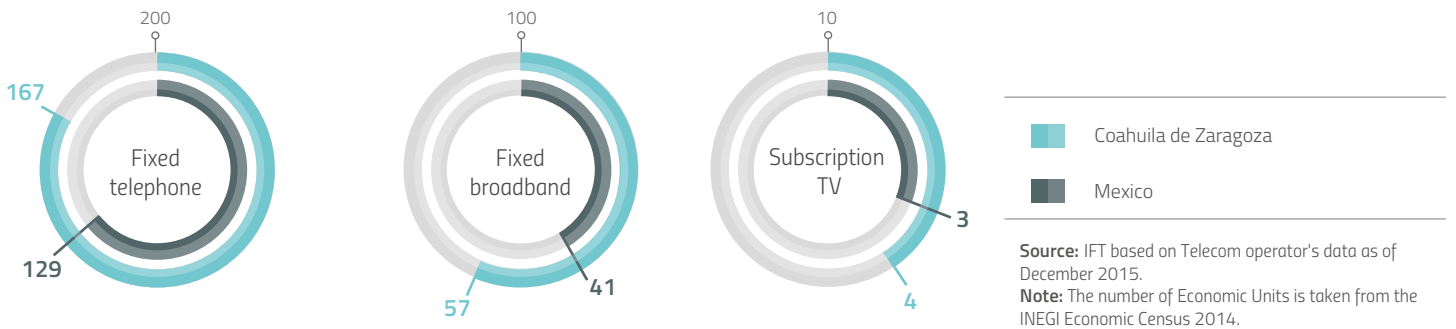


**Figure 2.5.3.1**  
Distribution of non-residential fixed broadband subscriptions per connection type

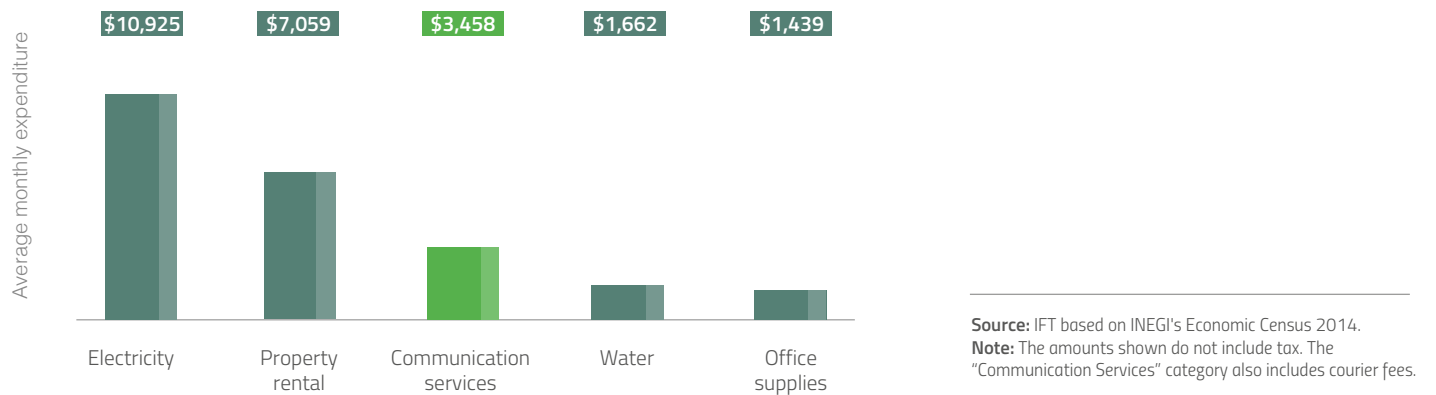


Source: IFT based on Telecom operator's data as of December 2015.  
Note: The "Other Technologies" category includes fixed wireless and satellite connections. Due to the rounding of data in the chart tags, the figures shown may not add up to 100%.

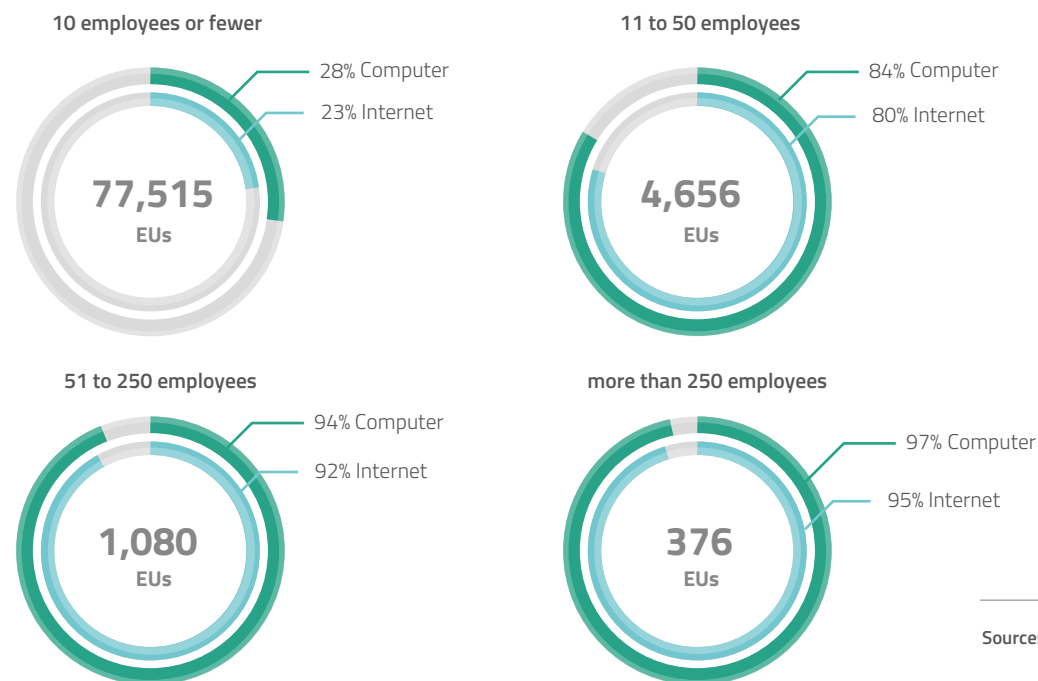
**FIGURE 2.5.3.2**  
Fixed telecommunications services penetration per 100 economic units



**FIGURE 2.5.3.3**  
Average monthly expenditure of economic units by service type



**Figure 2.5.3.4**  
Computer and internet adoption by economic unit (EU) size





Statistical Yearbook 2015:

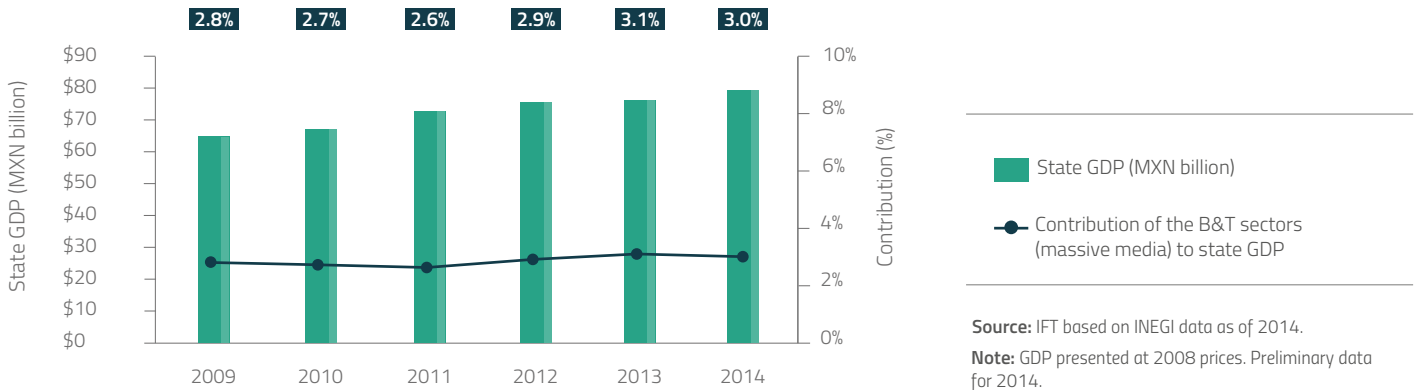
## 2.6 COLIMA (COL)

### General Overview

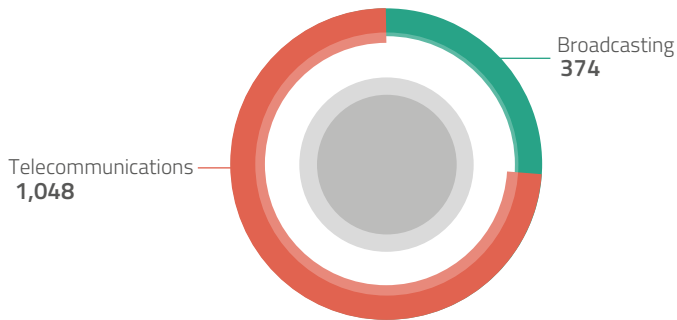
- ▶ From 2009 to 2014 Colima's GDP had an average annual growth rate of 4.2%. Additionally the massive media sector<sup>6</sup> contributed with 3% of the overall state's GDP, equivalent to MXN 7.670 billion.
- ▶ In 2015, the telecommunications sector employed approximately 1,050 people, whereas the broadcasting sector employed 374 people. In terms of broadcasting infrastructure, at the end of 2015, the state had 21 radio broadcasting stations (18 FM stations and 3 AM stations) and 14 broadcast television channels.
- ▶ In terms of fixed telecommunications services, by the end of 2015 Colima had the highest penetration in pay TV services with 65 subscriptions per 100 households, compared to 46 fixed telephone lines per 100 households and 44 fixed broadband subscriptions per 100 households. Moreover, by mid 2015 according to ENDUTIH's results, 81% of households had at least one of these services.
- ▶ In terms of mobile telecommunications services, the state's mobile phone teledensity as of December 2015 was 93 subscriptions per 100 inhabitants, whereas the mobile internet teledensity reached 61 subscriptions per 100 inhabitants, ranking the state, in terms of mobile telecommunications penetration, on top 11 out of 32 Mexican states.
- ▶ Regarding to ICT equipment adoption in Colima, radio equipment had the highest penetration level per 100 households with 66 radios per 100 households; followed by analog TV sets with 65 television sets per 100 households, digital television with 56 television sets per 100 households (this figure does not include households with an analog television set connected to a digital decoder, or households with pay TV services), and finally, computer equipment with 55 computers per 100 households.
- ▶ Unlike most states, as of 2014 electricity was the principal expenditure incurred by economic units (business) in Colima, standing at an average near to MXN 4,300 per month. On the other hand, expenditure on telecommunications services was MXN 1,166 per month, higher than other typical company expenditures such as water (MXN 674 per month) and office supplies (MXN 633 per month).
- ▶ Additionally, the fixed telecom services penetrations in Colima's economic units (business) segment, were 93 fixed telephone lines per 100 economic units, 53 fixed broadband subscriptions per 100 economic units and five pay TV subscriptions per 100 economic units.
- ▶ Finally, in 2014 there were registered 29,084 economic units (business) in the state and of those who had 10 employees or less only 27% economic units (business) used computers as part of their operations, whereas only 22% used internet. Nevertheless, these figures were above 80% for economic units (business) with 11 employees or more, which proves that there is a positive relation between company size and the telecommunications services adoption as part of the business as usual processes.

<sup>6</sup> According to the SCIAN, the Broadcasting and Telecommunications subsectors form part of Sector 51 Massive Media Information, and contributed 94% to the sector's nationwide GDP in 2015

**FIGURE 2.6.1.1**  
Contribution of the B&T sectors (massive media) to state GDP

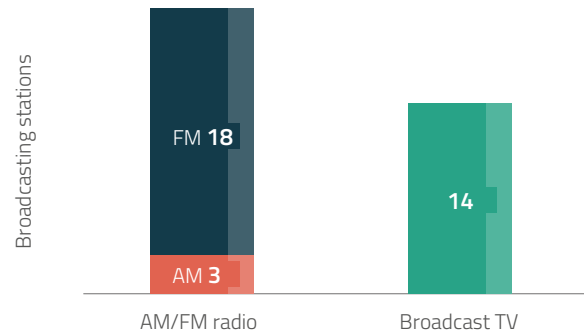


**FIGURE 2.6.1.2**  
Employees in the B&T sectors



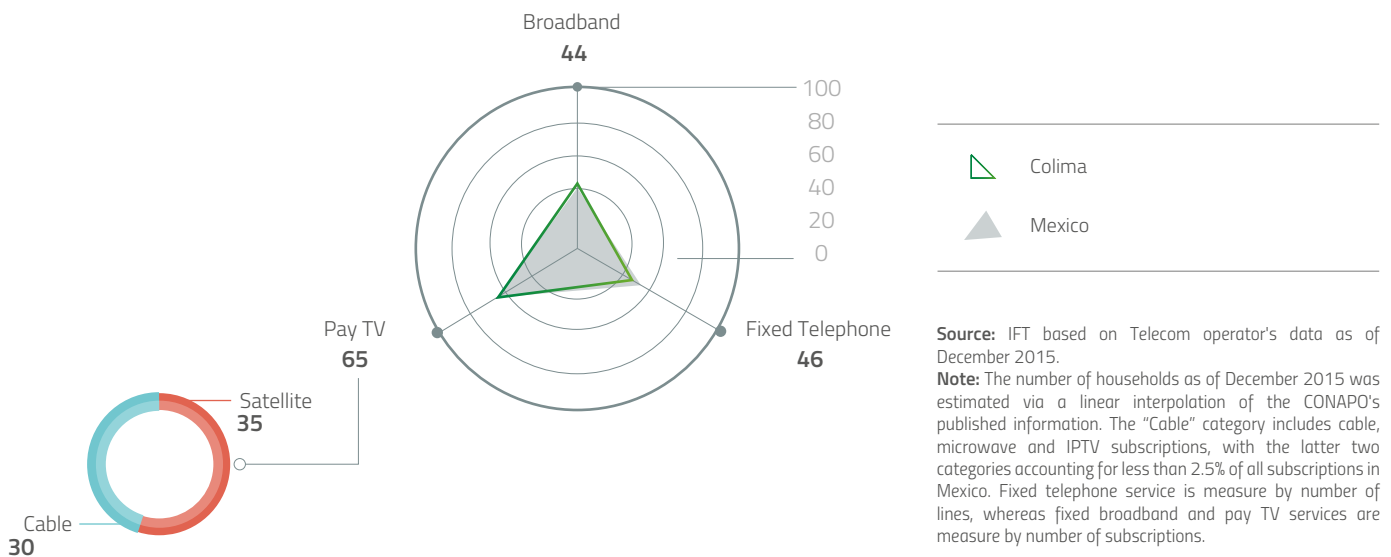
Source: IFT based on data from INEGI's quarterly National Occupation and Employment Surveys.

**FIGURE 2.6.1.3**  
AM/FM radio and broadcast TV stations

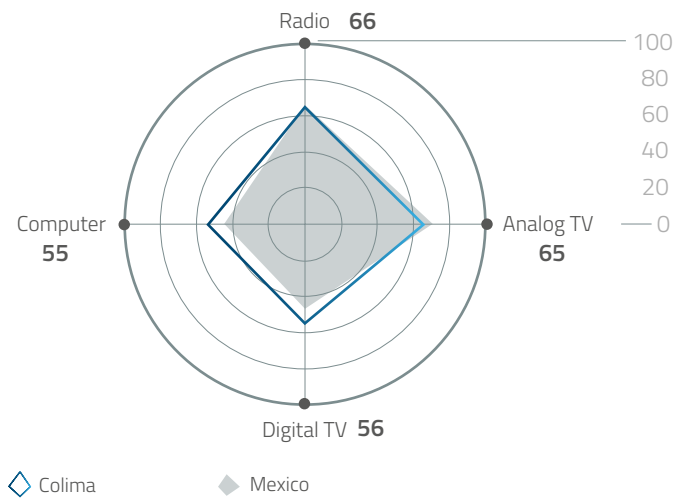


Source: IFT based on data as of December 2015.

**Figure 2.6.2.1**  
Fixed telecommunications services penetration per 100 households

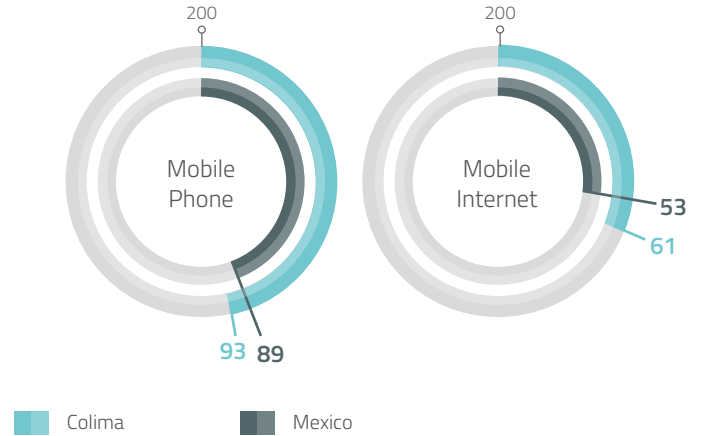


**FIGURE 2.6.2.2**  
ICT equipment per 100 households



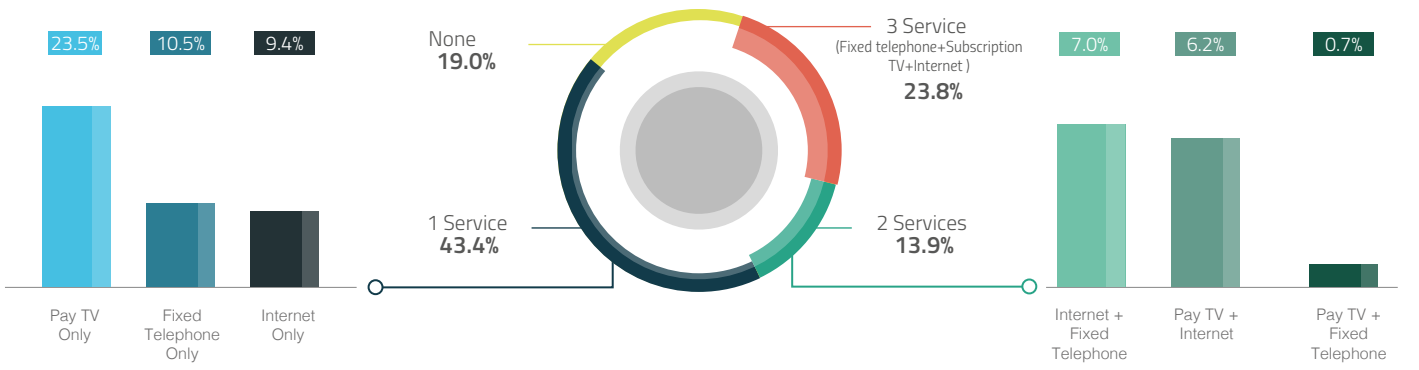
**Source:** IFT based on data from ENDUTIH 2015.  
**Note:** The figure for Digital TV does not include households with an analog television set and digital decoder, or households with pay TV services.

**FIGURE 2.6.2.3**  
Mobile telecommunications teledensity per 100 inhabitants



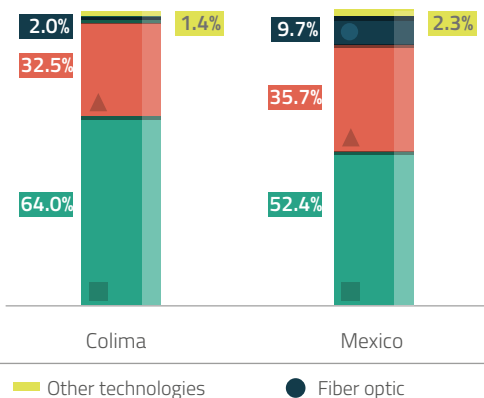
**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The number of inhabitants is taken from the data published by CONAPO as of January 2016. The teledensity desagregation per state was estimated based on the Telecom operator's data and INEGI's data from the ENDUTIH 2015.

**FIGURE 2.6.2.4**  
Distribution of fixed telecommunications services in households

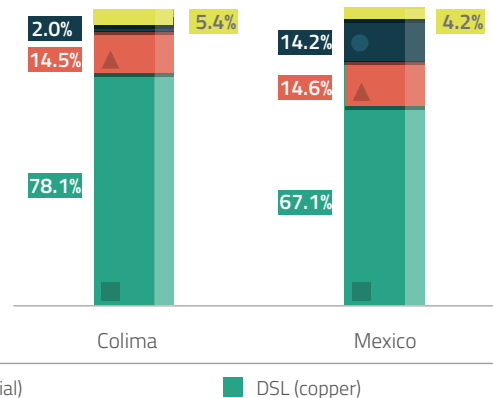


**Source:** IFT based on INEGI's ENDUTIH 2015.  
**Note:** Due to the rounding of data in the figure tags, the sum of the values shown in the bar charts may vary from those shown in the pie chart.

**Figure 2.6.2.5**  
Distribution of residential fixed broadband subscriptions per connection type

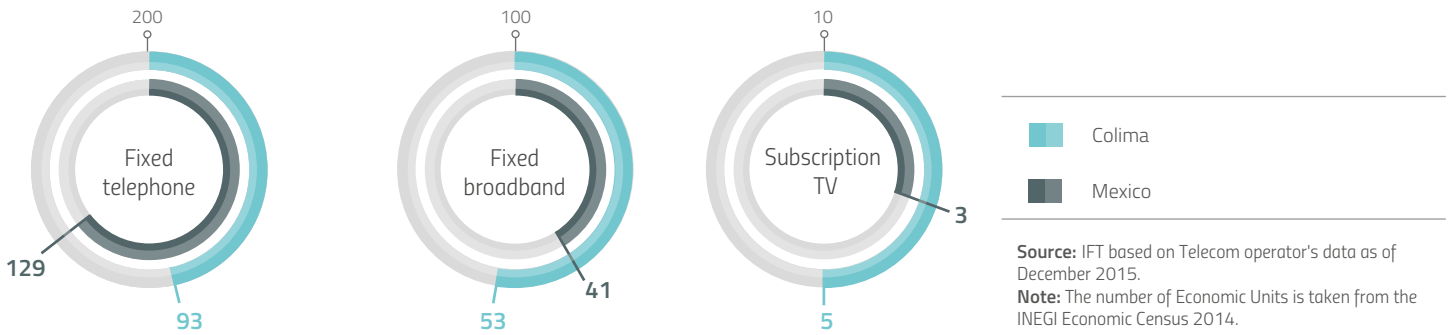


**Figure 2.6.3.1**  
Distribution of non-residential fixed broadband subscriptions per connection type

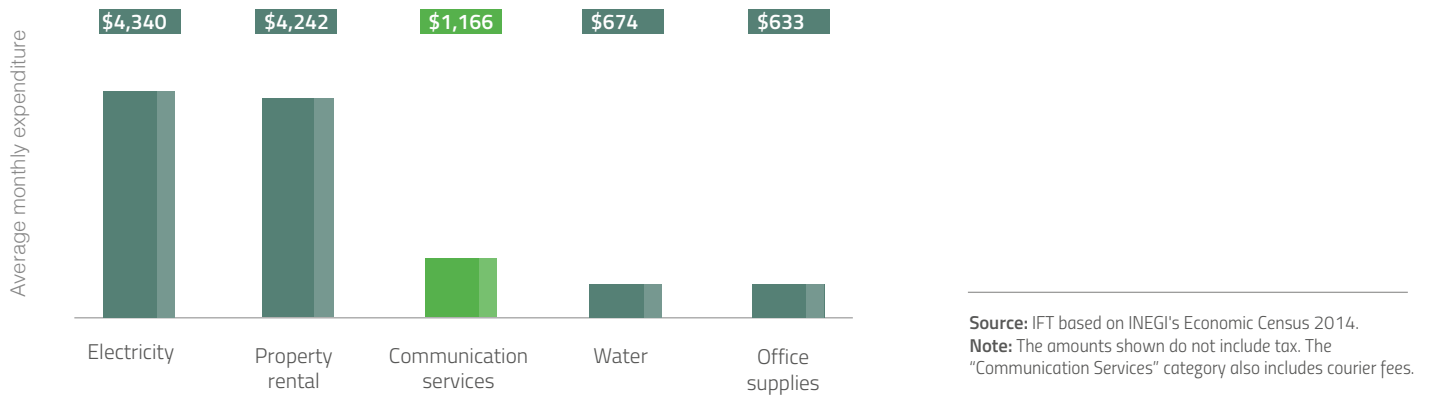


**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The "Other Technologies" category includes fixed wireless and satellite connections. Due to the rounding of data in the chart tags, the figures shown may not add up to 100%.

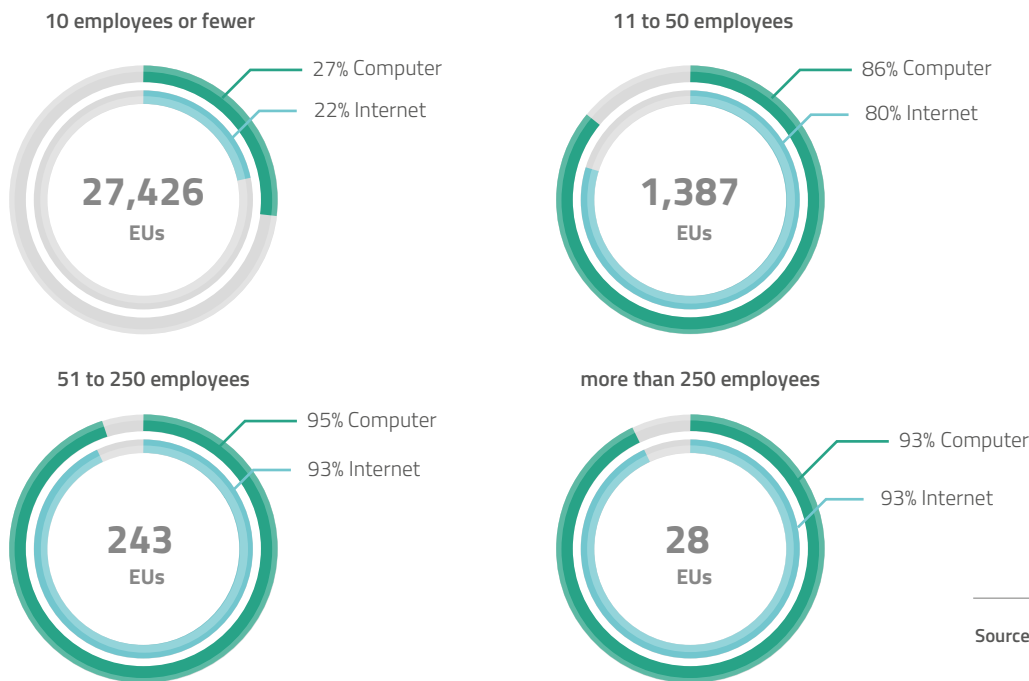
**FIGURE 2.6.3.2**  
Fixed telecommunications services penetration per 100 economic units



**FIGURE 2.6.3.3**  
Average monthly expenditure of economic units by service type



**Figure 2.6.3.4**  
Computer and internet adoption by economic unit (EU) size







STATISTICAL YEARBOOK 2015:

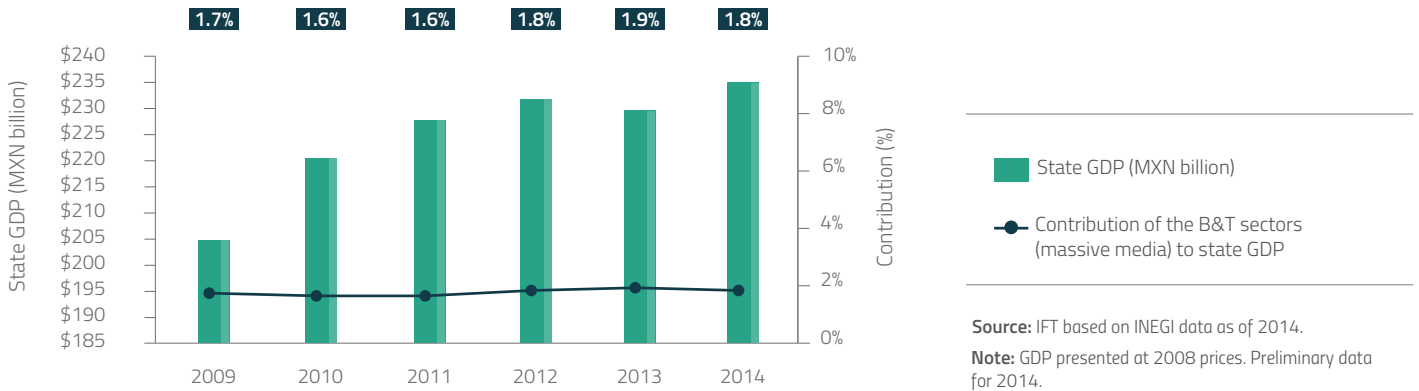
## 2.7 CHIAPAS (CHIS)

### General Overview

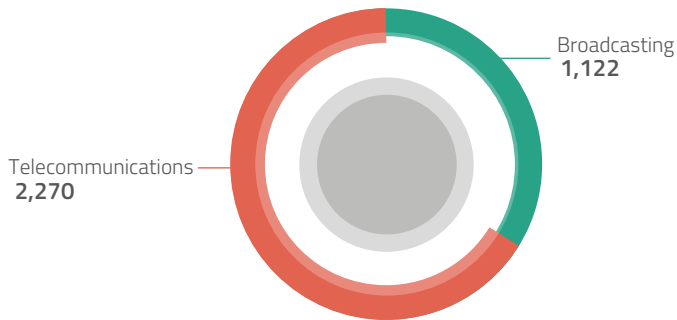
- ▶ From 2009 to 2014 Chiapas's GDP had an annual growth rate of 2.8%. Additionally, the massive media sector<sup>7</sup> contributed with 1.8% of the overall state's GDP, equivalent to MXN 4.330 billion.
- ▶ In 2015, the telecommunications sector employed approximately 2,300 people, whereas the broadcasting sector employed over 1,100 people. In terms of broadcasting infrastructure at the end of 2015, the state had 61 radio broadcasting stations (52 FM stations and 9 AM stations) and 46 broadcast television channels.
- ▶ In terms of fixed telecommunications services, by the end of 2015 Chiapas had the highest penetration in pay TV services with 44 subscriptions per 100 households, compared to 12 fixed telephone lines per 100 households, and 12 fixed broadband subscriptions per 100 households. Moreover, by mid 2015 according to ENDUTIH's results, 44.5% of households had at least one of these services.
- ▶ In terms of mobile telecommunications services, the state's mobile phone teledensity as of December 2015 was 56 subscriptions per 100 inhabitants, whereas the mobile internet teledensity reached 24 mobile internet subscriptions per 100 inhabitants, ranking the state, in terms of mobile telecommunications penetration, in the last place out of 32 Mexican states.
- ▶ Regarding to ICT equipment adoption in Chiapas, analog TV sets had the highest penetration level per 100 households with 64 television sets per 100 households, followed by radio equipment with 55 radios per 100 households, computer equipment with 23 computers per 100 households and finally digital television, with 22 television sets per 100 households (this figure does not include households with an analog television set connected to a digital decoder, or households with pay TV services).
- ▶ As in most states, as of 2014 property rental was the principal expenditure incurred by economic units (business) in Chiapas, standing at an average near to MXN 1,700 per month. On the other hand, expenditure on telecommunications services was MXN 316 per month, higher than other typical company expenditures such as water (MXN 154 per month) and office supplies (MXN 310 per month).
- ▶ Additionally, the fixed telecom services penetrations in Chiapas's economic units (business) segment were 41 fixed telephone lines per 100 economic units (business), 20 fixed broadband subscriptions per 100 economic units (business) and two TV subscriptions per 100 economic units (business).
- ▶ Finally, in 2014 there were registered 154,639 economic units in the state and of those who had 10 employees or less only 15% used computers as part of their operations, whereas only 10% used internet. Nevertheless, these figures were above to 70% for economic units with 11 employees or more, which proves that there is a positive relation between company size and the telecommunications services adoption as part of the business as usual processes.

<sup>7</sup> According to the SCIAN, the Broadcasting and Telecommunications subsectors form part of Sector 51 Massive Media Information, and contributed 94% to the sector's nationwide GDP in 2015

**FIGURE 2.7.1.1**  
Contribution of the B&T sectors (massive media) to state GDP

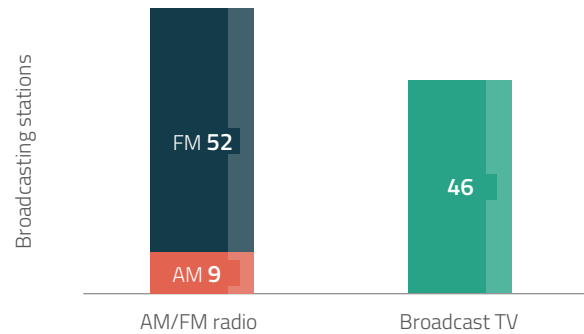


**FIGURE 2.7.1.2**  
Employees in the B&T sectors



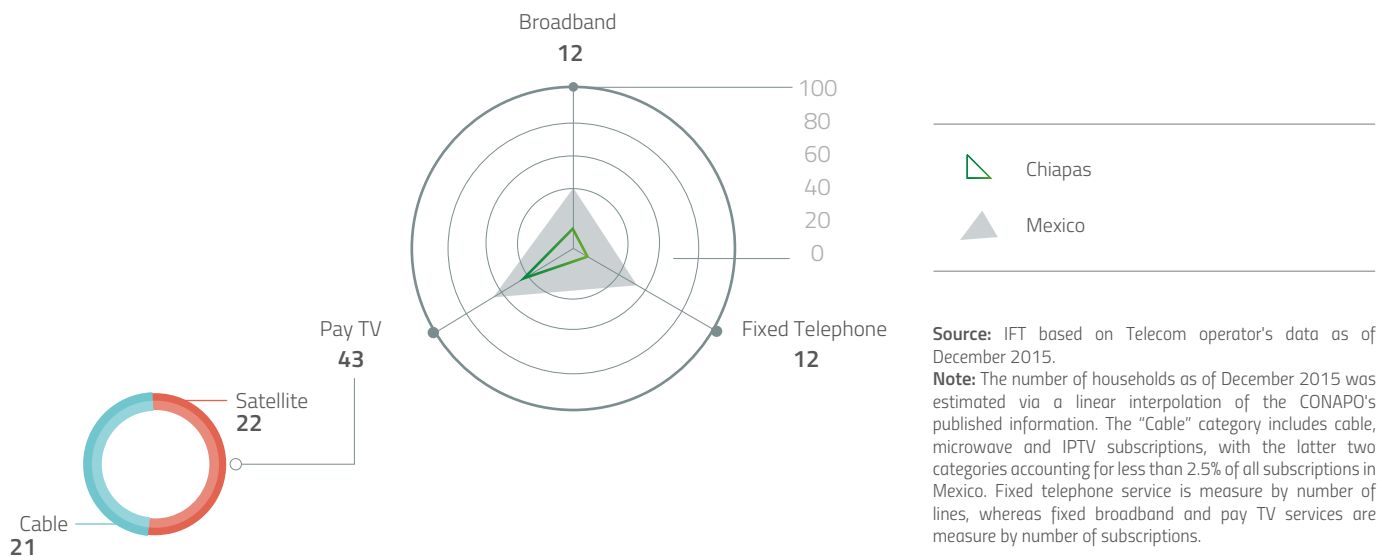
Source: IFT based on data from INEGI's quarterly National Occupation and Employment Surveys.

**FIGURE 2.7.1.3**  
AM/FM radio and broadcast TV stations



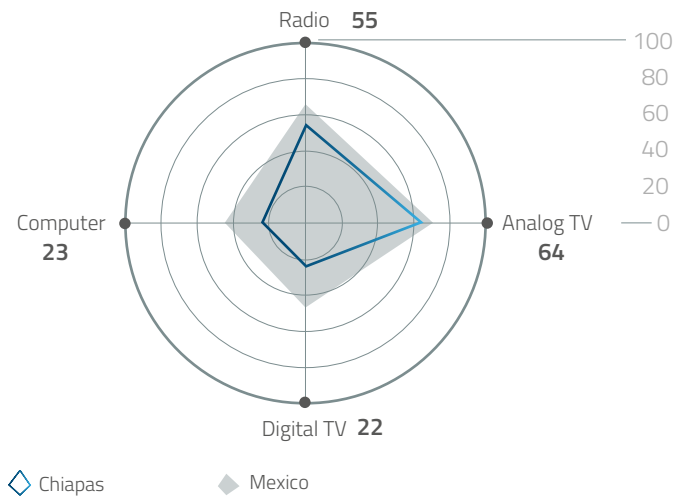
Source: IFT based on data as of December 2015.

**Figure 2.7.2.1**  
Fixed telecommunications services penetration per 100 households



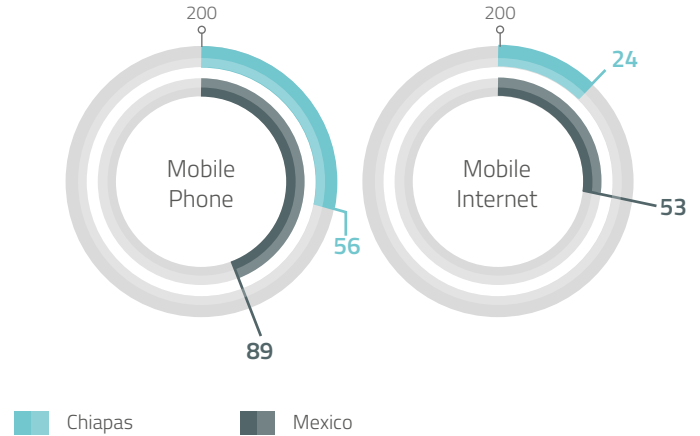


**FIGURE 2.7.2.2**  
ICT equipment per 100 households



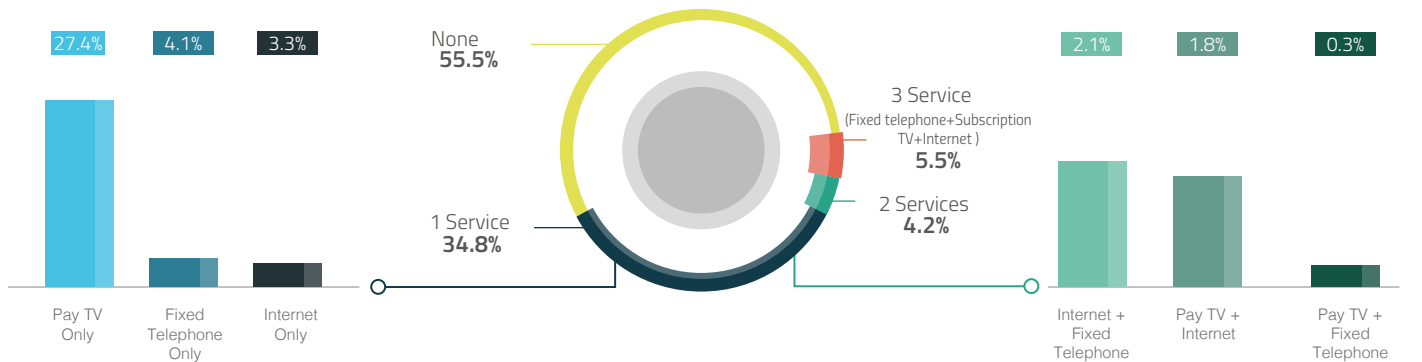
**Source:** IFT based on data from ENDUTIH 2015.  
**Note:** The figure for Digital TV does not include households with an analog television set and digital decoder, or households with pay TV services.

**FIGURE 2.7.2.3**  
Mobile telecommunications teledensity per 100 inhabitants



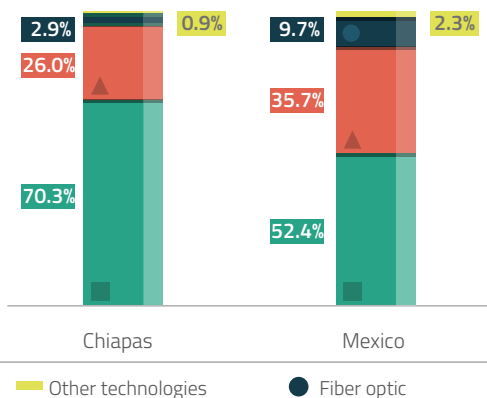
**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The number of inhabitants is taken from the data published by CONAPO as of January 2016. The teledensity disaggregation per state was estimated based on the Telecom operator's data and INEGI's data from the ENDUTIH 2015.

**FIGURE 2.7.2.4**  
Distribution of fixed telecommunications services in households

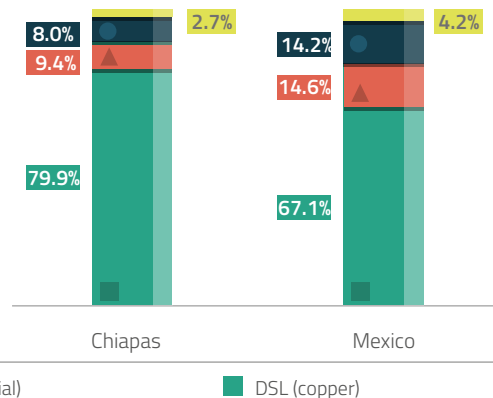


**Source:** IFT based on INEGI's ENDUTIH 2015.  
**Note:** Due to the rounding of data in the figure tags, the sum of the values shown in the bar charts may vary from those shown in the pie chart.

**Figure 2.7.2.5**  
Distribution of residential fixed broadband subscriptions per connection type

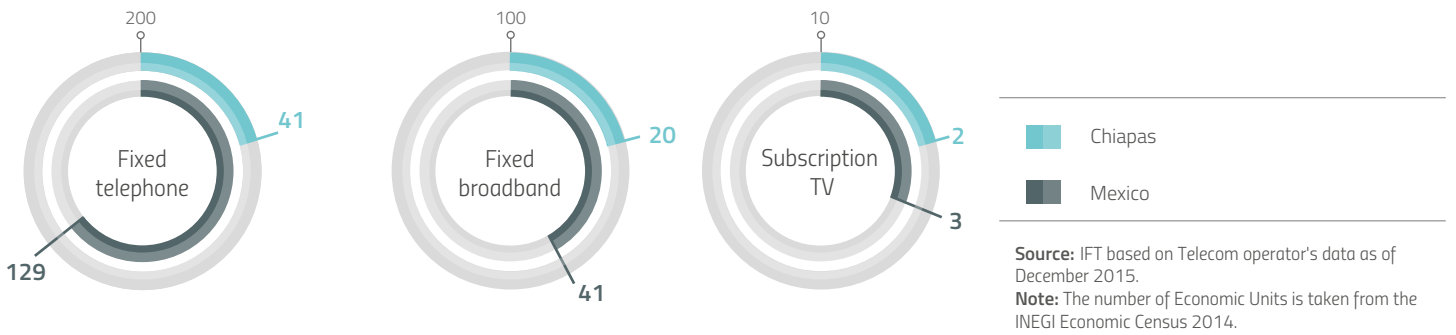


**Figure 2.7.3.1**  
Distribution of non-residential fixed broadband subscriptions per connection type

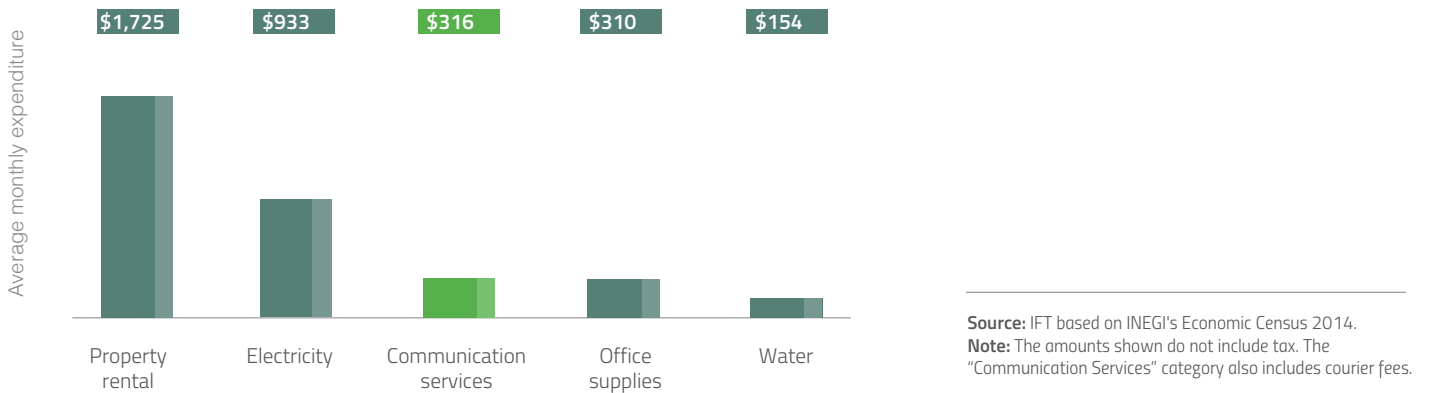


**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The "Other Technologies" category includes fixed wireless and satellite connections. Due to the rounding of data in the chart tags, the figures shown may not add up to 100%.

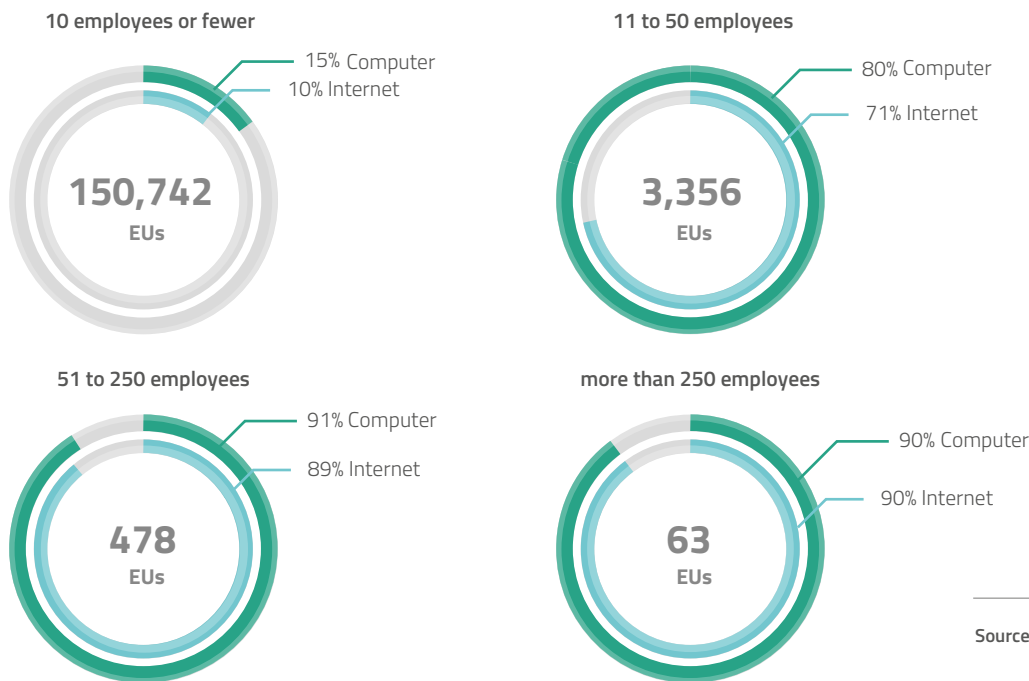
**FIGURE 2.7.3.2**  
Fixed telecommunications services penetration per 100 economic units



**FIGURE 2.7.3.3**  
Average monthly expenditure of economic units by service type



**Figure 2.7.3.4**  
Computer and internet adoption by economic unit (EU) size





## STATISTICAL YEARBOOK 2015:

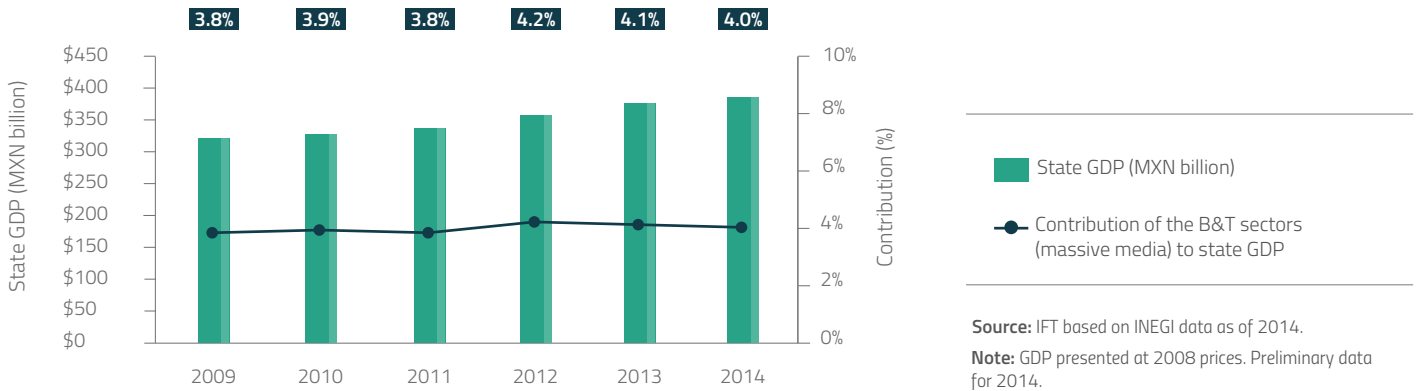
# 2.8 CHIHUAHUA (CHIH)

## General Overview

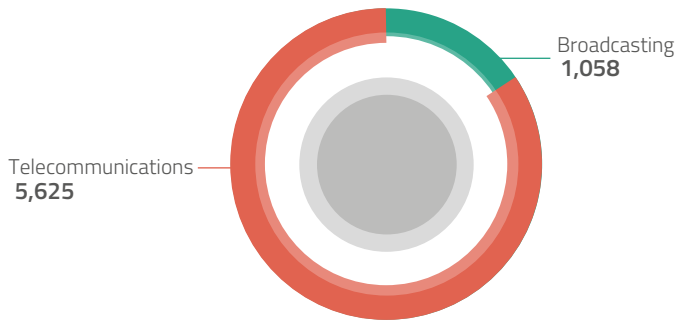
- ▶ From 2009 to 2014 Chihuahua's GDP had an average annual growth rate of 3.7%. Additionally, the massive media sector<sup>8</sup> contributed with 4% of the overall state's GDP at the end of 2014, equivalent to MXN 15.420 billion.
- ▶ In 2015, the telecommunications sector employed 5,625 whereas the broadcasting sector employed more than 1,000 people. In terms of broadcasting infrastructure, at the end of 2015, the state had 93 radio broadcasting stations (70 FM stations and 23 AM stations) and 36 broadcast television channels.
- ▶ In terms of fixed telecommunications services, by the end of 2015 Chihuahua had the highest penetration level in pay TV services with 48 subscriptions per 100 households, compared to 42 fixed telephone lines per 100 households, and 40 fixed broadband subscriptions per 100 households. Moreover, by mid 2015 according to ENDUTIH's results, 70.5% of households had at least one of these services.
- ▶ In terms of mobile telecommunications services, the state's mobile phone teledensity as of December 2015 was 83 subscriptions per 100 inhabitants, whereas the mobile internet teledensity reached 49 subscriptions per 100 inhabitants, ranking the state, in terms of mobile telecommunications penetration, on top 16 out of 32 Mexican states.
- ▶ Regarding to ICT equipment adoption in Chihuahua, radio equipment had the highest penetration level in households with 71 radios per 100 households, followed by analog TV sets with 68 television sets per 100 households and computer equipment and digital television with 48 television sets per 100 households each (this figure does not include households with an analog television set connected to a digital decoder, or households with pay TV services).
- ▶ As in most states, property rental is the principal expenditure incurred by economic units (business) in Chihuahua, standing at an average near to MXN 9,000 per month. On the other hand, expenditure on telecommunications services was MXN 3,312 per month, higher than other typical company expenditures such as water (MXN 1,571 per month) and office supplies (MXN 1,786 per month).
- ▶ Additionally, in the fixed telecom services penetrations in Chihuahua's economic units (business) segment were 133 fixed telephone lines per 100 economic units (business), 53 fixed broadband subscriptions per 100 economic units (business) and four TV subscriptions per 100 economic units (business).
- ▶ Finally, in 2014 there were registered 97,018 economic units (business) in the state and of those who had 10 employees or less only 29% used computers as part of their operations, whereas only 22% used internet. Nevertheless, these figures were above 80% for economic units (business) with 11 employees or more, which proves that there is a positive relation between company size and the telecommunications services adoption as part of the business as usual processes.

<sup>8</sup> According to the SCIAN, the Broadcasting and Telecommunications subsectors form part of Sector 51 Massive Media Information, and contributed 94% to the sector's nationwide GDP in 2015

**FIGURE 2.8.1.1**  
Contribution of the B&T sectors (massive media) to state GDP

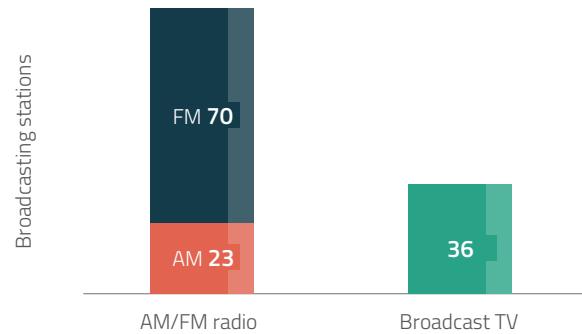


**FIGURE 2.8.1.2**  
Employees in the B&T sectors



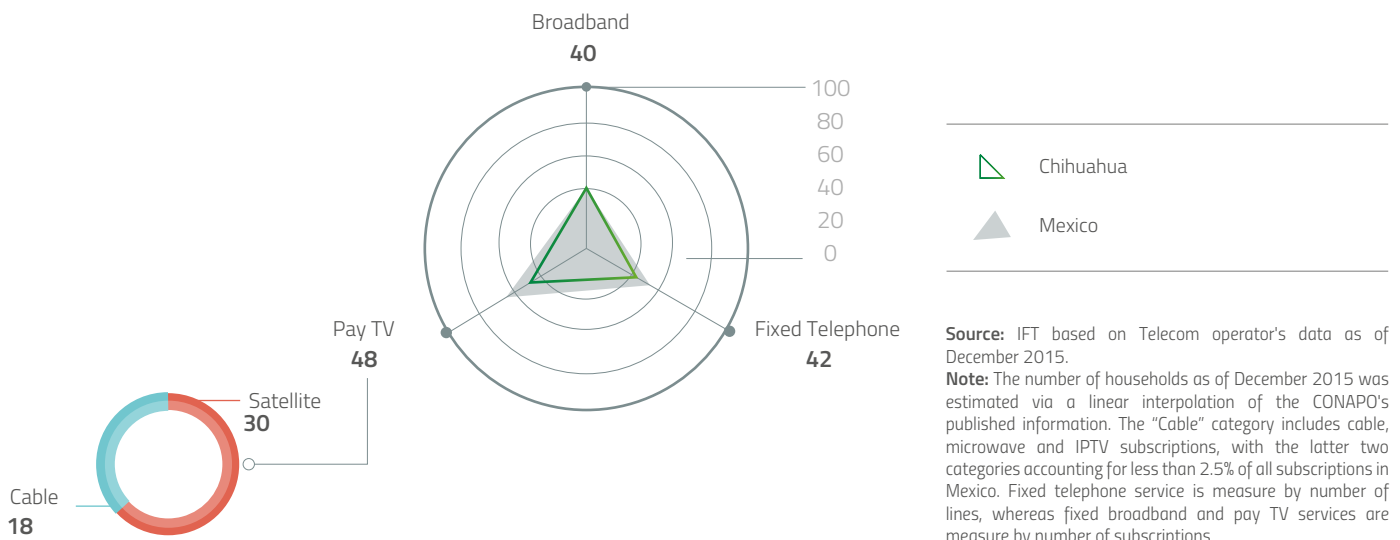
Source: IFT based on data from INEGI's quarterly National Occupation and Employment Surveys.

**FIGURE 2.8.1.3**  
AM/FM radio and broadcast TV stations

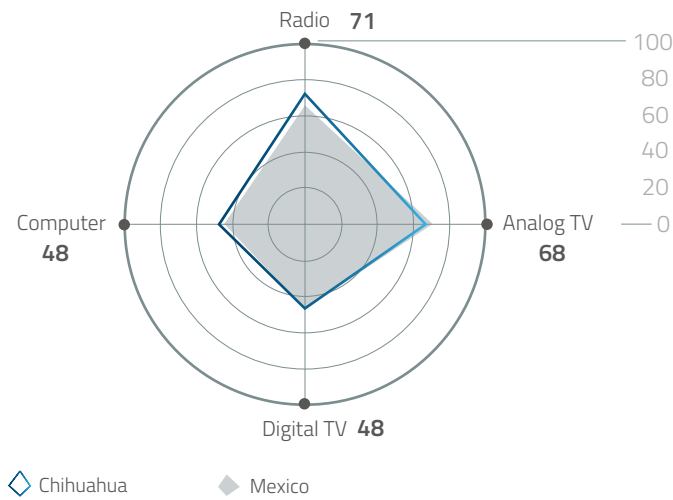


Source: IFT based on data as of December 2015.

**Figure 2.8.2.1**  
Fixed telecommunications services penetration per 100 households

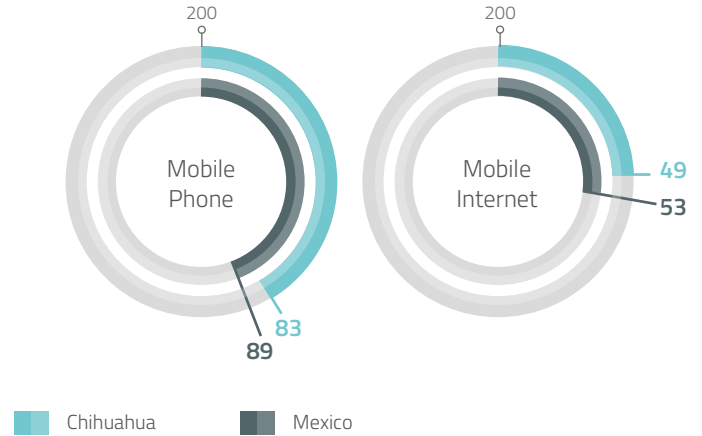


**FIGURE 2.8.2.2**  
ICT equipment per 100 households



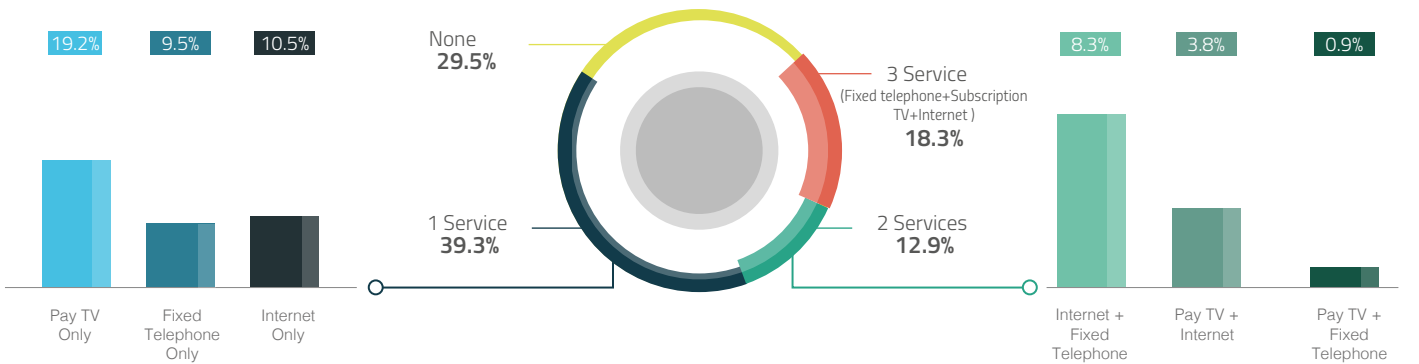
**Source:** IFT based on data from ENDUTIH 2015.  
**Note:** The figure for Digital TV does not include households with an analog television set and digital decoder, or households with pay TV services.

**FIGURE 2.8.2.3**  
Mobile telecommunications teledensity per 100 inhabitants



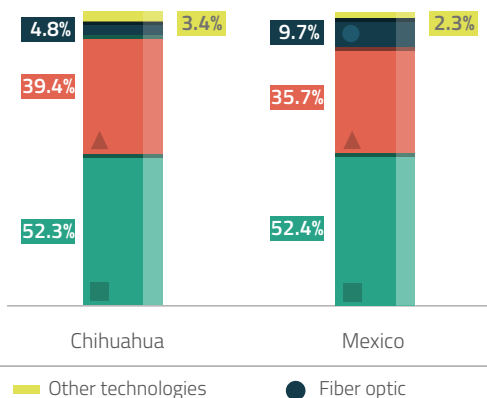
**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The number of inhabitants is taken from the data published by CONAPO as of January 2016. The teledensity disaggregation per state was estimated based on the Telecom operator's data and INEGI's data from the ENDUTIH 2015.

**FIGURE 2.8.2.4**  
Distribution of fixed telecommunications services in households

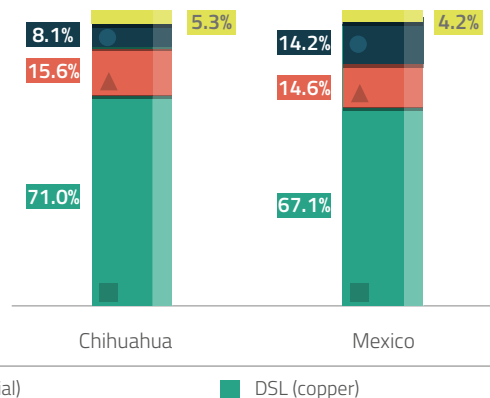


**Source:** IFT based on INEGI's ENDUTIH 2015.  
**Note:** Due to the rounding of data in the figure tags, the sum of the values shown in the bar charts may vary from those shown in the pie chart.

**Figure 2.8.2.5**  
Distribution of residential fixed broadband subscriptions per connection type

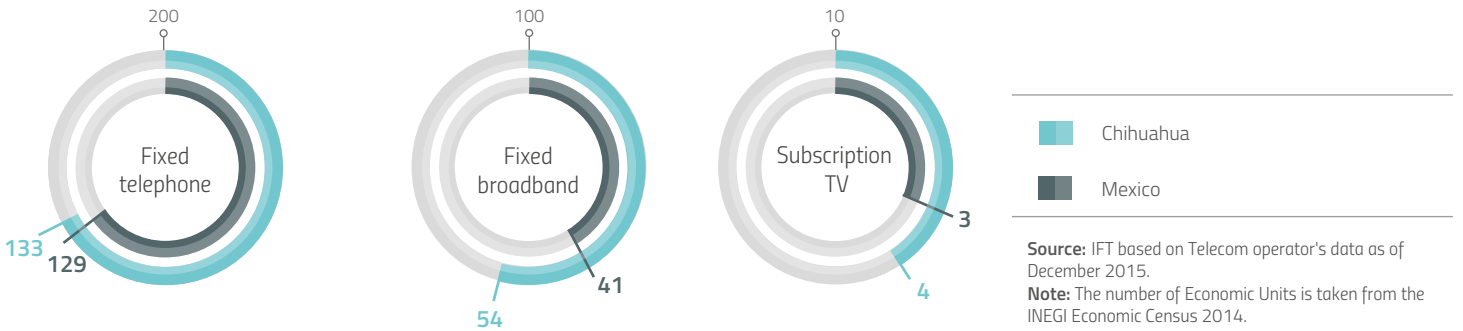


**Figure 2.8.3.1**  
Distribution of non-residential fixed broadband subscriptions per connection type

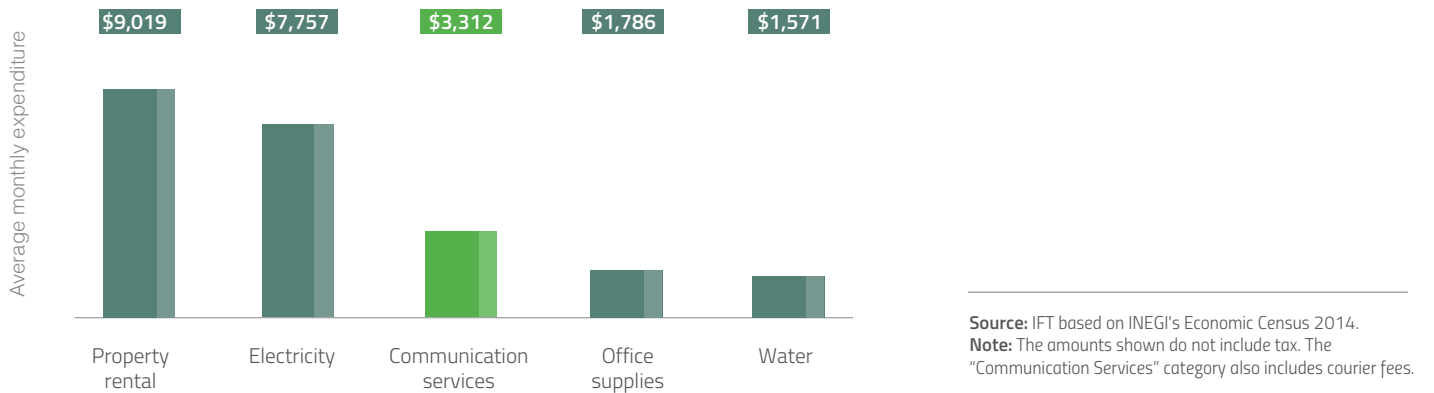


**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The "Other Technologies" category includes fixed wireless and satellite connections. Due to the rounding of data in the chart tags, the figures shown may not add up to 100%.

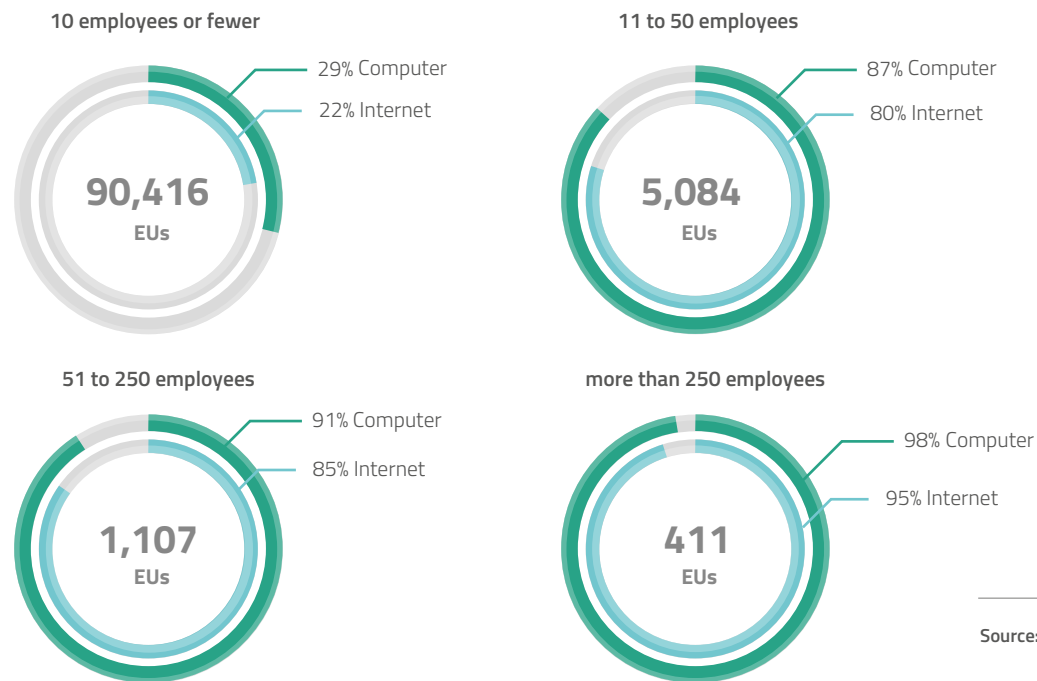
**FIGURE 2.8.3.2**  
Fixed telecommunications services penetration per 100 economic units



**FIGURE 2.8.3.3**  
Average monthly expenditure of economic units by service type



**Figure 2.8.3.4**  
Computer and internet adoption by economic unit (EU) size







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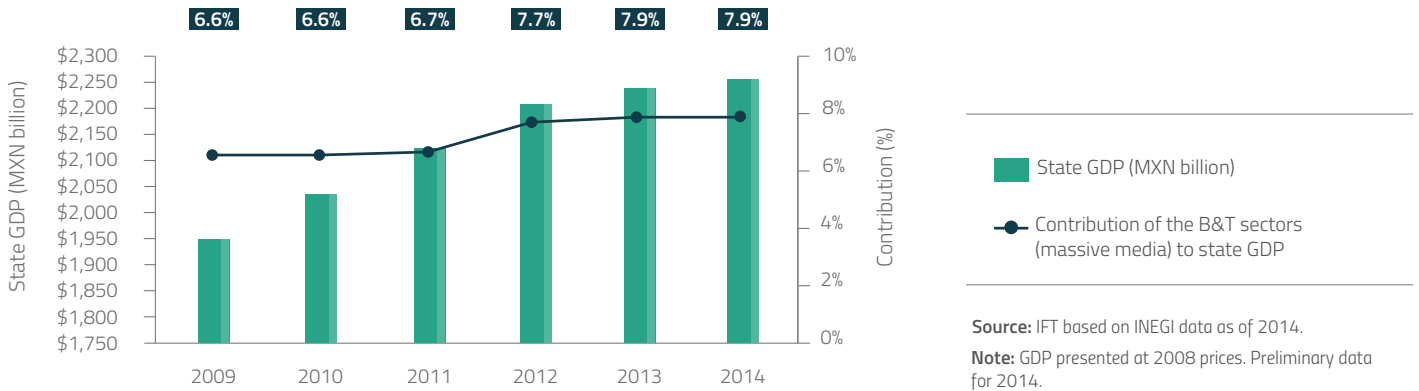
# 2.9 MEXICO CITY (CDMX)

## General Overview

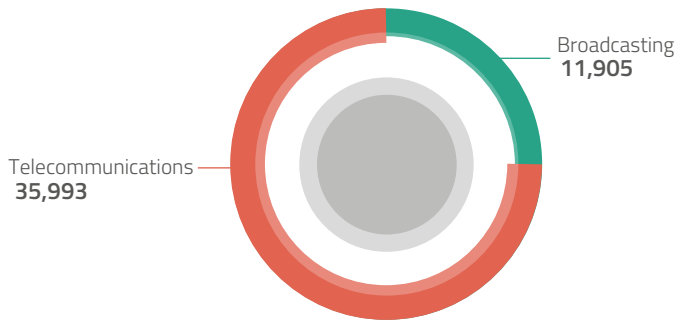
- ▶ From 2009 to 2014 Mexico City's GDP had an average annual growth rate of 2.97%. Additionally, as of 2014 the massive media sector<sup>9</sup> contributed with 7.9% to the overall state's GDP, equivalent to MXN 177 billion.
- ▶ In 2015, the telecommunications sector employed approximately 36,000 people, whereas the broadcasting sector employed 12,000 people. In terms of broadcasting infrastructure, at the end of 2015, Mexico City had 62 radio broadcasting stations (33 FM stations and 29 AM stations) and 14 broadcast television channels.
- ▶ In terms of fixed telecommunications services, by the end of 2015 Mexico City had the highest penetration level in fixed telephone services with 95 fixed telephone lines per 100 households, compared to 76 fixed broadband subscriptions per 100 households, and 63 pay TV subscriptions per 100 households. Moreover, by mid 2015 according to ENDUTIH's results, 86.4% of households had at least one of these services.
- ▶ In terms of mobile telecommunications services, the state's mobile phone teledensity as of December 2015 was 132 subscriptions per 100 inhabitants, which implies that there were some Mexico City residents with more than one mobile phone, whereas the mobile internet teledensity reached 90 subscriptions per 100 inhabitants, ranking the state, in terms of mobile telecommunications penetration, on the first place out of 32 Mexican states.
- ▶ Regarding to ICT equipment adoption in Mexico City, radio equipment had the highest penetration level with 86 radios per 100 households, followed by computer equipment with 64 computers per 100 households, and then analog and digital TV sets with 59 television sets per 100 households each (this figure does not include households with an analog television set with digital decoder, or households with pay TV services).
- ▶ As in most states, as of 2014 property rental is the principal expenditure incurred by economic units (business) in Mexico City, standing at an average near to MXN 20,000 per month. On the other hand, expenditure on telecommunications services was MXN 4,729 per month, higher than other typical company expenditures such as water (MXN 1,000 per month) and office supplies (MXN 4,382 per month).
- ▶ Additionally, the fixed telecom services penetrations in Mexico City's economic units (business) segment were 401 fixed telephone lines per 100 economic units (business), 211% higher than the nationwide level, 72 fixed broadband subscriptions per 100 economic units (business) and five TV subscriptions per 100 economic units (business).
- ▶ Finally, in 2014 there were registered 415,479 economic units (business) in the state and of those who had 10 employees or less only 23% used computers as part of their operations, whereas only 19% used internet. Nevertheless, these figures were above 80% for economic units with 11 employees or more, which proves that there is a positive relation between company size and the telecommunications services adoption as part of the business as usual processes.

<sup>9</sup> According to the SCIAN, the Broadcasting and Telecommunications subsectors form part of Sector 51 Massive Media Information, and contributed 94% to the sector's nationwide GDP in 2015

**FIGURE 2.9.1.1**  
Contribution of the B&T sectors (massive media) to state GDP

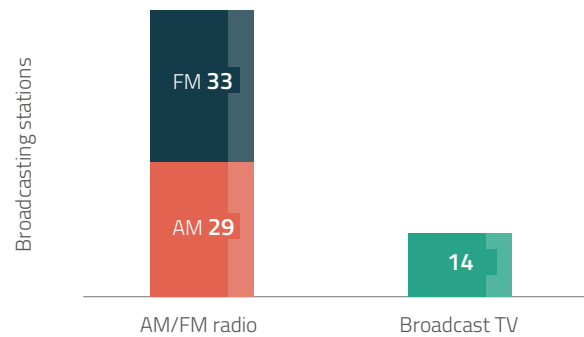


**FIGURE 2.9.1.2**  
Employees in the B&T sectors



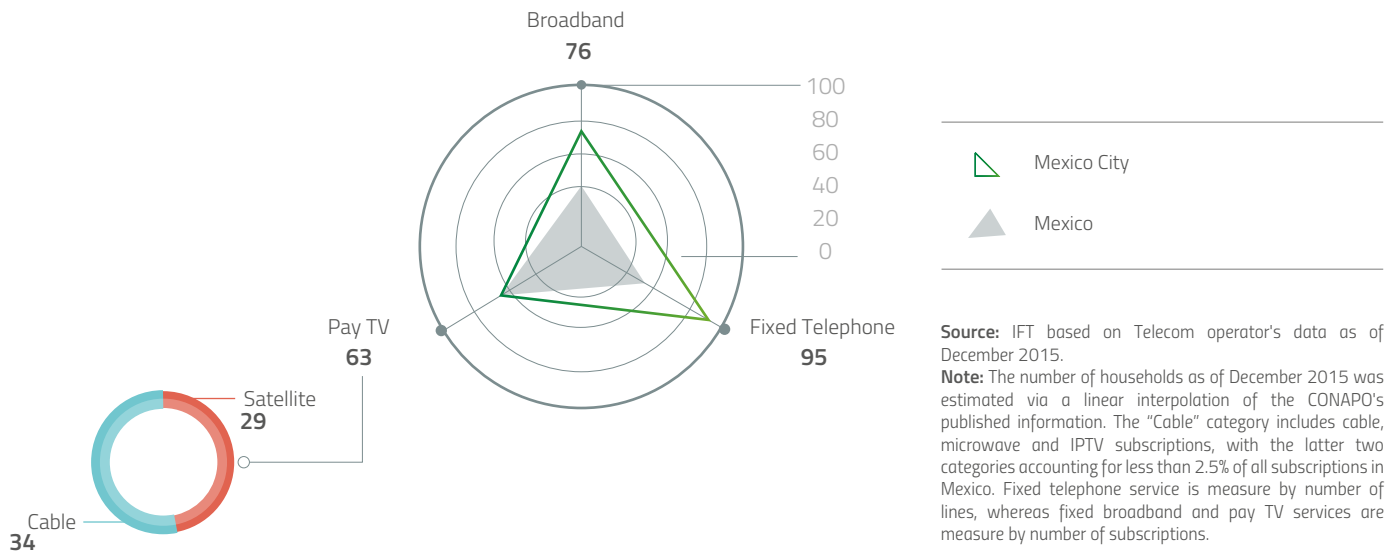
Source: IFT based on data from INEGI's quarterly National Occupation and Employment Surveys.

**FIGURE 2.9.1.3**  
AM/FM radio and broadcast TV stations



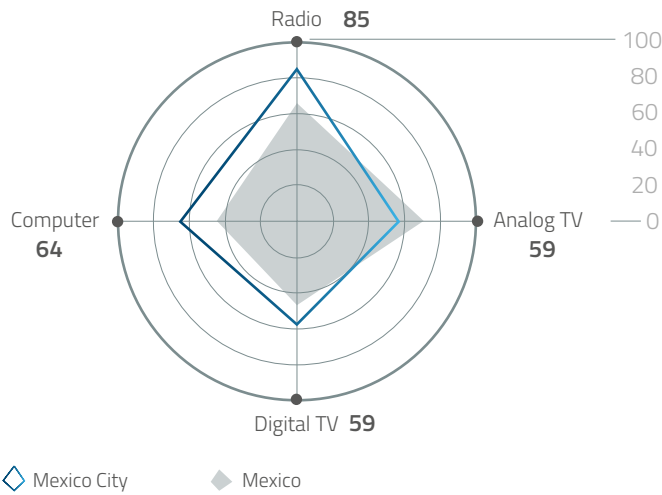
Source: IFT based on data as of December 2015.

**Figure 2.9.2.1**  
Fixed telecommunications services penetration per 100 households



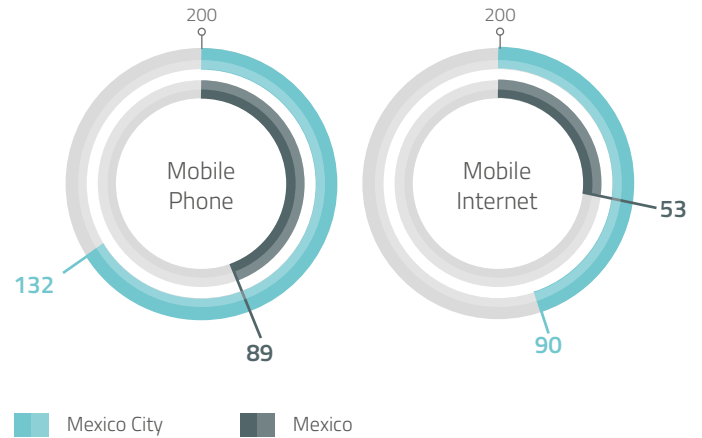


**FIGURE 2.9.2.2**  
ICT equipment per 100 households



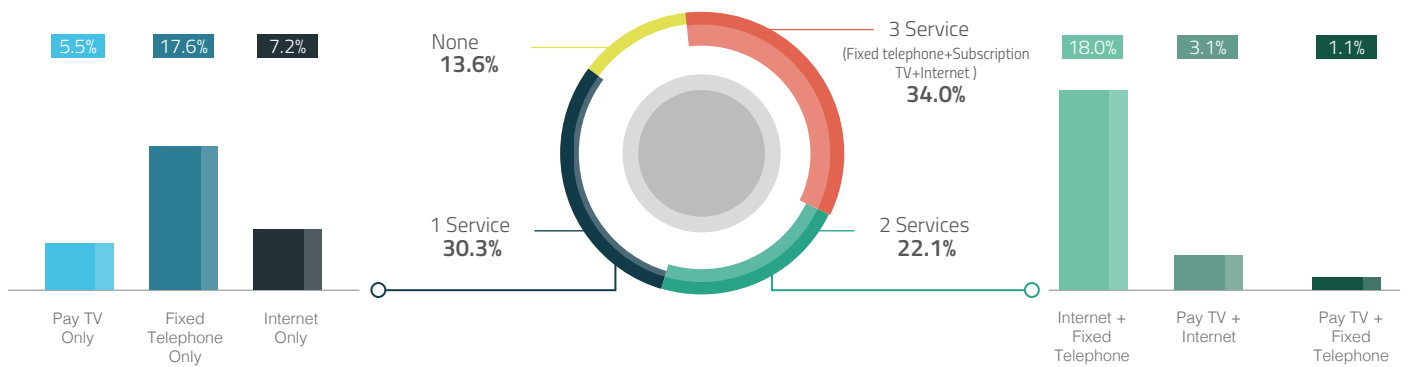
Source: IFT based on data from ENDUTIH 2015.  
Note: The figure for Digital TV does not include households with an analog television set and digital decoder, or households with pay TV services.

**FIGURE 2.9.2.3**  
Mobile telecommunications teledensity per 100 inhabitants



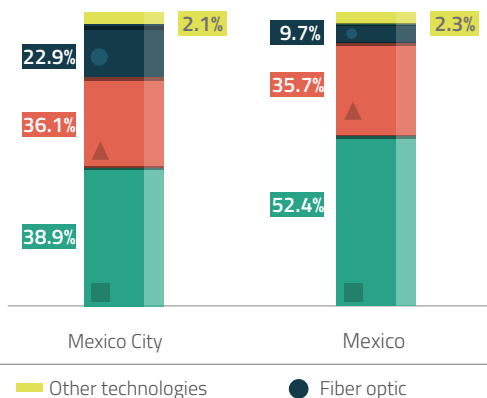
Source: IFT based on Telecom operator's data as of December 2015.  
Note: The number of inhabitants is taken from the data published by CONAPO as of January 2016. The teledensity disaggregation per state was estimated based on the Telecom operator's data and INEGI's data from the ENDUTIH 2015.

**FIGURE 2.9.2.4**  
Distribution of fixed telecommunications services in households

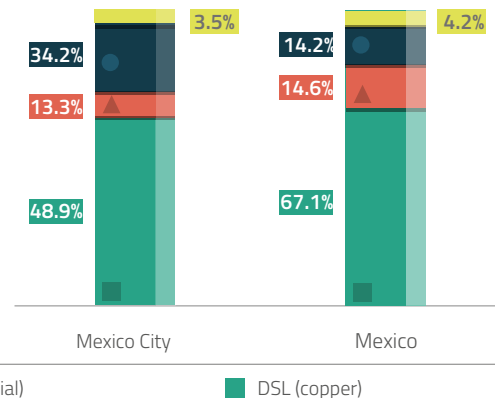


Source: IFT based on INEGI's ENDUTIH 2015.  
Note: Due to the rounding of data in the figure tags, the sum of the values shown in the bar charts may vary from those shown in the pie chart.

**Figure 2.9.2.5**  
Distribution of residential fixed broadband subscriptions per connection type

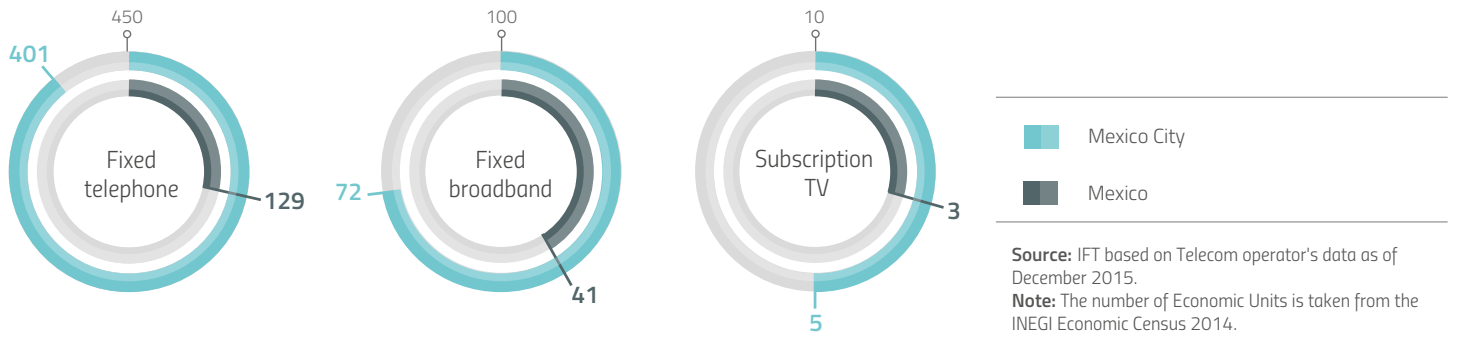


**Figure 2.9.3.1**  
Distribution of non-residential fixed broadband subscriptions per connection type

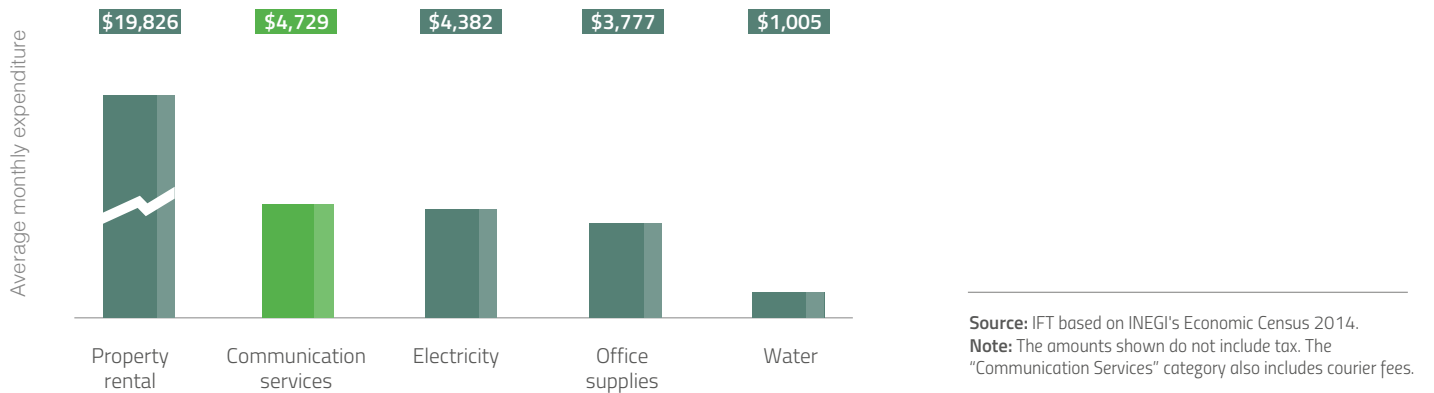


Source: IFT based on Telecom operator's data as of December 2015.  
Note: The "Other Technologies" category includes fixed wireless and satellite connections. Due to the rounding of data in the chart tags, the figures shown may not add up to 100%.

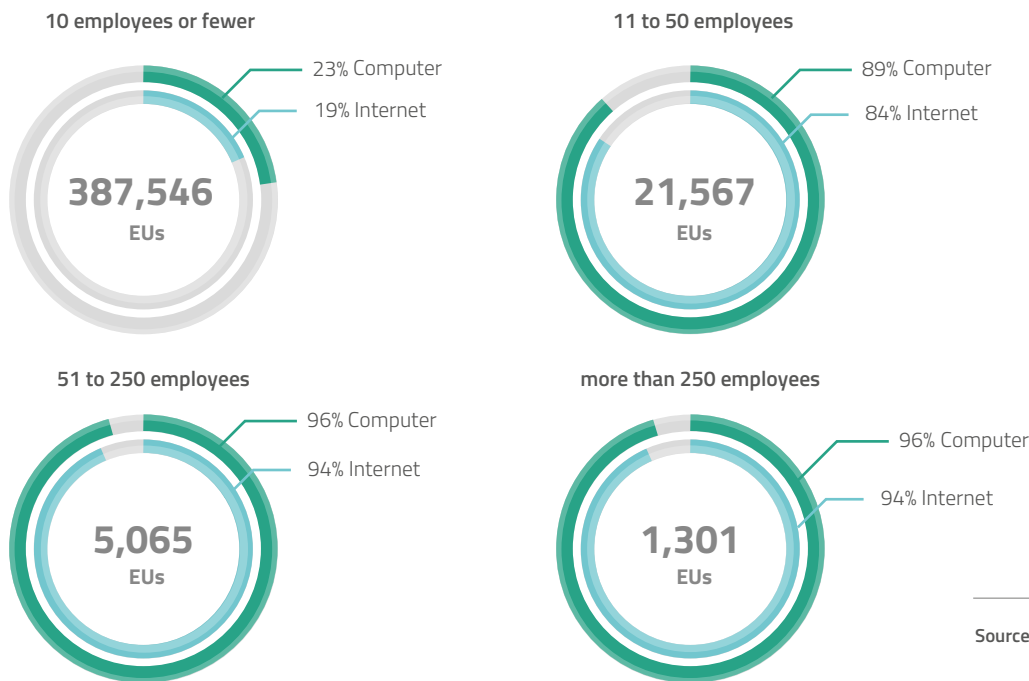
**FIGURE 2.9.3.2**  
Fixed telecommunications services penetration per 100 economic units



**FIGURE 2.9.3.3**  
Average monthly expenditure of economic units by service type



**Figure 2.9.3.4**  
Computer and internet adoption by economic unit (EU) size





STATISTICAL YEARBOOK 2015:

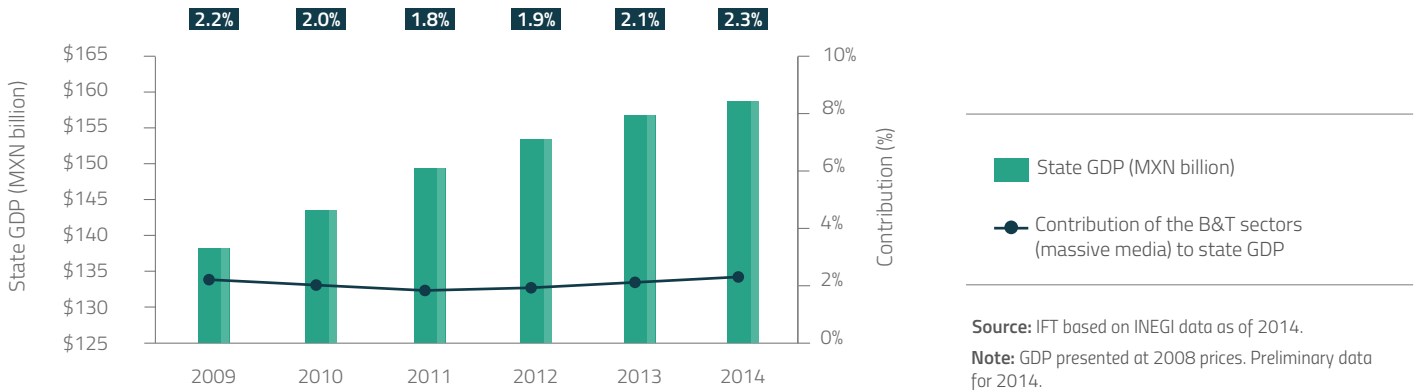
## 2.10 DURANGO (DGO)

### General Overview

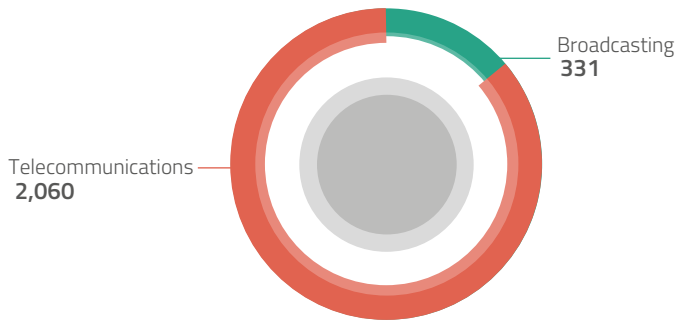
- ▶ From 2009 to 2014 Durango's GDP had an average annual growth rate of 2.8%. Additionally, the massive media sector<sup>10</sup> contributed with 2.3% to the overall state's GDP, equivalent to MXN 3.610 billion.
- ▶ In 2015, the telecommunications sector employed 2,060 people, whereas the broadcasting sector employed 330 people. In terms of broadcasting infrastructure, at the end of 2015, Durango had 29 radio broadcasting stations (22 FM stations and seven AM stations) and 15 broadcast television channels.
- ▶ In terms of fixed telecommunications services, by the end of 2015 Durango had the highest penetration in pay TV services with 55 subscriptions per 100 households, compared to 33 fixed telephone lines per 100 households, and 31 fixed broadband subscriptions per 100 households. Moreover, by mid 2015 according to the ENDUTIH's results, 70.3% of households had at least one of these services.
- ▶ In terms of mobile telecommunications services, the state's mobile phone teledensity as of December 2015 was 80 subscriptions per 100 inhabitants, whereas the mobile internet teledensity reached 46 mobile internet subscriptions per 100 inhabitants, ranking the state, in terms of mobile telecommunications penetration, on top 19 out of 32 Mexican states.
- ▶ Regarding to ICT equipment adoption in Durango, analog TV sets had the highest penetration level with 80 television sets per 100 households, followed by radio equipment with 59 radios per 100 households, digital television with 40 television sets per 100 households (this figure does not include households with an analog television set connected to a digital decoder, or households with pay TV services), and finally computer equipment, with 39 computers per 100 households.
- ▶ Unlike in most states, as of 2014 electricity was the principal expenditure incurred by economic units (business) in Durango, standing at an average near to MXN 4,000 per month. On the other hand, expenditure on telecommunications services was MXN 1,024 per month, higher than other typical company expenditures such as water (MXN 464 per month) and office supplies (MXN 631 per month).
- ▶ Additionally, the fixed telecom services penetrations in Durango's economic units (business) segment were 94 fixed telephone lines per 100 economic units (business), 38 fixed broadband subscriptions per 100 economic units (business) and five pay TV subscriptions per 100 economic units (business).
- ▶ Finally, in 2014 there were registered 50,436 economic units (business) in the state and of those who had 10 employees or less only 21% used computers as part of their operations, whereas only 16% used internet. Nevertheless, these figures were above 80% for economic units (business) with 11 employees or more, which proves that there is a positive relation between company size and the telecommunications services adoption as part of the business as usual processes.

<sup>10</sup> According to the SCIAN, the Broadcasting and Telecommunications subsectors form part of Sector 51 Massive Media Information, and contributed 94% to the sector's nationwide GDP in 2015

**FIGURE 2.10.1.1**  
Contribution of the B&T sectors (massive media) to state GDP

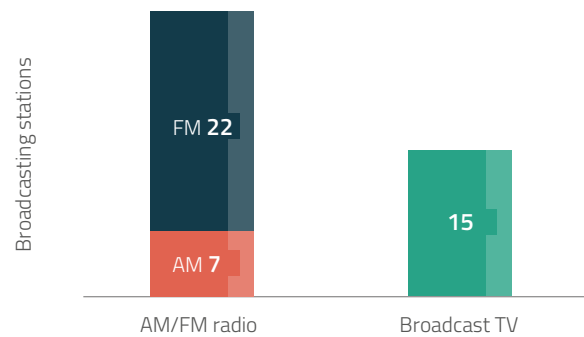


**FIGURE 2.10.1.2**  
Employees in the B&T sectors



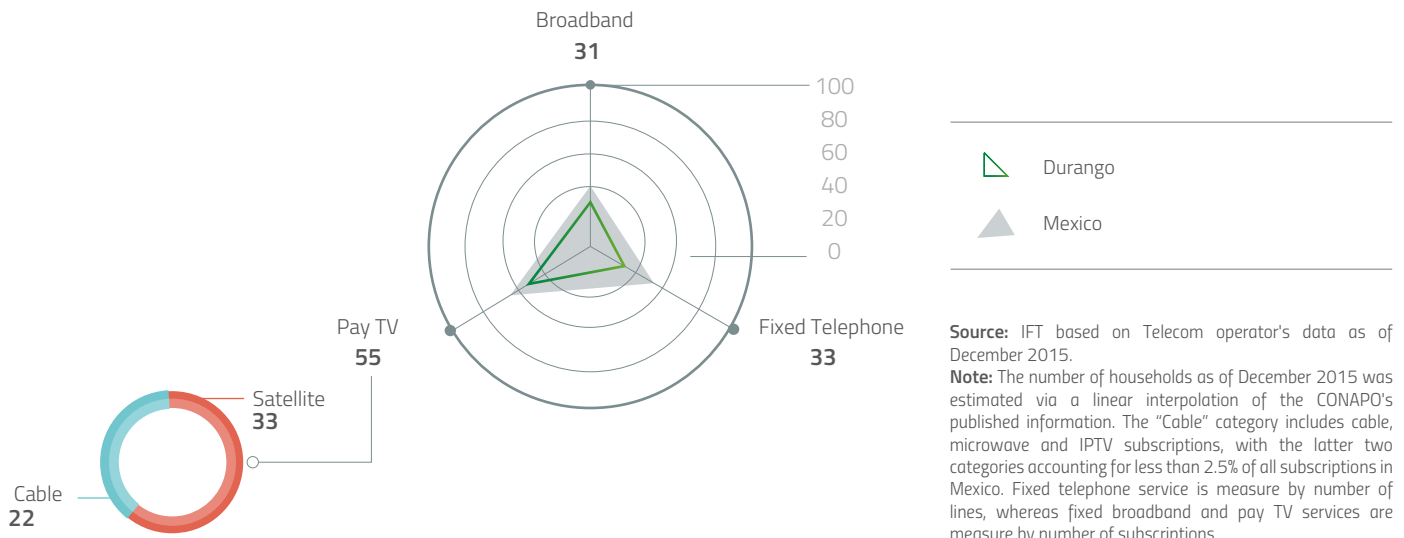
Source: IFT based on data from INEGI's quarterly National Occupation and Employment Surveys.

**FIGURE 2.10.1.3**  
AM/FM radio and broadcast TV stations



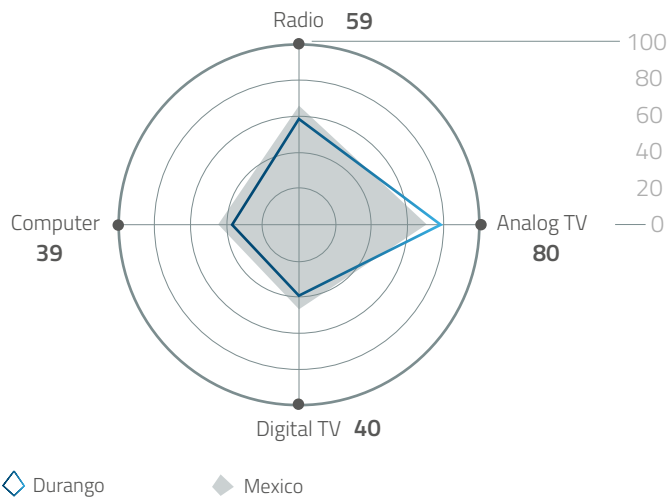
Source: IFT based on data as of December 2015.

**Figure 2.10.2.1**  
Fixed telecommunications services penetration per 100 households



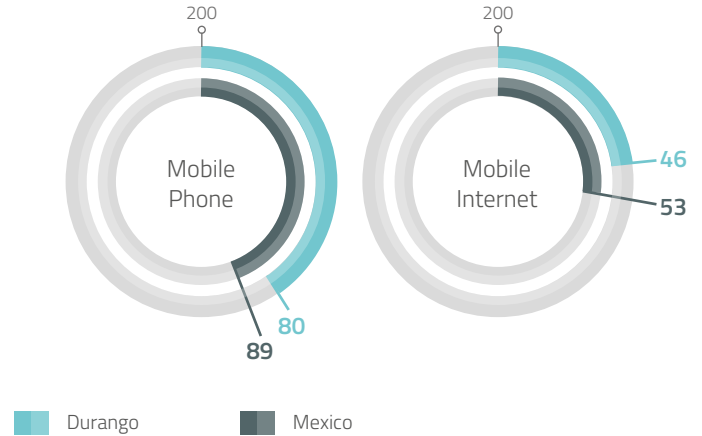


**FIGURE 2.10.2.2**  
ICT equipment per 100 households



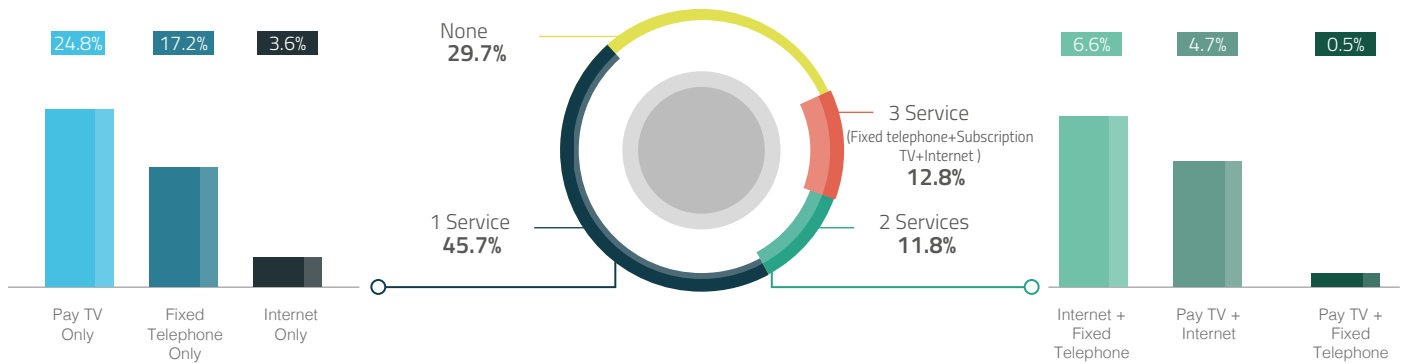
**Source:** IFT based on data from ENDUTIH 2015.  
**Note:** The figure for Digital TV does not include households with an analog television set and digital decoder, or households with pay TV services.

**FIGURE 2.10.2.3**  
Mobile telecommunications teledensity per 100 inhabitants



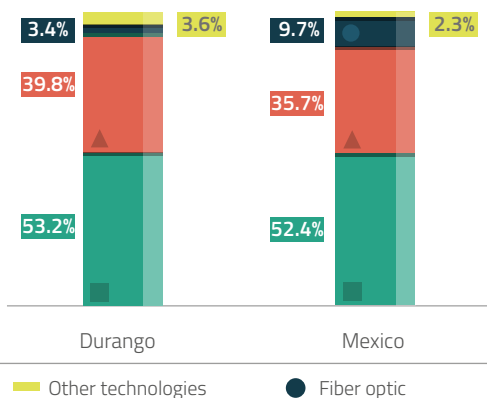
**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The number of inhabitants is taken from the data published by CONAPO as of January 2016. The teledensity desagregation per state was estimated based on the Telecom operator's data and INEGI's data from the ENDUTIH 2015.

**FIGURE 2.10.2.4**  
Distribution of fixed telecommunications services in households

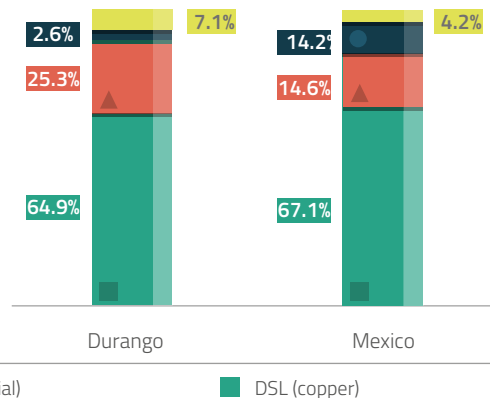


**Source:** IFT based on INEGI's ENDUTIH 2015.  
**Note:** Due to the rounding of data in the figure tags, the sum of the values shown in the bar charts may vary from those shown in the pie chart.

**Figure 2.10.2.5**  
Distribution of residential fixed broadband subscriptions per connection type

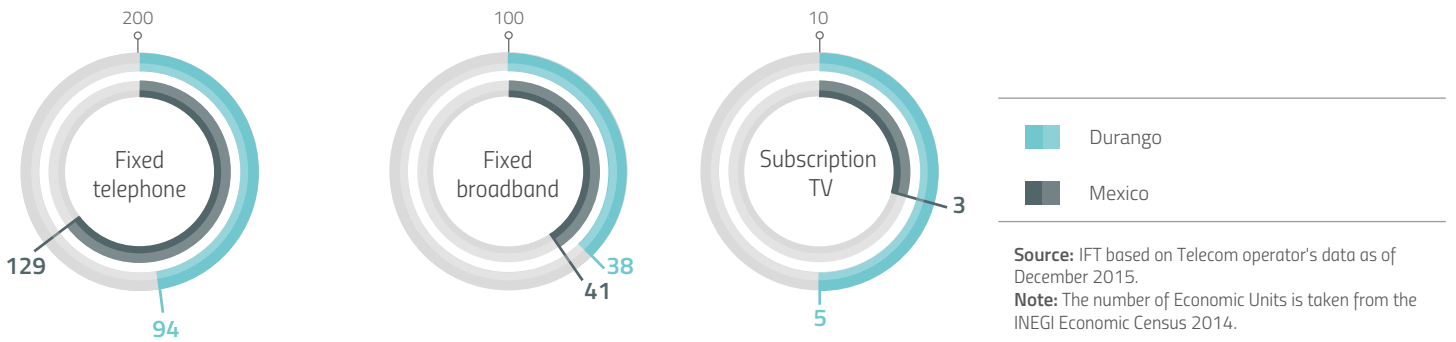


**Figure 2.10.3.1**  
Distribution of non-residential fixed broadband subscriptions per connection type

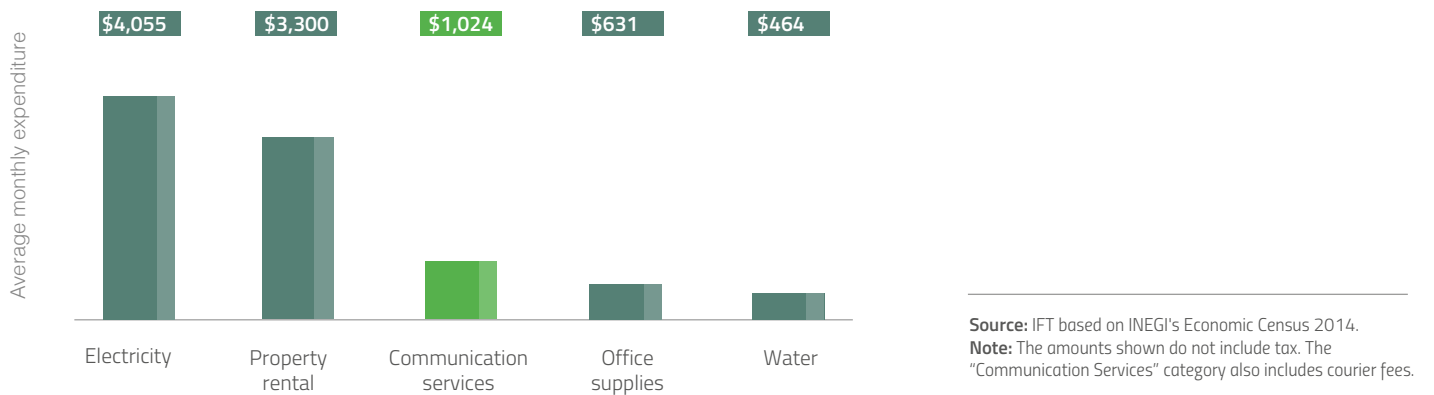


**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The "Other Technologies" category includes fixed wireless and satellite connections. Due to the rounding of data in the chart tags, the figures shown may not add up to 100%.

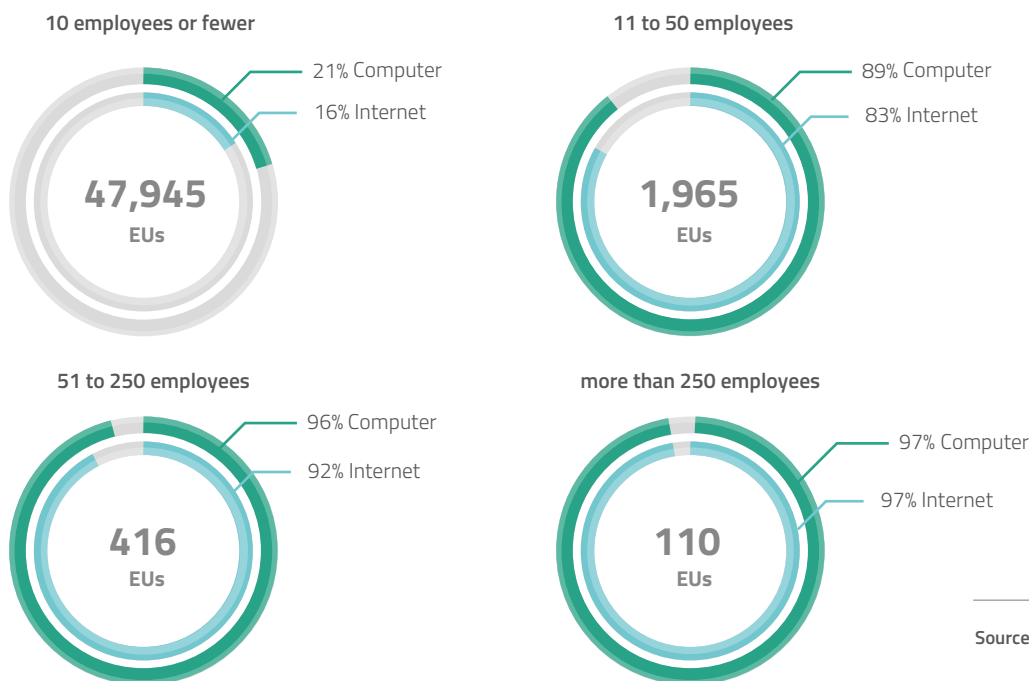
**FIGURE 2.10.3.2**  
Fixed telecommunications services penetration per 100 economic units



**FIGURE 2.10.3.3**  
Average monthly expenditure of economic units by service type



**Figure 2.10.3.4**  
Computer and internet adoption by economic unit (EU) size







STATISTICAL YEARBOOK 2015:

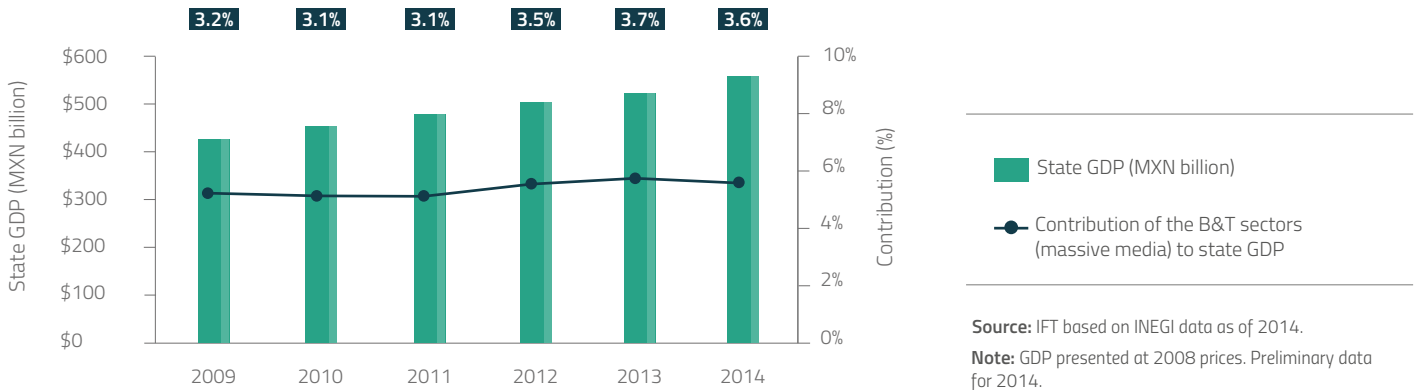
## 2.11 GUANAJUATO (GTO)

### General Overview

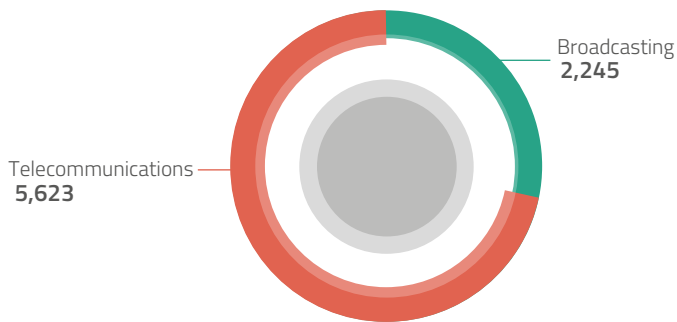
- ▶ From 2009 to 2014 Guanajuato's GDP had an average annual growth rate of 5.5%. Additionally, the massive media sector<sup>11</sup> contributed with 3.6% of the overall state's GDP, equivalent to MXN 19.880 billion.
- ▶ In 2015, the telecommunications sector employed over 5,600 people, whereas the broadcasting sector employed 2,245 people. In terms of broadcasting infrastructure at the end of 2015, the state had 62 radio broadcasting stations (50 FM stations and 12 AM stations) and 64 broadcast television channels.
- ▶ In terms of fixed telecommunications services, by the end of 2015 Guanajuato had the highest penetration in pay TV services with 54 subscriptions per 100 households, compared to 45 fixed telephone lines per 100 households and 35 fixed broadband subscriptions per 100 households. Moreover, by mid 2015 according to ENDUTIH's results, 70.1% of households had at least one of these services.
- ▶ In terms of mobile telecommunications services, the state's mobile phone teledensity as of December 2015 was 72 subscriptions per 100 inhabitants, whereas the mobile internet teledensity reached 39 mobile internet subscriptions per 100 inhabitants, ranking the state, in terms of mobile telecommunications penetration, in the top 22 out of 32 Mexican states.
- ▶ Regarding to ICT equipment adoption in Guanajuato, analog television sets had the highest penetration level in households with 74 television sets per 100 households, followed by radio equipment with 66 radios per 100 households, digital television with 61 television sets per 100 households (this figure does not include households with an analog television set connected to a digital decoder, or households with pay TV services) and finally, computer equipment with 40 computers per 100 households.
- ▶ As in most states, as of 2014 property rental was the principal expenditure incurred by economic units (business) in Guanajuato, standing at an average near to MXN 4,000 per month. On the other hand, expenditure on telecommunications services was MXN 1,090 per month, higher than other typical company expenditures such as water (MXN 705 per month) and office supplies (MXN 689 per month).
- ▶ Additionally, the fixed telecom services penetrations in Guanajuato's economic units (business) segment were 84 fixed telephone lines per 100 economic units (business), 36 fixed broadband subscriptions per 100 economic units (business); and three TV subscriptions per 100 economic units (business).
- ▶ Finally, in 2014 there were registered 222,918 economic units in the state and of those who had 10 employees or less only 20% used computers as part of their operations, whereas only 15% used internet. Nevertheless, these figures were above 80% for economic units with 11 employees or more, which proves that there is a positive relation between company size and the telecommunications services adoption as part of the business as usual processes.

<sup>11</sup> According to the SCIAN, the Broadcasting and Telecommunications subsectors form part of Sector 51 Massive Media Information, and contributed 94% to the sector's nationwide GDP in 2015

**FIGURE 2.11.1.1**  
Contribution of the B&T sectors (massive media) to state GDP

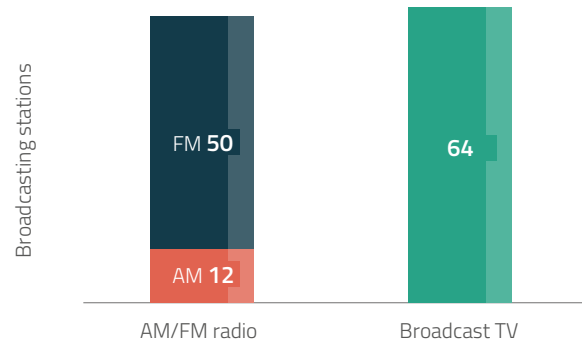


**FIGURE 2.11.1.2**  
Employees in the B&T sectors



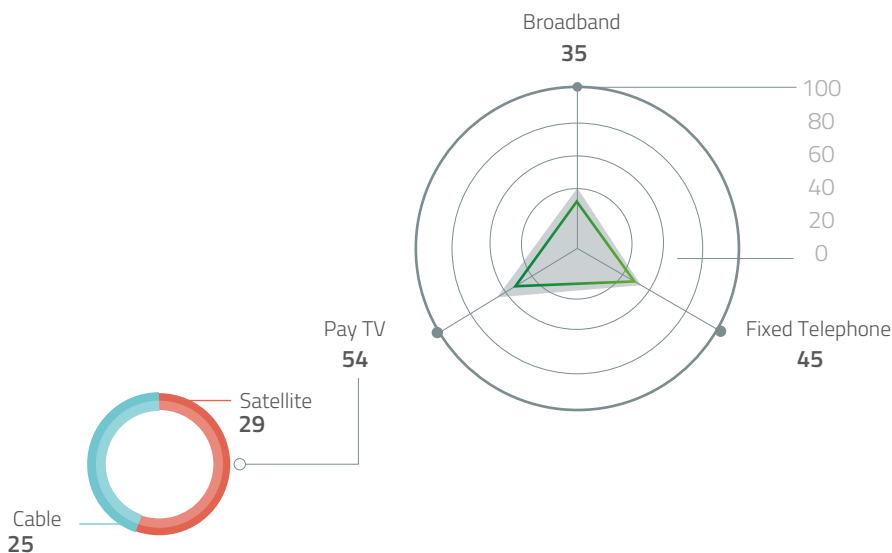
Source: IFT based on data from INEGI's quarterly National Occupation and Employment Surveys.

**FIGURE 2.11.1.3**  
AM/FM radio and broadcast TV stations



Source: IFT based on data as of December 2015.

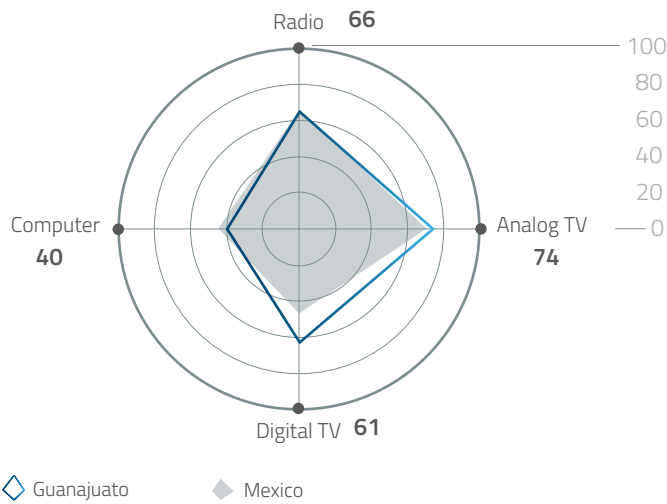
**Figure 2.11.2.1**  
Fixed telecommunications services penetration per 100 households



Source: IFT based on Telecom operator's data as of December 2015.

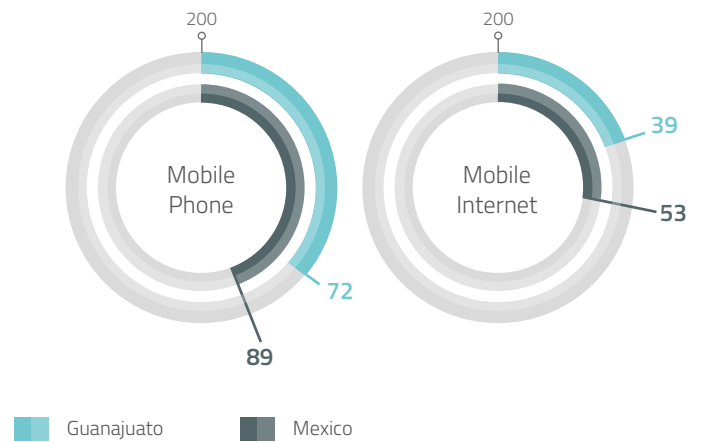
Note: The number of households as of December 2015 was estimated via a linear interpolation of the CONAPO's published information. The "Cable" category includes cable, microwave and IPTV subscriptions, with the latter two categories accounting for less than 2.5% of all subscriptions in Mexico. Fixed telephone service is measure by number of lines, whereas fixed broadband and pay TV services are measure by number of subscriptions.

**FIGURE 2.11.2.2**  
ICT equipment per 100 households



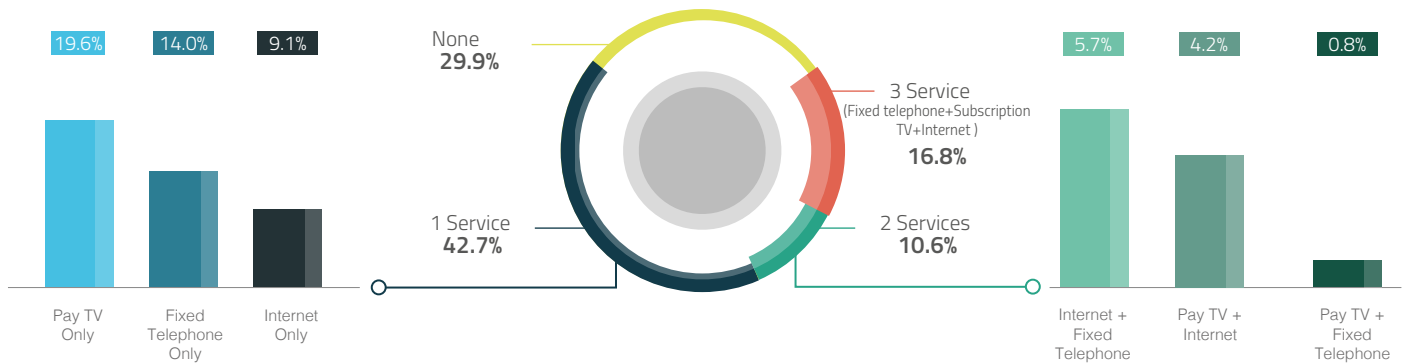
Source: IFT based on data from ENDUTIH 2015.  
Note: The figure for Digital TV does not include households with an analog television set and digital decoder, or households with pay TV services.

**FIGURE 2.11.2.3**  
Mobile telecommunications teledensity per 100 inhabitants



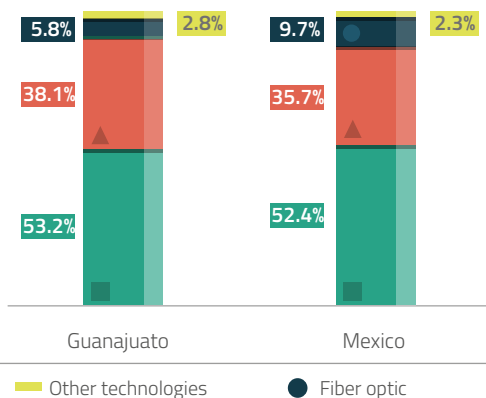
Source: IFT based on Telecom operator's data as of December 2015.  
Note: The number of inhabitants is taken from the data published by CONAPO as of January 2016. The teledensity disaggregation per state was estimated based on the Telecom operator's data and INEGI's data from the ENDUTIH 2015.

**FIGURE 2.11.2.4**  
Distribution of fixed telecommunications services in households

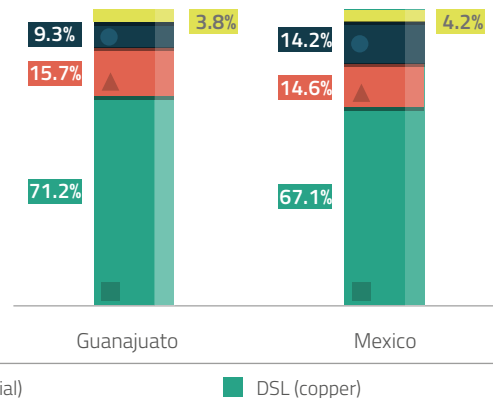


Source: IFT based on INEGI's ENDUTIH 2015.  
Note: Due to the rounding of data in the figure tags, the sum of the values shown in the bar charts may vary from those shown in the pie chart.

**Figure 2.11.2.5**  
Distribution of residential fixed broadband subscriptions per connection type



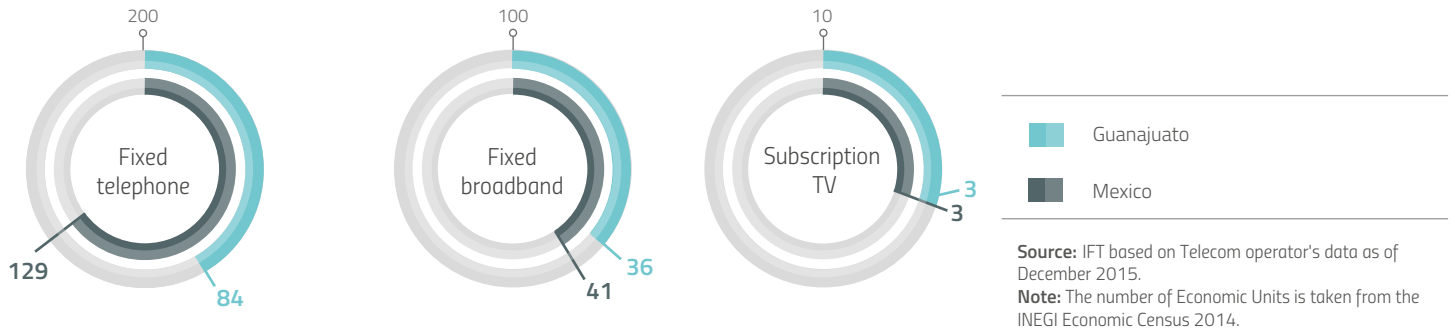
**Figure 2.11.3.1**  
Distribution of non-residential fixed broadband subscriptions per connection type



Source: IFT based on Telecom operator's data as of December 2015.  
Note: The "Other Technologies" category includes fixed wireless and satellite connections. Due to the rounding of data in the chart tags, the figures shown may not add up to 100%.

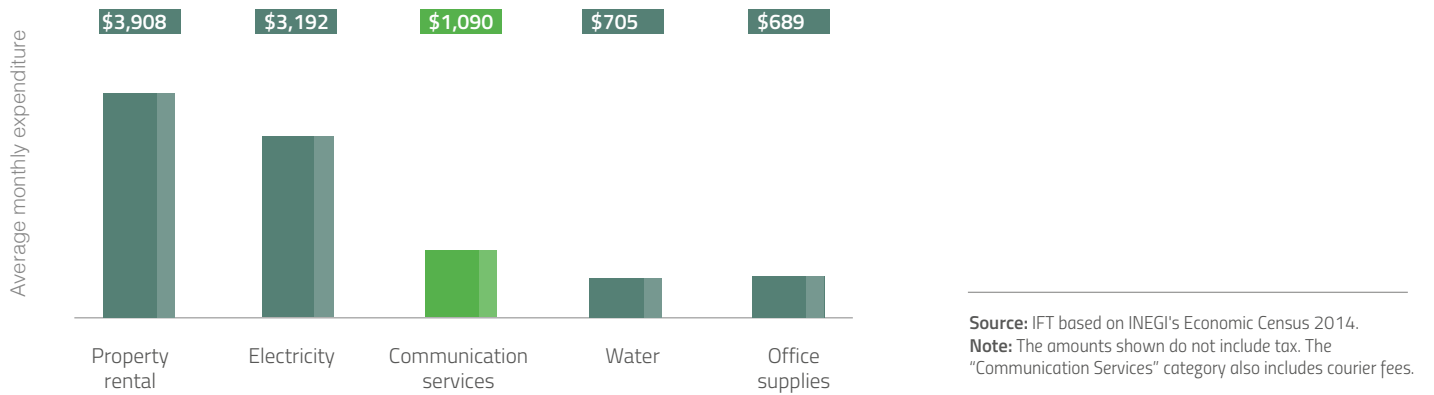
**FIGURE 2.11.3.2**

Fixed telecommunications services penetration per 100 economic units



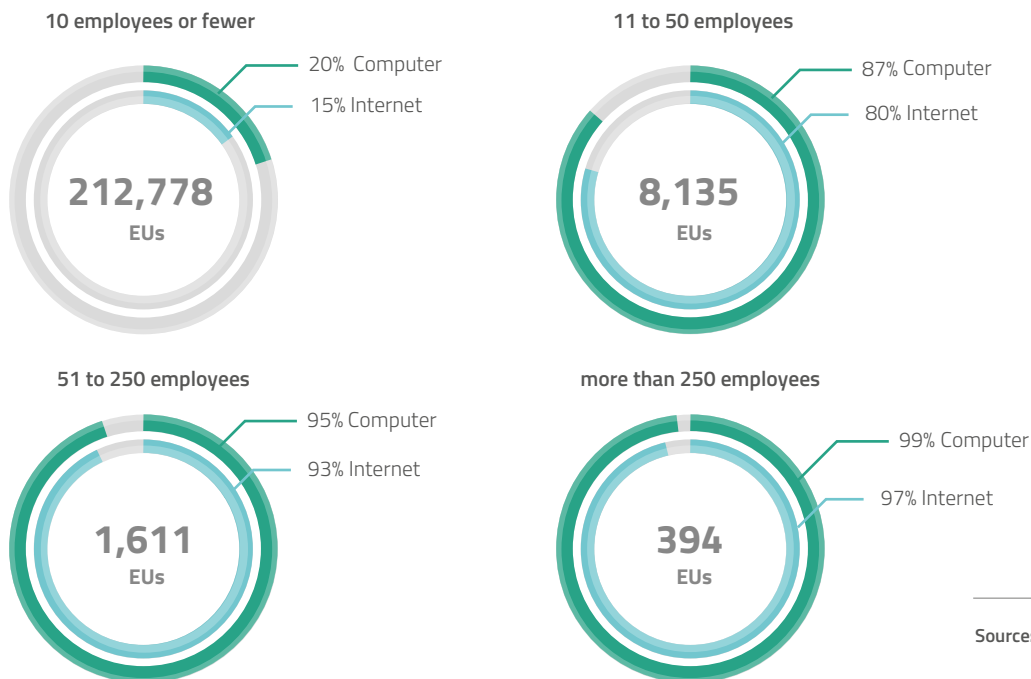
**FIGURE 2.11.3.3**

Average monthly expenditure of economic units by service type



**Figure 2.11.3.4**

Computer and internet adoption by economic unit (EU) size





## STATISTICAL YEARBOOK 2015:

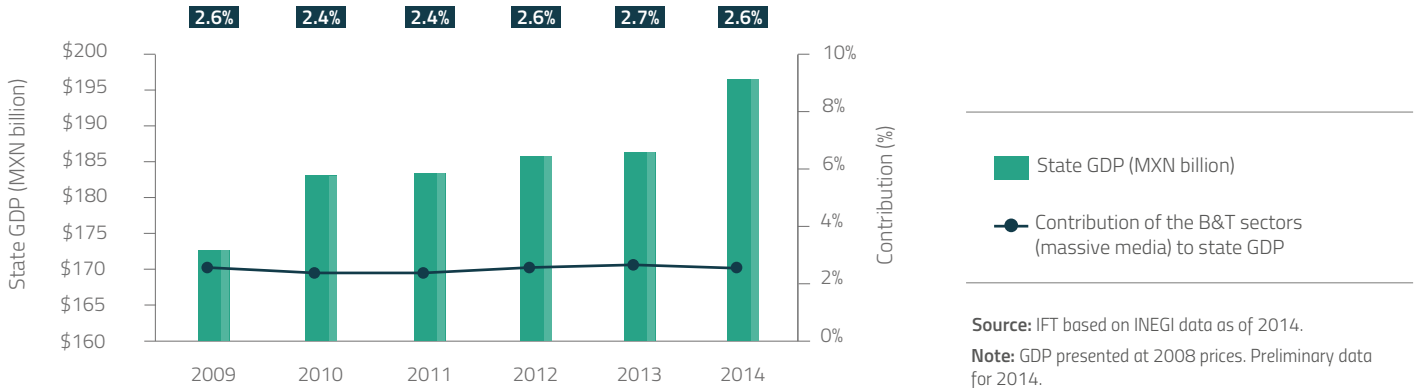
# 2.12 GUERRERO (GRO)

## General Overview

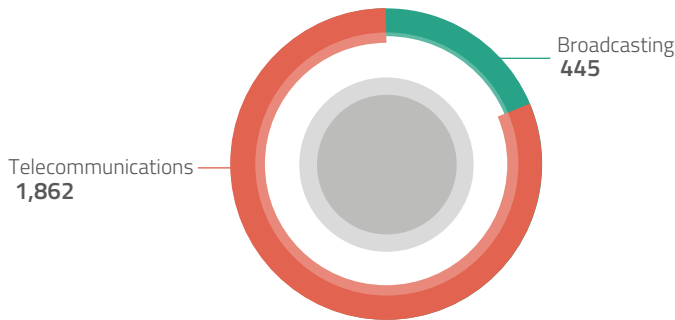
- ▶ From 2009 to 2014 Guerrero's GDP showed an average annual growth rate of 2.6%. Additionally as of 2014 the massive media sector<sup>12</sup> contributed with 2.6% of the overall state's GDP, equivalent to MXN 5,060 billion.
- ▶ In 2015, the telecommunications sector employed 1,862 people, whereas the broadcasting sector employed 450 people. In terms of broadcasting infrastructure, at the end of 2015, the state had 54 radio broadcasting stations (37 FM stations and 17 AM stations) and 23 broadcast television channels.
- ▶ In terms of fixed telecommunications services, by the end of 2015 Guerrero had the highest penetration in pay TV services with 46 subscriptions per 100 households, compared to 31 fixed telephone lines and 24 fixed broadband subscriptions per 100 households. Moreover, by mid 2015 according to ENDUTIH's results 60.8% of households had at least one of these services.
- ▶ In terms of mobile telecommunications services, the state's mobile phone teledensity as of December 2015 was 60 subscriptions per 100 inhabitants, whereas the mobile internet teledensity reached 26 subscriptions per 100 inhabitants in the same period, ranking the state, in terms of mobile telecommunications penetration, on top 30 out of 32 Mexican states.
- ▶ Regarding to ICT equipment adoption in Guerrero, analog TV sets had the highest penetration level per 100 households with 67 television sets per 100 households; followed by radio equipment with 43 radios per 100 households, digital television with 27 television sets per 100 households (this figure does not include households with an analog television set connected to a digital decoder, or households with pay TV services), and finally, computer equipment with 25 computers per 100 households.
- ▶ As in most states, as of 2014 property rental was the principal expenditure incurred by economic units (business) in Guerrero, standing at an average near to MXN 2,000 per month. On the other hand, expenditure on telecommunications services was MXN 255 per month, higher than other typical company expenditures such as water (MXN 350 per month) and office supplies (approximately MXN 224 per month).
- ▶ Additionally, the fixed telecom services penetrations in Guerrero's economic units (business) segment were 42 fixed telephone lines per 100 economic units (business), 20 fixed broadband subscriptions per 100 economic units (business); and two pay TV subscriptions per 100 economic units (business).
- ▶ Finally, in 2014 there were registered 134,149 economic units (business) in the state and of those who had 10 employees or less only 11% used computer as part their operations, whereas only 8% used internet. Nevertheless, these figures were above 65% for economic units (business) with 11 employees or more, which proves that there is a positive relation between company size and the telecommunications services adoptions as part of the business as usual processes.

<sup>12</sup> According to the SCIAN, the Broadcasting and Telecommunications subsectors form part of Sector 51 Massive Media Information, and contributed 94% to the sector's nationwide GDP in 2015

**FIGURE 2.12.1.1**  
Contribution of the B&T sectors (massive media) to state GDP

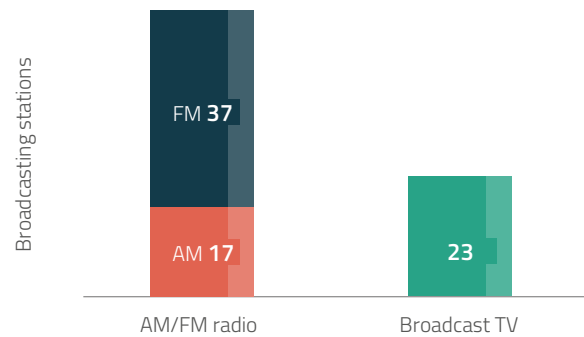


**FIGURE 2.12.1.2**  
Employees in the B&T sectors



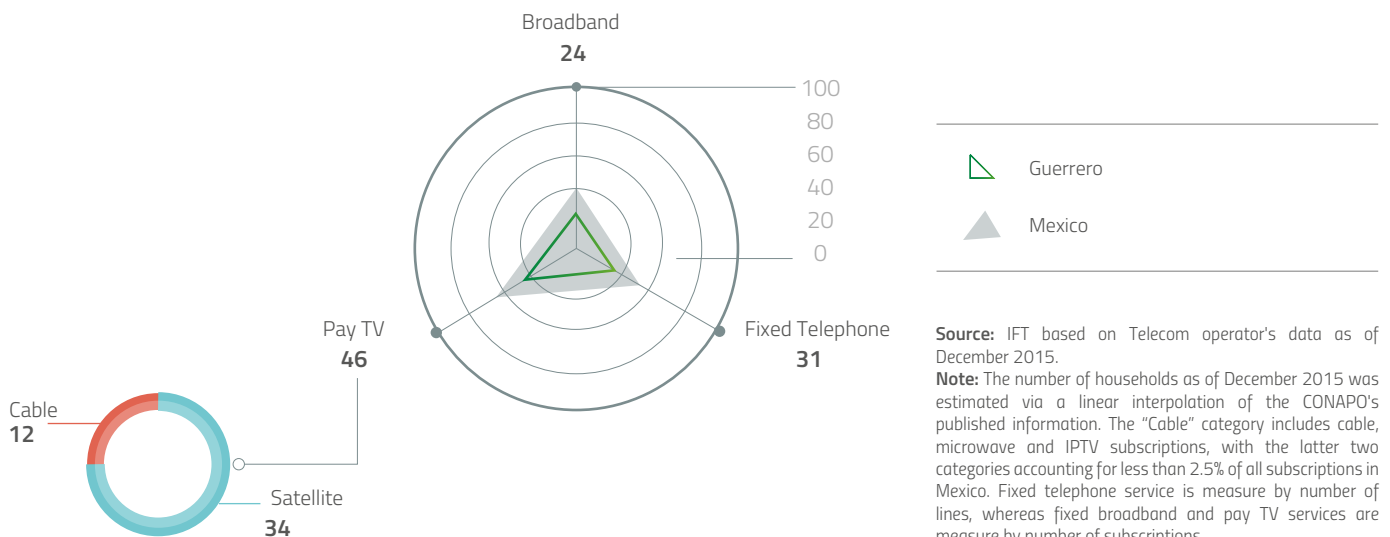
Source: IFT based on data from INEGI's quarterly National Occupation and Employment Surveys.

**FIGURE 2.12.1.3**  
AM/FM radio and broadcast TV stations



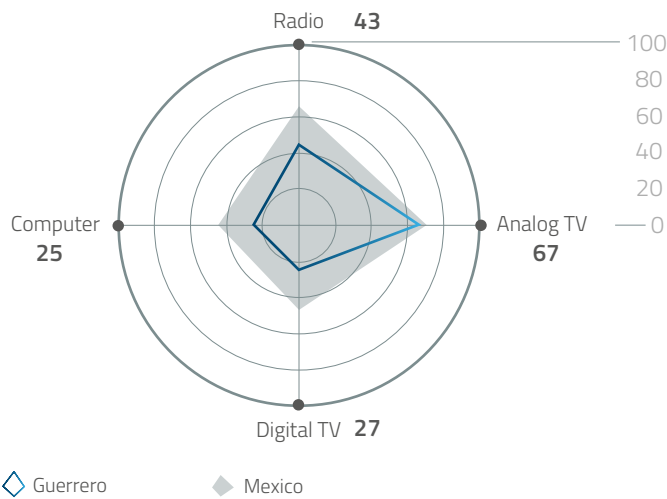
Source: IFT based on data as of December 2015.

**Figure 2.12.2.1**  
Fixed telecommunications services penetration per 100 households



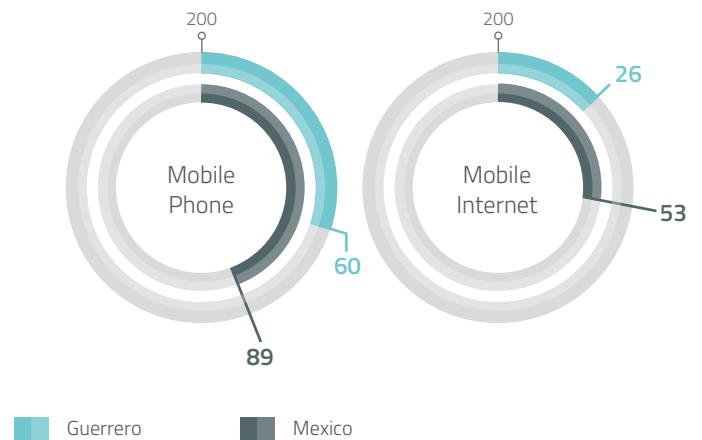


**FIGURE 2.12.2.2**  
ICT equipment per 100 households



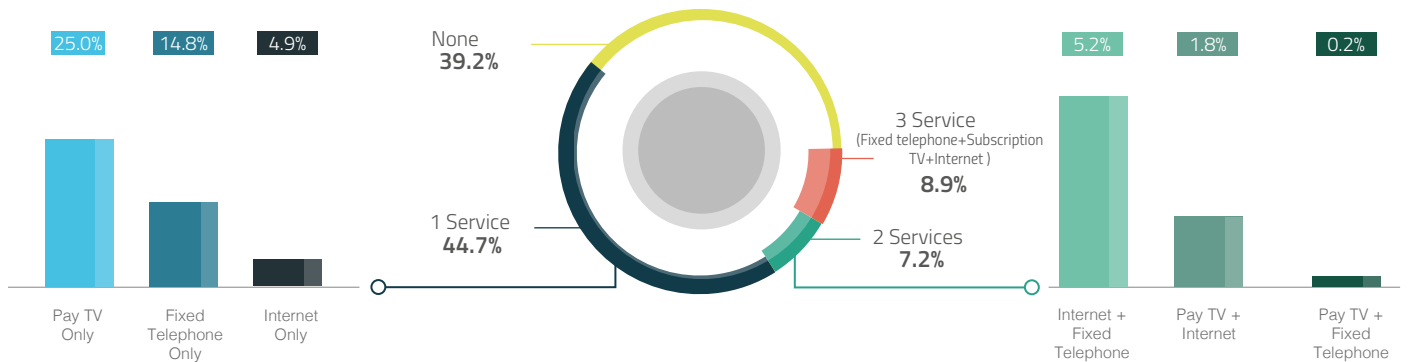
**Source:** IFT based on data from ENDUTIH 2015.  
**Note:** The figure for Digital TV does not include households with an analog television set and digital decoder, or households with pay TV services.

**FIGURE 2.12.2.3**  
Mobile telecommunications teledensity per 100 inhabitants



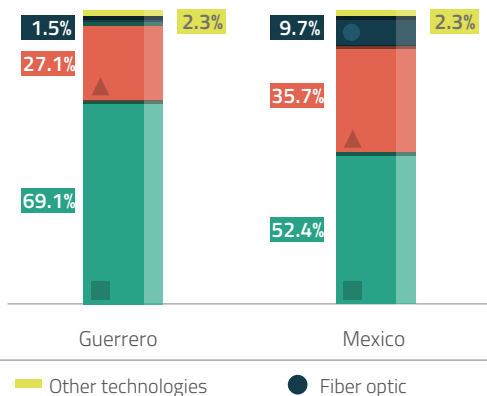
**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The number of inhabitants is taken from the data published by CONAPO as of January 2016. The teledensity disaggregation per state was estimated based on the Telecom operator's data and INEGI's data from the ENDUTIH 2015.

**FIGURE 2.12.2.4**  
Distribution of fixed telecommunications services in households

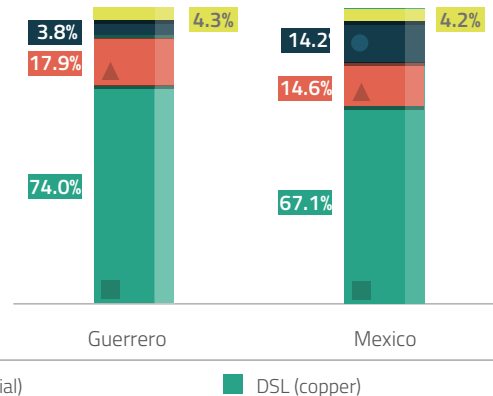


**Source:** IFT based on INEGI's ENDUTIH 2015.  
**Note:** Due to the rounding of data in the figure tags, the sum of the values shown in the bar charts may vary from those shown in the pie chart.

**Figure 2.12.2.5**  
Distribution of residential fixed broadband subscriptions per connection type

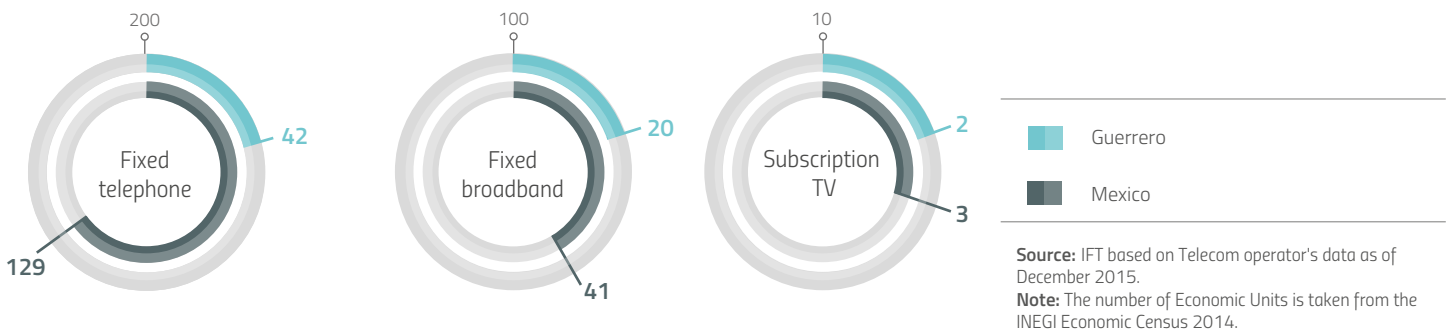


**Figure 2.12.3.1**  
Distribution of non-residential fixed broadband subscriptions per connection type

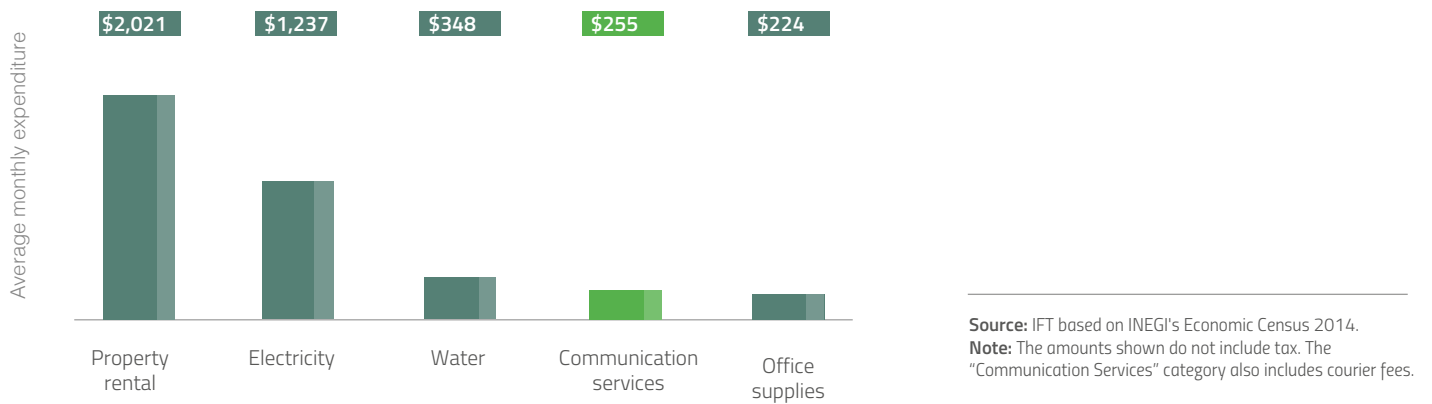


**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The "Other Technologies" category includes fixed wireless and satellite connections. Due to the rounding of data in the chart tags, the figures shown may not add up to 100%.

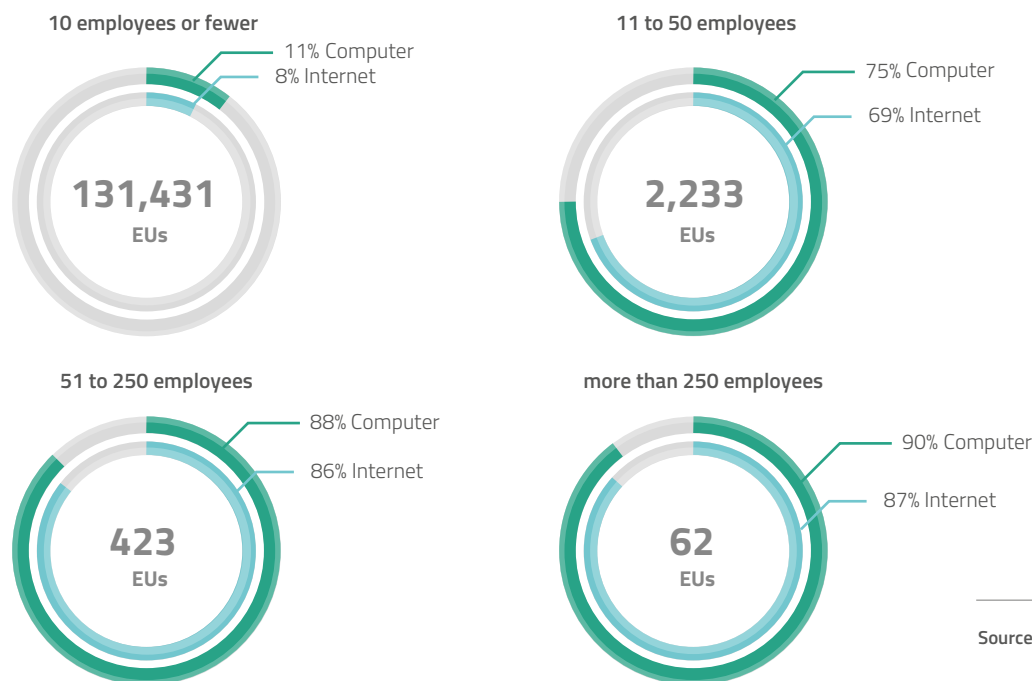
**FIGURE 2.12.3.2**  
Fixed telecommunications services penetration per 100 economic units



**FIGURE 2.12.3.3**  
Average monthly expenditure of economic units by service type



**Figure 2.12.3.4**  
Computer and internet adoption by economic unit (EU) size







## STATISTICAL YEARBOOK 2015:

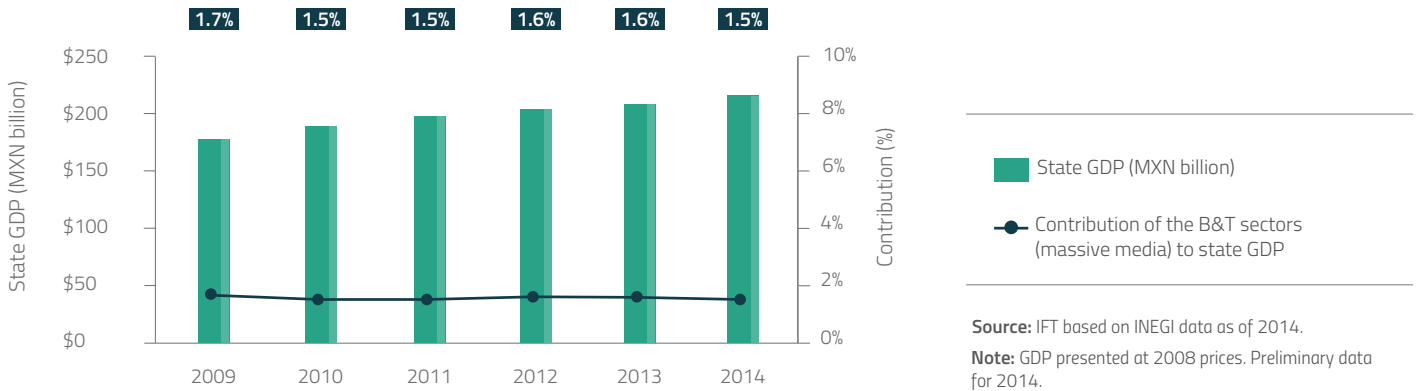
# 2.13 HIDALGO (HGO)

## General Overview

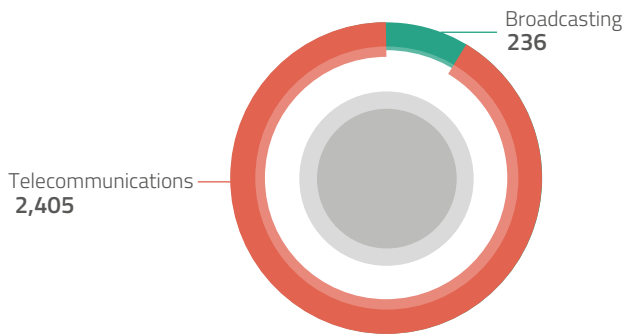
- ▶ From 2009 to 2014 Hidalgo's GDP showed an average annual growth rate of 3.8%. Additionally as of 2014 the massive media sector<sup>13</sup> contributed with 1.5% of the overall state's GDP, equivalent to MXN 3.280 billion.
- ▶ In 2015, the telecommunications sector employed 2,400 people, whereas the broadcasting sector employed 236 people. In terms of broadcasting infrastructure, at the end of 2015, the state had 32 radio broadcasting stations (23 FM stations and 9 AM stations) and 15 broadcast television channels.
- ▶ In terms of fixed telecommunications services, by the end of 2015 Hidalgo had the highest penetration in pay TV services with 54 subscriptions per 100 households, compared to 26 fixed telephone lines per 100 households and 23 broadband subscriptions per 100 households. Moreover, by mid 2015 according to ENDUTIH's results 73.4% of households had at least one of these services.
- ▶ In terms of mobile telecommunications services, the state's mobile phone teledensity as of December 2015 was 68 subscriptions per 100 inhabitants, whereas the mobile internet teledensity reached 38 subscriptions per 100 inhabitants in the same period, ranking the state, in terms of mobile telecommunications penetration, on top 24 out of 32 Mexican states.
- ▶ Regarding to ICT equipment adoption in Hidalgo, analog TV sets and radio had the highest penetration level per 100 households with 66 radios and television sets per 100 households; followed by digital television with 44 television sets per 100 household (this figure does not include households with an analog television set connected to a digital decoder, or households with pay TV services), and finally, computer equipment with 34 computers per 100 households.
- ▶ As in most states, as of 2014 property rental was the principal expenditure incurred by economic units (business) in Hidalgo, standing at an average near to MXN 2,500 per month. On the other hand, expenditure on telecommunications services was MXN 419 per month, lower than other typical company expenditures such as water (MXN 426 per month) and office supplies (approximately MXN 455 per month).
- ▶ Additionally, the fixed telecom services penetrations in Hidalgo's economic units (business) segment were 52 fixed telephone lines per 100 economic units (business), 25 fixed broadband subscriptions per 100 economic units (business); and two pay TV subscriptions per 100 economic units (business).
- ▶ Finally, in 2014 there were registered 98,447 economic units (business) in the state and of those who had 10 employees or less only 17% used computer as part their operations, whereas only 13% used internet. Nevertheless, these figures were above 75% for economic units (business) with 11 or more employees, which proves that there is a positive relation between company size and the telecommunications services adoptions as part of the business as usual processes.

<sup>13</sup> According to the SCIAN, the Broadcasting and Telecommunications subsectors form part of Sector 51 Massive Media Information, and contributed 94% to the sector's nationwide GDP in 2015

**FIGURE 2.13.1.1**  
Contribution of the B&T sectors (massive media) to state GDP

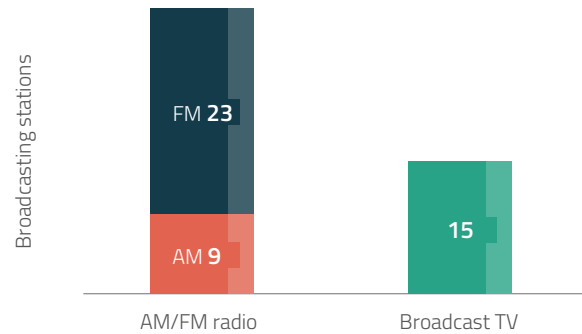


**FIGURE 2.13.1.2**  
Employees in the B&T sectors



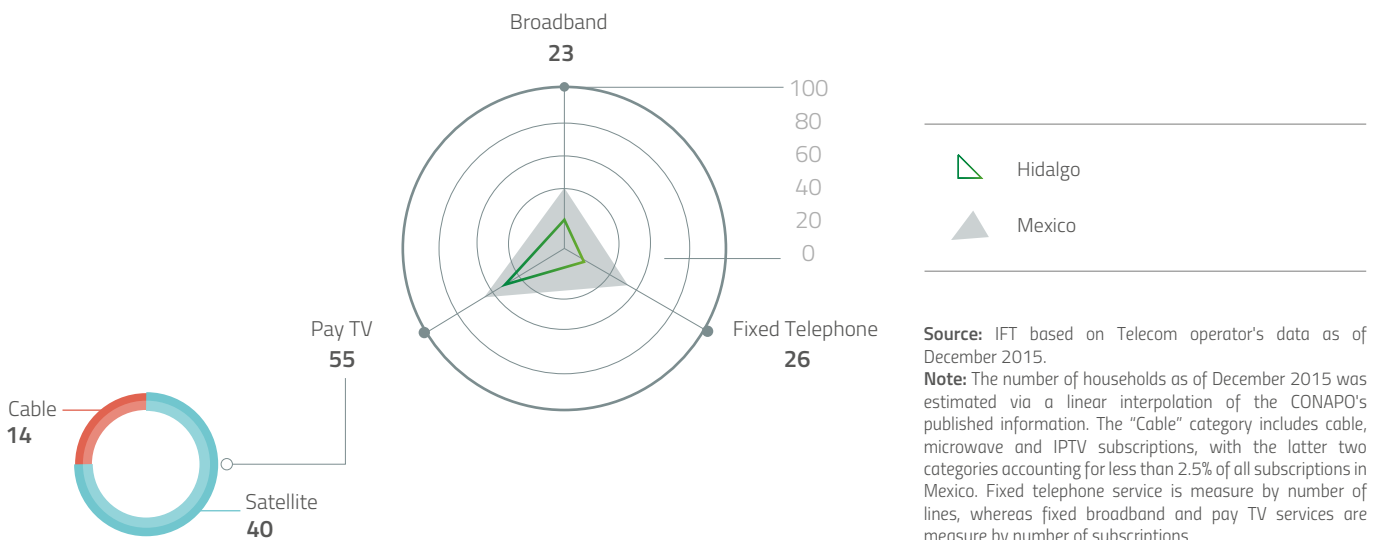
**Source:** IFT based on data from INEGI's quarterly National Occupation and Employment Surveys.

**FIGURE 2.13.1.3**  
AM/FM radio and broadcast TV stations

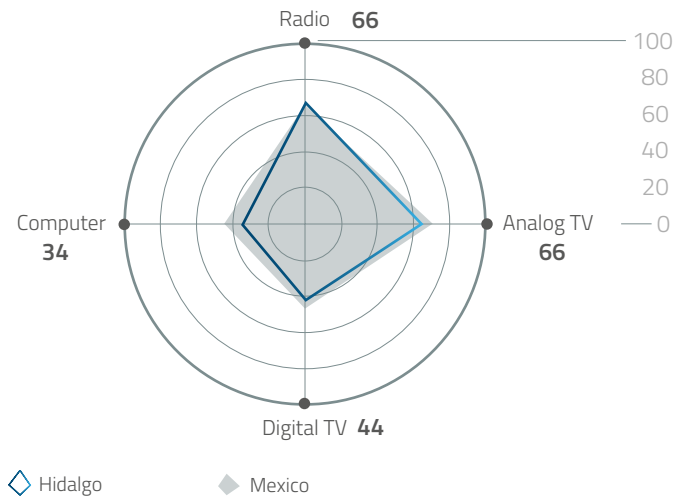


**Source:** IFT based on data as of December 2015.

**Figure 2.13.2.1**  
Fixed telecommunications services penetration per 100 households

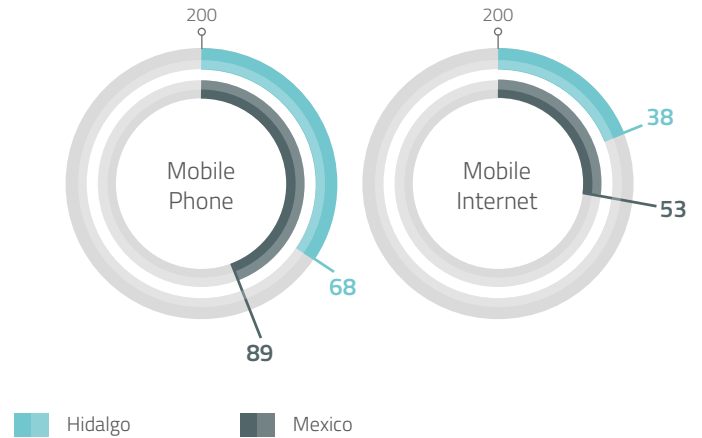


**FIGURE 2.13.2.2**  
ICT equipment per 100 households



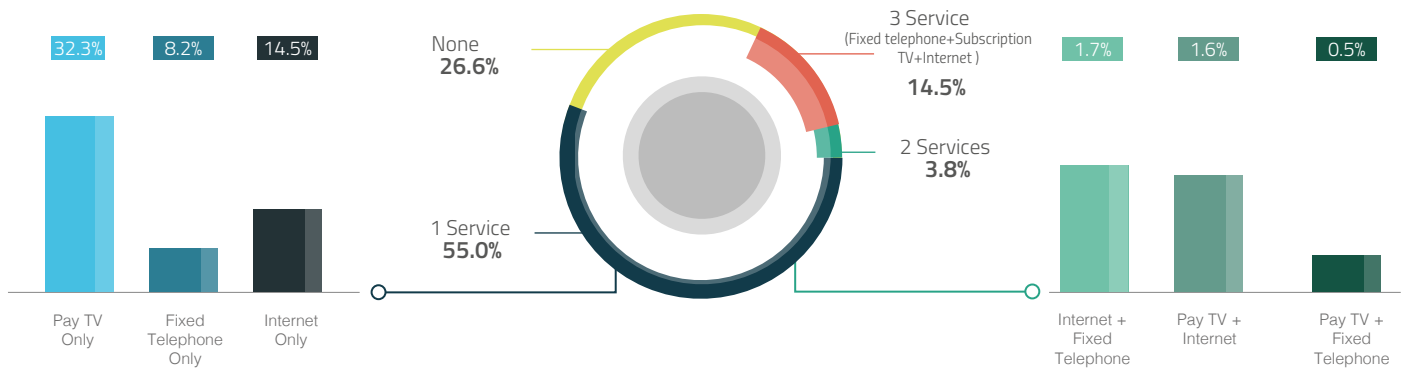
**Source:** IFT based on data from ENDUTIH 2015.  
**Note:** The figure for Digital TV does not include households with an analog television set and digital decoder, or households with pay TV services.

**FIGURE 2.13.2.3**  
Mobile telecommunications teledensity per 100 inhabitants



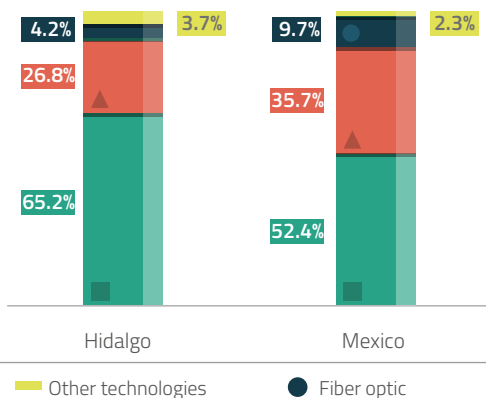
**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The number of inhabitants is taken from the data published by CONAPO as of January 2016. The teledensity desagregation per state was estimated based on the Telecom operator's data and INEGI's data from the ENDUTIH 2015.

**FIGURE 2.13.2.4**  
Distribution of fixed telecommunications services in households

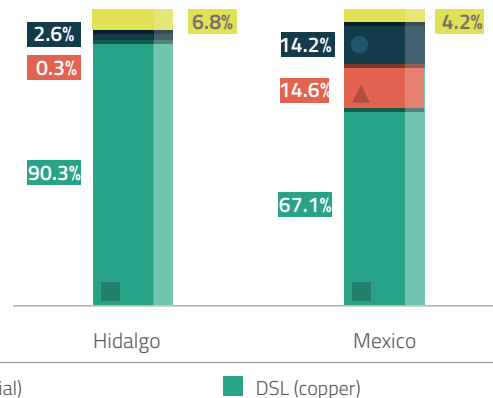


**Source:** IFT based on INEGI's ENDUTIH 2015.  
**Note:** Due to the rounding of data in the figure tags, the sum of the values shown in the bar charts may vary from those shown in the pie chart.

**Figure 2.13.2.5**  
Distribution of residential fixed broadband subscriptions per connection type

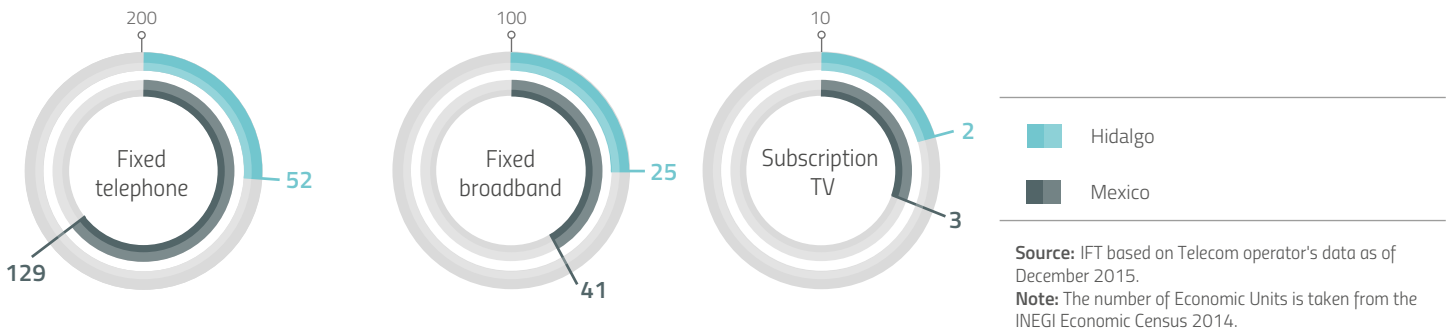


**Figure 2.13.3.1**  
Distribution of non-residential fixed broadband subscriptions per connection type

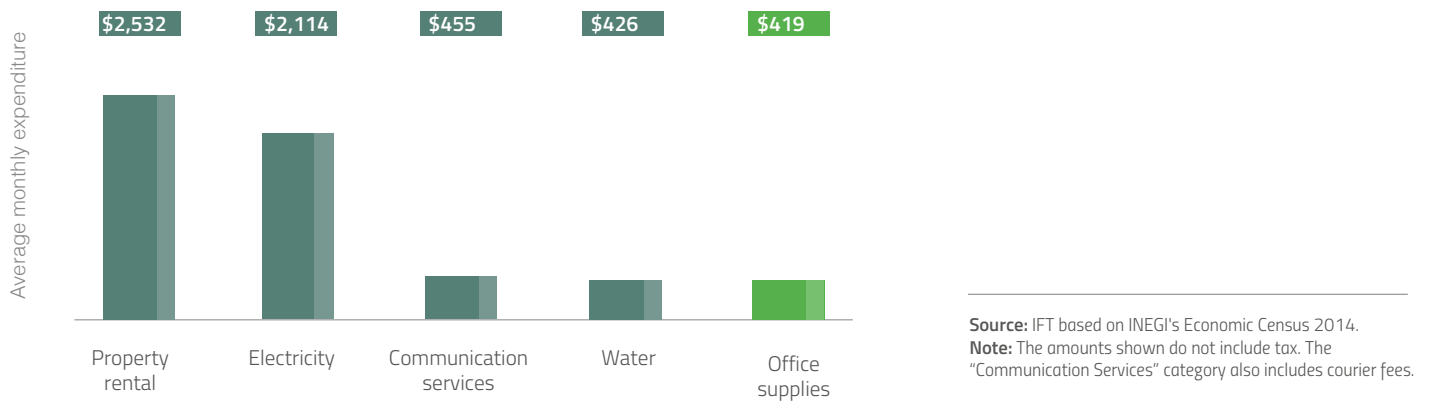


**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The "Other Technologies" category includes fixed wireless and satellite connections. Due to the rounding of data in the chart tags, the figures shown may not add up to 100%.

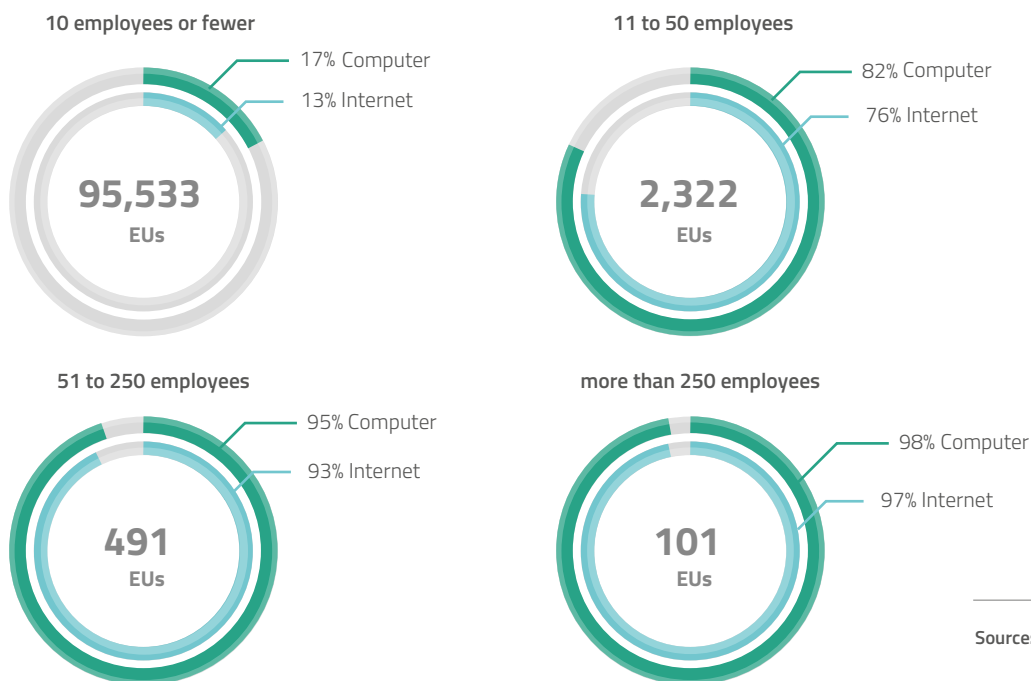
**FIGURE 2.13.3.2**  
Fixed telecommunications services penetration per 100 economic units



**FIGURE 2.13.3.3**  
Average monthly expenditure of economic units by service type



**Figure 2.13.3.4**  
Computer and internet adoption by economic unit (EU) size



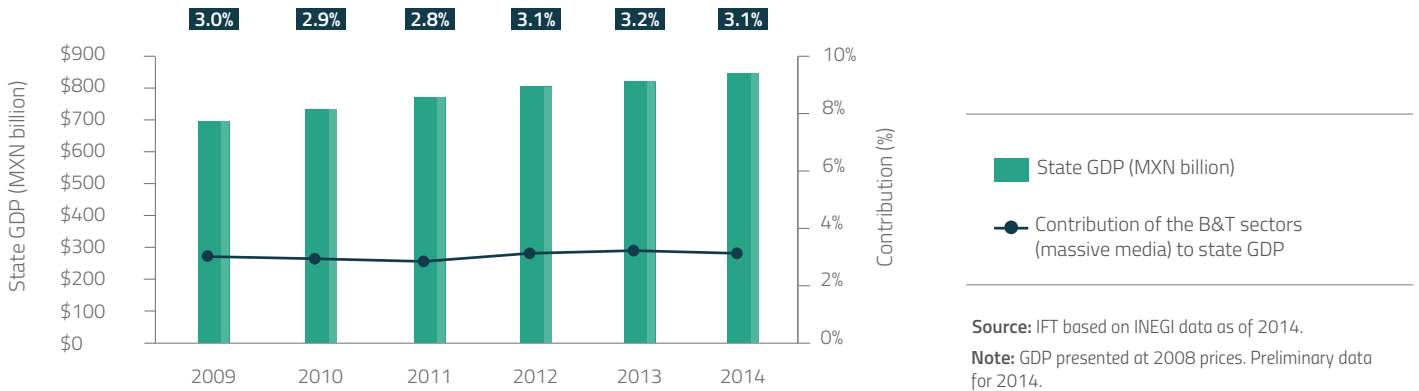

**STATISTICAL YEARBOOK 2015:**
**2.14 JALISCO (JAL)**

## General Overview

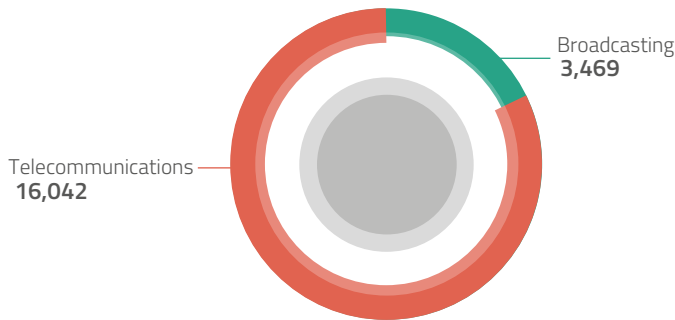
- ▶ From 2009 to 2014 Jalisco's GDP showed an average annual growth rate of 4%. Additionally as of 2014 the massive media sector<sup>14</sup> contributed with 3.1% of the overall state's GDP, equivalent to MXN 26.280 billion.
- ▶ In 2015, the telecommunications sector employed more than 16,000 people, whereas the broadcasting sector employed approximately 3,469 people. In terms of broadcasting infrastructure at the end of 2015, Jalisco had 100 radio broadcasting stations (67 FM stations and 33 AM stations) and 24 broadcast television channels.
- ▶ In terms of fixed telecommunications services, by the end of 2015, Jalisco had the highest penetration level in pay TV services with 60 subscriptions per 100 households, compared to 59 fixed telephone lines per 100 households, and 49 fixed broadband subscriptions per 100 households. Moreover, by mid 2015 according to ENDUTIH's results, 80.6% of households had at least one of these services.
- ▶ In terms of mobile telecommunications services, the state's mobile phone teledensity as of December 2015 was 100 subscriptions per 100 inhabitants, whereas the mobile internet teledensity reached 67 subscriptions per 100 inhabitants, ranking the state, in terms of mobile telecommunications penetration, on top 7 out of 32 Mexican states.
- ▶ Regarding to ICT equipment adoption in Jalisco, radio equipment had the highest penetration level per 100 households with 73 radios sets per 100 households; followed by analog TV equipment with 72, digital television with 60 sets per 100 households (this figure does not include households with an analog television set connected to a digital decoder, or households with pay TV services), and finally, computer equipment with 56 computers per 100 households.
- ▶ As in most states, as of 2014 property rental was the principal expenditure incurred by economic units (business) Jalisco, standing at an average over MXN 6,200 per month. On the other hand, expenditure on telecommunications services was MXN 1,323 per month, higher than other typical company expenditures such as water (MXN 582 per month) and office supplies (MXN 793 per month).
- ▶ Additionally, the fixed telecom services penetrations in Jalisco economic units (business) segment were 148 fixed telephone lines per 100 economic units (business), 47 fixed broadband subscriptions per 100 economic units (business); and 3 pay TV subscriptions per 100 economic units (business).
- ▶ Finally, in 2014 there were registered 312,823 economic units (business), in the state and of those who had 10 employees or less only 24% used computers as part of their operations, whereas only 19% used the internet. Nevertheless, these figures were above 80% for economic units (business) with 11 employees or more, which proves that there is a positive relation between company size and telecommunications services adoption as part of the business as usual processes.

<sup>14</sup> According to the SCIAN, the Broadcasting and Telecommunications subsectors form part of Sector 51 Massive Media Information, and contributed 94% to the sector's nationwide GDP in 2015

**FIGURE 2.14.1.1**  
Contribution of the B&T sectors (massive media) to state GDP

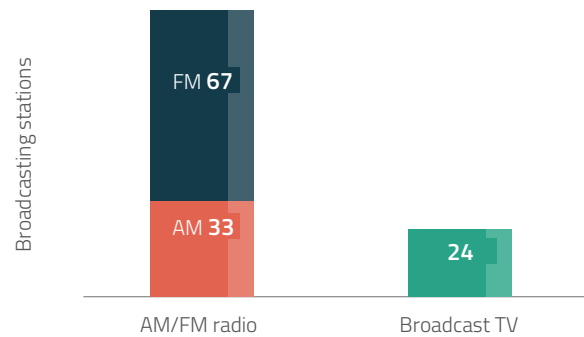


**FIGURE 2.14.1.2**  
Employees in the B&T sectors



Source: IFT based on data from INEGI's quarterly National Occupation and Employment Surveys.

**FIGURE 2.14.1.3**  
AM/FM radio and broadcast TV stations



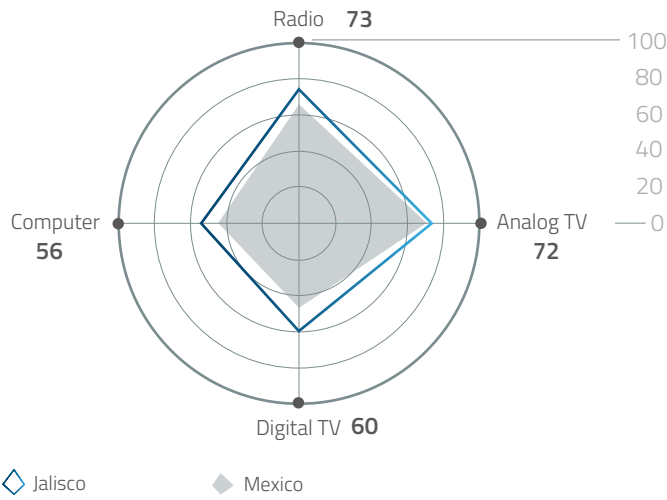
Source: IFT based on data as of December 2015.

**Figure 2.14.2.1**  
Fixed telecommunications services penetration per 100 households



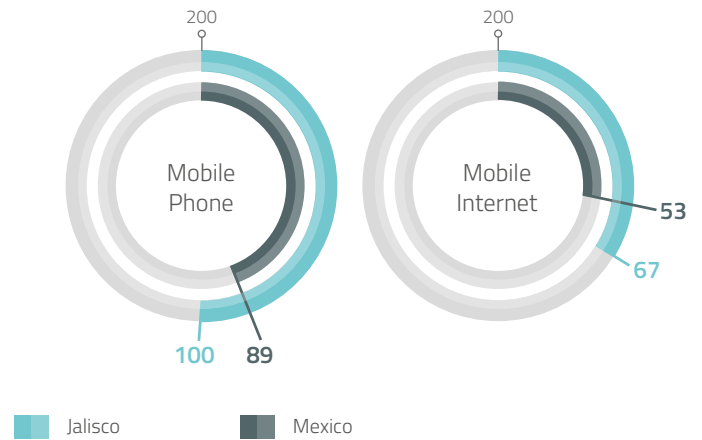


**FIGURE 2.14.2.2**  
ICT equipment per 100 households



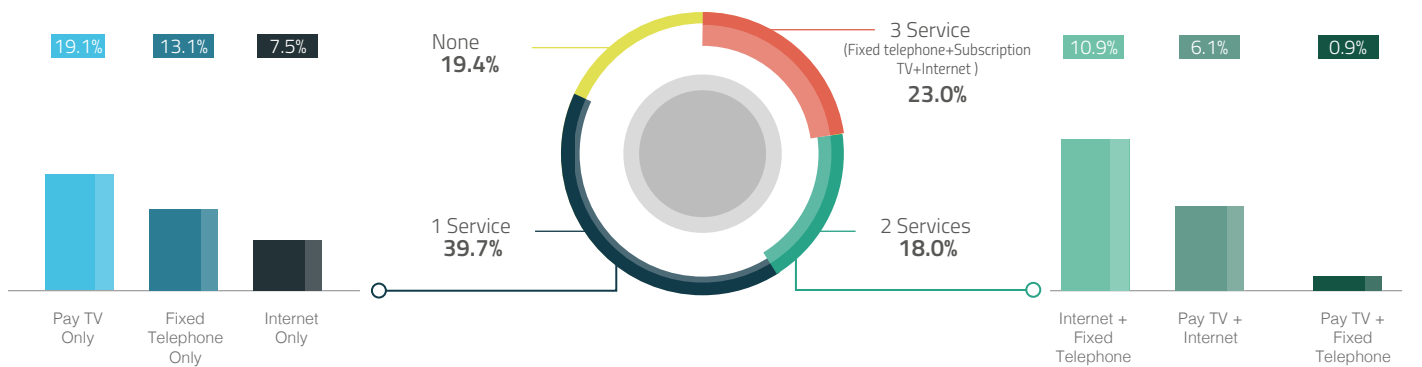
**Source:** IFT based on data from ENDUTIH 2015.  
**Note:** The figure for Digital TV does not include households with an analog television set and digital decoder, or households with pay TV services.

**FIGURE 2.14.2.3**  
Mobile telecommunications teledensity per 100 inhabitants



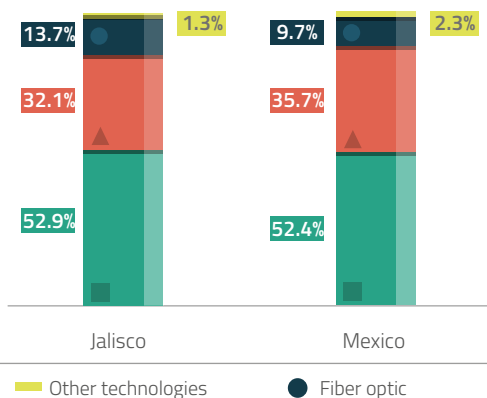
**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The number of inhabitants is taken from the data published by CONAPO as of January 2016. The teledensity desagregation per state was estimated based on the Telecom operator's data and INEGI's data from the ENDUTIH 2015.

**FIGURE 2.14.2.4**  
Distribution of fixed telecommunications services in households

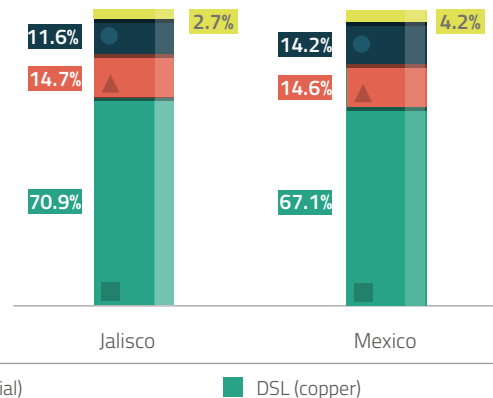


**Source:** IFT based on INEGI's ENDUTIH 2015.  
**Note:** Due to the rounding of data in the figure tags, the sum of the values shown in the bar charts may vary from those shown in the pie chart.

**Figure 2.14.2.5**  
Distribution of residential fixed broadband subscriptions per connection type

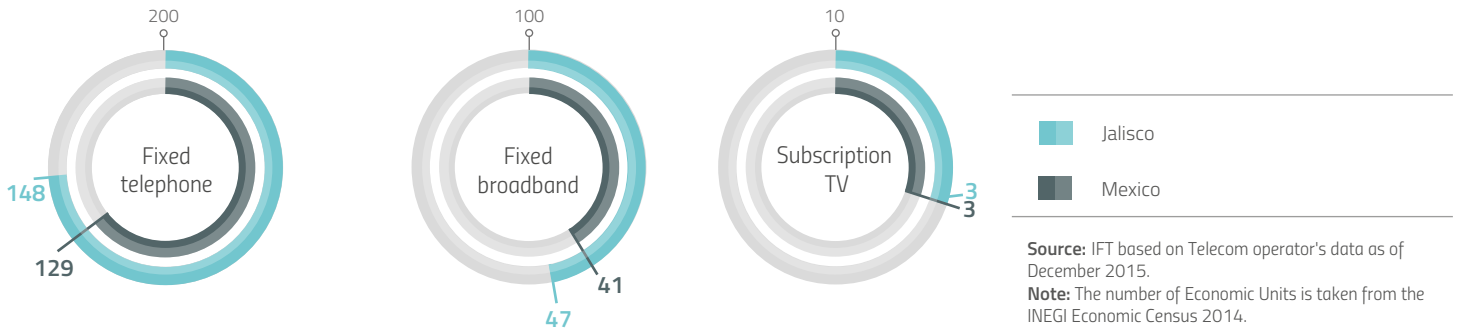


**Figure 2.14.3.1**  
Distribution of non-residential fixed broadband subscriptions per connection type

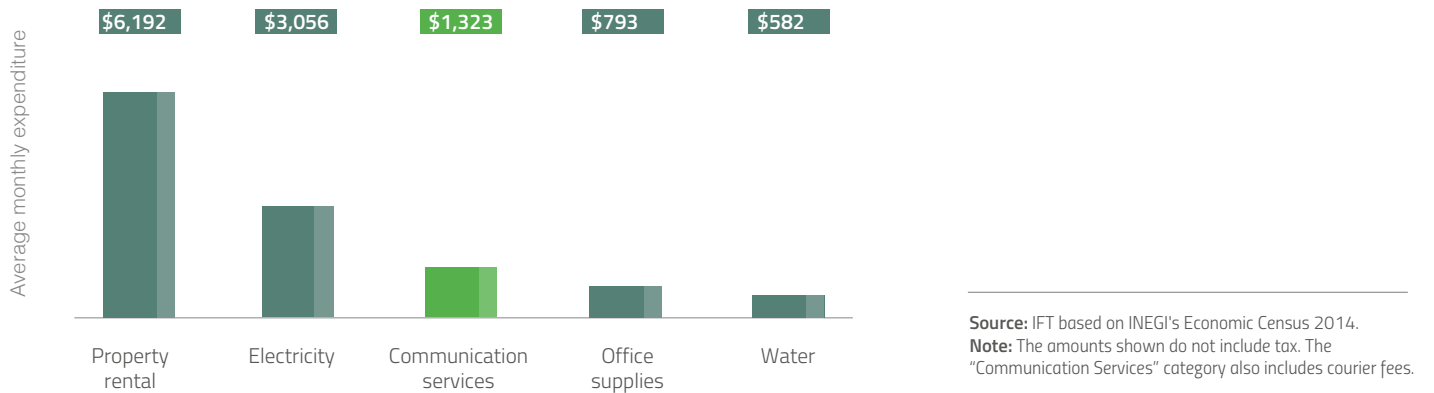


**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The "Other Technologies" category includes fixed wireless and satellite connections. Due to the rounding of data in the chart tags, the figures shown may not add up to 100%.

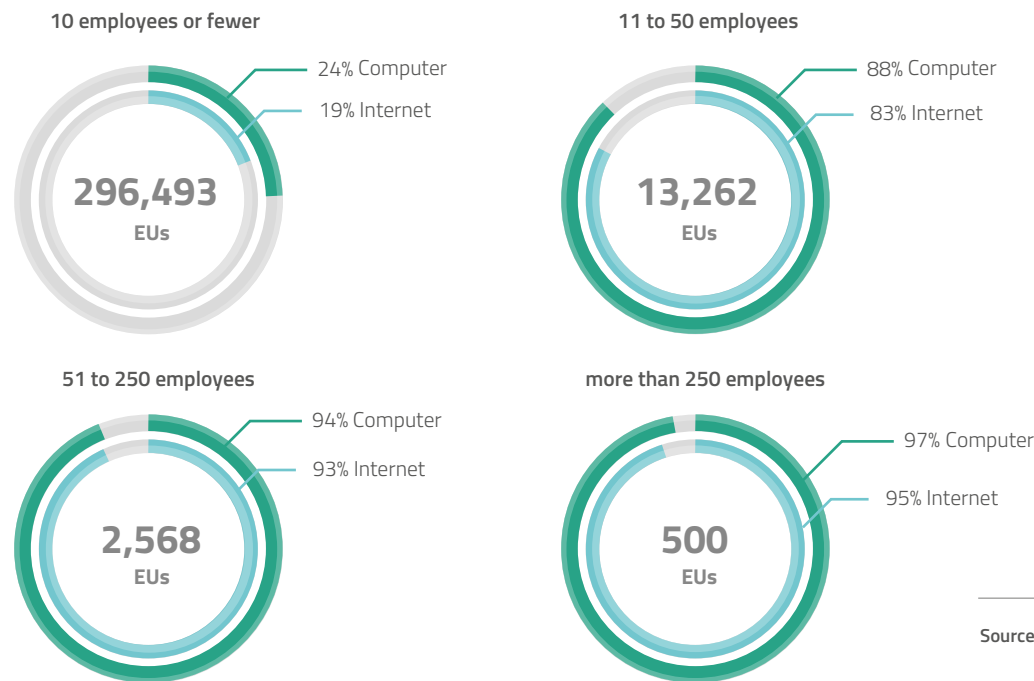
**FIGURE 2.14.3.2**  
Fixed telecommunications services penetration per 100 economic units



**FIGURE 2.14.3.3**  
Average monthly expenditure of economic units by service type



**Figure 2.14.3.4**  
Computer and internet adoption by economic unit (EU) size







STATISTICAL YEARBOOK 2015:

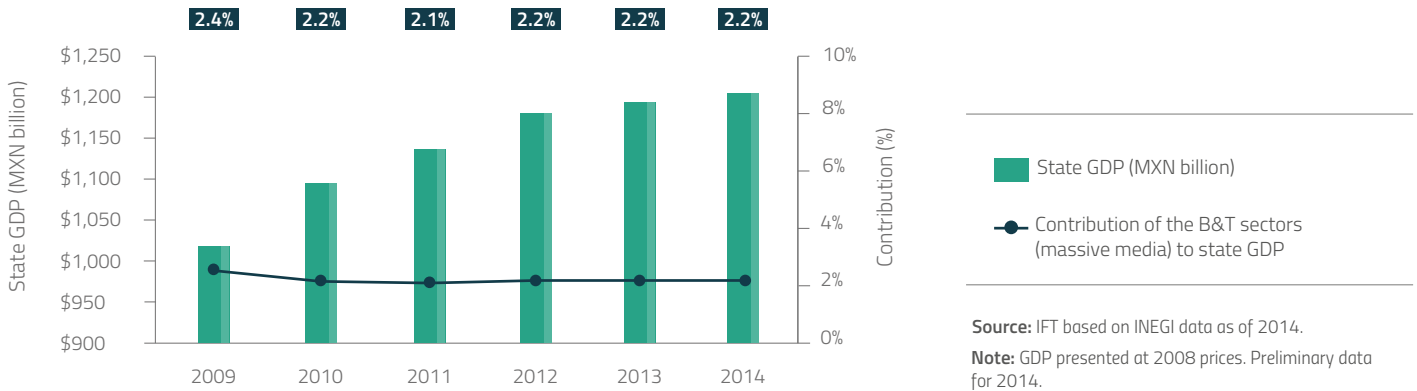
## 2.15 STATE OF MEXICO (EMEX)

### General Overview

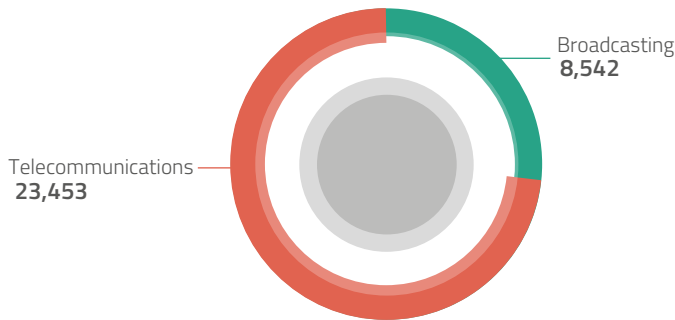
- ▶ From 2009 to 2014 the State of Mexico GDP showed an average annual growth rate of 3.5%. Additionally as of 2014 the massive media sector<sup>15</sup> contributed with 2.2% of the overall state's GDP, equivalent to MXN 26.020 billion.
- ▶ In 2015, the telecommunications sector employed more than 23,453 people, whereas the broadcasting sector employed approximately 8,500 people. In terms of broadcasting infrastructure at the end of 2015, the State of Mexico had 36 radio broadcasting stations (22 FM stations and 14 AM stations) and 11 broadcast television channels.
- ▶ In terms of fixed telecommunications services, by the end of 2015, the State of Mexico had the highest penetration level in fixed telephone lines with 46 lines per 100 household, compared to 45 TV subscriptions per 100 households, and 42 fixed broadband subscriptions per 100 households. Moreover, by mid 2015 according to ENDUTIH's results, 67.8% of households had at least one of these services.
- ▶ In terms of mobile telecommunications services, the state's mobile phone teledensity as of December 2015 was 108 subscriptions per 100 inhabitants, which implies that there were some State of Mexico residents with more than one mobile phone, whereas the mobile internet teledensity reached 61 subscriptions per 100 inhabitants, ranking the state, in terms of mobile telecommunications penetration, on top 3 out of 32 Mexican states.
- ▶ Regarding to ICT equipment adoption in the State of Mexico, analog TV sets had the highest penetration level per 100 households, with 73 television sets per 100 households; followed by radio equipment with 70 radios per 100 households, and computer equipment with 49 computers per 100 households. Finally digital television, with 46 television sets per 100 households (this figure does not include households with an analog television set connected to a digital decoder, or households with pay TV services).
- ▶ As in most states, as of 2014 property rental was the principal expenditure incurred by economic units (business) the State of Mexico, standing at an average over MXN 5,000 per month. On the other hand, expenditure on telecommunications services was MXN 1,006 per month, higher than other typical company expenditures such as water (MXN 633 per month) and office supplies (MXN 621 per month).
- ▶ Additionally, the fixed telecom services penetrations in the State of Mexico economic units (business) segment were 64 fixed telephone lines per 100 economic units (business), 25 fixed broadband subscriptions per 100 economic units (business); and 2 TV subscriptions per 100 economic units (business).
- ▶ Finally, in 2014 there were registered 534,629 economic units (business), in the state and of those who had 10 employees or less only 10% used computers as part of their operations, whereas only 10% used the internet. Nevertheless, these figures were above 78% economic units (business) with 11 employees or more, which proves that there is a positive relation between company size and telecommunications services adoption as part of the business as usual processes.

<sup>15</sup> According to the SCIAN, the Broadcasting and Telecommunications subsectors form part of Sector 51 Massive Media Information, and contributed 94% to the sector's nationwide GDP in 2015

**FIGURE 2.15.1.1**  
Contribution of the B&T sectors (massive media) to state GDP

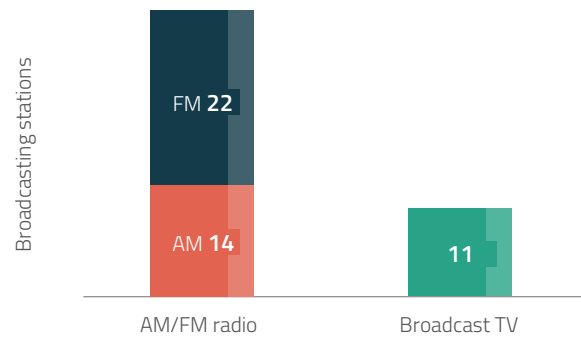


**FIGURE 2.15.1.2**  
Employees in the B&T sectors



Source: IFT based on data from INEGI's quarterly National Occupation and Employment Surveys.

**FIGURE 2.15.1.3**  
AM/FM radio and broadcast TV stations



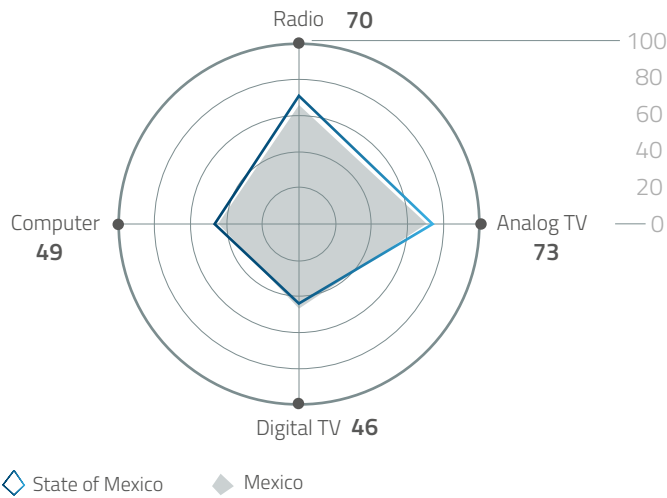
Source: IFT based on data as of December 2015.

**Figure 2.15.2.1**  
Fixed telecommunications services penetration per 100 households



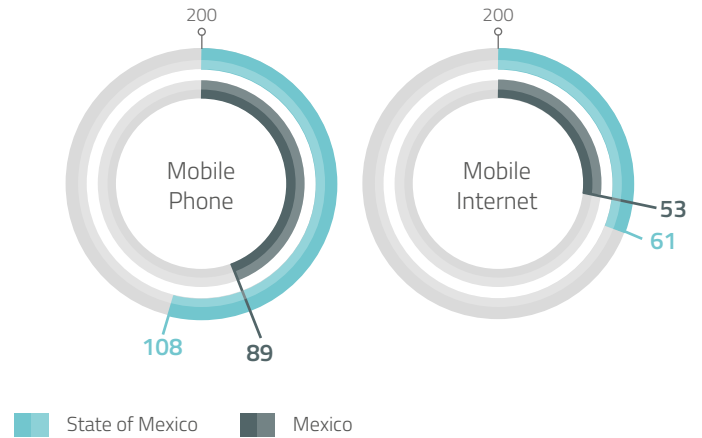


**FIGURE 2.15.2.2**  
ICT equipment per 100 households



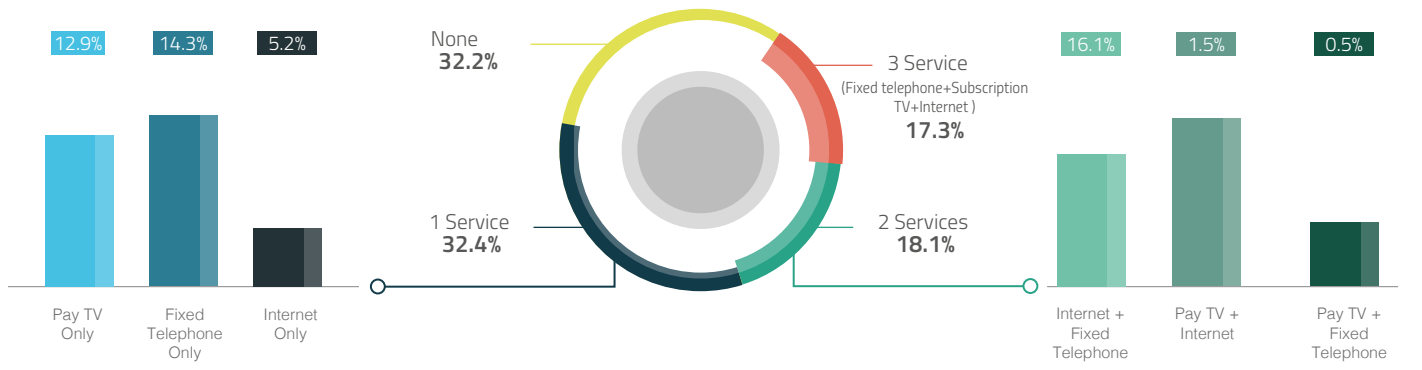
**Source:** IFT based on data from ENDUTIH 2015.  
**Note:** The figure for Digital TV does not include households with an analog television set and digital decoder, or households with pay TV services.

**FIGURE 2.15.2.3**  
Mobile telecommunications teledensity per 100 inhabitants



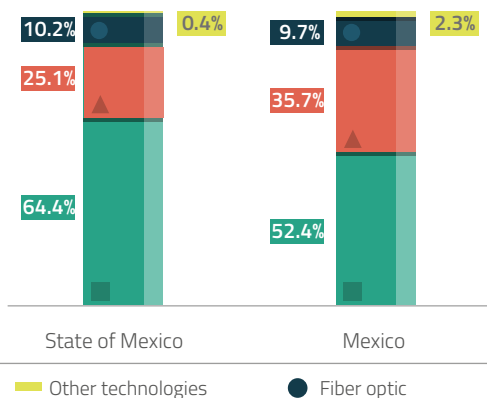
**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The number of inhabitants is taken from the data published by CONAPO as of January 2016. The teledensity desagregation per state was estimated based on the Telecom operator's data and INEGI's data from the ENDUTIH 2015.

**FIGURE 2.15.2.4**  
Distribution of fixed telecommunications services in households

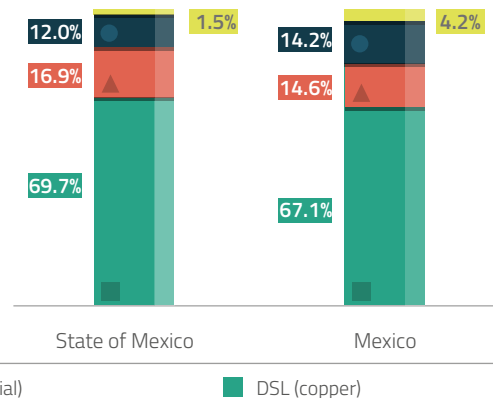


**Source:** IFT based on INEGI's ENDUTIH 2015.  
**Note:** Due to the rounding of data in the figure tags, the sum of the values shown in the bar charts may vary from those shown in the pie chart.

**Figure 2.15.2.5**  
Distribution of residential fixed broadband subscriptions per connection type

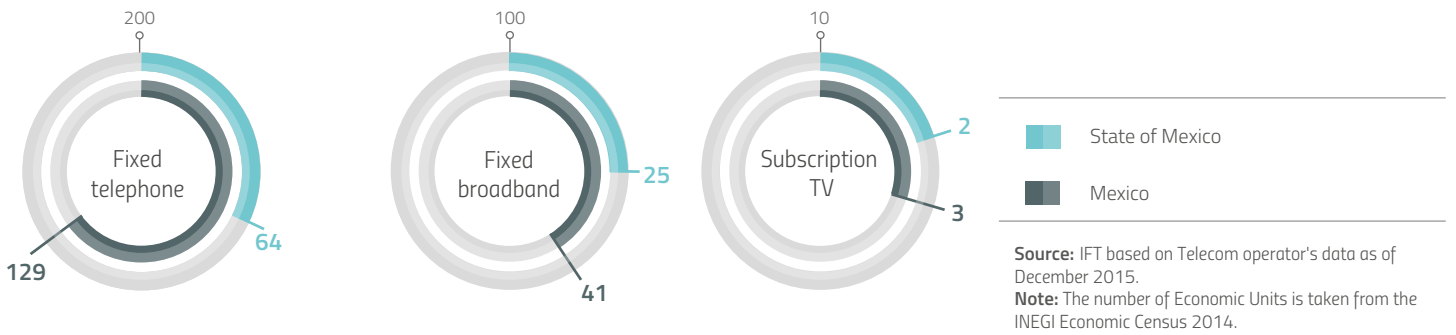


**Figure 2.15.3.1**  
Distribution of non-residential fixed broadband subscriptions per connection type

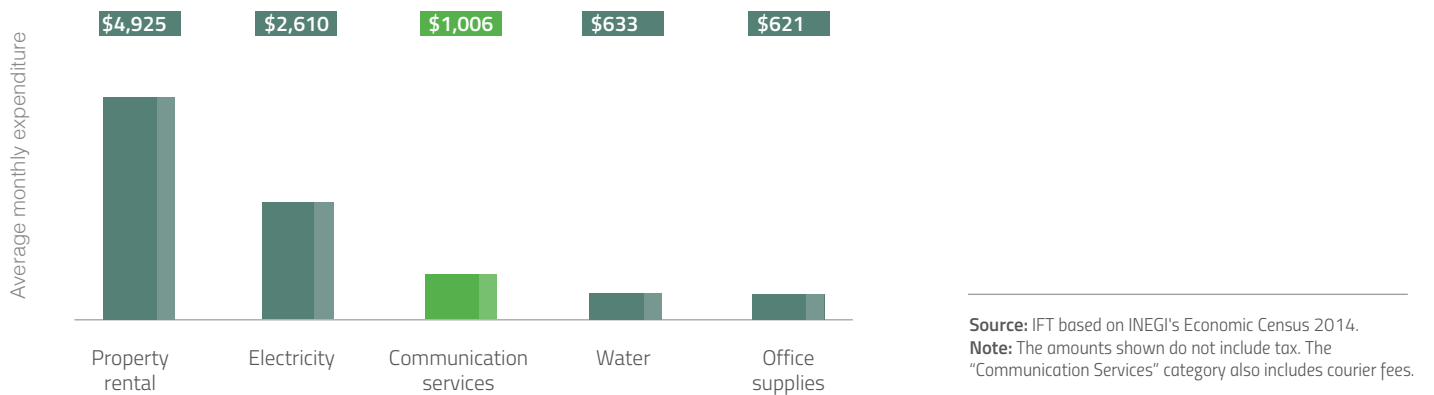


**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The "Other Technologies" category includes fixed wireless and satellite connections. Due to the rounding of data in the chart tags, the figures shown may not add up to 100%.

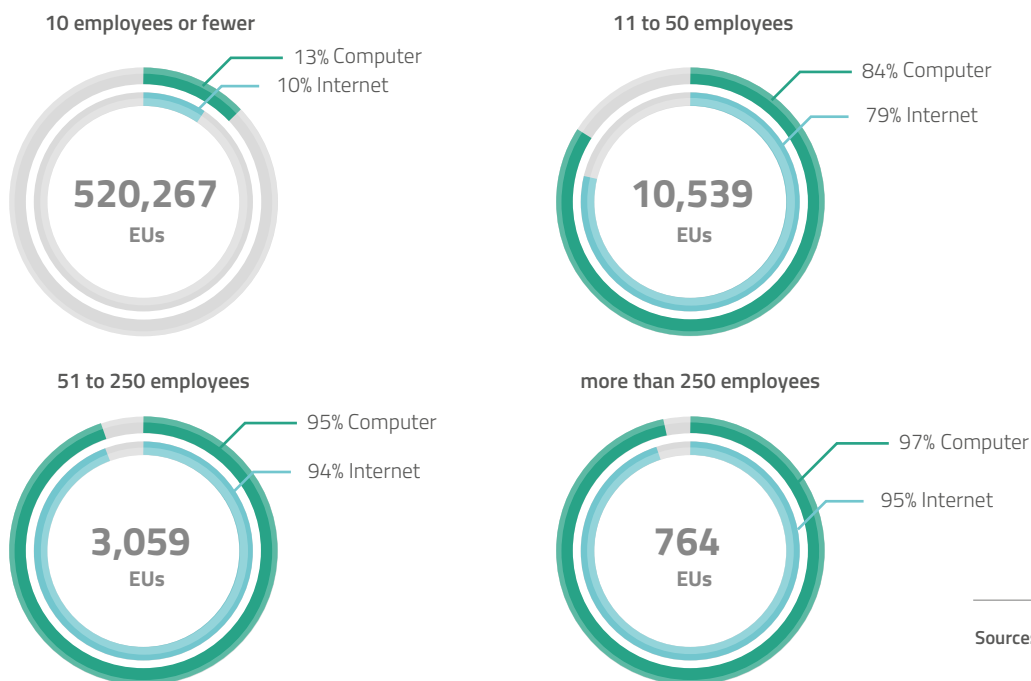
**FIGURE 2.15.3.2**  
Fixed telecommunications services penetration per 100 economic units



**FIGURE 2.15.3.3**  
Average monthly expenditure of economic units by service type



**Figure 2.15.3.4**  
Computer and internet adoption by economic unit (EU) size





## STATISTICAL YEARBOOK 2015:

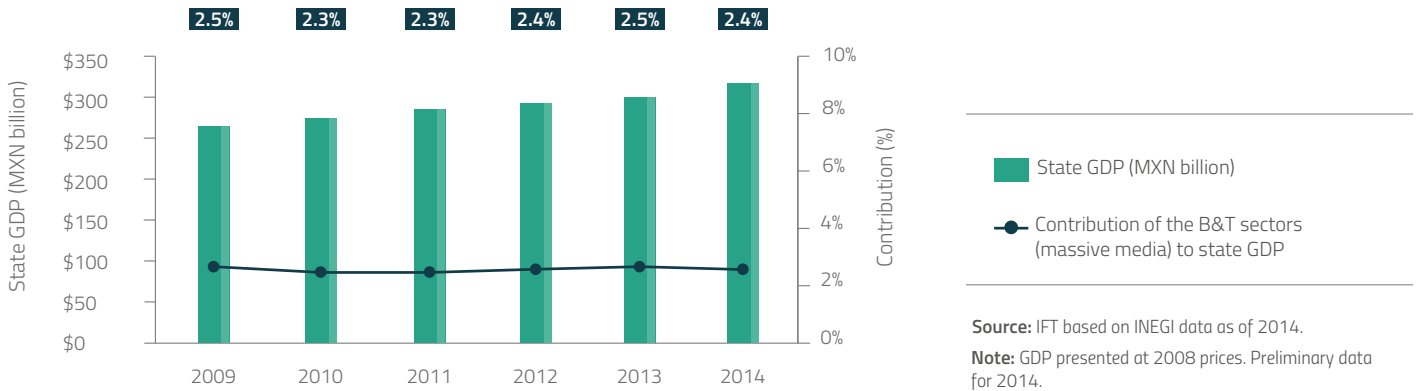
# 2.16 MICHOACAN DE OCAMPO (MICH)

## General Overview

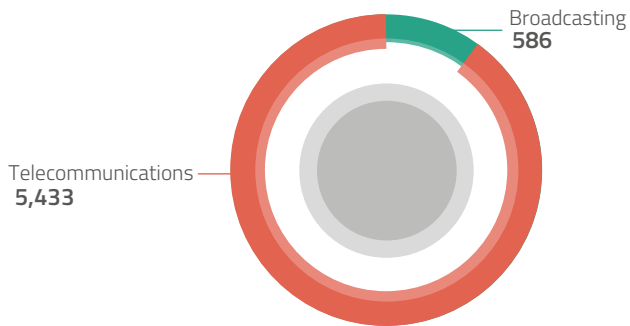
- ▶ From 2009 to 2014 Michoacan de Ocampo GDP had an average annual growth rate of 3.7%. Additionally as of 2014 the massive media sector<sup>16</sup> contributed with 2.4% of the overall state's GDP, equivalent to MXN 7.580 billion.
- ▶ In 2015, the telecommunications sector employed more than 5,400 people, whereas the broadcasting sector employed approximately 600 people. In terms of broadcasting infrastructure at the end of 2015, Michoacan had 84 radio broadcasting stations (67 FM stations and 17 AM stations) and 48 broadcast television channels.
- ▶ In terms of fixed telecommunications services, by the end of 2015, Michoacan had the highest penetration level in pay TV services with 59 subscriptions per 100 households, compared to 35 fixed telephone lines per 100 households, and 30 fixed broadband subscriptions per 100 households. Moreover, by mid 2015 according to ENDUTIH's results, 68.5% of households had at least one of these services.
- ▶ In terms of mobile telecommunications services, the state's mobile phone teledensity as of December 2015 was 62 subscriptions per 100 inhabitants, whereas the mobile internet teledensity was 31 subscriptions per 100 inhabitants, ranking the state, in terms of mobile telecommunications penetration, on top 26 out of 32 Mexican states.
- ▶ Regarding to ICT equipment adoption in Michoacan, analog TV sets had the highest penetration level per 100 households with 77 television sets per 100 households; followed by radio equipment with 60 radios per 100 households, digital television with 51 television sets per 100 households (this figure does not include households with an analog television set connected to a digital decoder, or households with pay TV services), and finally, computer equipment with 32 computers per 100 households.
- ▶ As in most states, as of 2014 property rental was the principal expenditure incurred by economic units (business) in Michoacan, standing at an average over MXN 3,800 per month. On the other hand, expenditure on telecommunications services was MXN 666 per month, higher than other typical company expenditures such as water (MXN 249 per month) and office supplies (MXN 276 per month).
- ▶ Additionally, the fixed telecom services penetrations in Michoacan economic units (business) segment were 50 fixed telephone lines per 100 economic units (business), 26 fixed broadband subscriptions per 100 economic units (business); and 2 pay TV subscriptions per 100 economic units (business).
- ▶ Finally, in 2014 there were registered 194,656 economic units (business) in the state and of those who had 10 employees or less only 16% used computers as part of their operations, whereas only 13% used the internet. Nevertheless, these figure were above 75% for economic units (business) with 11 employees or more, which proves that there is a positive relation between company size and telecommunications services adoption as part of the business as usual processes.

<sup>16</sup> According to the SCIAN, the Broadcasting and Telecommunications subsectors form part of Sector 51 Massive Media Information, and contributed 94% to the sector's nationwide GDP in 2015

**FIGURE 2.16.1.1**  
Contribution of the B&T sectors (massive media) to state GDP

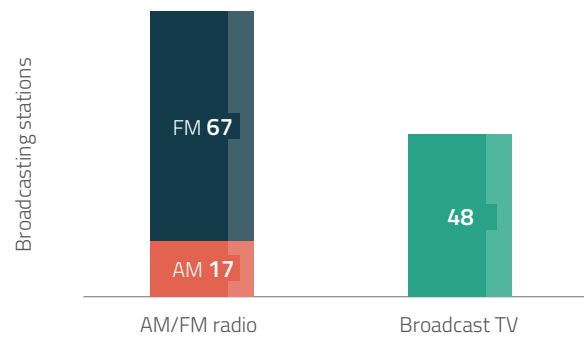


**FIGURE 2.16.1.2**  
Employees in the B&T sectors



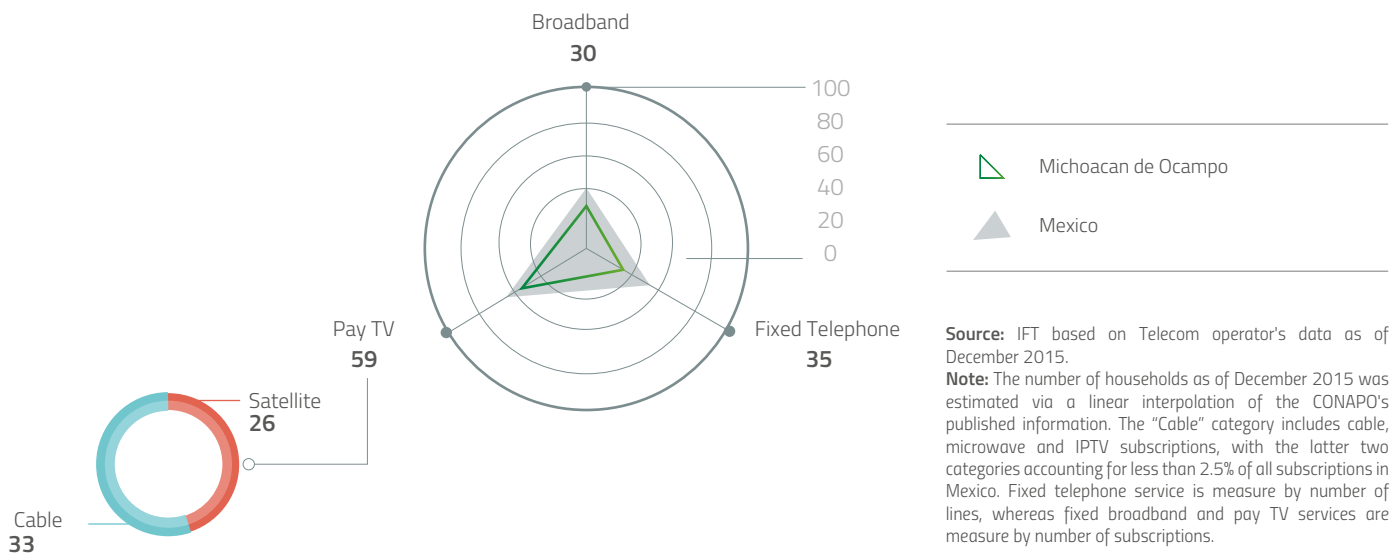
Source: IFT based on data from INEGI's quarterly National Occupation and Employment Surveys.

**FIGURE 2.16.1.3**  
AM/FM radio and broadcast TV stations



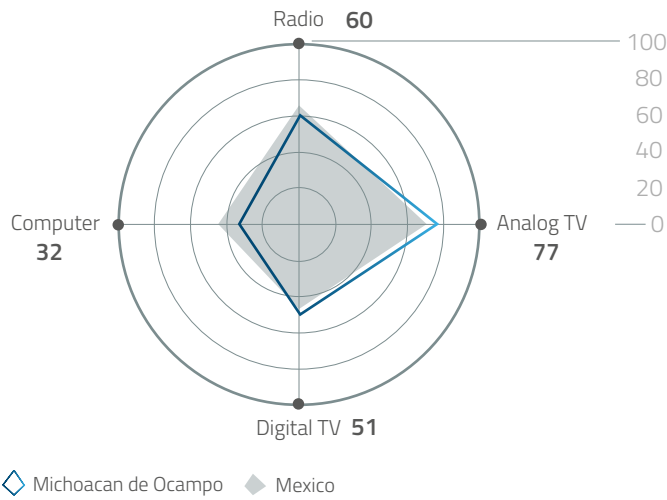
Source: IFT based on data as of December 2015.

**Figure 2.16.2.1**  
Fixed telecommunications services penetration per 100 households



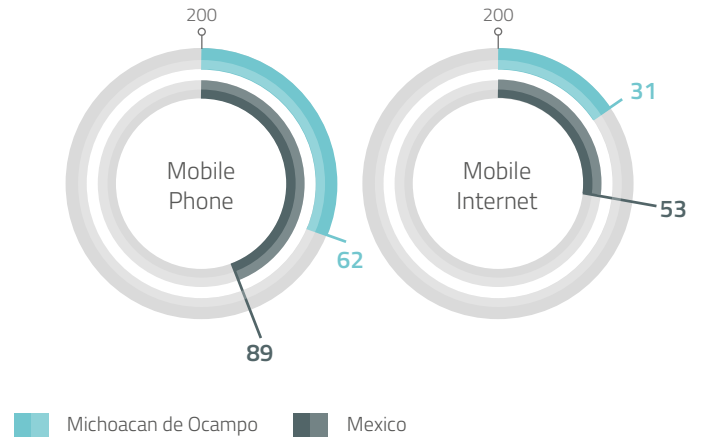


**FIGURE 2.16.2.2**  
ICT equipment per 100 households



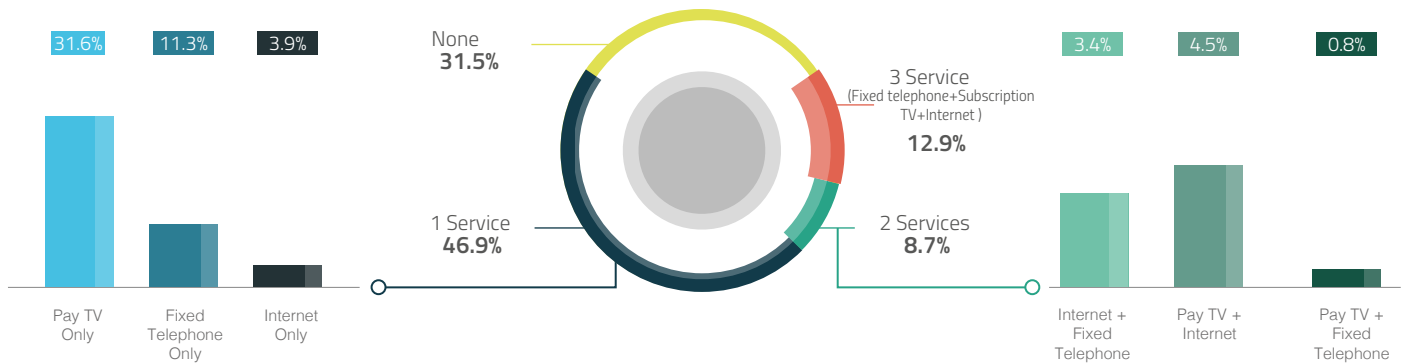
**Source:** IFT based on data from ENDUTIH 2015.  
**Note:** The figure for Digital TV does not include households with an analog television set and digital decoder, or households with pay TV services.

**FIGURE 2.16.2.3**  
Mobile telecommunications teledensity per 100 inhabitants



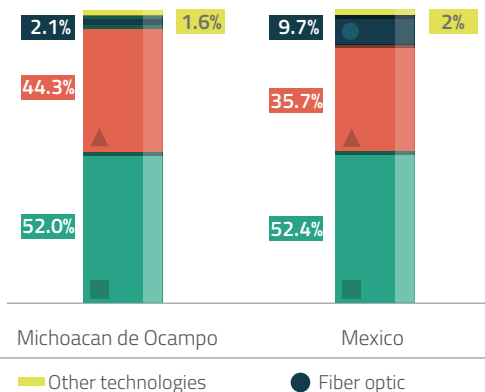
**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The number of inhabitants is taken from the data published by CONAPO as of January 2016. The teledensity desagregation per state was estimated based on the Telecom operator's data and INEGI's data from the ENDUTIH 2015.

**FIGURE 2.16.2.4**  
Distribution of fixed telecommunications services in households

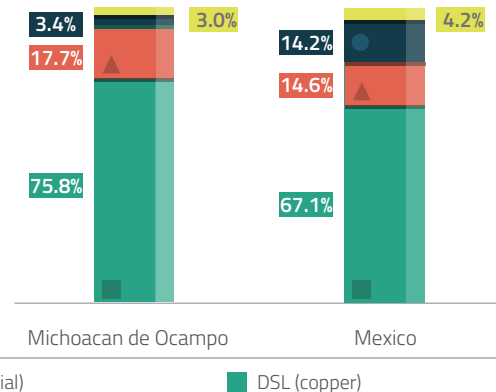


**Source:** IFT based on INEGI's ENDUTIH 2015.  
**Note:** Due to the rounding of data in the figure tags, the sum of the values shown in the bar charts may vary from those shown in the pie chart.

**Figure 2.16.2.5**  
Distribution of residential fixed broadband subscriptions per connection type

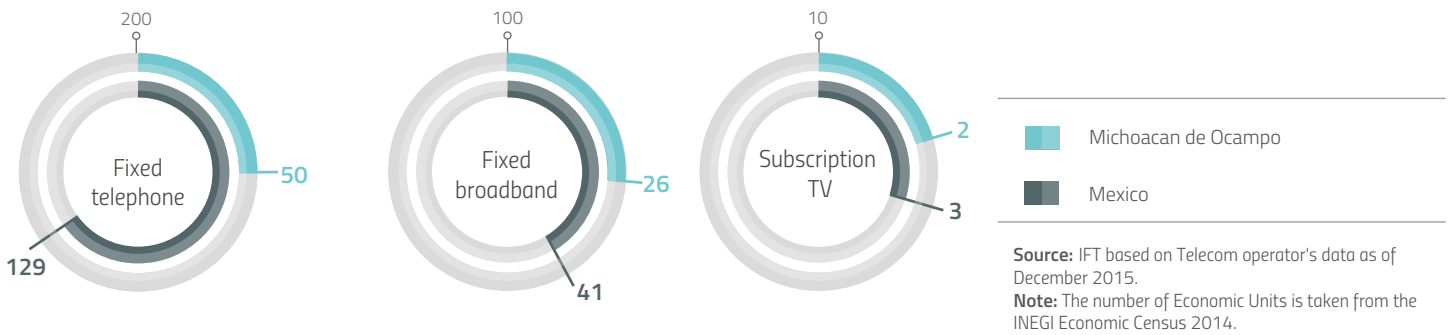


**Figure 2.16.3.1**  
Distribution of non-residential fixed broadband subscriptions per connection type

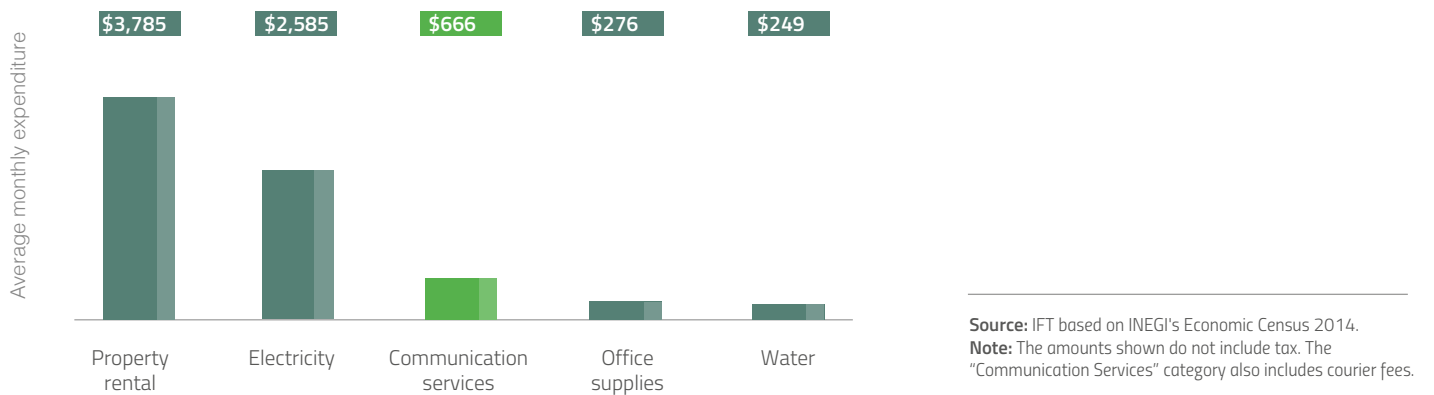


**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The "Other Technologies" category includes fixed wireless and satellite connections. Due to the rounding of data in the chart tags, the figures shown may not add up to 100%.

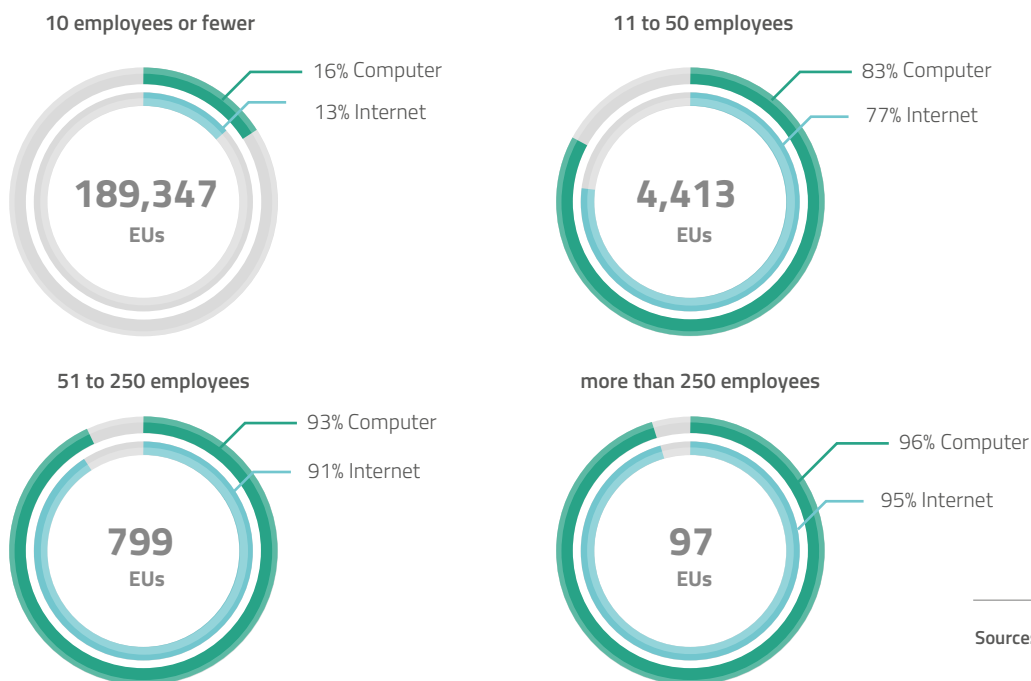
**FIGURE 2.16.3.2**  
Fixed telecommunications services penetration per 100 economic units



**FIGURE 2.16.3.3**  
Average monthly expenditure of economic units by service type



**Figure 2.16.3.4**  
Computer and internet adoption by economic unit (EU) size







STATISTICAL YEARBOOK 2015:

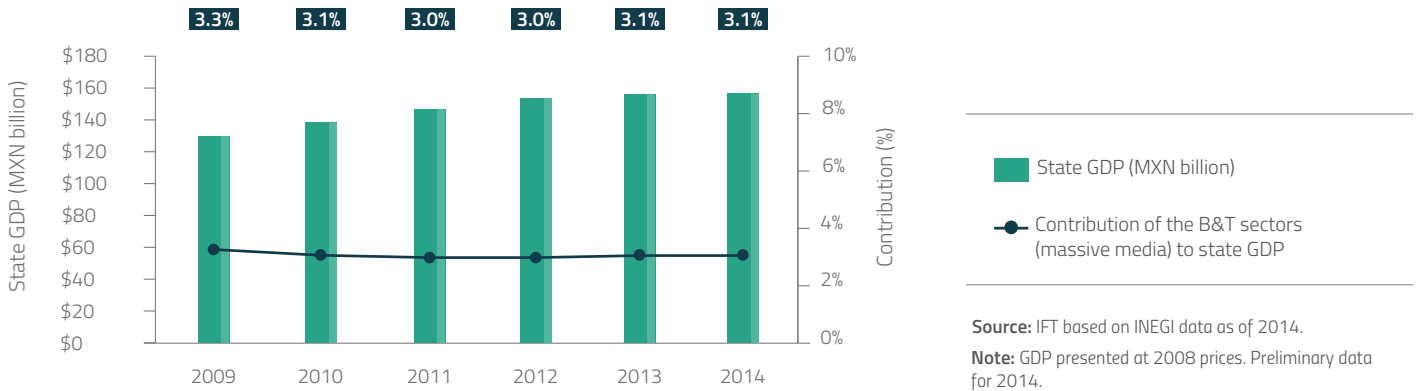
## 2.17 MORELOS (MOR)

### General Overview

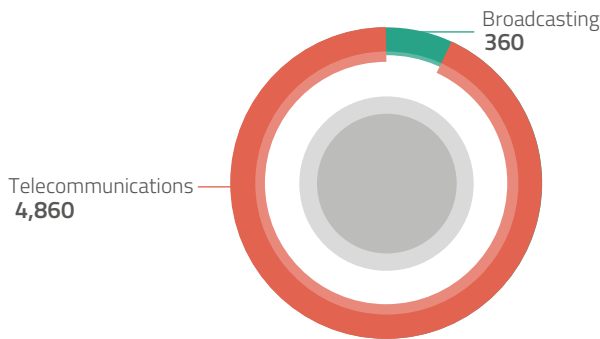
- ▶ From 2009 to 2014 Morelos' GDP had an average annual growth rate of 3.9%. Additionally as of 2014 the massive media sector<sup>17</sup> contributed with 3.1% of the overall state's GDP, equivalent to MXN 4.810 billion.
- ▶ In 2015, the telecommunications sector employed almost 4,900 people, whereas the broadcasting sector employed approximately 360 people. In terms of broadcasting infrastructure at the end of 2015, Morelos had 26 radio broadcasting stations (25 FM stations and one AM station) and five broadcast television channels.
- ▶ In terms of fixed telecommunications services, by the end of 2015, Morelos had the highest penetration level in pay TV services with 56 subscriptions per 100 households, compared to 54 fixed telephone lines per 100 households, and 48 fixed broadband subscriptions per 100 households. Moreover, by mid 2015 according to ENDUTIH's results, 66.3% of households had at least one of these services.
- ▶ In terms of mobile telecommunications services, the state's mobile phone teledensity as of December 2015 was 84 subscriptions per 100 inhabitants, whereas the mobile internet teledensity was 49 subscriptions per 100 inhabitants, ranking the state, in terms of mobile telecommunications penetration, on top 15 out of 32 Mexican states.
- ▶ Regarding to ICT equipment adoption in Morelos, analog TV sets had the highest penetration level per 100 households, with 69 television sets per 100 households, followed by radio equipment with 64 radios per 100 households, digital television with 47 television sets per 100 households (this figure does not include households with an analog television set connected to a digital decoder, or households with pay TV services), and finally computer equipment with 42 computers per 100 households.
- ▶ As in most states, as of 2014 property rental was the principal expenditure incurred by economic units (business) in Morelos, standing at an average over MXN 2,800 per month. On the other hand, expenditure on telecommunications services was MXN 714 per month, higher than other typical company expenditures such as water (MXN 298 per month) and office supplies (MXN 543 per month).
- ▶ Additionally, the fixed telecom services penetrations in Morelos's economic units (business) segment were 101 fixed telephone lines per 100 economic units (business), 33 fixed broadband subscriptions per 100 economic units (business); and 3 pay TV subscriptions per 100 economic units (business).
- ▶ Finally, in 2014 there were registered 84,357 economic units (business) in the state and of those who had 10 employees or less only 16% used computers as part of their operations, whereas only 13% used the internet. Nevertheless, these figures were above 80% for economic units (business) with 11 employees or more, which proves that there is a positive relation between company size and telecommunications services adoption as part of the business as usual processes.

<sup>17</sup> According to the SCIAN, the Broadcasting and Telecommunications subsectors form part of Sector 51 Massive Media Information, and contributed 94% to the sector's nationwide GDP in 2015

**FIGURE 2.17.1.1**  
Contribution of the B&T sectors (massive media) to state GDP

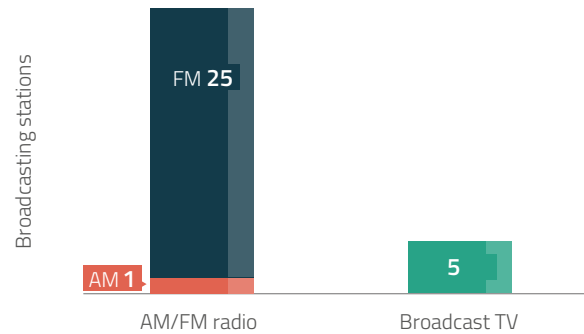


**FIGURE 2.17.1.2**  
Employees in the B&T sectors



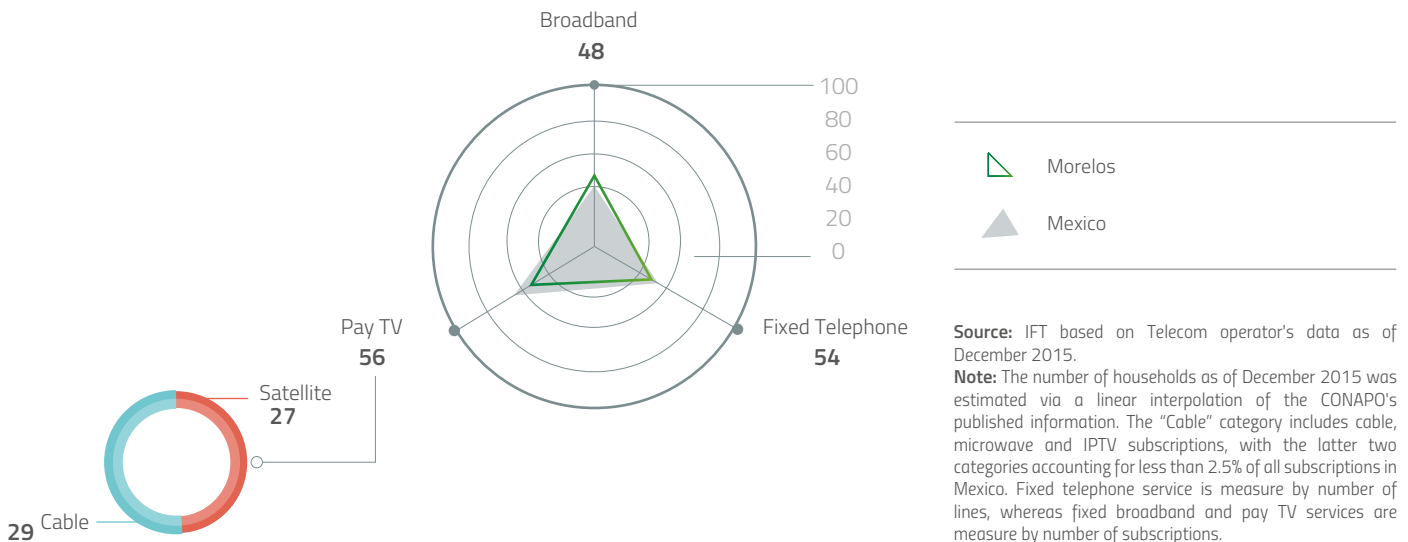
Source: IFT based on data from INEGI's quarterly National Occupation and Employment Surveys.

**FIGURE 2.17.1.3**  
AM/FM radio and broadcast TV stations

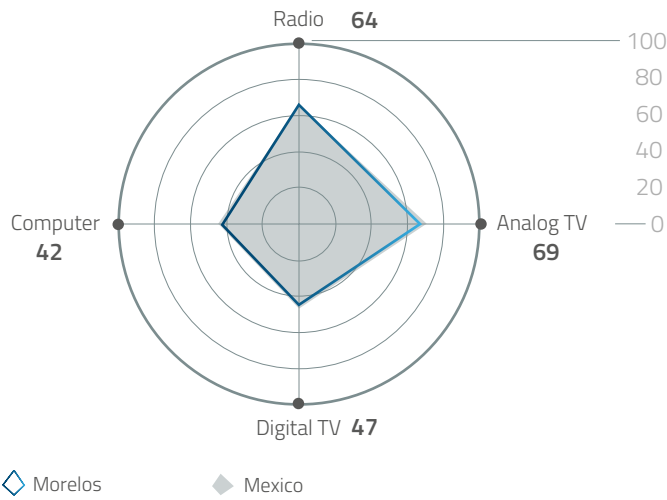


Source: IFT based on data as of December 2015.

**Figure 2.17.2.1**  
Fixed telecommunications services penetration per 100 households

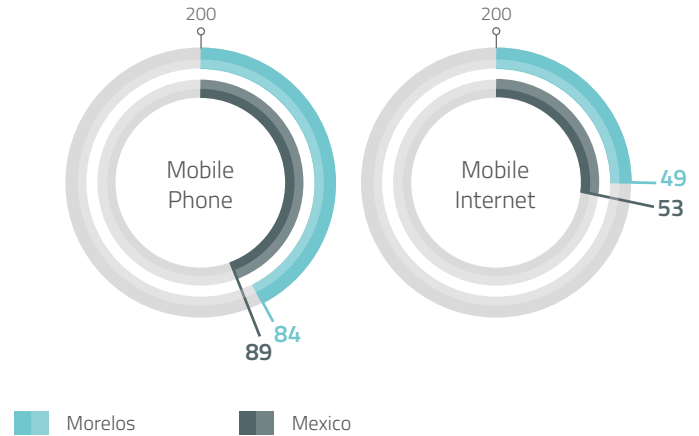


**FIGURE 2.17.2.2**  
ICT equipment per 100 households



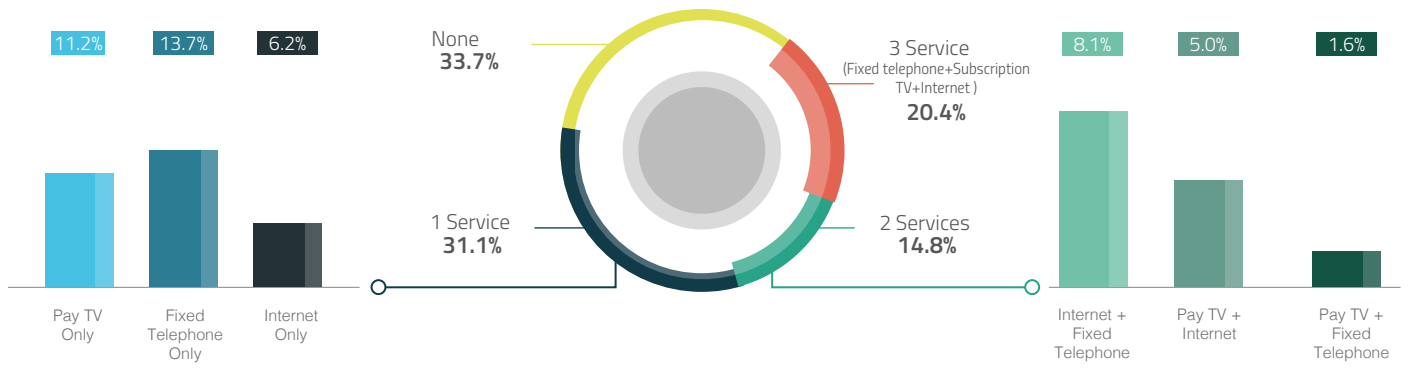
**Source:** IFT based on data from ENDUTIH 2015.  
**Note:** The figure for Digital TV does not include households with an analog television set and digital decoder, or households with pay TV services.

**FIGURE 2.17.2.3**  
Mobile telecommunications teledensity per 100 inhabitants



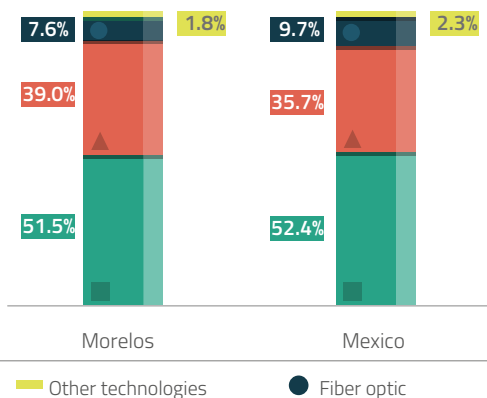
**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The number of inhabitants is taken from the data published by CONAPO as of January 2016. The teledensity desagregation per state was estimated based on the Telecom operator's data and INEGI's data from the ENDUTIH 2015.

**FIGURE 2.17.2.4**  
Distribution of fixed telecommunications services in households

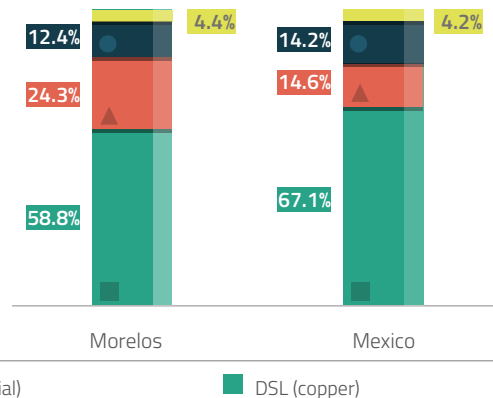


**Source:** IFT based on INEGI's ENDUTIH 2015.  
**Note:** Due to the rounding of data in the figure tags, the sum of the values shown in the bar charts may vary from those shown in the pie chart.

**Figure 2.17.2.5**  
Distribution of residential fixed broadband subscriptions per connection type

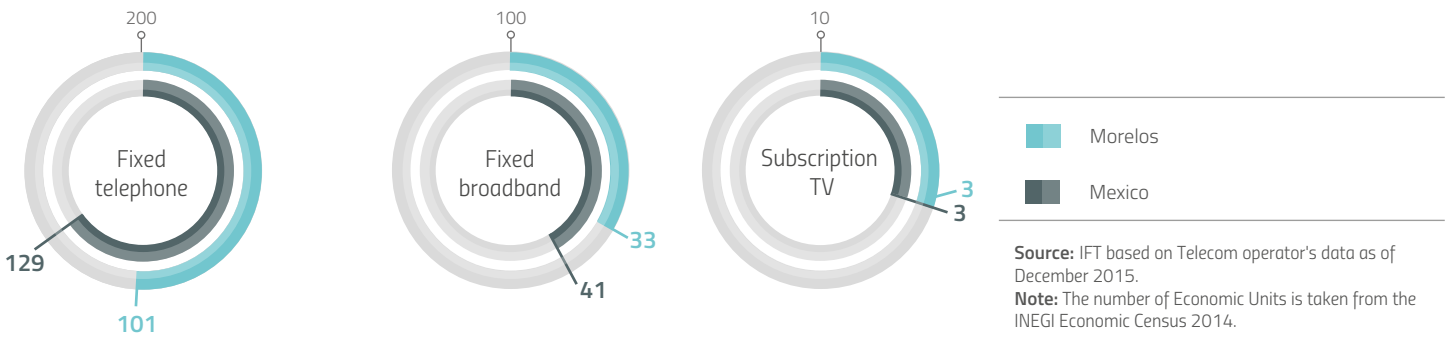


**Figure 2.17.3.1**  
Distribution of non-residential fixed broadband subscriptions per connection type

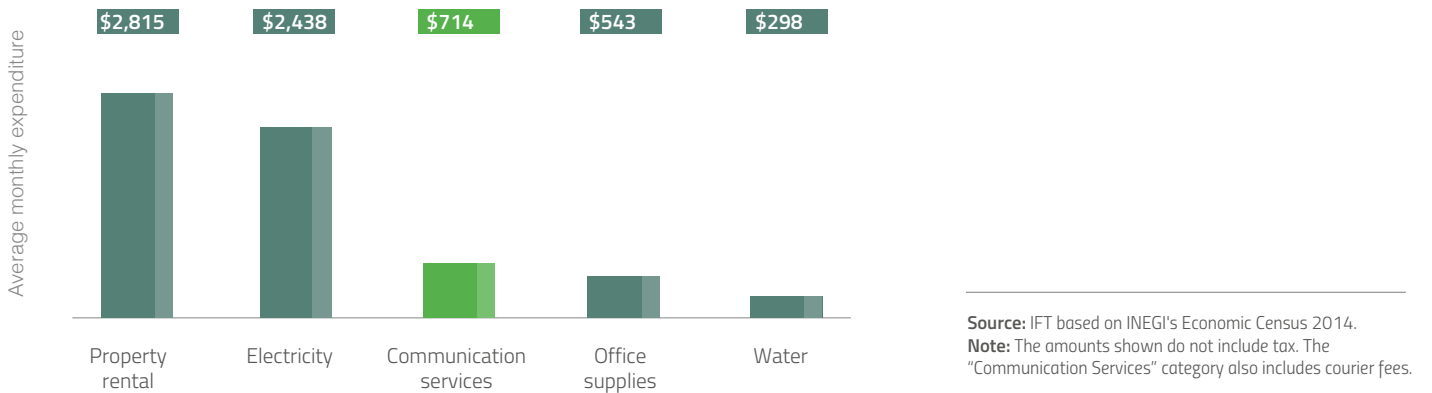


**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The "Other Technologies" category includes fixed wireless and satellite connections. Due to the rounding of data in the chart tags, the figures shown may not add up to 100%.

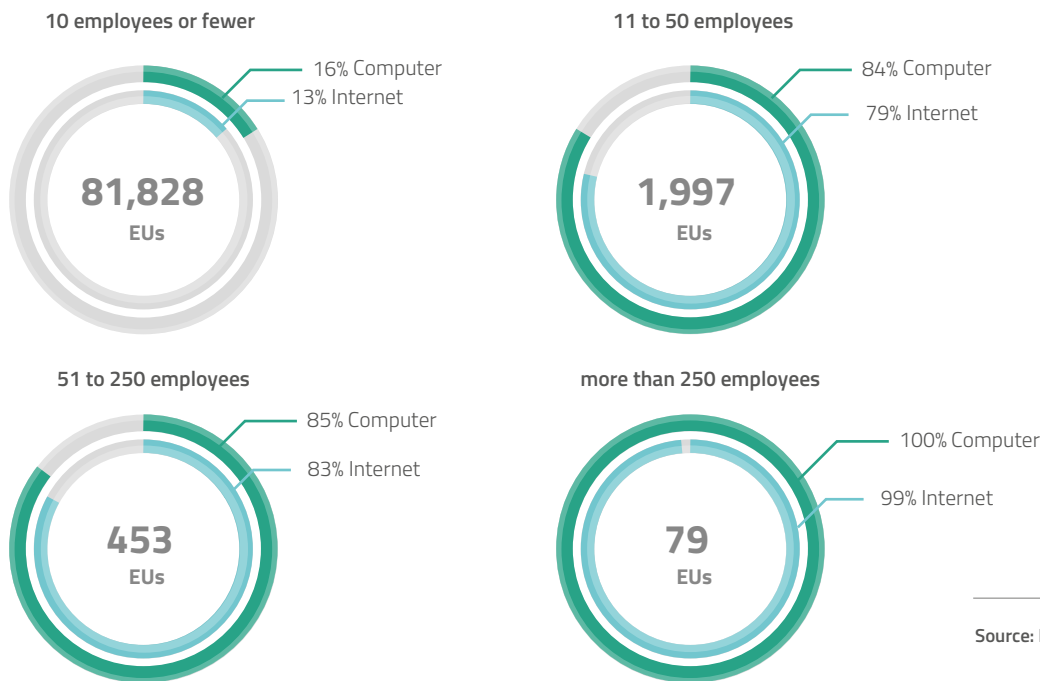
**FIGURE 2.17.3.2**  
Fixed telecommunications services penetration per 100 economic units



**FIGURE 2.17.3.3**  
Average monthly expenditure of economic units by service type



**Figure 2.17.3.4**  
Computer and internet adoption by economic unit (EU) size





## STATISTICAL YEARBOOK 2015:

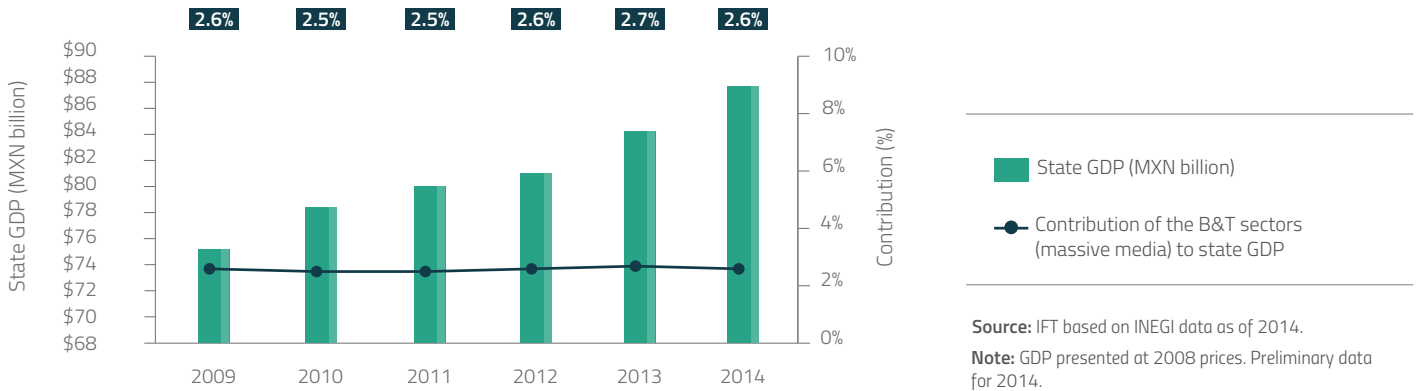
# 2.18 NAYARIT (NAY)

## General Overview

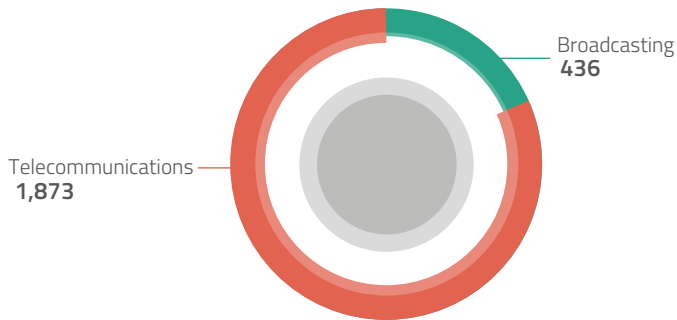
- ▶ From 2009 to 2014 Nayarit's GDP had an average annual growth rate of 3.2%. Additionally as of 2014 the massive media sector<sup>18</sup> contributed with 2.6% of the overall state's GDP, equivalent to MXN 2.270 billion.
- ▶ In 2015, the telecommunications sector employed almost 1,900 people, whereas the broadcasting sector employed approximately 436 people. In terms of broadcasting infrastructure at the end of 2015, Nayarit had 25 radio broadcasting stations (20 FM stations and five AM stations) and 12 broadcast television channels.
- ▶ In terms of fixed telecommunications services, by the end of 2015, Nayarit had the highest penetration level in pay TV services with 61 subscriptions per 100 households, compared to 36 fixed telephone lines per 100 households, and 35 fixed broadband subscriptions per 100 households. Moreover, by mid 2015 according to ENDUTIH's results, 75.4% of households had at least one of these services.
- ▶ In terms of mobile telecommunications services, the state's mobile phone teledensity as of December 2015 was 87 subscriptions per 100 inhabitants, whereas the mobile internet teledensity was 53 subscriptions per 100 inhabitants, ranking the state, in terms of mobile telecommunications penetration, on top 13 out of 32 Mexican states.
- ▶ Regarding to ICT equipment adoption in Nayarit, analog TV sets had the highest penetration level per 100 households, with 73 television sets per 100 households, followed by radio equipment with 58 radios per 100 households, computer equipment with 44 computers per 100 households, and finally digital television, with 41 television sets per 100 households (this figure does not include households with an analog television set connected to a digital decoder, or households with pay TV services).
- ▶ As in most states, as of 2014 property rental was the principal expenditure incurred by economic units (business) in Nayarit, standing at an average over MXN 6,700 per month. On the other hand, expenditure on telecommunications services was MXN 565 per month, higher than other typical company expenditures such as water (MXN 358 per month) and office supplies (MXN 453 per month).
- ▶ Additionally, the fixed telecom services penetrations in Nayarit's economic units (business) segment were 99 fixed telephone lines per 100 economic units (business), 37 fixed broadband subscriptions per 100 economic units (business); and 5 pay TV subscriptions per 100 economic units (business).
- ▶ Finally, in 2014 there were registered 45,684 economic units (business) in the state and of those who had 10 employees or less only 18% used computers as part of their operations, whereas only 15% used internet. Nevertheless, these figures were above 80% for economic units (business) with 11 employees or more, which proves that there is a positive relation, between company size and telecommunications services adoption as part of the business as usual processes.

<sup>18</sup> According to the SCIAN, the Broadcasting and Telecommunications subsectors form part of Sector 51 Massive Media Information, and contributed 94% to the sector's nationwide GDP in 2015

**FIGURE 2.18.1.1**  
Contribution of the B&T sectors (massive media) to state GDP

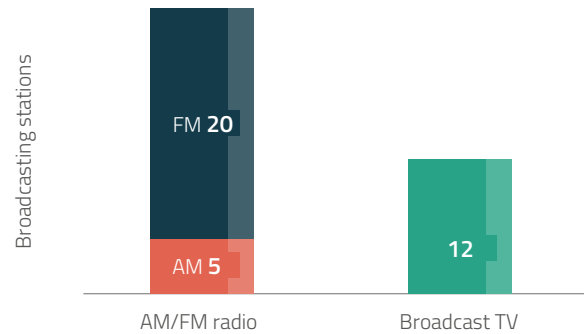


**FIGURE 2.18.1.2**  
Employees in the B&T sectors



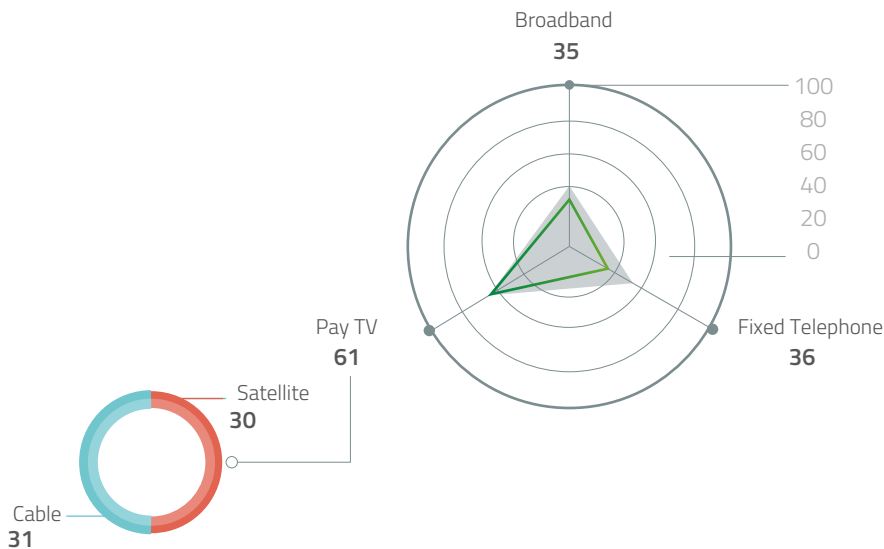
Source: IFT based on data from INEGI's quarterly National Occupation and Employment Surveys.

**FIGURE 2.18.1.3**  
AM/FM radio and broadcast TV stations



Source: IFT based on data as of December 2015.

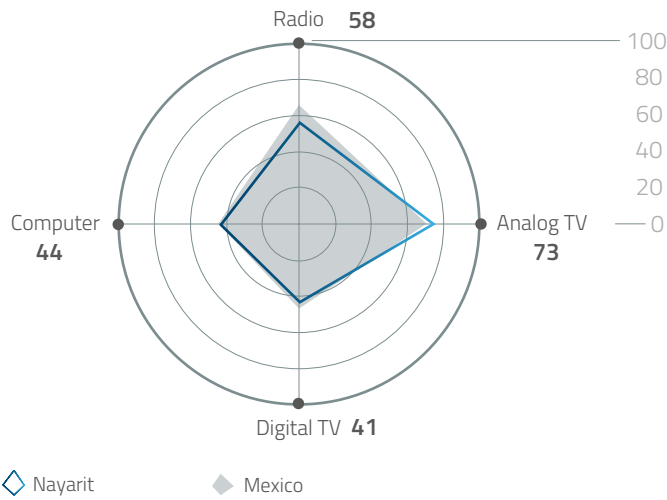
**Figure 2.18.2.1**  
Fixed telecommunications services penetration per 100 households



Source: IFT based on Telecom operator's data as of December 2015.

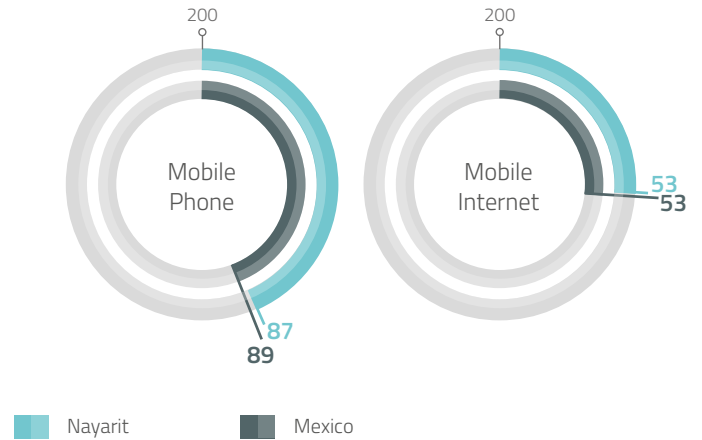
Note: The number of households as of December 2015 was estimated via a linear interpolation of the CONAPO's published information. The "Cable" category includes cable, microwave and IPTV subscriptions, with the latter two categories accounting for less than 2.5% of all subscriptions in Mexico. Fixed telephone service is measure by number of lines, whereas fixed broadband and pay TV services are measure by number of subscriptions.

**FIGURE 2.18.2.2**  
ICT equipment per 100 households



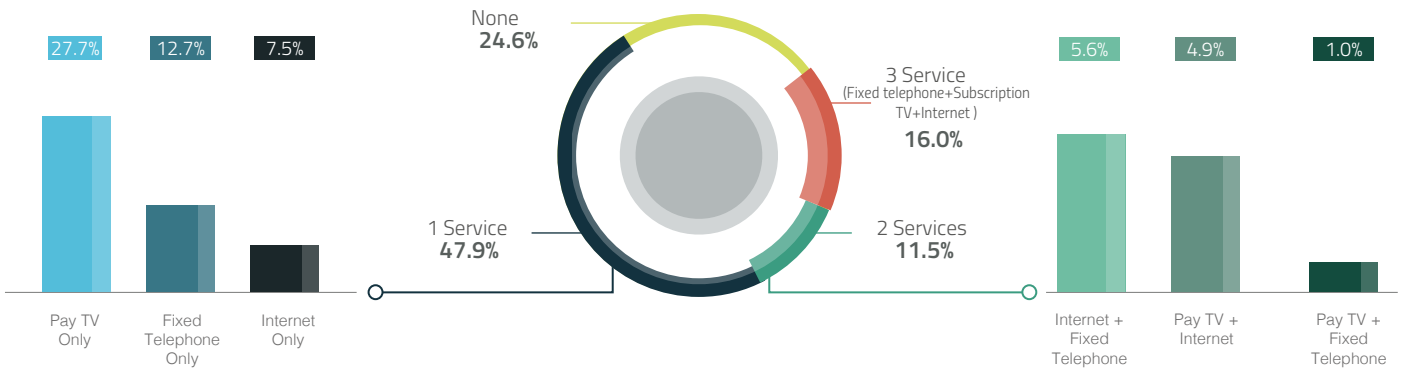
Source: IFT based on data from ENDUTIH 2015.  
Note: The figure for Digital TV does not include households with an analog television set and digital decoder, or households with pay TV services.

**FIGURE 2.18.2.3**  
Mobile telecommunications teledensity per 100 inhabitants



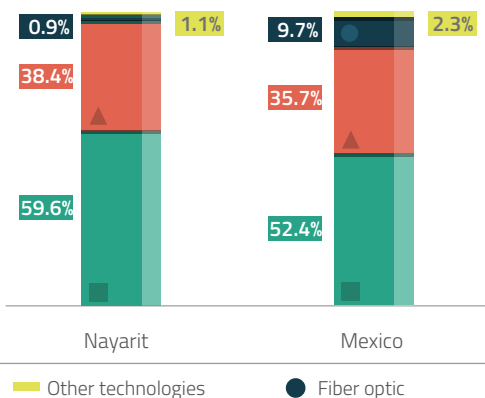
Source: IFT based on Telecom operator's data as of December 2015.  
Note: The number of inhabitants is taken from the data published by CONAPO as of January 2016. The teledensity desagregation per state was estimated based on the Telecom operator's data and INEGI's data from the ENDUTIH 2015.

**FIGURE 2.18.2.4**  
Distribution of fixed telecommunications services in households

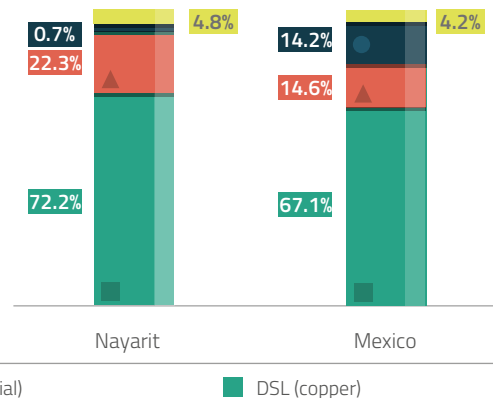


Source: IFT based on INEGI's ENDUTIH 2015.  
Note: Due to the rounding of data in the figure tags, the sum of the values shown in the bar charts may vary from those shown in the pie chart.

**Figure 2.18.2.5**  
Distribution of residential fixed broadband subscriptions per connection type

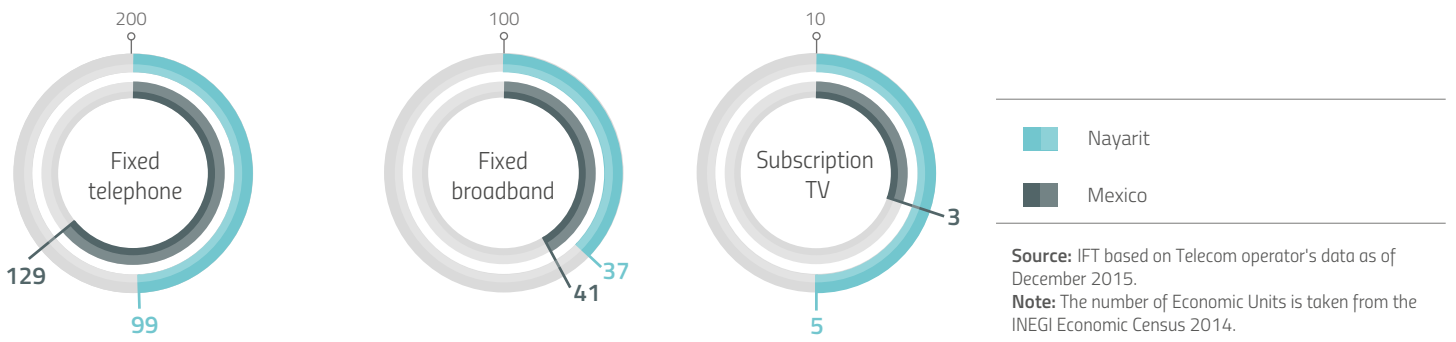


**Figure 2.18.3.1**  
Distribution of non-residential fixed broadband subscriptions per connection type

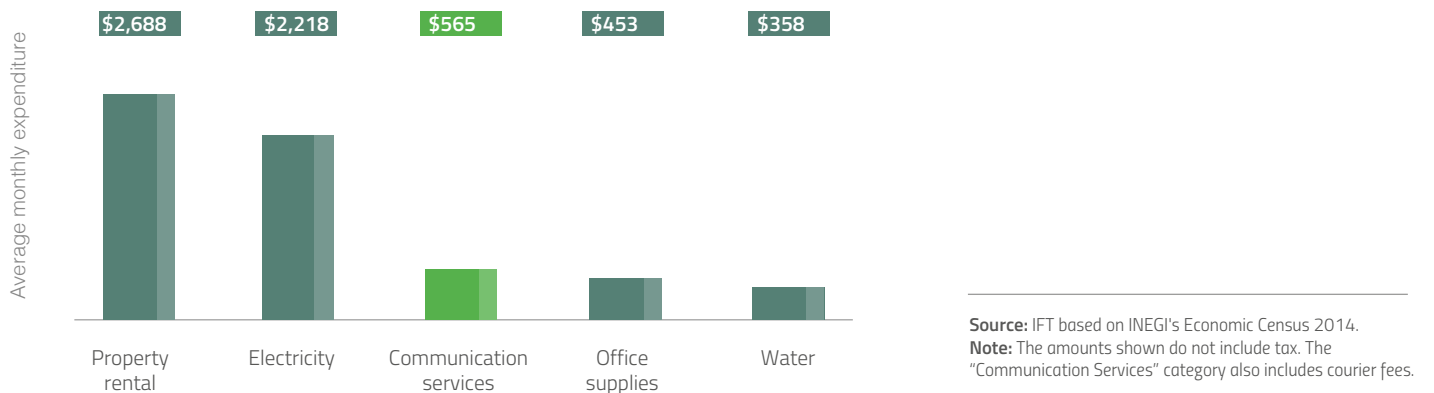


Source: IFT based on Telecom operator's data as of December 2015.  
Note: The "Other Technologies" category includes fixed wireless and satellite connections. Due to the rounding of data in the chart tags, the figures shown may not add up to 100%.

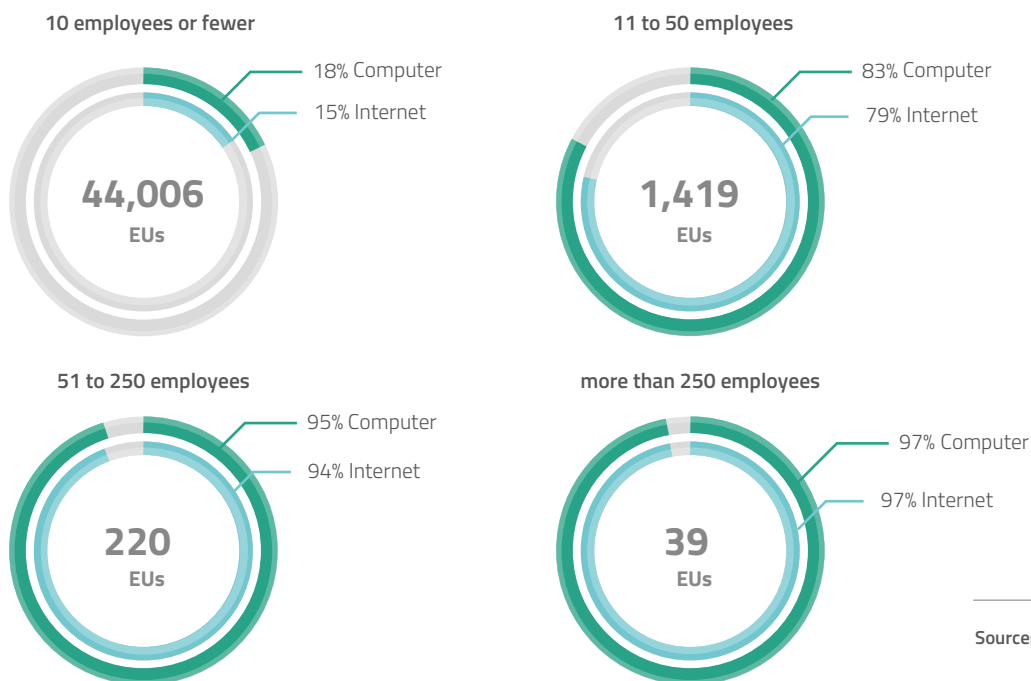
**FIGURE 2.18.3.2**  
Fixed telecommunications services penetration per 100 economic units



**FIGURE 2.18.3.3**  
Average monthly expenditure of economic units by service type



**Figure 2.18.3.4**  
Computer and internet adoption by economic unit (EU) size







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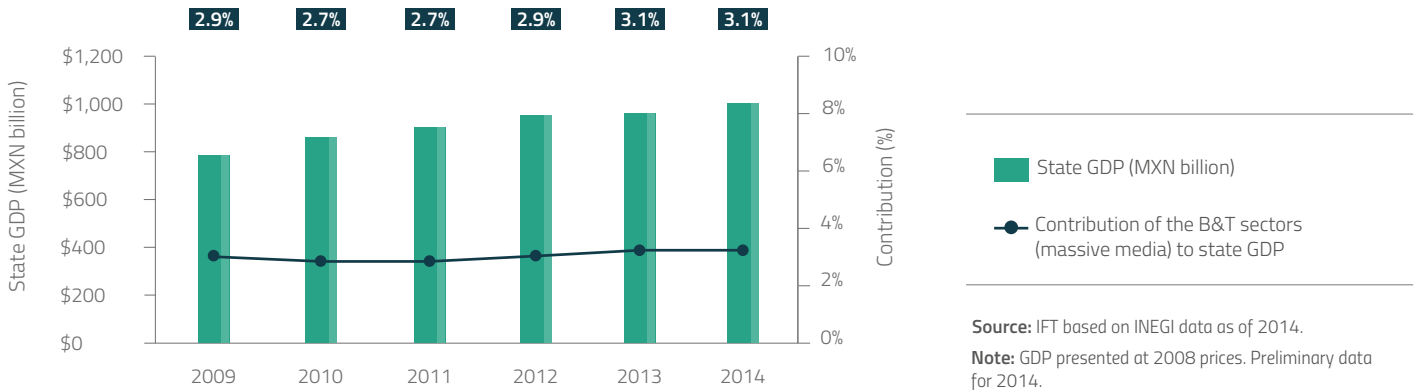
## 2.19 NUEVO LEON (NL)

### General Overview

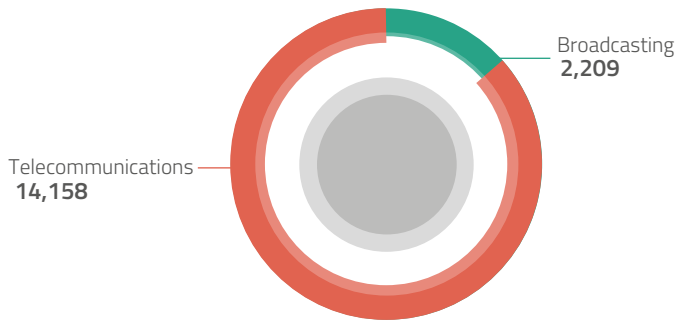
- ▶ From 2009 to 2014 Nuevo Leon's GDP had an average annual growth rate of 5%. Additionally, the massive media sector<sup>19</sup> contributed with 3.1% of the overall state's GDP, equivalent to MXN 30.840 billion.
- ▶ In 2015, the telecommunications sector employed over 14,000 people, whereas the broadcasting sector employed 2,200 people. In terms of broadcasting infrastructure, at the end of 2015, the state had 67 radio broadcasting stations (40 FM stations and 27 AM stations) and 47 broadcast television channels.
- ▶ In terms of fixed telecommunications services, by the end of 2015 Nuevo Leon had the highest penetration in fixed telephone services with 78 subscriptions per 100 households, compared to 70 pay TV subscriptions per 100 households, and 62 fixed broadband subscriptions per 100 households. Moreover, by mid 2015 according to ENDUTIH's results, 86.4% of households had at least one of these services.
- ▶ In terms of mobile telecommunications services, the state's mobile phone teledensity as of December 2015 was 116 subscriptions per 100 inhabitants, which implies that there were some Nuevo Leon residents with more than one mobile phone, whereas the mobile internet teledensity was 86 subscriptions per 100 inhabitants, ranking the state, in terms of mobile telecommunications penetration, in the top 2 out of 32 Mexican states.
- ▶ Regarding to ICT equipment adoption in Nuevo Leon, digital TV sets and radio equipment had the highest penetration level in households with 68 television sets (this figure does not include households with an analog television set connected to a digital decoder, or households with pay TV services), 68 radios per 100 households, 67 analog television sets per 100 households, and finally, 59 computers per 100 households.
- ▶ As in most states, as of 2014 property rental was the principal expenditure incurred by economic units (business) in Nuevo Leon, standing at an average near of MXN 18,700 per month. On the other hand, expenditure on telecommunications services was MXN 4,610 per month, higher than other typical company expenditures such as water (MXN 1,955 per month) and office supplies (MXN 2,759 per month).
- ▶ Additionally, the fixed telecom services penetration in Nuevo Leon's economic units (business) segment was 398 fixed telephone lines per 100 economic units (business), 209% higher than the nationwide level; 78 fixed broadband subscriptions per 100 economic units (business) and six pay TV subscriptions per 100 economic units (business).
- ▶ Finally, in 2014 there were registered 135,478 economic units (business) in the state and of those who had 10 employees or less only 33% used computers as part of their operations, whereas only 26% used internet. Nevertheless, these figures were above 80% for economic units with 11 employees or more, which proves that there is a positive relation between company size and the telecommunications services adoption as part of the business as usual processes.

<sup>19</sup> According to the SCIAN, the Broadcasting and Telecommunications subsectors form part of Sector 51 Massive Media Information, and contributed 94% to the sector's nationwide GDP in 2015

**FIGURE 2.19.1.1**  
Contribution of the B&T sectors (massive media) to state GDP

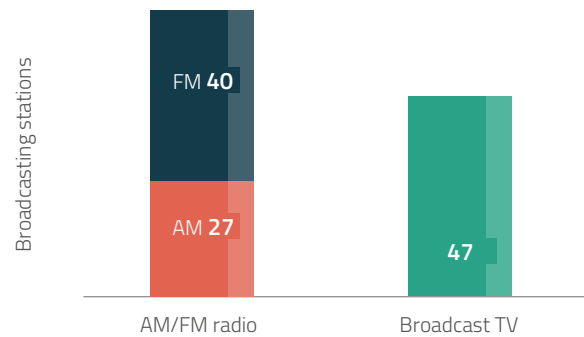


**FIGURE 2.19.1.2**  
Employees in the B&T sectors



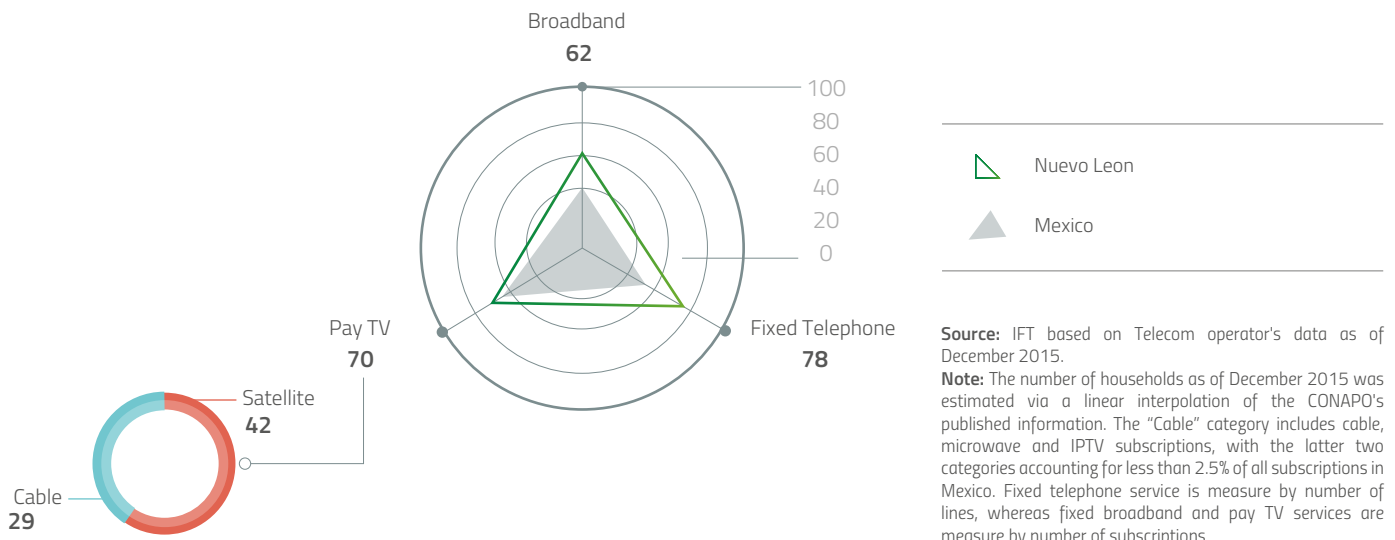
Source: IFT based on data from INEGI's quarterly National Occupation and Employment Surveys.

**FIGURE 2.19.1.3**  
AM/FM radio and broadcast TV stations

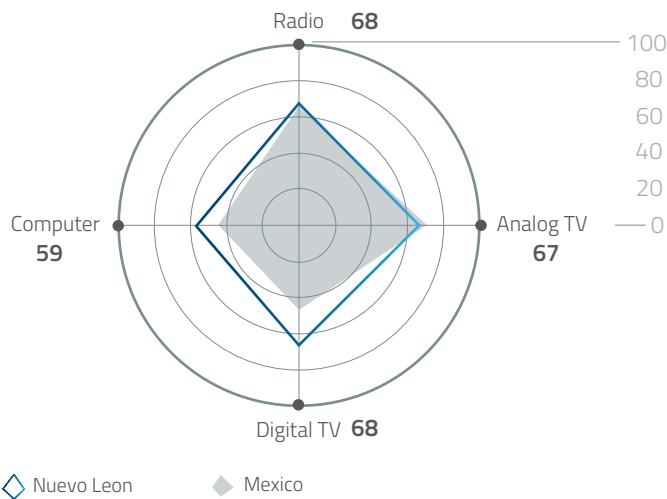


Source: IFT based on data as of December 2015.

**Figure 2.19.2.1**  
Fixed telecommunications services penetration per 100 households

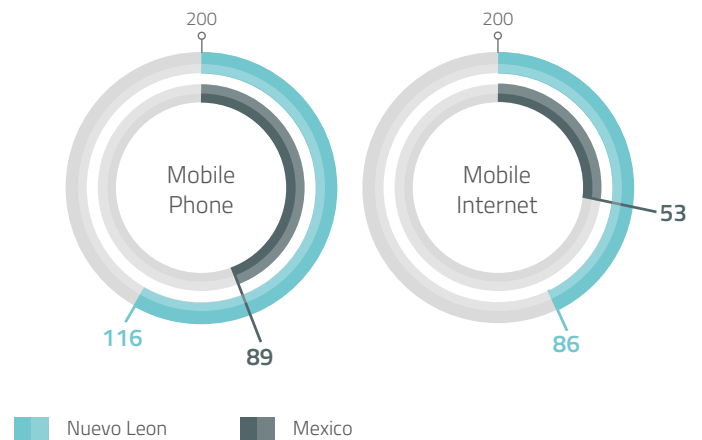


**FIGURE 2.19.2.2**  
ICT equipment per 100 households



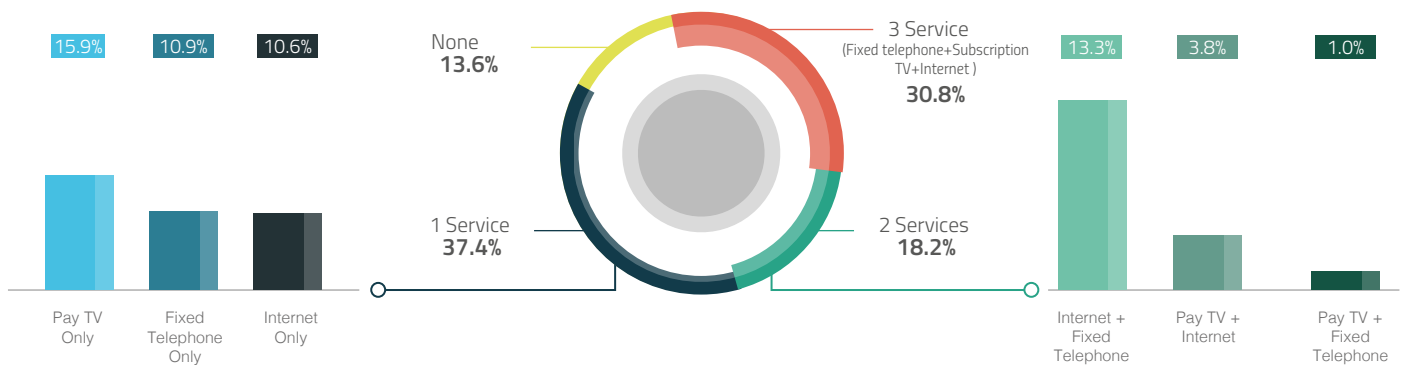
**Source:** IFT based on data from ENDUTIH 2015.  
**Note:** The figure for Digital TV does not include households with an analog television set and digital decoder, or households with pay TV services.

**FIGURE 2.19.2.3**  
Mobile telecommunications teledensity per 100 inhabitants



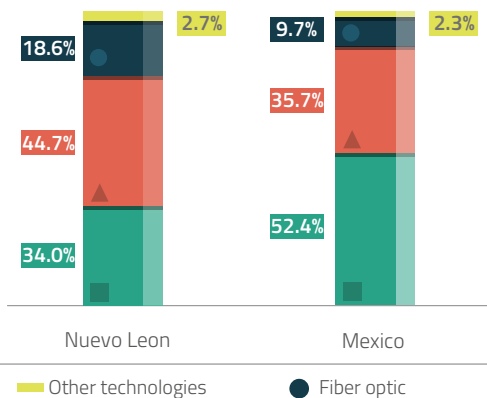
**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The number of inhabitants is taken from the data published by CONAPO as of January 2016. The teledensity disaggregation per state was estimated based on the Telecom operator's data and INEGI's data from the ENDUTIH 2015.

**FIGURE 2.19.2.4**  
Distribution of fixed telecommunications services in households

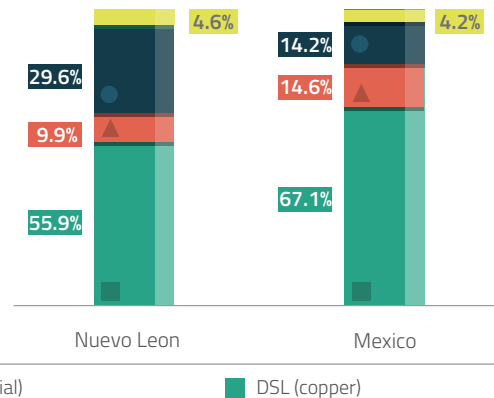


**Source:** IFT based on INEGI's ENDUTIH 2015.  
**Note:** Due to the rounding of data in the figure tags, the sum of the values shown in the bar charts may vary from those shown in the pie chart.

**Figure 2.19.2.5**  
Distribution of residential fixed broadband subscriptions per connection type

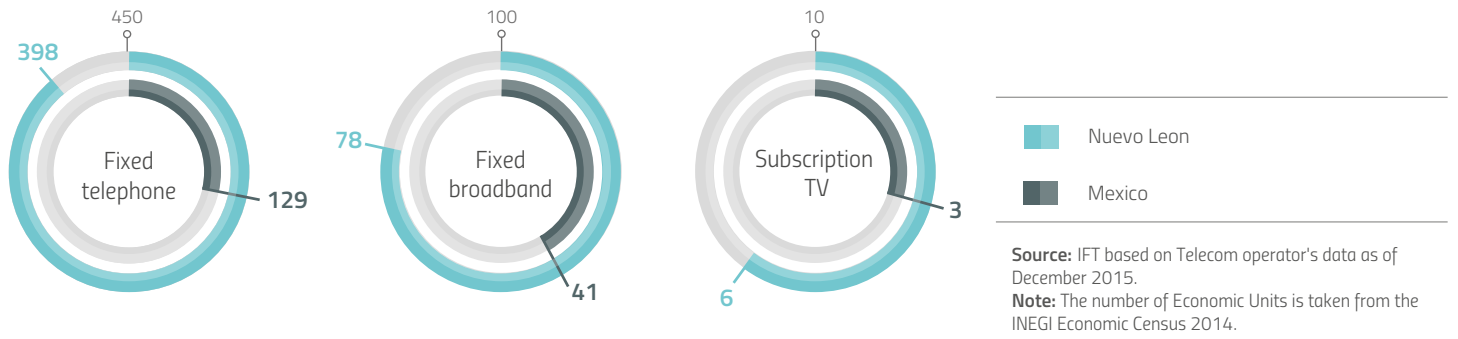


**Figure 2.19.3.1**  
Distribution of non-residential fixed broadband subscriptions per connection type

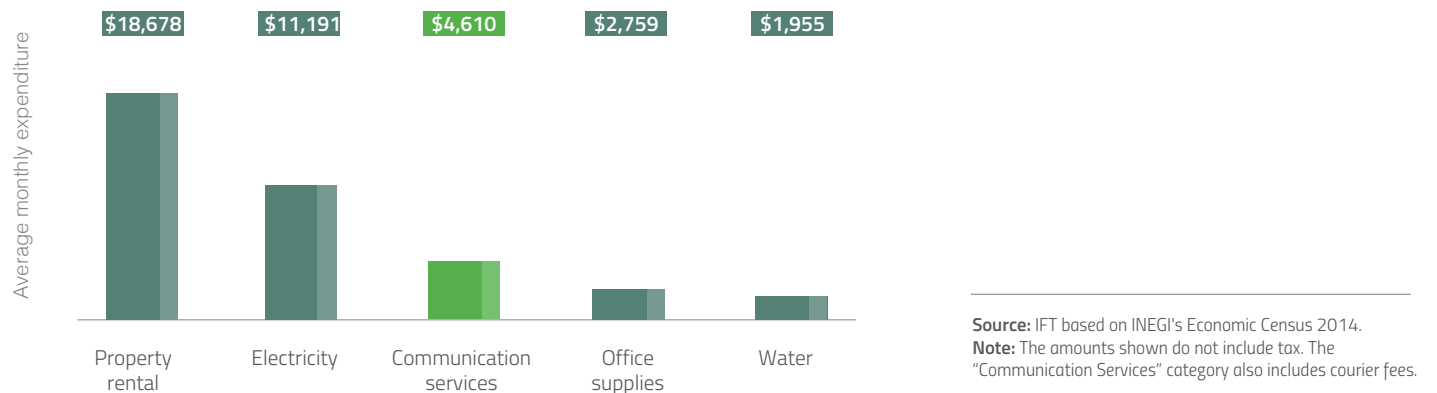


**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The "Other Technologies" category includes fixed wireless and satellite connections. Due to the rounding of data in the chart tags, the figures shown may not add up to 100%.

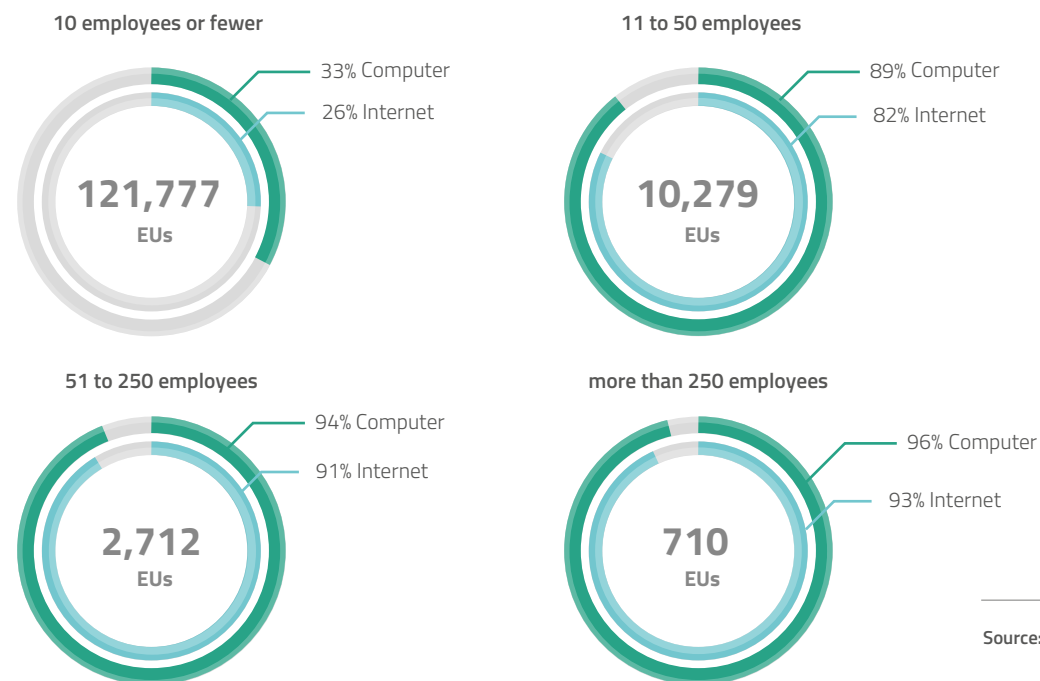
**FIGURE 2.19.3.2**  
Fixed telecommunications services penetration per 100 economic units



**FIGURE 2.19.3.3**  
Average monthly expenditure of economic units by service type



**Figure 2.19.3.4**  
Computer and internet adoption by economic unit (EU) size





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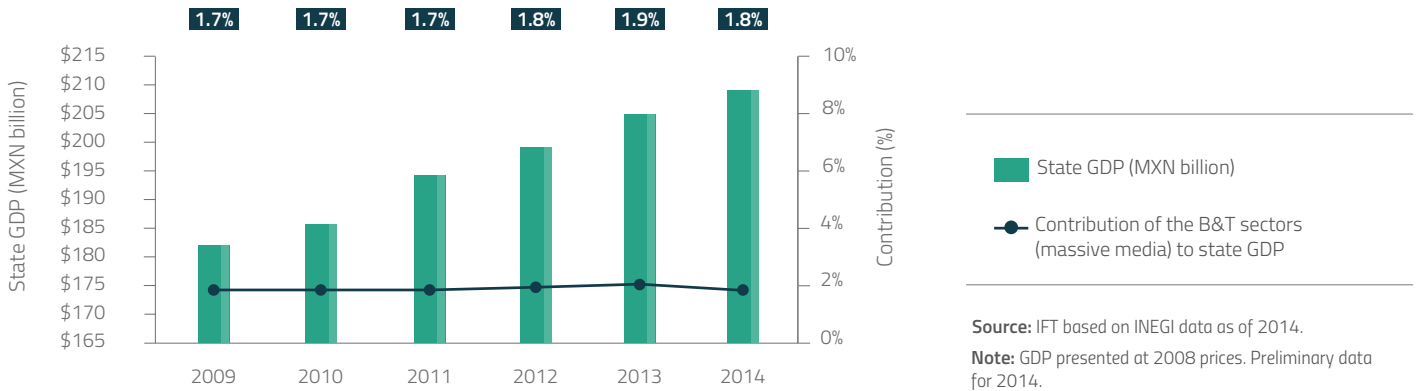
## 2.20 OAXACA (OAX)

### General Overview

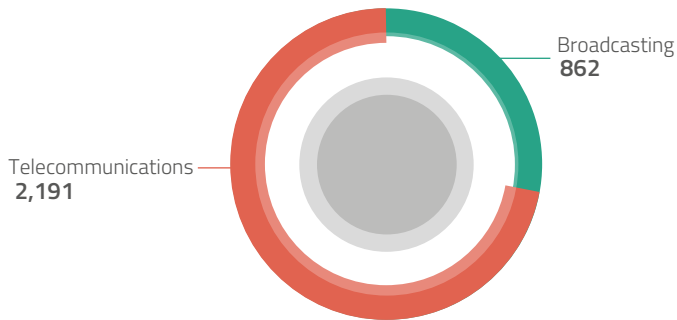
- ▶ From 2009 to 2014 Oaxaca's GDP had an average annual growth rate of 2.8%. Additionally, the massive media sector<sup>20</sup> contributed with 1.8% to the overall state's GDP, equivalent to MXN 3.730 billion.
- ▶ In 2015, the telecommunications sector employed approximately 2,200 people, whereas the broadcasting sector employed 862 people. In terms of broadcasting infrastructure at the end of 2015, the state had 80 radio broadcasting stations (68 FM stations and 12 AM stations) and 61 broadcast television channels.
- ▶ In terms of fixed telecommunications services, by the end of 2015 Oaxaca had the highest penetration in pay TV services with 38 subscriptions per 100 households, compared to 20 fixed telephone lines per 100 households, and 17 fixed broadband subscriptions per 100 households. Moreover, by mid 2015 according to ENDUTIH's results, 44.4% of households had at least one of these services.
- ▶ In terms of mobile telecommunications services, the state's mobile phone teledensity as of December 2015 was 59 subscriptions per 100 inhabitants, whereas the mobile internet teledensity reached 29 subscriptions per 100 inhabitants, ranking the state, in terms of mobile telecommunications penetration, in the top 31 out of 32 Mexican states.
- ▶ Regarding to ICT equipment adoption in Oaxaca, analog TV sets had the highest penetration level in households with 65 television sets per 100 households, followed by radio equipment with 58 radios per 100 households, computer equipment with 25 computers per 100 households and finally, digital television with 24 television sets per 100 households (this figure does not include households with an analog television set connected to a digital decoder, or households with pay TV services).
- ▶ As in most states, as of 2014 property rental was the principal expenditure incurred by economic units (business) in Oaxaca, standing at an average near of MXN 1,300 per month. On the other hand, expenditure on telecommunications services was MXN 283 per month, higher than other typical company expenditures such as water (MXN 165 per month) and office supplies (MXN 216 per month).
- ▶ Additionally, the fixed telecom services penetrations in Oaxaca's economic units (business) segment were 34 fixed telephone lines per 100 economic units (business), 18 fixed broadband subscriptions per 100 economic units (business) and two pay TV subscriptions per 100 economic units (business).
- ▶ Finally, in 2014 there were registered 175,010 economic units (business) in the state and of those who had 10 employees or less only 12% used computers, whereas only 9% used internet. Nevertheless, these figures were above 70% for economic units with 11 employees or more, which proves that there is a positive relation between company size and the telecommunications services adoption as part of the business as usual processes.

<sup>20</sup> According to the SCIAN, the Broadcasting and Telecommunications subsectors form part of Sector 51 Massive Media Information, and contributed 94% to the sector's nationwide GDP in 2015

**FIGURE 2.20.1.1**  
Contribution of the B&T sectors (massive media) to state GDP

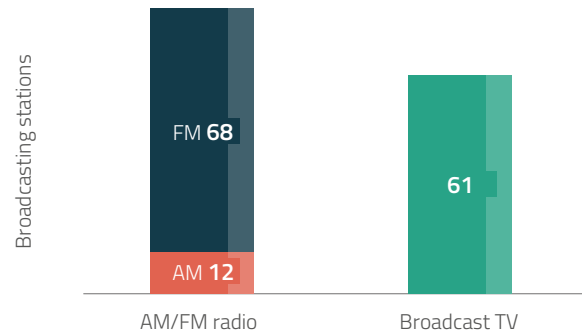


**FIGURE 2.20.1.2**  
Employees in the B&T sectors



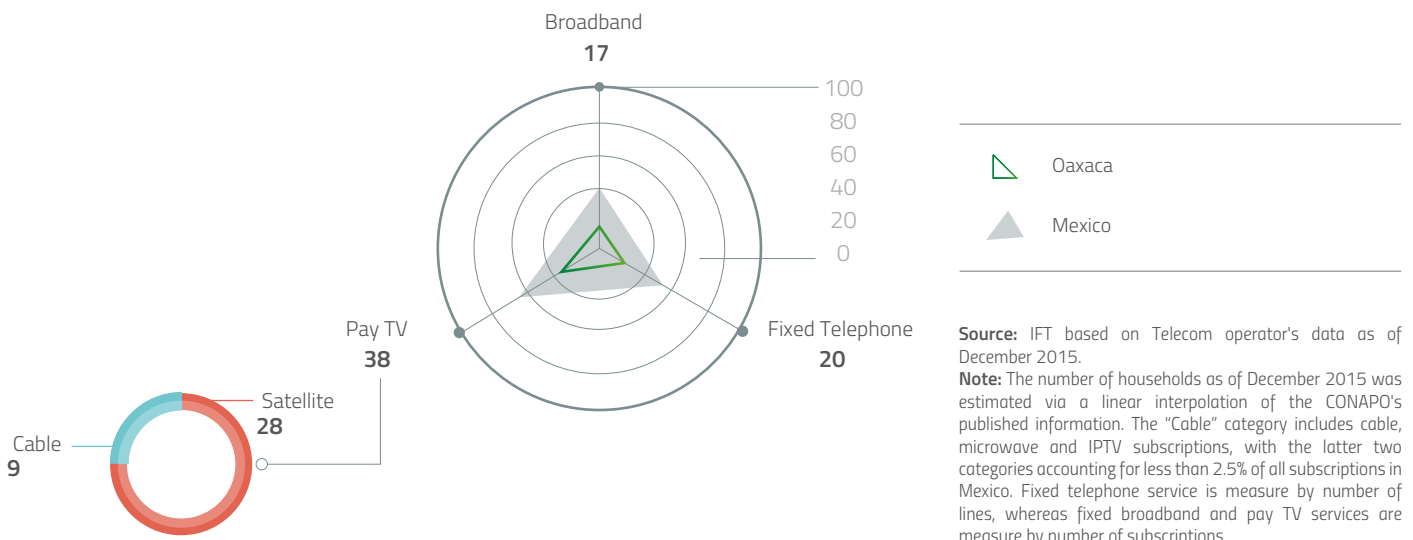
Source: IFT based on data from INEGI's quarterly National Occupation and Employment Surveys.

**FIGURE 2.20.1.3**  
AM/FM radio and broadcast TV stations

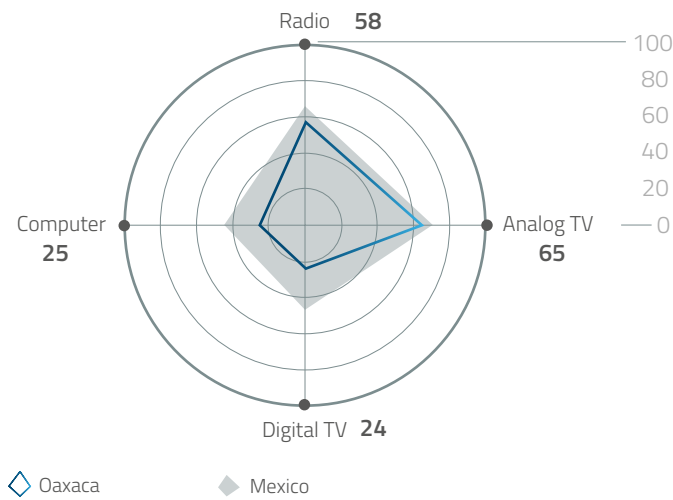


Source: IFT based on data as of December 2015.

**Figure 2.20.2.1**  
Fixed telecommunications services penetration per 100 households

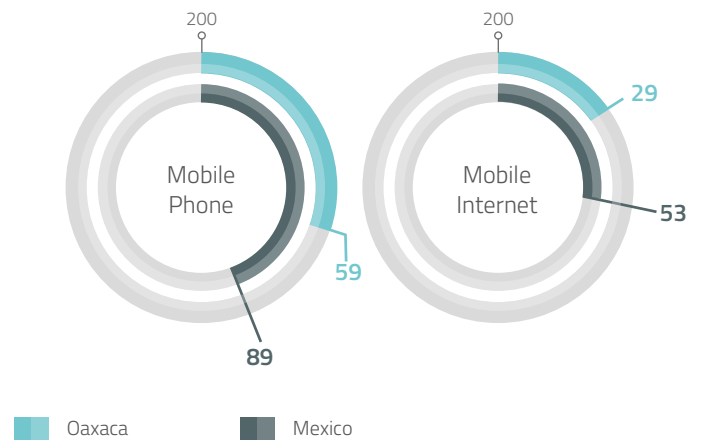


**FIGURE 2.20.2.2**  
ICT equipment per 100 households



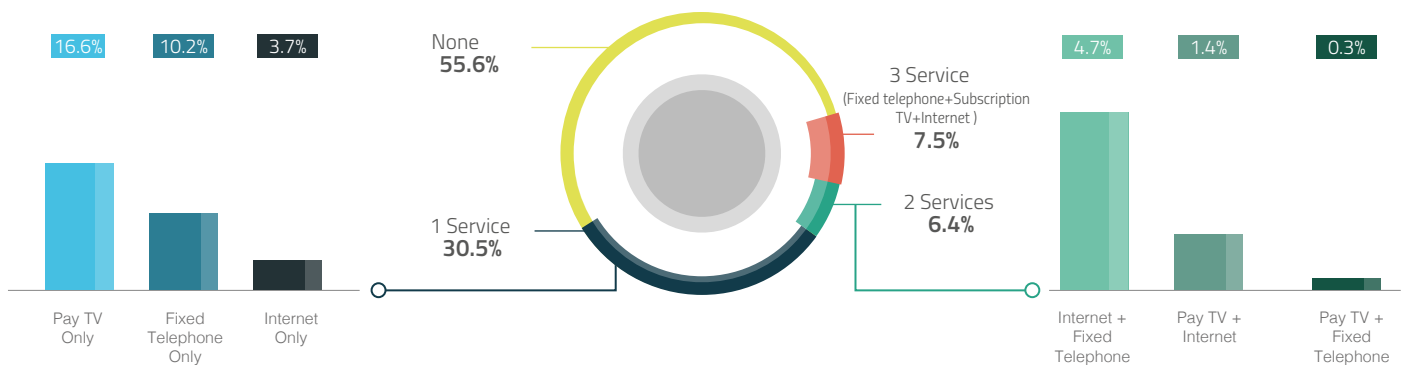
**Source:** IFT based on data from ENDUTIH 2015.  
**Note:** The figure for Digital TV does not include households with an analog television set and digital decoder, or households with pay TV services.

**FIGURE 2.20.2.3**  
Mobile telecommunications teledensity per 100 inhabitants



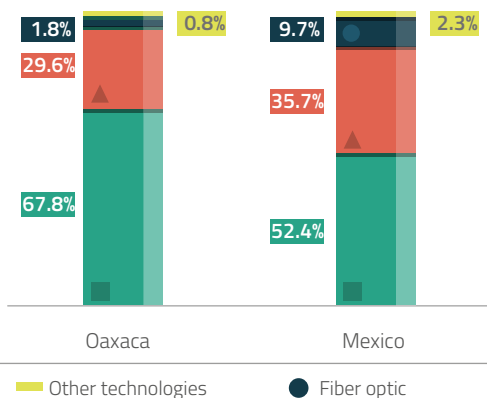
**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The number of inhabitants is taken from the data published by CONAPO as of January 2016. The teledensity desagregation per state was estimated based on the Telecom operator's data and INEGI's data from the ENDUTIH 2015.

**FIGURE 2.20.2.4**  
Distribution of fixed telecommunications services in households

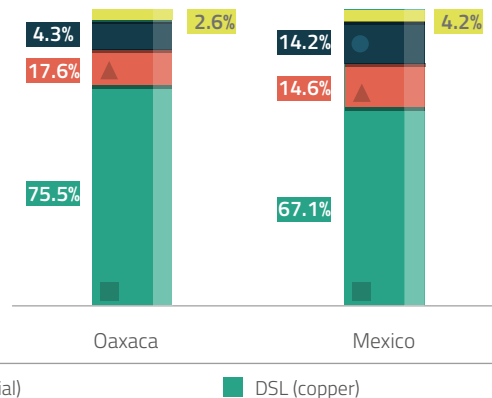


**Source:** IFT based on INEGI's ENDUTIH 2015.  
**Note:** Due to the rounding of data in the figure tags, the sum of the values shown in the bar charts may vary from those shown in the pie chart.

**Figure 2.20.2.5**  
Distribution of residential fixed broadband subscriptions per connection type

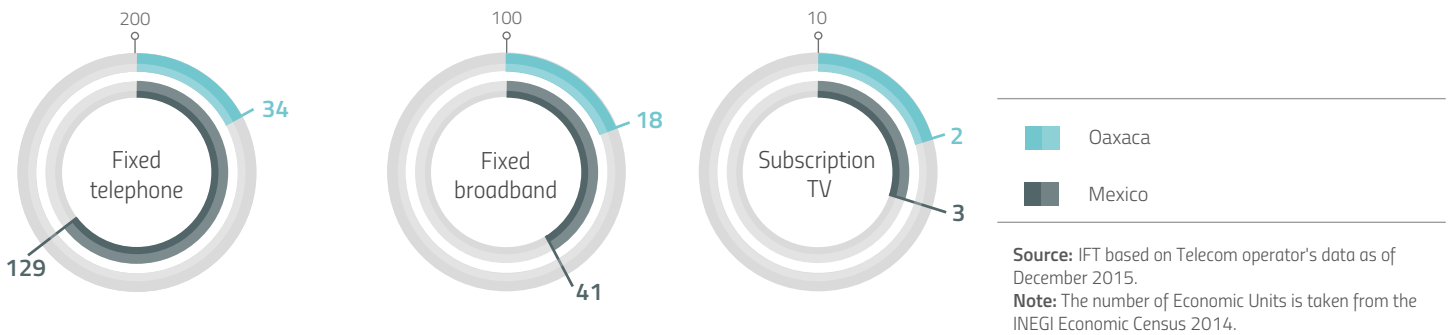


**Figure 2.20.3.1**  
Distribution of non-residential fixed broadband subscriptions per connection type

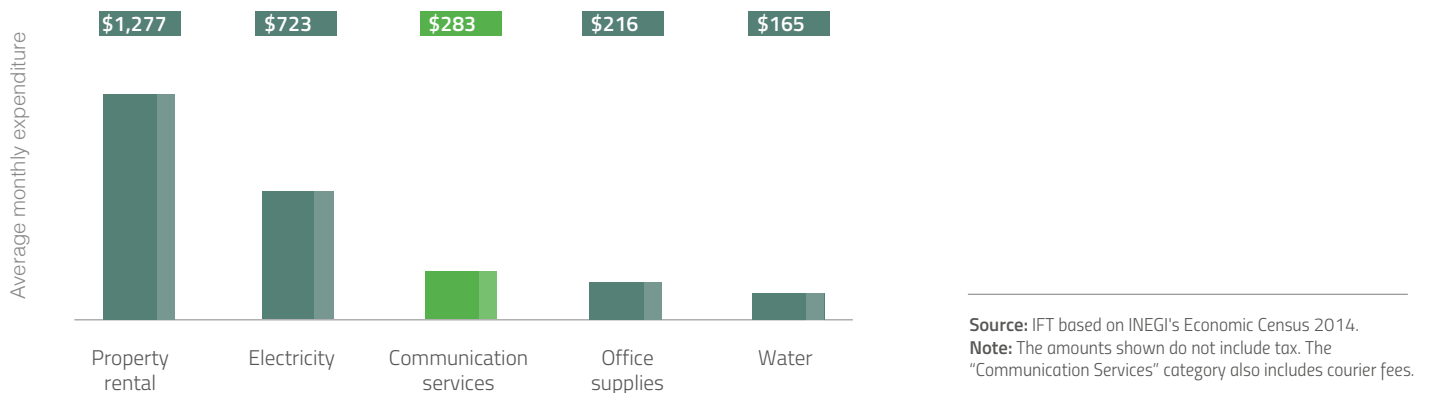


**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The "Other Technologies" category includes fixed wireless and satellite connections. Due to the rounding of data in the chart tags, the figures shown may not add up to 100%.

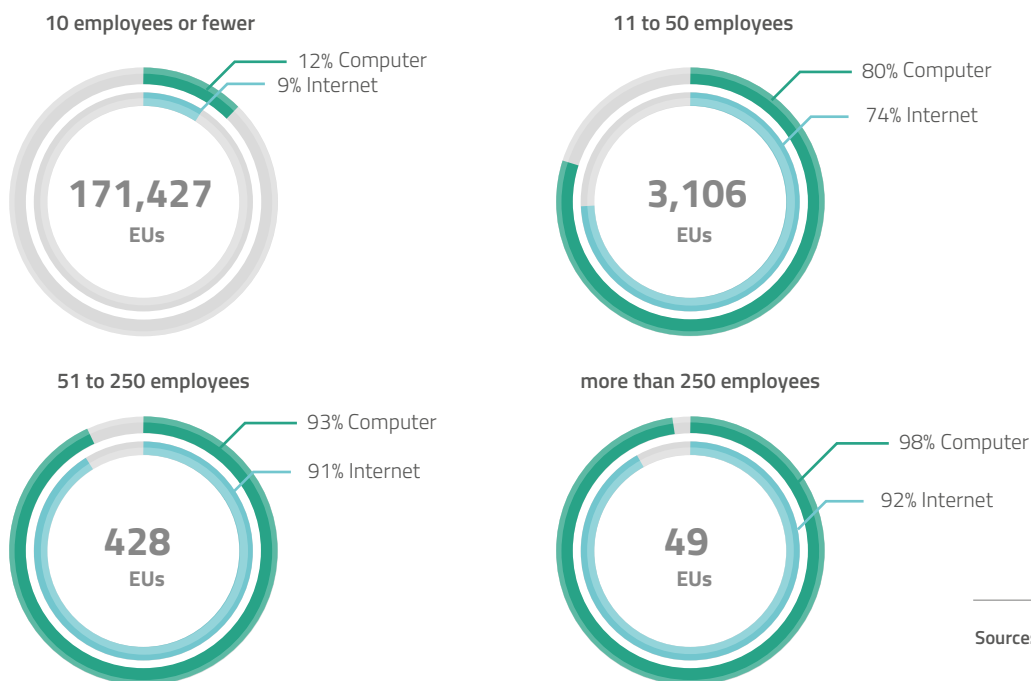
**FIGURE 2.20.3.2**  
Fixed telecommunications services penetration per 100 economic units



**FIGURE 2.20.3.3**  
Average monthly expenditure of economic units by service type



**Figure 2.20.3.4**  
Computer and internet adoption by economic unit (EU) size







## STATISTICAL YEARBOOK 2015:

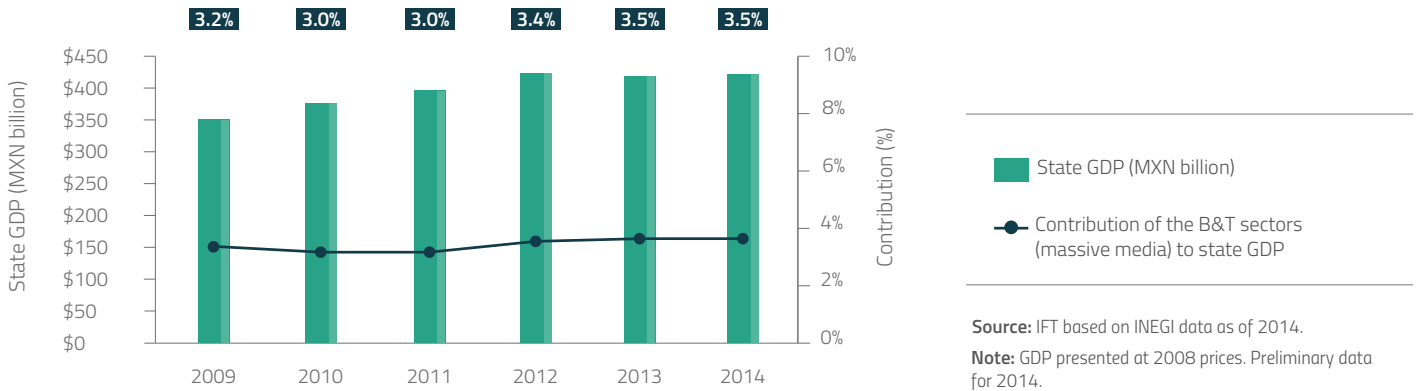
# 2.21 PUEBLA (PUE)

## General Overview

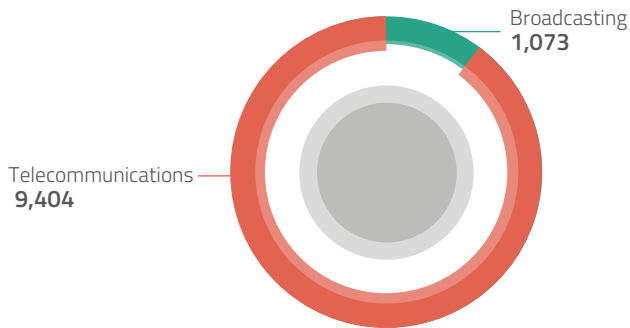
- ▶ From 2009 to 2014 Puebla's GDP showed an average annual growth rate of 3.9%. Additionally as of 2014 the massive media sector<sup>21</sup> contributed with 3.5% of the overall state's GDP, equivalent to MXN 14.940 billion.
- ▶ In 2015, the telecommunications sector employed 9,400 people, whereas the broadcasting sector employed more than 1,073 people. In terms of broadcasting infrastructure, at the end of 2015, the state had 52 radio broadcasting stations (39 FM stations and 13 AM stations) and eight broadcast television channels.
- ▶ In terms of fixed telecommunications services, by the end of 2015 Puebla had the highest penetration in pay TV services with 44 subscriptions per 100 households, compared to 40 fixed lines per 100 households and 33 fixed broadband subscriptions per 100 households. Moreover, by mid 2015 according to ENDUTIH's results 56.1% of households had at least one of these services.
- ▶ In terms of mobile telecommunications services, the state's mobile phone teledensity as of December 2015 was 71 subscriptions per 100 inhabitants, whereas the mobile internet teledensity reached 34 subscriptions per 100 inhabitants in the same period, ranking the state, in terms of mobile telecommunications penetration, on top 23 out of 32 Mexican states.
- ▶ Regarding to ICT equipment adoption in Puebla, analog TV sets had the highest penetration level per 100 households with 76 television sets per 100 households; followed by radio equipment with 65 radios per 100 households, digital television with 39 television sets per 100 households (this figure does not include households with an analog television set connected to a digital decoder, or households with pay TV services), and finally, computer equipment with 38 computers per 100 households.
- ▶ As in most states, as of 2014 property rental was the principal expenditure incurred by economic units (business) in Puebla, standing at an average near to MXN 3,200 per month. On the other hand, expenditure on telecommunications services was MXN 644 per month, higher than other typical company expenditures such as water (MXN 349 per month) and office supplies (approximately MXN 383 per month).
- ▶ Additionally, the fixed telecom services penetrations in Puebla's economic units (business) segment were 60 fixed telephone lines per 100 economic units (business), 25 fixed broadband subscriptions per 100 economic units (business); and three pay TV subscriptions per 100 economic units (business).
- ▶ Finally, in 2014 there were registered 251,060 economic units (business) in the state and of those who had 10 employees or less only 15% used computer as part their operations, whereas only 12% used internet. Nevertheless, these figures were above 75% for economic units (business) with 11 employees or more, which proves that there is a positive relation between company size and the telecommunications services adoptions as part of the business as usual processes.

<sup>21</sup> According to the SCIAN, the Broadcasting and Telecommunications subsectors form part of Sector 51 Massive Media Information, and contributed 94% to the sector's nationwide GDP in 2015

**FIGURE 2.21.1.1**  
Contribution of the B&T sectors (massive media) to state GDP

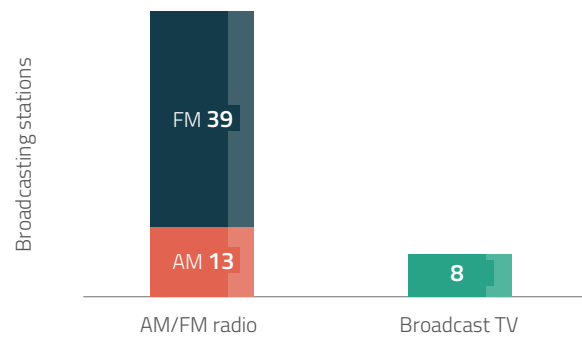


**FIGURE 2.21.1.2**  
Employees in the B&T sectors



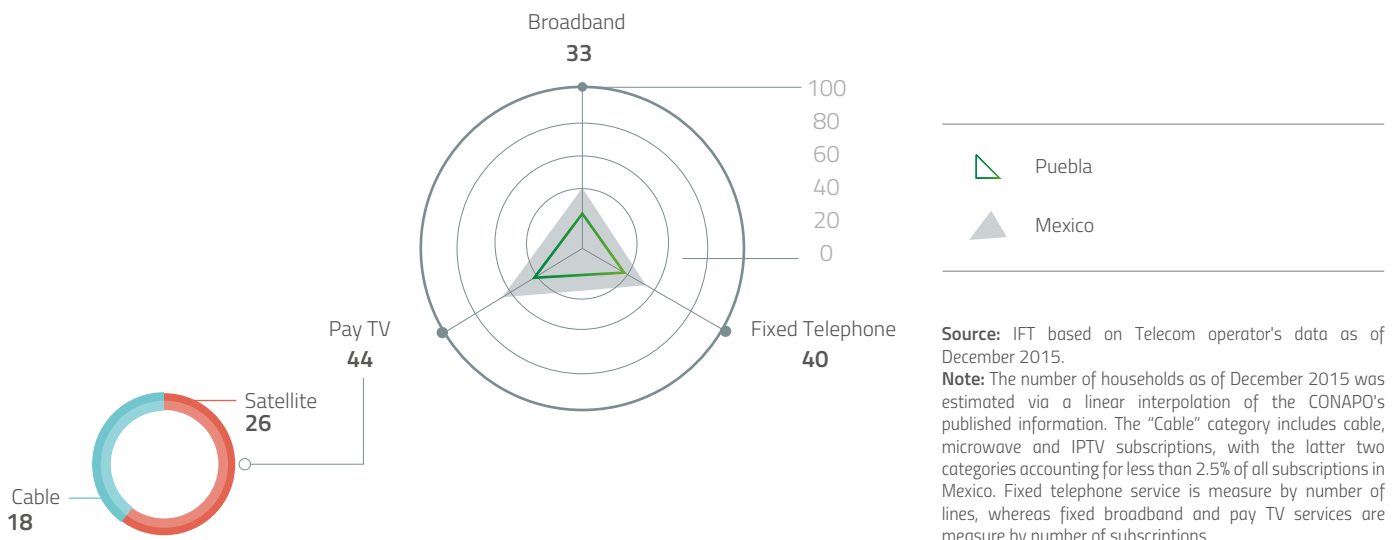
**Source:** IFT based on data from INEGI's quarterly National Occupation and Employment Surveys.

**FIGURE 2.21.1.3**  
AM/FM radio and broadcast TV stations

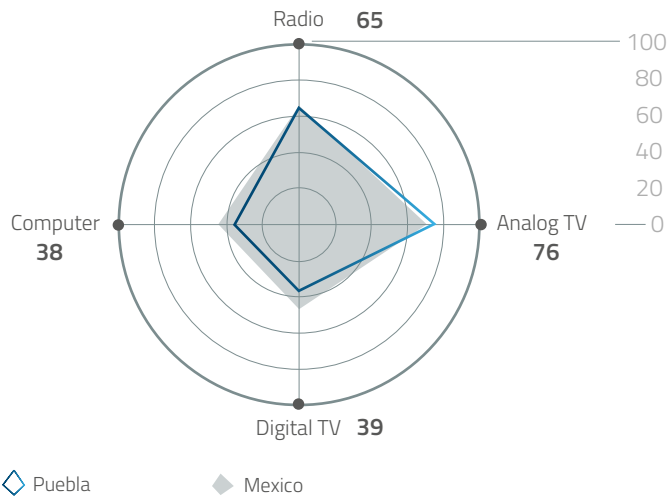


**Source:** IFT based on data as of December 2015.

**Figure 2.21.2.1**  
Fixed telecommunications services penetration per 100 households

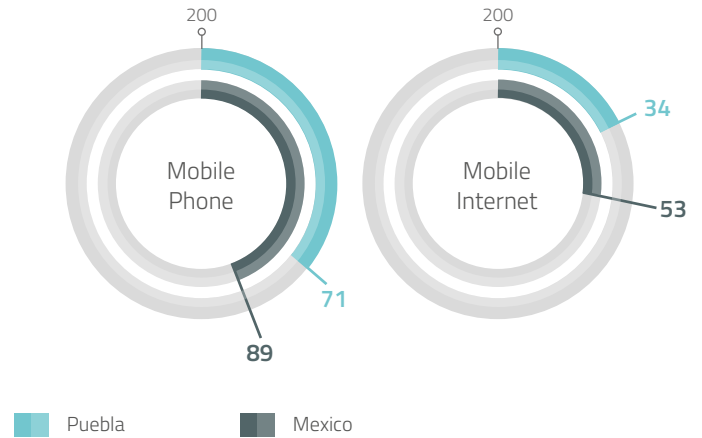


**FIGURE 2.21.2.2**  
ICT equipment per 100 households



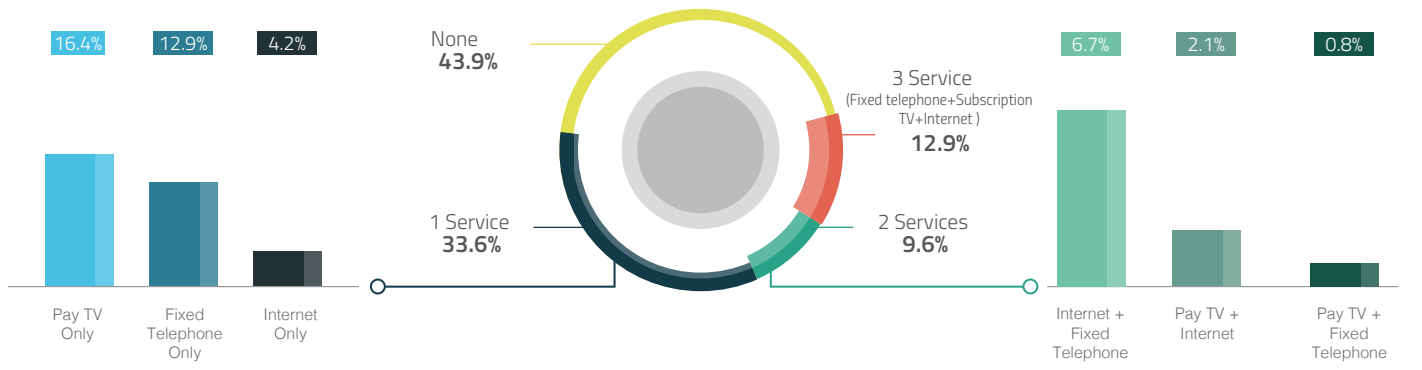
Source: IFT based on data from ENDUTIH 2015.  
Note: The figure for Digital TV does not include households with an analog television set and digital decoder, or households with pay TV services.

**FIGURE 2.21.2.3**  
Mobile telecommunications teledensity per 100 inhabitants



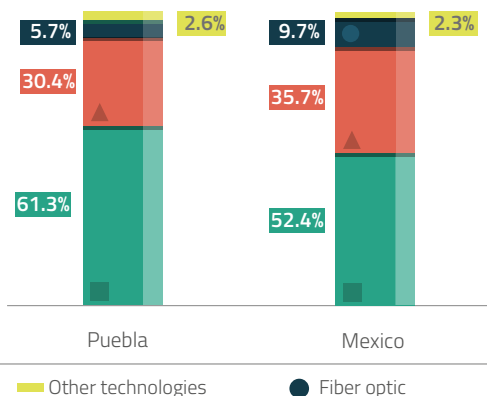
Source: IFT based on Telecom operator's data as of December 2015.  
Note: The number of inhabitants is taken from the data published by CONAPO as of January 2016. The teledensity desagregation per state was estimated based on the Telecom operator's data and INEGI's data from the ENDUTIH 2015.

**FIGURE 2.21.2.4**  
Distribution of fixed telecommunications services in households

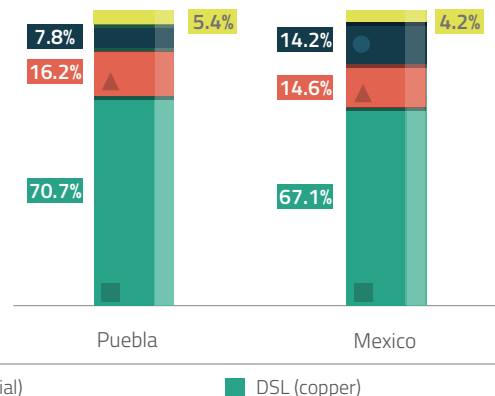


Source: IFT based on INEGI's ENDUTIH 2015.  
Note: Due to the rounding of data in the figure tags, the sum of the values shown in the bar charts may vary from those shown in the pie chart.

**Figure 2.21.2.5**  
Distribution of residential fixed broadband subscriptions per connection type



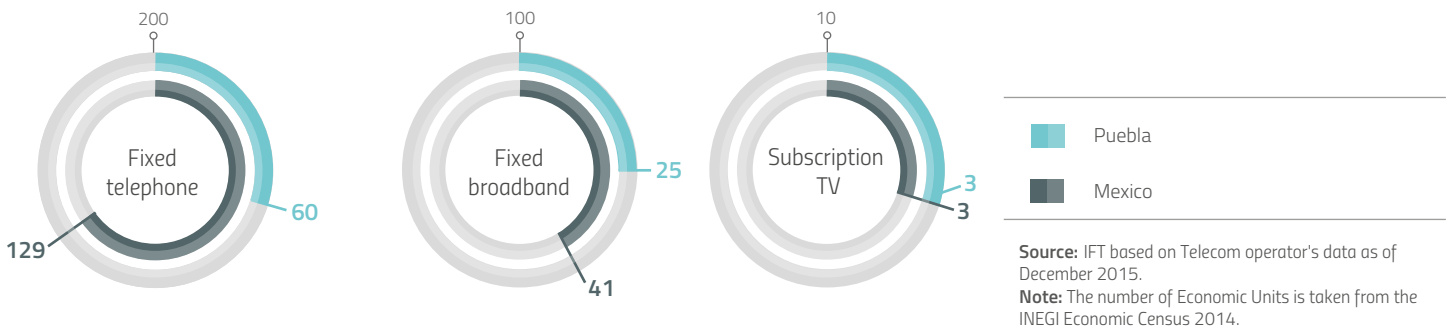
**Figure 2.21.3.1**  
Distribution of non-residential fixed broadband subscriptions per connection type



Source: IFT based on Telecom operator's data as of December 2015.  
Note: The "Other Technologies" category includes fixed wireless and satellite connections. Due to the rounding of data in the chart tags, the figures shown may not add up to 100%.

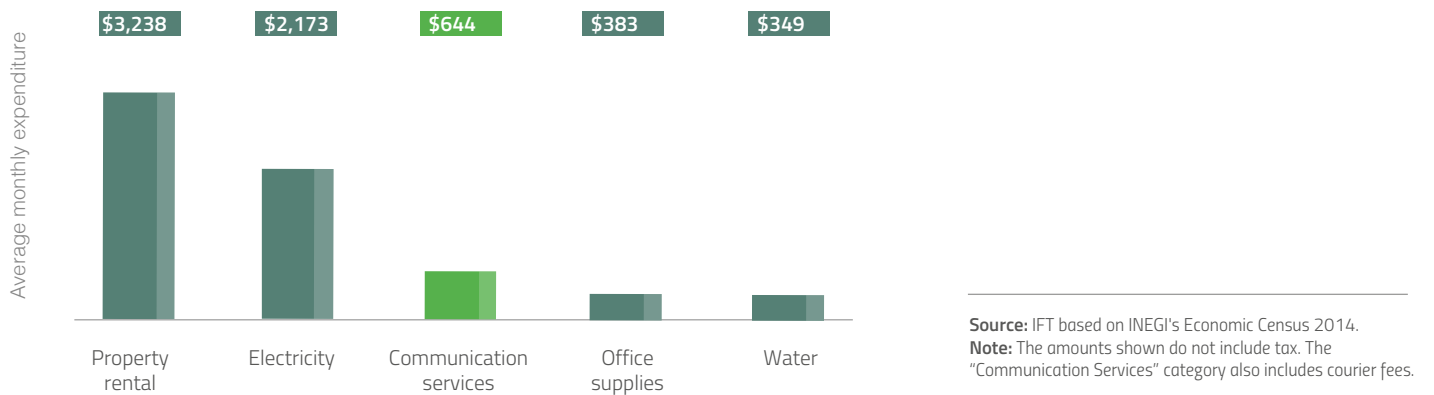
**FIGURE 2.21.3.2**

Fixed telecommunications services penetration per 100 economic units



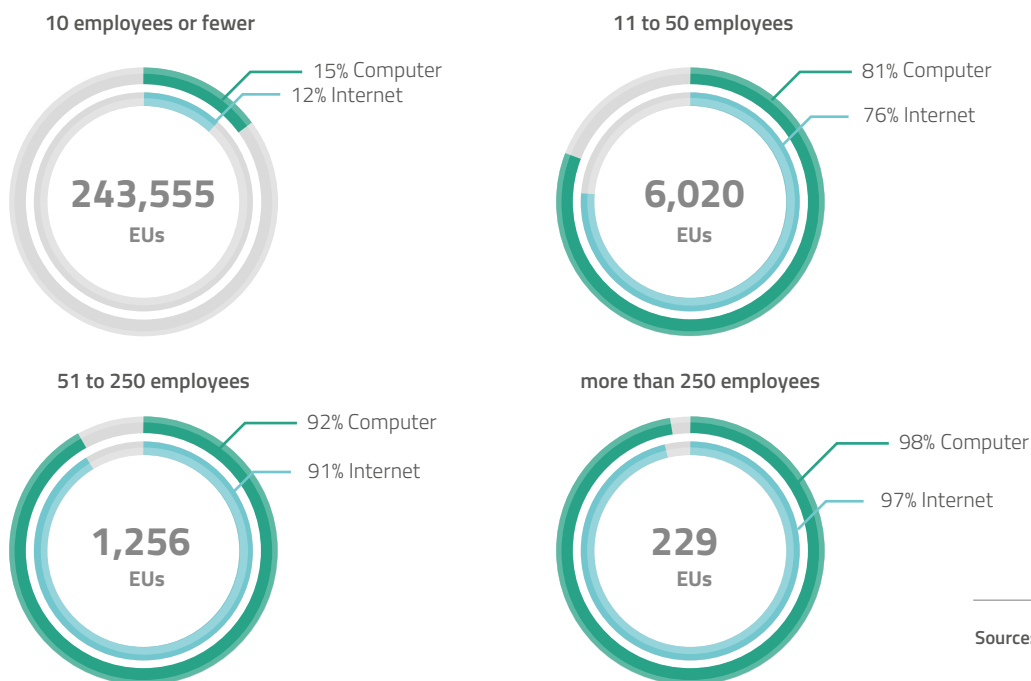
**FIGURE 2.21.3.3**

Average monthly expenditure of economic units by service type



**Figure 2.21.3.4**

Computer and internet adoption by economic unit (EU) size





STATISTICAL YEARBOOK 2015:

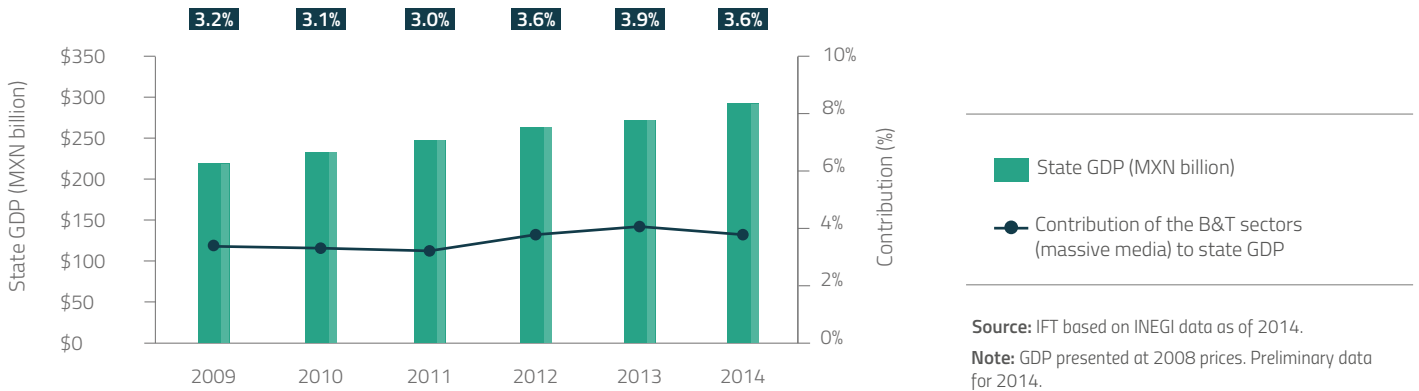
## 2.22 QUERETARO (QRO)

### General Overview

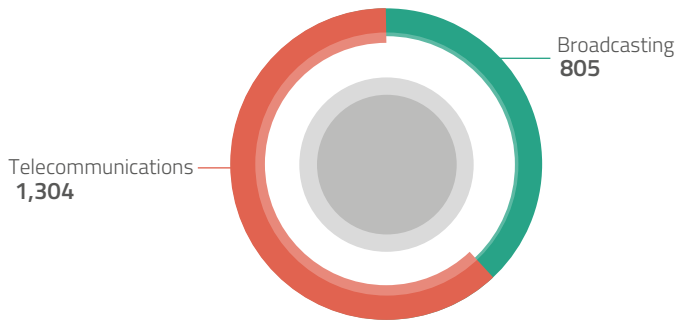
- ▶ From 2009 to 2014 Queretaro's GDP showed an average annual growth rate of 6.1%. Additionally as of 2014 the massive media sector<sup>22</sup> contributed with 3.6% of the overall state's GDP, equivalent to MXN 10.580 billion.
- ▶ In 2015, the telecommunications sector employed more than 1,300 people, whereas the broadcasting sector employed more than 800 people. In terms of broadcasting infrastructure, at the end of 2015, the state had 21 radio broadcasting stations (19 FM stations and 2 AM stations) and seven broadcast television channels.
- ▶ In terms of fixed telecommunications services, by the end of 2015 Queretaro had the highest penetration in pay TV services with 73 subscriptions per 100 households, compared to 50 broadband subscriptions per 100 households and 46 fixed telephone lines per 100 households. Moreover, by mid 2015 according to ENDUTIH's results 69.3% of households had at least one of these services.
- ▶ In terms of mobile telecommunications services, the state's mobile phone teledensity as of December 2015 was 96 subscriptions per 100 inhabitants, whereas the mobile internet teledensity reached 53 subscriptions per 100 inhabitants in the same period, ranking the state, in terms of mobile telecommunications penetration, on top 9 out of 32 Mexican states.
- ▶ Regarding to ICT equipment adoption in Queretaro, analog TV sets and radio equipment had the highest penetration level per 100 households, both with 69 sets per 100 households; followed by digital television with 57 television sets per 100 households (this figure does not include households with an analog television set connected to a digital decoder, or households with pay TV services), and finally, computer equipment with 51 computers per 100 households.
- ▶ As in most states, as of 2014 property rental was the principal expenditure incurred by economic units (business) in Queretaro, standing at an average near to MXN 9,900 per month. On the other hand, expenditure on telecommunications services was MXN 2,182 per month, higher than other typical company expenditures such as water (MXN 1,174 per month) and office supplies (approximately MXN 1,368 per month).
- ▶ Additionally, the fixed telecom services penetrations in Queretaro's economic units (business) segment were 169 fixed telephone lines per 100 economic units (business), 65 fixed broadband subscriptions per 100 economic units (business); and four pay TV subscriptions per 100 economic units (business).
- ▶ Finally, in 2014 there were registered 69,004 economic units (business) in the state and of those who had 10 employees or less only 29% used computer as part their operations, whereas only 25% used internet. Nevertheless, these figures were above 80% for economic units (business) on the 11 to 50 employees segment, and 90% for economic units (business) with more than 50 employees, which proves that there is a positive relation between company size and the telecommunications services adoption as part of the business as usual processes.

<sup>22</sup> According to the SCIAN, the Broadcasting and Telecommunications subsectors form part of Sector 51 Massive Media Information, and contributed 94% to the sector's nationwide GDP in 2015

**FIGURE 2.22.1.1**  
Contribution of the B&T sectors (massive media) to state GDP

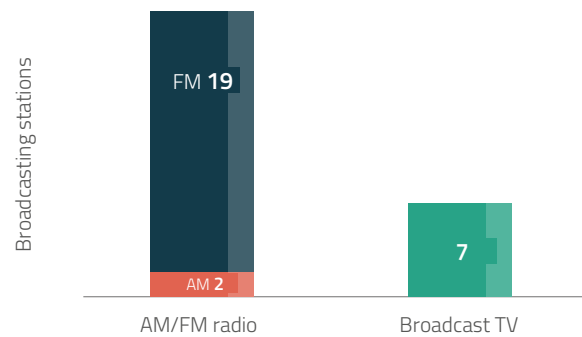


**FIGURE 2.22.1.2**  
Employees in the B&T sectors



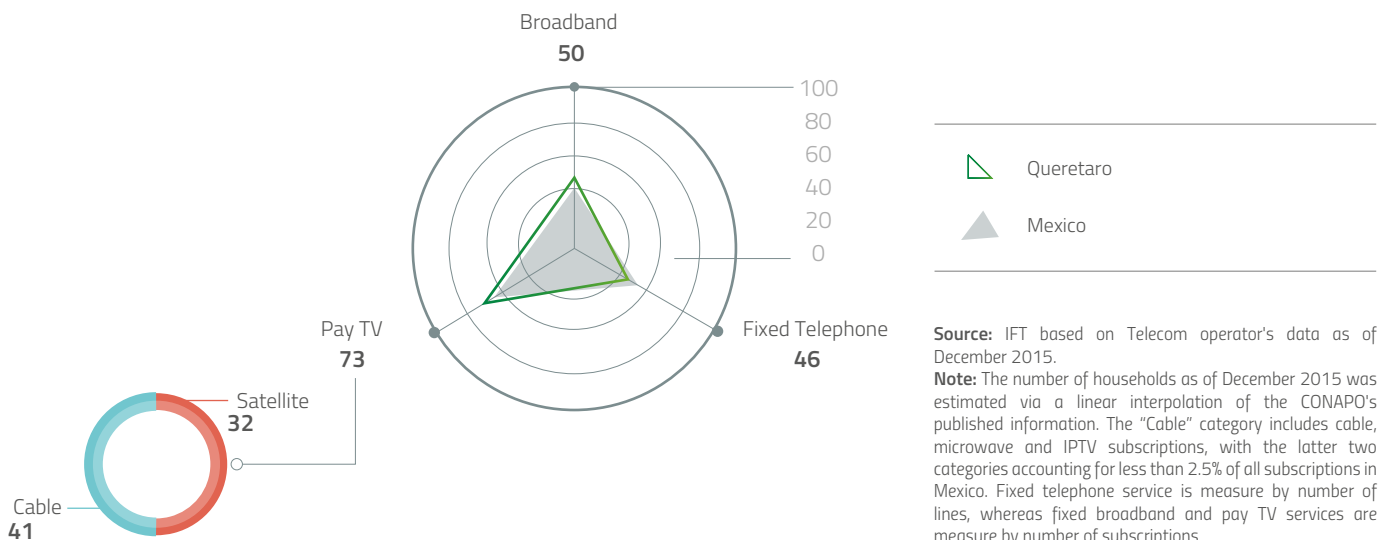
Source: IFT based on data from INEGI's quarterly National Occupation and Employment Surveys.

**FIGURE 2.22.1.3**  
AM/FM radio and broadcast TV stations

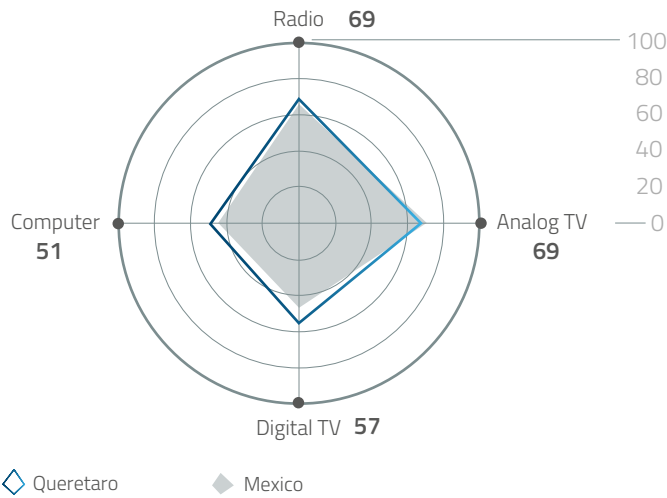


Source: IFT based on data as of December 2015.

**Figure 2.22.2.1**  
Fixed telecommunications services penetration per 100 households

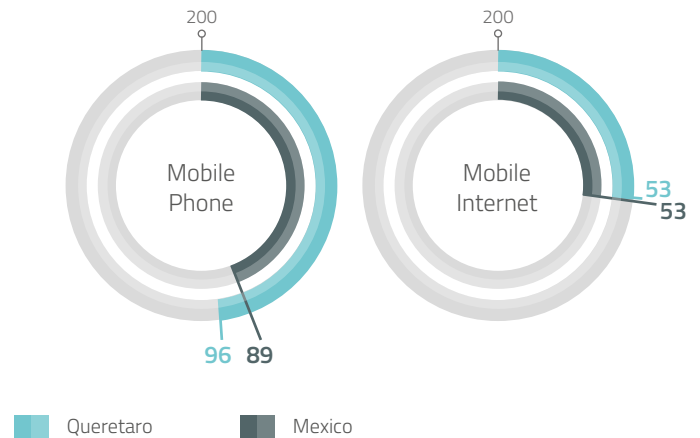


**FIGURE 2.22.2.2**  
ICT equipment per 100 households



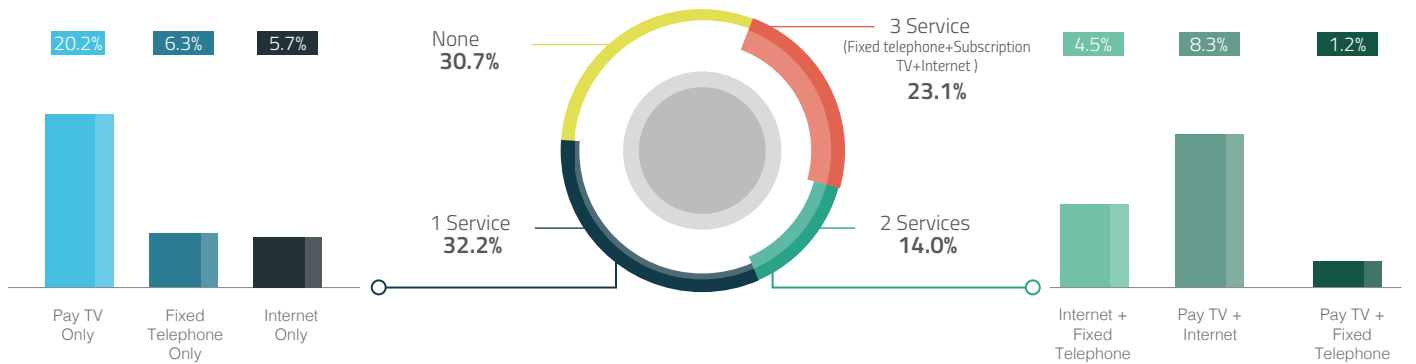
**Source:** IFT based on data from ENDUTIH 2015.  
**Note:** The figure for Digital TV does not include households with an analog television set and digital decoder, or households with pay TV services.

**FIGURE 2.22.2.3**  
Mobile telecommunications teledensity per 100 inhabitants



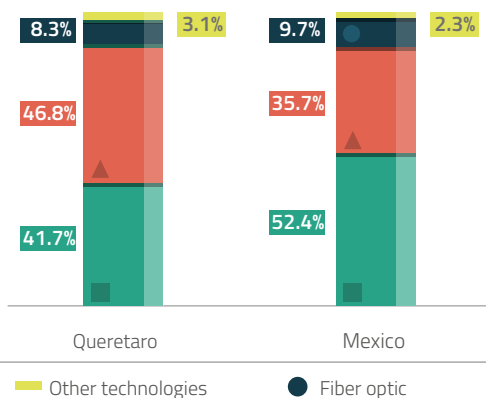
**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The number of inhabitants is taken from the data published by CONAPO as of January 2016. The teledensity desagregation per state was estimated based on the Telecom operator's data and INEGI's data from the ENDUTIH 2015.

**FIGURE 2.22.2.4**  
Distribution of fixed telecommunications services in households

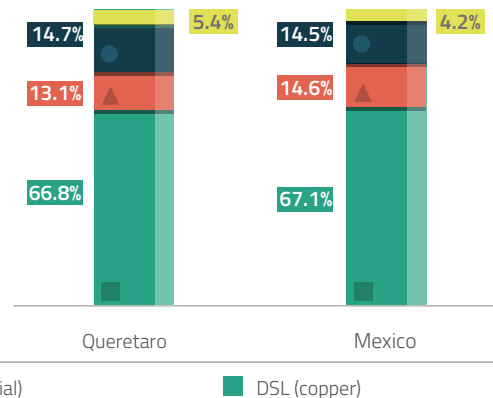


**Source:** IFT based on INEGI's ENDUTIH 2015.  
**Note:** Due to the rounding of data in the figure tags, the sum of the values shown in the bar charts may vary from those shown in the pie chart.

**Figure 2.22.2.5**  
Distribution of residential fixed broadband subscriptions per connection type

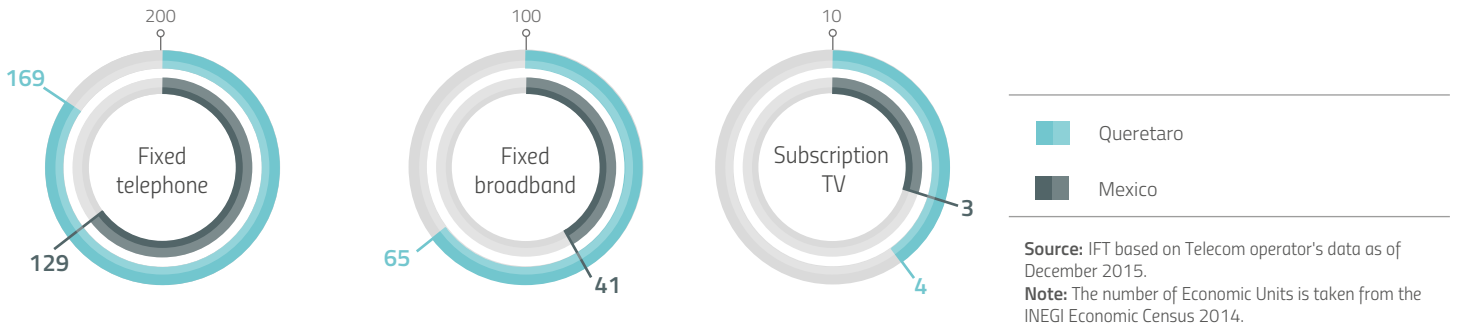


**Figure 2.22.3.1**  
Distribution of non-residential fixed broadband subscriptions per connection type

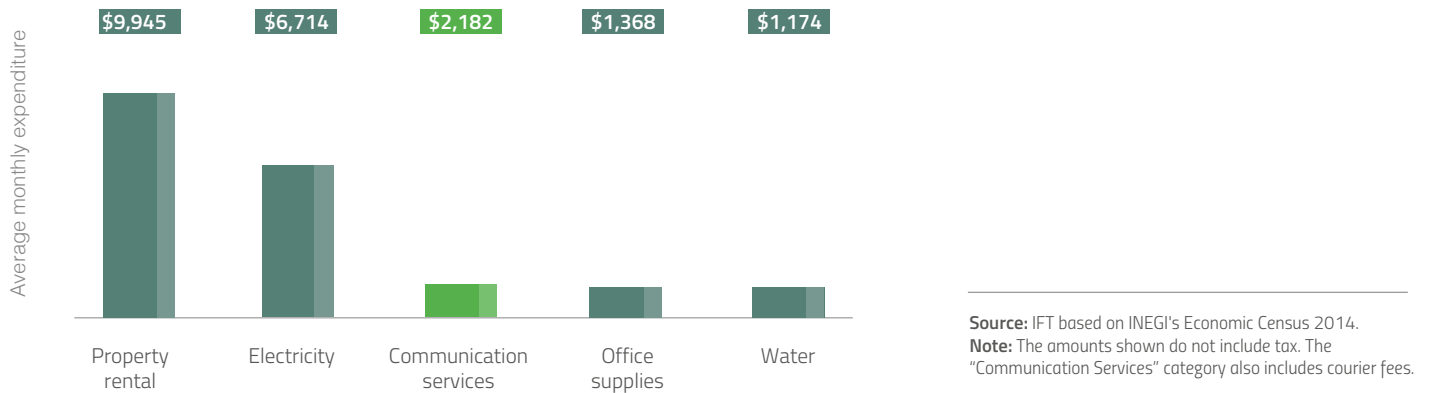


**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The "Other Technologies" category includes fixed wireless and satellite connections. Due to the rounding of data in the chart tags, the figures shown may not add up to 100%.

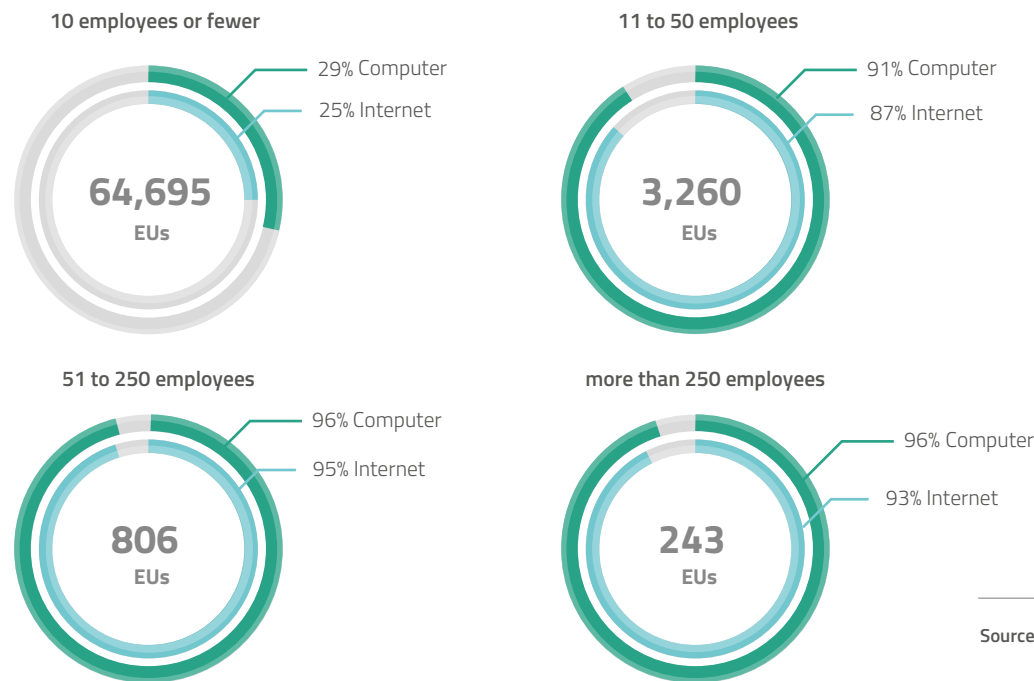
**FIGURE 2.22.3.2**  
Fixed telecommunications services penetration per 100 economic units



**FIGURE 2.22.3.3**  
Average monthly expenditure of economic units by service type



**Figure 2.22.3.4**  
Computer and internet adoption by economic unit (EU) size







STATISTICAL YEARBOOK 2015:

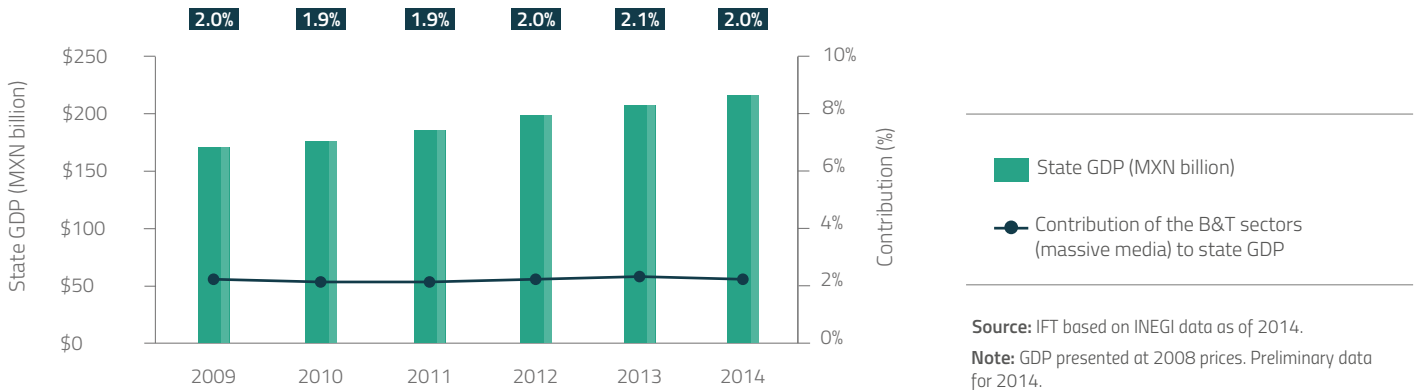
## 2.23 QUINTANA ROO (QR)

### General Overview

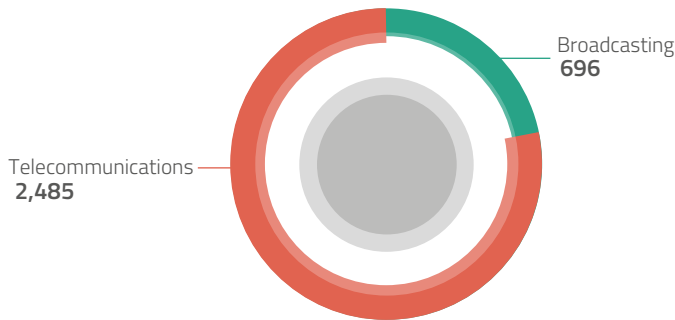
- ▶ From 2009 to 2014 Quintana Roo's GDP showed an average annual growth rate of 4.9%. Additionally as of 2014 the massive media sector<sup>23</sup> contributed with 2% of the overall state's GDP, equivalent to MXN 4.180 billion.
- ▶ In 2015, the telecommunications sector employed 2,485 people, whereas the broadcasting sector employed 696 people. In terms of broadcasting infrastructure, at the end of 2015, the state had 33 radio broadcasting stations (25 FM stations and 8 AM stations) and 16 broadcast television channels.
- ▶ In terms of fixed telecommunications services, by the end of 2015 Quintana Roo had the highest penetration in pay TV services with 69 subscriptions per 100 households, compared to 41 broadband subscriptions per 100 households, and 28 fixed telephone lines per 100 households. Moreover, by mid 2015 according to ENDUTIH's results 82.7% of households had at least one of these services.
- ▶ In terms of mobile telecommunications services, the state's mobile phone teledensity as of December 2015 was 103 subscriptions per 100 inhabitants, whereas the mobile internet teledensity reached 73 subscriptions per 100 inhabitants in the same period, ranking the state, in terms of mobile telecommunications penetration, on top 5 out of 32 Mexican states.
- ▶ Regarding to ICT equipment adoption in Quintana Roo, analog television had the highest penetration level per 100 households with 61 television sets per 100 households; followed by radio with 53 radios per 100 households, computer equipment with 47 computers per 100 households, and finally, digital TV with 43 television sets per 100 households (this figure does not include households with an analog television set connected to a digital decoder, or households with pay TV services).
- ▶ As in most states, as of 2014 property rental was the principal expenditure incurred by economic units (business) in Quintana Roo, standing at an average near to MXN 11,507 per month, followed by the monthly average expenditure on electricity, which was MXN 6,607. On the other hand, expenditure on telecommunications services was MXN 1,358 per month, higher than other typical company expenditures such as water (MXN 1,278 per month).
- ▶ Additionally, the fixed telecom services penetrations in Quintana Roo's economic units (business) segment were 153 fixed telephone lines per 100 economic units (business), 85 fixed broadband subscriptions per 100 economic units (business); and nine pay TV subscriptions per 100 economic units (business).
- ▶ Finally, in 2014 there were registered 45,387 economic units (business) in the state and of those who had 10 employees or less only 32% used computer as part their operations, whereas only 26% used internet. Nevertheless, these figures were above 80% for economic units (business) with 11 employees or more, which proves that there is a positive relation between company size and the telecommunications services adoption as part of the business as usual processes.

<sup>23</sup> According to the SCIAN, the Broadcasting and Telecommunications subsectors form part of Sector 51 Massive Media Information, and contributed 94% to the sector's nationwide GDP in 2015

**FIGURE 2.23.1.1**  
Contribution of the B&T sectors (massive media) to state GDP

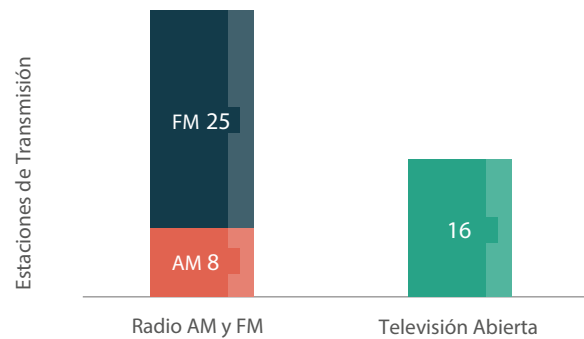


**FIGURE 2.23.1.2**  
Employees in the B&T sectors



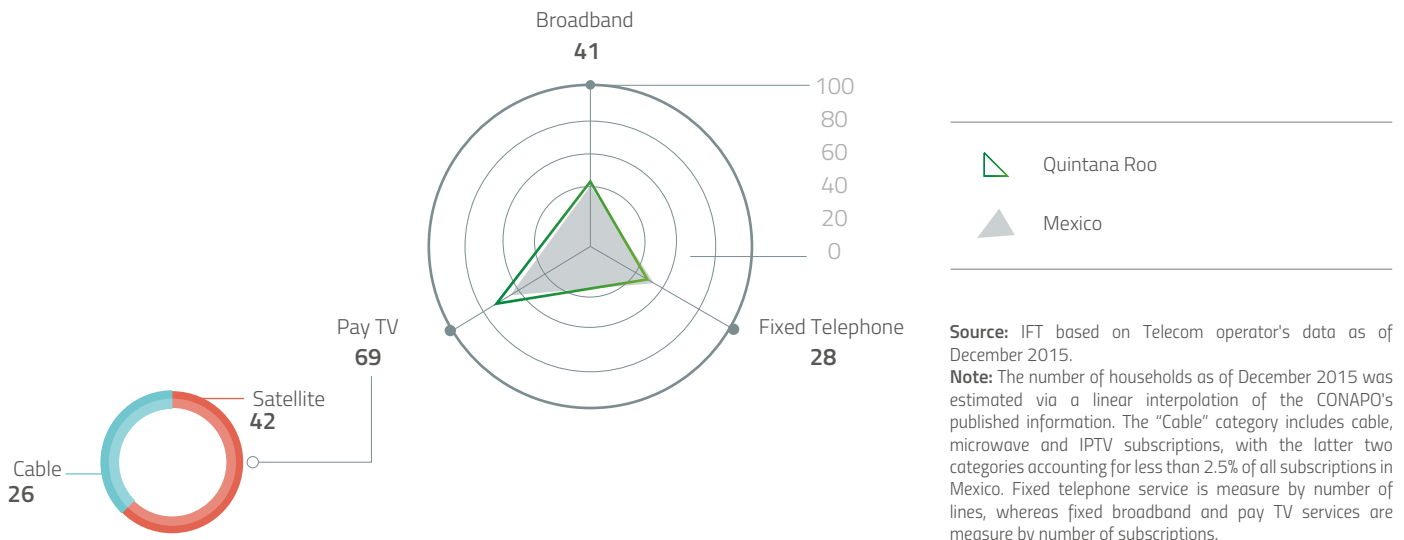
Source: IFT based on data from INEGI's quarterly National Occupation and Employment Surveys.

**FIGURA 2.23.1.3**  
Estaciones de Radio AM y FM y TV Abierta

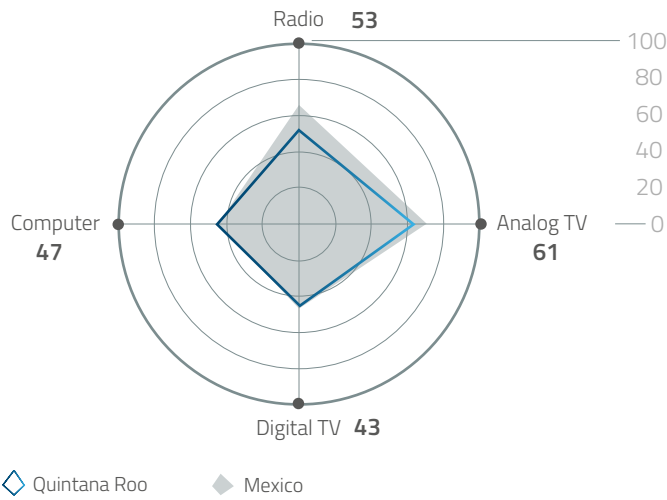


Fuente: IFT con datos actualizados a diciembre 2015

**Figure 2.23.2.1**  
Fixed telecommunications services penetration per 100 households

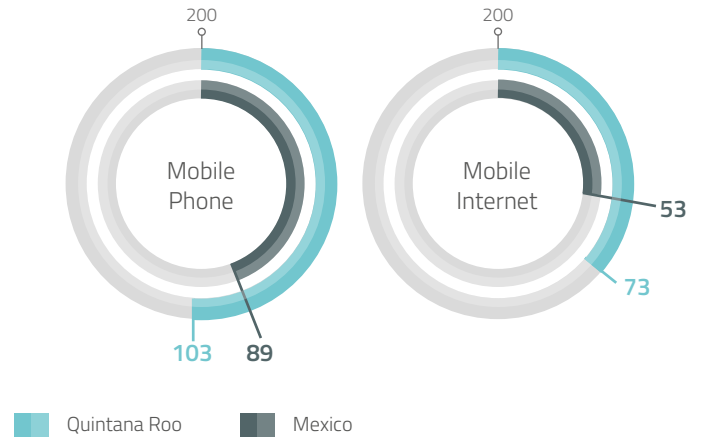


**FIGURE 2.23.2.2**  
ICT equipment per 100 households



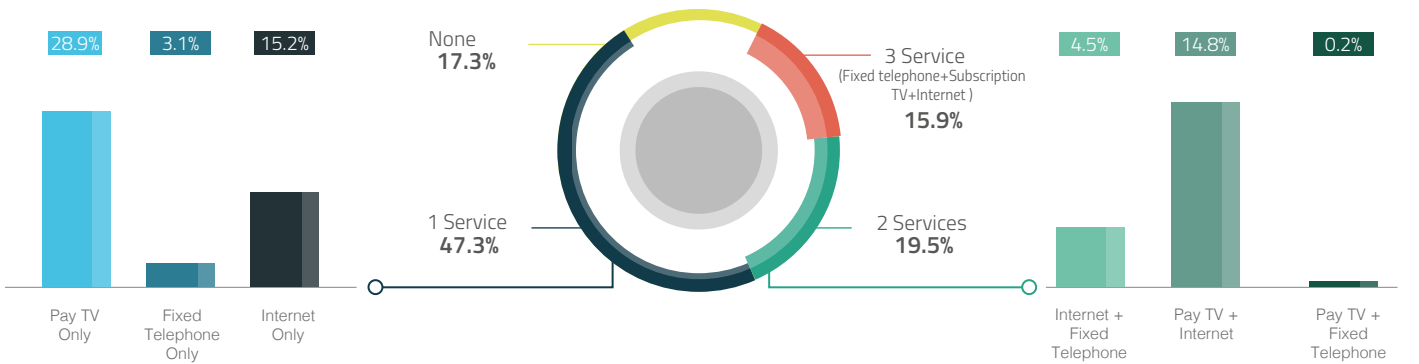
**Source:** IFT based on data from ENDUTIH 2015.  
**Note:** The figure for Digital TV does not include households with an analog television set and digital decoder, or households with pay TV services.

**FIGURE 2.23.2.3**  
Mobile telecommunications teledensity per 100 inhabitants



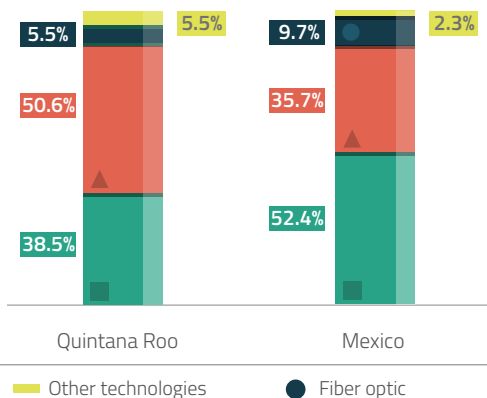
**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The number of inhabitants is taken from the data published by CONAPO as of January 2016. The teledensity disaggregation per state was estimated based on the Telecom operator's data and INEGI's data from the ENDUTIH 2015.

**FIGURE 2.23.2.4**  
Distribution of fixed telecommunications services in households

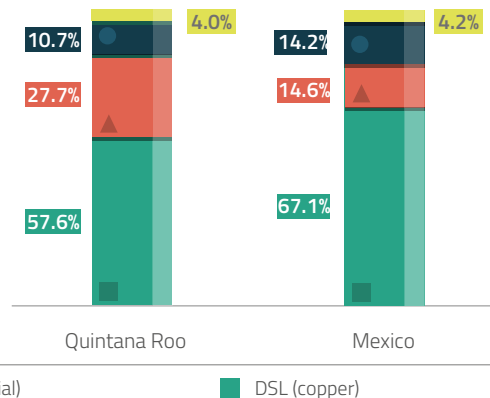


**Source:** IFT based on INEGI's ENDUTIH 2015.  
**Note:** Due to the rounding of data in the figure tags, the sum of the values shown in the bar charts may vary from those shown in the pie chart.

**Figure 2.23.2.5**  
Distribution of residential fixed broadband subscriptions per connection type

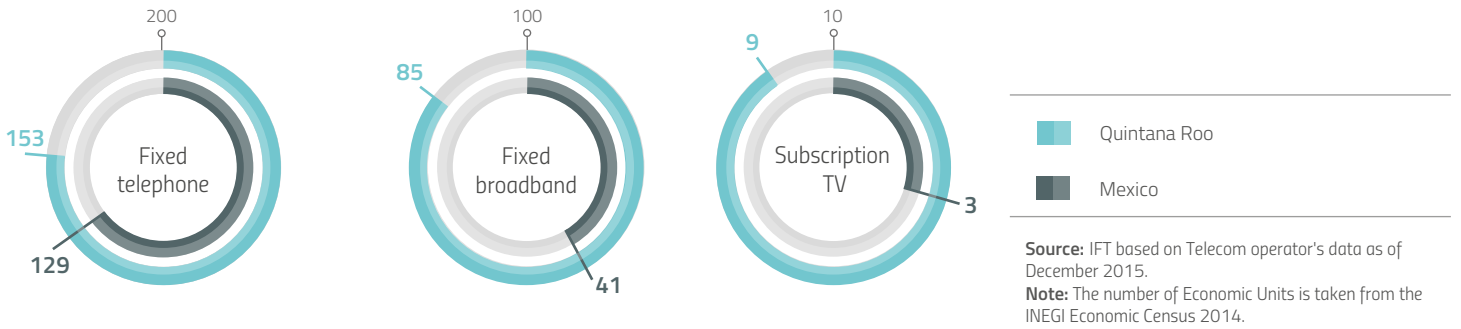


**Figure 2.23.3.1**  
Distribution of non-residential fixed broadband subscriptions per connection type

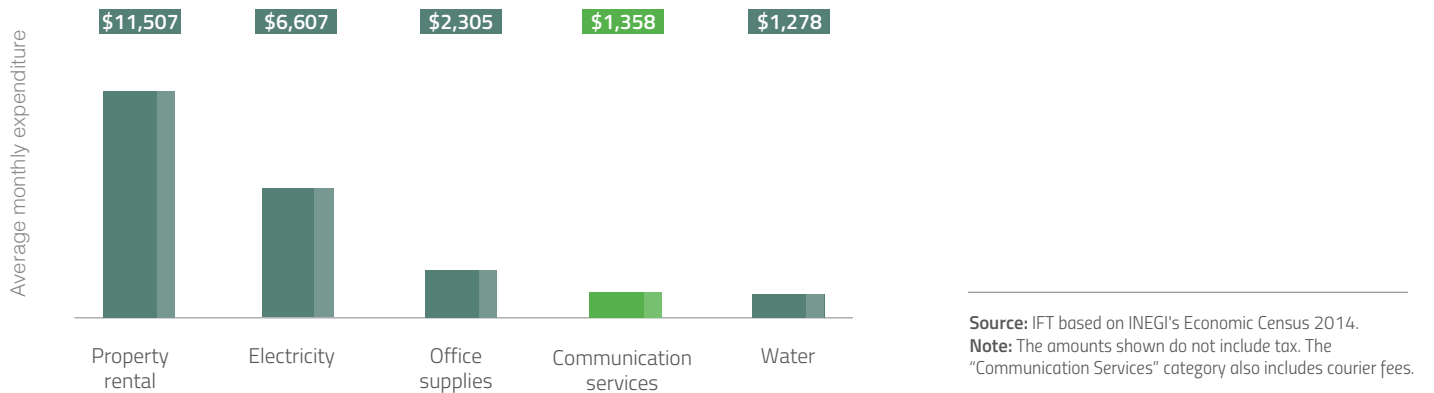


**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The "Other Technologies" category includes fixed wireless and satellite connections. Due to the rounding of data in the chart tags, the figures shown may not add up to 100%.

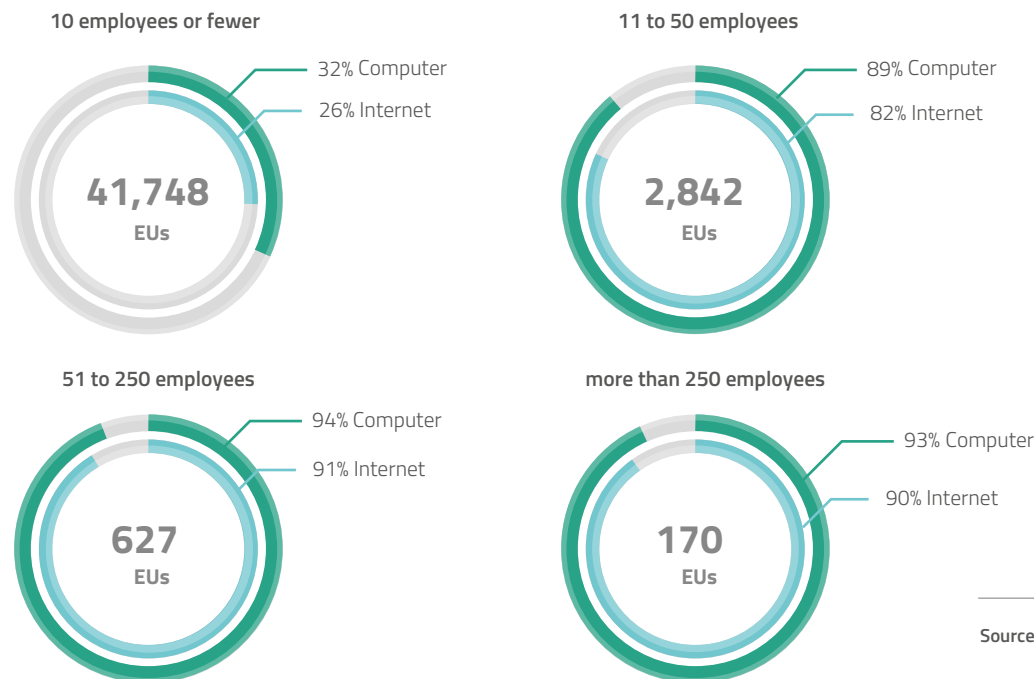
**FIGURE 2.23.3.2**  
Fixed telecommunications services penetration per 100 economic units



**FIGURE 2.23.3.3**  
Average monthly expenditure of economic units by service type



**Figure 2.23.3.4**  
Computer and internet adoption by economic unit (EU) size





Statistical Yearbook 2015:

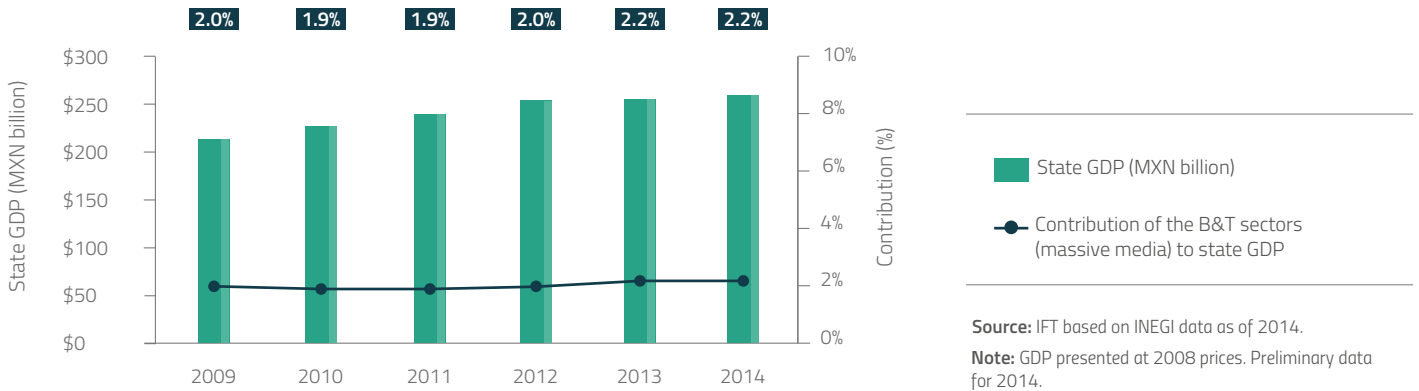
## 2.24 SAN LUIS POTOSI (SLP)

### General Overview

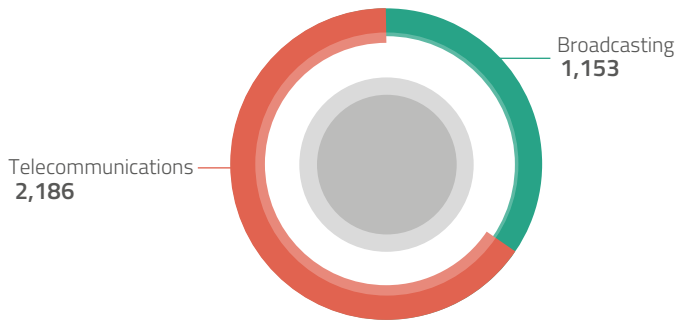
- ▶ From 2009 to 2014 San Luis Potosi's GDP showed an average annual growth rate of 4.1%. Additionally as of 2014 the massive media sector<sup>24</sup> contributed with 2.2% of the overall state's GDP, equivalent to MXN 5.710 billion.
- ▶ In 2015, the telecommunications sector employed 2,186 people, whereas the broadcasting sector employed 1,153 people. In terms of broadcasting infrastructure, at the end of 2015, the state had 35 radio broadcasting stations (30 FM stations and 5 AM stations) and 19 broadcast television channels.
- ▶ In terms of fixed telecommunications services, by the end of 2015 San Luis Potosi had the highest penetration in pay TV services with 59 subscriptions per 100 households, compared to 38 fixed lines per 100 households and 31 fixed broadband subscriptions per 100 households. Moreover, by mid 2015 according to ENDUTIH's results 80.7% of households had at least one of these services.
- ▶ In terms of mobile telecommunications services, the state's mobile phone teledensity as of December 2015 was 79 subscriptions per 100 inhabitants, whereas the mobile internet teledensity reached 46 subscriptions per 100 inhabitants in the same period, ranking the state, in terms of mobile telecommunications penetration, on top 22 out of 32 Mexican states.
- ▶ Regarding to ICT equipment adoption in San Luis Potosi, radio equipment had the highest penetration level per 100 households with 67 radio per 100 households; followed by analog TV with 68 television sets per 100 households, digital television sets with 51 television sets per 100 households (this figure does not include households with an analog television set connected to a digital decoder, or households with pay TV services), and finally, computer equipment with 39 computers per 100 households.
- ▶ Unlike most of the states, as of 2014 electricity was the principal expenditure incurred by economic units (business) in San Luis Potosi, standing at an average of almost MXN 5,474 per month, followed by the monthly average expenditure on property rental, which was MXN 5,233. On the other hand, expenditure on telecommunications services was MXN 2,654 per month, higher than other typical company expenditures such as water (MXN 601 per month) and office supplies (approximately MXN 816 per month).
- ▶ Additionally, the fixed telecom services penetration in San Luis Potosi's economic units (business) segment were 89 fixed telephone lines per 100 economic units (business), 36 fixed broadband subscriptions per 100 economic units (business); and three pay TV subscriptions per 100 economic units (business).
- ▶ Finally, in 2014 there were registered 88,075 economic units (business) in the state and of those who had 10 employees or less only 22% used computer as part their operations, whereas only 17% used internet. Nevertheless, these figures were above 80% for economic units (business) on the 11 to 50 employees segment, and 90% for economic units (business) with more than 50 employees, which proves that there is a positive relation between company size and the telecommunications services adoption as part of the business as usual processes.

<sup>24</sup> According to the SCIAN, the Broadcasting and Telecommunications subsectors form part of Sector 51 Massive Media Information, and contributed 94% to the sector's nationwide GDP in 2015

**FIGURE 2.24.1.1**  
Contribution of the B&T sectors (massive media) to state GDP

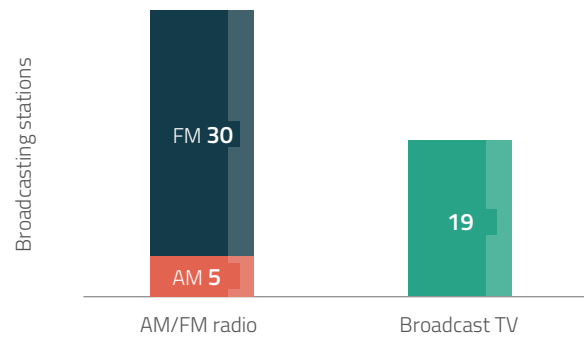


**FIGURE 2.24.1.2**  
Employees in the B&T sectors



**Source:** IFT based on data from INEGI's quarterly National Occupation and Employment Surveys.

**FIGURE 2.24.1.3**  
AM/FM radio and broadcast TV stations

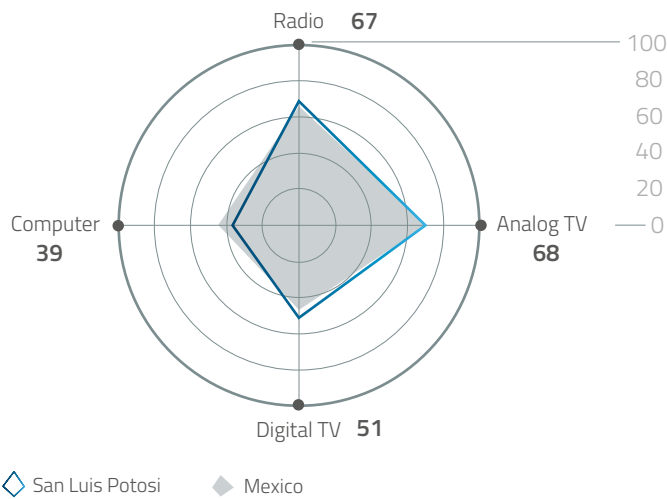


**Source:** IFT based on data as of December 2015.

**Figure 2.24.2.1**  
Fixed telecommunications services penetration per 100 households

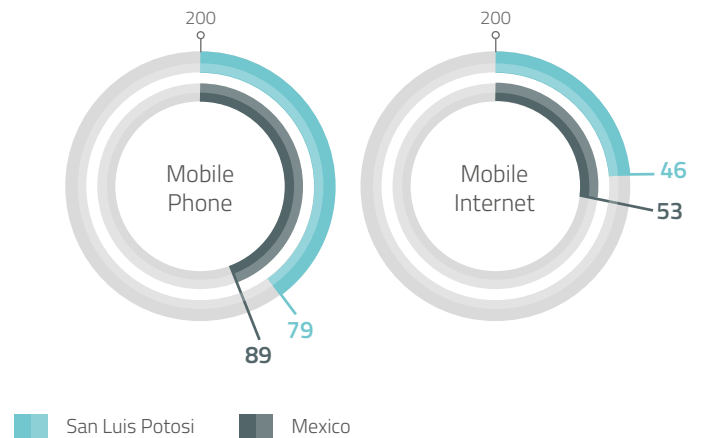


**FIGURE 2.24.2.2**  
ICT equipment per 100 households



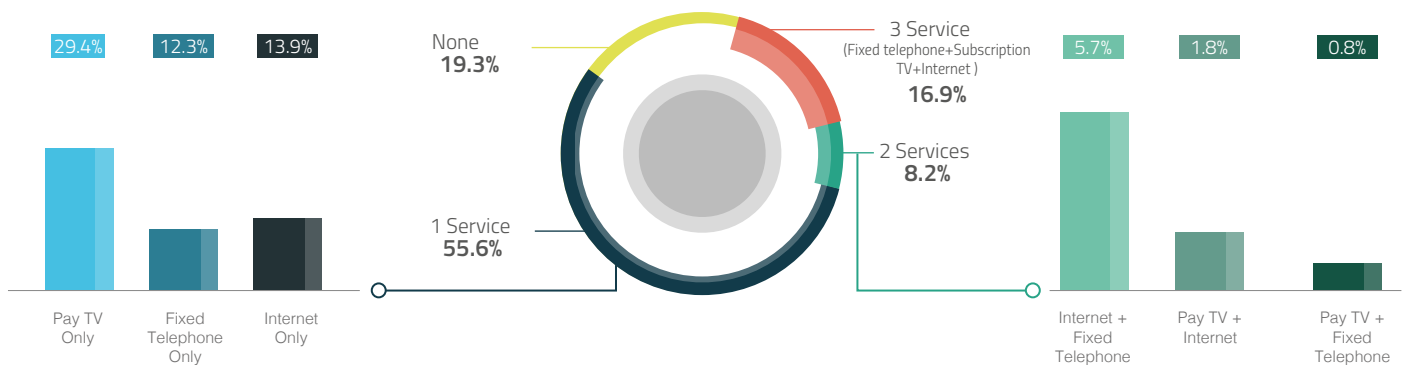
**Source:** IFT based on data from ENDUTIH 2015.  
**Note:** The figure for Digital TV does not include households with an analog television set and digital decoder, or households with pay TV services.

**FIGURE 2.24.2.3**  
Mobile telecommunications teledensity per 100 inhabitants



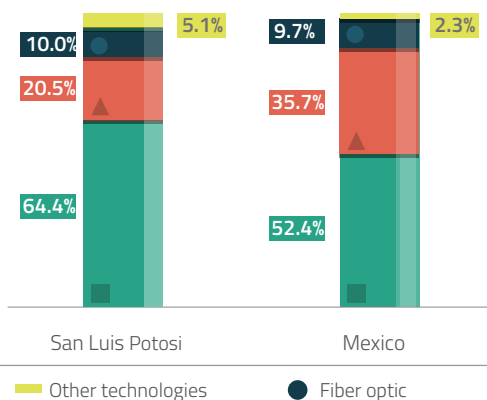
**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The number of inhabitants is taken from the data published by CONAPO as of January 2016. The teledensity disaggregation per state was estimated based on the Telecom operator's data and INEGI's data from the ENDUTIH 2015.

**FIGURE 2.24.2.4**  
Distribution of fixed telecommunications services in households

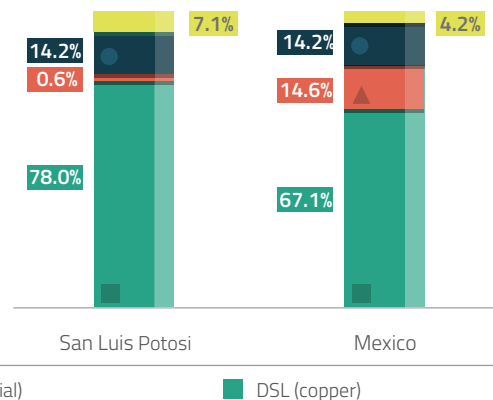


**Source:** IFT based on INEGI's ENDUTIH 2015.  
**Note:** Due to the rounding of data in the figure tags, the sum of the values shown in the bar charts may vary from those shown in the pie chart.

**Figure 2.24.2.5**  
Distribution of residential fixed broadband subscriptions per connection type

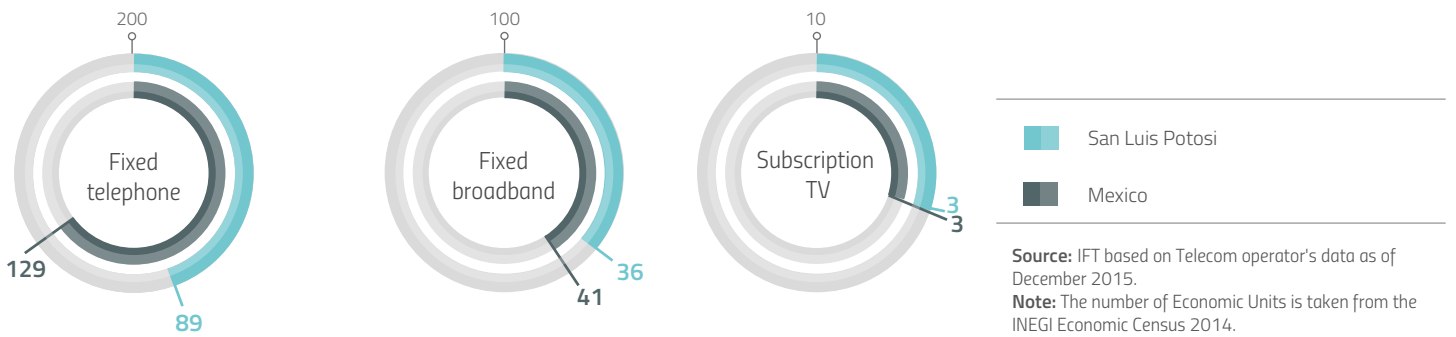


**Figure 2.24.3.1**  
Distribution of non-residential fixed broadband subscriptions per connection type

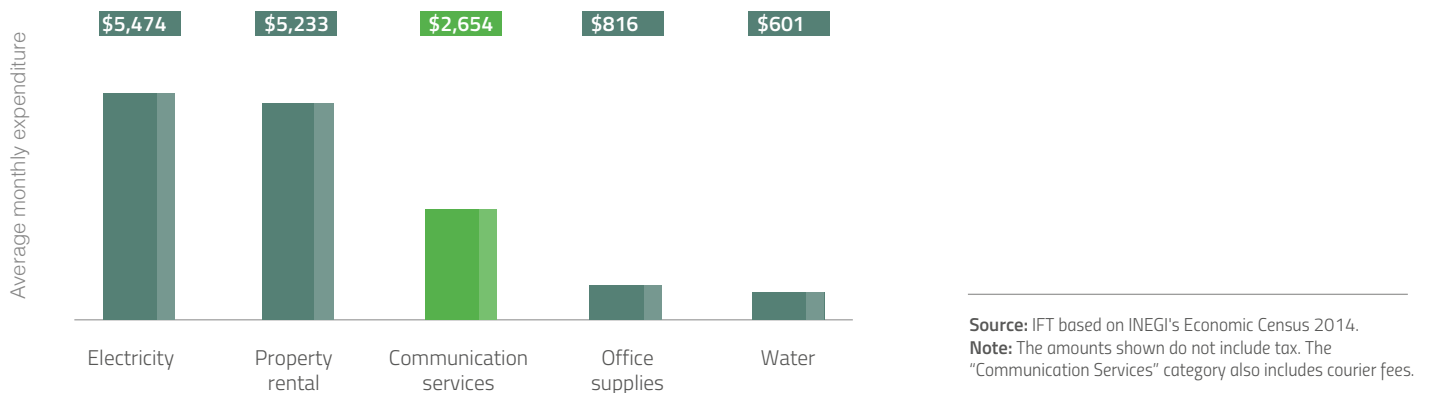


**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The "Other Technologies" category includes fixed wireless and satellite connections. Due to the rounding of data in the chart tags, the figures shown may not add up to 100%.

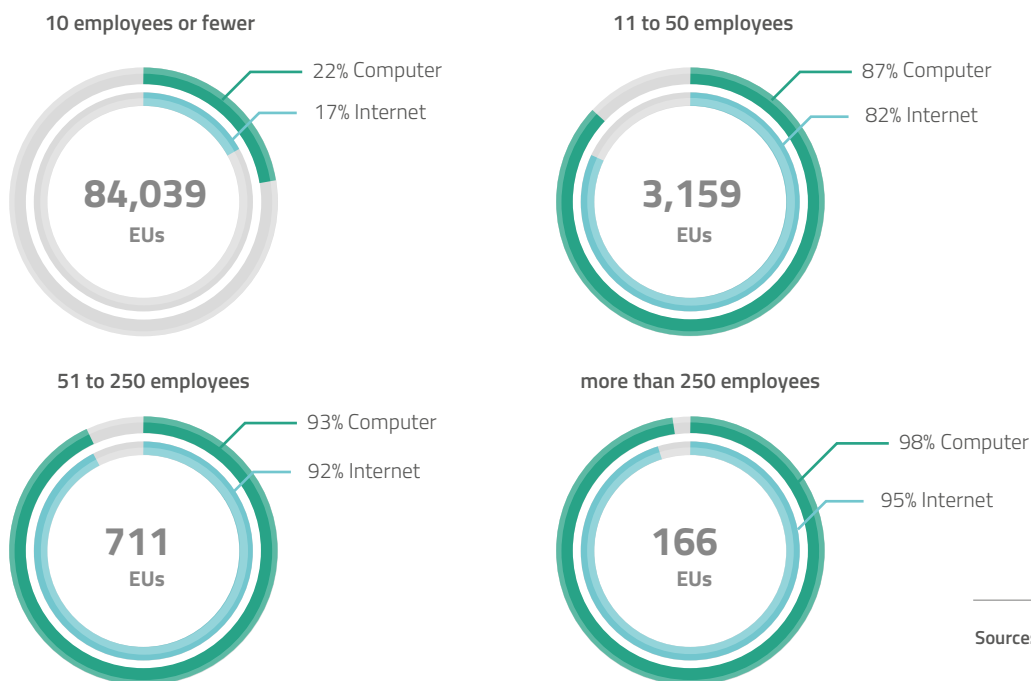
**FIGURE 2.24.3.2**  
Fixed telecommunications services penetration per 100 economic units



**FIGURE 2.24.3.3**  
Average monthly expenditure of economic units by service type



**Figure 2.24.3.4**  
Computer and internet adoption by economic unit (EU) size







STATISTICAL YEARBOOK 2015:

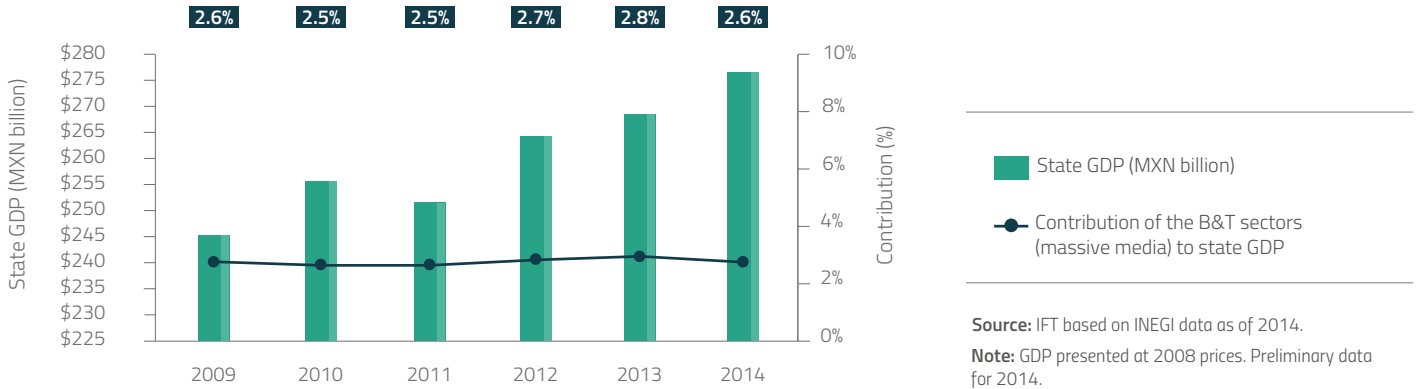
## 2.25 SINALOA (SIN)

### General Overview

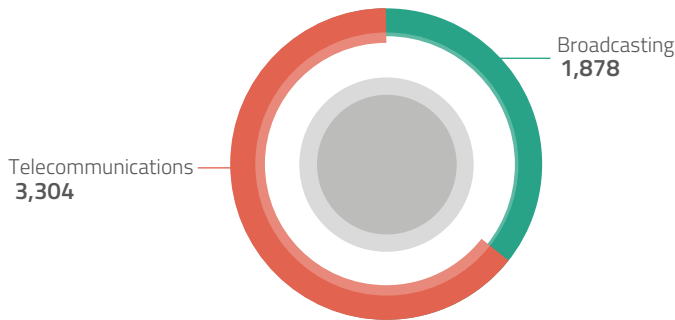
- ▶ From 2009 to 2014 Sinaloa's GDP showed an average annual growth rate of 2.5%. Additionally as of 2014 the massive media sector<sup>25</sup> contributed with 2.6% of the overall state's GDP, equivalent to MXN 7.250 billion.
- ▶ In 2015, the telecommunications sector employed 3,304 people, whereas the broadcasting sector employed 1,878 people. In terms of broadcasting infrastructure, at the end of 2015, the state had 64 radio broadcasting stations (54 FM stations and 10 AM stations) and 17 broadcast television channels.
- ▶ In terms of fixed telecommunications services, by the end of 2015 Sinaloa had the highest penetration in pay TV services with 66 subscriptions per 100 households, compared to 45 broadband subscriptions per 100 households, and 32 fixed telephone lines per 100 households. Moreover, by mid 2015 according to ENDUTIH's results 77.4% of households had at least one of these services.
- ▶ In terms of mobile telecommunications services, the state's mobile phone teledensity as of December 2015 was 92 subscriptions per 100 inhabitants, whereas the mobile internet teledensity reached 56 subscriptions per 100 inhabitants in the same period, ranking the state, in terms of mobile telecommunications penetration, on top 13 out of 32 Mexican states.
- ▶ Regarding to ICT equipment adoption in Sinaloa, analog TV sets had the highest penetration level per 100 households with 78 television sets per 100 households; followed by radio equipment with 49 radios per 100 households, computer equipment sets with 48 computers per 100 households, and finally, digital television with 41 television sets per 100 households (this figure does not include households with an analog television set connected to a digital decoder, or households with pay TV services).
- ▶ As in most states, as of 2014 property rental was the principal expenditure incurred by economic units (business) in Sinaloa, standing at an average near to MXN 5,609 per month, followed by the monthly average expenditure on electricity, which was MXN 3,358. On the other hand, expenditure on telecommunications services was MXN 1,144 per month, higher than other typical company expenditures such as water (MXN 573 per month) and office supplies (approximately MXN 687 per month).
- ▶ Additionally, the fixed telecom services penetrations in Sinaloa's economic units (business) segment were 179 fixed telephone lines per 100 economic units (business), 53 fixed broadband subscriptions per 100 economic units (business); and six pay TV subscriptions per 100 economic units (business).
- ▶ Finally, in 2014 there were registered 91,022 economic units (business) in the state and of those who had 10 employees or less only 26% used computer as part their operations, whereas only 22% used internet. Nevertheless, these figures were above 80% for economic units (business) on the 11 to 50 employees segment, and 90% for economic units (business) with more than 50 employees, which proves that there is a positive relation between company size and the telecommunications services adoption as part of the business as usual processes.

<sup>25</sup> According to the SCIAN, the Broadcasting and Telecommunications subsectors form part of Sector 51 Massive Media Information, and contributed 94% to the sector's nationwide GDP in 2015

**FIGURE 2.25.1.1**  
Contribution of the B&T sectors (massive media) to state GDP

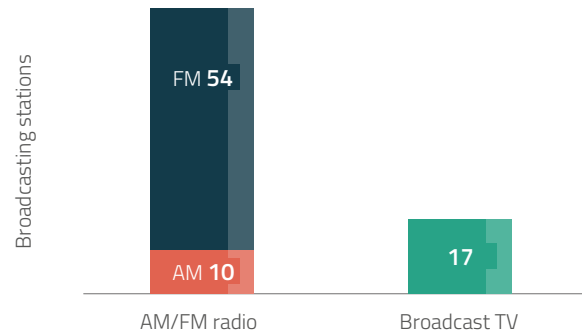


**FIGURE 2.25.1.2**  
Employees in the B&T sectors



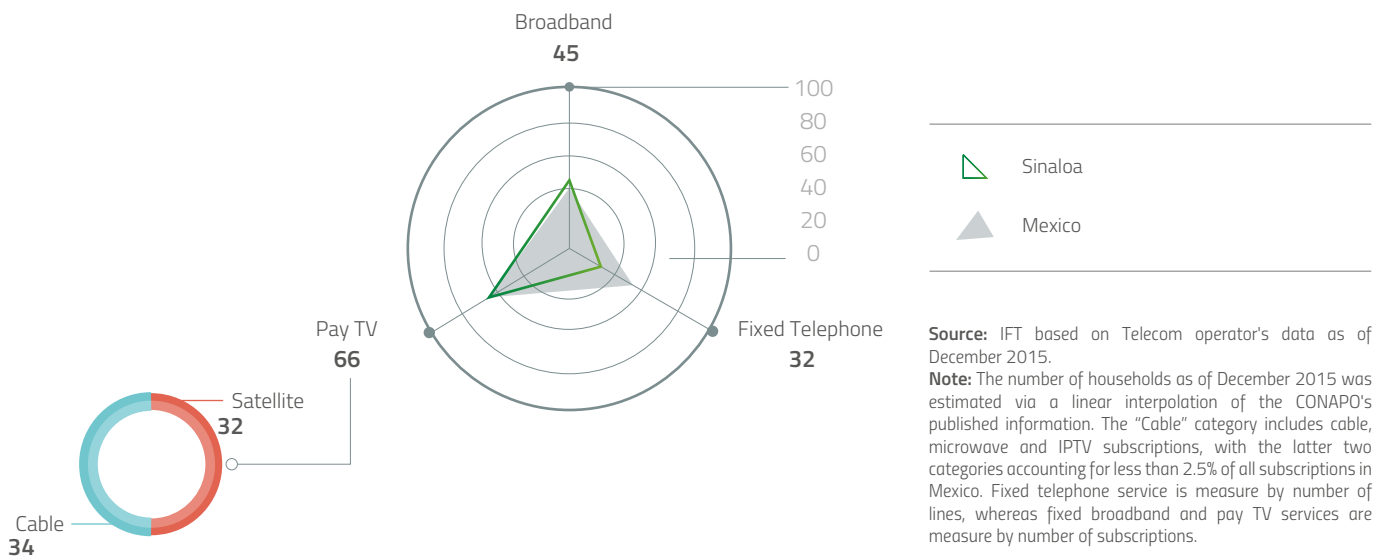
Source: IFT based on data from INEGI's quarterly National Occupation and Employment Surveys.

**FIGURE 2.25.1.3**  
AM/FM radio and broadcast TV stations

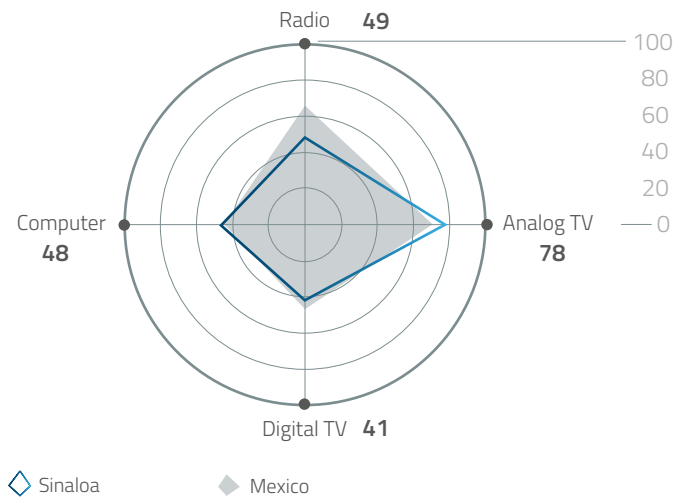


Source: IFT based on data as of December 2015.

**Figure 2.25.2.1**  
Fixed telecommunications services penetration per 100 households

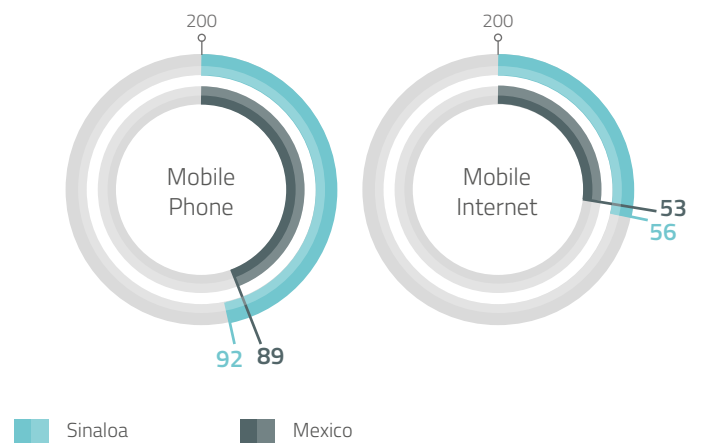


**FIGURE 2.25.2.2**  
ICT equipment per 100 households



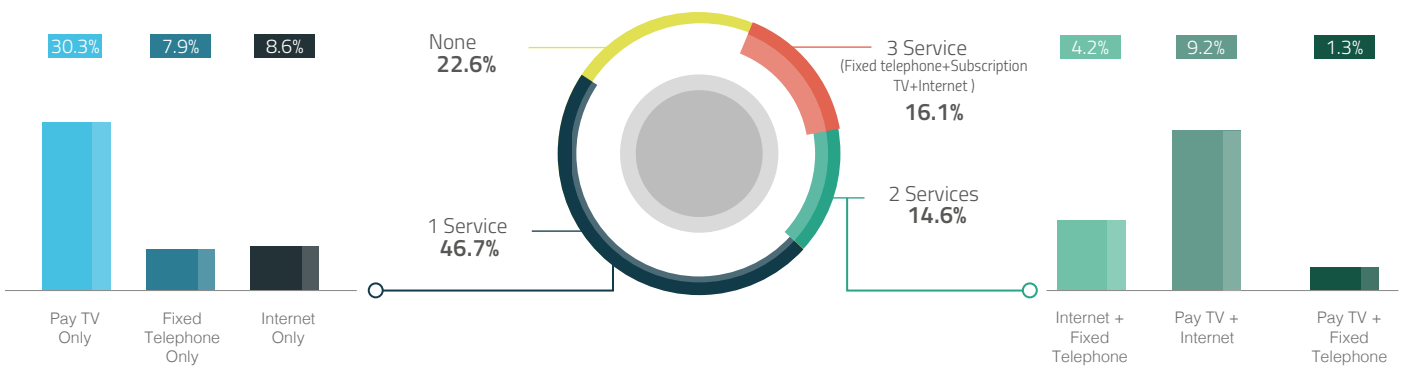
**Source:** IFT based on data from ENDUTIH 2015.  
**Note:** The figure for Digital TV does not include households with an analog television set and digital decoder, or households with pay TV services.

**FIGURE 2.25.2.3**  
Mobile telecommunications teledensity per 100 inhabitants



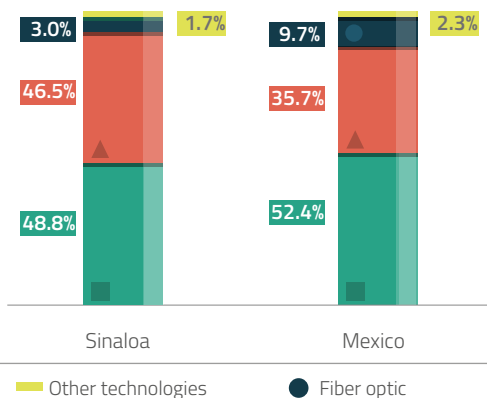
**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The number of inhabitants is taken from the data published by CONAPO as of January 2016. The teledensity desagregation per state was estimated based on the Telecom operator's data and INEGI's data from the ENDUTIH 2015.

**FIGURE 2.25.2.4**  
Distribution of fixed telecommunications services in households

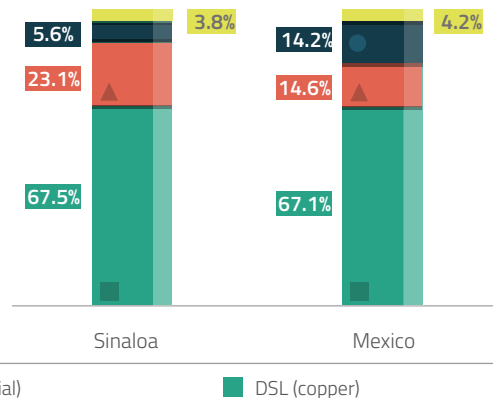


**Source:** IFT based on INEGI's ENDUTIH 2015.  
**Note:** Due to the rounding of data in the figure tags, the sum of the values shown in the bar charts may vary from those shown in the pie chart.

**Figure 2.25.2.5**  
Distribution of residential fixed broadband subscriptions per connection type

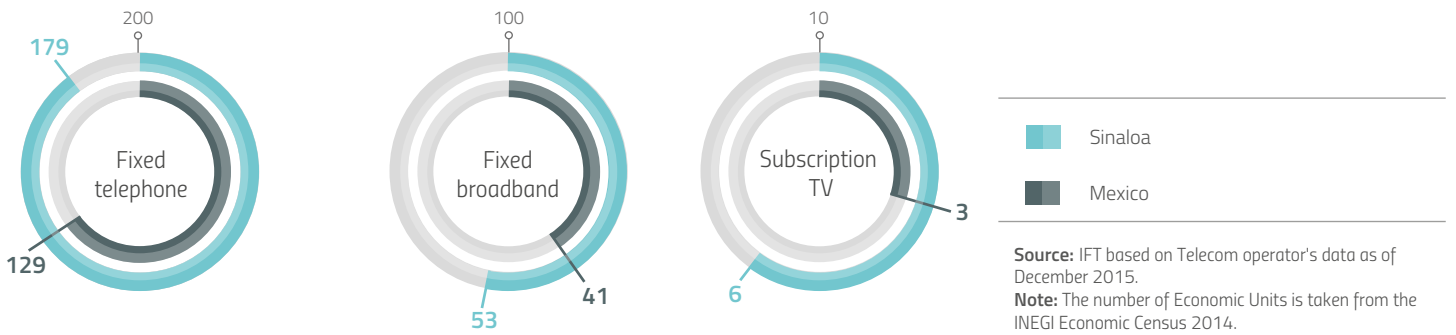


**Figure 2.25.3.1**  
Distribution of non-residential fixed broadband subscriptions per connection type

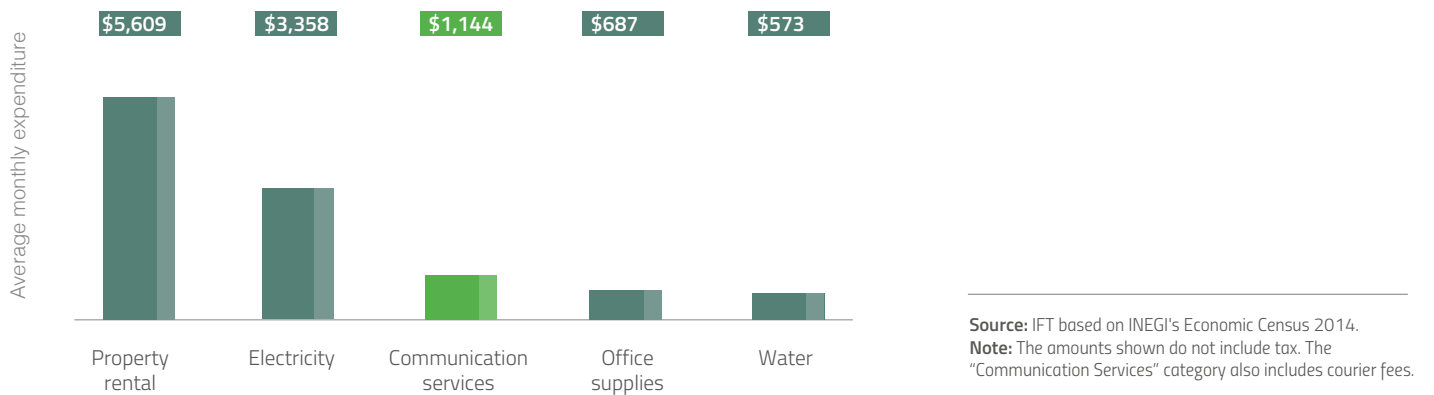


**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The "Other Technologies" category includes fixed wireless and satellite connections. Due to the rounding of data in the chart tags, the figures shown may not add up to 100%.

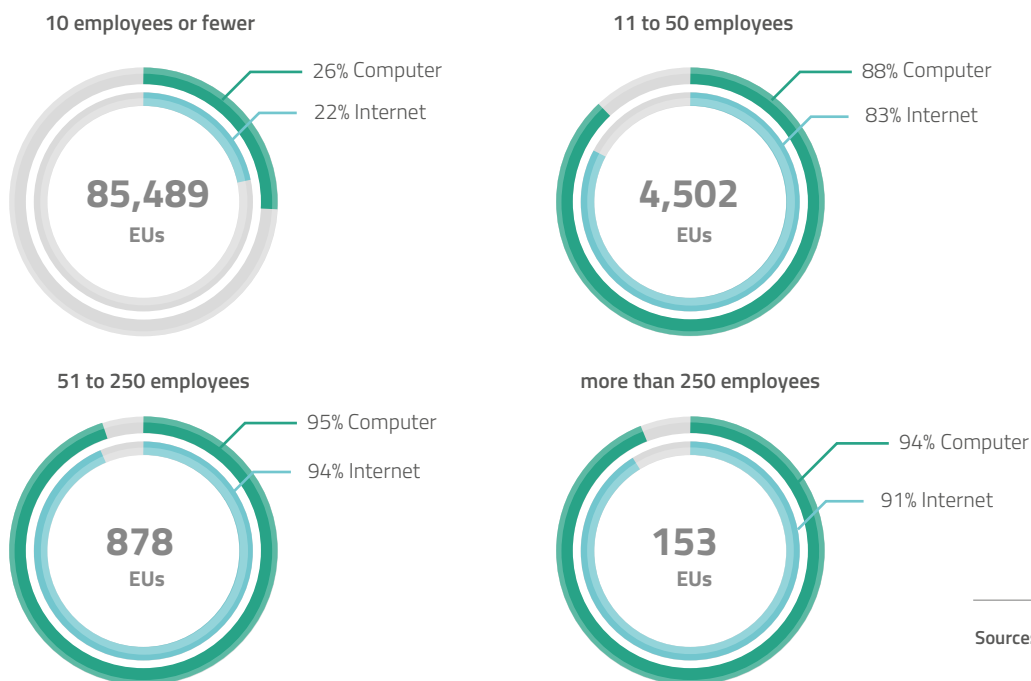
**FIGURE 2.25.3.2**  
Fixed telecommunications services penetration per 100 economic units



**FIGURE 2.25.3.3**  
Average monthly expenditure of economic units by service type



**Figure 2.25.3.4**  
Computer and internet adoption by economic unit (EU) size





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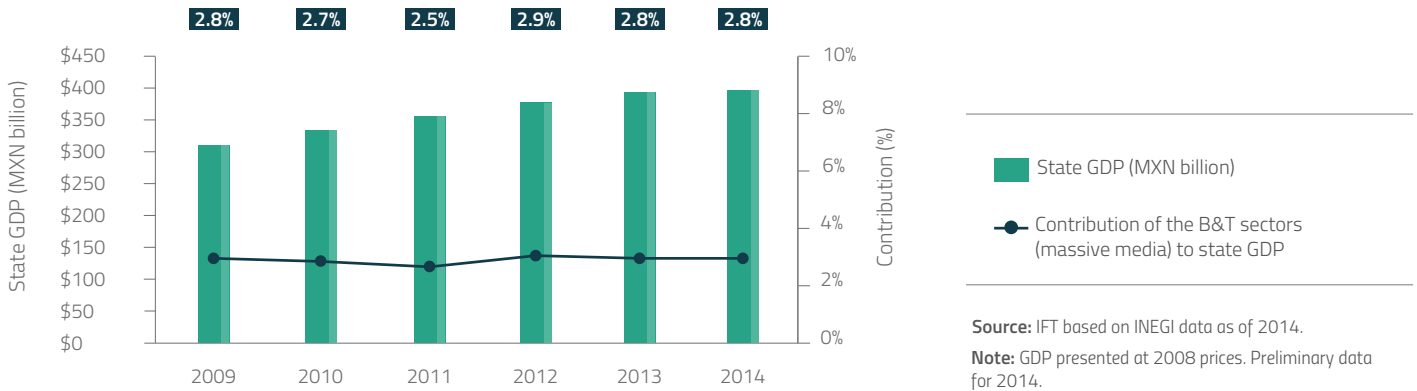
## 2.26 SONORA (SON)

### General Overview

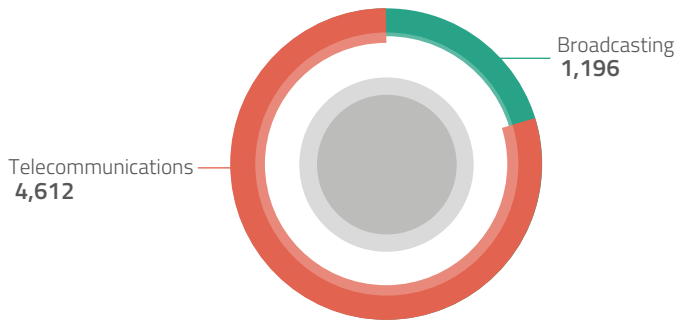
- ▶ From 2009 to 2014 Sonora's GDP showed an average annual growth rate of 56%. Additionally as of 2014 the massive media sector<sup>26</sup> contributed with 2.8% of the overall state's GDP, equivalent to MXN 10.880 billion.
- ▶ In 2015, the telecommunications sector employed 4,612 people, whereas the broadcasting sector employed 1,196 people. In terms of broadcasting infrastructure, at the end of 2015, the state had 123 radio broadcasting stations (98 FM stations and 25 AM stations) and 91 broadcast television channels.
- ▶ In terms of fixed telecommunications services, by the end of 2015 Sonora had the highest penetration in pay TV services with 69 subscriptions per 100 households, compared to 47 broadband subscriptions per 100 households and 35 fixed telephone lines per 100 households. Moreover, by mid 2015 according to ENDUTIH's results 83% of households had at least one of these services.
- ▶ In terms of mobile telecommunications services, the state's mobile phone teledensity as of December 2015 was 95 subscriptions per 100 inhabitants, whereas the mobile internet teledensity reached 62 subscriptions per 100 inhabitants in the same period, ranking the state, in terms of mobile telecommunications penetration, on top 11 out of 32 Mexican states.
- ▶ Regarding to ICT equipment adoption in Sonora, analog TV sets had the highest penetration level per 100 households with 77 television sets per 100 households; followed by radio equipment with 63 radios per 100 households, computer equipment sets with 59 computers per 100 households, and finally, digital television with 39 television sets per 100 households (this figure does not include households with an analog television set connected to a digital decoder, or households with pay TV services).
- ▶ As in most states, as of 2014 property rental was the principal expenditure incurred by economic units (business) in Sonora, standing at an average near to MXN 7,164 per month, followed by the monthly average expenditure on electricity, which was MXN 6,466. On the other hand, expenditure on telecommunications services was MXN 1,989 per month, higher than other typical company expenditures such as water (MXN 993 per month) and office supplies (approximately MXN 1,399 per month).
- ▶ Additionally, the fixed telecom services penetration in Sonora's economic units (business) segment were 115 fixed telephone lines per 100 economic units (business), 58 fixed broadband subscriptions per 100 economic units (business); and 7 pay TV subscriptions per 100 economic units (business).
- ▶ Finally, in 2014 there were registered 89,984 economic units (business) in the state and of those who had 10 employees or less only 29% used computer as part their operations, whereas only 24% used internet. Nevertheless, these figures were above 80% for economic units (business) on the 11 to 50 employees segment, and 95% for economic units (business) with more than 50 employees, which proves that there is a positive relation between company size and the telecommunications services adoption as part of the business as usual processes.

<sup>26</sup> According to the SCIAN, the Broadcasting and Telecommunications subsectors form part of Sector 51 Massive Media Information, and contributed 94% to the sector's nationwide GDP in 2015

**FIGURE 2.26.1.1**  
Contribution of the B&T sectors (massive media) to state GDP

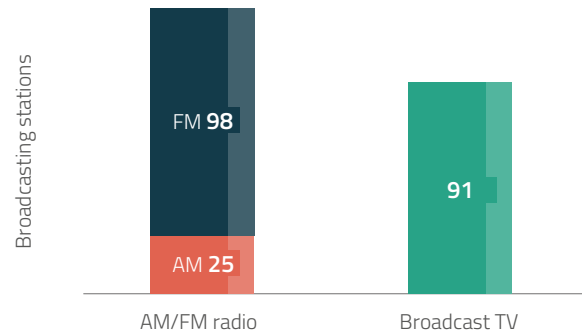


**FIGURE 2.26.1.2**  
Employees in the B&T sectors



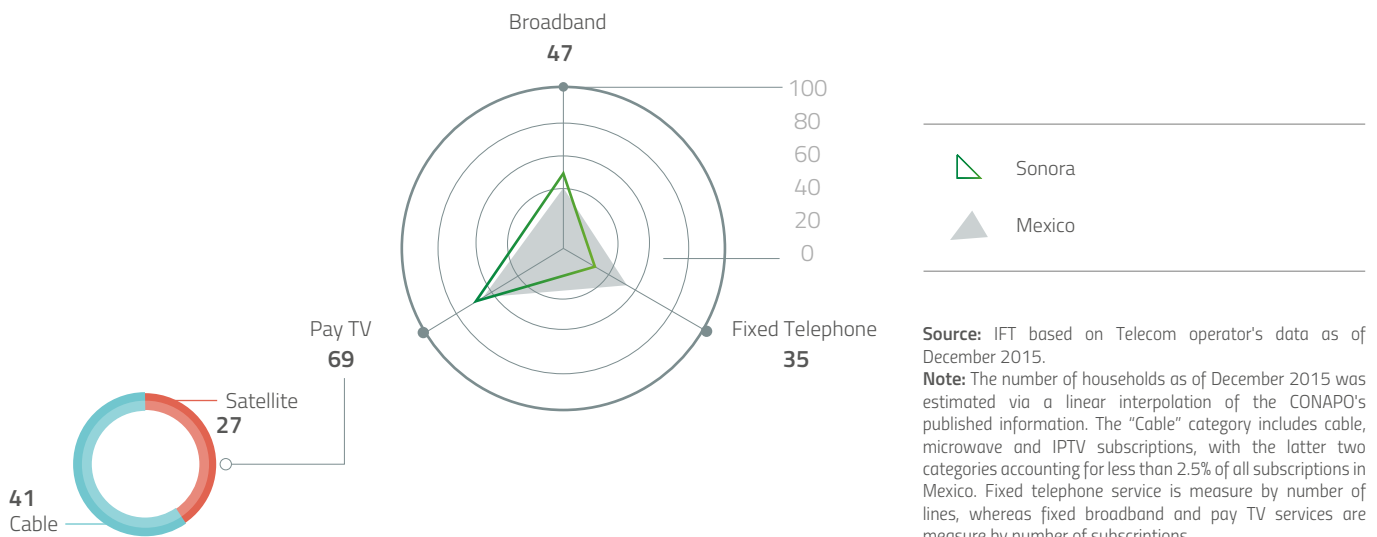
Source: IFT based on data from INEGI's quarterly National Occupation and Employment Surveys.

**FIGURE 2.26.1.3**  
AM/FM radio and broadcast TV stations



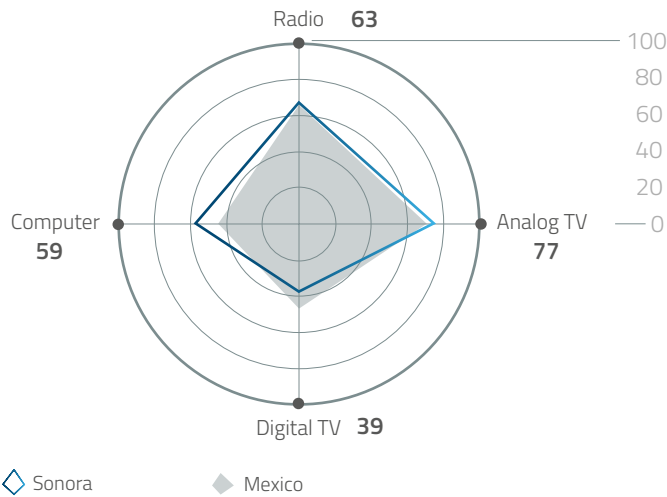
Source: IFT based on data as of December 2015.

**Figure 2.26.2.1**  
Fixed telecommunications services penetration per 100 households



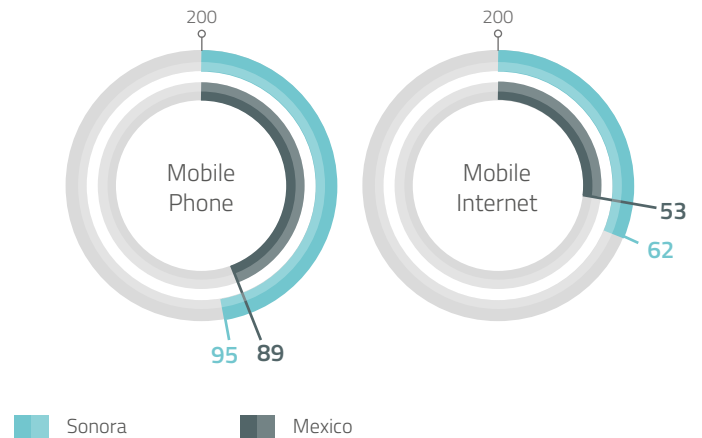


**FIGURE 2.26.2.2**  
ICT equipment per 100 households



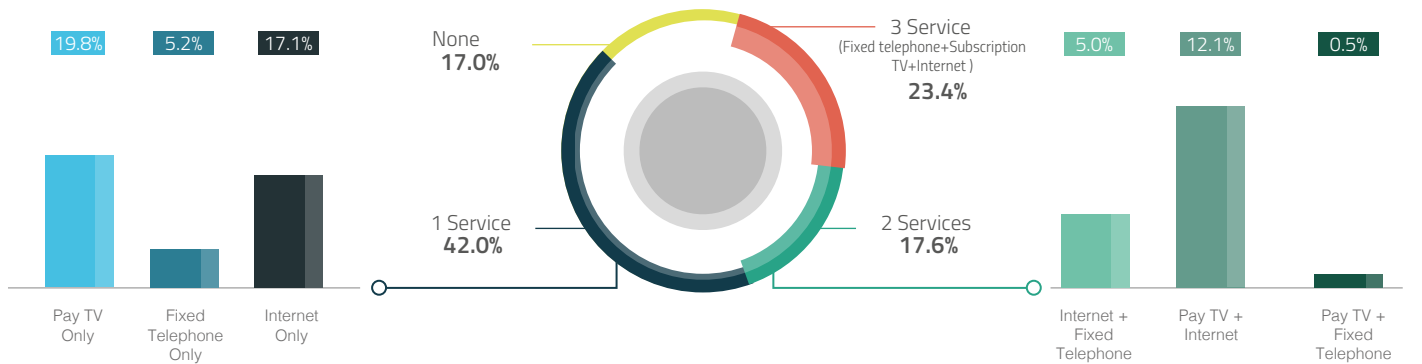
**Source:** IFT based on data from ENDUTIH 2015.  
**Note:** The figure for Digital TV does not include households with an analog television set and digital decoder, or households with pay TV services.

**FIGURE 2.26.2.3**  
Mobile telecommunications teledensity per 100 inhabitants



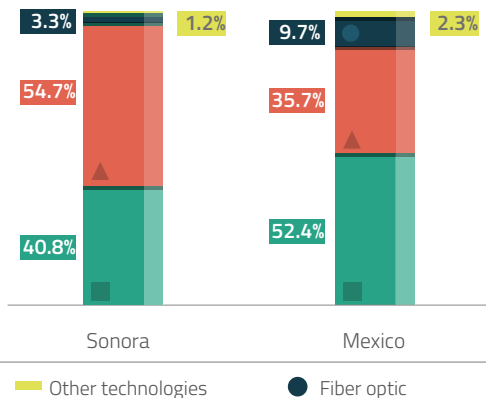
**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The number of inhabitants is taken from the data published by CONAPO as of January 2016. The teledensity desagregation per state was estimated based on the Telecom operator's data and INEGI's data from the ENDUTIH 2015.

**FIGURE 2.26.2.4**  
Distribution of fixed telecommunications services in households

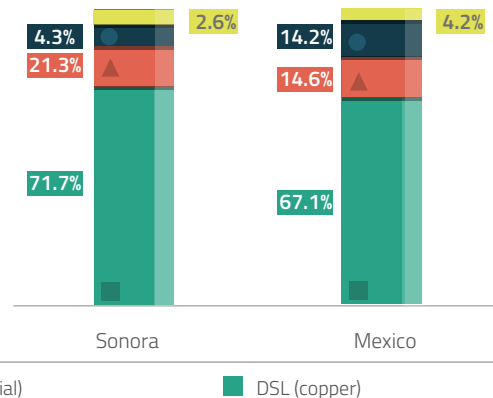


**Source:** IFT based on INEGI's ENDUTIH 2015.  
**Note:** Due to the rounding of data in the figure tags, the sum of the values shown in the bar charts may vary from those shown in the pie chart.

**Figure 2.26.2.5**  
Distribution of residential fixed broadband subscriptions per connection type

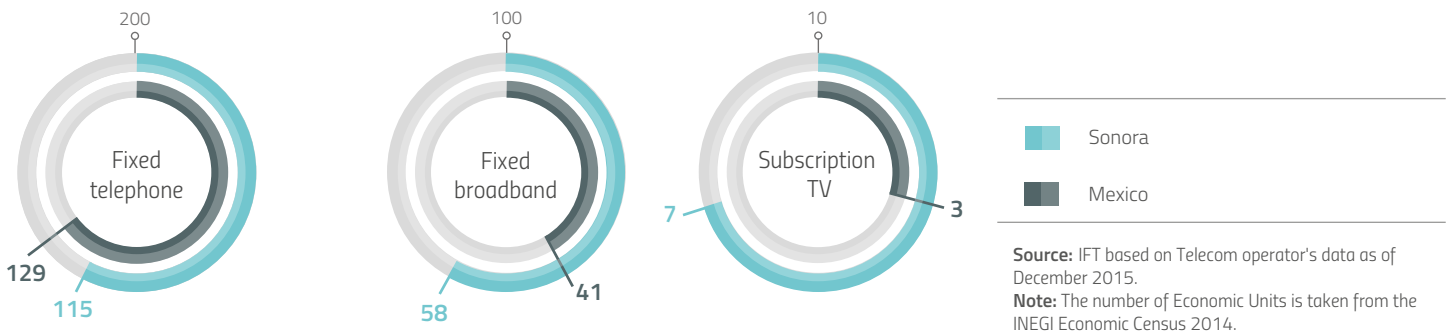


**Figure 2.26.3.1**  
Distribution of non-residential fixed broadband subscriptions per connection type

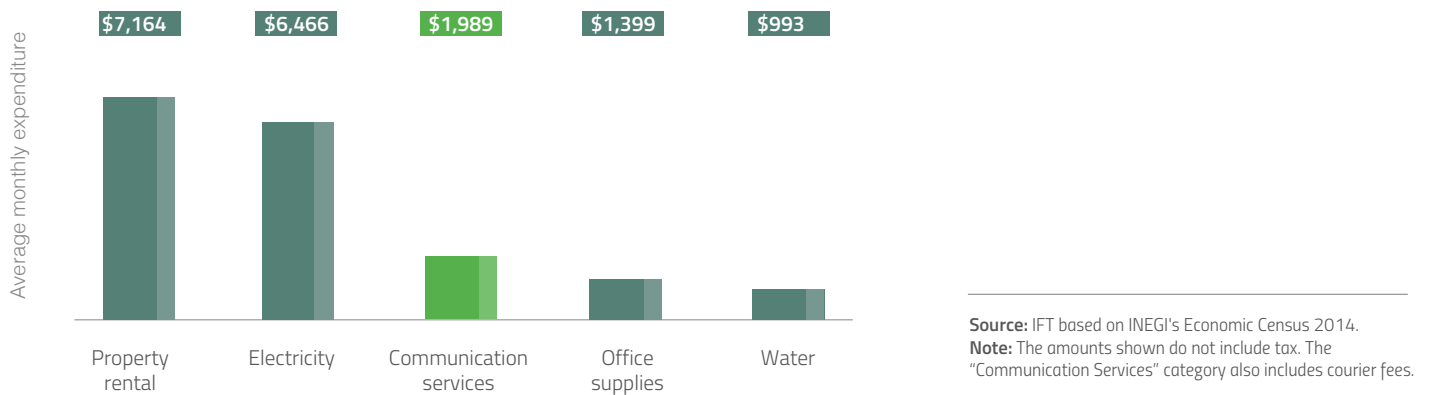


**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The "Other Technologies" category includes fixed wireless and satellite connections. Due to the rounding of data in the chart tags, the figures shown may not add up to 100%.

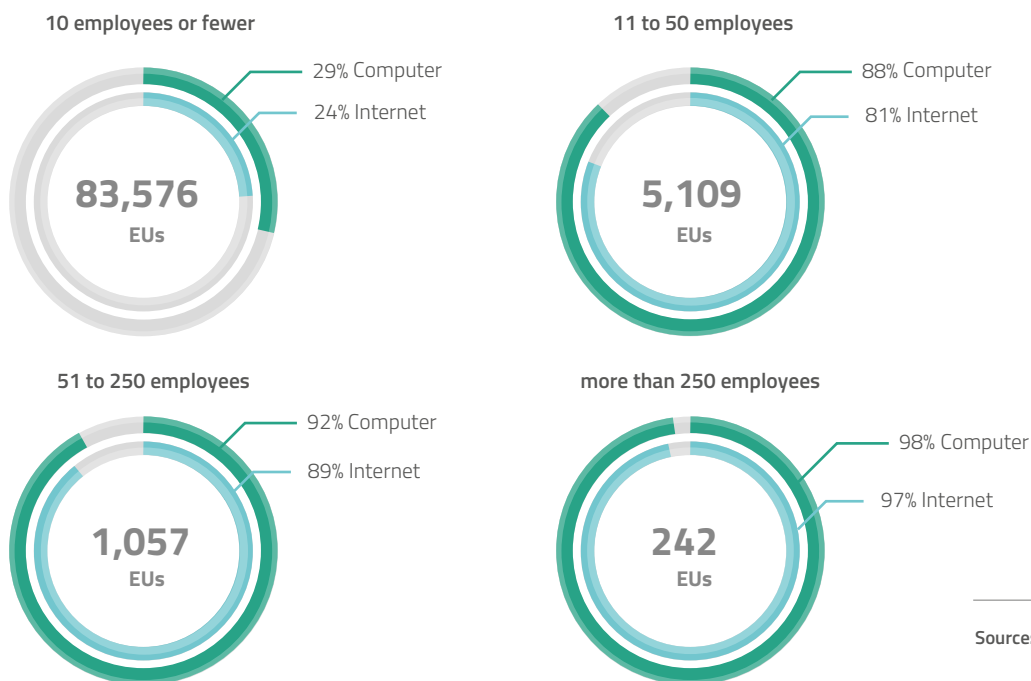
**FIGURE 2.26.3.2**  
Fixed telecommunications services penetration per 100 economic units



**FIGURE 2.26.3.3**  
Average monthly expenditure of economic units by service type



**Figure 2.26.3.4**  
Computer and internet adoption by economic unit (EU) size







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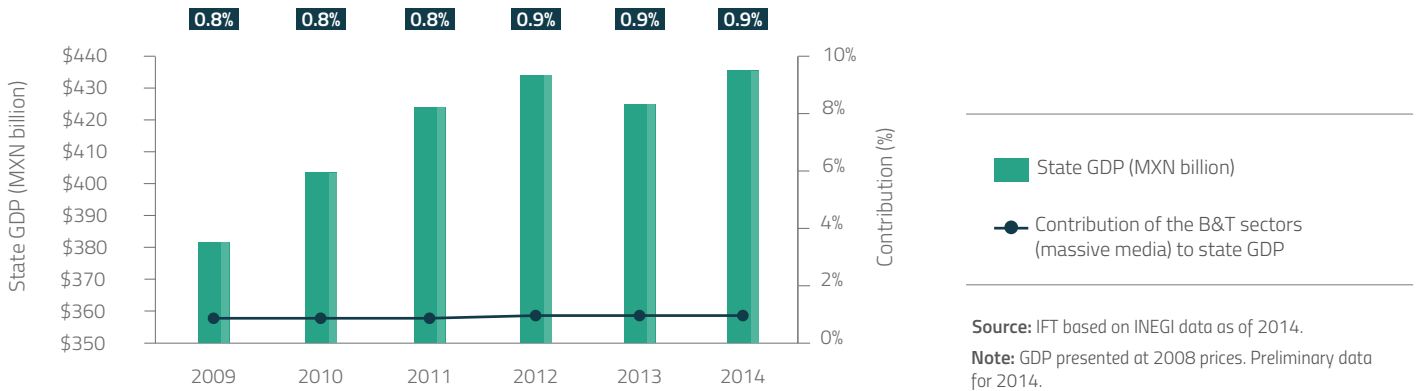
# 2.27 TABASCO (TAB)

## General Overview

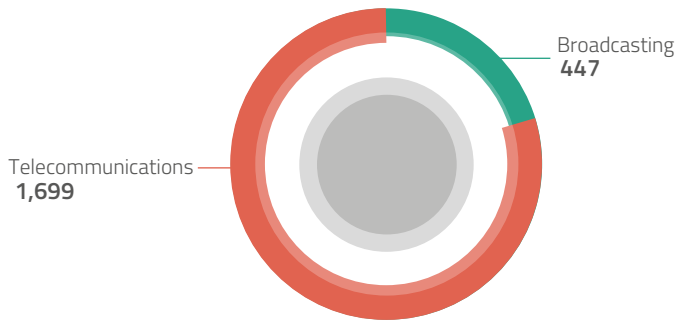
- ▶ From 2009 to 2014 Tabasco's GDP showed an average annual growth rate of 2.66%. Additionally as of 2014 the massive media sector<sup>27</sup> contributed with 0.9% of the overall state's GDP, equivalent to MXN 4.070 billion.
- ▶ In 2015, the telecommunications sector employed 1,699 people, whereas the broadcasting sector employed 447 people. In terms of broadcasting infrastructure, at the end of 2015, the state had 33 radio broadcasting stations (30 FM stations and 3 AM stations) and 15 broadcast television channels.
- ▶ In terms of fixed telecommunications services, by the end of 2015 Tabasco had the highest penetration in pay TV services with 60 subscriptions per 100 households, compared to 19 broadband subscriptions per 100 households, and 18 fixed telephone lines per 100 households. Moreover, by mid 2015 according to ENDUTIH's results 60.9% of households had at least one of these services.
- ▶ In terms of mobile telecommunications services, the state's mobile phone teledensity as of December 2015 was 75 subscriptions per 100 inhabitants, whereas the mobile internet teledensity reached 38 subscriptions per 100 inhabitants in the same period, ranking the state, in terms of mobile telecommunications penetration, on top 23 out of 32 Mexican states.
- ▶ Regarding to ICT equipment adoption in Tabasco, analog TV sets had the highest penetration level per 100 households with 65 television sets per 100 households; followed by radio equipment with 52 radios per 100 households, computer equipment with 42 computers sets per 100, and finally, digital television with 39 computers per 100 households (this figure does not include households with an analog television set connected to a digital decoder, or households with pay TV services).
- ▶ As in most states, as of 2014 property rental was the principal expenditure incurred by economic units (business) in Tabasco, standing at an average near to MXN 23,000 per month, followed by the monthly average expenditure on electricity, which was MXN 2,957. On the other hand, expenditure on telecommunications services was MXN 847 per month, lower than other typical company expenditures such as office supplies (MXN 1,658 per month) and water (approximately MXN 391 per month).
- ▶ Additionally, the fixed telecom services penetrations in Tabasco's economic units (business) segment were 76 fixed telephone lines per 100 economic units (business), 35 fixed broadband subscriptions per 100 economic units (business); and two pay TV subscriptions per 100 economic units (business).
- ▶ Finally, in 2014 there were registered 57,702 economic units (business) in the state and of those who had 10 employees or less only 19% used computer as part their operations, whereas only 15% used internet. Nevertheless, these figures were above 80% for economic units (business) on the 11 to 50 employees segment, and 85% for economic units (business) with more than 50 employees, which proves that there is a positive relation between company size and the telecommunications services adoptions as part of the business as usual processes.

<sup>27</sup> According to the SCIAN, the Broadcasting and Telecommunications subsectors form part of Sector 51 Massive Media Information, and contributed 94% to the sector's nationwide GDP in 2015

**FIGURE 2.27.1.1**  
Contribution of the B&T sectors (massive media) to state GDP

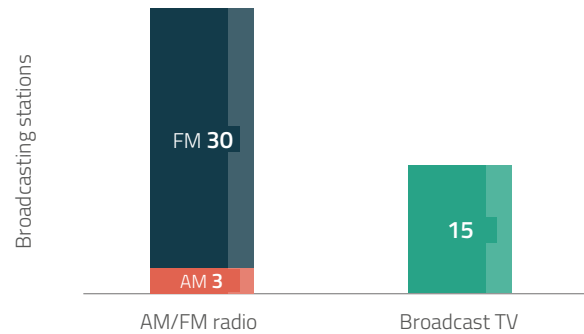


**FIGURE 2.27.1.2**  
Employees in the B&T sectors



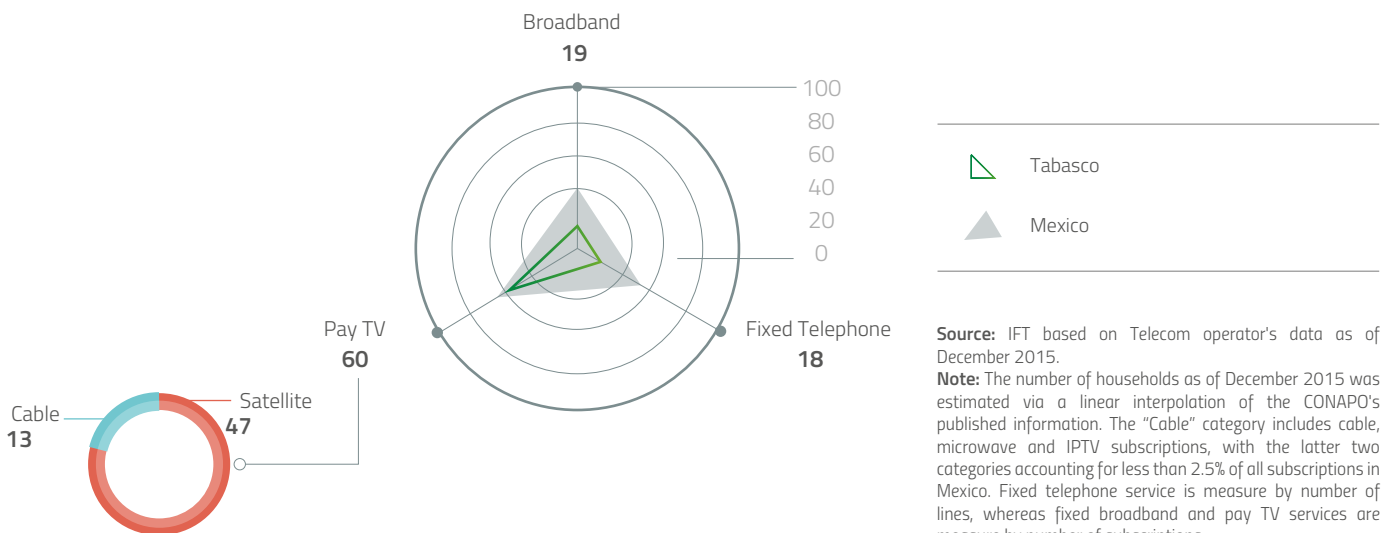
Source: IFT based on data from INEGI's quarterly National Occupation and Employment Surveys.

**FIGURE 2.27.1.3**  
AM/FM radio and broadcast TV stations

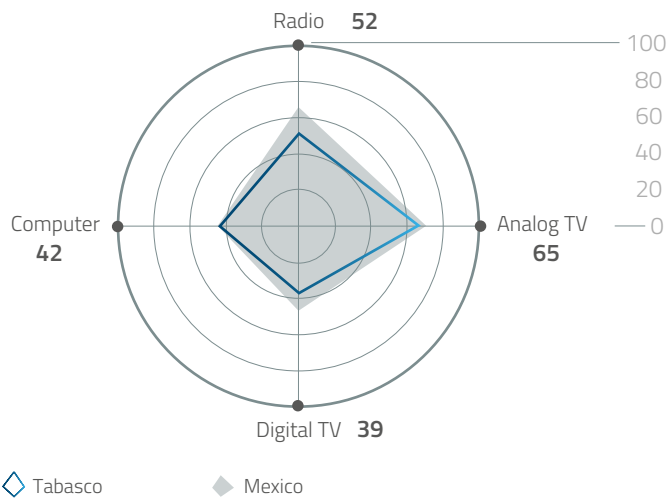


Source: IFT based on data as of December 2015.

**Figure 2.27.2.1**  
Fixed telecommunications services penetration per 100 households

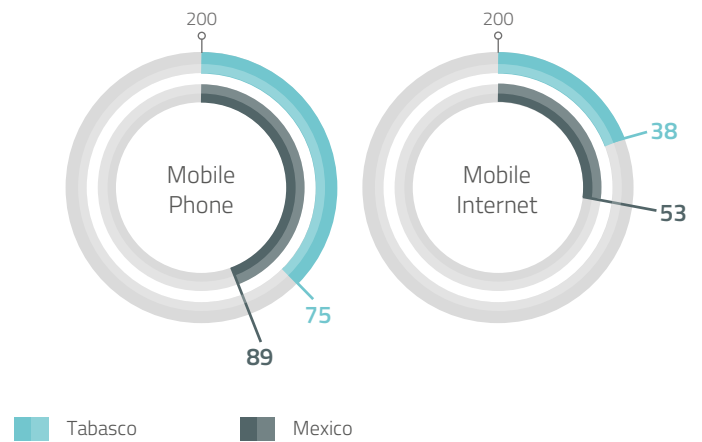


**FIGURE 2.27.2.2**  
ICT equipment per 100 households



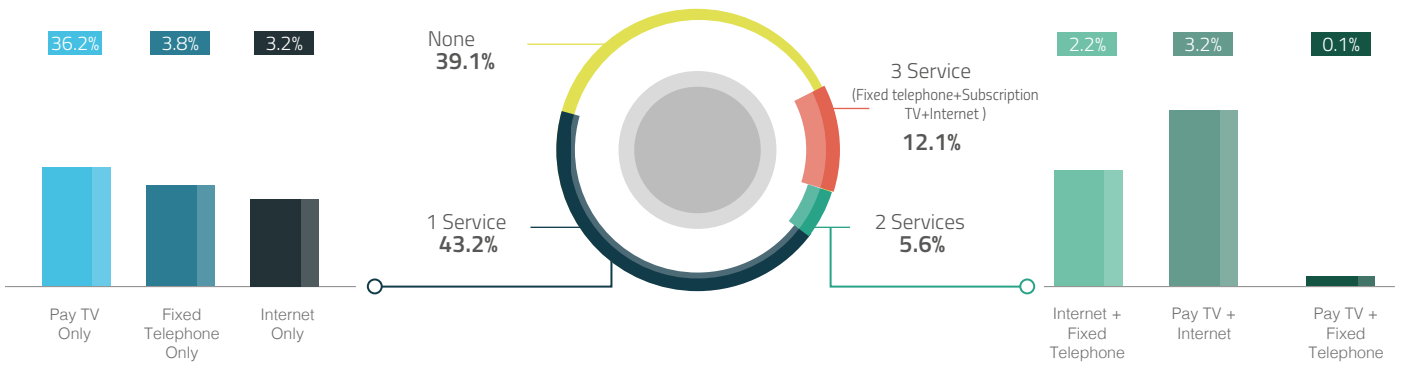
**Source:** IFT based on data from ENDUTIH 2015.  
**Note:** The figure for Digital TV does not include households with an analog television set and digital decoder, or households with pay TV services.

**FIGURE 2.27.2.3**  
Mobile telecommunications teledensity per 100 inhabitants



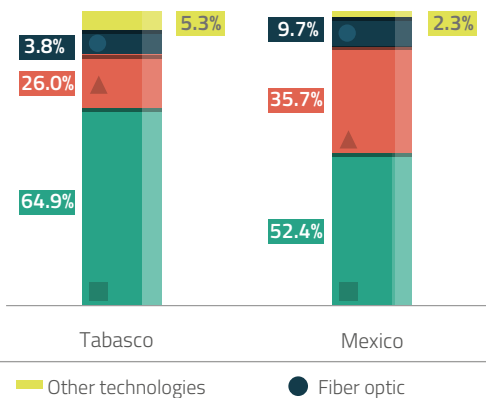
**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The number of inhabitants is taken from the data published by CONAPO as of January 2016. The teledensity desagregation per state was estimated based on the Telecom operator's data and INEGI's data from the ENDUTIH 2015.

**FIGURE 2.27.2.4**  
Distribution of fixed telecommunications services in households

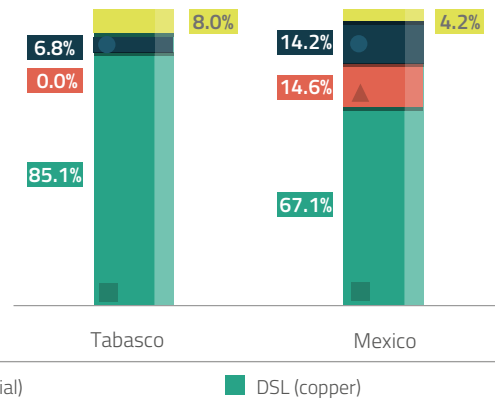


**Source:** IFT based on INEGI's ENDUTIH 2015.  
**Note:** Due to the rounding of data in the figure tags, the sum of the values shown in the bar charts may vary from those shown in the pie chart.

**Figure 2.27.2.5**  
Distribution of residential fixed broadband subscriptions per connection type

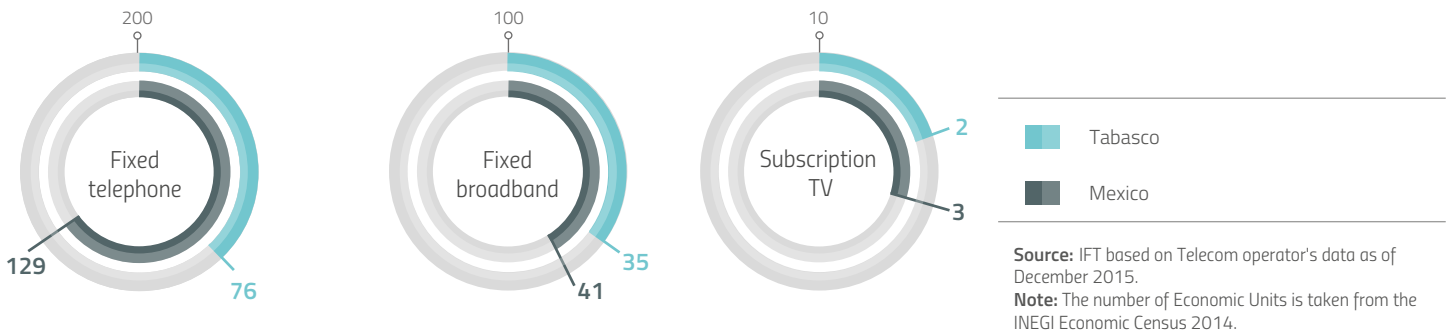


**Figure 2.27.3.1**  
Distribution of non-residential fixed broadband subscriptions per connection type

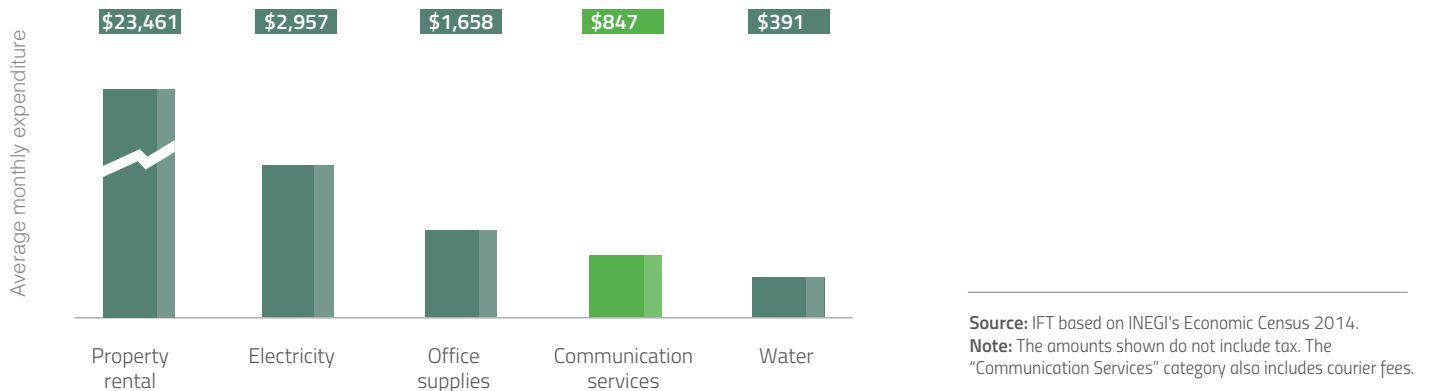


**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The "Other Technologies" category includes fixed wireless and satellite connections. Due to the rounding of data in the chart tags, the figures shown may not add up to 100%.

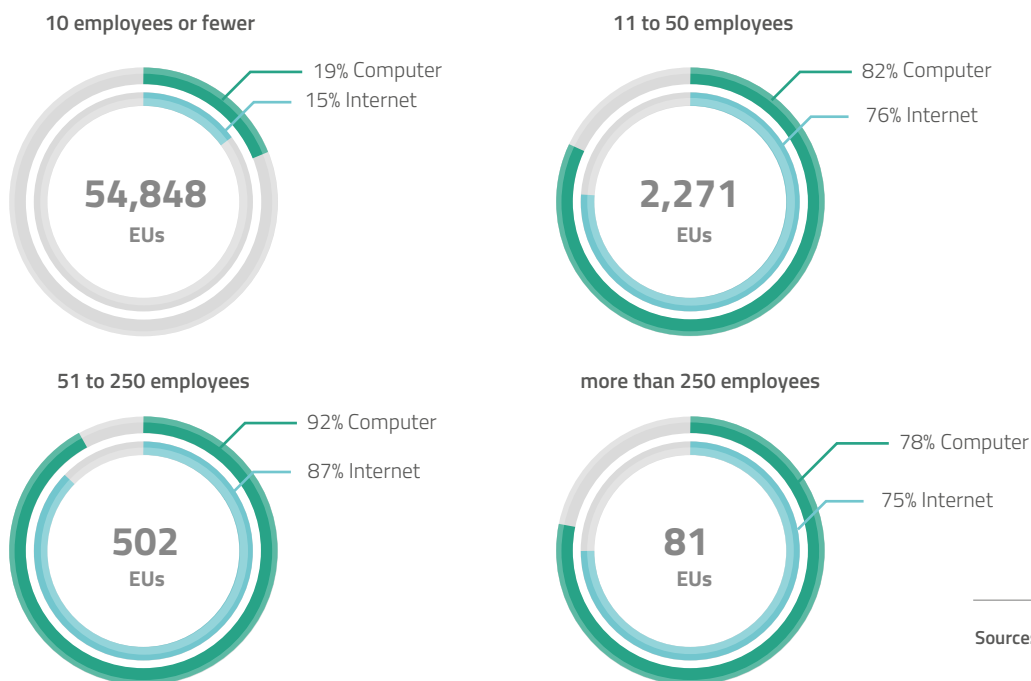
**FIGURE 2.27.3.2**  
Fixed telecommunications services penetration per 100 economic units



**FIGURE 2.27.3.3**  
Average monthly expenditure of economic units by service type



**Figure 2.27.3.4**  
Computer and internet adoption by economic unit (EU) size





STATISTICAL YEARBOOK 2015:

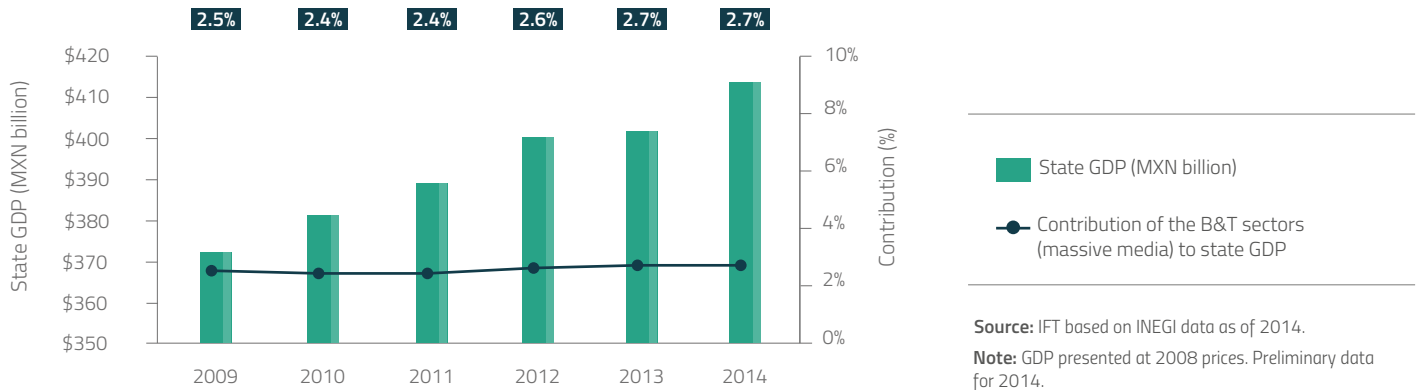
## 2.28 TAMAULIPAS (TAMPS)

### General Overview

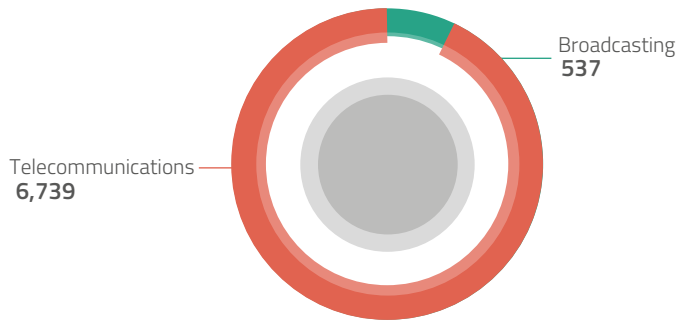
- ▶ From 2009 to 2014 Tamaulipas's GDP showed an average annual growth rate of 2.14%. Additionally as of 2014 the massive media sector<sup>28</sup> contributed with 2.7% of the overall state's GDP, equivalent to MXN 11.000 billion.
- ▶ In 2015, the telecommunications sector employed 6,739 people, whereas the broadcasting sector employed 537 people. In terms of broadcasting infrastructure, at the end of 2015, the state had 88 radio broadcasting stations (58 FM stations and 30 AM stations) and 36 broadcast television channels.
- ▶ In terms of fixed telecommunications services, by the end of 2015 Tamaulipas had the highest penetration in pay TV services with 64 subscriptions per 100 households, compared to 40 broadband subscriptions per 100 households and 40 fixed telephone lines per 100 households. Moreover, by mid 2015 according to ENDUTIH's results 82.6% of households had at least one of these services.
- ▶ In terms of mobile telecommunications services, the state's mobile phone teledensity as of December 2015 was 81 subscriptions per 100 inhabitants, whereas the mobile internet teledensity reached 53 subscriptions per 100 inhabitants in the same period, ranking the state, in terms mobile telecommunications penetration, on top 20 out of 32 Mexican states.
- ▶ Regarding to ICT equipment adoption in Tamaulipas, analog TV sets had the highest penetration level per 100 households with 62 television sets per 100 households; followed by radio equipment with 58 radios per 100 households, digital television sets with 56 television sets per 100 households (this figure does not include households with an analog television set with digital decoder, or households with pay TV services), and finally, computer equipment with 48 computers per 100 households.
- ▶ As in most states, as of 2014 property rental was the principal expenditure incurred by economic units (business) in Tabasco, standing at an average near to MXN 7,000 per month, followed by the monthly average expenditure on electricity, which was MXN 5,970. On the other hand, expenditure on telecommunications services was MXN 2,068 per month, higher than other typical company expenditures such as office supplies (MXN 1,459 per month) and water (approximately MXN 1,253 per month).
- ▶ Additionally, the fixed telecom services penetrations in Tamaulipas's economic units (business) segment were 146 fixed telephone lines per 100 economic units (business), 51 fixed broadband subscriptions per 100 economic units (business); and three pay TV subscriptions per 100 economic units (business).
- ▶ Finally, in 2014 there were registered 103,560 economic units (business) in the state and of those who had 10 employees or less only 24% used computer as part their operations, whereas only 19% used internet. Nevertheless, these figures were above 80% for economic units (business) on the 11 to 50 employees segment, and 90% for economic units (business) with more than 50 employees, which proves that there is a positive relation between company size and the telecommunications services adoptions as part of the business as usual processes.

<sup>28</sup> According to the SCIAN, the Broadcasting and Telecommunications subsectors form part of Sector 51 Massive Media Information, and contributed 94% to the sector's nationwide GDP in 2015

**FIGURE 2.28.1.1**  
Contribution of the B&T sectors (massive media) to state GDP

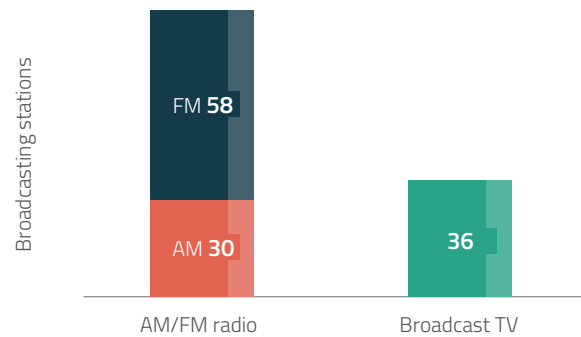


**FIGURE 2.28.1.2**  
Employees in the B&T sectors



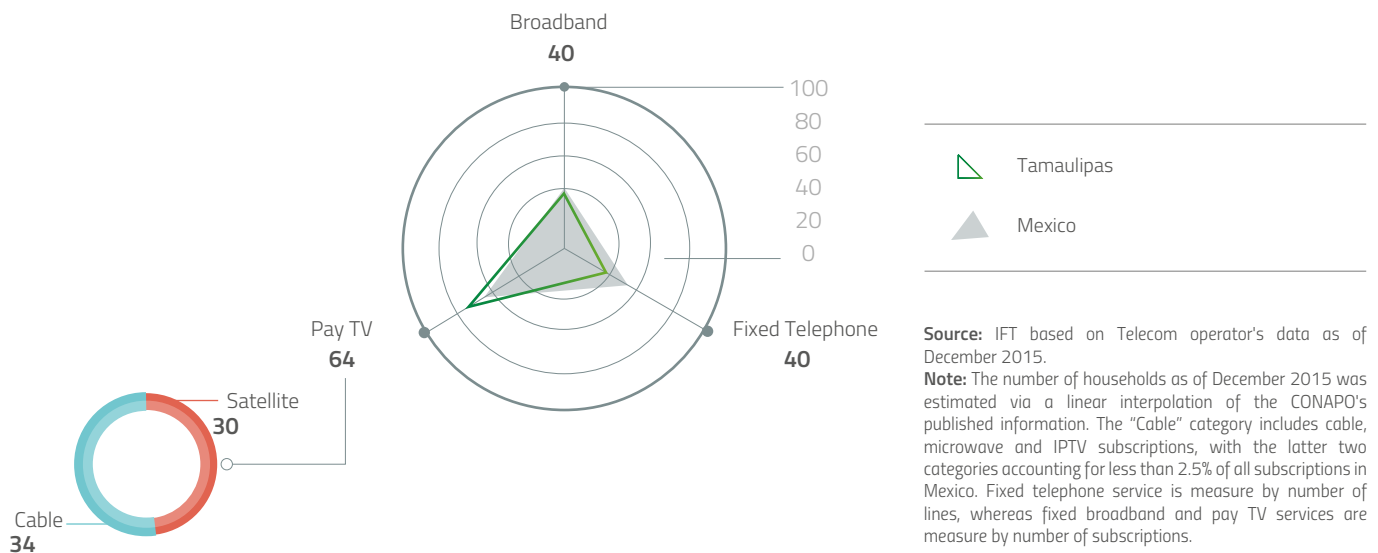
Source: IFT based on data from INEGI's quarterly National Occupation and Employment Surveys.

**FIGURE 2.28.1.3**  
AM/FM radio and broadcast TV stations

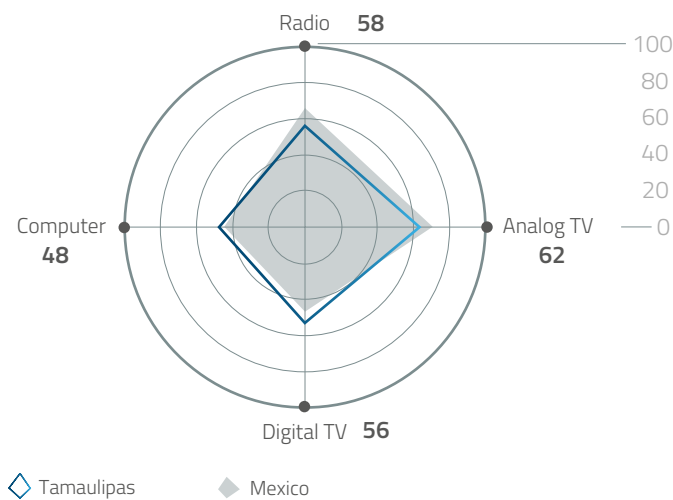


Source: IFT based on data as of December 2015.

**Figure 2.28.2.1**  
Fixed telecommunications services penetration per 100 households

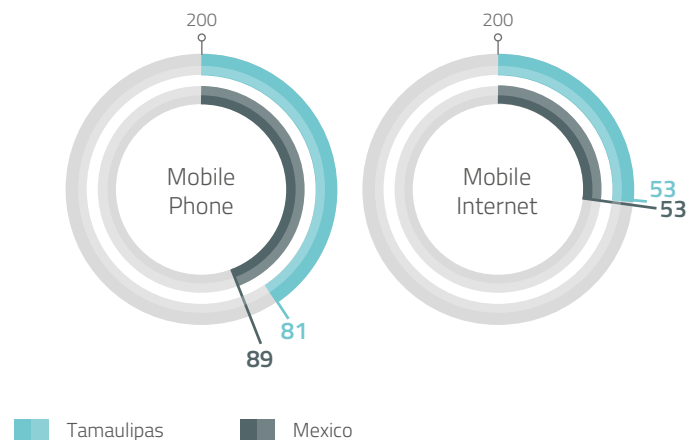


**FIGURE 2.28.2.2**  
ICT equipment per 100 households



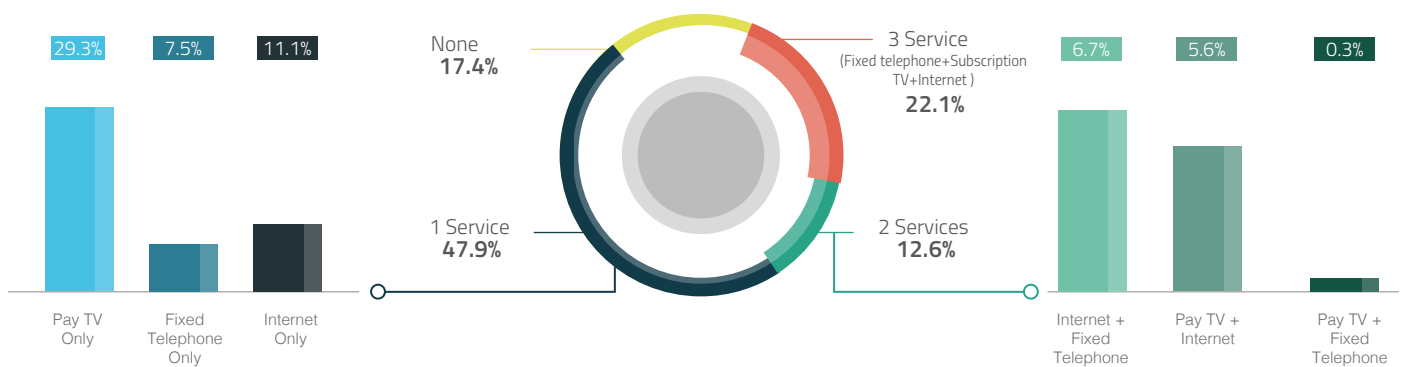
**Source:** IFT based on data from ENDUTIH 2015.  
**Note:** The figure for Digital TV does not include households with an analog television set and digital decoder, or households with pay TV services.

**FIGURE 2.28.2.3**  
Mobile telecommunications teledensity per 100 inhabitants



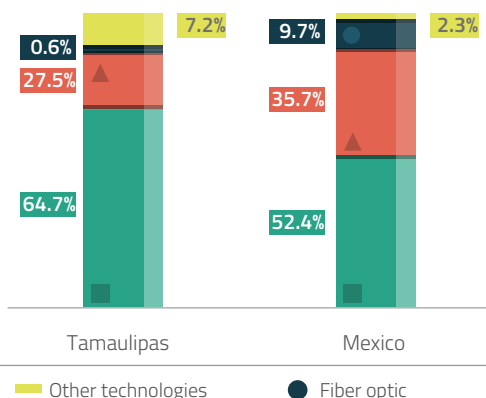
**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The number of inhabitants is taken from the data published by CONAPO as of January 2016. The teledensity desagregation per state was estimated based on the Telecom operator's data and INEGI's data from the ENDUTIH 2015.

**FIGURE 2.28.2.4**  
Distribution of fixed telecommunications services in households

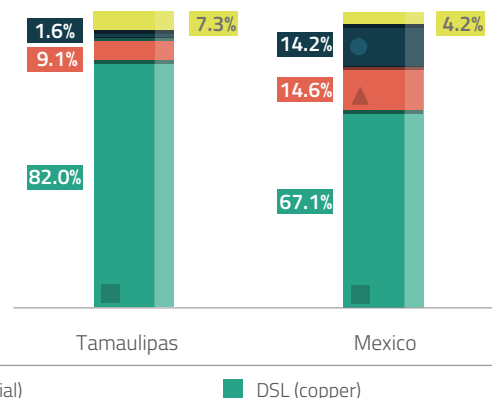


**Source:** IFT based on INEGI's ENDUTIH 2015.  
**Note:** Due to the rounding of data in the figure tags, the sum of the values shown in the bar charts may vary from those shown in the pie chart.

**Figure 2.28.2.5**  
Distribution of residential fixed broadband subscriptions per connection type



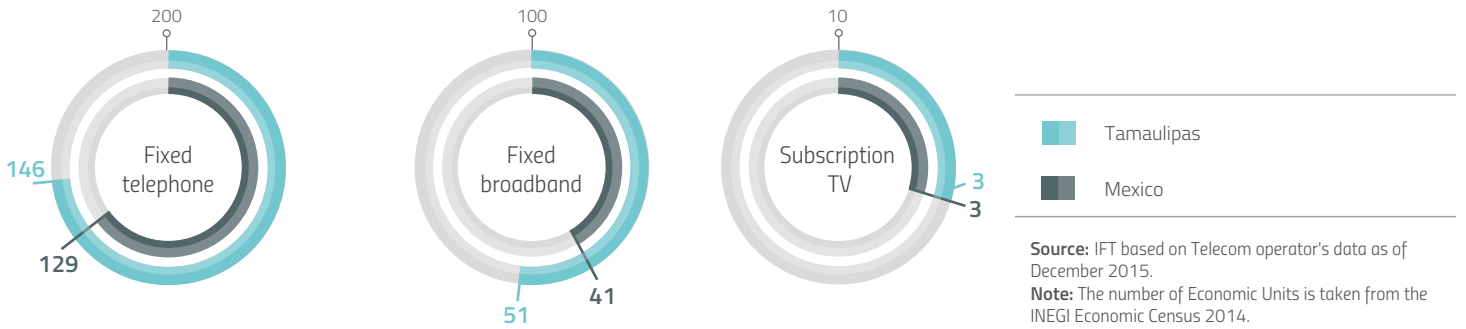
**Figure 2.28.3.1**  
Distribution of non-residential fixed broadband subscriptions per connection type



**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The "Other Technologies" category includes fixed wireless and satellite connections. Due to the rounding of data in the chart tags, the figures shown may not add up to 100%.

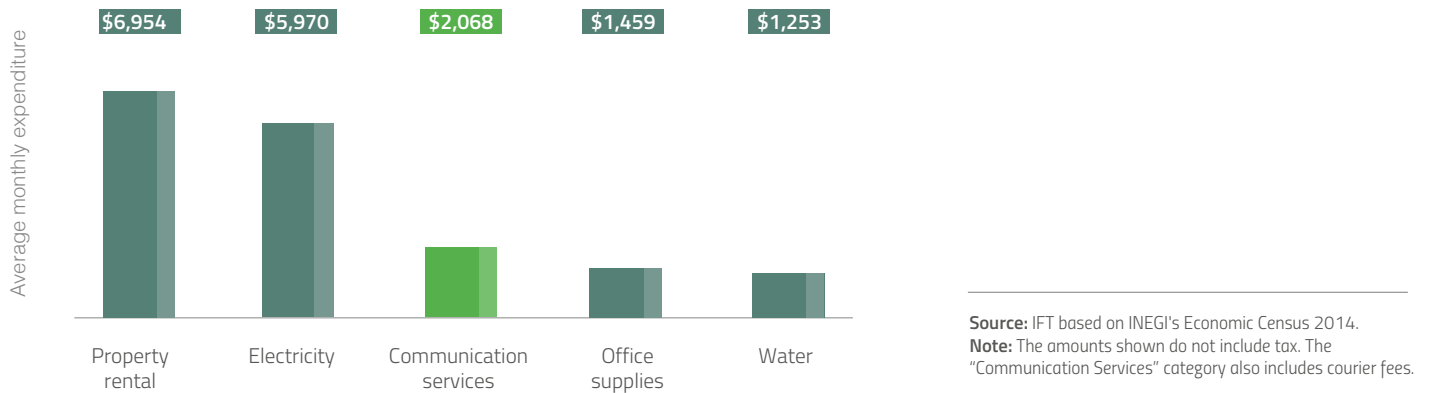
**FIGURE 2.28.3.2**

Fixed telecommunications services penetration per 100 economic units



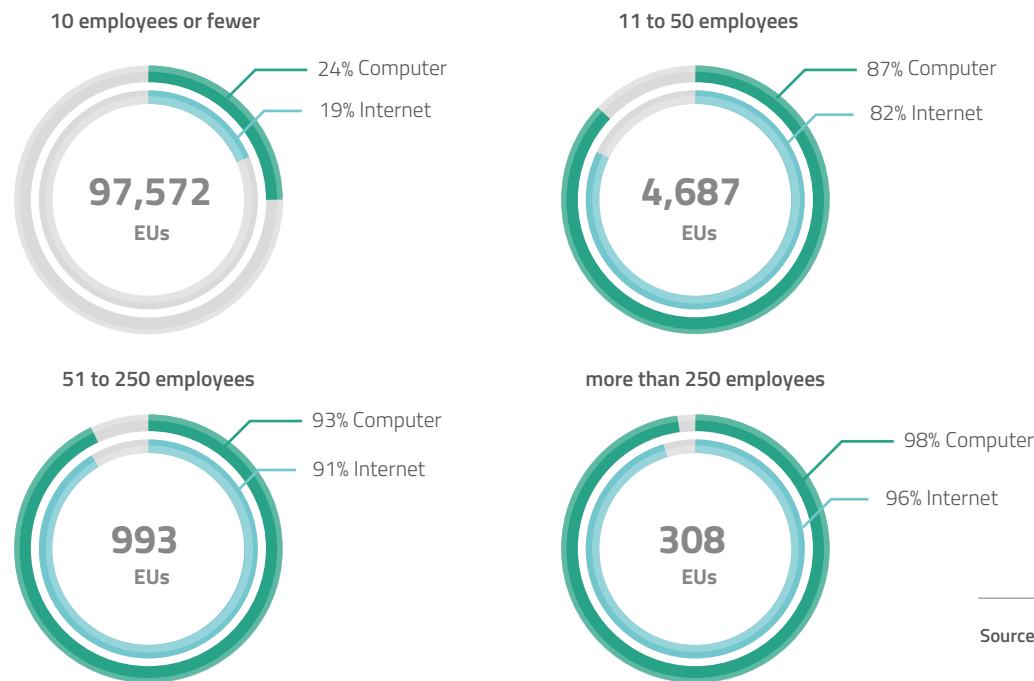
**FIGURE 2.28.3.3**

Average monthly expenditure of economic units by service type



**Figure 2.28.3.4**

Computer and internet adoption by economic unit (EU) size







## STATISTICAL YEARBOOK 2015:

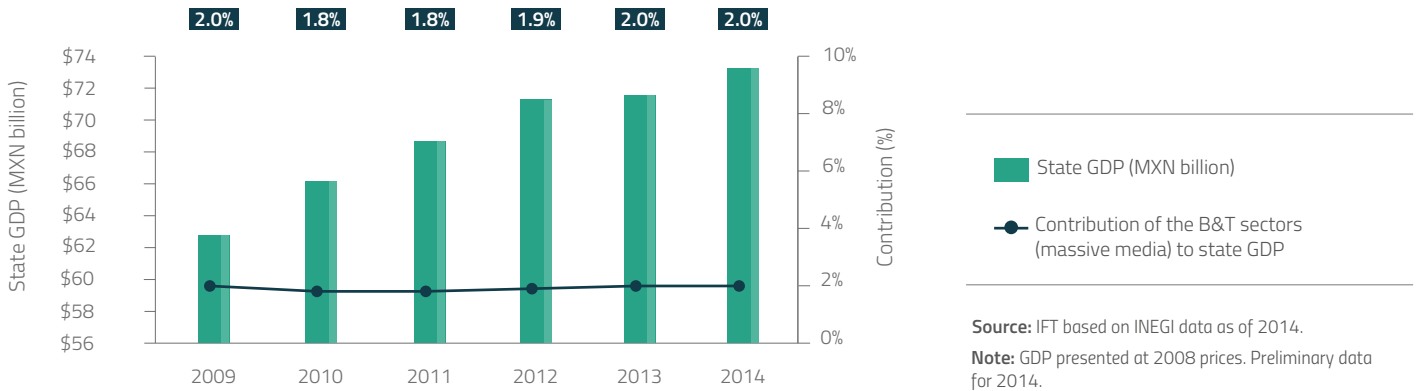
# 2.29 TLAXCALA (TLAX)

## General Overview

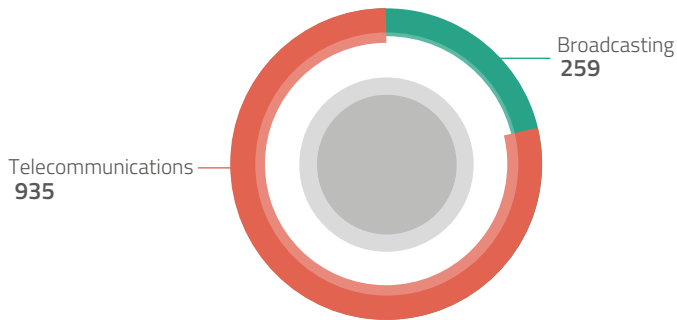
- ▶ From 2009 to 2014 Tlaxcala's GDP showed an average annual growth rate of 3.14%. Additionally as of 2014 the massive media sector<sup>29</sup> contributed with 2% of the overall state's GDP, equivalent to MXN 1.464 billion.
- ▶ In 2015, the telecommunications sector employed 935 people, whereas the broadcasting sector employed 259 people. In terms of broadcasting infrastructure, at the end of 2015, the state had six radio broadcasting stations (five FM stations and one AM stations) and seven broadcast television channels.
- ▶ In terms of fixed telecommunications services, by the end of 2015 Tlaxcala had the highest penetration in pay TV services with 49 subscriptions per 100 households, compared to 33 fixed telephone lines per 100 households, and 29 broadband subscriptions per 100 households. Moreover, by mid 2015 according to ENDUTIH's results 59.6% of households had at least one of these services.
- ▶ In terms of mobile telecommunications services, the state's mobile phone teledensity as of December 2015 was 85 subscriptions per 100 inhabitants, whereas the mobile internet teledensity reached 44 subscriptions per 100 inhabitants in the same period, ranking the state, in terms of mobile telecommunications penetration, on top 15 out of 32 Mexican states.
- ▶ Regarding to ICT equipment adoption in Tlaxcala, analog TV sets had the highest penetration level per 100 households with 78 television sets per 100 households; followed by radio equipment with 69 radios per 100 households, digital television sets with 34 television sets per 100 households (this figure does not include households with an analog television set connected to a digital decoder, or households with pay TV services), and finally, computer equipment with 32 computers per 100 households.
- ▶ Unlike most states, as of 2014 property rental was the second higher expenditure incurred by economic units (business) in Tlaxcala, standing at an average near to MXN 1,757 per month, behind the monthly average expenditure on electricity, which was MXN 2,678. On the other hand, expenditure on telecommunications services was MXN 616 per month, higher than other typical company expenditures such as office supplies (MXN 262 per month) and water (approximately MXN 185 per month).
- ▶ Additionally, the fixed telecom services penetrations in Tlaxcala's economic units (business) segment were 36 fixed telephone lines per 100 economic units (business), 15 fixed broadband subscriptions per 100 economic units (business); and two pay TV subscriptions per 100 economic units (business).
- ▶ Finally, in 2014 there were registered 58,123 economic units (business) in the state and of those who had 10 employees or less only 13% used computer as part their operations, whereas only 10% used internet. Nevertheless, these figures were above 70% for economic units (business) on the 11 to 50 employees segment, and 90% for economic units (business) with more than 50 employees, which proves that there is a positive relation between company size and the telecommunications services adoption as part of the business as usual processes.

<sup>29</sup> According to the SCIAN, the Broadcasting and Telecommunications subsectors form part of Sector 51 Massive Media Information, and contributed 94% to the sector's nationwide GDP in 2015

**FIGURE 2.29.1.1**  
Contribution of the B&T sectors (massive media) to state GDP

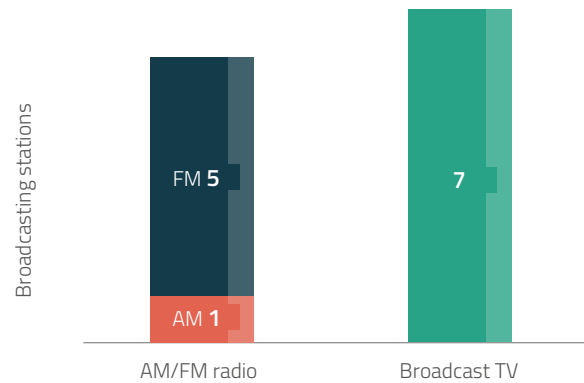


**FIGURE 2.29.1.2**  
Employees in the B&T sectors



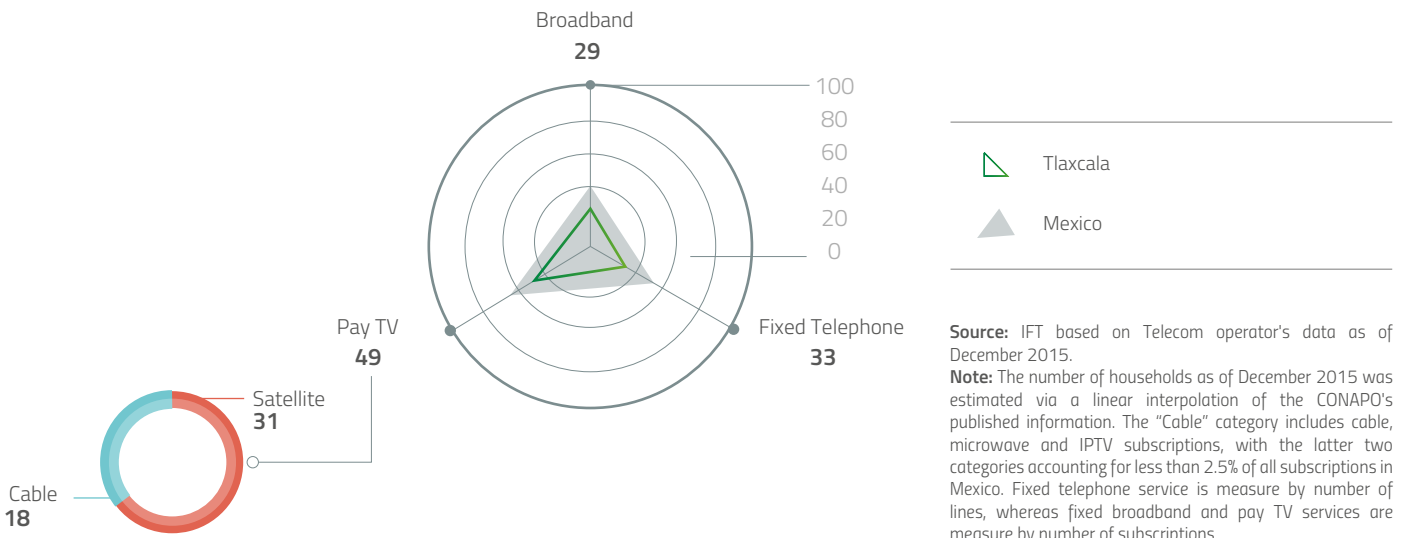
**Source:** IFT based on data from INEGI's quarterly National Occupation and Employment Surveys.

**FIGURE 2.29.1.3**  
AM/FM radio and broadcast TV stations

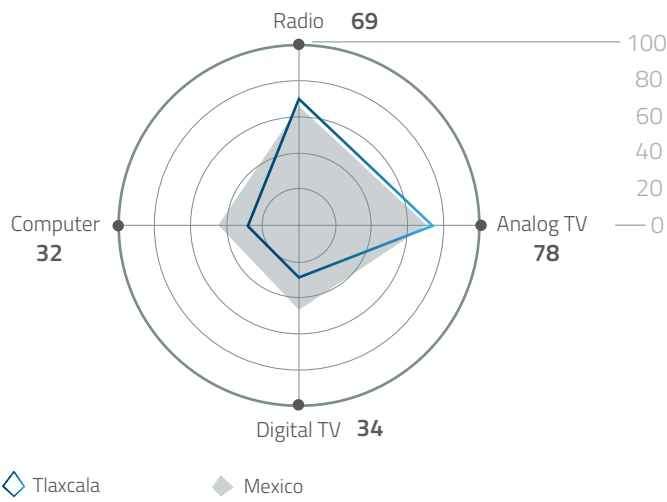


**Source:** IFT based on data as of December 2015.

**Figure 2.29.2.1**  
Fixed telecommunications services penetration per 100 households

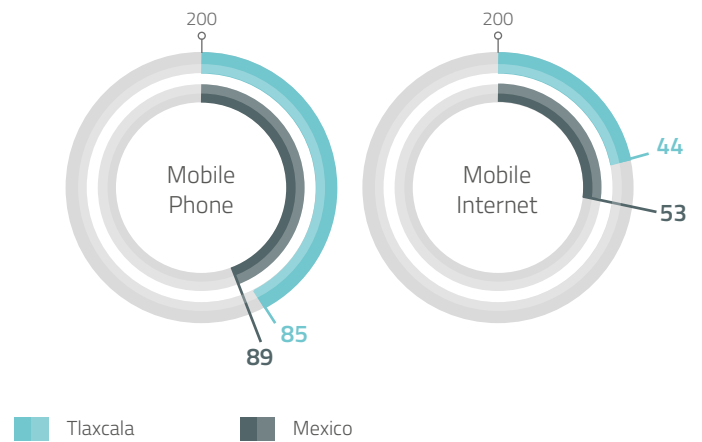


**FIGURE 2.29.2.2**  
ICT equipment per 100 households



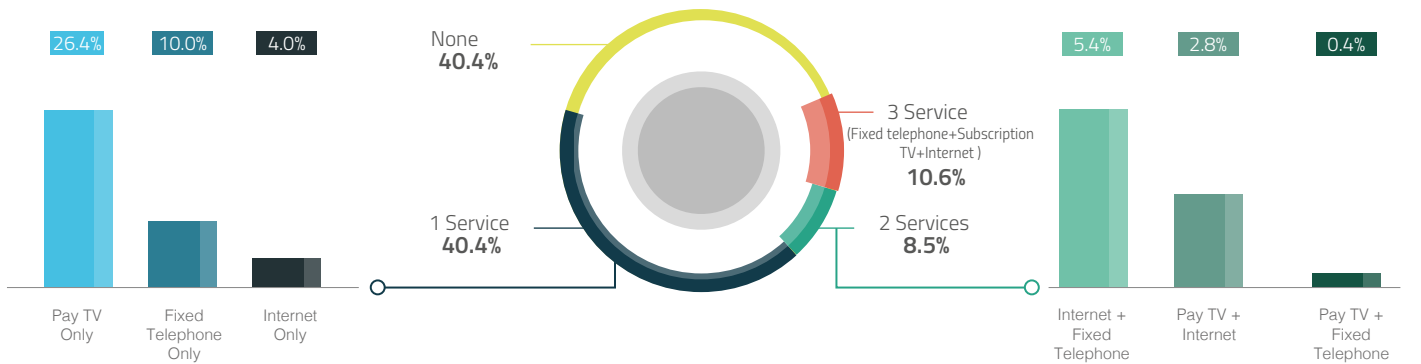
Source: IFT based on data from ENDUTIH 2015.  
Note: The figure for Digital TV does not include households with an analog television set and digital decoder, or households with pay TV services.

**FIGURE 2.29.2.3**  
Mobile telecommunications teledensity per 100 inhabitants



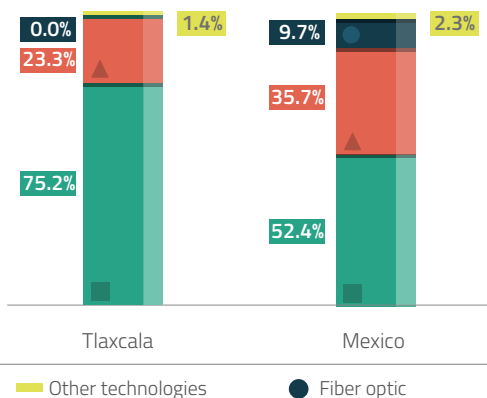
Source: IFT based on Telecom operator's data as of December 2015.  
Note: The number of inhabitants is taken from the data published by CONAPO as of January 2016. The teledensity desagregation per state was estimated based on the Telecom operator's data and INEGI's data from the ENDUTIH 2015.

**FIGURE 2.29.2.4**  
Distribution of fixed telecommunications services in households

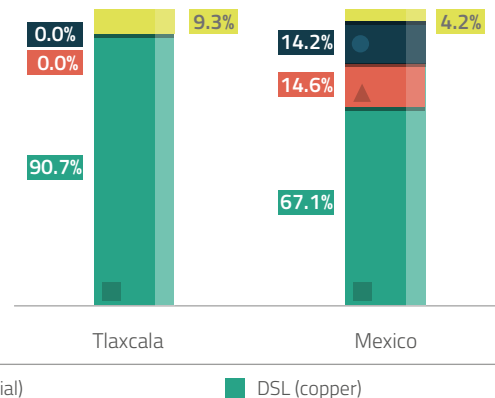


Source: IFT based on INEGI's ENDUTIH 2015.  
Note: Due to the rounding of data in the figure tags, the sum of the values shown in the bar charts may vary from those shown in the pie chart.

**Figure 2.29.2.5**  
Distribution of residential fixed broadband subscriptions per connection type

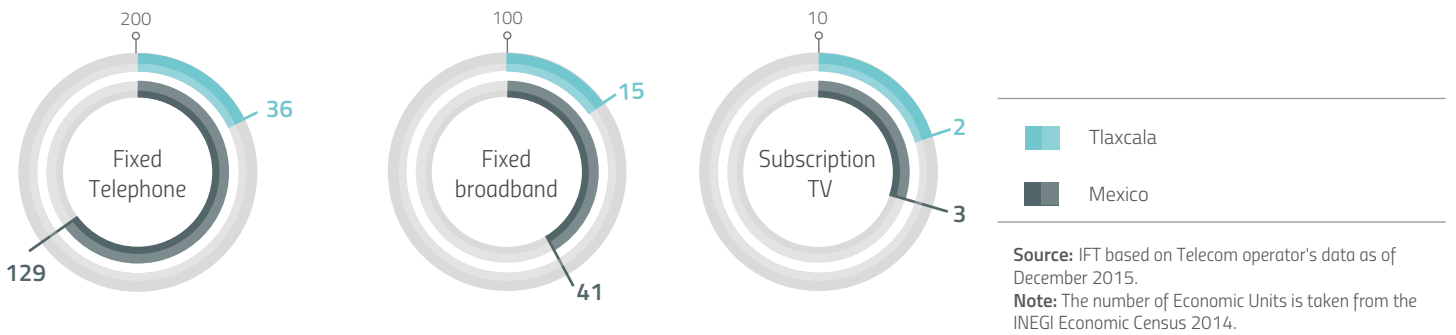


**Figure 2.29.3.1**  
Distribution of non-residential fixed broadband subscriptions per connection type

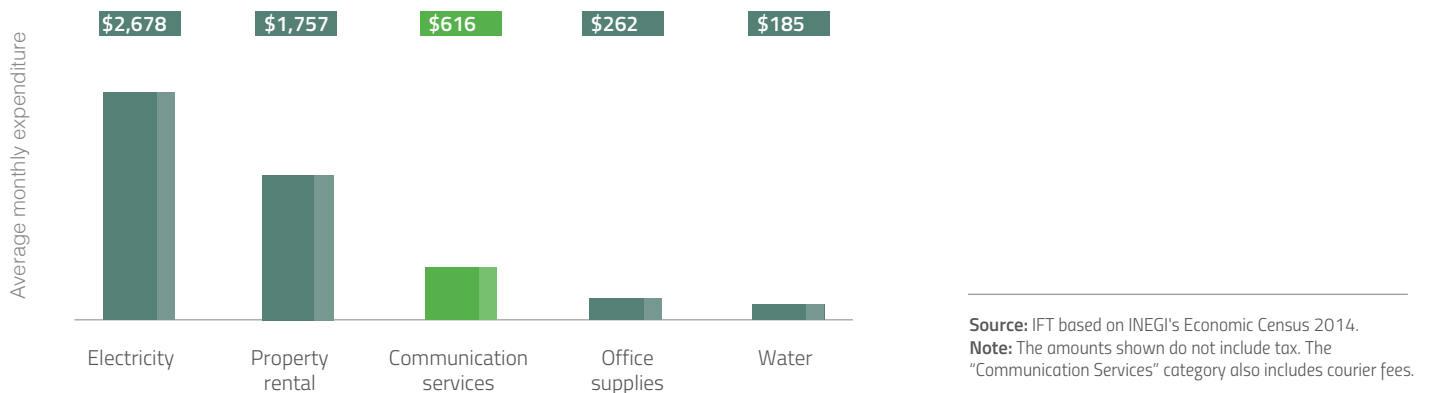


Source: IFT based on Telecom operator's data as of December 2015.  
Note: The "Other Technologies" category includes fixed wireless and satellite connections. Due to the rounding of data in the chart tags, the figures shown may not add up to 100%.

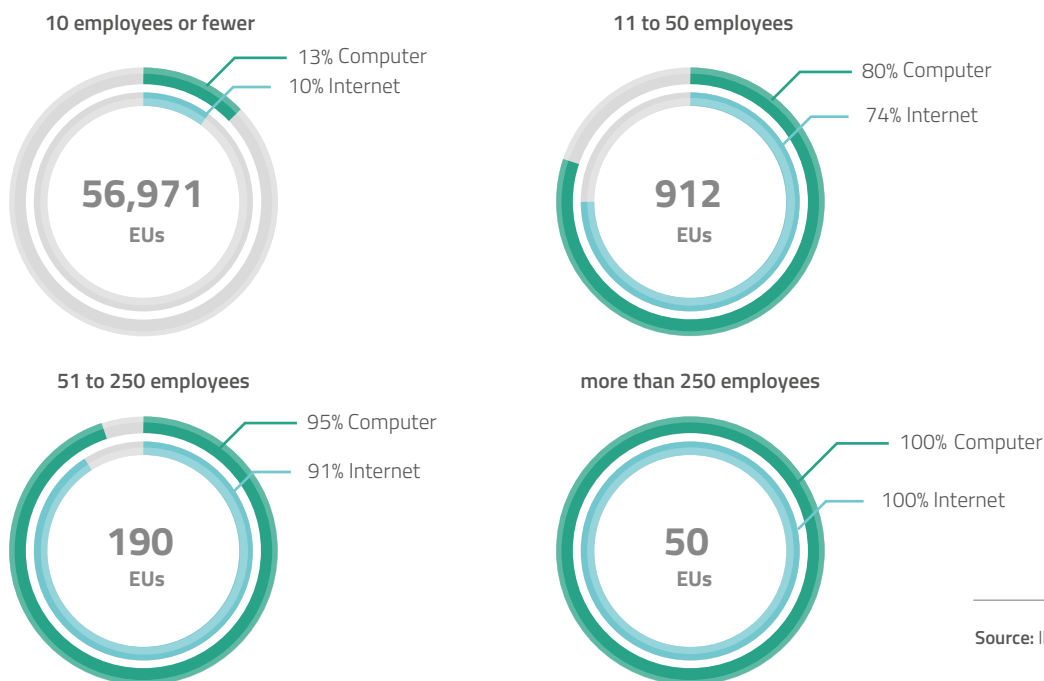
**FIGURE 2.29.3.2**  
Fixed telecommunications services penetration per 100 economic units



**FIGURE 2.29.3.3**  
Average monthly expenditure of economic units by service type



**Figure 2.29.3.4**  
Computer and internet adoption by economic unit (EU) size





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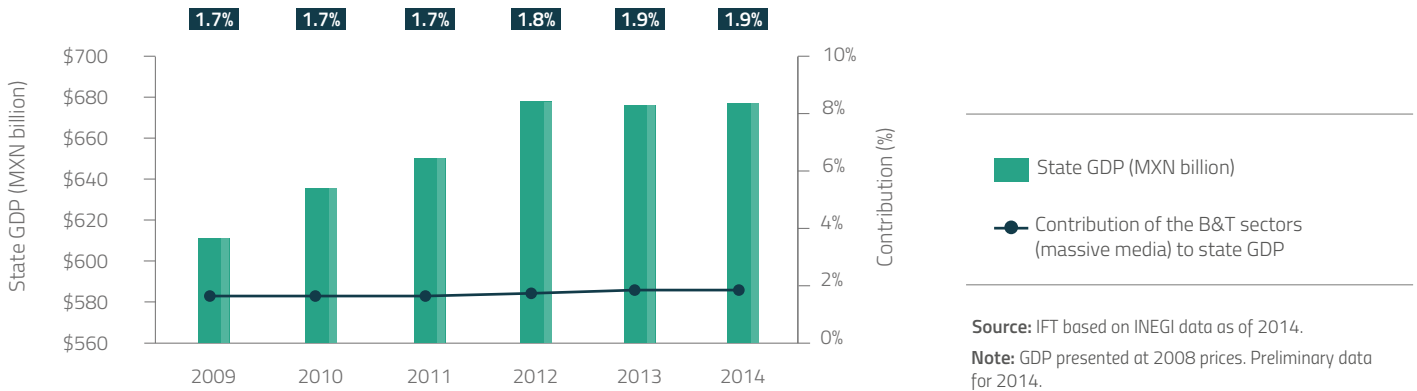
## 2.30 VERACRUZ DE IGNACIO DE LA LLAVE (VER)

### General Overview

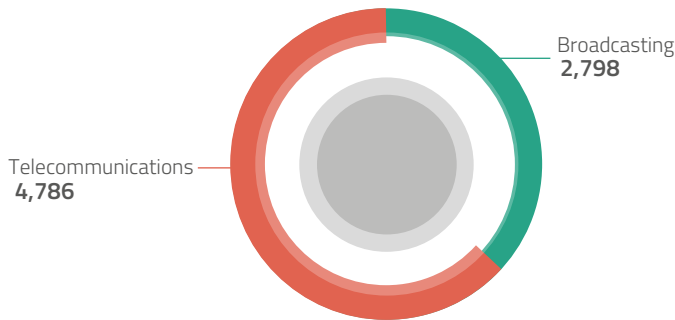
- ▶ From 2009 to 2014 Veracruz's GDP showed an average annual growth rate of 2.08%. Additionally as of 2014 the massive media sector<sup>30</sup> contributed with 1.9% of the overall state's GDP, equivalent to MXN 12.600 billion.
- ▶ In 2015, the telecommunications sector employed 4,786 people, whereas the broadcasting sector employed 2,798 people. In terms of broadcasting infrastructure, at the end of 2015, the state had 119 radio broadcasting stations (106 FM stations and 13 AM stations) and 32 broadcast television channels.
- ▶ In terms of fixed telecommunications services, by the end of 2015 Veracruz had the highest penetration in pay TV services with 49 subscriptions per 100 households, compared to 28 broadband subscriptions per 100 households, and 28 fixed telephone lines per 100 households. Moreover, by mid 2015 according to ENDUTIH's results 59.1% of households had at least one of these services.
- ▶ In terms of mobile telecommunications services, the state's mobile phone teledensity as of December 2015 was 72 subscriptions per 100 inhabitants, whereas the mobile internet teledensity reached 40 subscriptions per 100 inhabitants in the same period, ranking the state, in terms of mobile telecommunications penetration, on top 24 out of 32 Mexican states.
- ▶ Regarding to ICT equipment adoption in Veracruz, radio equipment had the highest penetration level per 100 households with 69 radio sets per 100 households; followed by analog TV equipment with 67 sets per 100 households, digital television with 36 television sets per 100 households (this figure does not include households with an analog television set connected to digital decoder, or households with pay TV services), and finally, computer equipment with 31 computers per 100 households.
- ▶ As in most states, as of 2014 property rental was the principal expenditure incurred by economic units (business) in Veracruz, standing at an average near to MXN 4,136 per month, followed by the monthly average expenditure on electricity, which was MXN 3,198. On the other hand, expenditure on telecommunications services was MXN 693 per month, lower than other typical company expenditures such as office supplies (MXN 879 per month) and water (approximately MXN 486 per month).
- ▶ Additionally, the fixed telecom services penetrations in Veracruz's economic units (business) segment were 72 fixed telephone lines per 100 economic units (business), 33 fixed broadband subscriptions per 100 economic units (business); and three pay TV subscriptions per 100 economic units (business).
- ▶ Finally, in 2014 there were registered 237,297 economic units (business) in the state and of those who had 10 employees or less only 17% used computer as part their operations, whereas only 14% used internet. Nevertheless, these figures were above 80% for economic units (business) on the 11 to 50 employees segment, and 90% for economic units (business) with more than 50 employees, which proves that there is a positive relation between company size and the telecommunications services adoptions as part of the business as usual processes.

<sup>30</sup> According to the SCIAN, the Broadcasting and Telecommunications subsectors form part of Sector 51 Massive Media Information, and contributed 94% to the sector's nationwide GDP in 2015

**FIGURE 2.30.1.1**  
Contribution of the B&T sectors (massive media) to state GDP

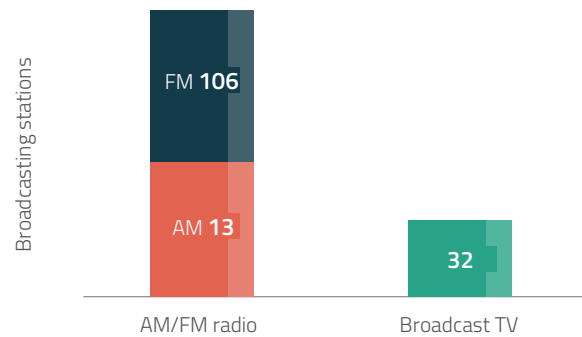


**FIGURE 2.30.1.2**  
Employees in the B&T sectors



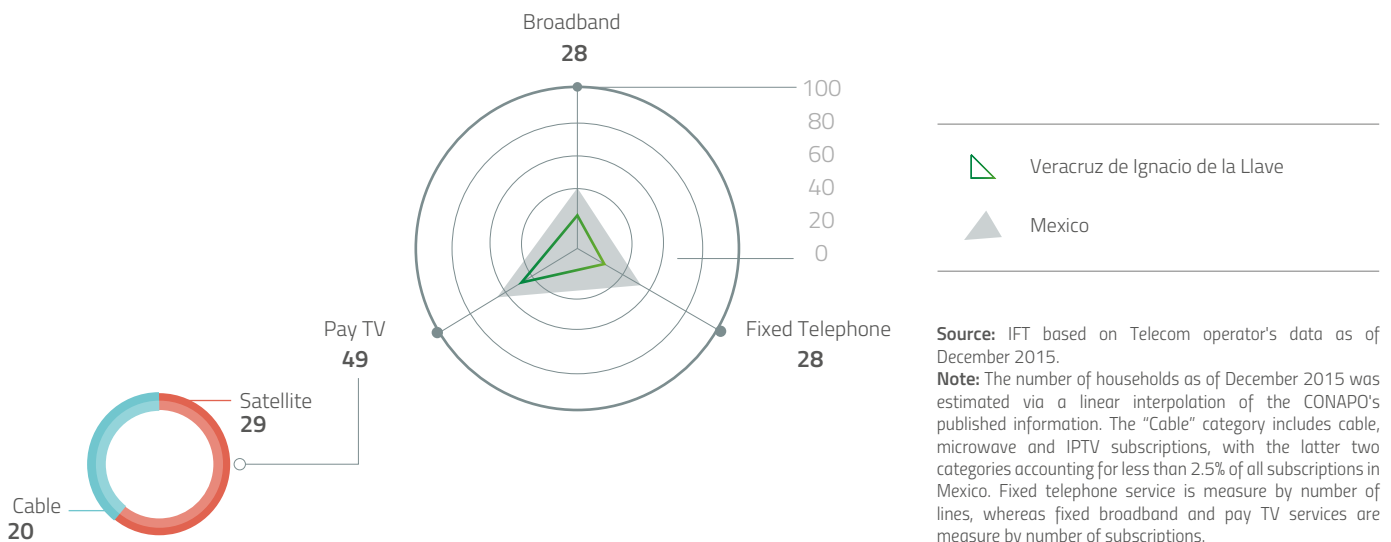
**Source:** IFT based on data from INEGI's quarterly National Occupation and Employment Surveys.

**FIGURE 2.30.1.3**  
AM/FM radio and broadcast TV stations



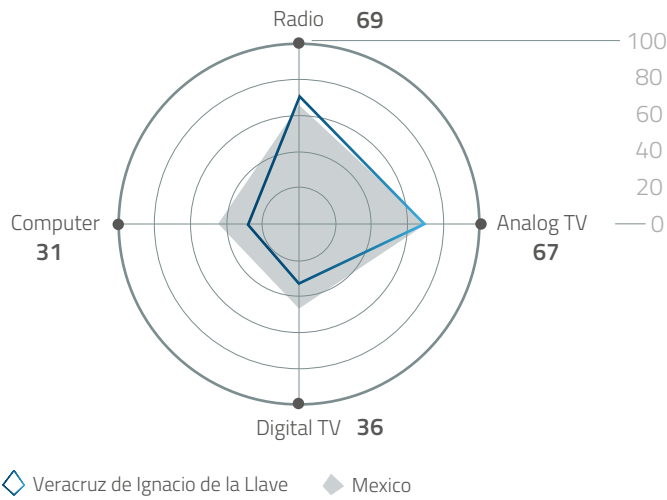
**Source:** IFT based on data as of December 2015.

**Figure 2.30.2.1**  
Fixed telecommunications services penetration per 100 households



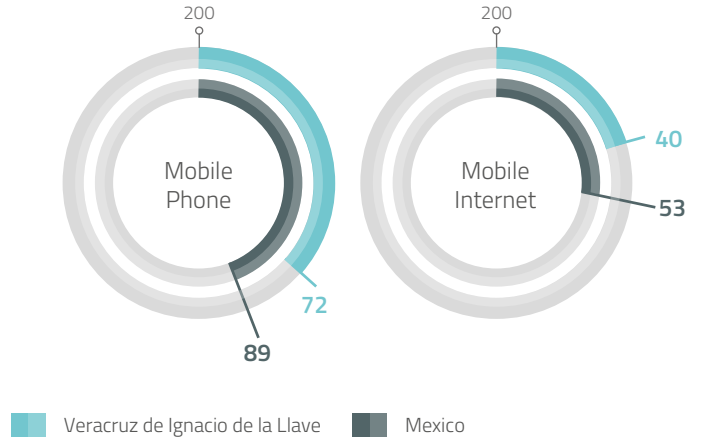


**FIGURE 2.30.2.2**  
ICT equipment per 100 households



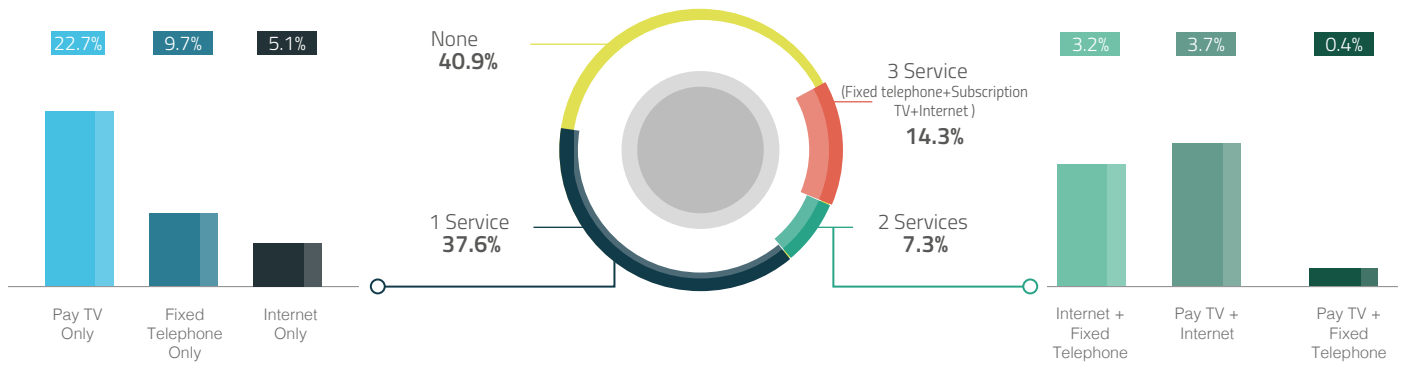
Source: IFT based on data from ENDUTIH 2015.  
Note: The figure for Digital TV does not include households with an analog television set and digital decoder, or households with pay TV services.

**FIGURE 2.30.2.3**  
Mobile telecommunications teledensity per 100 inhabitants



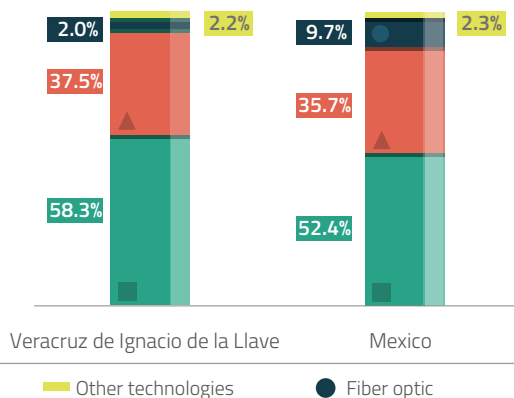
Source: IFT based on Telecom operator's data as of December 2015.  
Note: The number of inhabitants is taken from the data published by CONAPO as of January 2016. The teledensity desagregation per state was estimated based on the Telecom operator's data and INEGI's data from the ENDUTIH 2015.

**FIGURE 2.30.2.4**  
Distribution of fixed telecommunications services in households

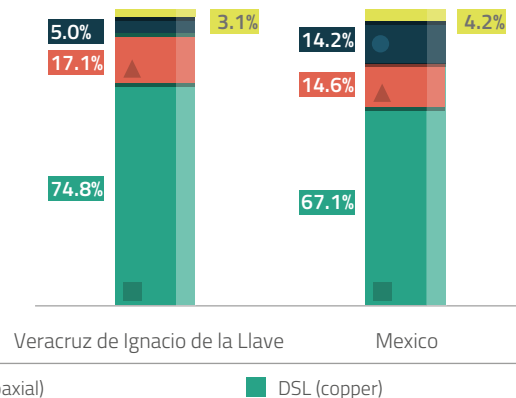


Source: IFT based on INEGI's ENDUTIH 2015.  
Note: Due to the rounding of data in the figure tags, the sum of the values shown in the bar charts may vary from those shown in the pie chart.

**Figure 2.30.2.5**  
Distribution of residential fixed broadband subscriptions per connection type

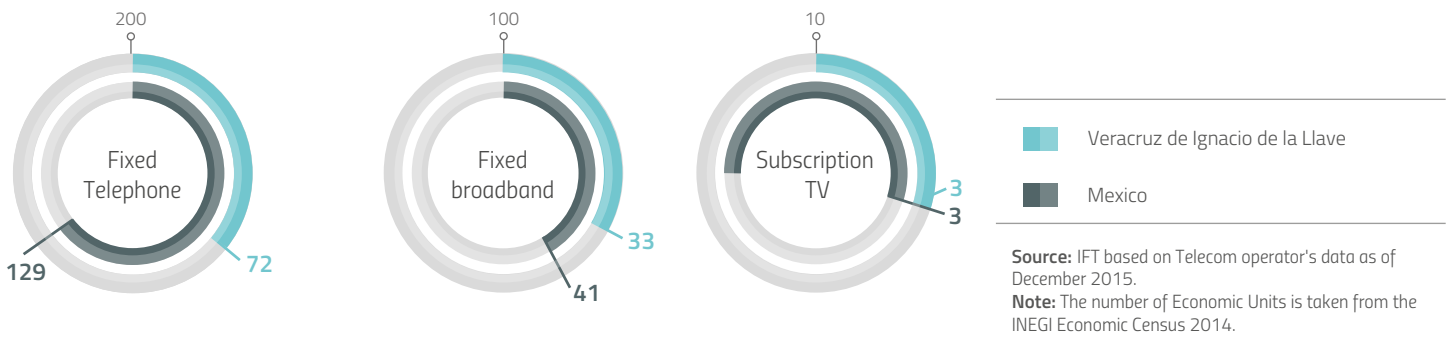


**Figure 2.30.3.1**  
Distribution of non-residential fixed broadband subscriptions per connection type

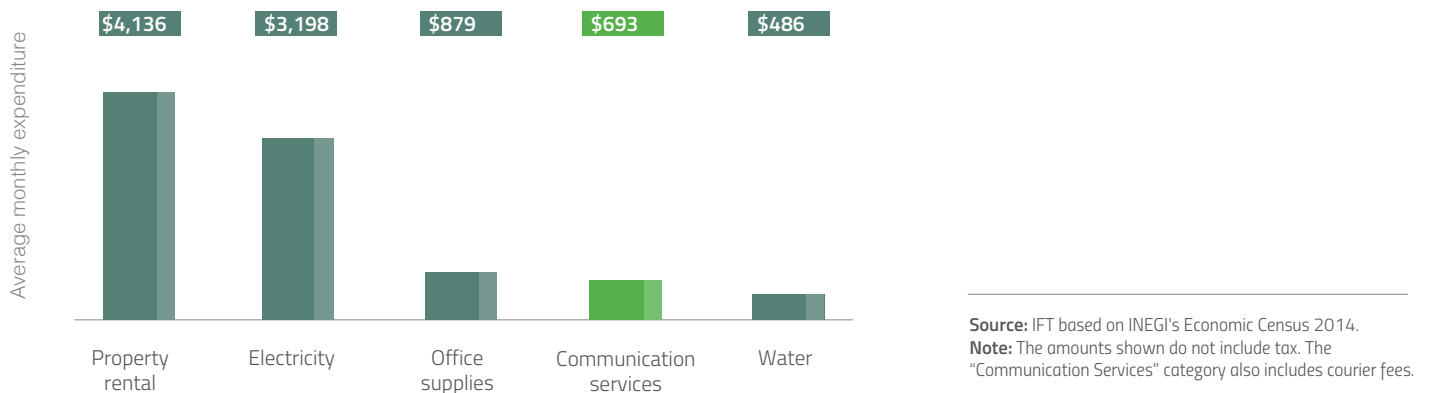


Source: IFT based on Telecom operator's data as of December 2015.  
Note: The "Other Technologies" category includes fixed wireless and satellite connections. Due to the rounding of data in the chart tags, the figures shown may not add up to 100%.

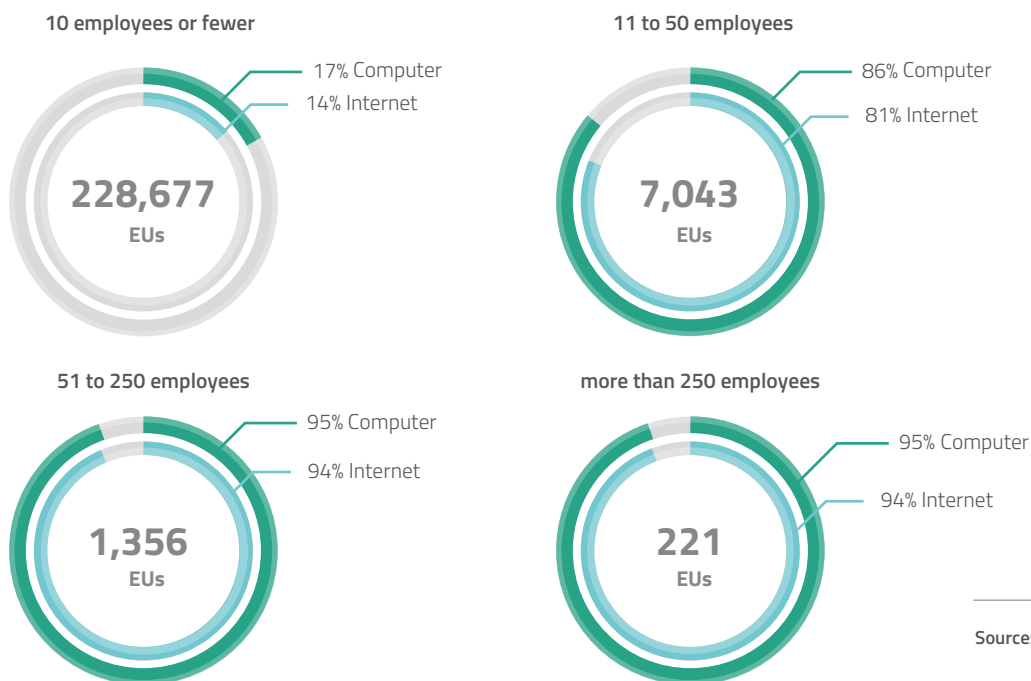
**FIGURE 2.30.3.2**  
Fixed telecommunications services penetration per 100 economic units



**FIGURE 2.30.3.3**  
Average monthly expenditure of economic units by service type



**Figure 2.30.3.4**  
Computer and internet adoption by economic unit (EU) size







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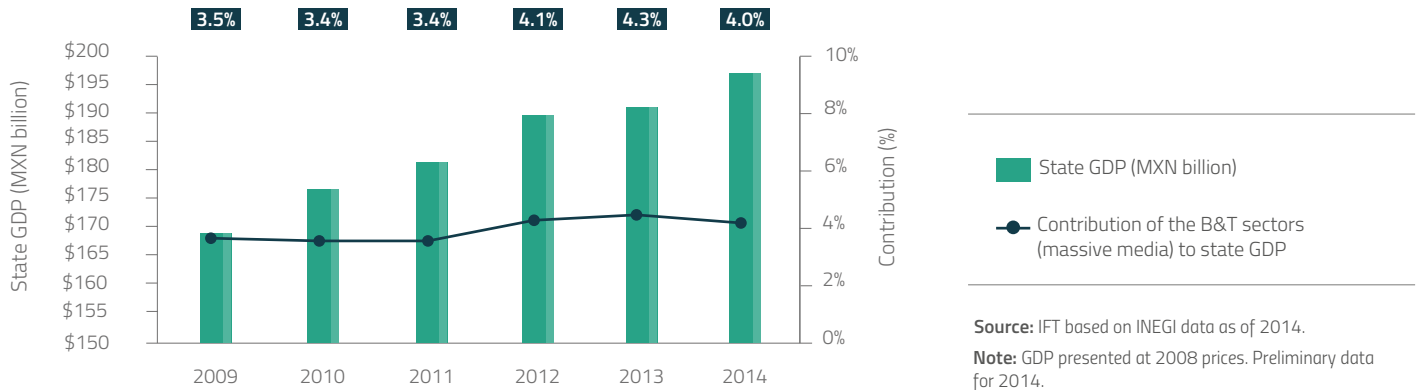
# 2.31 YUCATAN (YUC)

## General Overview

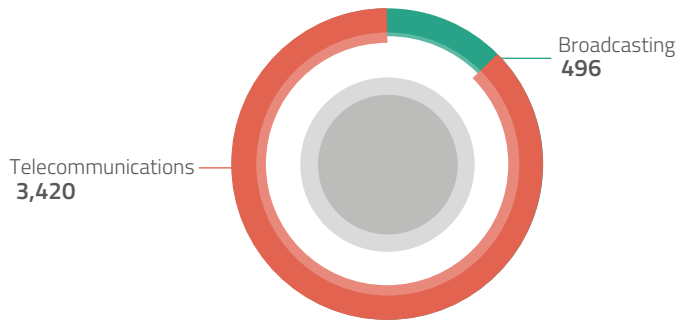
- ▶ From 2009 to 2014 Yucatan's GDP showed an average annual growth rate of 3.04%. Additionally as of 2014 the massive media sector<sup>31</sup> contributed with 4% of the overall state's GDP, equivalent to MXN 8.0 billion.
- ▶ In 2015, the telecommunications sector employed 3,420 people, whereas the broadcasting sector employed 496 people. In terms of broadcasting infrastructure, at the end of 2015, the state had 38 radio broadcasting stations (31 FM stations and 7 AM stations) and 10 broadcast television channels.
- ▶ In terms of fixed telecommunications services, by the end of 2015 Yucatan had the highest penetration in pay TV services with 62 subscriptions per 100 households, compared to 33 broadband subscriptions per 100 households and 30 fixed telephone lines per 100 households. Moreover, by mid 2015 according to ENDUTIH's results 84.8% of households had at least one of these services.
- ▶ In terms of mobile telecommunications services, the state's mobile phone teledensity as of December 2015 was 98 subscriptions per 100 inhabitants, whereas the mobile internet teledensity reached 71 subscriptions per 100 inhabitants in the same period, ranking the state, in terms of mobile telecommunications penetration, on top 9 out of 32 Mexican states.
- ▶ Regarding to ICT equipment adoption in Yucatan, analog TV sets had the highest penetration level per 100 households with 75 television sets per 100 households; followed by radio equipment with 61 radios per 100 households, digital television with 43 television sets per 100 households (this figure does not include households with an analog television set connected to a digital decoder, or households with pay TV services), and finally, computer equipment with 43 computers per 100 households.
- ▶ As in most states, as of 2014 property rental was the principal expenditure incurred by economic units (business) in Yucatan, standing at an average near to MXN 4,000 per month, followed by the monthly average expenditure on electricity, which was MXN 2,087. On the other hand, expenditure on telecommunications services was MXN 801 per month, lower than other typical company expenditures such as office supplies (MXN 846 per month) and water (approximately MXN 252 per month).
- ▶ Additionally, the fixed telecom services penetrations in Yucatan's economic units (business) segment were 64 fixed telephone lines per 100 economic units (business), 29 fixed broadband subscriptions per 100 economic units (business); and three pay TV subscriptions per 100 economic units (business).
- ▶ Finally, in 2014 there were registered 97,668 economic units (business) in the state and of those who had 10 employees or less only 19% used computer as part their operations, whereas only 16% used internet. Nevertheless, these figures were above 80% for economic units (business) with 11 employees or more, which proves that there is a positive relation between company size and the telecommunications services adoption as part of the business as usual processes.

<sup>31</sup> According to the SCIAN, the Broadcasting and Telecommunications subsectors form part of Sector 51 Massive Media Information, and contributed 94% to the sector's nationwide GDP in 2015

**FIGURE 2.31.1.1**  
Contribution of the B&T sectors (massive media) to state GDP

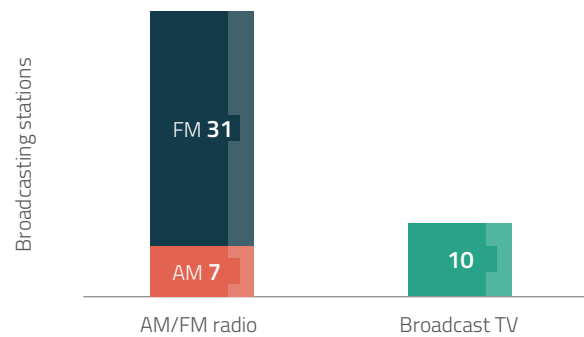


**FIGURE 2.31.1.2**  
Employees in the B&T sectors



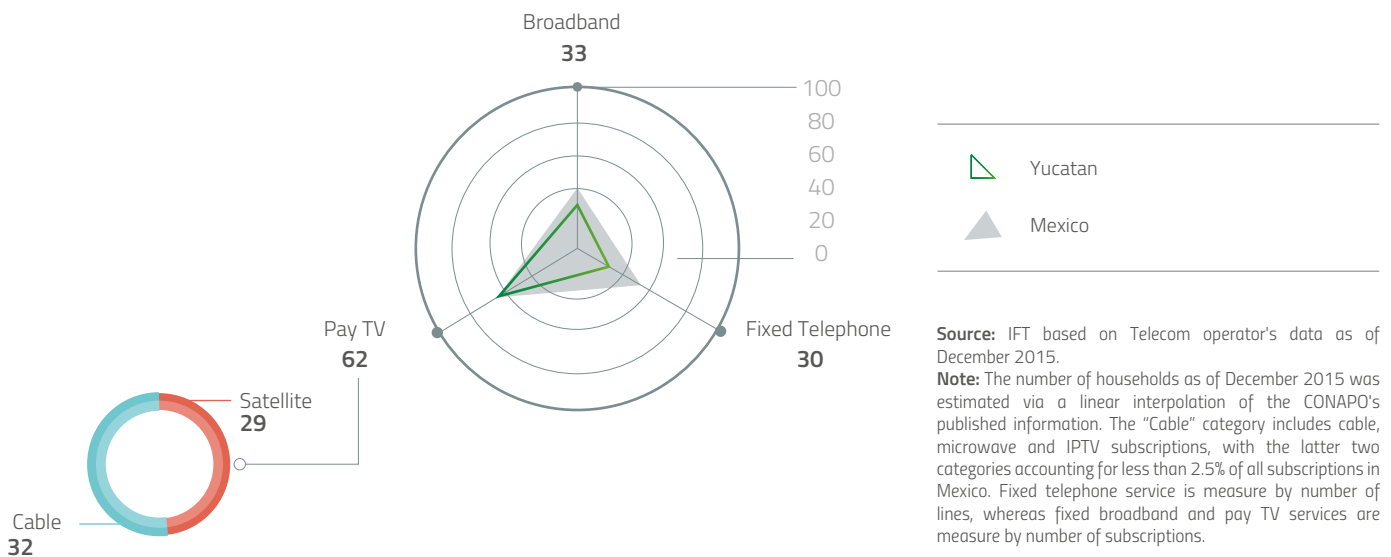
Source: IFT based on data from INEGI's quarterly National Occupation and Employment Surveys.

**FIGURE 2.31.1.3**  
AM/FM radio and broadcast TV stations

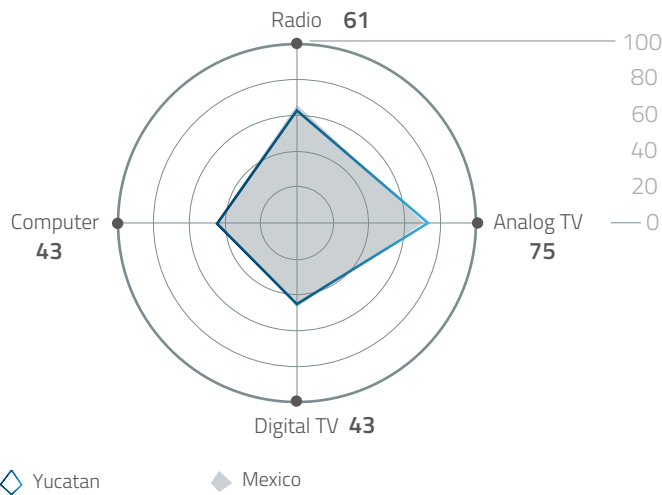


Source: IFT based on data as of December 2015.

**Figure 2.31.2.1**  
Fixed telecommunications services penetration per 100 households

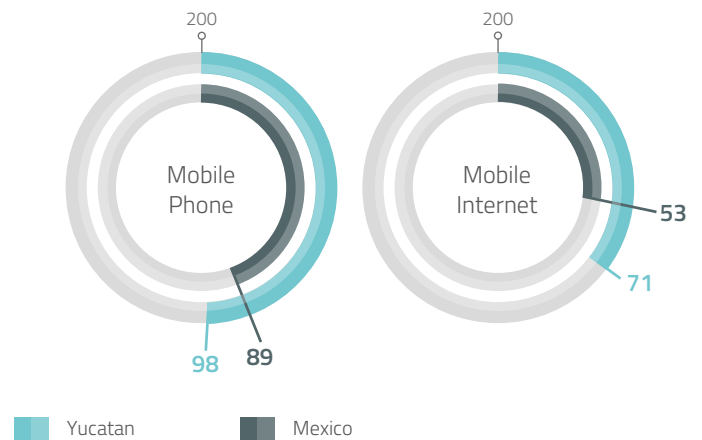


**FIGURE 2.31.2.2**  
ICT equipment per 100 households



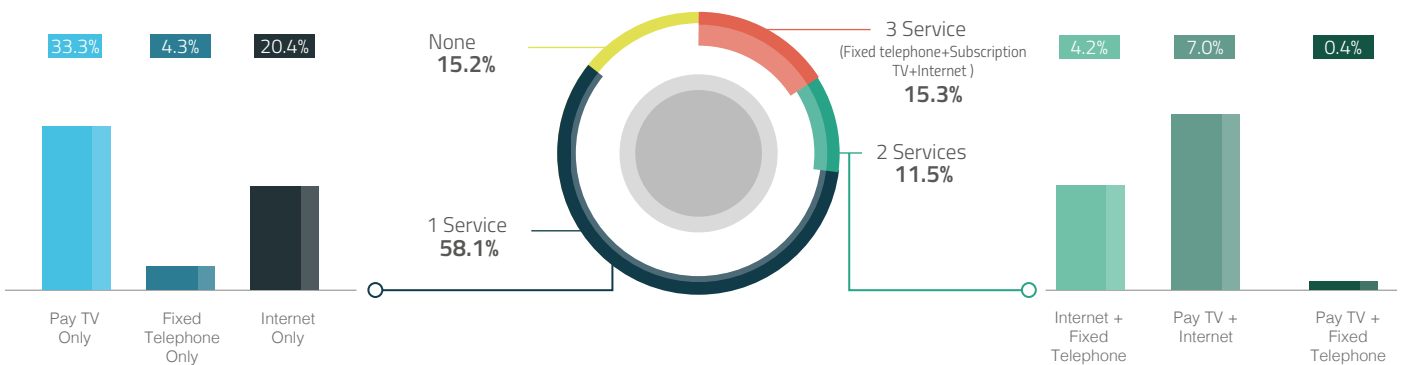
**Source:** IFT based on data from ENDUTIH 2015.  
**Note:** The figure for Digital TV does not include households with an analog television set and digital decoder, or households with pay TV services.

**FIGURE 2.31.2.3**  
Mobile telecommunications teledensity per 100 inhabitants



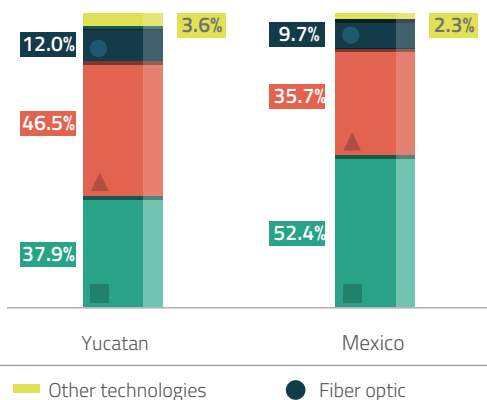
**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The number of inhabitants is taken from the data published by CONAPO as of January 2016. The teledensity disaggregation per state was estimated based on the Telecom operator's data and INEGI's data from the ENDUTIH 2015.

**FIGURE 2.31.2.4**  
Distribution of fixed telecommunications services in households

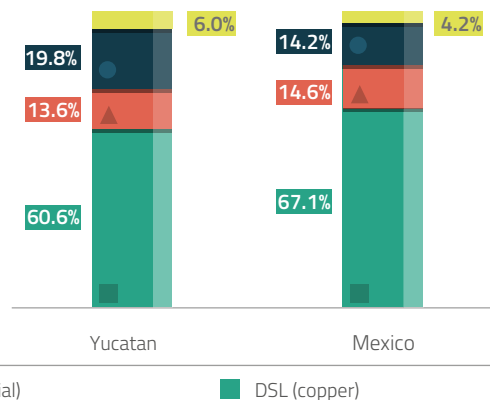


**Source:** IFT based on INEGI's ENDUTIH 2015.  
**Note:** Due to the rounding of data in the figure tags, the sum of the values shown in the bar charts may vary from those shown in the pie chart.

**Figure 2.31.2.5**  
Distribution of residential fixed broadband subscriptions per connection type

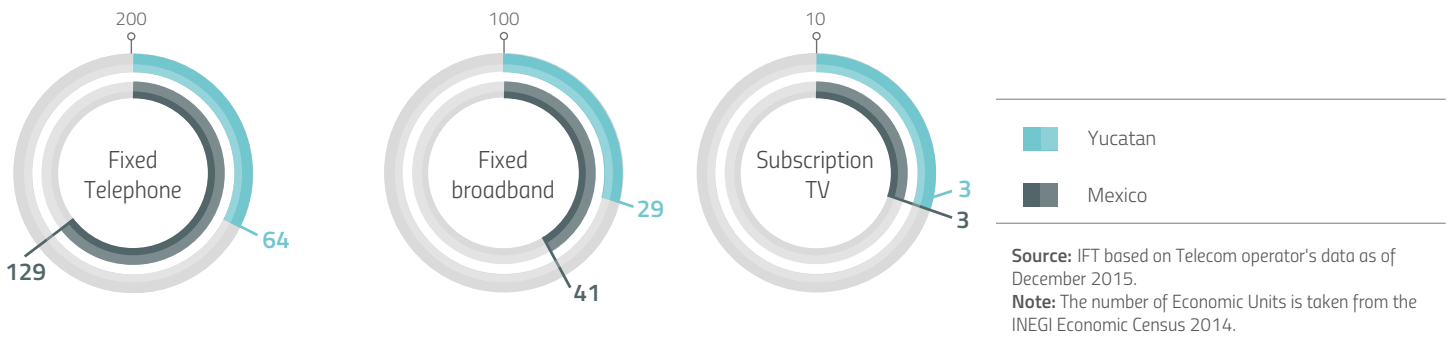


**Figure 2.31.3.1**  
Distribution of non-residential fixed broadband subscriptions per connection type

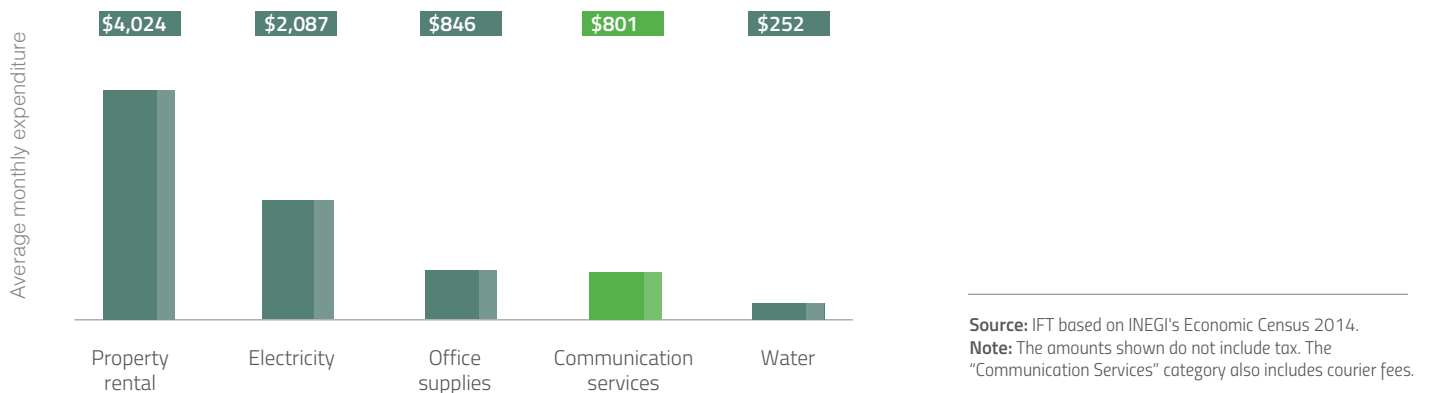


**Source:** IFT based on Telecom operator's data as of December 2015.  
**Note:** The "Other Technologies" category includes fixed wireless and satellite connections. Due to the rounding of data in the chart tags, the figures shown may not add up to 100%.

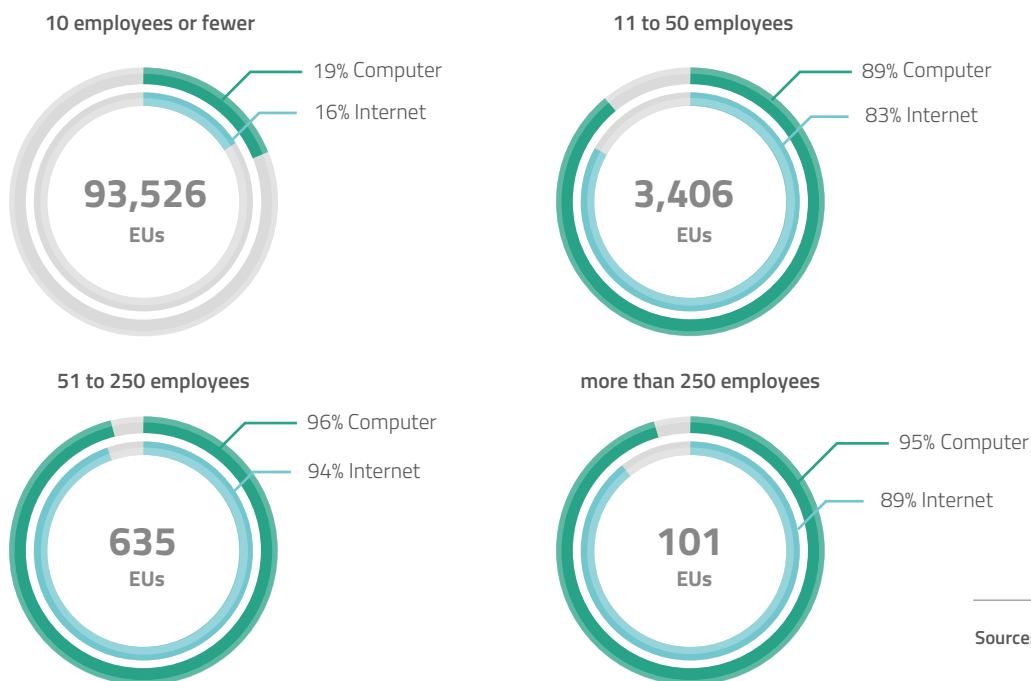
**FIGURE 2.31.3.2**  
Fixed telecommunications services penetration per 100 economic units



**FIGURE 2.31.3.3**  
Average monthly expenditure of economic units by service type



**Figure 2.31.3.4**  
Computer and internet adoption by economic unit (EU) size





## STATISTICAL YEARBOOK 2015:

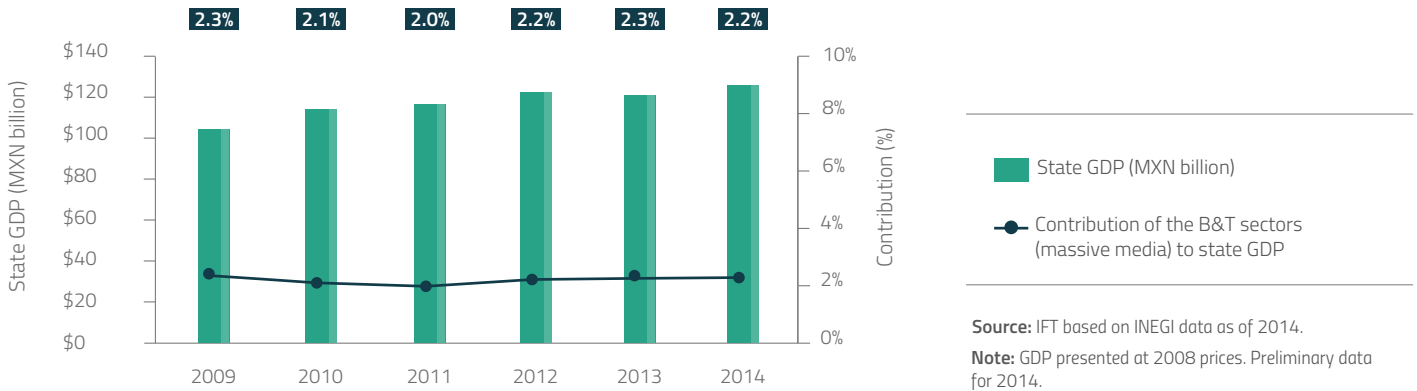
# 2.32 ZACATECAS (ZAC)

## General Overview

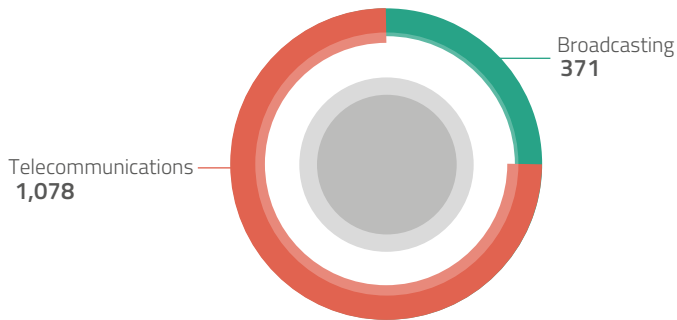
- ▶ From 2009 to 2014 Zacatecas's GDP showed an average annual growth rate of 3.87%. Additionally as of 2014 the massive media sector<sup>32</sup> contributed with 2.2% of the overall state's GDP, equivalent to MXN 2.4 billion.
- ▶ In 2015, the telecommunications sector employed 1,078 people, whereas the broadcasting sector employed 371 people. In terms of broadcasting infrastructure, at the end of 2015, the state had 23 radio broadcasting stations (21 FM stations and 2 AM stations) and 18 broadcast television channels.
- ▶ In terms of fixed telecommunications services, by the end of 2015 Zacatecas had the highest penetration in pay TV services with 56 subscriptions per 100 households, compared to 29 broadband subscriptions per 100 households, and 32 fixed telephone lines per 100 households. Moreover, by mid 2015 according to ENDUTIH's results 78.5% of households had at least one of these services.
- ▶ In terms of mobile telecommunications services, the state's mobile phone teledensity as of December 2015 was 64 subscriptions per 100 inhabitants, whereas the mobile internet teledensity reached 35 subscriptions per 100 inhabitants in the same period, ranking the state, in terms of mobile telecommunications penetration, on top 28 out of 32 Mexican states.
- ▶ Regarding to ICT equipment adoption in Zacatecas, analog TV sets had the highest penetration level per 100 households with 80 television sets per 100 households; followed by radio equipment with 72 radios per 100 households, digital television with 39 television sets per 100 households (this figure does not include households with an analog television set connected to a digital decoder, or households with pay TV services), and finally, computer equipment with 36 computers per 100 households.
- ▶ Unlike most states, as of 2014 electricity was the principal expenditure incurred by economic units (business) in Zacatecas, standing at an average near to MXN 5,300 per month, followed by the monthly average property rental, which was MXN 3,599. On the other hand, expenditure on telecommunications services was MXN 676 per month, lower than other typical company expenditures such as water (MXN 787 per month) and office supplies (approximately MXN 664 per month).
- ▶ Additionally, the fixed telecom services penetrations in Zacatecas's economic units (business) segment were 59 fixed telephone lines per 100 economic units (business), 30 fixed broadband subscriptions per 100 economic units (business); and two pay TV subscriptions per 100 economic units (business).
- ▶ Finally, in 2014 there were registered 51,680 economic units (business) in the state and of those who had 10 employees or less only 19% used computer as part their operations, whereas only 14% used internet. Nevertheless, these figures were above 80% for economic units (business) with 11 employees or more, which proves that there is a positive relation between company size and the telecommunications services adoption as part of the business as usual processes.

<sup>32</sup> According to the SCIAN, the Broadcasting and Telecommunications subsectors form part of Sector 51 Massive Media Information, and contributed 94% to the sector's nationwide GDP in 2015

**FIGURE 2.32.1.1**  
Contribution of the B&T sectors (massive media) to state GDP

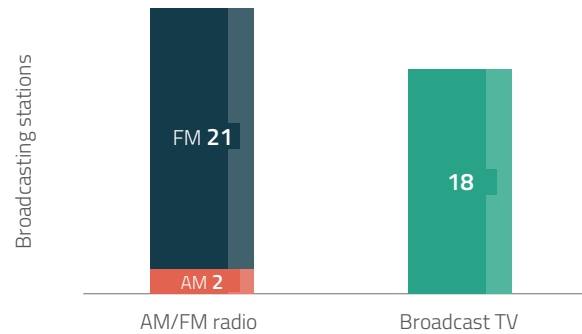


**FIGURE 2.32.1.2**  
Employees in the B&T sectors



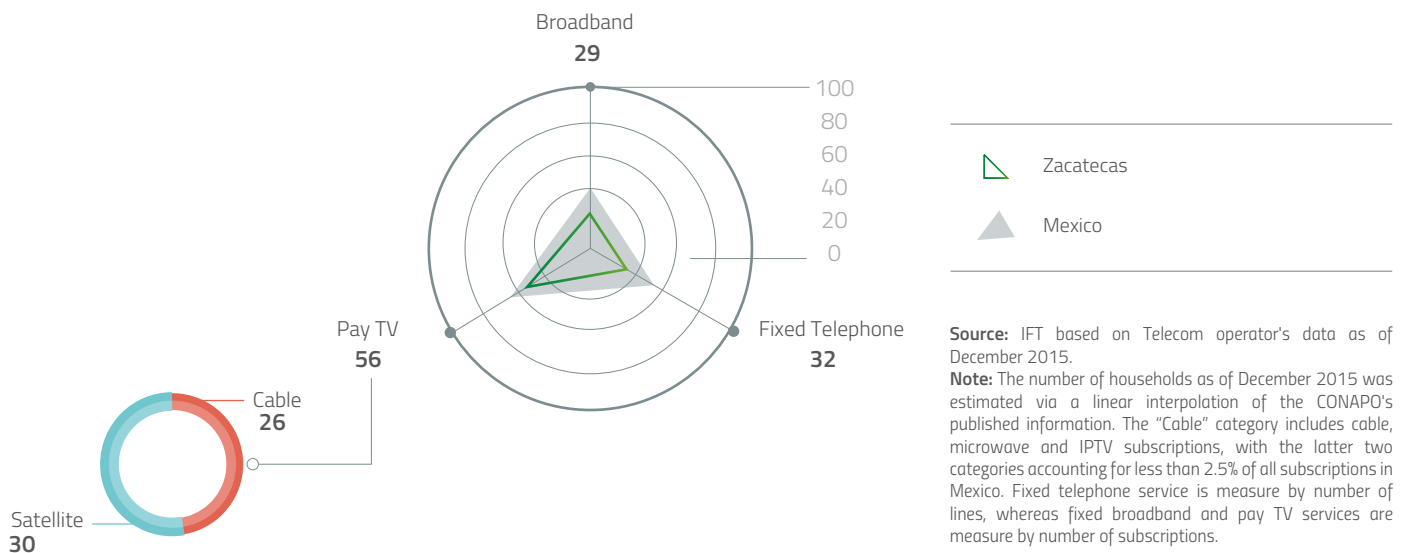
**Source:** IFT based on data from INEGI's quarterly National Occupation and Employment Surveys.

**FIGURE 2.32.1.3**  
AM/FM radio and broadcast TV stations

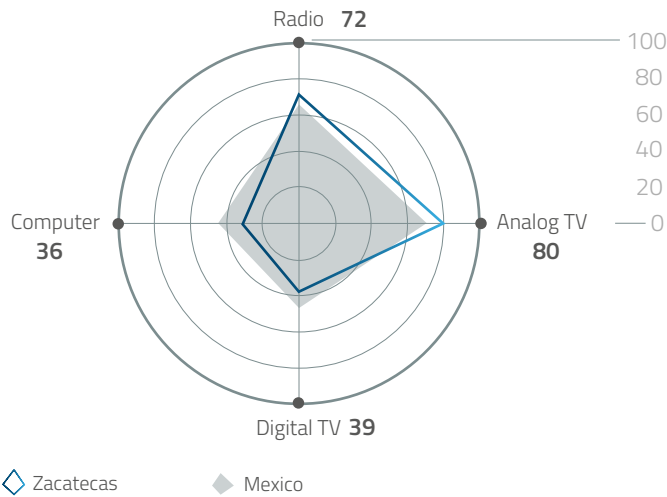


**Source:** IFT based on data as of December 2015.

**Figure 2.32.2.1**  
Fixed telecommunications services penetration per 100 households

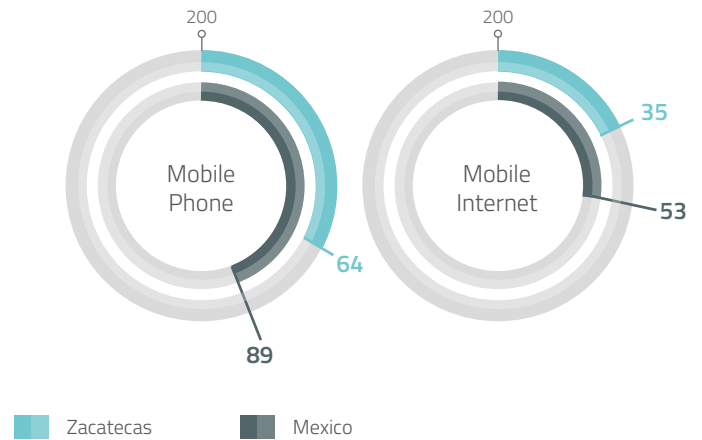


**FIGURE 2.32.2.2**  
ICT equipment per 100 households



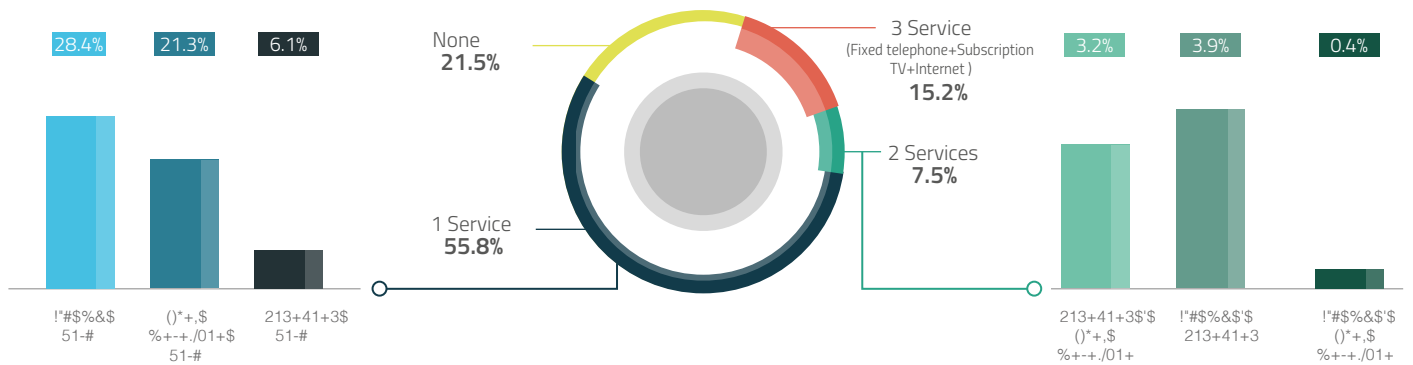
Source: IFT based on data from ENDUTIH 2015.  
Note: The figure for Digital TV does not include households with an analog television set and digital decoder, or households with pay TV services.

**FIGURE 2.32.2.3**  
Mobile telecommunications teledensity per 100 inhabitants



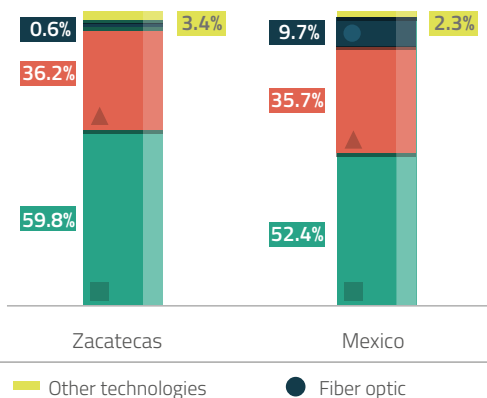
Source: IFT based on Telecom operator's data as of December 2015.  
Note: The number of inhabitants is taken from the data published by CONAPO as of January 2016. The teledensity desagregation per state was estimated based on the Telecom operator's data and INEGI's data from the ENDUTIH 2015.

**FIGURE 2.32.2.4**  
Distribution of fixed telecommunications services in households

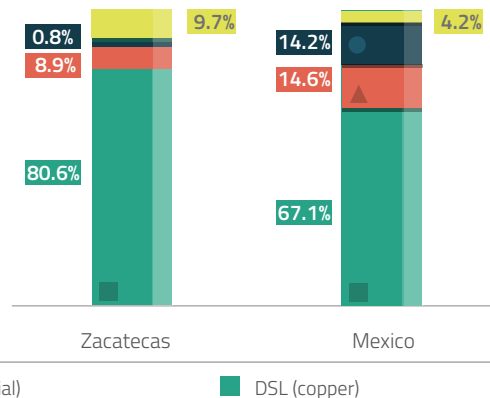


Source: IFT based on INEGI's ENDUTIH 2015.  
Note: Due to the rounding of data in the figure tags, the sum of the values shown in the bar charts may vary from those shown in the pie chart.

**Figure 2.32.2.5**  
Distribution of residential fixed broadband subscriptions per connection type



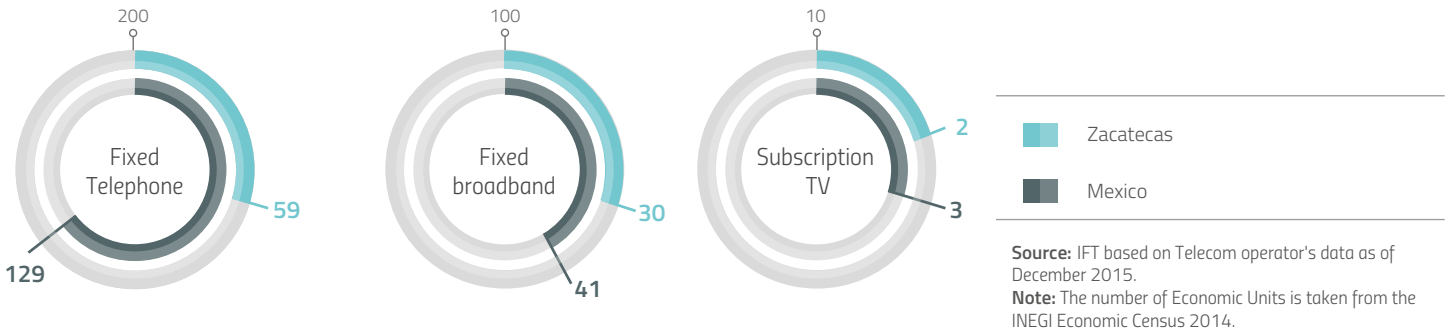
**Figure 2.32.3.1**  
Distribution of non-residential fixed broadband subscriptions per connection type



Source: IFT based on Telecom operator's data as of December 2015.  
Note: The "Other Technologies" category includes fixed wireless and satellite connections. Due to the rounding of data in the chart tags, the figures shown may not add up to 100%.

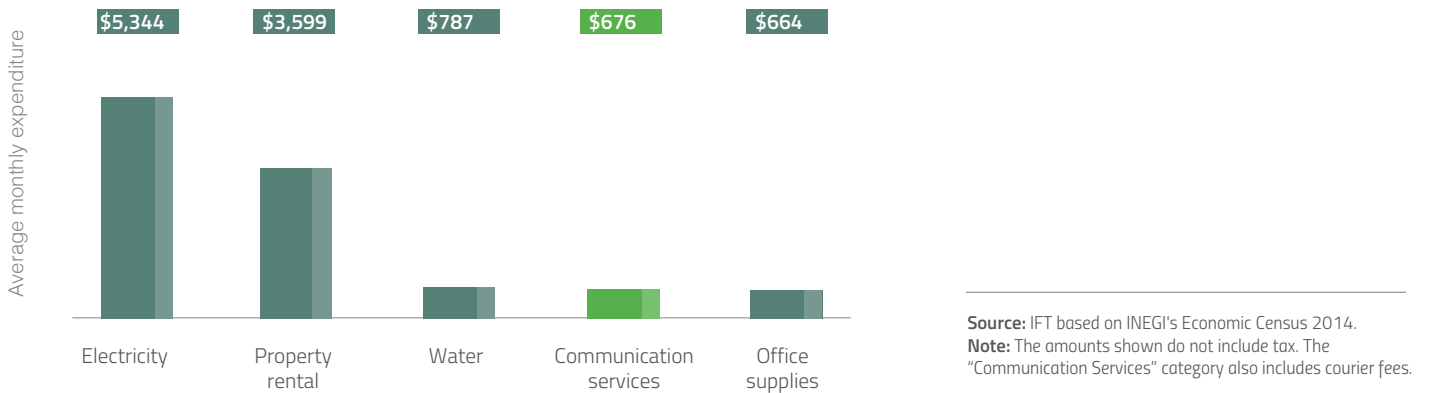
**FIGURE 2.32.3.2**

Fixed telecommunications services penetration per 100 economic units



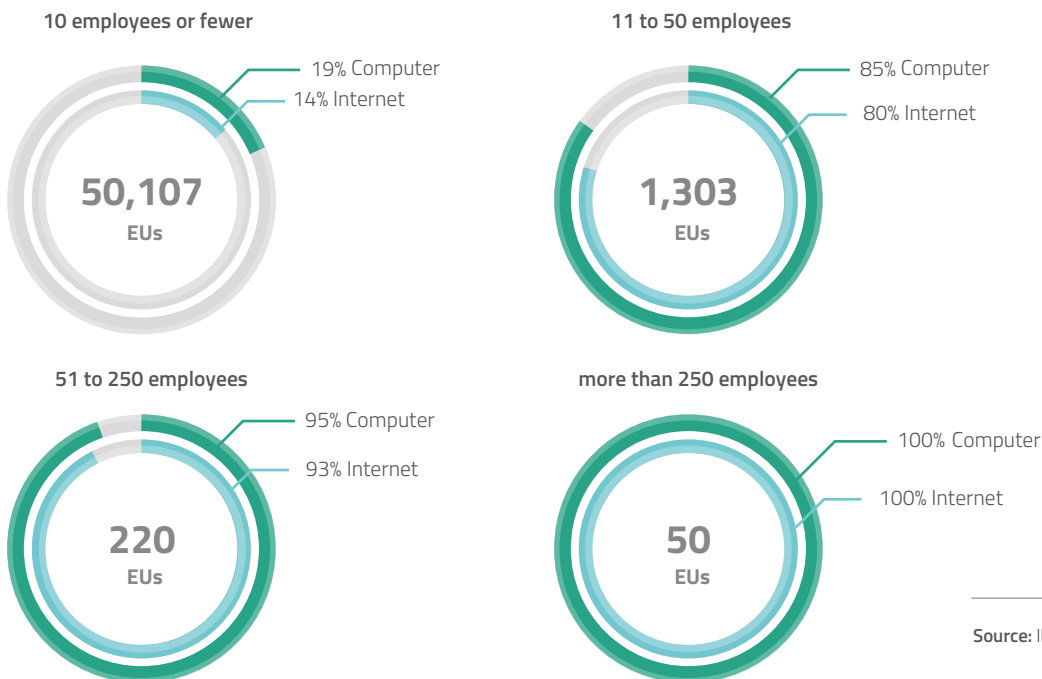
**FIGURE 2.32.3.3**

Average monthly expenditure of economic units by service type



**Figure 2.32.3.4**

Computer and internet adoption by economic unit (EU) size

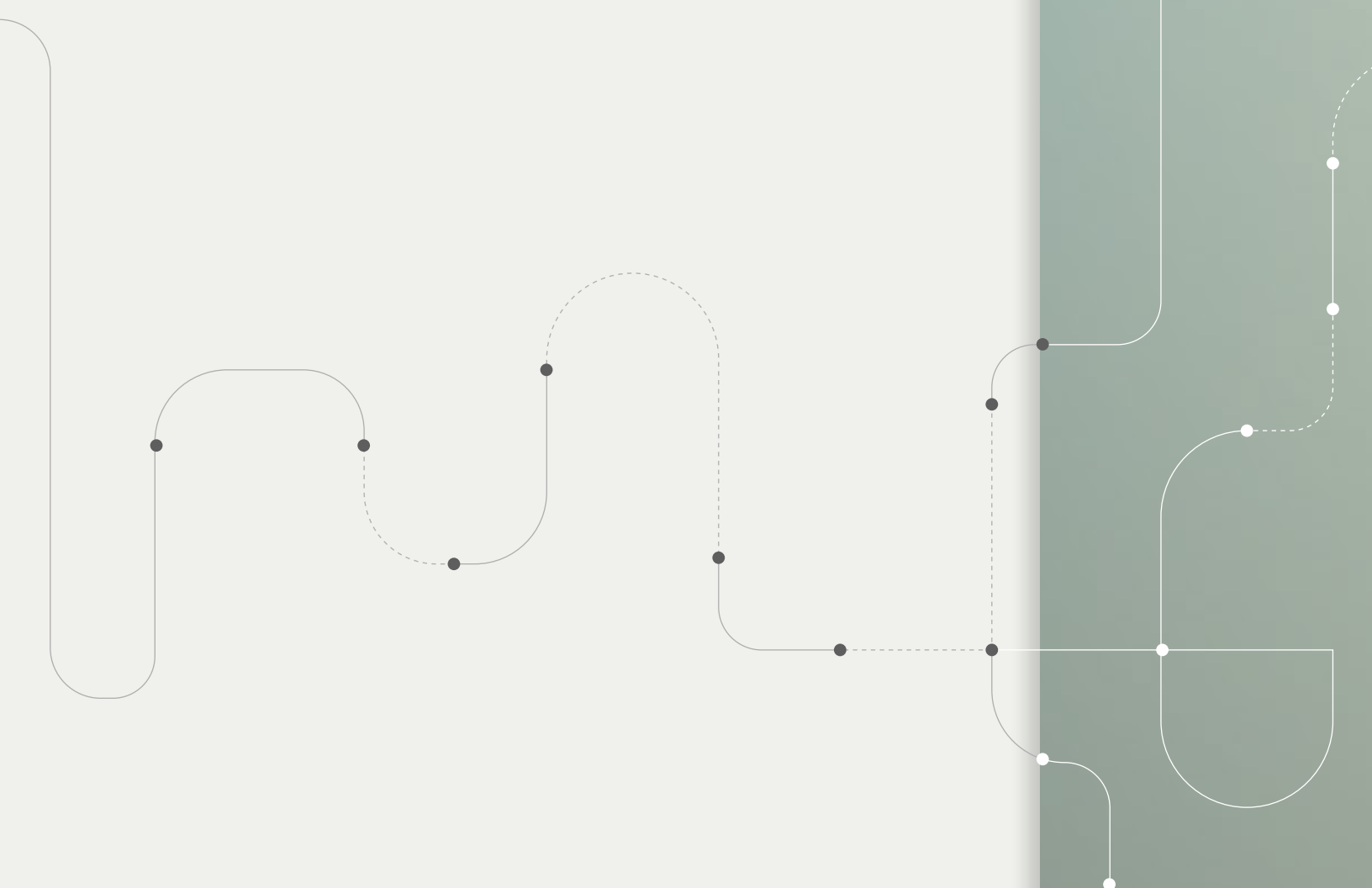




# 03

## ANNEXES

STATISTICAL YEARBOOK 2015




**STATISTICAL YEARBOOK 2015:**

# ANNEX I: CPI WEIGHTING FACTORS

The National Institute of Statistics and Geography (INEGI) builds the National Consumer Price Index (CPI) using variations in the prices of goods and services of a representative basket of consumption of urban households nationwide. The 283 goods and services classified as "Generic" include mobile phone services, local landlines, pay TV, internet, and national and international long distance services<sup>1</sup>.

The top 10 weighting factors are presented in order to rank the relevance of the different generic expenses within the CPI, which collectively represent 40.11% of the total index weight (see Table 1). It is important to note that mobile phone services ranked eighth, contributing 2.11% of the CPI. The other five services included in the telecommunications sector accounted for 2.68% of the CPI, where the entire telecommunications sector represents 4.79% of the basket monitored through the CPI (see Table 2).

**TABLE 1**

Weighting factors for the top 10 generic services included on the CPI

PRICE INDEX	WEIGHTING FACTOR
Homeownership	14.15%
Snack bars, small restaurants, and taco and sandwich stands	3.88%
Low-octane fuel	3.79%
Restaurants and similar establishments	3.43%
Home rental	3.38%
Motor vehicles	2.90%
Electricity	2.81%
<b>Mobile phone services</b>	<b>2.11%</b>
Collective	1.88%
University	1.78%

**TABLE 2**

Weighting factors for telecommunications services

PRICE INDEX	WEIGHTING FACTOR
<b>Telecommunications Sector</b>	<b>4.79%</b>
Mobile phone services	2.11%
Local landline services	1.29%
Pay television services	0.82%
Internet services	0.42%
Domestic long distance	0.1%
International long distance	0.05%

<sup>1</sup> Broadcasting services, including broadcast TV and AM and FM Radio are not included in the CPI weighting factors because they are not goods or services that generate an expense in the fixed basket of household spending



**Statistical Yearbook 2015:**

## **ANNEX II: METHODOLOGIES**

For the purposes of preparing this yearbook, information as of Q415 was obtained from Ace Telecomunicaciones, Aire Cable, Alestra, Axtel, Avantel, Bes- tphone, Cablecom, Cablemás, Cablevisión, Cablevisión Red, Con- vergia, Dish, GTM, IP Matrix, Marcatel, Maxcom, MCM, Megacable, MVS, AT&T, Operbes, Sky, Telcel, Telefónica, Televisión Internacional, Telmex, Telnor, Total Play, TV Rey de Occidente, Ultravisión and VDT Comunicaciones.

The number of households as of December 2015 was estimated via linear interpolation, whereas the number of inhabitants was taken from the projections published by the CONAPO, as of January 2016.

Given that the subscriptions of telecommunications services were not totally disaggregated at state level, it was necessary to standardize the penetrations by assuming a weighted distribution for the non-disaggregated data. The standardization for each service type was based on the following assumptions:

### *Subscription television services*

1. The reported data reported accounted for the 95.1% of all subscriptions in this market, which were divided between residential and non-residential subscriptions. The remaining 4.9% was distributed in accordance with the National Survey on Information Technology Availability and Use in Households 2015 (Encuesta Nacional sobre Disponibilidad y Uso de Tecnologías de la Información en Hogares 2015 - ENDUTIH). IFT compared the data provided by operators with the information contained in the ENDUTIH, and estimated the market weighting factor that would be used to distribute subscriptions among each state.
2. In terms of non-residential subscriptions, the study uses information from the economic units belonging to sector 72 under the Economic Census 2014. By comparing the number of economic units against the total pay TV subscriptions that the operators reported as non-residential, IFT was able to estimate the weighting factors that would be used to distribute subscriptions among each state.

### *Mobile phone services*

3. The state data was disaggregated based on operator's information and ENDUTUH's mobile phones availability.

### *Fixed broadband services*

4. ENDUTIH's information was used to estimate the percentage of households that contracts one, two or three services per state.

### *Mobile broadband Services*

5. The state data was disaggregated based on operator's information and ENDUTUH's mobile phones availability.

For all other services, the number of subscriptions and operator estimates were used, as published in the Fourth Quarterly Statistical Report 2015, available at: <http://www.ift.org.mx/estadisticas/informe-estadistico-4to-trimestre-2015>.

Reported income corresponds to gross revenues, defined as income before cost of sales, expenses, depreciation, amortization and taxes. Investment refers to all investments made in land, buildings and infrastructure used for telecommunications purposes. The margin was calculated in consideration of all operational expenditures reported (i.e. all outgoings except investments). Telcel did not report revenue information for Q1 2015, for this reason the presented data was estimated base on the investors report (available at <http://www.americamovil.com/amx/es/cm/investor/repQ.html?p=2&s=13>), which were also used to calculate revenue share in the IFT reports. The 2013 investment figure is currently being reviewed with Telcel, and was estimated based on the difference between the corrected figures and those reported previously



Statistical Yearbook 2015:

## ANNEX III: FORMULARY

The formulas listed below were used for each relevant section:

- ▶ To calculate levels of market concentration (HHI):

$$HHI = \sum (\text{Market share of each operator} \times 100)^2$$

- ▶ To calculate penetration per 100 households:

$$\text{Penetration} = (\text{Residential subscriptions}) / (\text{Estimate of households as of December 2015}) \times 100$$

- ▶ To calculate penetration per 100 economic units:

$$\text{Penetration} = (\text{Non-residential subscriptions}) / (\text{Economic units per the Economic Census 2014}) \times 100$$

- ▶ To calculate teledensity of mobile phone services per 100 inhabitants:

$$\text{Teledensity of mobile phone services} = (\text{Mobile phone subscriptions}) / (\text{CONAPO population forecast at January 2016}) \times 100$$

- ▶ To calculate minutes of use (MOUs):

$$\text{MOUs} = (\text{Minutes of traffic}) / \text{Subscriptions}$$

- ▶ To calculate average traffic per mobile broadband subscription:

$$\text{(Megabytes of traffic)} / \text{(Mobile broadband subscriptions)}$$

- ▶ To calculate text messages (SMS) sent per subscription:

$$\text{SMS per user} = (\text{Text messages sent}) / \text{(Mobile phone subscriptions)}$$

- ▶ To calculate Average Revenue per User (ARPU):

$$\text{ARPU} = (\text{Total Revenue}) / \text{(Total Users)}$$

- ▶ To calculate the margin:

$$\text{Margin} = \text{Gross revenue} - \text{Operating expenditures}$$



STATISTICAL YEARBOOK 2015:

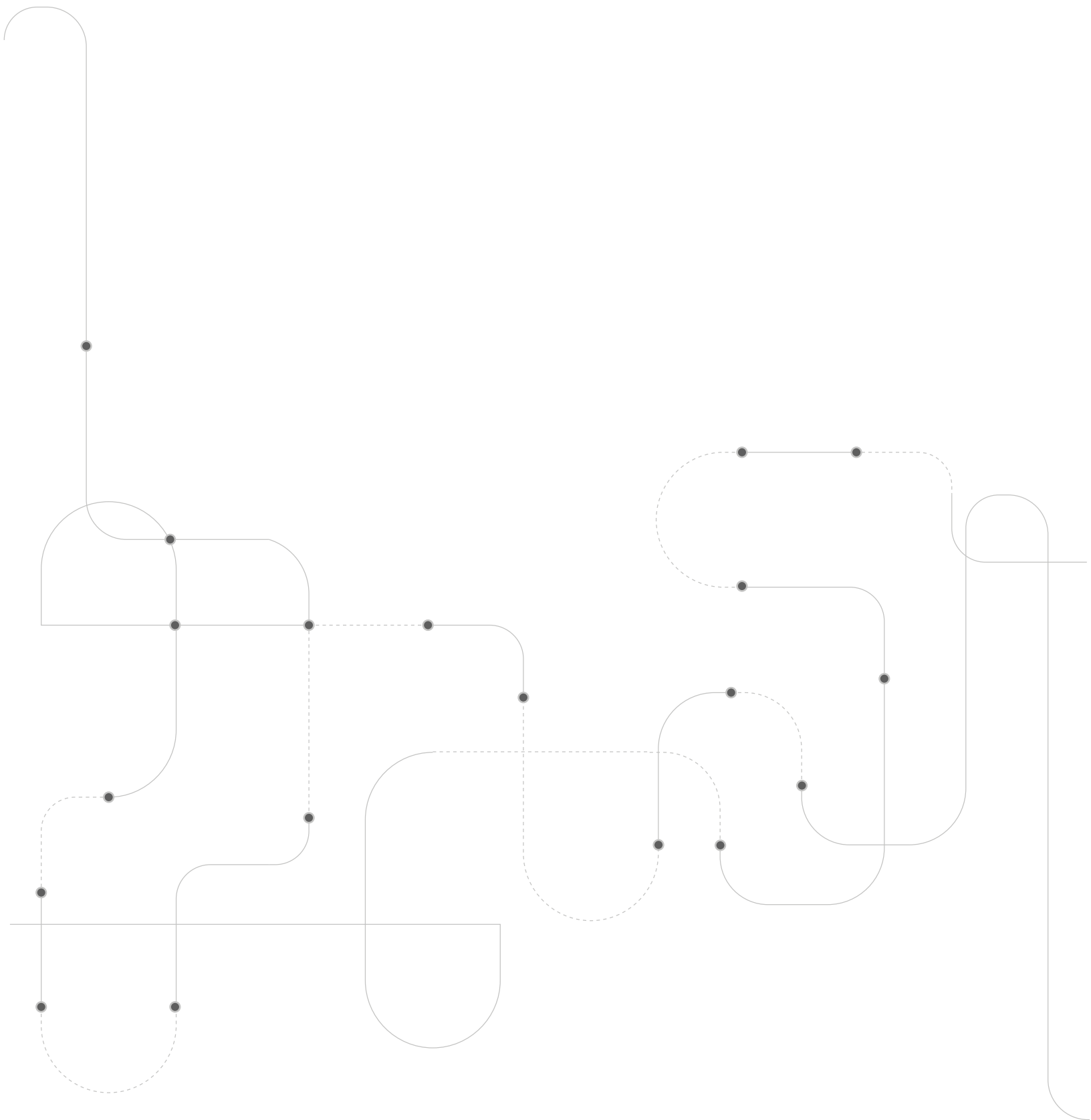
# ANNEX IV: TV AND RADIO CONSUMPTION DEFINITIONS

ITEM	DEFINITION
<b>Audience adhesion or composition (adh%)</b>	<i>The demographic composition of the audience watching or listening to a given event.</i>
<b>Rating (rat%)</b>	<i>Percentage of households or people who were watching a particular television channel/station during a given period of time.</i>
<b>Share (shr%)</b>	<i>A channel or station's percentage share of all people watching television or listening to the radio at a given time.</i>
<b>Households using television or radio (HUTs/HURs)</b>	<i>Percentage of households or people with television sets or radios on at a particular time, regardless of the channel or station they are watching/listening to.</i>
<b>Average time spent (ATS)</b>	<i>The average time in minutes that a viewer or listener spends listening to an event, not including people not physically present.</i>
<b>Genre</b>	<i>Program genre is a label that Nielsen IBOPE uses in its databases for reference in order to classify programs.</i>
<b>Genre: Culture</b>	<p><i>Programming that presents the forms and expressions of a society. Its content touches on the following areas:</i></p> <ul style="list-style-type: none"> <li>▪ <i>Artistic: Architecture, Dance, Sculpture, Literature, Opera, Painting, Theater, Museums, Exhibitions.</i></li> <li>▪ <i>Social: Academic, Scientific, Historical, Gastronomical, Ethnographical, Natural Sciences.</i></li> <li>▪ <i>Symbolic: Biographies and interviews of personalities in the field of culture.</i></li> </ul> <p><i>NOTE: This genre does not include news reports that have a particular episode on cultural issues.</i></p>
<b>Genre: News</b>	<i>Programming based on national and international news events that are propagated by traditional genres of written journalism, such as articles, reporting, interviews and editorials. Programming is usually structured into themed blocks that aim to hold the interest of viewers and remove any sources of distraction that they might be exposed to. This genre includes informational programs, detailed analyses and expert reports on specific subject matter.</i>
<b>Genre: Religion</b>	<p><i>Programming whose content is strictly religious, such as coverage of mass, retreats and pastoral visits.</i></p> <p><i>NOTE: This genre does not include news reports that have a particula</i></p>

ITEM	DEFINITION
<b>Genre: Discussion</b>	<i>A forum for debate where contrary viewpoints are put forward on a particular issue or issues. A panel of experts and a moderator contribute their points of view from their various fields of expertise.</i>
<b>Genre: Public Service</b>	<i>The Federal Radio and Television Act requires that Digital Communication Media broadcast free programming of at least 30 minutes in duration, either continuous or discontinuous, dedicated to educational, cultural and social issues. All radio and television stations in the country will be required to link to programming that broadcasts information of national importance when prompted to do so by the Ministry of the Interior.</i>
<b>Genre: Political Parties</b>	<i>Programming whose content involves various political parties presenting or disseminating messages or activities. These productions can be made on behalf of one or several political groupings.</i>
<b>Genre: Telenovelas</b>	<i>Serials or storylines produced for television that are broadcast in consecutive daily episodes to narrate a fictitious story (although they may also be based on a true story), usually in melodramatic fashion. Each episode has a beginning, plot development, a climax and the end: a cliffhanger that is often the climax itself.</i>
<b>Genre: Procedural Dramas</b>	<i>Fictional programming where each episode has a self-contained plot, which features situations of conflict or tragedy. Each episode has a beginning, plot development and an end. On exceptional occasions, dramas can be extended to more than a single broadcast.</i>
<b>Genre: Music</b>	<i>Music programming such as music videos, concerts, presentations of groups or singers, which may include background or interviews of the artists being presented.</i>
<b>Genre: Comedy</b>	<i>Programming whose content is aimed at amusing the audience. Staple features include sketches, jokes, anecdotes and any other attempt to draw laughter.</i>
<b>Genre: Game Shows</b>	<i>Programming where contestants try to outperform rival contestants in a series of activities. A game show can be contested by individuals, groups, or private or public institutions. Prizes may or may not be awarded.</i>
<b>Genre: Sports</b>	<i>Broadcasts of sports events or physical activities, as well as programming that provides summaries, results or commentary related to sports.</i>  <i>NOTE: This genre does not include news reports that have a particular episode on sports issues.</i>
<b>Genre: Serial Dramas</b>	<i>A format broadcast in successive episodes, each with a self-contained storyline despite there being an element of continuity, on a thematic level at least, between episodes. The genre has subgenres such as fiction, action, suspense and comedy, and includes both Mexican and foreign productions. Miniseries also come under this format.</i>
<b>Genre: Movies</b>	<i>Son todos los programas que están hechos con alguna de las siguientes técnicas; dibujos animados, plastilina, arcilla (stop motion), animación vectorial y de 3ª dimensión.</i>  <i>NOTE: The genre does not include educational documentary movies, or movies made up of interviews.</i>
<b>Genre: Children's</b>	<i>Programming directly aimed at children, although some of its audience may also be adults. This genre does not generally include cartoons, since programs tend to be learning-orientated and structured using simple language appropriate for their target age. They are sometimes presented by children to achieve greater audience identification.</i>
<b>Genre: Cartoons</b>	<i>This genre includes all programs that are created using any of the following techniques: animated pictures, plastilina, clay (stop motion), vector animation and 3D.</i>  <i>NOTE: This genre does not include animated short films.</i>



ITEM	DEFINITION
<b>Genre: Marketing</b>	<i>Programming that promotes the sale of products by phone, usually with demonstrations or explanations of how the articles on offer work. This category also includes programming paid for by institutions, civil associations or religious organizations, where airtime is used to disseminate a particular message.</i>
<b>Genre: Magazine Shows</b>	<i>Programming that contains different skits such as variety performances, interviews, reports, research and commentary. This group also includes programming that cannot be categorized under any other genre, such as event coverage (except religious, sports and cultural events).</i>
<b>Genre: Reality TV</b>	<i>*This genre follows a group of people - famous or otherwise - as their lives are recorded during a particular period of time.  All contestants are usually gathered in a single location, and may or may not be competing for a prize.</i>
<b>Genre: Talk Shows</b>	<i>Programming where various guests talk about current affairs or discuss events they have witnessed (guests are not experts).</i>







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Insurgentes Sur #1143 Col. Noche Buena – Delegación Benito  
Juárez CP 03720 Ciudad de México  
Tel 5015 4000 / 01800 2000 120

August 2016

