MEDIA INFLUENCE MATRIX

RESEARCH TEAM

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Mexico

Technology, Public Sphere and Journalism

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Media and Journalism Research Center

Media and Journalism Research Center (MJRC) is an independent media research and policy think tank that seeks to improve the quality of media policymaking and the state of independent media and journalism through research, knowledge sharing and financial support. The center's main areas of research are regulation and policy, media ownership and funding, and the links between tech companies, politics and journalism.

OBSERVACOM

OBSERVACOM (Latin American Observatory of Regulation, Media and Convergence) is a regional think tank specializing in regulation and public policies related to the media, telecommunications, the internet and freedom of expression. OBSERVACOM addresses these issues from a rights perspective, focusing on access, diversity and pluralism. OBSERVACOM brings together experts and researchers committed to the protection and promotion of democracy, cultural diversity, human rights and freedom of expression in Latin America and the Caribbean.

University of Santiago de Compostela (USC)

The University of Santiago de Compostela (USC), founded in 1495, is one of the world's oldest public universities and has two campuses in the cities of Santiago de Compostela and Lugo, in Galicia (Spain). The USC partner in this project is the research group Novos Medios, which is part of the USC's Department of Communication Sciences. Novos Medios specializes in studying the relationship between technology and media, as well as the changes that affect today's journalism in terms of audiences, funding, innovation and public service.

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Universidad Autónoma Metropolitana, according to its Organic Law, was established as a decentralized and autonomous high education body and it is empowered to carry out its teaching, research and cultural dissemination activities in accordance with the principles of academic and research freedom. UAM Cuajimalpa Unit was established in 2005.

Authors

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He has published in the Latin American Research Review, International Journal of Communication, Media, War & Conflict, Tripodos, Comunicación y Sociedad, and Global Media Journal México. In addition, he is co-author, along with Sofía Paláu, of the book Manual for Media Observation (ITESO, 2014), as well as author and coordinator of several books on political communication. His research is focused on theoretically and empirically studying public and political communication.

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Marius Dragomir is the Founding Director of the Media and Journalism Research Center (MJRC). He previously worked as director of the Center for Media, Data and Society at CEU in Budapest. Before, he worked for the Open Society Foundations (OSF) for over a decade where he managed the research and policy portfolio of the Program on Independent Journalism (PIJ), formerly the Network Media Program (NMP), in London. He has also been one of the main editors for PIJ's flagship research and advocacy project, Mapping Digital Media, which covered 56 countries worldwide, and he was the main writer and editor of OSF's Television Across Europe, a comparative study of broadcast policies in 20 European countries.

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The **Media Influence Matrix Project** is run collaboratively by the Media & Power Research Consortium, which consists of local as well as regional and international organizations. The consortium members are academic institutions (universities and research centers), NGOs, journalism networks and private foundations.

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Introduction

Mexico is a country dependent on infrastructure, technological goods, and services. In fact, it is known for being a manufacturing economy that serves various industries, including production of various technologies for products such as semiconductors, smart television sets, automobiles, and airplane turbines[1].

Mexico's geographical proximity to the U.S. as well as being part of the North American Free Trade Agreement, now known as USMCA[2], positions Mexico as a key strategic supply partner of the U.S. The ongoing global competition for technological supremacy between the U.S. and China is a major factor in the relationship between Mexico and the U.S.[3].

Foreign direct investment (FDI) plays a key role in the overall investment in Mexico. The FDI has practically equalled public investment since 2019[4]. However, FDI has led to a high level of concentration in various industries as it was not well connected with local companies. That resulted in what Dussel Peters called "a lack of technological spillovers"[5]. Both public investment and a public policy that would promote linkages between those investments, including FDI, are needed.

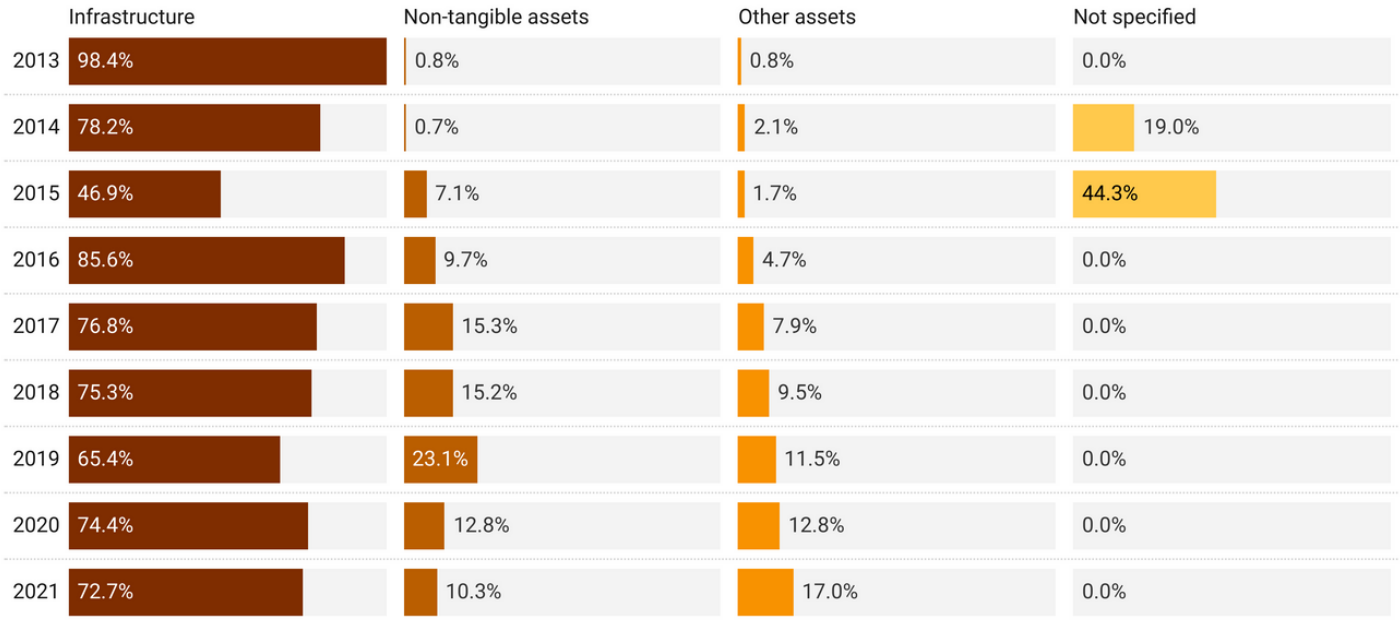
In the telecommunication sector, investment has been increasing in recent years, driven by the dynamic growth of the sector as well as the deployment of state-of-the-art fixed and mobile infrastructures. For example, during the third quarter of 2021, the telecommunication and broadcasting sectors contributed 3.6% to Mexico's GDP, which is the equivalent of MXN 627bn out of a total of MXN 18.315bn[6].

[1] Contreras, O. and García, M. (2019). Pequeñas y medianas empresas tecnológicas en México: distribución regional e inserción en cadenas globales de valor. Región y sociedad, 31. https://doi.org/10.22198/rys2019/31/1234
[2] The previously called North American Free Trade Agreement (NAFTA), better known by its acronym in English, NAFTA, was renegotiated and a new version entered into force on 1 July 2020. It is called the Treaty between Mexico, the United States and Canada (T-MEC) and in English US-Mexico-Canada Agreement (USMCA). To review the changes between NAFTA and T-MEC, we recommend Contreras, Ó. F., Cánovas, G. V., & Durán, C. R. (2020). La reestructuración de Norteamérica a través del libre comercio: del TLCAN al TMEC. El Colegio de México AC.
[3] Dussel Peters, E. (2022). The new triangular relationship between the US, China, and Latin America: the case of trade in the autoparts-automobile global value chain (2000–2019). Journal of Current Chinese Affairs, 51(1), 60-82.
[4] Ortiz, S. (2022) La inversión extranjera directa en México: Análisis de sus determinantes según características de las industrias. Investigación Económica, 81(321), 120-155.
[5] Dussel Peters, E. (2018). Cadenas globales de valor. Metodología, contenidos e implicaciones para el caso de la atracción de inversión extranjera directa. In: E. Dussel P. (coord.). Cadenas globales de valor. Metodología, teoría y debates (pp. 45-66). México: cechimex-unam. http://dx.doi.org/10.22201/cechimex.9786073002899p.2018
[6] Federal Telecommunications Institute, Statistical Yearbook 2022. IFT. Mexico.

The telecommunications sector has steadily increased its contribution to the total GDP from 1.8% in 2014 to 4% at the end of 2022[7], standing out among other industries, despite a series of macroeconomic challenges created by the Covid-19 pandemic between 2020 and 2022. The sector has seen an incessant growth and innovation in segments such as voice, paid channels and content, as well as an expansion of fixed and mobile connectivity. Additionally, next-generation networks are being deployed and technological infrastructure is getting a facelift.

Since 2013, the private sector investment in the industry has been focused on infrastructure. Although it has remained constant during the past five years, a slowdown in its growth has been recorded since 2016. Private sector investment reached MNX 96.496bn in 2022, a significant decrease compared to the previous year. Mainly 10 telecommunications companies, eight of them Mexican and two foreign[8], have been responsible for the bulk of this investment.

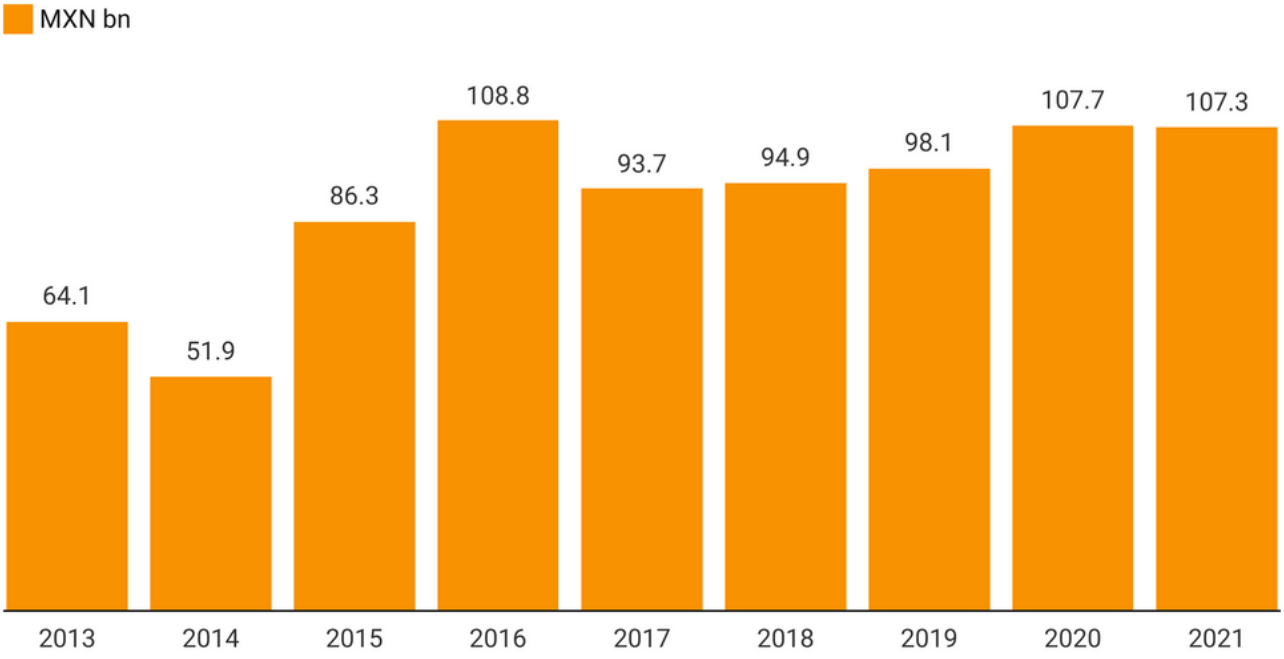
Target of private investment in telecommunications (%), 2013-2021



Source: authors' own calculation with data from IFT 2022, pp. 13. • Created with Datawrapper

[7] IFT Statistical Yearbook 2022, *cit.*; Hernández, C. (2023) Dinámica de las telecomunicaciones en 2022 y prospectiva 2023. https://www.theciu.com/publicaciones-2/2023/1/2/q2upey2r3zbazdpfnbuoohhfcy6rbv; Gómez, R. (2020). Inversión en Telecomunicaciones 2013-2019: un corte de caja, en Gómez, R (ed.) A seis años de la Ley Federal de Telecomunicaciones y Radiodifusión. Análisis y propuestas. Ciudad de México: Tintable/Amedi.
[8] Gómez, R. (2020). Inversión en telecomunicaciones, *cit.*

Private investment in telecommunications, MXN bn, 2013-2021



Source: authors' own calculation with data from IFT 2022, pp. 13. • Created with Datawrapper

On the other hand, the regulatory agenda of the Federal Telecommunications Institute (IFT) is key to the growth of the sector. The year 2023 is considered especially important as it marks 10 years since the adoption of the constitutional reform of the telecommunication sector in Mexico. The third review and implementation of new measures of asymmetric regulation on América Móvil, a dominant player in telecommunications (AEP-T), will also be carried out in 2023[9]. Auction of spectrum frequencies for the offer of 5G services and the creation of the National Information System of Infrastructure (SNII)[10] are also planned to take place in 2023. Between June 2013 and the end of 2022, prices of telecommunication services as a whole fell by 31%.

[9] See the chapter on regulation in Media Influence Matrix (Argelia Muñoz (postdoc UAM-C), Rodrigo Gómez (UAM-C), Juan Larrosa Fuentes (ITESO), Media Influence Matrix: Mexico. Government, Politics and Regulation, 2022, available online at https://journalismresearch.org/wp-content/uploads/2022/11/Mexico-Regulation-FINAL-REPORT.pdf) where dominant position and the asymmetric measures imposed on América Móvil are explained.
[10] The SNII is envisaged to be a tool that offers detailed information on availability, location, capacity and deployed use of the existing telecommunications and broadcasting infrastructure in Mexico, to ensure that investments are focused on areas and regions without coverage, as well as to reduce costs. In short, the SNII seeks to make efficient use of the infrastructure to offer better services while avoiding and reducing barriers to competition and information asymmetries between operators.

When it comes to global tech companies operating in Mexico such as Alphabet, Meta, Microsoft, Twitter, Amazon, Apple or Netflix, there is very little information publicly available about their operations in the country. Most of these companies dominate various tech services markets. For example, Alphabet, with its Google search engine, controls 94% of the online search market in Mexico; similarly, its Chrome browser commands nearly 76% of the market followed distantly by Apple's Safari with 12.6%. In the case of operating systems, the situation is less alarming, yet that market is also significantly concentrated with Microsoft leading with 48.65% followed by Alphabet's Android with 34.7%, and in the third and fourth place, Apple's iOS and macOS with 10.22% and 3.49%, respectively. Finally, on the social media market, Facebook has a significant 70.96% share followed by YouTube with 11.67% and Twitter with 8.39%[11].

The leading companies on the Mexican online market are mostly U.S.-owned. These companies add, curate, distribute and organize news content. They are the main access platforms for the most important news as well as for disinformation content.

The global digital platforms take advantage of the news content generated by the local media to expand their reach at national level and to attract advertisers to their platforms. They generate the highest profits from advertising in the hybrid media systems[12].

The relationship between technology and news content has a direct impact on the financing of media companies focused on journalism. Advertisers place most of their investments in various digital platforms rather than in media outlets specialized in news. This has led to a financial crisis among local media that have been faced with significant cuts in ad revenue.

Another aspect of the relation between technology, journalism, and the public sphere is the impact of WikiLeaks-type disclosures, which generate public debate but, at the same time, show how vulnerable to hackers strategic, confidential, or classified government-level information can be. In a similar manner, the use of spyware technology is another important aspect of the relation between technology, information use, privacy, and surveillance. It also speaks to the violation of human rights by both state institutions and private businesses.

[11] This trend is replicated in several Latin American markets. To have a comparative perspective on the region, see the OBSERVACOM study: ¿Hay concentración en internet en América Latina? casos: Argentina, Colombia, México, Perú y Uruguay. https://www.observacom.org/hay-concentracion-en-internet-en-america-latina-el-caso-uruguay/
[12] For a review of the hybrid media system concept see: Chadwick, A. (2017). The hybrid media system: Politics and power. Oxford University Press.

Technological Overview

Infrastructure

Mexico boasts a high level of telecommunication services penetration throughout its territory. However, there are still several regions in the country that lack coverage, which leads to inequalities. The country needs public policies to address those inequalities as the market itself has thus far failed to create the conditions to ensure communities that do not present a profitability potential for private investors have access to services.

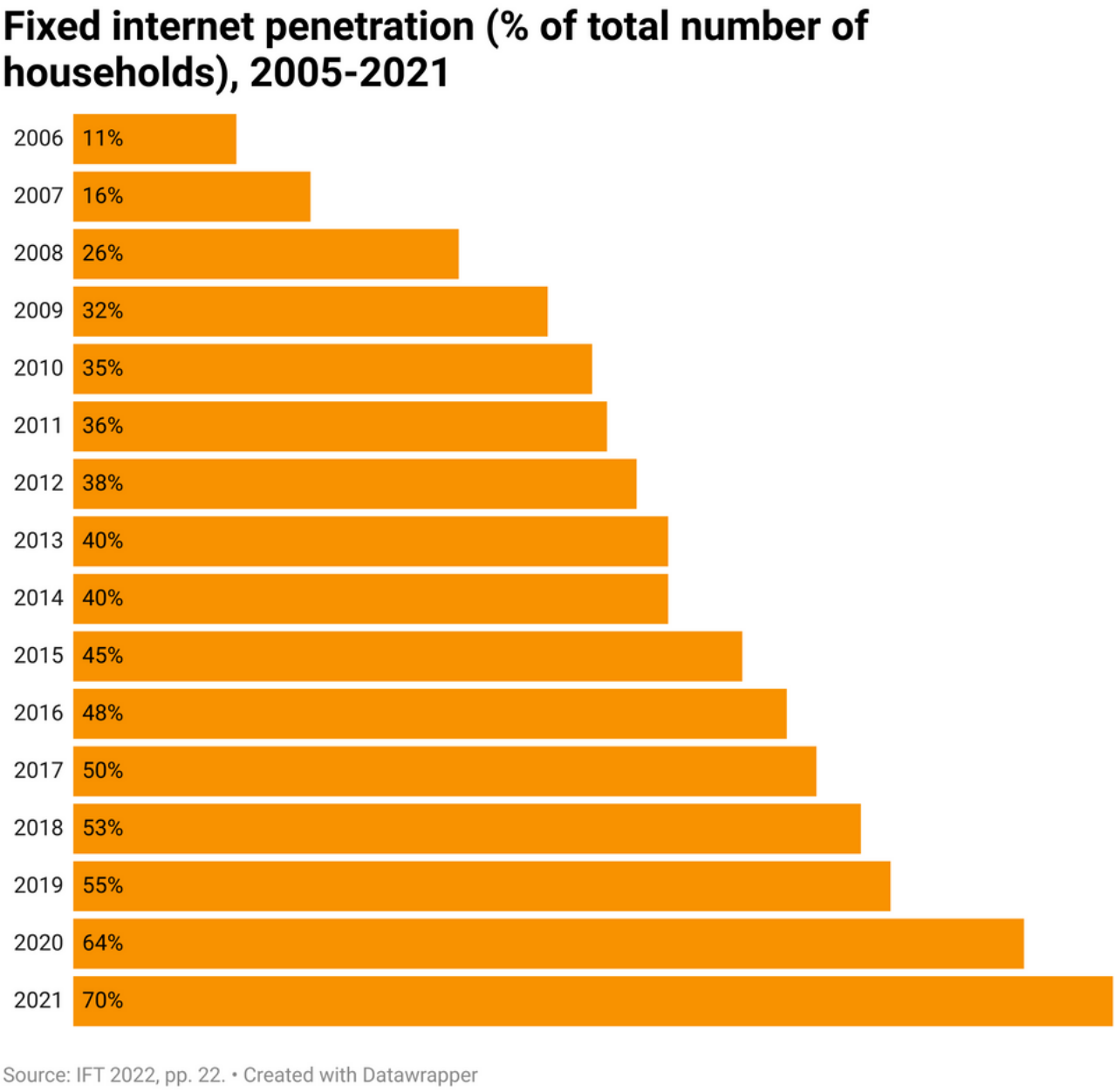
Public policy initiatives promoted by the Mexican state such as plans to introduce shared networks or an "internet for all" program aim to change this situation. However, despite good intentions, such actions are yet to be implemented as resources allocated to achieve those objectives are insufficient.

Fixed Broadband

In urban areas, internet penetration has significantly increased in recent years. For example, fixed internet services grew by almost 100% over a span of 10 years. In 2011, internet access was present in 36 out of 100 Mexican households. By 2021, it expanded to 70 out of 100 households nationwide[13].

Although the nationwide picture is rather uplifting, there are substantial differences between states and regions. For example, Mexico City and states such as Nuevo León, Baja California, and Baja California Sur have the highest internet access per 100 households, with 96, 87, 85, and 80, respectively. On the other hand, states such as Tabasco (with 31% of total households), Oaxaca (with 26%), and Chiapas (with only 23%) have the lowest internet penetration in the country[14].

[13] IFT Statistical Yearbook 2022, *cit.*, p. 20.
[14] IFT Statistical Yearbook 2022, *cit.*, pp. 22-23.



As it started from a low level of infrastructure deployment, Mexico has experienced the fourth highest growth in fixed broadband penetration among OECD countries from June 2013 to June 2022, a cumulative 93%. It was topped only by Turkey, which grew by 104%. According to the OECD, as of June 2022, Mexico's annual growth in fixed broadband penetration has stood at 5%, while the average growth of the other OECD countries has been 2.5%[15].

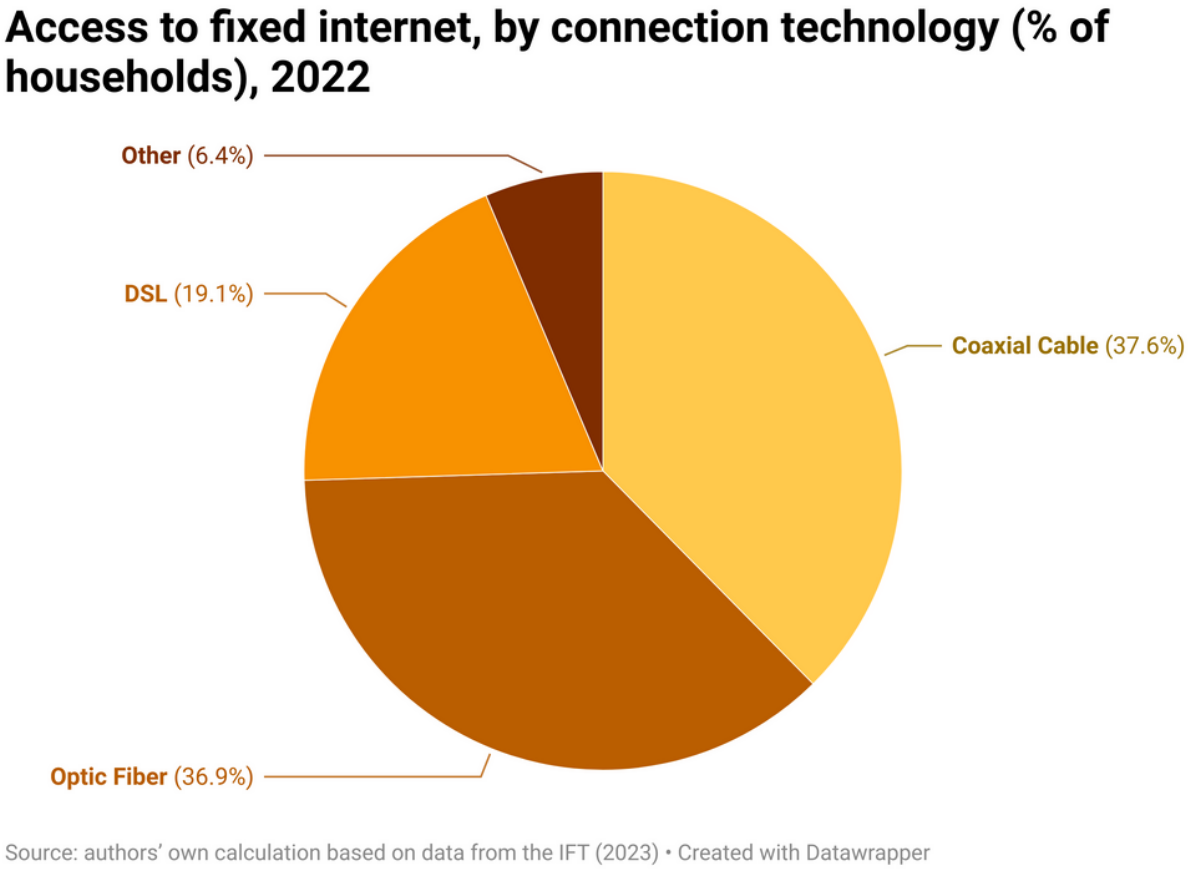
[15] IFT (2023). Mexico among the countries with the highest growth in fixed broadband: OECD. Press Release, 1 March 2023, available online at https://www.ift.org.mx/sites/default/files/comunicacion-y-medios/comunicados-ift/comunicado20ift_3.pdf.

Mexico has also experienced progress in the speed of fixed broadband line connectivity. According to the IFT, in 2021, 81% of all the connected households reported a download speed between 10 Mbps and 100 Mbps, a share that has remained stable since 2017[16]. That speed level is better than other countries in the region such as Colombia and Costa Rica, or than in other OECD members such as Turkey. In Mexico only 6% of internet subscriptions have connectivity speed below 10 Mbps, less than in countries such as Chile (10.4%), Canada (7.9%), Colombia (30%) or Costa Rica (56%). On the other hand, when it comes to subscriptions to fixed broadband that exceed 100 Mbps, only 8.1% of Mexican households enjoy those speeds. In contrast, the figure in Chile is 71.1%. The average download speed in Mexico in January 2021 was 44 Mbps, well below the OECD average of 119 Mbps[17].

The technologies used to access fixed broadband internet play an important role in the quality and speed of internet connectivity. In June 2022, coaxial cable accounted for 37.6% of all internet connections in Mexico. Optic fiber was used by 36.9%, DSL by 19.1%, and 6.4% were provided by satellite and mobile technology[18]. Optic fiber had a year-on-year growth rate of 34.9% in December 2021. In contrast, DSL decreased by 17.7% in the same period, a sign that fixed infrastructure has been refurbished thanks to more flexible technologies introduced by the four largest telcos that compete in Mexico's biggest urban areas.

This information helps us calibrate the deployment of fixed broadband internet infrastructure at a national level in relation to recent years. However, as we mentioned earlier, in order to have a truly national diagnosis, this information must be analyzed at both the local/state level and in rural and urban areas, since the majority of fixed broadband lines are concentrated in large cities and urban areas.

[16] IFT Statistical Yearbook 2022, *cit.*, p. 24.
[17] Vargas, F. (2022). Banda Ancha Fija: Conectividad en la Métrica de la OCDE. 4 July. Ciu. https://www.theciu.com/publicaciones-2/2022/7/4/banda-ancha-fija-conectividad-en-la-mtrica-de-la-ocde
[18] IFT (2023). OECD, *cit.*



Major gaps remain between rural and urban areas in the use of fixed telecommunications services. According to data from the IFT, out of some 8.4 million rural households in Mexico, only 4% have triple-play service; 16% have two services; 37% have only one such service; and the remaining 43% do not use any fixed telecommunications services[19]. On the other hand, of the 28.2 million urban households in the country, 27% benefit from the triple-play package, 32% have access to two internet services, 20% have one and the rest of 22% do not have any fixed telecommunications services[20]. This gap is illustrative of the poverty and marginalization of approximately 5.6 million households in urban areas.

[19] IFT Statistical Yearbook 2022, *cit.*, p. 16.
[20] IFT Statistical Yearbook 2022, *cit.*, p. 18.

Mobile Broadband

Mobile broadband has also experienced significant growth in Mexico in recent years. According to OECD data, from June 2013 to June 2022, Mexico had the second highest growth rate in wireless internet penetration, from 23 subscriptions per 100 inhabitants to 89, second only to Colombia[21]. In fact, Mexico stands out among OECD countries in this area, being ranked third with 113 million mobile broadband subscriptions, surpassed only by the U.S. with 570 million subscriptions and Japan with 242 million subscription in June 2022[22]. Mexico also reported an annual growth rate of the mobile broadband services of 9.2% between June 2021 and June 2022, above's OECD average growth rate of 5.8%.

However, due to the inequalities and economic divides in Mexican society, 80.5% of mobile phone and mobile broadband subscriptions are based on prepaid contracts. Only 17.2% of Mexicans have a postpaid contract[23]. Moreover, those subscriptions are concentrated in urban areas and in the country's wealthiest states. For example, while Mexico City registers 116 mobile service subscriptions per 100 inhabitants, states like Oaxaca and Chiapas only have 81 and 69 mobile subscriptions, respectively, per 100 inhabitants[24].

The deployment and updating of technological infrastructure is influenced by various factors such as economic capacity, competition, population density, territorial characteristics, and the implementation of public policies. Therefore, the context in each Mexican state largely determines its technological advancement.

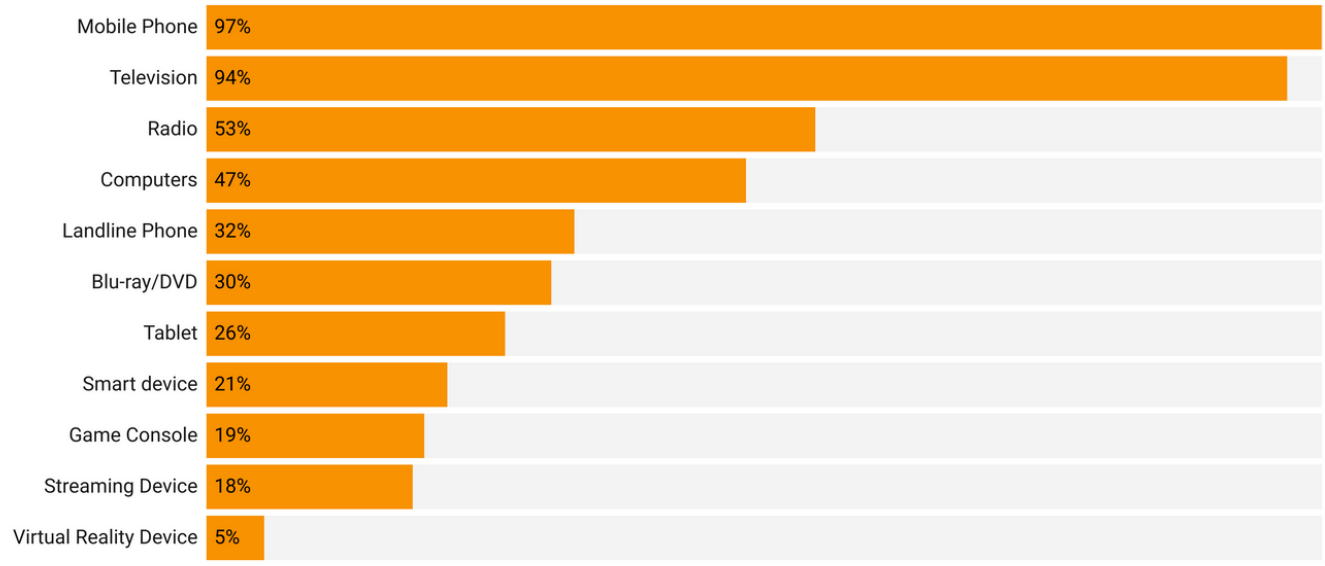
[21] IFT (2023). OECD, *cit.*
[22] OECD Broadband Statistics, see more at https://www.oecd.org/sti/broadband/broadband-statistics/
[23] IFT Statistical Yearbook 2022, *cit.*, p. 35.
[24] IFT Statistical Yearbook 2022, *cit.*, p. 32.

Devices

The National Institute of Statistics, Geography and Informatics (INEGI) through its National Survey on Availability and Use of Information Technologies in Households (ENDUTIH) and the Federal Telecommunications Institute (IFT) through its National Survey of Audiovisual Content Consumption (ENCCA) are the main sources of data used in the following sections of this report.

Mobile phones are the devices with the highest penetration in Mexican households, 97% of them having at least one, according to the most recent data published by the ENCCA. Mobile phones are followed by television, with 94% of the households owning a TV set and radio with a 53% household penetration.

Electronic devices ownership (% of households), 2021-2022

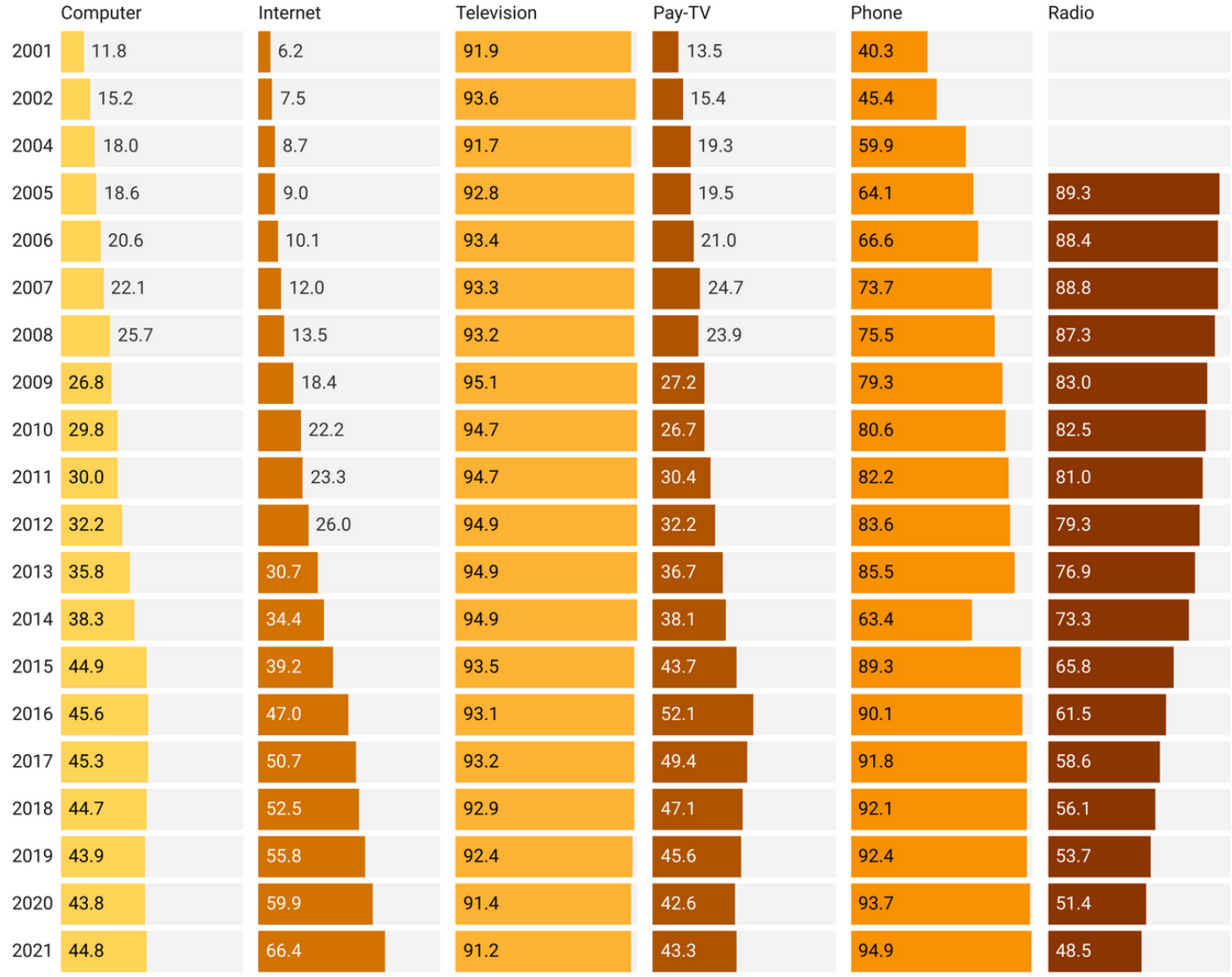


Source: ENCCA (2021) • Created with Datawrapper

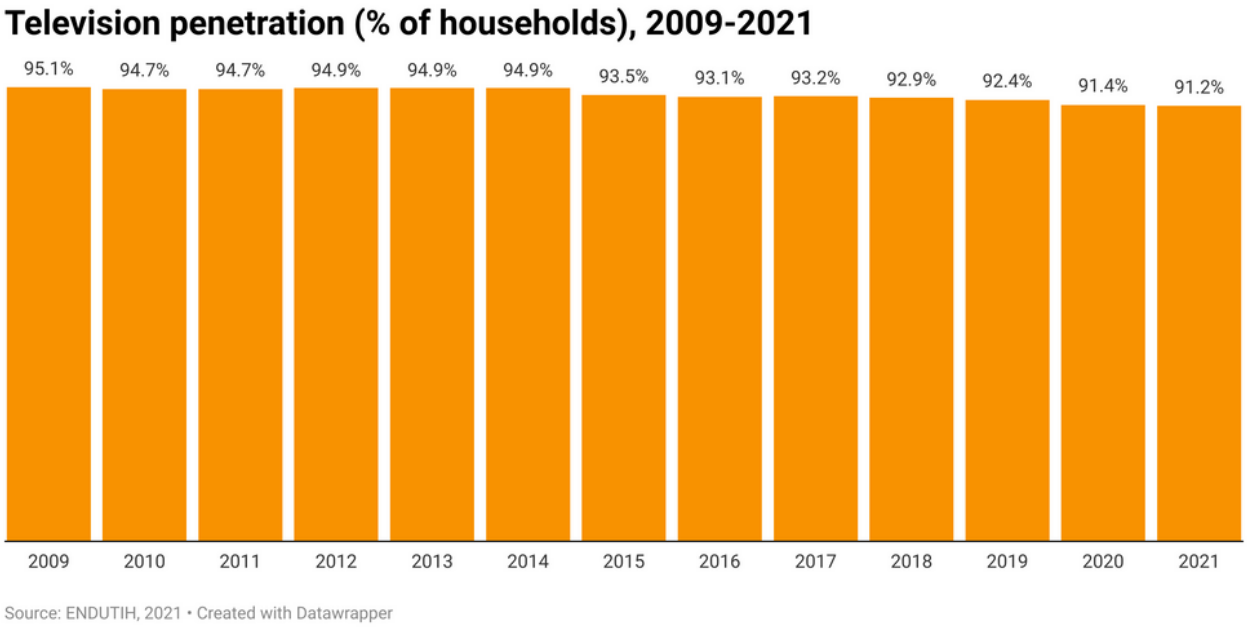
According to the ENDUTIH survey, use of phones is the most widespread in Mexico, present in 94% of the country's households, a figure that includes both cell phones and landline telephony. However, over a longer period of time, it is the television sets that have had the highest penetration in Mexico, with a penetration of over 91% during the last 20 years. In 2021, 91.2% of Mexican households, which is the equivalent of 33.3 million households, had at least one television set, whether analog or digital. That marked a slight decrease compared to 2009 when a record 95.1% penetration of households (or 26.5 million homes) was reached.

Devices that provide internet access have steadily increased their penetration, from a mere 6.2% of households in 2001 to 66.4% in 2021. The penetration of radio equipment, on the other hand, has decreased from 89.3% in 2005 to only 48.5% in 2021.

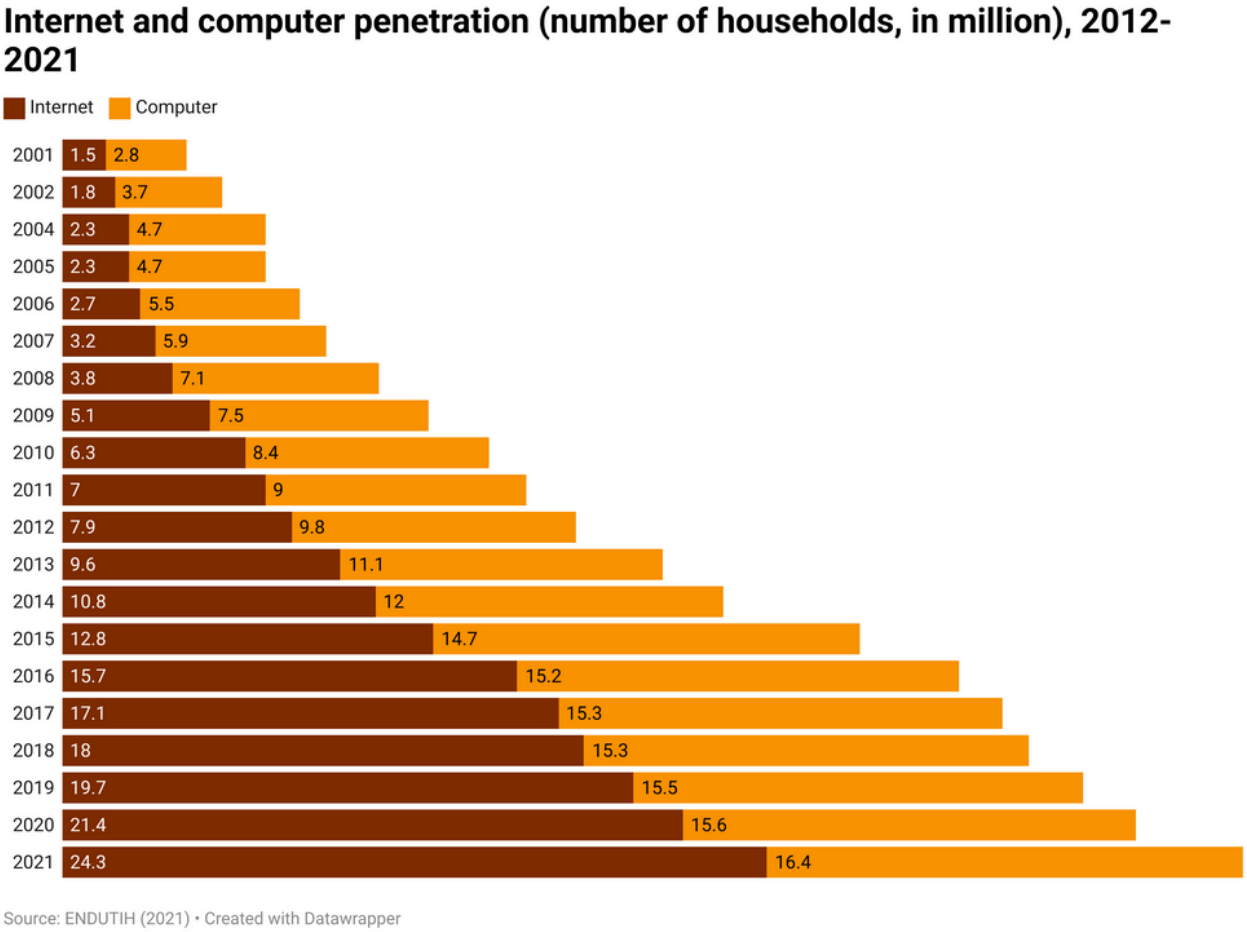
Penetration of communication technology equipment (% of households), 2001-2021



Source: ENDUTIH (2021) • Created with Datawrapper

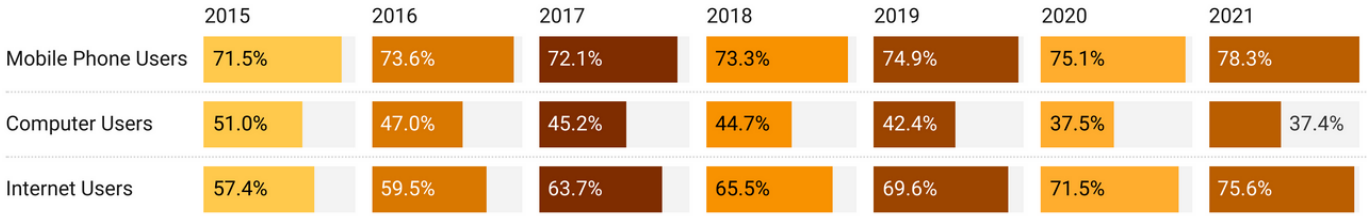


The internet saw an increase in penetration from 1.5 million households (6.2%) in 2001 to 24.3 million (66.4%) in 2021. In spite of this strong growth, Mexico still sports a digital divide that government programs have not been able to close. Computers, on the other hand, were present in 2.8 million Mexican households (11.8%) in 2001, a figure that increased to 16.4 million (44.8%) in 2021. Computer penetration has remained relatively stable in Mexico since 2015.



Use of mobile phones has experienced a significant upward trend with a total of 91.7 million users in 2021, which represented 78.3% of the Mexican population. A similar trend was registered by the internet consumption that reached 88.5 million consumers in the same year, which accounted for 75.6% of the country's population. These figures have been increasing every year whereas the use of personal computers or PCs has decreased from 49.8 million users in 2017 to some 43.8 million in 2021, which accounted for 37.4% of the population.

Use of mobile phones, computers and internet (% of users), 2015-2021

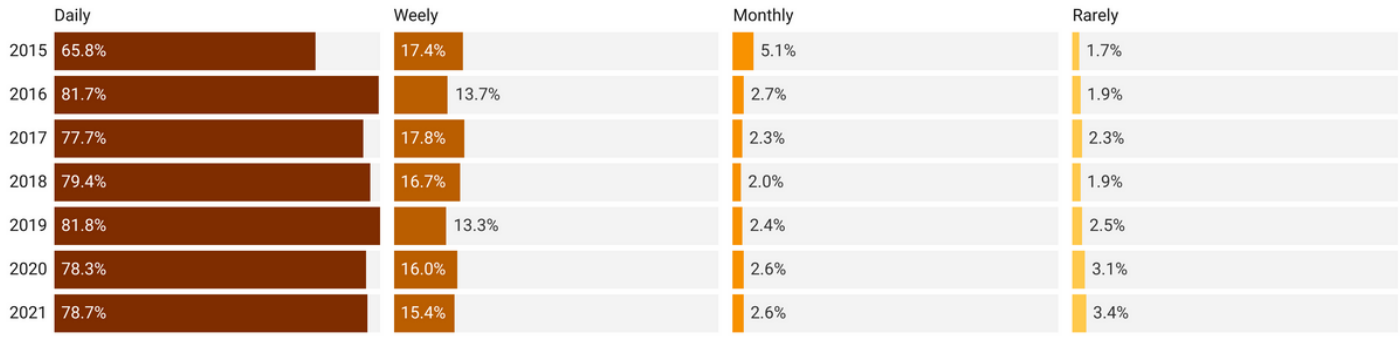


Source: ENDUTIH (2021) • Created with Datawrapper

Usage Patterns

Mobile phones are used with high frequency in Mexico. In 2021, 78.7% of people used them daily, 15.4% used them once a week, 2.6% used them once a month, and 3.4% used them less frequently. The daily use of cell phones increased from 65.8% in 2015 to a peak of 81.8% in 2019.

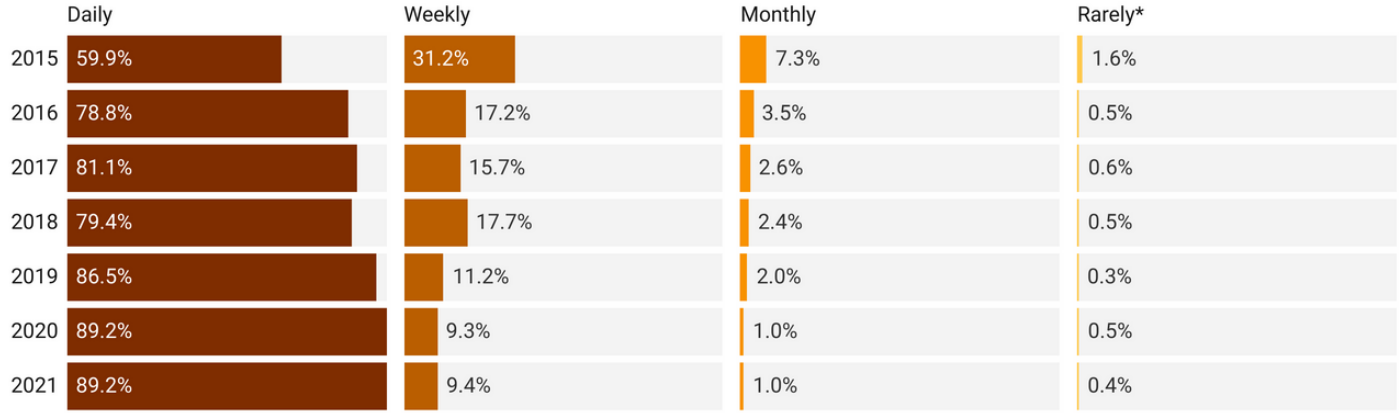
Frequency of mobile phone usage (%), 2015-2021



Source: ENDUTIH (2021) • Created with Datawrapper

Regarding the internet, there is a growing trend in its daily use. It increased from 59.9% in 2015 to 89.2% in 2021.

Frequency of internet usage (%), 2015-2021



once every three months or less

Source: ENDUTIH (2021) • Created with Datawrapper

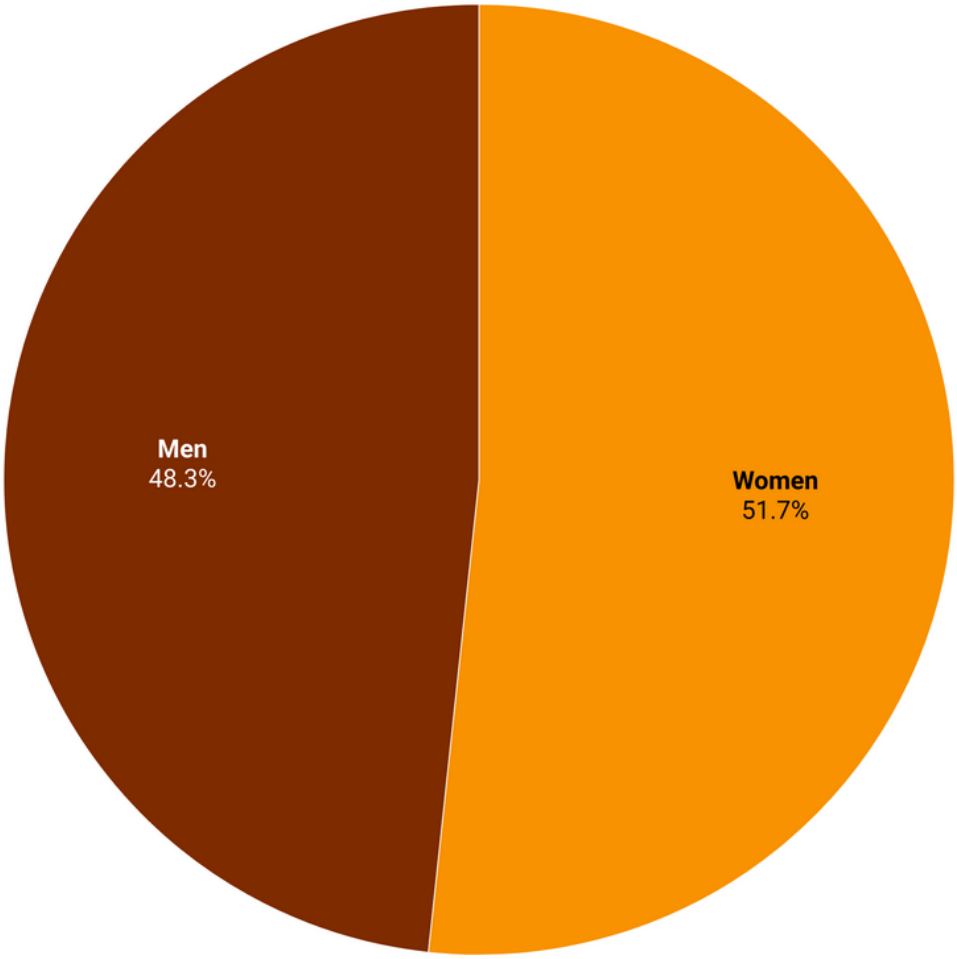
In terms of age groups, people aged 25 to 34 use the internet the most, accounting for 18.9% of the total usage in 2021. Since 2015, the gap between this age group and the other age groups has widened. In 2021, 15.9% of internet usage was accounted for by the 35 to 44 age group, and 15.6% by the 18 to 24 age group. The age groups that use the internet the least are children between 6 and 11 years old (10.8%) and those over 55 (11.3%). Women use the internet 4% more than men in Mexico.

Percentage of internet usage, breakdown by age groups, %, 2015-2021

	6-11 yrs	12-17 yrs	18-24 yrs	25-34 yrs	35-44 yrs	45-54 yrs	55 + yrs
2015	12	19	20	20	15	9	5
2016	11	19	19	20	16	10	6
2017	10	18	18	20	17	11	7
2018	10	16	18	20	16	12	8
2019	10	15	16	19	17	13	10
2020	11	15	16	19	16	13	10
2021	11	15	16	19	16	13	11

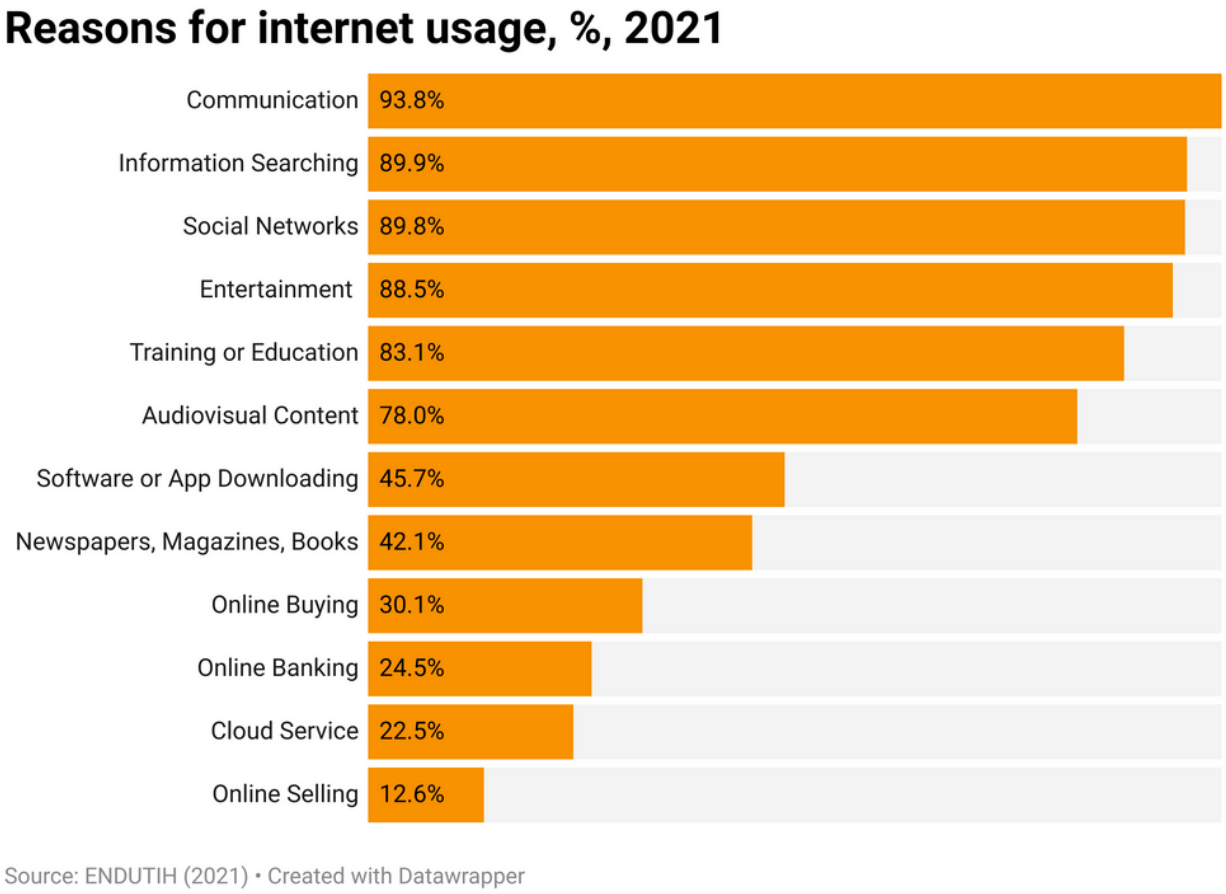
Source: ENDUTIH (2021) • Created with Datawrapper

Internet usage by gender, %, 2021

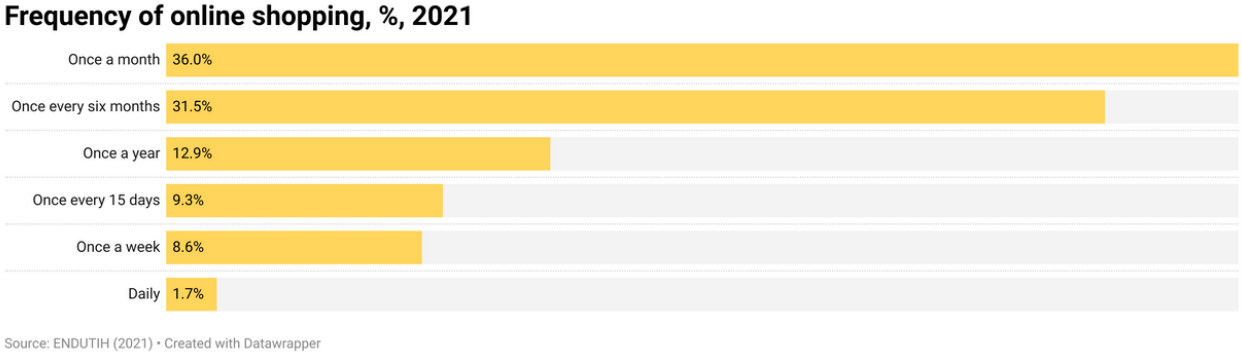


Source: ENDUTIH (2021) • Created with Datawrapper

The main reasons for Mexican users to access the internet are communication (93.8%), with social networks being the most popular at 89.8%, search for information for 89.9% of users, and entertainment for 88.5% of users (including 78% for accessing audiovisual content and 42.1% for reading newspapers, magazines, and books). People in Mexico also use the internet for training and education purposes, downloading programs and applications, and cloud services. Online buying accounts for 30.1% of the internet usage.

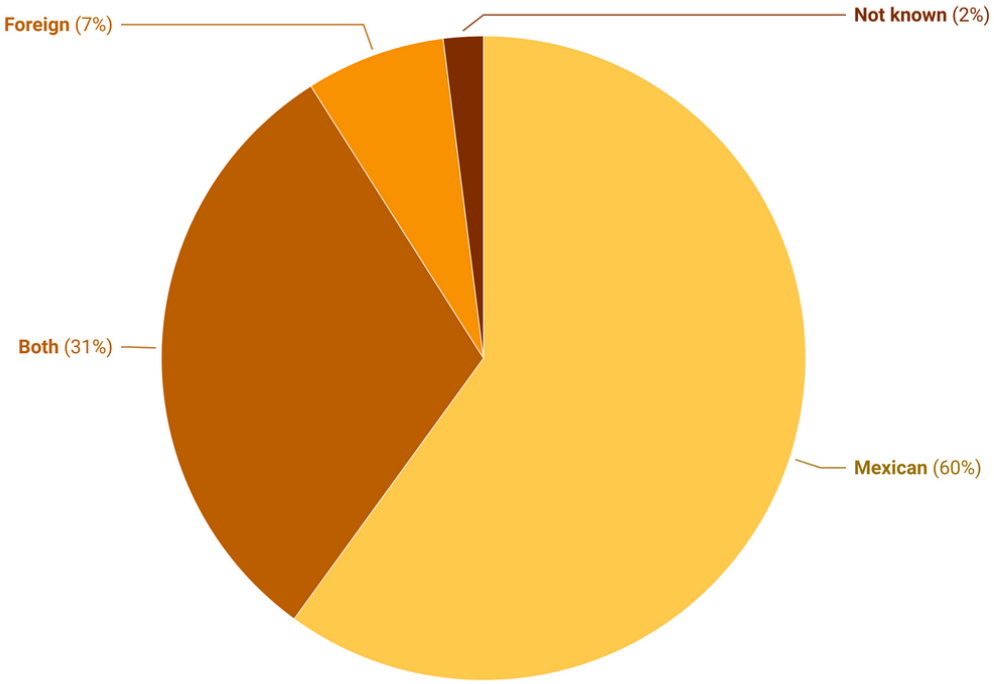


Regarding the frequency of online shopping, the majority of people make online purchases once a month, followed by once every six months and once a year.



Some 60% of people in Mexico make their online purchases from national companies, 8% from foreign companies, and 30% from both.

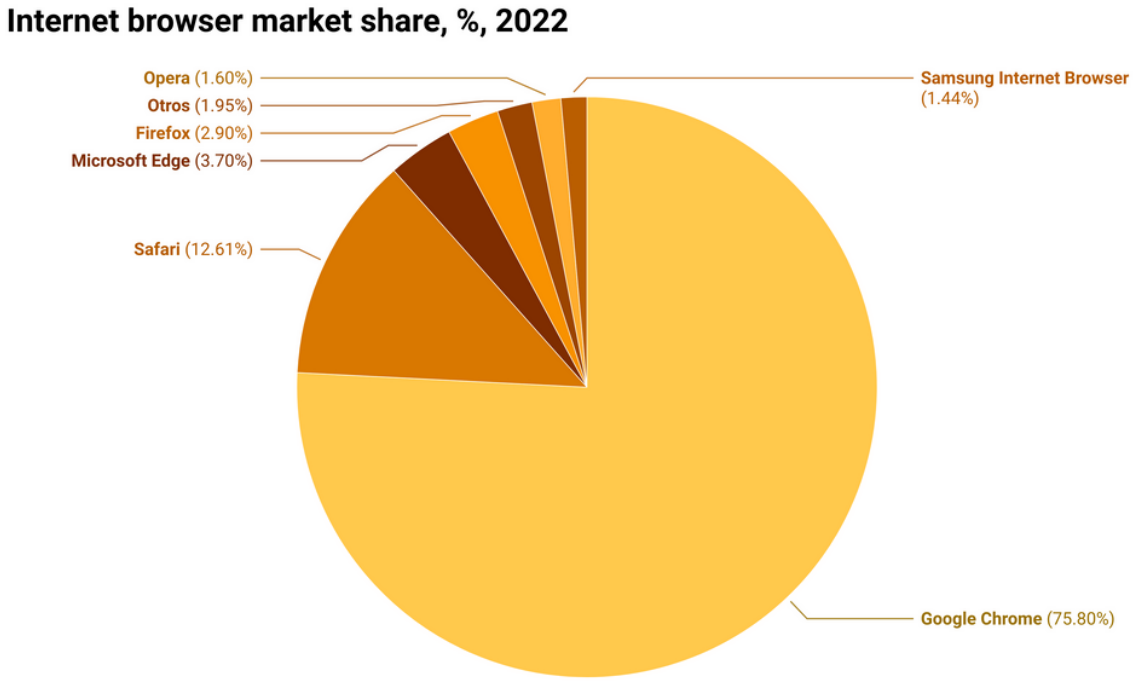
Origin of the online shopping websites, %, 2021



Source: ENDUTIH (2021) • Created with Datawrapper

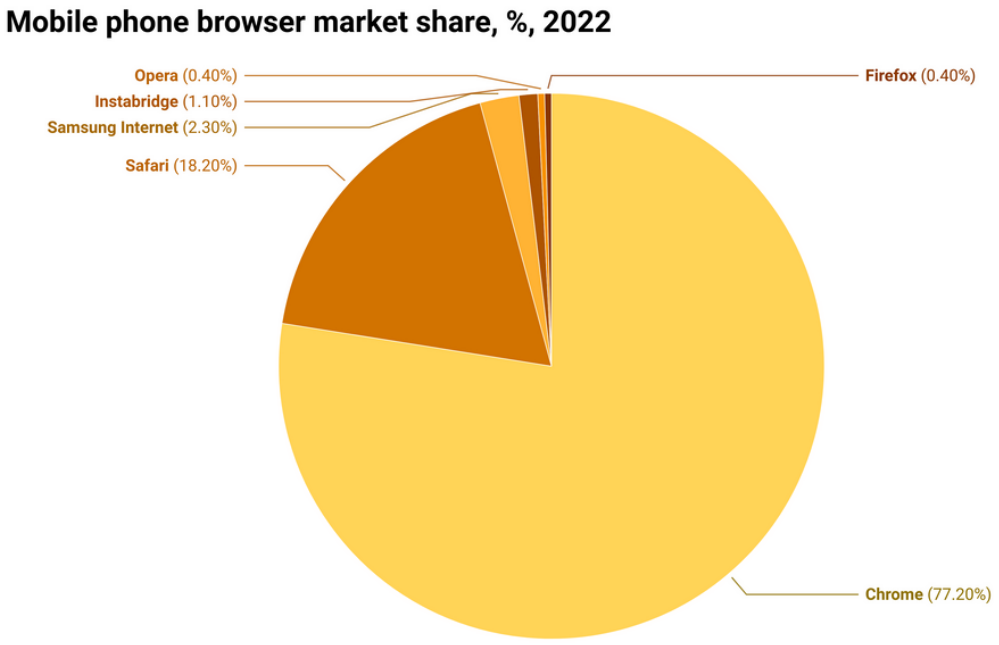
Digital Platforms

In January 2022, according to data from StatCounter, a web traffic analysis firm, the internet browser with the largest market share in Mexico was Google Chrome with 75.8%. In a distant second place came Apple's Safari with 12.6%, followed by Microsoft Edge with 3.7%.



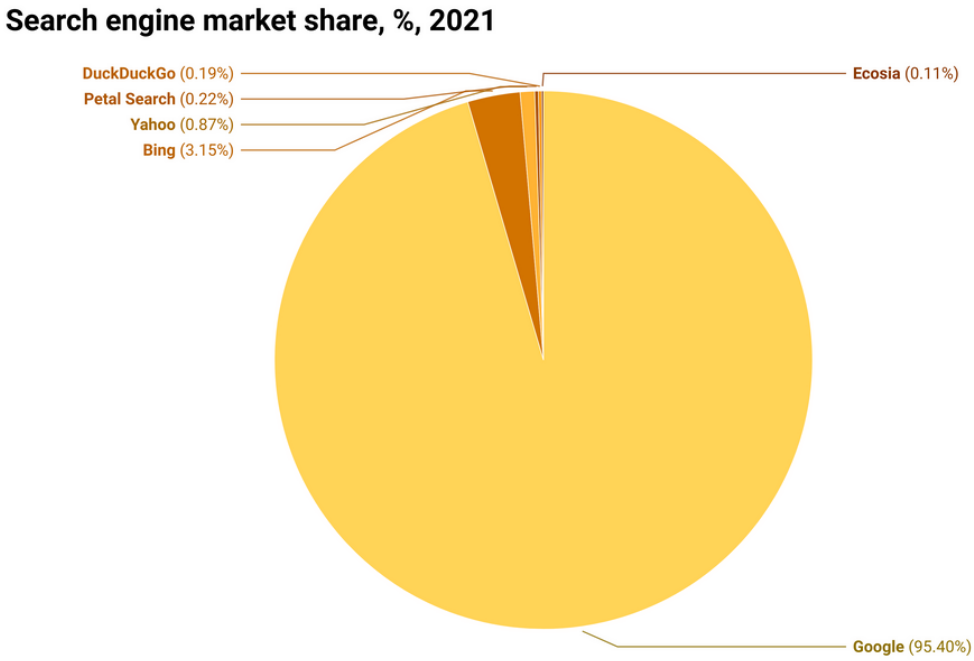
StatCounter (2022a). "Browser Market Share in Mexico". July 2022. https://gs.statcounter.com/browser-market-share/all/mexico/#monthly-202101-202201

Among the mobile phone browsers, Alphabet's Chrome also has the largest market share in Mexico (77.2%), Apple's Safari has a share of 18%, and Samsung Internet has 2.29%.



StatCounter (2022b). "Mobile Browser Market Share in Mexico". July 2022. https://gs.statcounter.com/browser-market-share/mobile/mexico

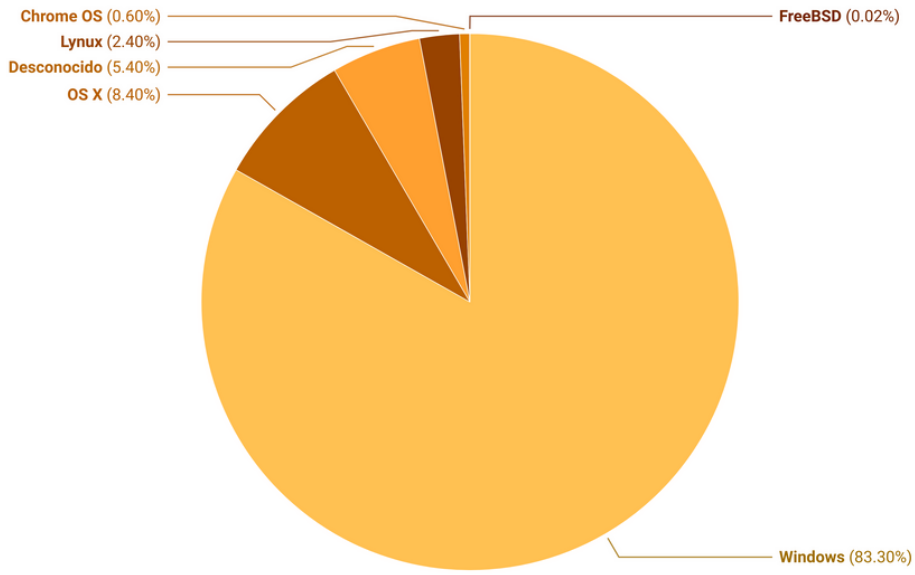
Alphabet-owned Google dominates the computer search engine market with 95.40%, followed far behind by Microsoft's Bing with 3.15% and Yahoo with 0.87%.



StatCounter (2021). "Search Engine Market Share in Mexico". July 2021. https://gs.statcounter.com/search-engine-market-share/all/mexico

Regarding computer operating systems, Microsoft's Windows has an 83% market share, followed by Apple's OS X with 8.37% and the open-source software Linux with 2.36%.

Computer operating system market share, %, 2022

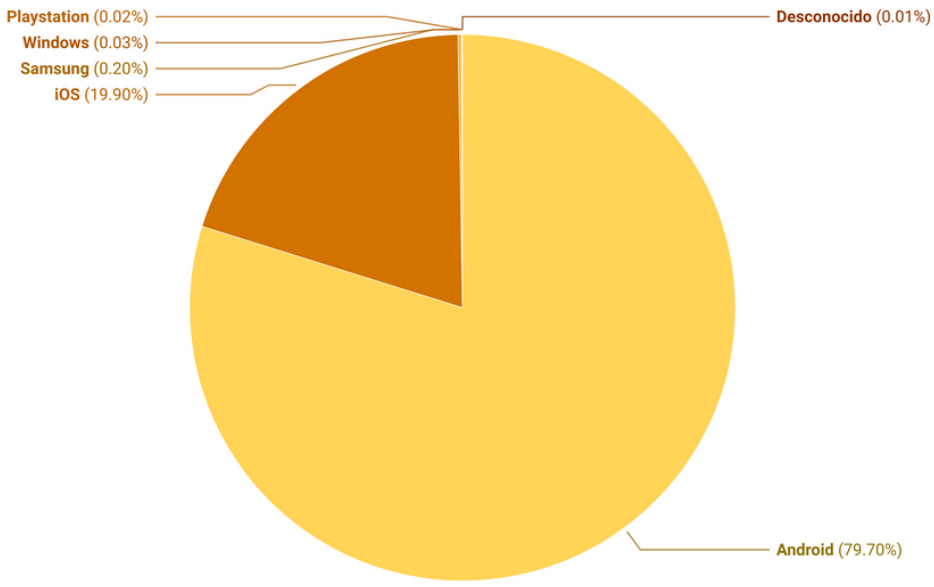


Source: StatCounter (2022c) • Created with Datawrapper

StatCounter (2022c). "Desktop Operating System Market Share in Mexico". July 2022. https://gs.statcounter.com/os-market-share/desktop/mexico

The most used mobile operating system in Mexico is Android owned by Alphabet with a market share of almost 80%, followed by Apple's iOS with around 20%.

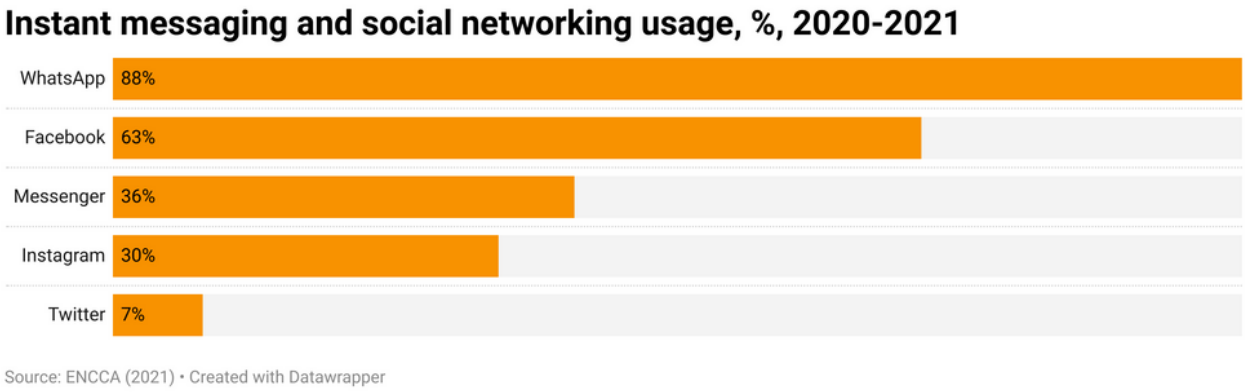
Mobile operating system market share, %, 2022



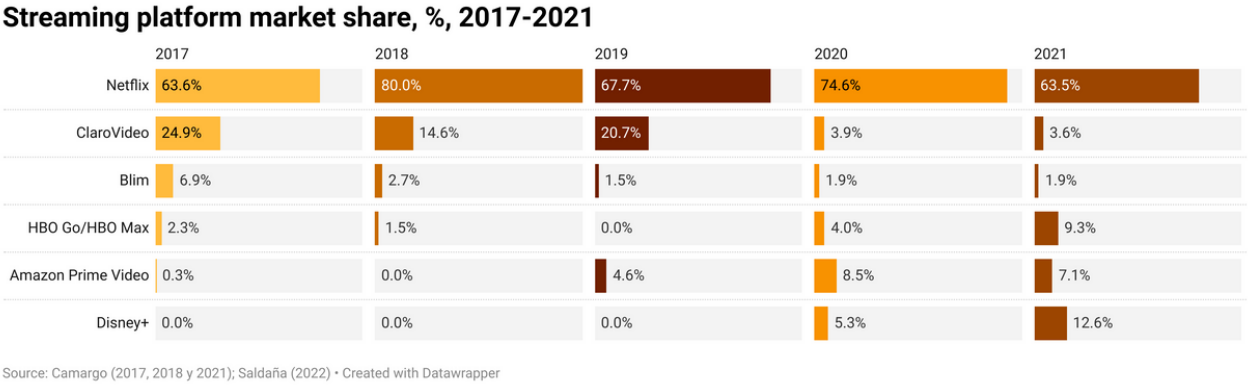
Source: StatCounter (2022d) • Created with Datawrapper

StatCounter (2022d). "Mobile Operating System Market Share in Mexico". July 2022. https://gs.statcounter.com/os-market-share/mobile/mexico

According to the National Survey of Audiovisual Content Consumption 2020-2021 conducted by the IFT, when it comes to instant messaging services and social networks, 88% of the Mexican users access WhatsApp, 63% use Facebook, 36% use Messenger and 30% use Instagram (all four applications owned by Meta).



Among the paid streaming platforms, Netflix reached a market share of 63.5% in 2021, followed by Disney+ with 12.6%, HBO Max with 9.3%, Amazon Prime Video with 7.1%, ClaroVideo of América Móvil with 3.6%, and Blim of Televisa with 1.9%, according to data from The Competitive Intelligence Unit, a private consultancy. Historical data shows the continued dominance of Netflix, despite a decrease of its 80% market share in 2018. It also reveals a decrease in the market shares of national platforms as a result of the entry of Disney+ and HBO Max on the Mexican market.



See Camargo, R. (2017). "Competencia de contenidos de video bajo demanda por subscripción (SVOD)." The Competitive Intelligence Unit. 11 August. https://www.theciu.com/publicaciones-2/2017/8/20/competencia-en-contenidos-de-video-bajo-demanda-por-suscripcin-svod
Camargo, R. (2018). "Ecosistema competitivo de plataformas de video bajo demanda por suscripción." The Competitive Intelligence Unit. 17 December. https://www.theciu.com/publicaciones-2/2018/12/17/dinmica-de-suscripciones-de-servicios-de-televisin-y-audio-restringidos-1
Camargo, R. (2021). "La Guerra del Streaming: Nuevos Jugadores y Adopción Acelerada". The Competitive Intelligence Unit. 12 April. https://www.theciu.com/publicaciones-2/2021/4/12/la-guerra-del-streaming-nuevos-jugadores-y-adopcin-acelerada

Revenues

According to the Global Entertainment and Media Outlook reports published by PwC, a privately owned accounting firm, the Mexican digital media market is forecast to experience significant growth in the coming years. The internet access sector is leading, with estimated revenues of US$ 9.951bn in 2022. Internet advertising has also skyrocketed due to the pandemic, surpassing television advertising and reaching US$ 3.913bn the same year.

Revenues of entertainment and digital media, US$ m, 2020-2022

Source: PwC (2021, 2022) • Created with Datawrapper

Main Market Players

The telecommunications market in Mexico is highly concentrated. In 2014, the Federal Telecommunications Institute (IFT) designated América Móvil as a dominant economic agent (AEP), a company with a dominant position in the telecommunications market and took a string of asymmetric measures to balance the market[25]. Those measures have achieved a progressive decrease of the Herfindahl-Hirschman concentration index (IHH).

Herfindahl Hirschman (HHI) Concentration Index in telecommunications services, 2013-2021

	Fixed lines	Fixed internet	Pay TV	Mobile lines	Mobile internet
2013	5,089	5,282	3,936	5,229	6,789
2014	4,762	4,649	4,444	5,084	5,848
2015	4,307	4,224	4,593	5,227	5,389
2016	4,216	4,027	4,507	4,873	5,446
2017	4,055	3,763	5,002	4,759	5,375
2018	3,867	3,540	5,033	4,576	5,381
2019	3,559	3,396	5,239	4,558	5,292
2020	3,140	3,044	5,035	4,549	5,411
2021	2,924	2,810	4,451	4,602	5,380

Source: authors' own calculation based on IFT data (2023) • Created with Datawrapper

[25] Gómez, R. (2020). A seis años de la Ley Federal de Telecomunicaciones y Radiodifusión, *cit*.

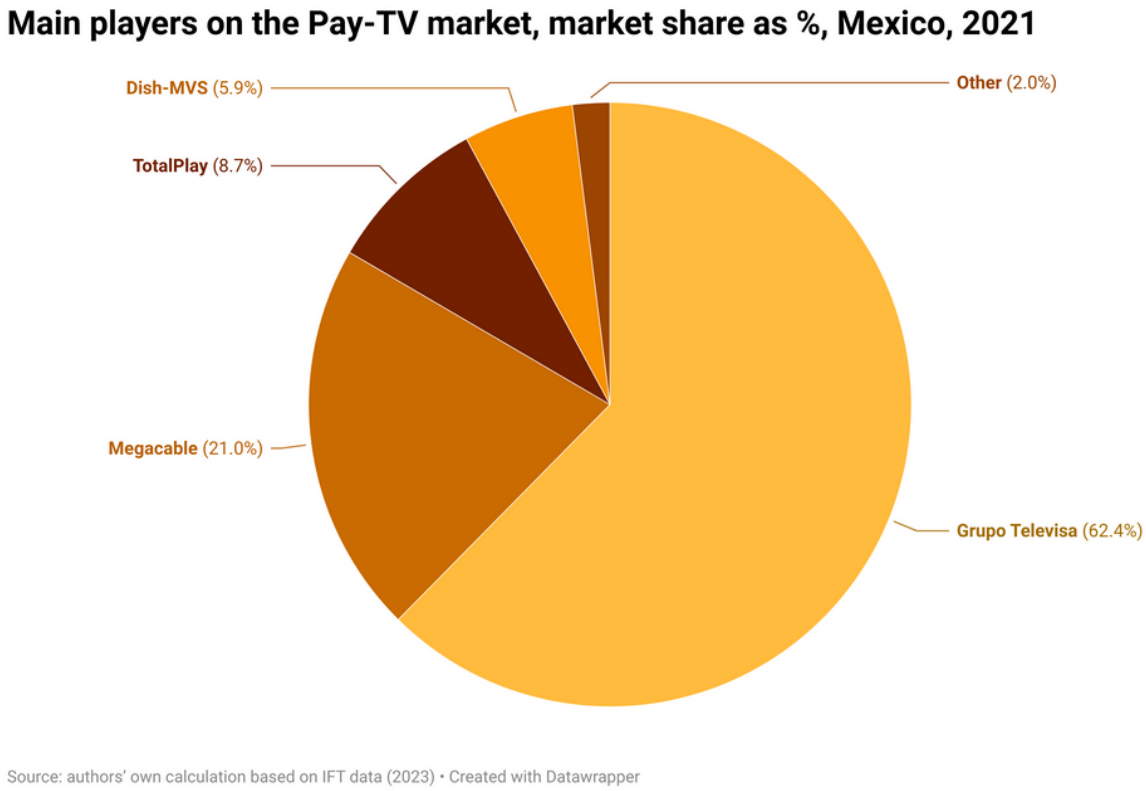
Three companies jointly command over 97% of the Mexican mobile phone market, creating an oligopoly. The two companies that compete with América Móvil on this market are both foreign owned: AT&T is American owned and Telefónica is backed by Spanish capital. The fixed internet market is different, all of the five competing companies being domestically owned. The fixed internet market registers the lowest concentration and has experienced a significant decrease in the IHH, down by 2,472 points between 2013 and 2021, a result of the asymmetrical measures imposed by the Mexican telecom regulator.

One of the reasons for this situation is that those companies offer triple play packages consisting of telephone, internet and paid television. Grupo Televisa offers quadruple play packages, which include mobile telephony. Meanwhile, América Móvil is barred from offering open and pay-TV services. On the pay-TV market, Grupo Televisa increased its power to such an extent that in 2020, the IFT designated the company as a player with an oversized market influence. Televisa had a share of 70.2% of the pay-TV subscribers in 2019.

Following the IFT's ruling, Grupo Televisa filed an appeal with a specialized telecommunications court and won. As a result, the substantial market power designation was dropped, the court arguing that the IFT's decision lacked up-to-date market information and failed to take into account the competition of pay-TV with streaming platforms[26].

According to the latest information about the pay-TV services in Mexico provided by the IFT in its 2022 report, Grupo Televisa concentrates 62.4% of the market, followed by Megacable with 21%, TotalPlay with 8.7%, Dish-MVS with 5.8%, Stargroup with 1.1%, and others with the remaining 0.83%.

[26] Ana Luiza Gutiérrez, "IFT quiere demostrar que Televisa tiene 'poder sustancial' en televisión de paga" (The IFT wants to show that Televisa has 'substantial power' in the pay television market), *Expansión*, 5 December 2022, available online at https://expansion.mx/empresas/2022/12/05/ift-quiere-demostrar-que-televisa-tiene-poder-sustancial-en-television-de-paga



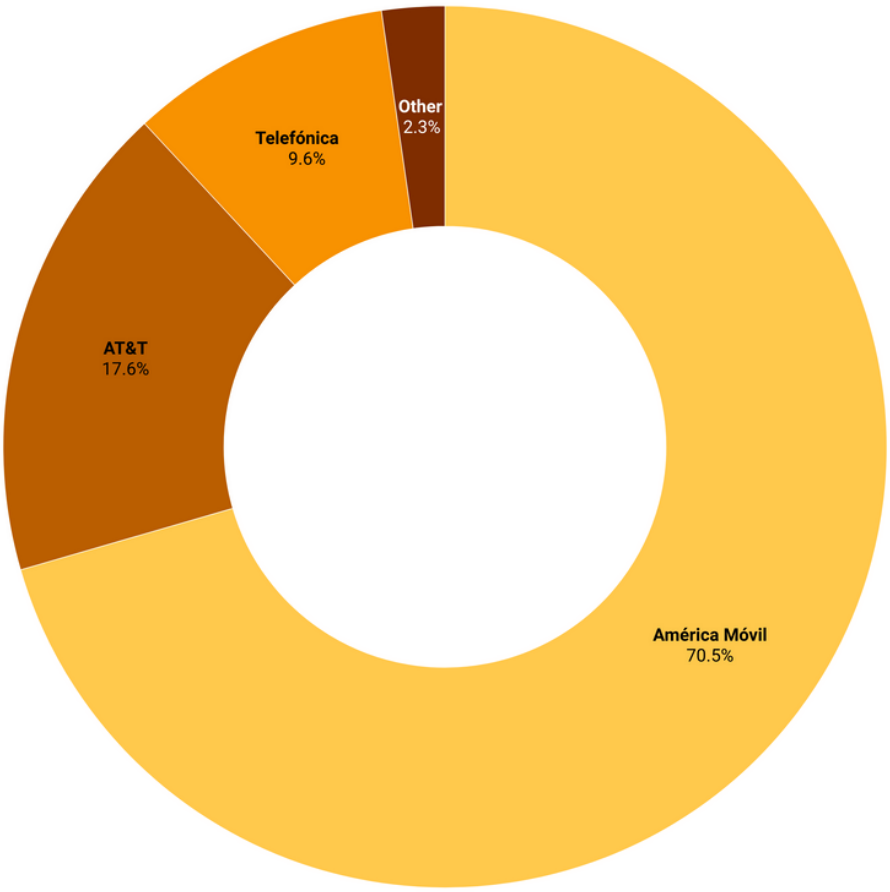
While fixed telecommunications services are mostly offered by companies with Mexican capital[27], the main players on the mobile telecommunications market, AT&T and Telefónica, are based outside the country. The reason for this may be the different potential and dynamic of the mobile market compared to the fixed market, as well as the different requirements for investment and infrastructure deployment between the two services.

AT&T entered the Mexican mobile phone market in 2015. It has since grown into the main competitor for América Móvil, displacing Telefónica as the second largest player on that market. One positive aspect of AT&T's entry on the Mexican market was the elimination of the roaming charges between Mexico and the U.S., a strategic decision prompted by the market potential presented by the large community of Mexican migrants living in the U.S. This initiative prompted competitors throughout North America to follow suit[28].

[27] In the satellite television market, the two leading companies are Sky and Dish-MVS. Sky is co-owned by Grupo Televisa (58.7%) and AT&T (41.3%). Dish-MVS was co-owned by Grupo MVS and US-controlled EchoStar until 2022 when MVS became the full owner of the company
[28] Gómez, R. (2020). A seis años de la Ley Federal de Telecomunicaciones y Radiodifusión, *cit*.

The mobile phone market allows the entry of several players as they are legally allowed to use the infrastructure deployed by dominant operators. Hence, there is a large number of companies that offer such services as Over The Top (OTT). However, together they barely account for 2.3% of the market.

Main players on the mobile phone market, market share as %, 2021

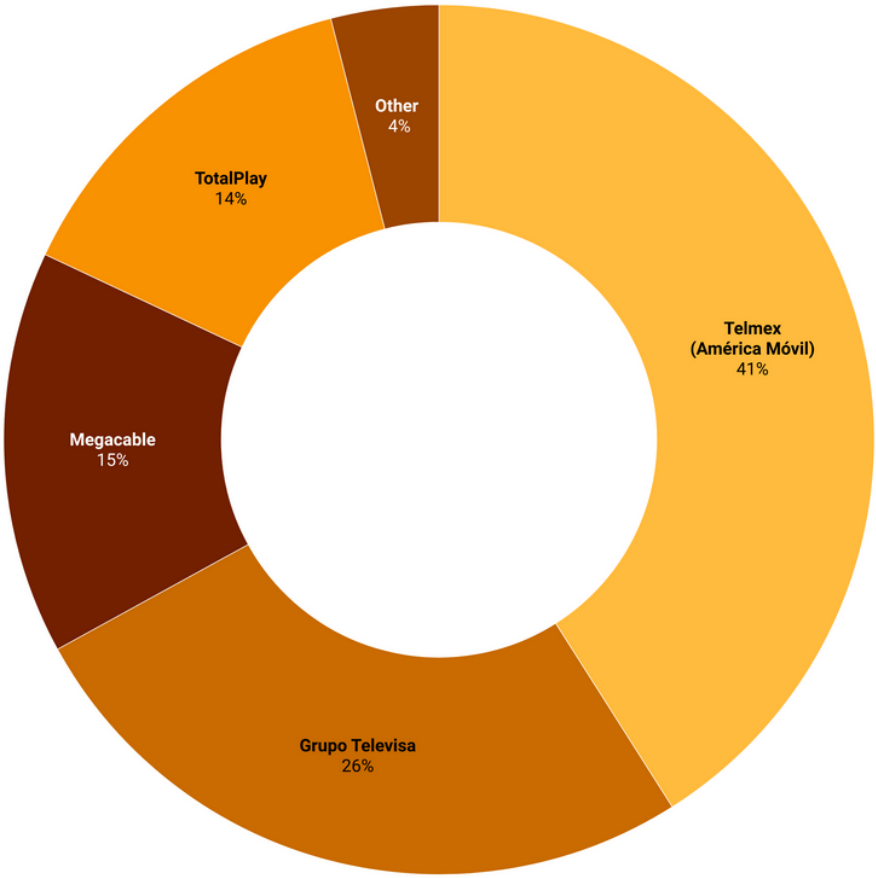


Source: authors' own calculation based on IFT data (2023) • Created with Datawrapper

The five largest companies competing in the Mexican fixed internet market are América Móvil, Grupo Televisa, Megacable, TotalPlay, and IST. Two key developments have shaped this market in recent years. One was the growth of Grupo Televisa through the acquisition of various cable companies in the last ten years[29], which was accompanied by a slew of investments in infrastructure. The second was the growth of TotalPlay in the last five years. The company reached a market share of nearly 15%. The four largest players control some 96% of the fixed internet market in Mexico.

[29] For a detailed context on the acquisition and concentration process at Grupo Televisa in pay-TV, fixed internet and telephony services, see: Gómez, R. (2017). Grupo Televisa in Birkinbine, Gomez & Wasko (eds.) Global Media Giants. Routledge, and Gómez, R. (2020). A seis años de la Ley Federal de Telecomunicaciones y Radiodifusión. Análisis y propuestas. Tintable/Amedi.

Main players on the fixed internet market, market share as %, 2021



Source: authors' own calculation based on IFT data (2023) • Created with Datawrapper

Income of fixed data telecommunications companies (MXN m), 2014-2021

Company	2014	2015	2016	2017	2018	2019	2020	2021
Telmex	20,572	39,995	41,255	54,254	n/a	37,161	55,316	41,989
Televisa	4,911	7,617	9,709	11,357	13,044	14,544	16,54	18,648
Megacable	2,526	3,500	4,466	5,146	6,079	6,622	7,206	8,225
Totalplay	0.2	600	1,923	2,74	3,862	4,977	7,101	10,322
Axtel[30]	1,337	1,482	n/a	n/a	n/a	n/a	n/a	n/a

n/a: not available

Source: authors' own calculation based on data from the IFT - Telecommunications Information Bank (BIT), see https://bit.ift.org.mx/BitWebApp/ • Created with Datawrapper

[30]Axtel sold part of its shares in the fiber optic business for triple play services in the north of the country to Grupo Televisa in 2018, , and its remaining fiber optic assets in the south of the country to Megacable in May 2019.

Income of mobile data telecommunications companies (MXN m), 2014-2021

Company	2014	2015	2016	2017	2018	2019	2020	2021
América M	185,131	191,751	187,127	190,022	207,610	226,164	214,578	225,219
AT&T[31] MX	n/a	n/a	8,742	14,477	22,441	19,365	19,605	55,696
Telefónica MX	33,240	32,683	30,053	29,497	28,514	28,593	25,822	24,176
Unefon	5,933	1,396	n/a	n/a	n/a	n/a	n/a	n/a
Iusacell (Televisa/Grupo Salinas)	13,022	12,718	n/a	n/a	n/a	n/a	n/a	n/a
Nextel	18,267	13,596	n/a	n/a	n/a	n/a	n/a	n/a
OTT[32]	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

n/a: not available

Source: authors' own calculation based on data from the IFT - Telecommunications Information Bank (BIT) https://bit.ift.org.mx/BitWebApp/ • Created with Datawrapper

Telmex/América Móvil

Telmex/América Móvil is a domestically owned private company that was previously state controlled. In 1990, the company's assets and shares were offered for sale in a tender by the government of Carlos Salinas de Gortari (1988-1994). The businessman Carlos Slim Helú, through Carso Group and with investment partners such as France Telecom and SBC Telecom, won the bid. As part of the privatization conditions, the company was protected to operate as a monopoly for the first five years to strengthen its market position and be able to better compete. As part of the privatization deal, the company had several obligations, too, including: a) to increase the number of fixed lines by at least 12% each year between 1990 and 1994; b) to improve the quality of service and maintenance; c) to expand telephone services in rural areas; and d) to install five public telephones for every 1,000 inhabitants[33]. The company was also prohibited to offer pay-TV and broadcasting services[34].

[31] In 2015, AT&T entered the Mexican market through the purchase of Iusacell, Unefon and Nextel. As a result, concentration on the mobile phone market increased, only three large players being left to compete.
[32] In Mexico, according to the IFT directory, there are more than 90 Mobile Virtual Network Operators (MVNO) known also as Over The Top (OTT) operators.
[33] For a deeper analysis of the history of the company and its corporate evolution from a political economy approach, see: Sosa, G. (2017). América Móvil in Birkinbine, Gómez and Wasko (eds.) Global Media Giants. NY: Routledge.
[34] At the time of writing this report, this clause was still active, Telmex not being able to offer pay-TV or broadcasting services in Mexico.

The company was initially given a license to operate until 2026. In 2016, the Federal Telecommunications Institute (IFT) approved at Telmex's request an extension of the company's license by another 30 years, that is until 2056.

Today the corporation operates as América Móvil, offering fixed and mobile telecommunications services in 23 countries across America and Europe. It is part of the Carso Group, which owns a bevy of companies ranging from department stores and restaurants to builders of oil platforms. The company owns five satellites, 47,000 kilometers of undersea cable, and one million kilometers of optic fiber cable. Its most well-known companies in the sector include América Móvil, Claro, Claro Enterprise Solutions, Telmex, Embratel, and Telekom Austria Group. The majority shareholder in the company is Carlos Slim Helú.

Grupo Televisa

Televisa Group is a Mexican broadcasting and telecommunications company that was the most prominent Spanish-language content producer in Latin America during the second half of the 20th century. Its primary business was in broadcasting where it owned three nationwide chains (Channels 2, 5, and 9) and a regional television channel (Channel 4). From 1973 to 1993, it held a monopoly being the sole privately run company that provided free-to-air television nationwide. The company's coziness with the governments of the Institutional Revolutionary Party (PRI) allowed it to thrive by controlling a growing amount of television advertising revenues. However, the company's news programs served the PRI's political interests. Thanks to its dominant position, Televisa controlled the national news agenda in Mexico and shaped the television content diet consumed by Mexican audiences for a significant portion of the 20th century, which enabled Televisa to amass significant influence and political power in the country[35].

In the early 2000s, the company began to invest significant funds in various pay-TV services. These investments helped the company seize the benefits of digital convergence and reposition itself as a telecommunications operator. Currently, the flagship telecommunications company in the group is IZZI, which offers fixed telephony and internet services, pay-TV content, mobile telephony, and internet connection services (as an MVNO). Additionally, the group also sells pay-TV services through its satellite company SKY, in which AT&T it its main partner[36].

[35] To find out more about the history and profile of Grupo Televisa see: Gómez, R. (2017). Grupo Televisa in Birkinbine, Gómez and Wasko (eds.) Global Media Giants. NY: Routledge.
[36] Grupo Televisa owns 58.1% of the shares in SKY and AT&T México holds the remaining stake.

These two companies, IZZI and SKY, together generate most of Televisa Group's revenues. In 2022, anticipating sharp competition from video streaming platforms, Televisa merged its content and broadcasting division with its main partner in the United States, the leading Spanish-language television network Univision. They formed a new joint company specialized in the production and distribution of Spanish-language content called Televisa-Univision Inc.. The main objective of their joint streaming platform, VIX+, was to capitalize on the potential access to all Spanish-speaking audiences (some 100 million people) by operating in both Mexico and the U.S.[37].

TotalPlay

TotalPlay is a fixed telecommunications services company that belongs to the Salinas Group, which also owns TV Azteca, which is the second largest free-to-air television broadcaster, Elektra Group, and Banco Azteca. Salinas Group, through its company Azteca Comunicaciones Colombia, also offers various telecommunications services in Colombia.

Operating since 2011, TotalPlay offers broadband internet, paid HD television, and interactive television through the company's fiber-to-the-home (FTTH) network. In the period 2015-2020, TotalPlay experienced the highest growth rate, an annual increase of 40%, among the companies offering fixed telecommunications services in the Mexican market.

Megacable

Megacable is a Mexican-owned cable operator and provider of phone and internet services that was founded in 1982 in the northwest part of the country (the states of Sinaloa and Sonora). The company started in the cable television business and has since expanded its network to include cities in the northwest of the country while also acquiring local and regional cable companies. By now, the company has extended its network from north to south in all 32 Mexican states. It is the fourth largest fixed telecommunications service provider nationwide. Since 2014, it has owned 80% of the shares in the Television Producer and Distributor (PCTV), a company specialized in the production and distribution of pay-TV content. Additionally, Megacable offers a streaming platform called X View and provides mobile telephony through a MVNO under the brand Megamóvil.

[37] Grupo Televisa is the majority shareholder of the new company with 45% of the shares.

Telefónica México

The Spanish company started its operations in Mexico in 2001. Now, the company operates under the brand Movistar, primarily offering mobile telephony and internet services. It is the third-largest telecommunications company in terms of mobile lines. In recent years, as part of the company's strategy in Latin America, Movistar has made significant moves to strengthen its position in the Mexican market and to continue competing with América Móvil. In 2019, in order to improve its financial situation, Movistar gave up the spectrum it had previously acquired and paid for, and opted for a new policy of sharing and leasing infrastructure from AT&T Mexico.

AT&T México

The U.S.-owned AT&T launched its mobile telecommunications operations in Mexico in early 2015 after it took over the assets of three mobile phone providers: Unefon, Iusacell, and Nextel. The corporation's entry on the Mexican market was one of its several business expansion steps including the acquisition of DirecTV in 2014, and of Warner Media two years later. AT&T Mexico is investing significantly in the deployment of 5G infrastructure on the mobile phone and internet market, with the aim of further gaining market share from América Móvil in an attempt to take advantage of the asymmetrical measures imposed on the Mexican giant by authorities.

Technology and Government

The Mexican government does not prioritize the promotion of public policies related to new information and communication technologies. In fact, two major initiatives to achieve universal internet access, the shared network and the backbone network, have not yet been completed. Similarly, both the Chamber of Deputies and the Senate have failed to approve initiatives related to the digital agenda. Mexico also lacks a comprehensive regulatory framework for the internet due to the absence of a specialized agency. The roles of the IFT and the Federal Commission of Economic Competition (Cofece) in the regulation of tech platforms and social media are therefore uncertain.

Broadband Rollout

The rollout of fixed telecommunications infrastructure in rural areas is significantly delayed. According to data from the IFT, in Q4 2022, out of a total of 1,893 municipalities, a total of 729 did not have access to fiber optic. This shows that private and public investment in expanding fiber optic coverage is still insufficient. On the other hand, there is a lack of competition in most municipalities, many of them still having only one provider. Experts estimated that the national fiber optic coverage stood at less than 30% in 2022 in spite of a yearly growth of some 25%[38]. According to the IFT, only 40% of fixed internet connections are fiber optic, the remainder of 60% being accounted for by coaxial cable or DSL.

To tackle these digital gaps in the years ahead, steady upgrade and expansion of the fiber optic infrastructure are needed. That would spur investments from both public and private sources. The private investments in the sector reached around MXN 107.7bn in 2020, 10% higher than in the previous year. The public investment in expanding the coverage of the internet national network reached MXN 15.57bn in 2020. It was made through the state-owned company CFE Telecommunications.

[38] Jorge Bravo, "Inversión y toma de control de las telecomunicaciones" (Investment and takeover of telecommunications), Proceso, 9 June 2022, available online at https://dplnews.com/inversion-y-toma-de-control-en-telecomunicaciones/.

Tech Giants and Tax Regulation

Following the entry of the global digital platforms into the Mexican market an inequitable fiscal system was created as the country lacks an updated legal framework to address the issue of extraterritoriality of digital services, which is an obstacle to collecting taxes from those foreign players. This situation has affected local companies as they continued to pay taxes while foreign players did not, leading to a significant market distortion.

The current legislation in Mexico considers that corporate income tax should be collected where the source of production is located and where the company's headquarters are, not where the consumers live. As a result, since many digital platforms are established in other countries, although their consumers reside in Mexico, their income is not subject to taxation. However, digital platforms use personal data of consumers to generate profits, which means that a share of the production actually occurs where the users reside, even if that location does not coincide with the company's headquarters[39].

This issue was addressed at international level in an OECD report in 2015, which proposed among other things to challenge the "source rules"[40]. The report highlighted the need to design effective and transparent international standards on taxes that alter the definitions of the "permanent establishment requirement" for companies to identify their tax collection locations. The OECD also proposed tackling the challenge of "indirect taxation," which refers to the possibility for a state to tax income earned by companies that do not have a physical presence in that country and are not taxed elsewhere, thus avoiding double taxation. In 2020, the OECD proposed new rules regarding the location where tax on digital services and for multinational companies in general should be paid, including both in-person and remote activities. Those rules, according to the OECD, would be implemented through a global minimum tax as part of a Global Tax System. The G7 and G20 meetings in 2021 made progress in agreeing on technical and political issues regarding such a system, including a threshold of 20% for a tax on residual profit exceeding 10% for the largest and most profitable multinational companies, as well as the establishment of a minimum global tax of at least 15%[41].

[39] Jack M. Mintz, "Jack Mintz: Would the Liberals dare entertain a 'Netflix tax' before an election?", *Financial Post*, 22 January 2019, available online at https://business.financialpost.com/opinion/jack-mintz-would-the-liberals-dare-entertain-a-netflix-tax-before-an-election.
[40] OECD, Addressing the Tax Challenges of the Digital Economy, Action 1 - 2015 Final Report, 5 October 2015, available online at https://www.oecd.org/ctp/addressing-the-tax-challenges-of-the-digital-economy-action-1-2015-final-report-9789264241046-en.htm.
[41] Talía Díaz, "Acercándonos a la solución a los desafíos fiscales de la globalización y digitalización de la economía: el camino a un Sistema Tributario Global" (Approaching the solution to the tax challenges of globalization and digitization of the economy: the path to a Global Tax System), *Enfoque Derecho* [blog], 25 June 2021, available online at https://www.enfoquederecho.com/2021/06/25/acercandonos-a-la-solucion-a-los-desafios-fiscales-de-la-globalizacion-y-digitalizacion-de-la-economia-el-camino-a-un-sistema-tributario-global/; "Histórico acuerdo en G-20 sobre tasa mínima reducirá evasión fiscal: Arturo Herrera" (Historical G-20 agreement on minimum rate will reduce tax evasion: Arturo Herrera), *Aristegui Noticias*, 10 July 2021, available online at https://aristeguinoticias.com/1007/dinero-y-economia/historico-acuerdo-en-g-20-sobre-tasa-minima-reducira-evasion-fiscal-arturo-herrera-video/.

Since 2018, Mexico has witnessed a heated debate sparked by those in favor of taxing foreign platforms: local companies that compete with them and certain lawmakers who echoed those demands[42], including the Union of Telephone Operators of the Mexican Republic (STRM), which argues that foreign platforms use the Mexican telecommunications infrastructure without investing in or compensating the country[43].

Organizations opposed to such taxing proposals include the National Chamber of the Electronics Industry (Canieti), the Association of Internet.mx, the Latin American Internet Association (ALAI), to which Google and Mercado Libre belong, among others, and the Network for the Defense of Digital Rights. Among other things, they consider that the oversight of internet platforms is not compatible with the right to "universal access" to the internet, confusing the debate about the right to universal access to internet infrastructure services with commercial services that use the internet to reach their consumers. Those organizations oppose blocking of platforms that fail to pay taxes, considering such a decision to be unconstitutional. They also made proposals to cut down on taxes or postpone the implementation of the law[44].

The first bill covering these issues was presented to the Congress in 2018 by the Party of the Democratic Revolution. The bill requires foreign companies to establish a permanent presence in Mexico to be able to operate. The bill was turned down, lawmakers arguing that it would run against agreements that Mexico was committing to in the process of renegotiation of NAFTA[45].

In 2019, a couple more bills were put forwards, one by the Morena parliamentary group and the other by the Ministry of Finance[46].

[42] Irene Levy, "¿En qué se parecen Uber, Netflix y Roku?" (How are Uber, Netflix and Roku alike?), *El Universal*, 22 October 2018. https://www.eluniversal.com.mx/columna/irene-levy/cartera/en-que-se-parecen-uber-netflix-y-roku
[43] Antonio Cahun, "Impuestos para Uber, Netflix y otras plataformas digitales en México: la demanda bajaría en 2020 por el posible aumento de precios" (Taxes for Uber, Netflix and other digital platforms in Mexico: demand would drop in 2020 due to the possible price increase), *Xataka*, 23 December 2019, available online at https://www.xataka.com.mx/legislacion-y-derechos/impuestos-para-uber-netflix-otras-plataformas-digitales-mexico-demanda-bajaria-2020-posible-aumento-precios.
[44] Steve Saldaña, "Inconstitucional y técnicamente inviable será el veto a servicios digitales que no paguen IVA en México, asegura la ALAI" (The veto of digital services that do not pay VAT in Mexico will be unconstitutional and technically unfeasible, says ALAI), *Xataka*, 30 October 2020. https://www.xataka.com.mx/legislacion-y-derechos/inconstitucional-tecnicamente-inviable-sera-veto-a-servicios-digitales-que-no-paguen-iva-mexico-asegura-alai.
[45] Salinas, J. (2017). Iniciativa que expide la ley del impuesto sobre los ingresos procedentes de servicios digitales, suscrita por integrantes del grupo parlamentario del PRD. http://sil.gobernacion.gob.mx/Archivos/Documentos/2018/09/asun_3734291_20180913_1536243462.pdf; T-MEC (2020). Textos finales del Tratado entre México, Estados Unidos y Canadá (T-MEC). Junio 3. https://www.gob.mx/t-mec/acciones-y-programas/textos-finales-del-tratado-entre-mexico-estados-unidos-y-canada-t-mec-202730?state=published
[46] Ramírez Cuellar, A. (2019). Que Reforma y Adiciona Diversas Disposiciones de La Ley del Impuesto Al Valor Agregado y del Código Fiscal De La Federación, a Cargo del Diputado Alfonso Ramírez Cuéllar, del Grupo Parlamentario De Morena. http://sil.gobernacion.gob.mx/Archivos/Documentos/2019/09/asun_3900324_20190905_1567715208.pdf

They proposed reform of the income tax (ISR) and value added tax (VAT) along with the introduction of special taxes on digital services. The two bills, which were part of the 2020 Income Law, were approved by Congress at the end of 2019. Subsequently, the Tax Administration System (SAT) established the Regime for Business Activities with income generated from tech platforms, which introduced a 16% VAT as of June 1, 2020[47]. On the other hand, the collection of ISR from foreign platforms became voluntary, the responsibility of registration, reporting, and delivering profits being left to the platforms themselves until the OECD and international organizations agreed on a tax collection method[48]. Furthermore, intermediaries were required to act as ISR retainers for those who used them to offer services, with tax rates increasing gradually based on income level until reaching a maximum of 5.4%. Those rates were turned into fixed rates in 2020[49].

As of March 2021, there were already 86 fiscally registered platforms in Mexico, including Nintendo, Acorn, Amazon, Apple, Facebook, HBO, Huawei, Spotify, Uber, and Zoom. The success of tax collection was remarkable. The SAT had collected only MXN 849.6m in VAT payments from the platforms in 2019. However, in 2020, after the new regulation came into effect, it collected MXN 6.3bn, an increase of more than 600%. The tax contribution of foreign platforms in 2019 hovered around MXN 595m, but it increased to more than MXN 6bn in 2020, with expectations of further increases in the following years[50]. Moreover, some MXN 1.75bn was collected from ISR payments by taxing individuals who generated income through intermediaries (tech platforms and social media) [51].

In April 2021, the Morena party presented another proposal to charge streaming platforms 7% of the existing Special Tax on Production and Services (IEPS). However, this proposal has not advanced much. On the other hand, Netflix and Amazon agreed with this proposal, seeing it as a necessary revenue collection measure for the benefit of the country[52].

[47] "Netflix incrementa 16 por ciento sus tarifas en México" (Netflix increases its rates in Mexico by 16%), *Aristegui Noticias*, 7 May 2020, available online at https://aristeguinoticias.com/0705/mexico/netflix-incrementa-16-por-ciento-sus-tarifas-en-mexico-fotonota.
[48] Ernesto Pérez, personal communication, 2019.
[49] a) 2.1% for ground passenger transportation and courier services such as Uber and delivery men, b) 4% for AirBnB-style lodging services, and c) 1% for the sale of goods and provision of services such as Amazon or Mercado Libre electronic commerce. Steve Saldaña, "Morena dio reversa de último momento y bajó las tasas de ISR a vendedores de Mercado Libre y Amazon y conductores de Uber" (Morena made a last-minute reversal and lowered ISR rates for Mercado Libre and Amazon sellers and Uber drivers), *Xataka*, 29 October 2020.
[50] Steve Saldaña, "Gravar con IVA e ISR a plataformas digitales en México funcionó: el SAT recabó en 2020 600% más de lo recaudado en 2019" (Taxing digital platforms in Mexico with VAT and ISR worked: the SAT collected 600% more in 2020 than what was collected in 2019), *Xataka*, 23 March 2021. https://www.xataka.com.mx/empresas-y-economia/gravar-iva-e-isr-a-plataformas-digitales-mexico-funciono-sat-recabo-2020-600-recaudado-2019.
[51] Belén Saldívar, "En el 2020, plataformas digitales dejaron 8,663 millones de pesos de recaudación" (In 2020, digital platforms paid MXN 8.663bn in taxes, *El Economista*, 10 May 2021, avaialble online at https://www.eleconomista.com.mx/economia/En-el-2020-plataformas-digitales-dejaron-8663-mdp-de-recaudacion-20210510-0114.html.
[52] "Plataformas de streaming apoyan aumento de impuestos, usuarios absorberán costo" (Streaming platforms support tax increase, users will absorb cost), *Expansión*, 7 September 2021, available online at https://expansion.mx/tecnologia/2021/09/07/impuesto-streaming-mexico-usuarios-absorberan-costo.

Digital Competition and Antitrust Policy

In Mexico, like in other parts of the world, the study, regulation, and implementation of economic competition and anti-monopoly policies in digital markets have been carried out with delay. The network economy characteristics of digital platforms and the lack of regulation for decades have allowed digital platforms to achieve exponential growth and market dominance, which had economic and social effects on other companies and consumers. In Mexico, one of the factors that further delayed the adoption of regulations was a series of conflicts and rivalry between two regulatory authorities that have some competencies in the field.

The regulators with various powers in digital competition and digital antitrust policy in Mexico are the Federal Telecommunications Institute (IFT) and the Federal Competition Commission (Cofece) whose competences in those areas were brought about by the constitutional reform of the telecommunications sector carried out in 2013[53].

In October 2020, the IFT launched an investigation into whether there are any barriers to competition in the market of internet search engines, social networks, mobile operating systems, cloud computing services, and other services.
However, it halted its investigation when Cofece requested the Federal Judiciary (PJF) to decide which of the two agencies was legally competent to take such action. Previously, a similar jurisdictional conflict had occurred in the case regarding the acquisition of the shopping delivery platform Cornershop by Uber, a rideshare app[54].

[53] IFT. (2021). OTT digital platforms. December, https://www.ift.org.mx/sites/default/files/contenidogeneral/competencia-economica/plataformasdigitalesott.pdf, p. 87.
[54] Rodrigo Riquelme, "Cofece analizará mercados digitales; IFT se queda con sistemas operativos móviles, según el Poder Judicial" (Cofece will analyze digital markets; IFT sticks with mobile operating systems, according to the Judiciary), *El Economista*, 18 June 2021, available online at https://www.eleconomista.com.mx/empresas/Cofece-analizara-mercados-digitales-IFT-se-queda-con-sistemas-operativos-moviles-segun-el-Poder-Judicial-20210618-0051.html.

The Federal Law of Economic Competition (LFCE) stipulates that if the Institute and the Commission cannot reach an agreement, the PJF is to be required to resolve the conflict. In both cases, the tribunal's argument was that the use of the internet as a general-purpose technology (similar to electricity) by different players in different markets does not automatically grant any of the two regulators the absolute power to regulate them. Such cases thus, the tribunal said, must be studied on a case-by-case basis. In the Uber-Cornershop case, the PJF decided that Cofece was the right regulator to decide on the matter given that the two involved parties competed in the service intermediary market, not in the telecommunications market[55]. In the second case, the PJF decided that Cofece was the regulator competent to investigate the markets of online search services, social networks, and cloud computing services whereas the IFT was competent to investigate the market of mobile operating systems[56]. On the other hand, OTT platforms, because they compete in the telecommunications and broadcasting sector, fall under the IFT's jurisdiction.

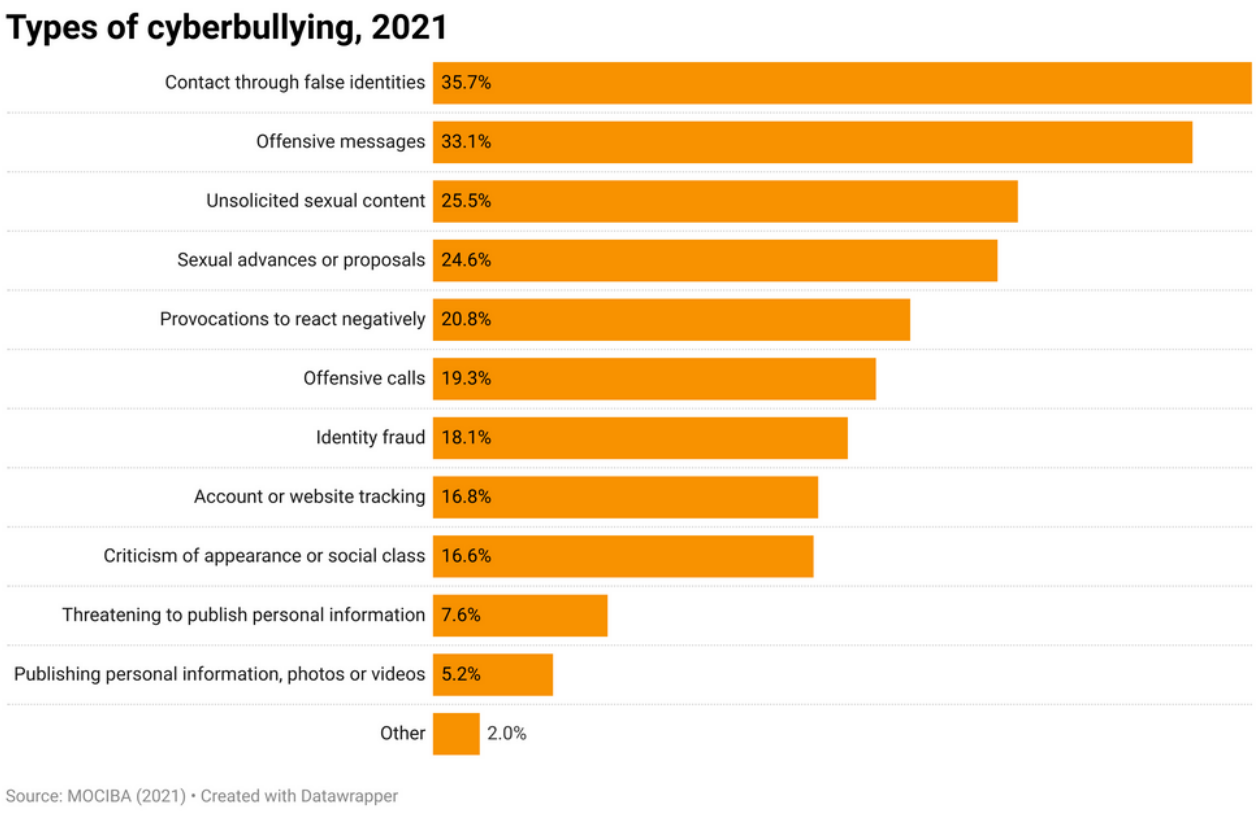
There are ongoing Investigations of digital markets by the two regulatory authorities, including one conducted by Cofece onto the purchase and sales of retail goods online, first investigation of digital markets covering "essential inputs"[57].

[55] Cofece. (2020). Jurisdictional Competition of technological platforms: the case Uber-Cornershop. July. https://www.cofece.mx/wp-content/uploads/2020/07/art-Cornershop-24julio2020.pdf
[56] Cofece. (2021). The Judiciary of the Federation resolves that Cofece is the competent authority to know about the markets for online search services, social networks and cloud computing. June 18. https://www.cofece.mx/el-poder-judicial-de-la-federacion-resuelve-que-la-cofece-es-la-autoridad-competente-para-conocer-de-los-mercados-de-servicios-de-busqueda-en-linea-redes-sociales-y-de-computo-en-la-nube/
[57] Cofece. (2022). Cofece investigates possible barriers to competition and essential inputs in the retail e-commerce market. March 31. https://www.cofece.mx/investiga-posibles-barreras-a-la-competencia-en-comercio-electronico-minorista/

Cyberbullying

Cyberbullying is defined as "an intentional act, either by an individual or a group, aimed at harming or molesting a person through the use of information and communication technologies (ICT), specifically the internet"[58], according to the National Institute of Statistics, Geography, and Informatics (INEGI), which has been analyzing cyberbullying since 2015 as part of the Cyberbullying Module project (MOCIBA)[59]. Cyberbullying has harmful psychological, moral and economic effect, even leading to suicidal tendencies in the victims.

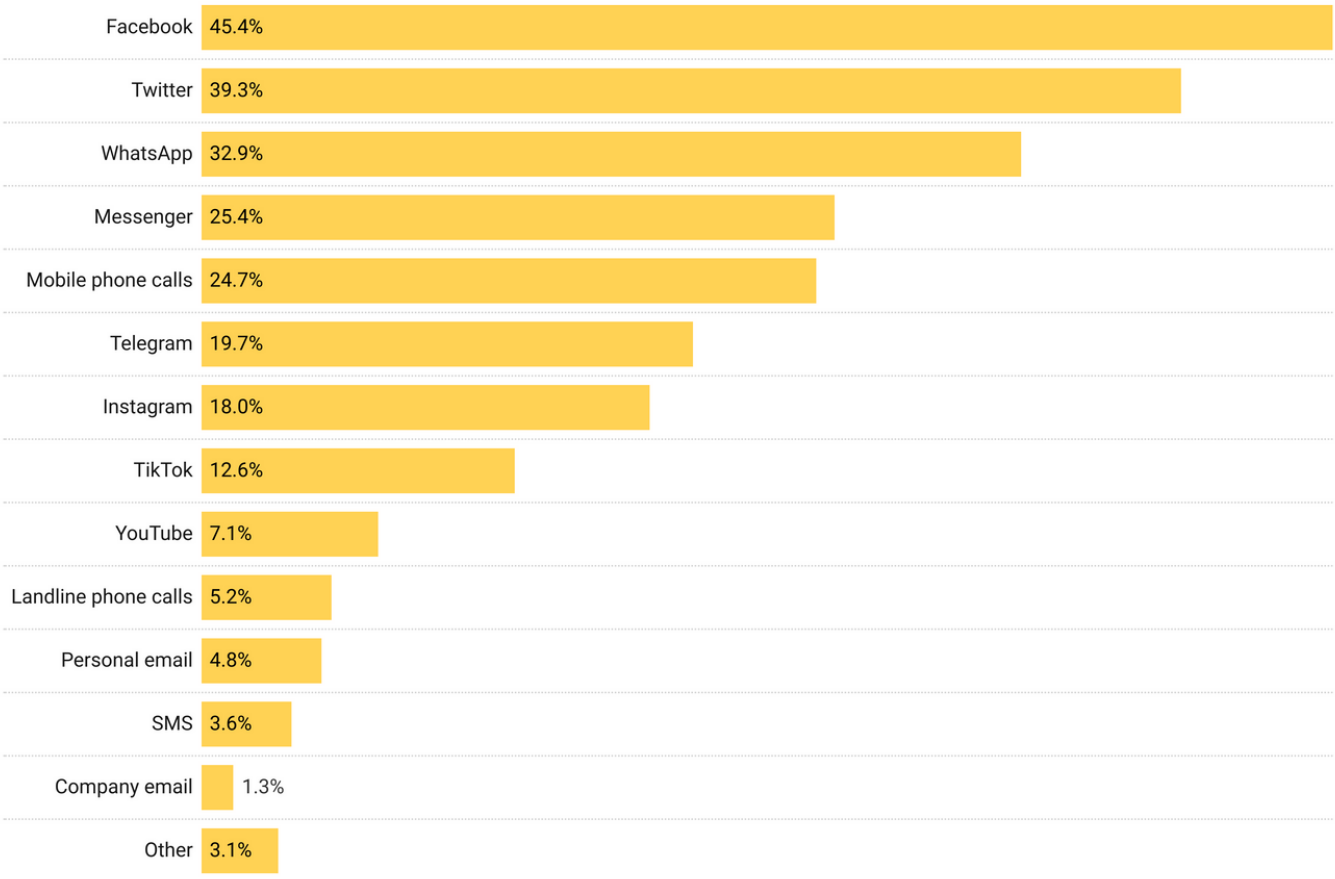
According to data from MOCIBA, 21.7% or 17.7 million people over the age of 12 who used the internet in 2021 were victims of cyberbullying. Eight million of them were men, with the age groups of 20 to 29 years old and 12 to 19 years old being the most vulnerable. The 50 to 59 years old group was the least vulnerable to cyberbullying. These figures show that the majority of cyberbullying victims are young women. Some 59% of the victims were attacked by strangers and 23% by acquaintances.



[58] MOCIBA. (2021). Module on Cyberbullying, main results 2021. https://www.inegi.org.mx/programas/mociba/2021/, p. 2.
[59] MOCIBA. (2021). Module on Cyberbullying, cit.

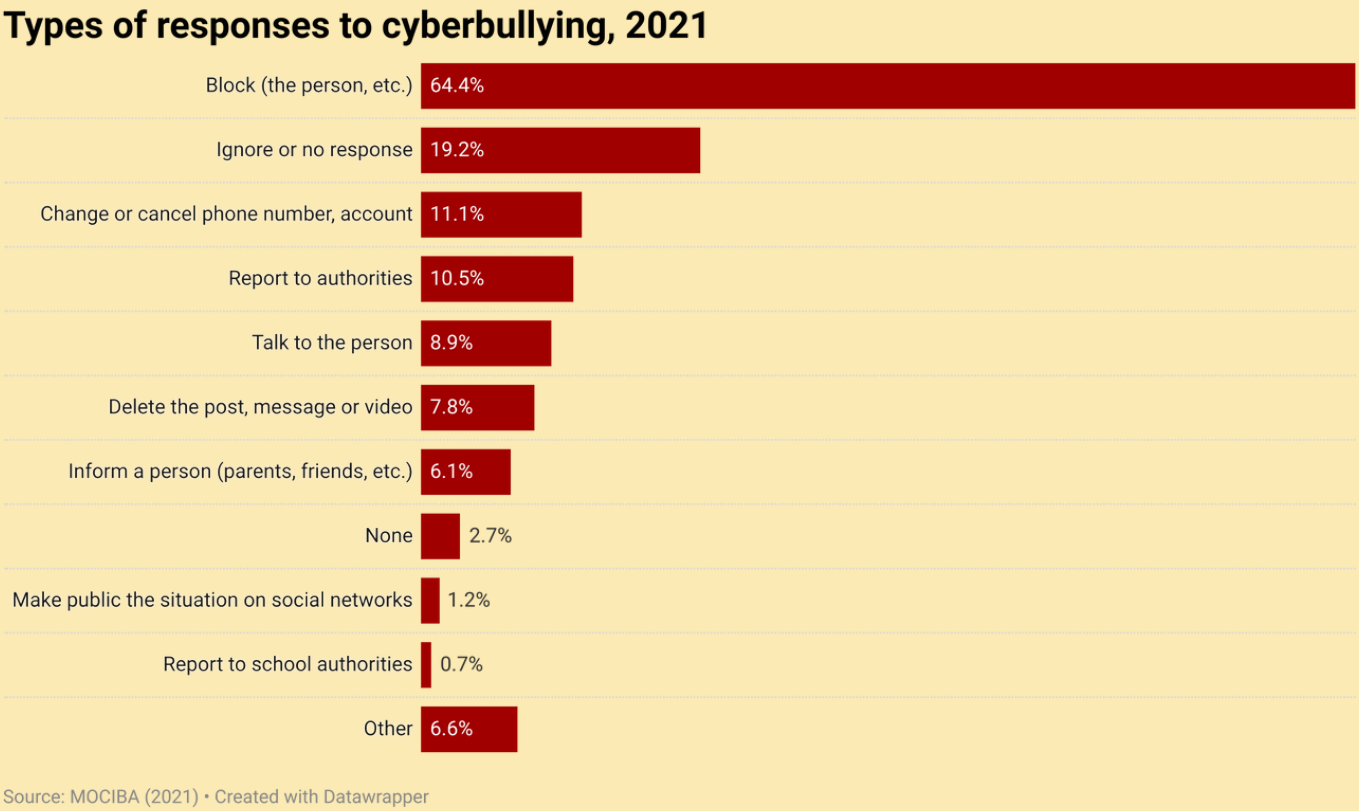
The main emotional effects caused by cyberbullying on the victims were anger, distrust, fear, insecurity, stress, frustration, and anxiety.

The most common platforms for cyberbullying, 2021



Source: MOCIBA (2021) • Created with Datawrapper

The majority of victims experienced cyberbullying on digital communication platforms such as Facebook and Twitter. They were followed by WhatsApp and phone calls. In response, most victims blocked the person, account, or page of the harasser or chose to ignore them or not respond. Only 10% of the victims reported the incident to the authorities, police, or service providers.



In Mexico, the crime of cyberbullying itself is not regulated, but there are legal possibilities to prosecute such crimes. The Supreme Court of Justice of the Nation has recognized cyberbullying as a criminal offense and has instructed "state congresses to amend their legal frameworks to include these behaviors"[60]. That was partially achieved through the amendment of the General Law on Women's Access to a Life Free of Violence and the Federal Criminal Code in June 2021. Known as the Olimpia Law, those amendments criminalize the violation of sexual intimacy through the unauthorized dissemination of intimate or sexual images of a person. The punishment for this offense is three to six years in prison and a fine calculated as 500 to 1,000 Units of Measurement and Update (UMA), an accounting unit or reference that determines the assigned value of various payment obligations as nailed down in federal and state laws. In 2023, the UMA was worth MXN 103.74 (or MXN 3,153).

[60] Luis Miguel González and Diego Badillo, "SCJN avala tipo penal para castigar ciberacoso" (SCJN endorses criminal type to punish cyberbullying), *El Economista*, 29 October 2021, available on;ien at https://www.eleconomista.com.mx/politica/SCJN-avala-tipo-penal-para-castigar-ciberacoso-20211028-0129.html.

The same law, which stipulates that victims are entitled to protection orders, can be used to order owners of social media, digital media, and any individual to remove incriminated images, audios or videos[61]. Similarly, it also puts forward a series of sanctions against the use of social media to disseminate content that threatens the integrity, security, and self-esteem of women and girls.

Nevertheless, a substantial number of cyberbullying victims are male, which requires other legal provisions. One could be the set of guarantees against cyberbullying in the General Law on the Rights of Girls, Boys, and Teenagers. Crimes motivated by prejudice or that violate personal dignity are addressed in the Federal Penal Code and a few state penal codes (yet not in all of them).

Despite all these legal tools though, the adoption of a comprehensive body of legal provisions that would exhaustively cover the wide array of types of digital violence is still pending. In this context, there is a public debate in Mexico about the need to regulate social networks instead of allowing self-regulation when it comes to issues such as harmful content, misinformation and hate speech. This debate involves citizens, civil organizations, the government, companies, and international organizations[62].

[61] Maritza Pérez, "Cámara de Diputados avala la Ley Olimpia; se remite al Ejecutivo" (Chamber of Deputies endorses the Olimpia Law; forwarded to the Executive), *El Economista*, 30 April 2021, available online at https://www.eleconomista.com.mx/politica/Camara-de-Diputados-avala-la-Ley-Olimpia-se-remite-al-Ejecutivo-20210429-0118.html.
[62] Ver Álvarez, C.L., Brant, J. and Gómez, R. (2021). Moderación de contenidos en Internet y protección de la libertad de expresión en redes sociales. UNESCO-OBSERVACOM.

Technology and Journalism

Selective Surveillance

In Mexico, various governments, both at state and federal level, as well as private companies, have used surveillance technology against journalists, politicians, activists, and human rights defenders[63]. The most notorious case, which had a global impact, involved the use of spyware software known as Pegasus, which, installed on mobile phones and other communication devices, enables complete control over the device by a third-party. All that is required is a person's phone number to gain access to their mobile phone. Pegasus allows access to encrypted messaging applications such as WhatsApp and Signal as well as activation of microphones and cameras.

Pegasus was first detected in August 2016 by researchers from Citizen Lab at the University of Toronto. That same year, the first case of cyber espionage in Mexico, an attack targeting a group of activists and academics supporting the introduction of a soda tax, became public. In collaboration with R3D and Article 19, the activists turned to Amnesty International and Citizen Lab to verify the surveillance attempt. These efforts led to a report that presented the details of the government's spying[64].

It was later uncovered that the Pegasus software was acquired by security bodies of the Mexican State including the National Army, the Attorney General's Office and the Center for Investigation and National Security (CISEN), during the tenures of the presidents Felipe Calderón Hinojosa, Enrique Peña Nieto and Andrés Manuel López Obrador[65].

[63] "Destapa la vigilancia: promotores del impuesto al refresco, espiados con malware gubernamental" (Uncover surveillance: soda tax promoters spied on with government malware), *R3D: Red en Defensa de los Derechos Digitales* (blog), 11 February 2017, available online at https://r3d.mx/2017/02/11/destapa-la-vigilancia-promotores-del-impuesto-al-refresco-espiados-con-malware-gubernamental/; "Gobierno espía. Vigilancia sistemática a periodistas y defensores de derechos humanos en México" (The government spies on. Systematic surveillance of journalists and human rights defenders in Mexico), *R3D: Red en Defensa de los Derechos Digitales* (blog), 19 June 2017, available online at https://r3d.mx/2017/06/19/gobierno-espia/; Sonia Corona, "El Ejército mexicano compró en 2019 Pegasus para espiar a activistas y periodistas" (The Mexican Army bought Pegasus in 2019 to spy on activists and journalists), *El País*, 2 October 2022, available online at https://elpais.com/mexico/2022-10-03/el-ejercito-mexicano-compro-en-2019-pegasus-para-espiar-a-activistas-y-periodistas.html.
[64] R3D, "Destapa la vigilancia...", *cit.*
[65] R3D, "Gobierno espía...", *cit.*; R3D, "Destapa la vigilancia..." *cit.*; Corona, "El Ejército mexicano...," *cit.*; Mathieu Tourliere, "El caso Pegasus no avanza ni con la 4T" (The Pegasus case does not advance even with the 4T), *Proceso*, 19 June 2022, available online at https://www.proceso.com.mx/reportajes/2022/6/23/el-caso-pegasus-no-avanza-ni-con-la-4t-288306.html.

It was later revealed that Pegasus had been used to spy on journalists such as Carmen Aristegui who led a investigation into Enrique Peña Nieto's White House affair; Carlos Loret de Mola, who reported on potential extrajudicial executions by the Army in Tanhuato; human rights defenders from the ProDH Center for their participation in an investigation of the Ayotzinapa case; and executives of civil initiative groups such as Mexicans Against Corruption as well as politicians like the then opposition leader and now president, Andrés Manuel López Obrador, and his family, among others[66].

The characteristics of the "anchor" messages used to break into phones are similar, the assumption being that they originated from the same source. A pattern in the Pegasus surveillance case was found: people were targeted with the software when they spoke openly and critically about governments or revealed information that could be detrimental to the interests of the ruling parties and authorities, particularly at the federation level. Citizen Lab's forensic experts explained that the precise source of espionage could not be identified[67]. Undoubtedly though the privacy and freedom of expression of journalists and activists were grossly violated in what Amnesty International has called a case of selective surveillance[68]. A total of 88 text messages with malicious links to the Pegasus infrastructure all targeting journalists and human rights defenders were documented in 2015-2016[69].

Although #Guacamaya, a civil society group, revealed that the Mexican Army used Pegasus to hack into people's phones, the surveillance continued at the time this report was written in March 2023[70]. President López Obrador said that his government gave no one instructions to spy on opponents or journalists, dismissing evidence of a hacking ase as apocryphal[71].

[66] Elías Camhaji, "López Obrador y su familia fueron blanco del aparato de espionaje telefónico del Gobierno de Peña Nieto" (López Obrador and his family were targeted by the Peña Nieto government's telephone spying device), *El País*, 19 July 2021, available online at https://elpais.com/mexico/2021-07-19/lopez-obrador-y-su-familia-fueron-un-blanco-del-aparato-de-espionaje-telefonico-del-gobierno-de-pena-nieto.html.
[67] Scott-Railton, John, Bill Marczak, Bahr Abdul Razzak, Masashi Crete-Nishihata, and Ron Deibert, "Reckless Exploit: Mexican Journalists, Lawyers, and a Child Targeted with NSO Spyware," Citizen Lab Research Report No. 93, 19 de junio de 2017, University of Toronto.
[68] Amnesty International. How Your Phone Can Be Weaponized Against You, 2022. https://www.youtube.com/watch?v=8r8MkMfvaPU.
[69] R3D, "Gobierno espía...," *cit.*
[70] Corona, "El Ejército mexicano...", *cit.*; Zedryk Raziel, "El Ejército mexicano espió con Pegasus al activista Raymundo Ramos para interferir en una investigación sobre ejecuciones extrajudiciales" (The Mexican Army used Pegasus to spy on activist Raymundo Ramos to interfere in an investigation into extrajudicial executions), *El País* México, 7 March 2023, available online at https://elpais.com/mexico/2023-03-07/el-ejercito-mexicano-espio-con-pegasus-al-activista-raymundo-ramos-para-interferir-en-una-investigacion-sobre-ejecuciones-extrajudiciales.html.
[71] Presidencia de la República, "Acciones de inteligencia, orientadas a atender amenazas y riesgos a la seguridad nacional". 23 de marzo de 2023. https://www.gob.mx/presidencia/prensa/acciones-de-inteligencia-orientadas-a-atender-amenazas-y-riesgos-a-la-seguridad-nacional

Given the Mexican Army's long history of human rights abuses and its increased power under the current administration, this issue merits further investigation. If the case is proven to be true, it means that, as commander of the armed forces, López Obrador "either knew about surveillance and tolerated it [...] or his own subordinates disobeyed him [...]", both scenarios being "terrible"[72]. The Office of the Attorney General of the Republic, which is supposed to be an independent body, has not made any progress on the complaints regarding the Pegasus case[73].

Surveillance and espionage practices persist in Mexico despite evidence of how they infringe on human rights, particularly those of journalists. The Pegasus case is emblematic for the much bigger scope of government surveillance on journalists and media. Moreover, there are many other cases involving state governments and other software companies that have not been documented in such detail but are equally concerning[74].

Lack of Information: The Case of Silenced Zones

There are areas in Mexico that have been designated as "silenced zones" by the Inter-American Commission on Human Rights (IACHR). They are towns, cities, municipalities, and even states where media and journalists are unable to carry out their work due to the physical and psychological violence exerted upon them by criminal groups[75]. There is no in-depth research on Mexico's silenced zones. However, the IACHR identified Tamaulipas as such an area. NGOs such as Reporters Without Borders (RSF) added Veracruz, Sinaloa, and Guerrero to the list[76].

[72] Natalie Kitroeff and Ronen Bergman, "Espionage by the Mexican Army Sparks Fears of a 'Military State'", *The New York Times*, 7 March 2023, available online at https://www.nytimes.com/es/2023/03/07/espanol/espionaje-ejercito-pegasus-mexico.html
[73] Tourliere, "El caso Pegasus no avanza...," cit.
[74] See, for example, Luis Herrera, "Sin rastro del uso del software Galileo para espionaje" (No trace of the use of Galileo software for espionage), *Reporte Indigo*, 27 July 2021, available online at https://www.reporteindigo.com/reporte/sin-rastro-del-uso-del-software-galileo-para-espionaje/.
[75] CIDH, "Zonas silenciadas: Regiones de alta peligrosidad para ejercer la libertad de expresión", Relatoría Especial para la Libertad de Expresión de la Comisión Interamericana de Derechos Humanos (México: Comisión Interamericana de Derechos Humanos (CIDH), 2017).
[76] Héctor De Mauleón, "Las zonas silenciadas de México" (The silences zones of Mexico), *El Universal*, 29 August 2017, available online at https://www.eluniversal.com.mx/columna/hector-de-mauleon/nacion/las-zonas-silenciadas-de-mexico.

Criminal groups use two methods to exert pressure on media and journalists. One is plain violence against media companies and journalists to prevent journalistic work from being carried out in certain areas. The second is to convince media and journalists to refrain from publishing information about criminal activities or to publish information that favors a specific gang or cartel.

Silenced regions compromise the freedom of expression of media outlets and journalists. They also violate the rights of their citizens because in these areas people face serious obstacles in freely expressing their ideas and receiving information.

Fake News and Disinformation

In Mexico, like in most countries around the world, fake news has gained greater visibility in the last decade. As a response to the proliferation of false narratives, various projects and initiatives have been designed by journalistic outlets, civil society groups and government bodies, many of which are focused on fact-checking. However, in a highly polarized political environment, combating the fake news phenomenon is extremely complicated. Three such initiatives seem to have played an effective role in fighting disinformation.

El Sabueso is a speech verification project launched in 2015 by Animal Político (Animalpolitico.mx), a native digital media outlet that aims to create content "with rigor, precision, and intended to serve citizens." El Sabueso has a general coordinator and seven editors who are dedicated to fact-checking information circulating in the public sphere. Their methodological strategy has been inspired by similar projects such as Politifact in the U.S. and Chequeado in Argentina. El Sabueso has thus far analyzed a bevy of controversial topics concerning the federal administrations as well as electoral campaigns and health emergencies (such as the Covid-19 pandemic).

Another example is the Verificado MX project, which was founded in Mexico City following the havoc caused by the earthquakes that occurred in 2017. At that time, the project was called Verificado 19s, and its objective was to debunk and expose the misinformation that was generated after the ravage caused by the earthquakes.

The initiative was successful and hence extended to cover the 2018 electoral campaigns in which the president of Mexico was elected, the two federal chambers were renewed along with governorships of several states and hundreds of heads of municipalities. During the elections, Verificado MX turned into a collaborative project that was joined by media outlets such as Animal Político, AJ+Español, Pop Up, Newsroom, Newsweek, NGOs such as Mexicanos Contra la Corrupción y la Impunidad, and tech platforms including Facebook, Twitter and Google[77]. This collaborative model was inspired by two similar initiatives, Electionland and Crosscheck, developed in the U.S. and France, respectively[78]. During the 2018 electoral campaigns, Verificado MX analyzed around 400 news articles using the El Sabueso methodology. When the electoral campaign ended, Verificado MX folded.

The third project is Verificado.com.mx. Although it has a similar name to the previous project, it is a different initiative founded in 2017 by journalists Daniela Mendoza, Liliana Elósegui and Deyra Guerrero. Today it is carried out by a group of seven women journalists who have come together to work on fighting disinformation. They believe that their work is necessary to identify in the large amount of sources and data that circulate in the public sphere the news content, events and statements that are real and worth using, commenting on, and redistributing. Verificado seeks to provide citizens and journalists with reliable and trustworthy information that can be consulted on its website. Additionally, it also offers training to journalists[79]. Verificado disseminates its information on its website, but also on social media networks such as Twitter. On its site, Verificado has fact-checked issues such as speeches and the morning conference of the President López Obrador; the Covid-19 pandemic; abortion and feminist demonstrations; and electoral processes of 2018 and 2021, among other topics[80].

Although some anti-disinformation initiatives provide useful and accurate data and facts, the info-sphere is also populated by initiatives claiming to play a role in informing the society that, however, use dubious methodologies or have a visible political bias. The federal government has been running its own fact-checking initiatives such as InfodemiaMX or the “Who is who in the lies” section of its morning press conference where news content is reviewed and data from media or messages on social media that the government considers to be false are analyzed.

[77] Belén Arce Terceros, “Verificado 2018: un ejemplo de periodismo colaborativo en las elecciones mexicanas” (Verified 2018: an example of collaborative journalism in the Mexican elections), International Journalists’ Network (IJNet), October 2018, available online at https://ijnet.org/es/story/verificado-2018-un-ejemplo-de-periodismo-colaborativo-en-las-elecciones-mexicanas; Eréndira Reyes, “El futuro de VerificadoMX después de las elecciones” (The future of VerificadoMX after the elections), Expansión, 27 June 2018, available online at https://expansion.mx/tecnologia/2018/06/27/el-futuro-de-verificadomx-despues-de-las-elecciones.
[78] Magallón Rosa, R. (2019). “Verificado México 2018. Desinformación y fact-checking en campaña electoral”, Revista de Comunicación 18:1 (20 March 2019): 234–58, https://doi.org/10.26441/RC18.1-2019-A12.
[79] “Verificado.com.mx: Saber buscar primero, para después poder verificar” (Verificado.com.mx: Know how to search first, so that you can verify later), SembraMedia (blog), 5 April 2020, available online at https://www.sembramedia.org/casos-de-estudio/caso-de-estudio-verificado-com-mx/.
[80] “Falso y engañoso el discurso de 4º Informe de Gobierno” (False and misleading: the speech of the 4th Government Report), *Verificado* (blog), 2 September 2022, available online at https://verificado.com.mx/falso-y-enganoso-discurso-4-informe-de-gobierno/.

These initiatives have been criticized for spreading disinformation, and discrediting and attacking journalists and media owners[81].

A solid assessment of the information resilience in Mexico is needed to understand the problems posed by disinformation and its social impact, and to find effective strategies to fight disinformation. Such an assessment is also needed for effective regulations of the issue, but above all, to promote a healthy public sphere anchored in truthful information. To be able to achieve that, the responsibility of internet platforms, traditional media, non-governmental organizations, and politicians in the dissemination of fake news needs to be properly understood.

[81] Article 19, "(Des)Información oficial y comunicación social" (Official (dis)information and social communication), 14 March 2023, available online at https://articulo19.org/desinformacion-oficial-y-comunicacion-social/.

Conclusions

The technological and economic components of deploying telecommunications infrastructure are vital to build a plural public space and to ensure human rights for Mexicans. Therefore, these infrastructures and the adjacent sectors cannot be governed solely by market rules. Instead, the Mexican government should regulate and moderate the national institutions in order to ensure, among others, the universal access of the services in the field of telecoms, the diversity of the actors and the plurality of the voices of the public.

There are also alarming levels of concentration in different areas related to communications, media and the Internet (such as browsers, search engine, operating system, social networks). This concentration results in considerable and significant control, management, and use of data and information by the major global players, almost all of whom are of American origin. This gives them a privileged status to earn economic profits on a global scale, as well as political capital in a great number of countries throughout the world.

Mexican journalism, in this milieu of technological and convergent change, confronts a variety of challenges but simultaneously has many opportunities. On one hand, there are chances to access previously unthinkable sources of confidential information that reveal the power of both private and public entities, thereby aiding in the development of a robust public sphere. Conversely, certain tools and spyware pose a threat to journalistic work. Moreover, the involvement and dominance of major platforms in the advertising sector has resulted in many small journalistic firms being in jeopardy, making it harder for them to attain primary funding sources.

For more information about the project:
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