



A History of the Monopolization of Pay Television in Mexico

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Abstract

The purpose of this article is to discuss the monopolization of pay television in Mexico that occurred as part of a larger process of broadcast television development and economic modernization that began in the 1950s. From the start, large corporations played a significant role in pay television services, and this became clearer as pay television extended throughout the country. And, capitalist monopolization developed in three stages to the present day. In my account of this process, I investigated the scant scholarly literature on the subject, collated data on pay television licenses, and examined annual reports and other information from several companies involved in the provision of this service. At present, only three large corporations control the substantive part of Mexico's television market. Yet, the possibility exists that ownership will become even more concentrated in the future.

From the beginning of the 1950s, industrialization and modernization of the Mexican economy enhanced the power of a ruling oligarchy that had its roots in old and new industries, trade, and services. Within communications and media, the main feature of this modernizing stage was the appearance of television. In 1950, Mexico became the first country in Latin America to offer an open television service. Despite difficulties in early development, it eventually became the cornerstone of the media industry. Television's influence extended to artistic, cultural, ideological, and political spheres. By 2019, open television had reached 95% of Mexican homes (Instituto Federal de Telecomunicaciones, 2020a: 11). In 1957, in the northern city of Nogales, a license was granted to Mario de la Fuente to provide a new service: cable television. Mexico became a Latin American pioneer in the distribution of television signals over physical lines, which allowed viewers to pay for subscription programmes. By 2020, this service had reached 18.1 million subscribers which represented 58% of the country's households (Instituto Federal de Telecomunicaciones, 2020b). Pay television is an important source of revenue for media companies in Mexico. In the case of Televisa (2021: 38-39), for example, two pay TV networks (Izzi and Sky) contributed 77% of domestic market revenues in 2020. Revenues for Megacable (2021: 10), the second-largest pay TV group in Mexico totalled 22. 4 billion pesos. Televisión Azteca (2021: 16), the second most important free-to-air television company in the country, billed 10.7 billion pesos.

Concentration and Centralization

Concentration entails the growth of individual capitals by reinvesting that part of surplus value that is not consumed. In the end, this represents "the basis of production on a large scale and of the specific methods of capitalist production" (Marx, 1872/1977: 777). Centralization refers to a different process: "It is the concentration of capitals already formed, the destruction of their individual independence, the expropriation of capitalist by capitalist, the transformation of many small into few large capitals" (Marx, 1872/1977: 778). This way, capital maintains a tendency toward an ever-growing scale of operation; large masses of constant and variable capital are accumulated and organized under a single command.

The large modern enterprise is a functional form that organizes such capital. Following Chandler's basic definition (1996) and drawing from Baran and Sweezy (1988), it is characterized by the following key features: the operation of large, interrelated units of production, trade, and/or services; the amassing of large labor forces that are subordinated to a single command; the varied offerings of products or services; and the establishment of holdings in a multiplicity of localities and countries. The largest enterprises are multinational corporations which maximize profit through multiple structures of vertical and horizontal integration, alongside the development of various financial operations. Such entities also have the capacity to restrict or eliminate the market mechanism by administering pricing.

Pay television in Mexico emerged when the Mexican economy was becoming dominated by monopolies during the 1950s. Individual entrepreneurs and their families made the first investments in pay television. However, its functional organization gradually moved towards joint-stock companies, which displaced the primacy of family companies. Looking at Table 1, from the 31 concessions granted between 1955 and 1972, 22 were granted to joint-stock companies.

At this point, it should be explained that *pay television*—also known as restricted television—refers to an audiovisual service whereby a contracting party pays a fee to the provider. This service was made available through different networks. Their order of appearance in Mexico can be listed as follows: cable, microwaves (MMDS), satellite, and internet protocol (IPTV).

In the case of pay television, the formation of a "natural monopoly" of sorts was common, since only one license would usually be granted per locality. At least that was what prevailed in Mexico until 1979, when the government opened the possibility of granting two or more concessions in a single community (Secretaría de Comunicaciones y Transportes, 1979: 14). Nonetheless, beyond this practice, the concessions became monopolized with the arrival of large capitalist interests, either because they gradually accumulated several licenses for the service of pay television or because they belonged to groups elsewhere in the economy that wanted to diversify.

Studies about the history of pay television in particular are sparse in the academic literature, although there are some general works that account for its origin and development, of which García Calderón's pioneering book (1987) stands out. Later, Crovi Druetta's work (1990) would follow Calderón's path. Subsequent essays have been written about pay television generally, including those by Sevilla (1998) and Mejía Barquera (1993). But it was not until 2010 that the concentration of the Mexican pay TV market was addressed (Gómez and Sosa Plata, 2010).

This article is based on the findings of these works and the recovery of information about the companies, their foundation, the business owners involved, and the statistical information that enables us to layout the indicators of concentration in the pay television market, at different stages of development. Additionally, we systematize the information provided by a database put together by the

Instituto Federal de Telecomunicaciones [Federal Institute of Telecommunications] (2018) of the 1,118 concessions granted between 1993 and 2018. This data was complemented with the information provided by Diario Oficial de la Federación [Official Journal of the Federation] (Secretaría de Gobernación, 2019), which includes 240 additional licenses. Finally, we draw from the companies' websites, their annual reports, and newspapers and magazine articles in order to gather more information.

The Initial Years: 1955-1972

From the mid-1950s, the Mexican economy entered a phase of high and sustained growth, undergirded by external stability—the exchange rate between the Mexican peso and the dollar remained unchanged for a long period. There was low inflation, sustained by fast industrialization and urban growth. This period is colloquially known as Stabilizing Development or, as others have called it, the "Mexican Miracle."

Broadcast television services had begun operating in 1950, and in 1957 the first pay license was published in the *Official Journal of the Federation* (Secretaría de Comunicaciones y Obras Públicas, 1955: 4-5). A cable television service was offered in the city of Nogales (Sonora state), adjacent to the United States-Mexico border. In addition, it must be acknowledged that, thanks to the development of the electrical coaxial cable [1], the minimal technical conditions needed to launch cable television services had already been consolidated, and that the number of TV shows was gradually increasing.

The new service started to distribute the signals of one Mexican TV broadcast channel and six other TV broadcast channels from the United States, a pattern that would be repeated in the case of virtually all the concessions granted during that first phase, that is, between 1955 and 1972. Thanks to this license, Mexico would become the first country in Latin America to have a cable television connection (Carbonell León, 2005: 21). Nevertheless, in general terms, the television service progressed slowly due to low levels of electrification in households, the high cost of television sets, and a legal regime that hindered the advancement of competitors in order to protect the monopoly player of broadcast television: Telesistema Mexicano (Vidal Bonifaz, 2019).

In 1950, the open television service was launched under a regulation consisting of only four articles (Secretaría de Comunicaciones y Obras Públicas, 1950: 5-6). This way, concessions for open television were granted according to the commitment of each businessman and their capacity to negotiate with the government. Because of this, the interests of the Azcárraga, O'Farrill, and Alemán families (Telesistema Mexicano) prevailed in the field of broadcast television.

In the case of cable television, the underdevelopment of electrification, the high prices of television sets, and the fact that it was a paid service restricted its evolution. By the end of 1972, 31 cities had been connected (see Table 1), but there were only 31,000 subscribers (Mercamétrica Ediciones, 1995) within a population of nearly 50 million. At this stage, transmission via cable was practically the only pay television service, and it was on this basis that the first enterprises in this field began to emerge, and economic groups started to form.

Mario de la Fuente became the pioneer businessman in the industry due to the license he had obtained to operate in Nogales. Of others, we find: the Tinajero-Harper family [2] that inaugurated the service in Piedras Negras (Coahuila) in 1962; Raúl González Lozano, in Ciudad Acuña (Coahuila) in 1964, and Alfonso Tamés in Monterrey, Nuevo León. (Carbonell León, 2005: 22). Only the Tinajero family eventually managed to consolidate a pay television business group: Cablecom (see Table 1).

Table 1. Mexico: licenses for the service of pay television 1955–1972

Year	Licensed party	City	State
1955	Mario de la Fuente Flores	Nogales	Sonora
1962	Hite L. Harper 1/	Piedras Negras	Coahuila
1962	Televisión Internacional, S.A. de C.V. 2/	Monterrey	Nuevo León
1964	Raúl Rosendo González Lozano	Ciudad Acuña	Coahuila
1968	Cablevisión, S.A. de C.V 3/	Ciudad de México	Ciudad de México
1968	Manuel Belmonte Espinosa	Uruapan	Michoacán
1968	Raúl Rosendo González Lozano	Monclova	Coahuila
1969	Rafael Tijerina Carranza	Nuevo Laredo	Tamaulipas
1969	Tele Azteca, S.A. de C.V.	Reynosa	Tamaulipas
1969	Televisión de Sahuayo, S.A. de C.V.	Sahuayo	Michoacán
1969	TV Comunal de México, S.A. de C.V.4/	Valle de Bravo	México
1970	Abraham Kahn Gordon	Cuernavaca	Morelos
1970	Antenas Comunales de Michoacán, S.A.	Zamora	Michoacán
1970	Cablemex, S.A. de C.V.	Ocotlán	Jalisco
1970	Francisco G. Vielma G.	Tula de Allende	Hidalgo
1970	Operadoras de Sistemas de Televisión por Cable, S.A. de C.V.	Hidalgo	Michoacán
1970	Tele Cable Mexicano, S.A. de C.V. ^{5/}	Acapulco	Guerrero
1970	T.V. Cable, S.A. de C.V. 4/	Iguala	Guerrero
1970	T.V. Cable, S.A. de C.V. 4/	Lagos de Moreno	Jalisco
1970	T.V. Cable, S.A. de C.V. 4/	Minatitlán	Veracruz
1970	T.V. Cable de Provincia, S.A. de C.V.	Pachuca	Hidalgo
1970	TV Comunal de México, S.A. de C.V. 4/	Toluca	México
1970	TV Comunal de México, S.A. de C.V. 4/	Zitácuaro	Michoacán
1970	TV Comunal de México, S.A. de C.V. 4/	Guadalajara	Jalisco
1970	Visión por Cable de México, S.A. de C.V.	Tecate	Baja California
1970	Visión por Cable de México, S.A. de C.V.	Tijuana	Baja California
1972	Cable Z, S.A. de C.V.	Zacatlán	Puebla
1972	Cablevisión de Apatzingán, S.A. de C.V.	Apatzingán	Michoacán
1972	Jorge Belmonte Espinosa	Yurécuaro	Michoacán
1972	T.V. Cable de Provincia, S.A. de C.V.	San Andrés Tuxtla	Veracruz
1972	T.V. Cable de Provincia, S.A. de C.V.	Tulancingo	Hidalgo

^{1/} María Concepción Tinajero and Ernesto Tinajero Benavides were also partners.

Source: elaborated with information by Carbonell León (2005) and Diario Oficial de la Federación.

As in the case of broadcast television, pay television services were launched without any specific regulation. These would be issued several decades later. The Mexican government was a key player throughout the history of pay television, since, according to law, the state was the entity that had the power to determine who could provide a pay television service. The state can grant or refuse licenses and, in the period we analyzed, did so by following no particular rule. Interestingly, the Federal Law for Radio and Television had been enacted in 1960 (Secretaría de Gobernación, 1960), but it did not address pay television specifically.

In its first period, family capital and family businesses prospered by offering the new service. However, a tendency towards concentration gradually began to emerge. This trend was driven by the

^{2/} Society owned by Alfonso Tamés.

^{3/} Part of the group Telesistema (Azcárraga Vidaurreta).

^{4/} In relation to Cablevisión.

^{5/} Society owned by Abraham Kahn and the Rivero Azcárraga family.

issuing of licenses to provide the service in the most populated cities of the country (Mexico City, Guadalajara, and Monterrey) and in those with greater consumption of television due to their proximity to the United States (especially in the west and north and in coastal tourist cities). During this period, the group headed by Emilio Azcárraga Vidaurreta managed to become the most important force in Mexican pay television. He had a relevant background in electronic media, where he developed some of the most successful national radio networks. Together with other partners, he became an essential part of the most important monopolistic institution of broadcast television: Telesistema Mexicano.

With this power, Azcárraga took over the cable television license for the most important city in the country (Mexico City) and undertook the development of cable television projects in different parts of Mexico. For this purpose, Azcárraga devised an alliance in which he would provide the programming; the Mexican company Condumex, the coaxial cable, and the American firm Anaconda Electrics, the technology for the design, construction, and operation of cable television systems (Carbonell León, 2005: 31). It should be noted that Anaconda was a partner of Condumex. That alliance got directly involved with the systems developed in Toluca (Estado de México), Lagos de Moreno (Jalisco), and Tula (Hidalgo). Throughout this process, Azcárraga formed a business relationship with TV Comunal de México and TV Cable. Access was thereby provided to a total amount of seven licenses in the same number of cities in the country.

It is not clear whether Telesistema and Condumex were shareholders of the licensed companies, but through the business relationship that was being established, they gained direct influence into, at least, a quarter of all concessions granted by the state before 1972. Thus, everything points to the fact that Telesistema wanted to replicate the method it had followed in the case of broadcast television. This consisted in the installation of several repeater stations for the broadcast channels it had established in Mexico City.

In 1968, Mexico hosted the Games of the XIX Olympiad; and in 1970, the FIFA World Cup. These two events positively influenced the establishment of broadcast television stations in many regions of the country and cleared the path for Telesistema (via Cablevisión) to try to install cable systems in the cities of Puerto Vallarta, San Miguel de Allende, Manzanillo, Ciudad Valles, Ciudad Mante, Tijuana, Ensenada, Tecate, and others in the center of the country [3]. Yet, as Carbonell León (2005: 40) observes,

...the project was not particularly successful...in a period in which it was necessary to climb mountains with poles, antennas, signal strength meters, and televisions; look for a signal, and move to a different hill if there was none; find the appropriate place, do the calculations, adjust the signal...In short, it [was] a monumental task.

It was not clear at this point, whether Cablevisión intended to build the systems for a third party or to operate them itself.

To summarize, in this first stage a hegemonic force was established in the field of pay television: Cablevisión, owned by the Azcárraga family. At the same time, the foundations were laid for the emergence of other interests which would become significant in the future: Ernesto Tinajero Benavides, who would eventually found Grupo Cable TV, commercially known as Cablecom; and the Vielma family, who would later establish Grupo Hevi, a company that operated under the commercial name of Telecable.

The Initial Formation of Pay Television Groups: 1973-1993

The distribution of audiovisual signals via cable was the dominant and virtually the sole technology in the first stage of existence of this service in Mexico. After cable, the Multipoint Multichannel Distribution Service (MMDS) emerged, a system authorized for use in the United States in 1960 (Sevilla, 1998: 441). Then, two new technological alternatives appeared: signal distribution via satellite and through internet protocol. These alternatives will be further discussed later in this article. Along with the emergence of new alternatives to cable, audiovisual content produced with the purpose of being used exclusively by this type of service was a boon for pay television. In 1972, Time Inc. founded Home Box Office (HBO) in the United States to produce and distribute audiovisual content without commercial breaks for subscribers of pay television services in that country (Gregersen, 2019). The content produced by HBO and similar services would help to foster the service of pay television in Mexico.

With regard to pay television via cable in Mexico, even though this had been operating formally for several years, only in the early 1970s did it begin to expand into several urban zones (García Calderón, 1983: 159). Between 1972 and 1976, on average, six localities were incorporated yearly to receive this service (Crovi Druetta, 1990: 4). However, the serious problems facing the Mexican economy in the early 1970s transformed the growth expectations of pay television. And, between 1973 and 1993, two subperiods can be distinguished that would determine the fate of cable television. In the first, between 1973 and 1982, the Mexican economy experienced a clear fall in virtually all indicators. During the second, complementary phase from 1982 to 1993, an intense process of adjustment and reorganization took place within the framework of a neoliberal policy agenda. In this context, the capitalist interests that were involved in pay television rearticulated their strategy.

Initially, in 1973, Telesistema Mexicano, which was the main force in both broadcast and cable television, merged with another company operating in broadcast television: Televisión Independiente de México. The enterprise Televisión Vía Satélite (better known by the acronym Televisa) was thereby created. Subsequently, this company would become a hegemonic force in Mexican television. At the same time, Televisa inherited the control of the major pay television business in Mexico—Cablevisión—which operated in the country's most important city.

All the evidence points to the fact that Televisa sought to expand its pay television operations in several cities and that, thanks to its alliance with Condumex-Anaconda, it managed to establish cable television systems in some locations. Nevertheless, achieving this objective was hampered by decisions from the Mexican authorities that blocked Televisa's expansion project in cable television and which forced Azcárraga to sell most of its assets related to this industry (Carbonell León, 2005: 53). The losses incurred by Cablevisión were located in northwestern Mexico (in the cities of Tijuana, Ensenada, and Tecate). After this, the company focused on diversifying its presence in Mexico City and the surrounding metropolitan area. The population in this region virtually doubled, from 8.8 to 15 million between 1970 and 1990 (Instituto Nacional de Estadística y Geografía, 2015: 1.54).

Government decisions contributed to Televisa's declining status within the pay television market to the extent that, in 1996, Televisa no longer figured as the main consortium (if we measure this indicator in terms subscriber numbers). This can be observed in Table 2.

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Table 2. Mexico: Concentration of subscribers of	/ television i	in the main groups,	1996 (estimated percentage)

Group	Percentage of participation
Visión por Cable ¹	18.21%
Cablevisión ²	15.10%
TV por Cable Nacional ³	9.57%
Televisión Internacional ⁴	4.75%
Video Servicios (Megapo)	4.71%
Cable Administradora ⁵	4.11%
Grupo Hevi ⁶	3.60%
Belmonte	3.42%
Telecable del Centro	3.33%
Others	32.35%
Total	100.00%

- 1. It would later become Megacable.
- 2. A subsidiary of Grupo Televisa.
- 3. It would later become Cablemás.
- 4. A subsidiary of Multimedios Estrellas de Oro.
- 5. Headed by Ernesto Tinajero and the antecedent of Cablecom.
- 6. Headed by Héctor Vielma.

Source: Elaborated with information by Cámara de la Industria de Televisión por Cable, 1996, various pages.

During this period, the power balance among the pay television groups would change. Paradoxically, Televisa had some influence in the reorganization previously mentioned, as it had sold its investments outside of Mexico City to Benjamín Burillo, the director of its subsidiary Cablevision. Burillo planned to create a network of systems throughout the western region of Mexico. With that objective in mind, he brought together a series of businessmen, among whom were Ernesto Tinajero, Alejandro Álvarez Guerrero, José Carral, Roque Chávez, Alejandro Sada, Prudencio López, and Victoriano Olazábal. Together, they established two companies: Vision by Cable de Sonora (Vicason) and Vision by Cable de Sinaloa (Vicasin) (Carbonell León, 2005: 53-54).

To this list, we should add those who would later have a significant role in the development of pay television groups in the country: Ernesto Tinajero, who, as we have already mentioned, would head the foundation of Grupo Cablecom; Alejandro Álvarez Guerrero, who would become the central figure in Grupo Cablemás as well as in Vicasin and Vicason (the starting points for the establishment of Grupo Megacable, Mexico's second most important pay television consortium television today.). In the latter context, Megacable began operations in 1982 under the name of Televisión por Cable in the cities of Guasave, Sinaloa, and Navojoa (in the state of Sonora, northwest Mexico) (Megacable Holdings, 2010: 22). From the multiple documents of the group, it is not clear when exactly Visión por Cable de Sinaloa (Vicasin) and Visión por Cable de Sonora (Vicason) were handed over to the families controlling Megacable, but both companies merged in 1986 under the name of Visión por Cable (Megacable Holdings, 2007: 28).

An important advance of the consortium was the purchase of the license to operate in Guadalajara, Jalisco, in 1992 (Megacable Holdings, 2010: 22). In 1990, it had a population of 2.8 million (Instituto Nacional de Estadística y Geografía, 2015: Table 1.62) and was being consolidated as the second most important city in the country. Simultaneously, the consortium grew with the purchase of licenses in the localities of Tlaquepaque and Tonalá, Jalisco (Megacable Holdings, 2007: 144). These were going through the process of becoming suburbs of Guadalajara. In 1993, the company unified its operations under the new corporate name of Megacable. (Megacable Holdings, 2007: 28). Throughout this process, the group became central to the pay television field (see Table 2).

Hand in hand with Megacable, another important pay television consortium was constituted. Alejandro Álvarez Guerrero was deeply involved in the operation of cable television as the director of Condumex. He was in charge of establishing the alliance with Telesistema to drive the production of coaxial cable and the development of cable systems in the country. He belonged to the group of business owners brought together by the director of Cablevisión to develop pay television in the north of the country. But in 1975, after this project failed, Álvarez Guerrero acquired, on his own, the concessions for the operation of the service in the cities of Tijuana (Baja California), Ocotlán (Jalisco), Ciudad Mante (Tamaulipas) and Ciudad Valles (San Luis Potosi) (Cablemás, a). A year later, National Cable TV was created, a group that concentrated the aforementioned licenses plus the one obtained for the town of Tula (Hidalgo), with Álvarez Guerrero at the helm of the company. The consortium subsequently grew after receiving new licenses and purchasing companies that had networks in operation, such as Cablemex, TV Cable, Vision por Cable de México, Cable de Tula, and Telecable de Chihuahua. (Cablemás, n.d.). By 1996, this growth strategy had resulted in Televisión por Cable Nacional occupying third place in the national market by the number of subscribers.

During the phase we have been discussing, the formation of additional, smaller groups was registered. The case of one operating in Monterrey, the third largest city of the country, stands out. The original license to provide a cable television service had been granted to Alfonso Tamés at the beginning of the 1960s (Carbonell León, 2005: 21). The license ended up in the hands of Grupo Multimedios, who also operated in radio and broadcast television. Multimedios opted to develop its Monterrey franchise until it became the fourth most important pay television group in Mexico.

For his part, Ernesto Tinajero, a pioneer of pay television in the north of the country who had been close to Telesistema in his interest in establishing several franchises, would later develop his own group in various locations. In addition to the original license of Piedras Negras, he acquired concessions in the states of Campeche, Jalisco, and Michoacán, and administered others from third parties (Cámara de la Industria de Televisión por Cable, 1996: 34-35). This allowed Tinajero's enterprise to become the sixth group with particular relevance in the national field of pay television. It later evolved into Grupo Cable TV, commercially known as Cablecom. A similar pattern occurred with Grupo Hevi, founded by the Vielma brothers. They began by building cable television networks for third parties with the company Cable Constructora in 1973 (PRODU, 2000). Later, between 1975 and 1993, they were granted four licenses to provide cable television services in the same number of cities (El Informador, 2009).

Even though a degree of concentration can already be detected, at this stage of cable television development, fragmentation is the prevailing tendency. However, this situation was not unique to the Mexican market. Concentration levels, calculated on the basis of subscriber numbers were similar in the United States: TCI Comunicaciones represented 20.12% of subscribers in 1995, followed, in order of importance, by Time Warner (15.73%), Continental Cablevision (6.55%), Comcast (5.49%), and Cox Communications (5.23%) (Federal Communications Commission, 1998: B-9). Five companies controlled more than half the market. For Mexican pay television services, cable television regulations were not issued until 1979. However, they did not modify the discretionary allocation of concessions that had been operating since the first license was authorized. Further, under the new regulations, the practice of authorizing a single license per geographical area could be modified "when the economic conditions of a population allow it" (Secretaría de Comunicaciones y Transportes, 1979: 14).

In summary, during this period, the main groups of the national pay television market were established. In the next stage, marked by new regulations and by important technical changes, these groups tried to survive or strengthen themselves.

Growth and Regrouping (1994–2018)

This period witnessed a transnationalization of economic operations: the breaking of the trade barriers and the forming of free trade agreements; a shrinkage of state-facilitated economic activity with the advent of privatization; and a decline of the so-called "welfare state." The size, operation, and influence of transnational companies increased, which entailed the loss of labor rights; falls in workers' income, and the expansion of impoverished populations worldwide (Ávila, 2006). The Mexican economy was certainly vulnerable to such trends. Nonetheless, by 2000, Mexico had almost 100 million inhabitants and was experiencing an historic process of urbanization. Eventually, a quarter (26%) of the total population was concentrated in the three largest metropolitan areas: Mexico City, Monterrey, and Guadalajara (Secretaría de Desarrollo Agrario, Territorial y Urbano, Consejo Nacional de Población e Instituto Nacional de Estadística y Geografía, 2018: 56-58). This created potential demand for goods and services provided by the media, including pay television.

Technological advances multiplied the modes of transmission for pay television signals. In addition to traditional cable television and microwave television [4], internet protocol television (IPTV) [5], and direct broadcast satellite (DBS) television entered the home [6]. The arrival of these transmission technologies, especially satellite, ousted cable television from its privileged position, as can be observed in Table 3.

Concept	Absolutes		Relatives	
	1996	2018	1996	2018
Cable	1,024,661	8,316,381	80.9%	37.8%
Satellite	1,104	12,613,693	0.1%	57.4%
Microwaves	241,101	0	19.0%	0.0%
IPTV	0	802,982	0.0%	3.7%
Determinate number	0	249,843	0.0%	1.1%
Total	1,266,866	21,982,899	100.0%	100.0%

Table 3. Mexico: Pay television subscribers by type of access technology

Source: Elaborated with information by the Instituto Federal de Telecomunicaciones, 2020c.

These changes meant that initially designed single-use networks could become multipurpose networks. And, the transmission of audiovisual signals, voice (telephony) and data (internet) signals could be commercialized.

This transformation was also accompanied by adjustments in the regulation of the sector. In 1995, the Federal Telecommunications Act that was issued allowed foreign investors to own up to 49% of the capital of a pay television license. Concessions would be granted by means of a public tender and multiple services would be provided (Secretaría de Comunicaciones y Transportes, 1995: 36, 37-38). Under such conditions, the old licensees of pay television could turn their old license into a new one that would enable them to transmit telephony and internet, in addition to audiovisual signals. This so-called triple play would increase the value of existing concessions as well as those subsequently granted. Under the new regime, the government granted new concessions to old licensees. In the case of cable services, licenses were granted in those cities where a provider already operated, thus breaking the common practice of granting one concession per locality. In the case of satellite television, the first licenses for national coverage were granted.

In summary, between 1995 and May of 2018, 1,428 licenses for pay television were granted (Carbonell León, 2005: 132-144; Instituto Federal de Telecomunicaciones, 2018). In order to assess the

importance of this figure, we should consider the fact that, between 1955 and 1994, only 174 licenses were granted for the different services of pay television (Carbonell León, 2005: 132-144).

The first distribution system of non-cable pay television began operating in 1989, when MVS Comunicaciones group commercialized the Multivisión service using microwaves (MMDS) (MVS Comunicaciones, 2016). MVS Comunicaciones had its origins in the operation of broadcast radio stations before transitioning into television. The heyday of the MMDS service came in 2005, when subscribers amounted to almost 900,000 (16% of the total market). Its presence then declined gradually before virtually disappearing in 2017 (Instituto Federal de Telecomunicaciones, 2020c). Although several concessions were granted for the operation of MMDS systems, MVS Comunicaciones was the only one which thrived (to the extent of ending cable television's three-decade domination).

But the most significant technological development was the arrival of satellite television offerings. These began to be commercialized in 1996, when the Galaxy Latin America company emerged. In Mexico, it operated under the commercial name of DirecTV. As a result of legal changes and international agreements, the new company was constituted by the American company Hughes Communications (60% of the shares), the Venezuelan Grupo Cisneros (20%), the Brazilian Grupo Abril (10%), and the Mexican MVS Comunicaciones (10%) (Carmel, 1996).

The hegemonic enterprise in the field of Mexican television, Grupo Televisa, which was already positioned in the cable television market, also moved into satellite television. For this purpose, it acquired a license to provide this service under the name Sky. The Sky Entertainment company was then founded, with Televisa contributing 30% of the capital. It partnered with the American companies News Corp, Tele-Communications Inc., and the Brazilian Organizacoes Globo (Carmel, 1996).

Some years after, the two new enterprises offered their services, the balance favored Sky. DirecTV decided to abandon the Mexican market (DIRECTV Group, 2006: 12) and its client list was sold to Sky, which would turn into the only national provider of satellite television. In October 2004, Sky closed the aforementioned operation at the cost of 621,000 million pesos (ca. US\$55 million) (Grupo Televisa, 2005: 52). By then, their pay television subscribers exceeded one million, 23.6% of the national market (Instituto Federal de Telecomunicaciones, 2020c). But two years later, MVS Comunicaciones, the group that had taken part in the foundation of DirecTV, announced a new alliance, this time with the American company EchoStar Corporation. Their aim was to provide a satellite television service under the name of Dish México (EchoStar Corporation, 2008). The Mexican enterprise took 51% of the shares and EchoStar the rest (Sarmiento and Barrera Díaz, 2008). The new joint company would grow to the point of becoming the second most important pay television operator, as measured by subscribers (see Table 4).

Table 4. Mexico: Pay television access by group, 2018

Group	Access	Percentage
Grupo Televisa	13,372,697	60.8%
Cable	4,333,458	19.7%
Cablevisión	1,067,652	4.9%
Cablemás	1,575,366	7.2%
Cablecom	536,119	2.4%
Telecable	603,832	2.7%
Televisión Internacional	550,489	2.5%
Satellite	9,039,239	41.1%
Sky	9,039,239	41.1%
Dish-Grupo Multivisión (satellite)	3,259,923	14.8%
Megacable (cable)	3,202,184	14.6%
Otros	2,148,095	9.8%
Total Play (IPTV)	790,332	3.6%
Star TV (satellite)	314,531	1.4%
Axtel	22,327	0.1%
TV Rey	20,997	0.1%
Airecable	2,908	0.0%
Ultravisión	256	0.0%
Others	996,744	4.5%
Total	21,982,899	100.0%

Source: Elaborated with information by the Instituto Federal de Telecomunicaciones, 2020d.

Even though there are more concessions available to provide satellite television, only Sky, Dish México, and Star TV offer the service today. Their market share after the first trimester of 2019 was 72.3%, 25.1%, and 2.6%, respectively (Instituto Federal de Telecomunicaciones, 2020d).

The service of satellite television gained ground and surpassed cable television in 2011, according to subscriber numbers. Cable television companies then faced a situation that was unprecedented until then; they were no longer the main source of pay television distribution. Facing this new reality, the most important companies in cable television expanded throughout various cities of the country and opted for triple play offerings. At the same time, they became involved in a process of acquisitions and mergers that reshaped the structure of pay television in Mexico.

In 1995, Grupo Televisa, Cablevisión's main shareholder, agreed to sell 49% of its shares to Teléfonos de México (Telmex), the main telecommunications company in the country. The latter was even given the option to purchase the remaining 51% of the shares from Cablevisión. Despite negative reactions from some sectors, uniting the main media company (Grupo Televisa) and the most important telecommunications company (Telmex) in cable television operations was authorized (Crovi Druetta, 1999: 135-136) on the condition that Telmex abandon its former position in 2002 (Grupo Televisa, 2002: 136). Consequently, through an offer on the Mexican stock exchange, Telmex sold its share package for 1,987 million pesos (Empresas Cablevisión, 2002: 28), equivalent to US\$206 million. Televisa reorganized its strategy in the pay television industry and began an offensive to acquire and merge several cable television groups. Among the first of these were the companies controlled by the Álvarez Guerrero family (they began operating under the commercial name of Cablemás and had undertaken a process of expansion during 1998).

In that year, the American firm Citicorp Venture Capital became a partner of Cablemás and contributed around US\$50 million for the Mexican group to settle liabilities, make investments, and

acquire four cable television systems [7]. Another financial institution, Olmeca Investment [8], contributed an additional US\$97 million for the purchase of five more systems [9]. Cablemás' acquisitions doubled its subscriber numbers between 1999 and 2003 (Cablemás, 2004: 35). Cablemás made more purchases of target companies, among which Grupo Megapo stands out (Cablemás, 2005: 33). This move brought 80,000 additional subscribers and allowed Cablemás to become "the second-largest cable television operator in Mexico by number of subscribers... houses, and the cable television operator with the greatest regional coverage in the country" (Cablemás, 2006a: 83). Between 2004 and 2005, Cablemás acquired 50% of the shares of two more companies (Cablemás 2006b: 39); and, in 2006, several assets related to pay television in two more cities (Cablemás 2006b: 3).

Even though Cablemás had been ready since 2006 to make its initial public shares offer, it was purchased by Grupo Televisa instead. Televisa acquired convertible debentures that would enable it to control 49% of Cablemás' shares with voting rights (Grupo Televisa 2007:24-25). After this purchase, Grupo Televisa became the main operator of pay television in the country. Later, in 2011, it bought the rest of Cablemás' shares, and the latter merged with Televisa (2013: 36).

In 2006, Grupo Televisa launched a new phase in the acquisition of cable television companies by purchasing 50% of the shares of Televisión Internacional (TVI), a subsidiary of the regional consortium Grupo Multimedios (Grupo Televisa 2007: 24-25). In 2016, Televisa ended up buying the remaining capital (Grupo Televisa 2017: 44). The acquisitions continued, and, in 2014, Televisa purchased the capital of Grupo Cable TV (better known as Cablecom) (Grupo Televisa 2016: 41), which was controlled by the Tinajero family. Between 1995 and 2006, Cablecom had also grown through acquisitions. After merging with Grupo Televisa, it was operating in almost 40 localities and had reached 725,000 cable television subscribers (Instituto Federal de Telecomunicaciones, 2020d). Among other enterprises, Grupo Cable TV acquired the substantive part of 30 concessions owned by TVI Comunicaciones [10].

To finish its purchasing cycle, Grupo Televisa acquired, in 2015, the Cablevisión Red company, which operated under the commercial name of Telecable (Grupo Televisa 2016: 41). The consortium had been founded by the Vielma family and, through the acquisition of 35 concessions and the purchase of other enterprises, it had extended its operations to eleven states (Grupo Televisa 2016: 73). For the purpose of consolidating its privileged position in cable television, Televisa paid out around US\$1,360 million between 2006 and 2015. We should also consider Televisa's preponderance in satellite television—owing to Sky, which enabled it to be crowned as the most important force in Mexican pay television, as can be observed in Table 4. It is pertinent to note that, in 2005, a new partner joined Sky. After a period in which News Corp was Televisa's main partner in the business of Mexican satellite television, AT&T (the major telecommunications enterprise in the United States) managed to gain control of DirecTV and to own 41.3% of the shares of the company operating Sky services in Mexico (Grupo Televisa, 2019: 34).

But in the case of cable television, it was not only Grupo Televisa that got stronger; Megacable did, too, mainly through acquisitions. They eventually consolidated as the third largest consortium in the field of pay television in Mexico. From 1995 onwards, Megacable undertook an acquisition plan that led to incursions within cities located in the states of Nayarit, Jalisco, Chihuahua, and Veracruz. It even began to produce its own TV signal in several of these locations (Megacable Holdings, 2010: 22).

Between 1998 and 2004, either via acquisitions or new concessions, Megacable incorporated several cities in Sinaloa, Veracruz, Chiapas, Coahuila, Durango, and Puebla into its networks (Megacable Holdings, 2007: 144; Megacable Holdings, 2010: 22). In 2007, Megacable purchased five groups for US\$366 million, and this extended operations into 12 states of the country (Megacable Holdings, 2007:

29). The group obtained more concessions and assets so that, "[b]y December 31, 2008, the company had presence in 24 states of the Republic" (Megacable Holdings, 2009: 27-28). In 2010 and 2011, more concessions were granted in the states of Sonora and Baja California (Megacable Holdings, 2011: 133), and in Michoacán, Guanajuato, and Estado de México (Megacable Holdings, 2012: 22, 145). This acquisition cycle culminated in 2014, when Megacable purchased Productora y Comercializadora de Televisión (PCTV), a company that produced and distributed five channels for pay television and which represented several foreign signals into Mexican territory—mostly from the United States (Megacable Holdings, 2015: 112). This growth strategy, largely based on the purchase of concessions that were already operating, was undertaken by Megacable's entrance into the Mexican Stock Exchange in November 2007, when it issued shares for 1,366 million pesos (Megacable Holdings, 2007: 1), equivalent to US\$125 million.

In 1995, the Federal Telecommunications Law (Ley Federal de Telecomunicaciones) was approved, by which it was established that new concessions for spectrum use should be granted through public bidding (Secretaría de Comunicaciones y Transportes, 1995: 36). In theory, this would eliminate the discretion in transfers that had contributed to an excessive concentration of licenses in a few hands. However, the monopolization process did not stop. In 2014, a new regulation was issued: the Federal Law on Telecommunications and Broadcasting (Secretaría de Comunicaciones y Transportes, 2014). This legal instrument not only maintained the instruction to grant licenses through tender, but also created an agency—the Federal Telecommunications Institute (IFT)—that included among its functions the regulation of concentration in telecommunications and broadcasting services. The law was born "poisoned" because, in one of its articles, Televisa, already dominant in the market, was allowed to settle the purchase of Cablecom, which violated the spirit of the new legislation. The transitory order would go down in history as the "Cablecom Clause" (Álvarez, 2014). The new law and the new agency could not stop further monopolization of pay television in Mexico. By the end of 2018, 90.2% of pay television subscribers nationwide were in the hands of three large consortiums, among which the power of Grupo Televisa was the most significant.

As mentioned, between 1995 and 2018, an historically unprecedented number of licenses were granted for the operation of pay television services. In theory, this would have fostered a variety of viewer options. In fact, the granting of licensing was accompanied by concentration and centralization of the capital involved in pay television enterprises. In 2003, the then Comisión Federal de Telecomunicaciones (Federal Telecommunications Commission) [11] issued a report stating that 27% of all pay television subscribers were under the control of Grupo Televisa, and that 10 more groups catered for 47% of subscribers. Twenty-six percent of the viewing market were scattered among several licensees (Comisión Federal de Telecomunicaciones, 2003).

Years later, Gómez y Sosa Plata indexed the concentration of pay television services by measuring the billing coefficient and audience coefficient. This resulted in 0.68 and 0.63, respectively, which meant that "the market of restricted television, being of 0.68, is highly concentrated and characterized by an oligopoly structure" (Gómez y Sosa Plata, 2010: 132). Despite such concentration, the process has continued in recent years, as expounded on in this essay.

América Móvil, the group controlling Teléfonos de México (Telmex), is headed by the family of Carlos Slim—the wealthiest business owner in Mexico today—and central provider of pay television services worldwide. In Mexico, antitrust laws have prohibited América Móvil offering pay television services. However, this prohibition can be modified once the company complies with a series of requirements imposed by the authority (Federal Institute of Telecommunications). Currently, the company is still waiting for a favorable ruling to be granted the license to provide the service in the

country. In the past months, there has been a lot of speculation about the possibility of a concession finally being granted. What is more, the consortium has revealed that it is ready to offer the service via satellite, in the first stage, and later through Telmex's physical network (Lucas, 2019). Additionally, it is likely that AT&T will opt for selling its shares in DirecTV, which would partly transform Grupo Televisa's alliances in the market of pay television.

Conclusion

This article has set out the growth and ownership concentration of pay television in Mexico. Initially, concessions were granted to individual business owners; a practice then began of granting two or more licenses to the same business group or even to a subsidiary of a major media company of the country. From the beginning, pay television was shaped by the technological shifts taking place—especially in the technologies of signal distribution—in association with the regulatory system. From the early 1970s, groups were created that gained concessions and joined with outside companies to the extent that five main consortiums emerged. They drew half of all national subscribers to the service of pay television. Up until this stage, cable was the predominant medium for the distribution of pay television.

With the introduction of MMDS as a system of distribution, especially involving satellite technology, rearrangements occurred which resulted in the current situation. Three groups dominate the Mexican market of pay television. Given the emergence of online audiovisual services that use the internet protocol (known as OTT), the old pay-TV companies are reorganizing their operations in response. Companies such as Cablevisión and Megacable—the two most important cable TV companies—have incorporated new services, such as Netflix, Disney+, Amazon Prime, and HBO Max to their offerings. In the near future, there will likely be mergers between, or alliances among, companies that offer online audiovisual services and those that own pay-TV distribution networks. There are no apparent signs that the trend toward the concentration and centralization of media capital will be countered. Rather, it is possible that we will soon witness a situation whereby only two large providers of pay television can operate in the Mexican market.

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The author gives credit to the translator of this article from Spanish to English: Bárbara Pérez Curiel (New York University).

Endnotes

[1] The coaxial cable had been patented since 1880. By definition, Huurdeman (1997: 145) points out that by definition: "[a] coaxial cable consists of a central conductor surrounded by a concentric external conductor, both made of copper."

- [2] The family members originally involved in the business were: María Concepción Tinajero de Harper, Hite L Harper and Ernesto Tinajero Benavides.
- [3] It is possible that the request for the respective concessions to build the systems of cable television was made through other companies, such as Visión por Cable de México, S.A. de C.V. (Tijuana, Ensenada, and Tecate) and Cablemex (Ciudad Mante and Ciudad Valles).
- [4] MMDS is an acronym for Multichannel Multipoint Distribution Service, also known as a local multipoint communications system or LMCS. This is a wireless application "without cable" that is used to broadcast signals to various subscribers. It was "...initially conceived for wireless TV distribution to subscribers located around a central radio base station that is connected to a CTV head end..." (Huurdeman, 1997: 243).
- [5] Its basic definition is: "...the distribution of traditional television channels, movies, text, graphics, data, and on-demand video and audio content through a private broadband IP network" (Lloret Mauri, García Pineda, and Boronat Seguí, 2008: 83).
- "In DBS networks, broadcast and television signals are transmitted from a central large Earth station via a satellite to a 'receive-only' Earth station ...which are either at CATV head-end stations or directly located at individual homes..." (Huurdeman, 1997: 297).
- [7] In the cities of Playa del Carmen, Cozumel, Chetumal and Coatzintla.
- [8] "Olmeca Investments B.V. is a company that was constituted with the sole purpose of acquiring and retaining shares of the company, and it is an integrated vehicle of AIG-GE Capital Latin American Infrastructure Fund, American International Underwriters Overseas, Edison Capital, and Mandeville Partners." (Cablemás, 2006a: 135).
- [9] In the cities of Poza Rica, Mérida, Cancún, Isla Mujeres and Campeche.
- [10] This company had been created by the shareholders who controlled the radio consortium Grupo Acir—one of the most important in Mexico. Their interests in cable television were managed by the company. These interests were divested in 2003 (Ibarra López and Dabdoub, 2010: 130).
- [11] It was then the telecommunications regulatory agency of the Mexican government. It was founded in 1996 and replaced in 2013 by the Instituto Federal de Telecomunicaciones, an agency which still operates.

References

Álvarez, CL (2014) Televisa-Cablecom,inconstitucional? *Clara Luz Álvarez, Telecomunicaciones y sociedad*, 20 August. Available at: http://claraluzalvarez.org/?p=90 (accessed 20 September 2021).

- Ávila, JL (2006) La era neoliberal. México: Editorial Océano, UNAM.
- Baran, PA and Sweezy, PM (1988) El capital monopolista, 20 edición. México: Siglo XXI Editores.
- Cablemás (2004) Reporte Anual que se presenta de acuerdo con las disposiciones de carácter general aplicables a las Emisoras de valores y a otros participantes del mercado, por el año terminado al 31 de diciembre de 2003. Informe anual. México: Cablemás.
- Cablemás (2005) Reporte Anual que se presenta de acuerdo con las disposiciones de carácter general aplicables a las Emisoras de valores y a otros participantes del mercado, por el año terminado al 31 de diciembre de 2004. Informe anual. México: Cablemás.
- Cablemás (2006a) *Oferta pública mixta de Certificados de Participación Ordinarios*. Oferta de acciones. México: Cablemás.
- Cablemás (2006b) *Estados Financieros Consolidados 31 de diciembre de 2006, 2005 y 2004*. Estados financieros. Cablemás.
- Cablemás (n.d.) *History, Investor relations*. Available at: http://www.cablemas.com/investorRelation/index.jsp (accessed 2 October 2019).
- Cámara de la Industria de Televisión por Cable (1996) Directorio de socios 1996. México.
- Carbonell León, AM (2005) 50 años de la televisión por cable en México: 30 años de la Canitec. México: Cámara Nacional de la Industria de Televisión por Cable.
- Carmel, C (1996) La TV directa por satélite se consolida como negocio. América Latina: dos grupos dispuestos a competir a muerte. *Reforma*, 12 November.
- Chandler, A, Hikino, T and Pascual, J (1996) *Escala y diversificación: la dinámica del capitalismo industrial.* Zaragoza: Prensas Universitarias de Zaragoza.
- Comisión Federal de Telecomunicaciones (2003) *Dirección general de televisión y audio restringidos*. México: Comisión Federal de Telecomunicaciones.
- Crovi Druetta, D (1990) *La televisión por cable: el caso mexicano*. México: Facultad de Ciencias Políticas y Sociales UNAM (Cuadernos de Ciencias de la Comunicación, 1–1990).
- DIRECTV Group (2006) Form 10-K.
- EchoStar Corporation (2008) MVS Multivision and EchoStar launch satellite TV service in Mexico. EchoStar Corporation. Available at: http://ir.echostar.com/news-releases/news-release-details/mvs-multivision-and-echostar-launch-satellite-tv-service-mexico (accessed 18 October 2019).
- El Informador (2009) *Grupo Hevi, con un cable al corazón y otro a la televisión*. Available at: https://www.informador.mx/Jalisco/Grupo-Hevi-con-un-cable-al-corazon-y-otro-a-la-television-20090225-0248.html (accessed 8 October 2019).
- Empresas Cablevisión (2002) Oferta pública secundaria de hasta 132,472,480 Certificados de Participación Ordinarios no amortizables (CPOs). Oferta pública. México: Empresas Cablevisión.
- Federal Communications Commission (1998) Annual assessment of the status of competition in Markets for the delivery of video programming. Fourth annual report. Washington: Federal Communications Commission.

- García Calderón, C (1987) Para conectarse a Cablevisión. México: Ediciones El Caballito.
- García Calderón, C (1983) La legislación de la televisión por cable, en *Comunicación social 1*. Mexico: Foros de Consulta Popular de Comunicación Social, pp. 159–162.
- Gómez, R and Sosa Plata, G (2010) La concentración en el mercado de la televisión restringida en México. *Comunicación y Sociedad*, Nueva época (14): 109–142.
- Gregersen, E (2019) HBO American company. *Encyclopedia Britannica*. Available at: https://www.britannica.com/topic/HBO (accessed 26 September 2019).
- Grupo Televisa. (2002). Informe anual que se presenta de acuerdo con la circular 11-33 de la Comisión Nacional Bancaria y de Valores, por el año terminado el 31 de diciembre de 2001. Grupo Televisa.
- Grupo Televisa (2005) Reporte anual que se presenta de acuerdo con las disposiciones de carácter general aplicables a las emisoras de valores y a otros participantes del mercado, por el año terminado el 31 de diciembre de 2004. Informe anual. México: Grupo Televisa.
- Grupo Televisa (2007) Reporte anual que se presenta de acuerdo con las disposiciones de carácter general aplicables a las emisoras de valores y a otros participantes del mercado, por el año terminado el 31 de diciembre de 2006. Informe anual. México: Grupo Televisa.
- Grupo Televisa (2013) Reporte anual que se presenta de acuerdo con las disposiciones de carácter general aplicables a las emisoras de valores y a otros participantes del mercado de valores, por el año terminado el 31 de diciembre de 2012. México.
- Grupo Televisa (2016) Reporte anual que se presenta de acuerdo con las disposiciones de carácter general aplicables a las emisoras de valores y a otros participantes del mercado de valores, por el año terminado el 31 de diciembre de 2015. Informe anual. México: Grupo Televisa.
- Grupo Televisa (2017) Reporte anual que se presenta de acuerdo con las disposiciones de carácter general aplicables a las emisoras de valores y a otros participantes del mercado de valores, por el año terminado el 31 de diciembre de 2016. Informe anual. México: Grupo Televisa.
- Grupo Televisa (2019) *Reporte anual por el año terminado al 31 de diciembre de 2018*. Informe anual. México: Grupo Televisa.
- Grupo Televisa (2021) Información financiera trimestral (trimestre 4, año 2020). Available at: https://xbrl.cnbv.gob.mx/visorXbrl.html?nombreArchivo=ifrsxbrl TLEVISA 2020-4.xbrl&idEnvio=45540#/enviosInformacionFinanciera (accessed 2 November 2021).
- Huurdeman, AA (1997) Guide to telecommunications transmission systems. Norwood: Artech House.
- Ibarra López, F and Dabdoub, AML (2010) Historia de un empresario mexicano. México: Océano.
- Instituto Federal de Telecomunicaciones (2018) *Concesiones. Base de datos, Registro Público de Concesiones*. Available at: http://ucsweb.ift.org.mx/vrpc/visor/downloads (accessed 23 October 2019).
- Instituto Federal de Telecomunicaciones (2020a) *Encuesta nacional de consumo de contenidos audiovisuales* 2019. Instituto Federal de Telecomunicaciones.
- Instituto Federal de Telecomunicaciones (2020b) Servicio de televisión restringida. Suscripciones. Banco de Información de Telecomunicaciones. Instituto Federal de Telecomunicaciones. Available at: https://bit.ift.org.mx/BitWebApp/descargaArchivos.xhtml (accessed 23 October 2019).
- Instituto Federal de Telecomunicaciones (2020c) Servicio de televisión restringida. Accesos (serie histórica desde 1996). Banco de Información de Telecomunicaciones. Available at: https://bit.ift.org.mx/BitWebApp/descargaArchivos.xhtml (accessed 23 October 2019).

Instituto Federal de Telecomunicaciones (2020d) *Participación de mercado (serie desde 1996*). Banco de Información de Telecomunicaciones. Available at: https://bit.ift.org.mx/BitWebApp/descargaArchivos.xhtml (accessed 23 October 2019).

- Instituto Nacional de Estadística y Geografía (2015) *Estadísticas históricas de México*, 2014. Aguascalientes: Instituto Nacional de Estadística y Geografía.
- Lloret Mauri, J, García Pineda, M and Boronat Seguí, F (2008) *IPTV: La televisión por internet*. Málaga: Publicaciones Vértice.
- Lucas, N (2019) América Móvil promete despliegues de triple play por fibra y por satélite con Claro TV en México. *El Economista*, 30 September. Available at:

 https://www.eleconomista.com.mx/empresas/America-Movil-promete-despliegues-de-triple-play-por-fibra-y-por-satelite-con-Claro-TV-en-Mexico-20190930-0013.html (accessed 23 October 2019).
- Marx, K (1977) El Capital (5a., Vol. 1). México: Siglo XXI Editores. [1872].
- Megacable Holdings (2007) Oferta pública primaria en México de Certificados de Participación Ordinarios no Amortizables. Prospecto de colocación. México: Megacable Holdings.
- Megacable Holdings (2009) Reporte anual que se presenta de acuerdo con las disposiciones de carácter general aplicables a las emisoras de valores y a otros participantes del mercado. Año terminado el 31 de Diciembre de 2008. Informe anual. Guadalajara: Megacable Holdings.
- Megacable Holdings (2010) Reporte anual que se presenta de acuerdo con las disposiciones de carácter general aplicables a las emisoras de valores y a otros participantes del mercado. Año terminado el 31 de Diciembre de 2009. Informe anual. Guadalajara: Megacable Holdings.
- Megacable Holdings (2011) Reporte anual que se presenta de acuerdo con las disposiciones de carácter general aplicables a las emisoras de valores y a otros participantes del mercado. Año terminado el 31 de Diciembre de 2010. Informe anual. Guadalajara: Megacable Holdings.
- Megacable Holdings (2012) Reporte anual que se presenta de acuerdo con las disposiciones de carácter general aplicables a las emisoras de valores y a otros participantes del mercado. Año terminado el 31 de Diciembre de 2011. Informe anual. Guadalajara: Megacable Holdings.
- Megacable Holdings (2015) Reporte anual que se presenta de acuerdo con las disposiciones de carácter general aplicables a las emisoras de valores y a otros participantes del mercado. Año terminado el 31 de Diciembre de 2014. Informe anual. Guadalajara: Megacable Holdings.
- Megacable Holdings (2021) *Reporte anual 2020*. Available at:

 https://xbrl.cnbv.gob.mx/visorXbrl.html?nombreArchivo=reporteAnual_MEGA_2020-12.xbrl&idEnvio=48182#/enviosInformacionFinanciera (accessed: 2 November 2021).
- Mejía Barquera, F (1993) Televisión por cable: una visión global. *Inter Medios*, September: 36–51.
- Mercamétrica Ediciones (1995) *Manual para selección de medios publicitarios*. 17a ed. México: Mercamétrica Ediciones.
- MVS Comunicaciones (2016) *Historia*, *MVS Comunicaciones*. Available at: https://mvs.com/tv.historia (accessed 10 October 2019).
- PRODU (2000) *Personaje de la semana: Héctor Vielma, presidente de CANITEC*. Available at: https://www.produ.com/noticias/personaje-de-la-semana-hector-vielma-presidente-de-canitec (accessed 8 October 2019).
- Sarmiento, T and Barrera Díaz, C (2008) Alianza MVS-Echostar ve gran potencial TV paga México. *Reuters*, 26 November.

Secretaría de Comunicaciones y Obras Públicas (1950) Decreto que fija las normas a que se sujetarán en su instalación y funcionamiento las estaciones radiodifusoras de Televisión. *Diario Oficial de la Federación*, 11 February: 5-6.

- Secretaría de Comunicaciones y Obras Públicas (1955) Solicitud presentada por el señor Mario de la Fuente para suministrar el servicio de televisión en Nogales, Son. *Diario Oficial de la Federación*, 17 February: 4–5.
- Secretaría de Comunicaciones y Transportes (1979) Reglamento del servicio de televisión por cable. *Diario Oficial de la Federación*, 18 January: 12-21.
- Secretaría de Comunicaciones y Transportes (1995) Ley Federal de Telecomunicaciones. *Diario Oficial de la Federación*, 7 June: 34–47.
- Secretaría de Comunicaciones y Transportes (2014) Ley Federal de Telecomunicaciones y Radiodifusión. *Diario Oficial de la Federación*, 14 July: 2-95.
- Secretaría de Desarrollo Agrario, Territorial y Urbano, Consejo Nacional de Población e Instituto Nacional de Estadística y Geografía (2018) *Delimitación de las zonas metropolitanas de México 2015*.

 México.
- Secretaría de Gobernación (1960) Ley Federal de Radio y Televisión. *Diario Oficial de la Federación*, 19 January: 1–8.
- Secretaría de Gobernación (2019) *Diario Oficial de la Federación*, *Diario Oficial de la Federación*. Available at: https://www.dof.gob.mx/ (accessed 23 October 2019).
- Sevilla, P (1998) Del cable a DTAH. In: *Apuntes para una historia de la televisión mexicana*. México: Revista Mexicana de Comunicación/Televisa, pp. 415–484.
- Televisión Azteca (2021) *Informe anual 2020*. Available at:
 https://xbrl.cnbv.gob.mx/visorXbrl.html?nombreArchivo=reporteAnual AZTECA 2020-12.xbrl&idEnvio=48083#/enviosInformacionFinanciera (accessed 2 November 2021).
- Vidal Bonifaz, FJ (2019) *Historia económica de la formación y consolidación del monopolio de la televisión abierta en México*. Doctorado. División de Estudios de Posgrado, Facultad de Economía, Universidad Nacional Autónoma de México.