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# Digital terrestrial television policies in Mexico: The telecom wars

## ABSTRACT

*This article analyses and discusses Mexican public policies regarding the transition from analogue to digital terrestrial television (DTT). We aim to show how digitization, in the Mexican context, can be thought of as an opportunity to change the duopolistic structure in television in order to obtain higher quality and greater content diversity. The methodology used here consists of a structural historical analysis of communication policies with an emphasis on digital switchover, paying special attention to the social power relations that have led to the current structural conditions of the concentrated Mexican communications system. Overall, preliminary results obtained in this research show a lack of clarity in DTT policies of the last two administrations (Vicente Fox 2000–2006 and Felipe Calderón 2006–2012) and a reinforced hegemony of the economically dominant broadcast and telecommunications actors: Televisa, TV Azteca and Telmex, in detriment to public service, competition, local TV stations, independent production, content quality and audiences in a broader sense.*

## KEYWORDS

digital terrestrial television  
communications policy  
digital switchover  
convergence  
telecommunications spectrum

## 1. INTRODUCTION

The media and telecommunications structures in Mexico are highly concentrated in almost all sub-sectors: free-to-air TV, pay-TV, fixed-line telephony, the Internet and mobile services (Huerta-Wong and Gómez 2013). Therefore, it is

important to situate digital terrestrial television (DTT) in Mexico in that context, in order to understand its development. Since technology convergence became a reality, different dominant actors in the media and the telecoms industry have reoriented their business and expansion strategies on the association between these two sectors, as they have identified the economic and market potential offered by convergent services and content.

The change from analogue to digital raises, from a technological viewpoint, the possibility of an efficient reorganization of the radio spectrum and, in particular, released television spectrum opens up space for new operators, not only in broadcasting, but also in the telecommunications field – the so-called ‘digital dividend’. In other words, digitization offers the possibility to have more actors and signals so that the TV structure de-concentrates and democratizes, at the same time boosting and incentivizing independent audio-visual production, which can generate dividends and give economic dynamism to the sector and produce creative jobs, opening the spectrum to a greater plurality of ideas, reinforcing local languages and different cultural expressions. Given all this, the historic ‘technical’ argument, which stated that there is no room for new players (McQuail 1992), is overturned by the possibilities offered by digitization (Albornoz and García Leiva 2012). And the international experience clearly proves it. For example, Spain went from six channels to 29 (Fuentes and Marengi 2012); the United Kingdom went from five to 43 (Freedman and Schlosberg 2011) and France from six to 23 (Badillo 2012). And those are only a few cases. However, as yet no Latin American country has achieved digital switchover.

This research, therefore, seeks to observe and characterize the role that the Mexican government has played as administrator and owner of the spectrum during the digitization process. Our goal is to understand its role in the organization of the production, distribution and consumption of communications goods through public policies that have promoted and at the same time established the different actions and strategies that have developed in recent years. Consequently, another main goal is to establish the balance between public power and economic agents in the media and the telecommunications industries (Golding and Murdock 2000).

The government authority in command of implementing the public policy on communications is the Comisión federal telecomunicaciones/Federal Commission of Telecommunications (Cofetel) and its role is fundamental in the conduct of the policy. For this reason, this article pays special attention to its actions.

Since 1988, the communications policies promoted by Mexican administrations have been characterized by showing a *marketization* component (Gómez 2007). By *marketization*, we mean the trend towards privatization, liberalization, corporatization and commercialization of communicative services and assets (Murdock 2002).

## 2. THEORY AND METHODOLOGICAL CONSIDERATIONS

The starting point of this research is the theoretical and methodological approaches of Political Economy of Communication and Culture, having as a main goal the observation and analysis of the social relations of power that mutually constitute the production, distribution and consumption of communication goods (Mosco 2009). We seek to identify who has the power to take decisions related to DTT and who are winners and losers. Moreover, the study

of the Political Economy of Communication is based on a structural historical analysis (Sánchez Ruiz 1992) of media assets and services, its industries and the institutions involved, as well as its corporations ([Sirois and Wasko 2011](#)), emphasizing the process of *structuration* of the social communications system in Mexico ([Mosco 2009](#)).

Moreover, this research is also interested in understanding the various roles that economic agents and the public power are playing (Golding and Murdock 2000) in the organization and design in the digitization of the spectrum in this Latin American country, paying particular attention to the DTT sub-sector. This will be analysed using a normative perspective, which understands the spectrum democratization as the access by the different social actors to licences needed to broadcast and offer telecommunications services (McQuail 1992).

Another aspect to be highlighted here is the weight that the media and telecommunications industries are gaining within the economic growth of the world economy (Hesmondhalgh 2007). To analyse industry dynamics, such as technological convergence, it is important to understand the characteristics of this industry in Mexico, in the larger context of global capitalism, as Mexican media and telecommunications companies play an increasingly important role on the international stage.

Finally, we must consider that at the present time the Mexican political system continues its transition towards democracy ([Meyer 2007](#)), so its institutions, as well as its economic and social actors, lack solid democratic practices. Therefore, tensions are being generated between previous formal institutional conditions, which lack democratic mechanisms and are unable to counterbalance different social power relations, and the search for democratic formulas orientated towards accountability, equity, plurality and diversity.

### 3. THE TV AND TELECOMMUNICATIONS STRUCTURES IN MEXICO

The media and telecommunications structures in Mexico are highly concentrated, especially the free-to-air TV industry, which has the highest levels of concentration worldwide (Trejo 2010; [Noam 2011](#)). Televisa and TV Azteca account for around 90% of the infrastructure of commercial TV: frequencies (94%), TV advertising revenue (97%) and audiences at national level (97%). In addition, both groups have companies of pay-TV and offer different services in telecommunications – Internet, fixed-line and mobile telephony (Huerta-Wong and Gómez 2013).

Televisa dominates the free-to-air TV industry: it runs three national networks (2, 5 and 9) and another for the metropolitan area of Mexico City (Channel 4), holding 70 per cent of the advertisement investment on free-to-air TV in 2011 (Televisa 2012). By the end of the initial three months of 2012, it registered more than 50 per cent of the total number of payees in pay-TV through its four companies: SKY-DTH, Cablemás, Cablevisión and TVI – Cable (Cofetel 2012; Televisa 2012).

TV Azteca operates two national networks (7 and 13) and a metropolitan one (Channel 40) representing 29 per cent of the investment in advertisement in TV during 2011. In the pay-TV sub-sector, TV Azteca launched in 2010 through Iusacell the company Total Play, which operates in the metropolitan area of Mexico City and in some municipalities in the State of Mexico where it offers Internet, fixed-line telephony and audio-visual content. Furthermore, this company offers ‘triple play’ packages of subscription TV, Internet and mobile telephony with 3G/4G network through Iusacell.

Company	2009	2010	2011
Televisa (2, 4, 5, 9)	1590	1805	1826
TV Azteca (7, 13, 40)	660	826	851
Others	21	45	41
Total expenditure in free-to-air TV advertisement	2271	2676	2718

Source: Prepared by Observatorio de las industrias, las políticas y los consumos culturales using the annual reports of TV Azteca (2010, 2012), Televisa (2010, 2012) and Cofetel (2011).

*Table 1: Market share of advertisement investment in free-to-air TV for the 2009–2011 period in millions (US dollars).*

Televisa and TV Azteca have begun a new phase of alliance. In March 2011, Televisa proposed to Iusacell, owned by the Salinas Group, which also owns TV Azteca, buying 50 per cent of the company's shares for 1600 million US dollars, 1570 of which would be convertible debt and a payment of 37.5 million US dollars in capital. At first, the Comisión federal de competencia/ Federal Competition Commission (CFC) did not approve the operation, on the grounds of competition issues in the free-to-air and private TV markets affecting both groups (Televisa and TV Azteca), but after a reconsideration involving undertakings by Televisa and Iusacell designed to mitigate the competition risks the alliance was approved by the CFC (2012).

Once this alliance was completed, Televisa Group increased its participation in the markets of pay-TV, Internet and fixed-line telephony. The most important aspect is its new incursion into new generation mobile services (such as 4G), accumulating more frequencies in the spectrum and opening yet another window for distributing its convergent audio-visual content. Televisa has become one of the first global companies to achieve full convergence.

In the telecommunications field, the markets of fixed-line and mobile telephony can be characterized as monopolistic: in the first one, Telmex holds control of 85 per cent of the market and Telcel 69 per cent of the second and both belong to the Carso group (Organization for the Cooperation and Economic Development (OCDE) 2012). However, we must point it out that in both markets there are various other players, in contrast to the pattern in the broadcast TV market. For example, in the fixed-line telephony market, there are several companies, such as Axtel/Avantel, Alestra/AT&T and Maxcom, which have operated since the last few years of the 1990s, to which we must add the cable companies Megacable, Cablevision, Telecable, Cablemas, etc, which have been allowed to offer this service in 'triple play' packages since 2006. In the case of mobile telephony, the main competitors of Telcel are Movistar (owned by the Spanish Telefónica), Iusacell, Unefon and Nextel (of United States).

Finally, another aspect of the telecom market that must be considered for the context of this research is the Internet. Here Telmex, through the brand Prodigy, has a concentration of 74 per cent of the Internet lines. The rest of the market is distributed between Cablevisión, Cablemás – Televisa – Megacable (all cable companies), Axtel and Maxcom (OCDE 2012).

Telecommunications is one of the most dynamic sectors of the world economy and Mexico is no exception here: in 2005, Cofetel reported a constant growth in its revenues for up to 10 per cent, year by year (OCDE 2012). For 2005, Cofetel reported revenues of 22,500 million US dollars; by 2010, these reached 30,382; and for 2011 it reported 31,823 million (OCDE 2012). These numbers show how rich this market is and its business potential in the convergent scenario, especially with audio-visual content. It is important to see DTT in this context in order to understand the strategies and disputes among the dominant telecommunications companies. At the same time, and within this context, we can analyse the role of the Mexican government in the digitization process.

#### 4. BACKGROUND OF DTT POLICIES

After the publication of the 'Agreement adopting the technological standard of digital terrestrial television and which sets policy for the transition to digital terrestrial television in Mexico' in July 2004 during the administration of Vicente Fox (*Diario Oficial de la Nación/Official Journal of the Federation* 2004), the public policies on DTT in Mexico have experienced setbacks, lack of clarity and contradictions.

First, the decision on the technological standard was approved without a public discussion (Trejo 2009) and the logic that prevailed was both proximity and economic and technological dependence on the United States since the formation of the North America Free Trade Agreement (NAFTA) in 1994. Mexico adopted the digital TV system established by America's Advanced Television Systems Committee (ATSC). This decision had its origins in 1998, during the administration of Ernesto Zedillo (1994–2000), when an Agreement was established between Mexico and the United States to plan the organization of the digital spectrum along their frontier (Gómez 2007) and also by the 'Agreement for the study, assessment and development of digital technologies on radio transmission' (*Diario Oficial de la Nación/Official Journal of the Federation* 1999). The selection of the ATSC standard in 2004, ruling out debate about alternatives, reflected the strong bilateral relationship between Mexico and the United States.

The policy for the transition to DTT, promoted by the Fox administration (2001–2006) in 2004, raises many questions on fundamental issues, such as how to achieve a transition from analogue to digital, in view of the household technological infrastructure and the financing of the so-called public media. The quoted document does not set as an objective exploiting the potential offered by digitization to diversify the TV structure through DTT, nor the possibility of opening the market to new licence holders. The content of the document favours the commercial licence holders and focuses on technological aspects associated with better-quality images and sound.

On the other hand, it did establish a phased schedule for the digital switchover by the States of the Republic, related to their socio-economic and demography status, with the possible date of switch-over by 31 December, 2021. However, it is important to mention that the quoted document does not define a date for concluding the analogue to digital transition.

The Agreement also added two actions, clearly in favour of the commercial licence holders: first, the renewal of their licence titles until 31 December 2021 on the grounds – according to the government – that this would give them time to invest in digital equipment; and, second, as happened in the United

States, the discretionary allocation of additional frequencies for analogue simulcasting (called 'mirror-channels'). There was no mention of possible restrictions on using the whole 6MHz assigned to include other telecommunications or multiplex services (Gómez et al. 2011).

Another Agreement was issued in 2006, this time relevant for the telecommunications and pay-TV companies. That is the 'Agreement of convergence of local telephony and pay-TV and/or audio offered by wire and wireless public networks' (*Diario Oficial de la Nación/Official Journal of the Federation* 2006). This document, in general, allows telephone companies to offer video services, while the operators of pay-TV can offer fixed-line and Internet. This Agreement is still controversial, because Telmex can use it to request the change of its licence to include the offer of audio-visual services. The main opponent of Telmex's incursion into the pay-TV market has been the Industry of National Chamber of the Cable Telecommunications Industry (Canitec). Pending resolution of this issue, the Ministry of Communications and Transport has not given Telmex (the telephone company owned by the richest man in the world, Carlos Slim, according to *Forbes*) a positive answer.

From this, we observe two blocks in the telecom wars: Televisa, TV Azteca and the cable companies on one side, and Telmex, MVS Multivisión and other small cable operators on the other. Their competition has translated into a series of lawsuits and investigations with CFC and between each other.

However, the hottest moment of the battle happened in February 2011, when the Carso Group (which owns Telmex and Telcel) withdrew its advertisements from TV Azteca and Televisa. This occurred after the two TV companies increased their advertising fees for Telmex alone by about 20 per cent. TV Azteca tried to bargain a reduction in Telcel's telephone interconnection fees for its mobile companies Iusacell and Unefon. Carso did not accept the increase and withdrew all its advertising (Anon. 2011b). According to Televisa, the adverts withdrawn by the Carso Group represented a cutback of 4 per cent of its anticipated sales for advertising for 2011 (Mares 2011), around 75 million US dollars.

Finally, in this section about the communications policies, we will refer to the reforms promoted by the legislative power during 2006 to the Radio and Television Act (1960) and the Telecommunications Federal Act (1995). These reforms are better known as 'Televisa Act' and show the lobbying ability of Televisa and TV Azteca to put the pressure on the Mexican political class (Esteinou and Alva de la Selva 2009). We must remember that those reforms were carried out months before the 2006 presidential elections, and that all the political parties at the Chamber of Deputies approved them unanimously in only seven minutes. The changes were minimal but substantial in benefiting the dominant broadcasters' operations. Briefly, the amendments included allowing the owners of private licences for radio and TV to offer additional telecommunications services in the same frequency, simply by notifying Cofetel and without having to pay and twenty-year terms for the renewal of broadcasting and telecommunications licences, which could be automatically renewed (Gómez and Sosa 2006).

These modifications motivated the petition of an action of unconstitutionality by a group of 47 senators to the Nation's Supreme Court of Justice on 4 May 2006 alleging violations of the Mexican Constitution (Gómez and Sosa 2006). The minister Sergio Salvador Aguirre explained the policy changes, and a year later the court declared its verdicts. Out of sixteen articles challenged, eight were overturned partially or totally by the court. The most relevant was

the invalidation of an article that allowed the commercial radio and TV licence holders to offer additional services of telecom without participating in a tender and without paying the state for those services. On the automatic renewal issue, the court established that licensees must go through a new competition in which the original licence-holder will have preference over new bidders (Sosa 2009).

This situation illustrates the constant search by media companies to extend their privileges in the telecommunications sector, as well as their persuasive power, in this case with the Chamber of Deputies and all the political parties. But it also shows the opportunity the dissatisfied political actors (47 senators) had in alliance with the organized civil society, and through the institutional channel of the Supreme Court, to counteract the efforts of the dominant economic agents. Democratic mechanisms in Mexico are progressing in the context of the democratic transition.

## 5. POLICIES OF DTT (2007–2012)

Having reviewed the background to DTT policies and the media and telecommunications structures, we now turn to events that have developed during the last six years.

Felipe Calderón's administration (2007–2012) established that telecommunications and media policies would have as main axes three Cs: competition, convergence and coverage. His government proposed six strategies for telecommunications in its Development National Plan:

1. Increase competition to improve coverage and reduce prices
2. Promote adherence by government actors and of society to strategies of design and development that facilitate the use of information and communication technologies
3. Promote the development of an infrastructure of connectivity technology allowing a penetration on over 60 per cent of the population, developing content of high impact and of interest for the population
4. Modernize the normative framework that leads to a growth of telecommunications, the use and development of new technologies projects and security over the use of information, services and electronic transfers
5. Propose financing schemes and self-sustainability to promote projects application and development in the use of information technologies and its operative continuity.
6. Develop mechanisms and conditions necessary to incentivise a greater investment in the building of infrastructure and sale of telecommunication services.

In September 2010, the president released a new decree on DTT, outlining six actions to bring the digital switchover from 2012 to 31 December 2015 (*Diario Oficial de la Nación/Official Journal of the Federation* 2010):

1. Boost DTT signal coverage so the public has access to that service throughout the country
2. Increase competition and diversity within the TV industry to offer a better service to the population
3. Promote in a convergent environment the development of new services, taking advantage of the characteristics of technologies associated with DTT



4. Open the 700MHz bandwidth by 2012 to facilitate other telecommunications services, encouraging the efficient use of that bandwidth
5. Promote the public access to antennas and decoders for DTT reception
6. Protect TV services so all the inhabitants have direct and free access and use the best available equipment

While this decree was presented as a planned action in economic terms and a strategy to boost competition, a political interpretation pointed to a possible populist manoeuvre in the run-up to the 2012 federal elections, by distributing decoders or TV's and digital antennas for the reception of digital signals. However, it is important to mention that the decree covers fundamental issues that the 2004 policy on DTT did not address and takes some significant steps towards switchover: for example, scheduling 31 December 2015 as the date for switchover and proposing an increase in competition and diversity within the TV industry – here the inclusion of new players is implicit.

Subsequently, Cofetel worked on a project to reform the 2004 Agreement that sought to align it with the 2010 decree of President Calderón. After consideration by the Federal Bureau of Regulatory Improvement, the document was finally published in the *Diario Oficial de la Nación/Official Journal of the Federation* on 4 May 2012. This is the current reform and its key points include:

1. Moving the digital TV switchover from 2021 to 2015, as established by the decree, with states staggering the end of analogue transmissions progressively from 2013, but with a condition that seems unattainable: 90 per cent of DTT penetration in households that only have free-to-air TV service. If a month before the digital switchover is due to take place, the 90 per cent of penetration of DTT in a specific place has not been reached, the Commission will adjust the switchover date notifying the licence holders involved.
2. Use of the American standard A/53 of ATSC, as well as other standards compatible with its development and growth such as A/72 or A/153. The service must include information systems and electronic programming guidelines through the use of the standard A/65 of ATSC.
3. Multiprogramming is allowed, that is, broadcast different signals in one channel. Licence holders that transmit simultaneously a TV programme on the 'mirror' channel will have to broadcast the same programming that is broadcast in the analogue channel with HDTV quality. However, this does not apply when more than one service is broadcast in the same digital multiplex. The 2004 Agreement had specified that at least 20 per cent of the programming of digital channels must be in HDTV, but this reform eliminated this requirement.
4. Once the analogue broadcasts conclude, the licence holder will have to return one of the channels and operate with the chosen channel for digital broadcast.

The idea of offering support for the acquisition of decoders and antennas in Calderón's initiative has not yet been implemented. Studies find that the subsidy needed for every household would be of around 60 dollars, so the federation should gather around 1200 million dollars (17,325 million pesos), if we consider that 21.3 million of households would be subject to the support, because only 15.8 per cent of the households have digital receivers (Gómez et al. 2011).



Theme	2004 Agreement	2010 Decree	Agreement 2012 reforms
Switchover date	2021 (possible date), three-year calendar	From 31 December 2011 until December 2015	From 2013 to 2015, subject to a 90% penetration
Associated and additional services	It does not allow mobile TV. Telecom should not affect HD and it requires compensation	It boosts the development of new services in the convergent environment	HD: <i>simulcasting</i> , multiprogramming, mobile TV. Telecom should not affect HD and it requires compensation
DTT penetration	Without clear definition of penetration or aspects related to reception	Subsidy for decoders and antennas. Restriction of analogue TVs	Penetration measured by the INEGI. Receivers should be standard A/53, preferably with A/72
Digital dividend 700MHz	It is not mentioned	Make free the 700MHz bandwidth by 2012 for Telecom	Channels in a 700MHz bandwidth are not assigned. Promote concentration under Channel 37 (600MHz)
Standard DTT	A/53 of ATSC and its development	Receivers have to be A/53 at least	A/53 of ATSC at least and with minimum compatible standards ATSC (A/72, A/153)

Source: Mony de Swaan (2012).

Table 2: Comparative chart of documents on DTT.

Figures from non-commercial stations – public service stations – estimate that converting a station from analogue to digital would cost around 376 thousand US dollars. In the case of the Mexican Network of Educational and Cultural Radio and Television Broadcasters, its partners are looking for support to finance these changes, and have requested the Congress 680 million US dollars (Gómez et al. 2011). Until 2012, these resources have not been included in the federal budget and there are no concrete plans to get them.

Despite all this, DTT is already a reality in different cities around the country. Until 2011, the regulator had authorized 228 stations to operate with this technology, which is 30.5 per cent of the 746 TV stations that exist in the country. According to the Consultative Committee of Digital Radio Broadcasting Technologies, 207 out of the 228 stations are commercial and only 21 are non-commercials holders (i.e. public television stations). However, to hold permissions does not imply digital broadcasting. By the end of 2011, only 83 stations were transmitting with digital technology, of which 76 are commercial licenses and only seven non-commercial licenses (see Table 3).

In a report dated 14 June 2012, the Committee points out that although the 83 DTT stations on operation represent 36 per cent of those authorized they only represent 11 per cent of the total analogue stations that operate in the country. The Federal District is the only place that has a digital offer equivalent to the analogue.

Therefore, eight years after the start of the analogue–digital TV transition, the coverage of the authorized channels for DTT is only 38.6 per cent.

Year	Authorized	On Air
2006	35	23
2007	36	31
2008	63	35
2009	63	47
2010	117	53
2011	228	83

Source: Cofetel (2011).

Table 3: DTT authorized and channels on air.

6. NEW CHANNELS TENDER

Another aspect that the Calderón administration has worked on, in line with the National Development Plan, is the possibility of tendering for new commercial TV licences at a national level. During December 2011, Cofetel established the possibility of tendering for a third national broadcaster after analysis by the head of the Commission based on market studies and broadcasting capacity. This required a public online consultation – something that can be considered positive because it is the first time that an exercise such as this has been conducted, although it had limitations because it was not mandatory to take the results into account.

The chairman of Cofetel, Mony De Swan, declared in a forum organized by the newspaper El Universal in December of 2011 that the selection process would last between twelve and eighteen months after publication of the tender. He mentioned that Cofetel received 55 requests from people interested in obtaining a digital commercial licence: nineteen to operate at a local level, 23 with regional reach and thirteen seeking national coverage. According to technical reports, there is enough spectrum for at least two national networks (Cofetel 2011).

OCDE, to which Mexico belongs, added its voice to the demand for the openness and competition in the sector:

Mexico needs more free-to-air TV broadcasters in order to enhance media plurality, especially given that the cable TV sector has very low national coverage compared to terrestrial television. Implementation of digital terrestrial television would allow a significant increase in the number of licensed broadcasters. More spectrum should be made available to develop further access by Mexicans to mobile broadband.

(OCDE 2012: 29)

7. TELECOMMUNICATIONS CONTROVERSIES

Cofetel has played a central role since 2007 in decisions on tenders and sanctions in telecommunications. It permitted an initiative by TV Azteca to launch HiTV, a service that offered twenty channels, although this was held to be a breach of the Telecommunications Act, since it could be considered a telecommunications and not a broadcasting service. In the end, this issue was resolved.

Region	Telefónica	Telcel–Telmex	Iusacell–Unefon (Televisa–Azteca)	Nextel	Axtel	MHz
1	60	129.4	51.6	93	50	384
2	70	121.4	51.6	102.5	50	395.5
3	80	128.3	41.6	102	50	401.9
4	72	127.3	41.6	112	50	402.8
5	50	129.4	61.6	103.5	50	394.5
6	60	128.3	66.6	102.9	50	407.8
7	60	122.4	61.6	103.7	50	397.7
8	30	129.4	51.6	105.5	50	366.5
9	70	128.3	56.6	102	50	406.9
Total	552	1144.2	484.4	927.1	450	3557.6
Percentage	15.5	32	13.6	26.05	21.64	100

Source: Cofetel: Includes the bands of 800 GHz, 1.9GHz, 1.7–2.1 GHz and 3.4–3.7 GHz.

Table 4: Distribution of the radioelectric spectrum on mobile telephony.

Next was the controversial ‘Tender 21’, which sought to make available to the market new frequencies in the spectrum for mobile telephony, but the basis of the call was written in such a way that it appeared as ‘tailored’ for two players: a new one, Televisa, and another with experience in trunking services (push to talk), Nextel. However, instead of competing for the frequencies, the two companies collaborated, avoiding a confrontation and paying the minimum value. The commercial venture Televisa-Nextel won the tender and paid only 180 million pesos (that is 14.5 million US dollars), while other operators such as Telcel, Telefónica and Iusacell competed for smaller segments of 10MHz in different areas of the country, paying up to three or four times more than Televisa-Nextel. In October 2010, after much debate and lawsuits filed mainly by Iusacell against this tender outcome, Televisa decided to cancel its alliance with Nextel and search for other options in the sector. After this, Televisa and its principal rival, Iusacell, joined in a new alliance.

These examples help to illustrate how controversial the role of Cofetel has been and, at the same time, the different strategies pursued by the dominant actors in free-to-air TV and telecommunications. At all times, they are playing a negotiation card with the political power to keep their dominant conditions. This illustrates how social relations of power work in the Mexican communication system. Cofetel has not begun to use its powers to sanction, regulate and, above all, reorganize the radio spectrum and the digital dividend, in association with public policies aiming for democratic processes, universal access, competition, public service, plurality of actors and cultural diversity.

## 8. DISCUSSION

In the light of all this, we propose a discussion that covers, first, the definition of factors that have delayed a policy in DTT in Mexico and, second, who are the losers in this situation. As shown here, there is a lack of a state vision on DTT by the different political actors – and differences of position between

the federal government and the other two powers of the state (legislative and judicial). In addition, the economically dominant actors Televisa and TV Azteca are especially interested in maintaining, reproducing and expanding the current structural conditions of analogue TV for their benefit. They have been endeavouring to manage the digital transition under their own agenda through lobbying in the Congress and arguing with the authority's resolutions. Moreover, their corporate interests have been extended to encompass various sectors of telecommunications, as well as broadcasting.

In this situation, Cofetel has not consistently followed the mandates stipulated by the legislature, nor always contributed to the achievement of the objectives issued by the Executive Power in terms of competition, convergence and coverage. The Commission is a new institution in the Mexican political system and, as such, reflects the slow and sometimes painful transition to democracy that this Latin American country is experiencing, characterized by a lack of consolidated institutions and a political environment in which consensus between the different political groups is rare, so that the design, execution, operation and evaluation of the public policies and their regulation becomes complicated. To this we must add the strong pressures by the economic groups – Televisa, TV Azteca, Telmex, Nextel, Axtel, among others – and the Commission's belief that its role is sometimes only that of referee and observer, which has translated into a controversial, marginal and discretionary role.

We can be even more specific by pointing out that:

1. The 1960 Federal Law of Radio and Television and the 1995 Federal Law of Telecommunications have not been reformed. They still contain clauses that afford privileges to private licence holders at odds with the potential to democratize and diversify the structure of media communication in Mexico.
2. The 2004 DTT policy, reformed in 2010 and updated in 2012, has made little progress and therefore it is likely that the goal of digital switchover by 2015 will not be accomplished for a variety of reasons.
3. It is clear that, until now, along with the distribution of the 'mirror channels', DTT spectrum is still concentrated on Televisa and TV Azteca. At the same time, non-commercial licence holders do not have enough financial options to continue with their digitization process.
4. One of the most interesting discussions to have emerged in recent years is on the possibilities digitization offers through greater spectrum efficiencies of a larger number of TV channels and broadcasters, and a greater diversity of opinions and perspectives. However, there have been no clear actions in this direction. On the contrary, even Cofetel has said that with digitization, the current channels of 6MHz could be divided to provide different services, allowing Televisa and TV Azteca to increase the number of national networks they each have.
5. The tender for a third or fourth TV company will not be a reality in the 2007–2012 administration and many doubts remain over its design.
6. In contrast to what occurs in Argentina, there is no evidence that the spectrum will be reorganized with the possibility of an equitable participation of the different social actors – not only the private sector and the public media, but also reserving space for non-profit civil society organizations (Becerra et al. 2012), not only for broadcasting but also for telecommunication services.

7. There is no clear path to the implementation of a subsidy plan of change to assist the 21.3 million Mexican households who cannot afford to buy antennas and digital receivers.

In this context, the great loser is Mexican society altogether, by not having a pluralist and democratic communications system that promotes cultural diversity, increases knowledge, boosts competition, promotes freedom of speech and initiates the creation of creative jobs through independent audio-visual production.

## 9. CONCLUSIONS

Our first conclusion is that the arrival of DTT is not changing the structure of television in Mexico; social relations of power prevail, which are favourable to the economically dominant agents in the media sector, and which do not allow the opening of the sector, thus maintaining the economic concentration of analogue TV. This does not lead towards a democratic transition in Mexico. Therefore, we characterize the power of these economic agents as an impediment to democratic development and the promotion of cultural diversity. We agree with Raúl Trejo when he says that they execute a 'savage power' and that there are few counterweights to them (2005). We see the risk of significant growth in the corporate range of TV Azteca and Televisa in telecommunications sub-sectors (pay-TV, landline and mobile telephony and Internet), generating greater concentration in media and telecommunications. Another aspect to consider is how the dominant positions of Televisa, TV Azteca and Telmex extend into the wider international market.

As a second conclusion, we think that the transition and the democratic institutions in Mexico is starting to operate in some sense in a positive manner, but this is still a small advance. What do we mean by that? For the first time in the history of communications public policies on the media and telecommunications structure in Mexico, a growing public discussion has begun. Civil society has started to have a voice and use the institutional mechanisms to intervene in the *structuration* of its own social communication system. This is only a start, but it is important to highlight it.

Our research finds as a final tentative conclusion that the Mexican state continues evading, in a disturbing way, its responsibility to regulate and manage the country's communication services, leaving too much power in incumbent corporate hands when planning the digital switchover. Because of this, the process of reorganizing the spectrum, as a consequence of digitization, is being shaped by commercial imperatives instead of the possibilities offered by public service.

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