TELECOM ADVISORY SERVICES

CHANGES IN THE GLOBAL AND BRAZILIAN AUDIOVISUAL MARKET

Competitive dynamics, impact on consumer welfare, and implications for public policy and competition model

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EXECUTIVE SUMMARY

A very significant public policy debate is taking place in Brazil with regards to the regulation of the audiovisual market in the context of the reform of the SeAC Law regulating pay-TV service. Issues under consideration include vertical ownership restrictions, limits to telecommunications operators on hiring national artistic talent and licensing of events of national interest, the pending expiration of local content quotas in pay-TV, the need (or not) of local content quotas in OTT platforms, the applicability of the current regulatory regime to linear OTT services, and the need to create or level taxation and regulatory structures for OTT, among others. The purpose of this study is to contribute to this debate by providing, based on an analysis of global and Brazilian industry trends, a comprehensive review of the transformations in content production and distribution, as well as consumer behavior that are disrupting the audiovisual value chain and that, therefore, have profound implications in the structural debate that is taking place.

Prompted by technology innovation, the global audiovisual market has undergone almost constant changes in industry and competitive dynamics since the early 1960s. Up until then, the industry value chain had been considerably stable, structured around vertically-integrated players, profits did not change substantially, while consumers received a limited amount of content made available in orderly fashion. The first wave of disruption begun with the explosive deployment of pay-TV, which altered the distribution stage of the value chain. The second disruption wave was driven by the introduction of new consumer technologies, the disintermediation of the value chain by small video stores, Blockbuster and Netflix upsetting the video distribution business, and triggering the consequent retaliation by broadcasters and studios. The third round of disruption, prompted by digitization and video-streaming, represented a challenge by OTTs to the pure play distributors of audiovisual content, such as pay-TV operators, as well as the producers of niche programming.

As of today, the audiovisual global market is affected by ferocious competition, where players are competing not only on video distribution but in other adjacent industries like content production on the basis of global scale, while adapting content to localized requirements. Netflix and Amazon alone are expected to invest over US$ 22 billion on film and TV programming in 2019, compared to US$ 21.7 billion in 2018 for NBC, ABC, and CBS, the three broadcasting networks in the United States. In 2018, Netflix had a $12.04 billion content budget, of which 85% was directed to develop original productions.

In this increasingly competitive environment, the primary strategy of all distribution players (OTT and non-OTT) has been to vertically integrate towards content acquisition to secure access to libraries in order to enhance service attractiveness, while reducing program acquisition costs. This move coincides with media companies needing to ensure control of distribution channels, which creates an alignment of objectives with regard to vertical integration. In addition, the development of the OTT industry has prompted pay-TV operators to enhance their VOD offer as a defensive strategy. They started including more developed interactivity and enriched customer services, adding to the traditional video-on-demand, content repackaging, games, music and information. Furthermore, recognizing the

value conveyed to their customers, pay-TV operators now offer OTT services such as Netflix on their platforms, thus allowing to position themselves as content aggregators from a single access interface.

In this context of accelerated vertical integration, audiovisual content production has accelerated across the globe, not only in advanced economies. In addition to the investment of global players in both US and "local" content, non-US players are ramping up their content development capability. The growth in content production is driven by strong consumer demand for local content. In addition, the shift towards national films and series is a normal competitive response of locally based OTT platforms, such as Claro Video, which realize that to better compete with global players they need to leverage indirect network effects as propelled by local content. This is the virtuous cycle that fuels the development of localized content across the world. As an enabler, digitization facilitates this virtuous cycle because content creation is becoming less expensive, reducing barriers to entry of new production players. In this context, consumers are benefitting massively - never have they had so much content available in so many forms at attractive price points.

The development of the Brazilian audiovisual industry closely mirrors the one analyzed internationally, with the only difference being that timing in value chain disruptions has occurred with some time lag. The first wave of disruption in the Brazilian audiovisual market took place in the mid-1990s with the development of pay-TV, while the second wave of disruption was triggered by the introduction of OTT platforms, which grew exponentially after 2015. As of today, the Brazilian audiovisual industry is increasingly competitive both within pay-TV and OTT sub-segments. The Herfindahl-Hirschman Index (HHI) of the pay-TV sector has declined 490 points since 2011, reaching 3,498 in 2018. while the HHI for the OTT sector in 2018 was 1,789. Moreover, as in the case of value chain reconfiguration taking place globally, the Brazilian audiovisual industry is undergoing a process of reintegration and increasing competitive intensity.

These developments, combined with regulatory incentives such as the imposition of national quota requirements, has fueled the growth of national content. Brazilian productions reached 17.7% of pay-TV program hours in 2017, while national movies currently represent 6.3% of the libraries of the top seven OTT platforms, and series amount to 23.1%.

The acceleration in the development of local content, coupled with the development of the OTT sector has had a positive impact on the Brazilian audiovisual industry. The pay-TV, broadcasting, and OTT industries in 2017 registered total sales of R$ 37.9 billion in 2017, which amounted to 0.58% of the Brazilian GDP, close to that of home appliances and higher than the pharmaceutical industry. The audiovisual sector as a whole, which includes also the film and videogame subsectors, comprises 335,000 direct and indirect jobs, with a direct to indirect multiplier of 2.94.

Vertical integration, which is a response to the different innovations and changes occurring in the market, represents one of the factors contributing to create more competition and more benefits for consumers (improved customer experience, increasing content variety, lower prices, ease of access). The evidence indicates that benefits greatly outweigh any

disadvantages that can result from this process of consolidation. In addition to enhancements to consumer welfare such as program diversity, improved customer experience, and lowering of prices, vertical integration conveys benefits to industry players (improved efficiency in content acquisition, economies of scale and scope), some of which have a positive impact on consumers, while others contribute to overall industry sustainability.

In summary, this study has demonstrated that the traditional value chain of the global and Brazilian audiovisual industries has been constantly disrupted by the entry of new players enabled by the digitization of content. These changes entail tremendous benefits to consumers. Disintermediation, fragmentation, emergence of specialists, and vertical integration (backward and forward) are all features of competitive intensity. These trends are not only present in advanced economies but are also present in the Brazilian market, where some players are competing not only on video distribution but in other adjacent industries like content development. Likewise, the lowering of entry barriers in distribution have allowed the development of a vibrant OTT Brazilian sector.

In this context, we believe regulatory authorities should not try to over-regulate these businesses (through either content quotas or other restrictions, such as limits to vertical integration). Restrictions to vertical integration are both harmful to competition and detrimental to the protection of the local audiovisual industry. Regarding OTT platforms, Brazilian authorities should consider that, rather than regulate them as pay-TV services, it might make more sense to avoid imposing regulatory restrictions and burdens on those innovative services. The objective is to create a level-playing field for pay-TV providers to compete with OTTs, which can be better achieved by gradually eliminating unnecessary restrictions and regulatory burdens to all players. Going forward, Brazilian regulators should allow the market to develop naturally, while monitoring it in terms of conventional market structure mechanisms, such as concentration ratios. If policy makers want to maximize diversity of content, low prices, multiple offers for consumers, they need to eliminate restrictions to vertical integration and allow new entrants without regulatory impediments. This will not reduce competition; on the contrary, it will allow it to flourish.

I. INTRODUCTION

A very significant public policy debate is taking place in Brazil with regards to the regulation of the audiovisual market. Issues under consideration, in the context of the reform of the SeAC Law regulating pay-TV service and enacted in September 2011, include vertical ownership restrictions, restrictions to telecommunications operators for hiring of national artistic talent and licensing of events of national interest, the pending expiration of local content quotas in pay-TV, the need (or not) of local content quotas in OTT platforms, the applicability of the current regulatory regime to linear OTT services, and the need to create or level taxation and regulatory structures for OTT, among others. While it is universally acknowledged that the market has changed dramatically, and will continue to do so in the future, there has been no comprehensive and updated analysis of the audiovisual market, its global transformations and impacts for the Brazilian industry that should support the public debate[1].

Underlining these debates is an assessment of the developments that have taken place in the audiovisual sector both globally and in Brazil in terms of more competitors, different types of players, changes in distribution models, and vertical integration between content distribution and production. The debate is pitting different public and private sector parties around the different matters under consideration. Take for example the potential elimination of cross-ownership restrictions among video content providers and distributors. As originally defined, Article 5 of the 12.485/11 Law restricts cross-ownership between the production/programming and telecommunications sectors (including pay tv distribution), establishing that the latter cannot control more than 30% of production/programming companies headquartered in Brazil. In addition, producers/programmers headquartered in Brazil cannot have more than 50% ownership of telecommunications service providers.[2] The justification for such a rule was that cross-ownership could allow firms to exercise significant market power, thereby affecting competition and, ultimately, consumer welfare, although it can be argued that it aimed at protecting dominant broadcasters from competition. Another debate exists around the need to continue to protect the local audiovisual content production industry[3].

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[1] The only study known to date with special focus on the Brazilian market is the ANCINE and ANATEL joint report on *Aspectos Econômicos e Comerciais do Serviço de Aceso Condicionado*. Brasília: março de 2016. The study, however, is based on the traditional concept of the pay-TV value chain as conceived by the 2011 SeAC Law (Lei 12.485/2011). Therefore, the ANCINE and ANATEL joint report does not encompass the profound structural changes occurred in the audiovisual global and Brazilian markets during the last decade.

[2] This debate is also affecting the potential outcome of the approval of the Time Warner-ATT merger. While the competition council CADE (*Conselho Administrativo de Defesa Econômica*) has already approved the merger, two technical areas of ANATEL initially believed the merger contradicts article 5 of the SeAC Law. ANATEL's Board met on August 22, 2019 and while two commissioners voted in favor of finding the transaction compliant with Article 5, the remaining three commissioners have not yet expressed their views nor vote.

[3] See statement made during the legislative discussion of Article 5:
"Trecho do parecer da Comissão de Ciência e Tecnologia, Comunicação e Informática ao Substitutivo ao Projeto de Lei nº 29, de 2007: 9. Restrições cruzadas na cadeia de valor (...) considerando a discrepância entre a magnitude dos faturamentos dos setores de telecomunicações e de produção de audiovisual, optamos por acatar a referida emenda. A medida permitirá que sejam evitadas potenciais distorções induzidas por

The parties endorsing the preservation of the vertical integration barriers find support in a perspective of the audiovisual market as structured around rigid value chain steps with producers, programmers, packagers and distributors operating in isolation, under limited competition, as depicted in the study cited above. On the other hand, the argument for lifting Article 5 recognizes that, propelled by technology changes, the audiovisual industry structure has undergone fundamental changes, which have generated significant consumer benefits. The official recommendation of the telecommunications regulator ANATEL, which was already submitted to the Brazilian Senate in April of 2019, is to modify the SeAC Law, eliminating said restrictions as a way to resolve two pending regulatory matters[4].

This debate spills over other issues regarding regulation of the audiovisual market. One of them is the debate over whether linear OTTs should be regulated as Pay-TV and required to have a Pay-TV license to operate. Another one regards whether local content quotas should also be applied to OTTs and if they should also pay contributions to the CONDECINE fund.

This is why it is a good time to step back from the debate and examine in detail what is occurring in the audiovisual industry, both in terms of supply and demand. The purpose of this study is to provide, based on an analysis of global and Brazilian market trends, a comprehensive review of the transformations in distribution, content production, and consumer behavior that are disrupting the audiovisual value chain and, therefore, that have profound implications in the structural debate that is taking place.

At the highest level, the study provides evidence in support of the following findings:

- The global and Brazilian audiovisual markets are affected by ferocious competition among pay-TV and OTT operators, where players are competing not only within video distribution but also in other adjacent industries like content development. Competition is taking place on the basis of global scale, while players are adapting content to local consumer demand localized requirements;
- Under the digitization of content, the original barriers across the audiovisual value chain stages have disappeared, prompting industry players to move across the chain in search of defensible positions and building competitive advantage;
- Intensifying competitive dynamics and vertical integration have produced tremendous benefits to consumers (e.g. variety of content, ease of access, improved customer experience, low pricing, etc.);
- In this context, restrictions to vertical integration are either anti-competitive or detrimental to the protection of the local audiovisual industry; this is so because traditional SeAC services inhibit their ability to fully compete in level playing field.

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aplicações massivas de capitais transnacionais na produção artística e cultural nacional. Além disso, permitirá que seja mantido o espírito da proposta original, qual seja, impedir que tanto o segmento das telecomunicações quanto o da radiodifusão controlem toda a cadeia produtiva da comunicação audiovisual de acesso condicionado."

[4] Claro's claim against the Fox prohibition to relay its signal through the Internet, and the merger of ATT and Time Warner.

In consequence, if policy makers want to maximize diversity of content, low prices, and multiple offers to consumers, they need to eliminate restrictions to vertical integration and other regulatory burdens that inhibit the industry players' ability to develop new products and services. Such an approach will not reduce competition; on the contrary, it will allow it to flourish, further benefitting consumers.

Chapter II of this paper reviews global industry dynamics in the audiovisual industry. Chapter III assesses these trends in the Brazilian context. Chapter IV provides evidence of the benefits that these changes yield to consumers and the audiovisual industry as a whole. Finally, chapter V draws the implications of the evidence for the Brazilian regulatory framework.

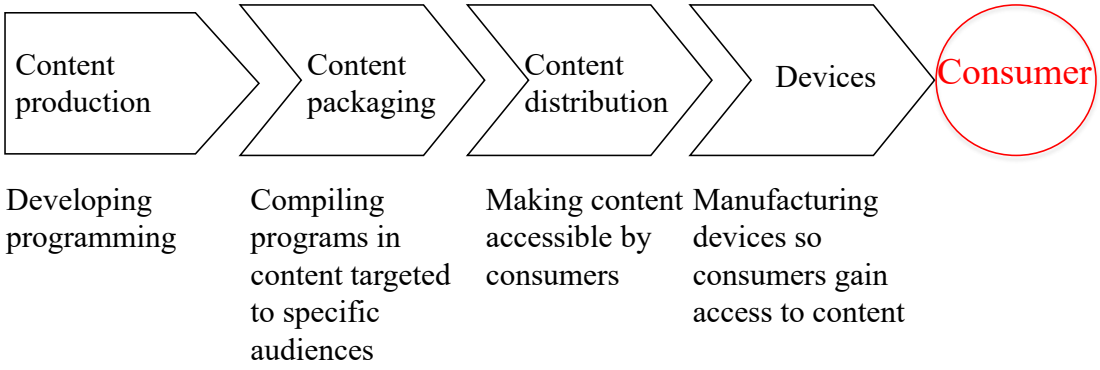
II. INDUSTRY DYNAMICS IN THE GLOBAL AUDIOVISUAL INDUSTRY

II.1. The historical evolution of the audiovisual value chain

The value chain framework maps the position different stakeholders in a particular industry occupy in the flow of activities needed to deliver a good to the end customer (Porter, 1985). While the chain is depicted as a sequential flow of stages, the framework also helps identifying those positions that can yield a strategic competitive advantage. In addition, the value chain is useful to understand structural industry changes such as backward and forward integration, disintermediation, and emergence of specialists (e.g. players that build a competitive advantage derived from economies of scale or scope).

The audiovisual industry value chain is structured around four clearly defined stages, with players operating in one or more than one stage of the chain (see figure 1).

Figure 1. Audiovisual Industry Value Chain[5]



The historical evolution of the audiovisual industry depicts successive changes in the value chain, which can be analyzed around four distinct periods: (1) the broadcast TV era, (2) the pay-TV era, and (3) the video direct distribution era and (4) the OTT era. While the ensuing discussion focusses primarily on the US market, the concepts generally apply to most countries.

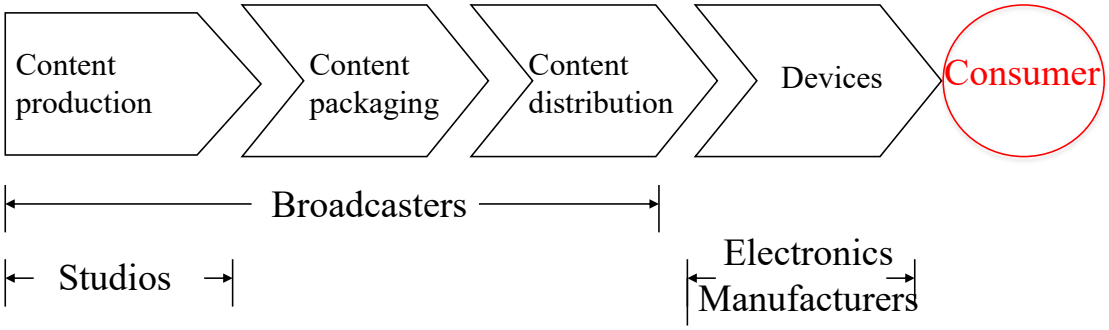
II.1.1. The broadcast TV era

Broadcast TV, introduced in the 1930s, represented the first major change in video content distribution, which until then was conducted through theaters. Beyond that major structural change, the audiovisual industry value chain remained considerably stable since its inception up until the early 1960s.

The traditional value chain exhibited a relative equilibrium in the profit pool, which meant that profit margins were relatively stable at each stage, reflecting the value that players were able to capture. In the traditional chain, broadcasters used to occupy all content related stages from production to distribution, although they could also acquire distribution rights from independent players. It should be emphasized that the audiovisual industry in the broadcast TV era was vertically integrated. Broadcasters produced their own content, supplemented by third party content, and controlled scarce spectrum used to distribute their signals directly to consumers. They would package their own and acquired content into few channels and would own the networks required to deliver the content to consumer devices. Electronic manufacturers focused exclusively in the production of equipment for consumers to access content (see figure 2).

[5] For reference, ANCINE disaggregates the content packaging stage in two: programming and packaging.

Figure 2. Audiovisual Industry: Traditional Value Chain



II.1.2. The pay-TV era

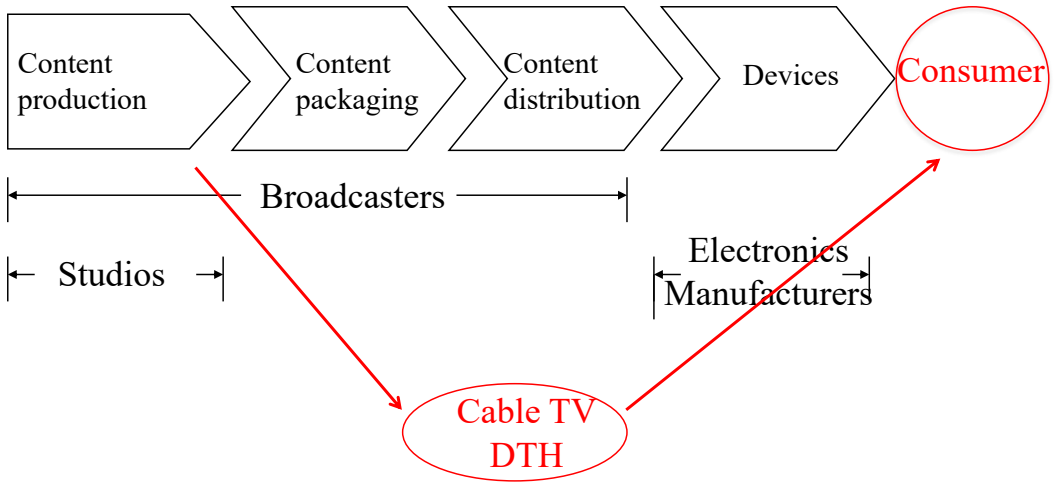
Prompted by technology innovation that begun in the early 1960s, the global audiovisual market begun to undergo significant changes in industry and competitive dynamics. The development of cable TV and Direct to Home (DTH) represented the first change in the value chain. Cable TV was originally deployed in the United States as a way for rural customers to improve the reception of signal although by the 1980s it had become a major alternative source of programming. Faced with inefficiencies in the terrestrial broadcast TV networks, partly due to underinvestment, entrepreneurs built out an alternative means of distribution. The new technology was not constrained by over the air spectrum limitations since it relied on coaxial links to the customer premise.

On the other hand, DTH was developed in the 1980s, much later than cable. However, its development had a similar effect on market dynamics. DTH was the first to digitize its signal (which allow for more channel capacity and improved quality) and then transitioned fast to high definition, which in turn, stimulated investment in analog cable to provide a competitive response.

By 1990, almost 70 percent of households in the US had pay-TV service from either cable or DTH, and the average customer received 57 channels from their provider[6]. As such, in order to meet consumers' needs, these new players focused on packaging content and developing their networks to improve the performance of content distribution (such as better coverage and signal quality) (see Figure 3).

[6] Nielsen Media Research (1999). *TV viewing in Internet Households*.

Figure 3. Audiovisual Industry: Pay-TV Disruption in the Original Value Chain



As depicted in figure 3, even before being a mature industry as we know it today, pay-TV was a disruptive service driven by technological change. This new, alternative means of distribution generated in turn a demand for more content. In the U.S., it gave rise to the development of CNN, Turner and ESPN, and then many other channels. Thus, the ability to deliver more content generated the need to produce more content, which in turn benefitted consumers in terms of variety. We will come back to this virtuous circle when analyzing how the Internet distribution, in a similar way, unleashed more volume and more variety of content.

Why did pay TV not develop as a "vertically integrated model" replicating the structure of the broadcast TV era? In fact, the industry displayed several attempts to vertically integrate. For example, in the United States, John Malone invested in content, while Rupert Murdoch tried to acquire DIRECTV as early as 2000, and did so in 2004, before DIRECTV was profitable[7]. However, capital intensity and economies of scale limited the capability of pay-TV players to attempt a full-fledged integration move. The build out of cable TV networks and DTH was too capital intensive for the broadcasters to support. Content economics are driven by scale which limited the ability of pay-TV operators to vertically integrate into content production.

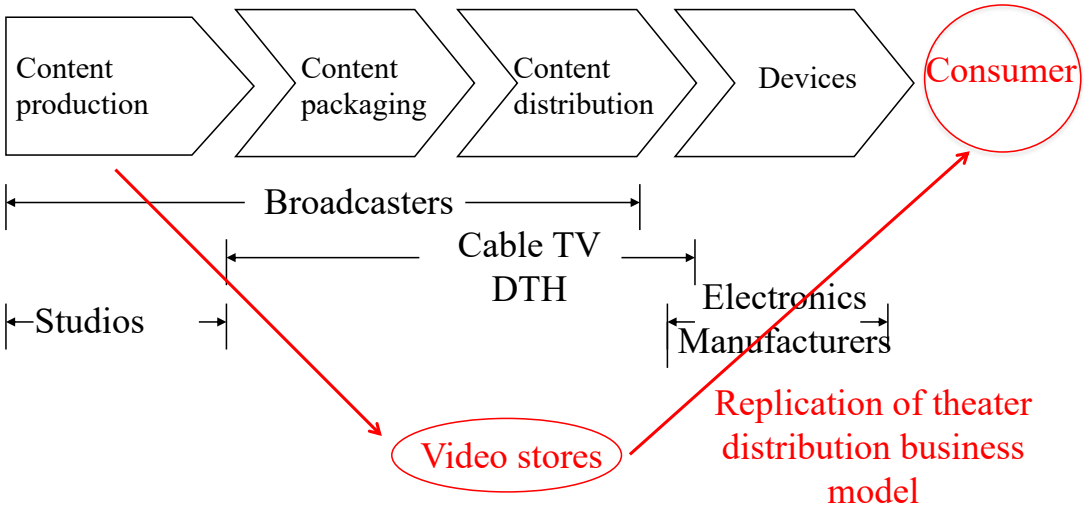
II.1.3. The video direct distribution era

The value chain structure of the pay-TV era was challenged in turn by a second wave of multiple technology-enabled disruptions. The first disruption was enabled by the emergence of consumer-oriented video-play technology, leading to the emergence of the retail-oriented movie rental business. In the beginning of consumer video-playing, the fees charged by film

[7] In fact, similar moves took place in Latin America, when broadcasters (such as Televisa and Globo) launched Sky DTH with News Corp, Globo acquired a majority of cable TV operators in Brazil, Televisa acquired Cablevision, Cablemas, Cablecom and Telecable in Mexico, and Clarin acquired Multicanal and Cablevision in Argentina.

distributors for VHS purchases (US$ 100 for a new release) prompted the emergence of the small video rental store. Under this model, the stores would acquire a limited number of copies of new movies (released under strict "windows") and rent them at a high rental fee which allowed them to recoup the acquisition cost over a short period of time. In a sense, the small store video rental business represented a business model similar to that of the movie theater business, although the latter retained its dominance by virtue of the release windows (see Figure 4).

Figure 4. Audiovisual Industry: Entry of the Small Business Video Rental Business



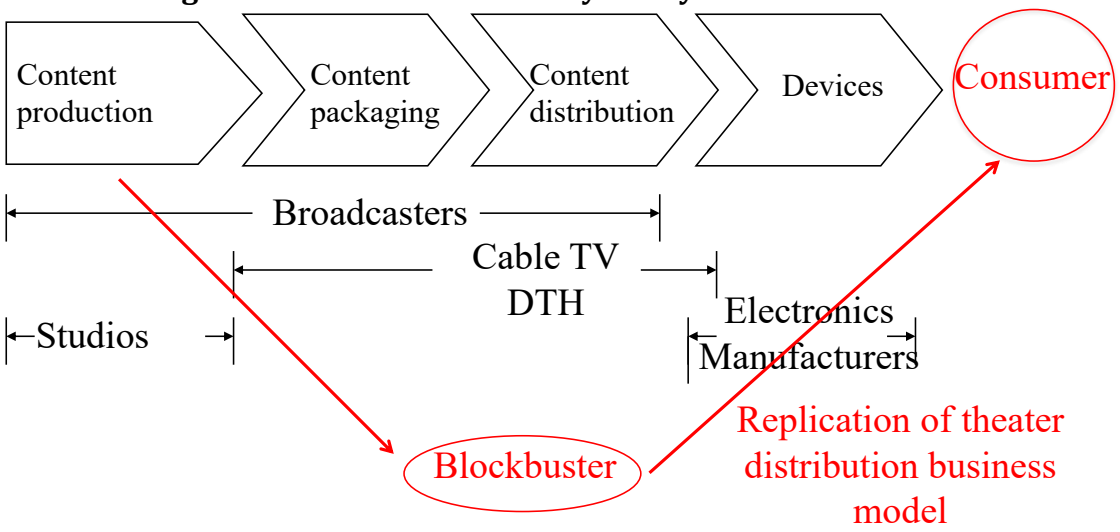
While the small business video rental business was a low scale pay-per-view model, it represented a threat to traditional distribution channels, especially cable TV and DTH operators. Consumers could relinquish attending movie theaters or watching films on pay-TV if they could rent them from the video store.

In 1985, Blockbuster entered the market with a disruptive business model enabled by customer tracking and data base management technologies. This allowed the company to establish a national presence and undermine the business model of smaller independent video stores. The company's membership model offered consumers the ability to rent movies from any number of stores without paying new start-up costs or separate deposits. On the other hand, the database management system allowed Blockbuster to manage inventory and track consumer preferences, which in turn gave the company a better understanding of rental behavior (identify "blockbusters" and the "long tail"[8]). Finally, the sheer size of locations allowed the company to leverage economies of scale in video acquisitions and negotiate upfront costs significantly lower than the traditional US$100 per

[8] The long tail, as defined by Chris Anderson indicates not only the high demand titles but also a long list of lesser known films requested by segments of the audience. In the author's words, "For too long we've been suffering the tyranny of lowest-common-denominator fare, subjected to brain-dead summer blockbusters and manufactured pop. Why? Economics. Many of our assumptions about popular taste are actually artifacts of poor supply-and-demand matching - a market response to inefficient distribution".

tape paid by smaller stores. In a certain way, the new economics of content purchasing was a replication of the pay TV content acquisition model, whereby unit prices were a function of the number of subscribers[9] (see Figure 5).

Figure 5. Audiovisual Industry: Entry of Blockbuster



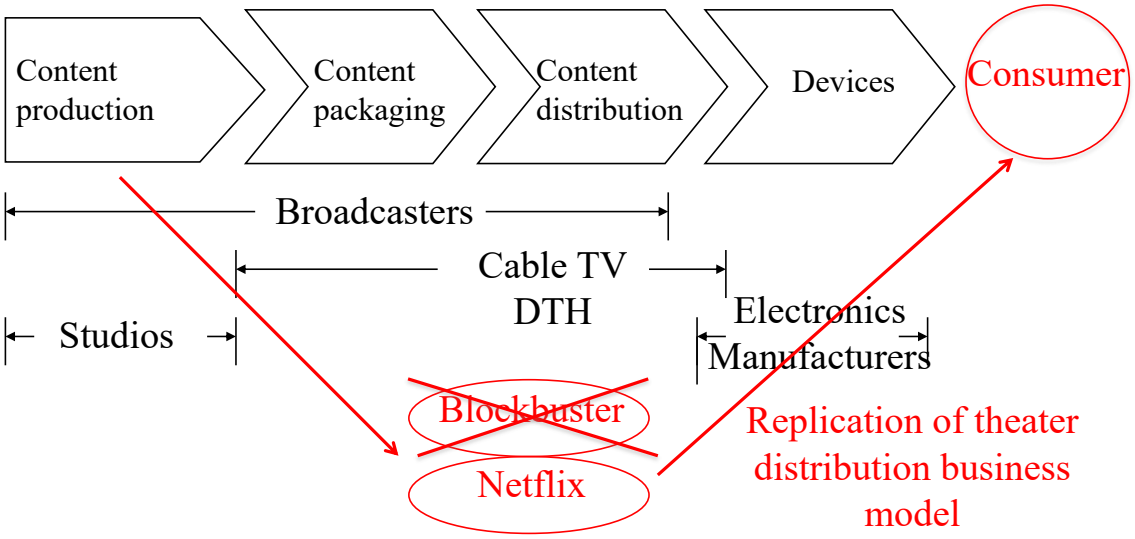
As indicated in figure 5, Blockbuster leveraged IT to displace the small-scale business model but did not introduce any changes in the value chain structure. The essence of its customer value proposition was geographic convenience (one of the four dimensions of network effects), and customer satisfaction in terms of product availability. The net result of this competitive advantage was the displacement of the small video rental store.

The digitization of content, enabled by DVD technology, led to the disruptive entry of Netflix in its original business model. Customers would manage a list of movies to rent and they would receive DVD copies by mail. DVDs would be returned by mail to Netflix after their use. Blockbuster also expanded its business to enter the DVD rental business, except that this technology entailed an implicit elimination of the incumbent's original competitive advantage: the network of retail "brick and mortar" stores. This is the reason why Netflix, already in its original incarnation, used central warehouses to direct ship films that consumers ordered on the Internet. A centralized fulfillment center allowed Netflix to better manage title inventory.

It should be noted that in the late 90s (Netflix was founded in 1997), the average Internet download speeds did not allow a successful video-streaming operation. That said, a low-cost mailing operation and centralized storage were sufficient to displace Blockbuster from the "brick and mortar" business (see Figure 6).

[9] Pricing of content acquired by pay-TV operators is a function of the number of subscribers.

Figure 6. Audiovisual Industry: Entry of Netflix



As shown in figure 6, Netflix original model represented an evolved pay-per-view model. A critical component of Netflix' value proposition was its recommendation engine, which allowed consumers to manage their own database of title requests. Its effect was multi-fold. By steering consumers to certain titles, it reduced the demand for new releases, which were more expensive. Furthermore, it provided a way to leverage the economic value of the long tail[10]. Additionally, by reducing consumer search costs with titles they might like, Netflix increased customer satisfaction.

The progression of Blockbuster first and Netflix second represented a disruption to the traditional value chain. Distributors of home entertainment saw their business threatened by the content rental model and retaliated via low-cost DVDs to be acquired in large retail chains such as Best Buy. Similarly, studios that were experiencing a decline in revenues due to piracy started offering a premium product which included "special editions", packaging DVDs with books, "director's cut", etc. Pay-per-view operators also retaliated by expanding Video on Demand based on long-tail effects to counter "a la carte" consumption mode.

In sum, the pre-streaming era of the audiovisual market already depicted technology-enabled disruption (VHS, DVD, Database management software, CRM), value chain disintermediation (Small Video stores, Blockbuster and Netflix upsetting the video

[10] The size of the long tail is a key enabler of a new economic model. The non-hits on the long tail is a market bigger than the hits: while the average Barnes & Noble store carries 130,000 titles, more than half of Amazon's book sales come from *outside* its top 130,000 titles. This implies that the market for books that are not even sold in the average bookstore is larger than the market for those that are. In other words, the potential book market may be twice as big as it appears to be, if only providers can get over the economics of scarcity. The same is true for all other aspects of the entertainment business, to one degree or another: a fifth of Netflix rentals were outside its top 3,000 titles. Witness the intrinsic dynamic that drove the emergence of OTTs.

distribution business) and traditional player retaliation (distributors and studios) (see table 1).

Table 1. Audiovisual Industry: Waves of Value Chain Disruption

	Broadcast TV	Pay-TV	VHS	DVD
Year introduced	1930	1960	1977	1997
Technology Features	• Point to multi-point distribution • Limited number of channels • Some reception limitations	• Improved reception • Ability to receive multi-channels	• Low quality video • Re-recordable • Expensive • Wears out over time	• High quality video • Not-recordable • Inexpensive
Key disrupting entity	• Theater distribution	• Cable TV • DTH	• Mom and pop video store • Blockbuster	• Netflix
Consumer benefit	• Ability to consume content at home	• Content variety • Video on Demand experience	• More up-to-date content • Ability to watch any time	• Differentiated interface • Recommendation engine

Most value chain moves until the introduction of DVDs represented a disintermediation of traditional players enabled by technology innovation. While this triggered retaliatory moves on the part of the threatened players, the industry value chain structure remained fairly stable with no vertical integration moves across value chain stages.

That said, audience behavior changed significantly. With the advent of cable TV, the audience of broadcast TV declined to 47%, although it increased seasonally driven by major public events. Cable TV captured the remaining share[11]. Finally, the advent of DVDs resulted in an increase in video audience time, which would reach by 2010 an average of 60 hours per week including broadcast, pay-TV, and home devices[12].

II.1.4. The OTT era

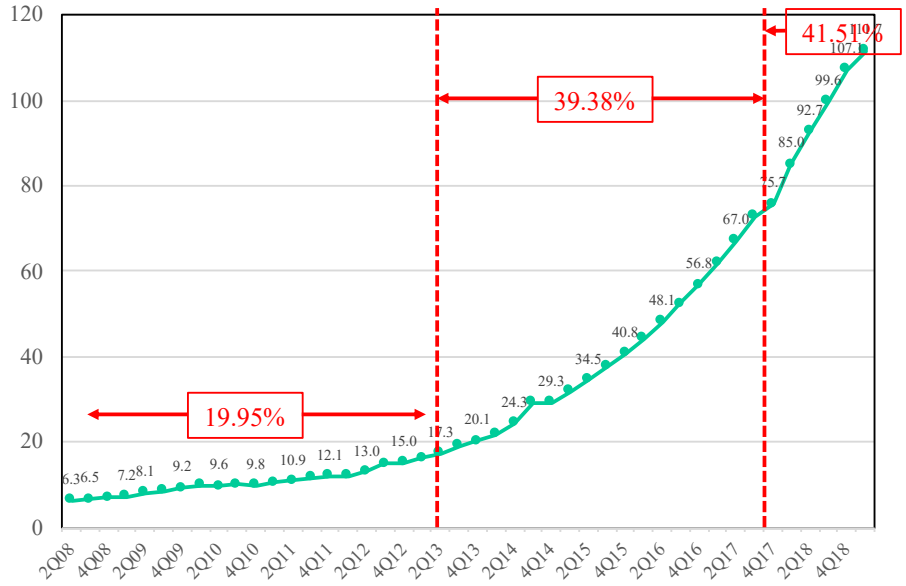
At the beginning of the twenty-first century, video streaming started making inroads in video distribution. While initially slow (due to low broadband download speed), low quality video and high broadband pricing, the service started making inroads rapidly superseding the physical DVD distribution, which was becoming increasingly expensive. The move to video-streaming, enabled by the increase in fixed broadband download speeds (see graphic 1) was the final demise for Blockbuster[13].

[11] Barns, M. (2014). "Expect a seismic shift in video consumption". *Nielsen*, February 26.

[12] Source: ComScore.

[13] It is a well-known story that Netflix founder brought to Blockbuster a proposal of the video-streaming concept for a 49% stake in Netflix for US$ 50 million. At the time, Blockbuster had 7,700 stores, and a gross profit of $3 billion, while Netflix had 300,000 subscribers. Blockbuster declined the offer, and it would file for bankruptcy in 2010.

Graphic 1. United States: Fixed Broadband Average Download Speed (in Mbps)



Note: The time intervals were selected to indicate an acceleration of download speeds over time
Source: Ookla/Speedtest; Telecom Advisory Services analysis

Video-streaming was the key enabler of the entry of several OTT players. Note the parallel between the adoption of the Internet leading to the development of the OTT sector and the evolution triggered by pay TV. The dynamics are exactly the same: a new technology reduces the barriers to content distribution, which leads to competition in this segment, thereby allowing increased content and variety, benefitting consumers.

Netflix was able to leverage its consumer facing relationship, high level of service, content volume, and a proven subscription-based monetization model to shift its DVD mail model to Internet-based distribution. It should be mentioned, though, that Netflix original move in video-streaming, while disruptive, was based on the delivery of only third-party content. However, its entry opened the gate to a number of players, each of which depicted alternative business models, some of which entailed vertical integration. For example, Hulu (originally, a joint venture between the broadcasters NBC and ABC, Fox and the private equity fund Providence) was the first player to offer an advertising-based model. Over time, Hulu moved from an advertising-only model to having a Hulu Plus subscription model giving access to a broad catalogue (full current season of many programs and past seasons of extensive catalogue) accessible to devices from Samsung HDTV to the iPad, and the Xbox[14].

On the other hand, Apple also attempted to backward integrate from the device position of the value chain. It leveraged the "halo" effect of premium devices (such as the MAC and the

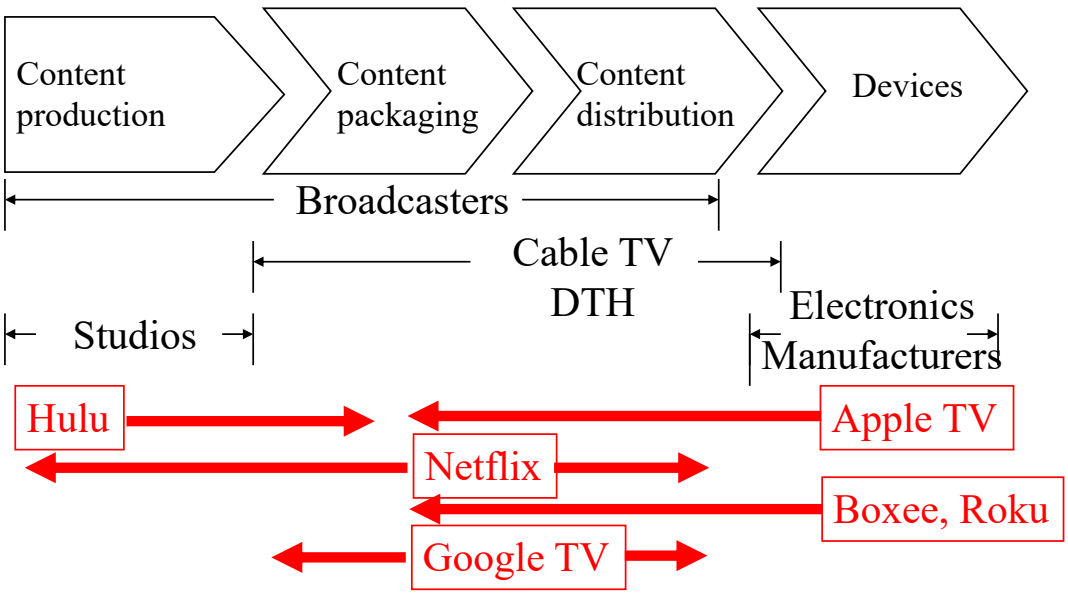
[14] By 2019 Disney had become a majority owner after its acquisition of 21st Century Fox (with a 60% stake), while Comcast via NBCUniversal (with a 30% stake) and AT&T via Warner Media (with a 10% stake) continued hold an interest as well.

iPad) and offered a subscription-based service, combined with the sale of an access device (Apple TV), offering a portal capability to other services, such as Netflix and Hulu.

In addition, content digitization around video-streaming prompted the entry of non-traditional players, such as Amazon and Walmart, attempting to leverage their physical distribution advantage. In particular, for Amazon, a retailer of video content, video-streaming represented an opportunity to reduce the cost of shipping, particularly for Amazon Primer members, who received free shipping. As a result, the retailer could bundle the cost of licensing, offering the content as an upgrade to Prime (simultaneous sale of the physical media and the video-streaming service), and also provide content providers immediate access to 25 million paying subscribers (a big incentive for collaboration). Similarly, by acquiring Vudu, Walmart - a retailer of 40% of the DVDs sold in the US at the time -, generated a video-streaming retaliatory response.

In sum, the attack on the value chain through vertical integration and the entry of non-traditional firms occurred simultaneously by different players that, while leveraging streaming technology, attempted to differentiate from one another, attacking different stages of the value chain. The digitization of content resulted in an erosion of barriers across value chain stages, prompting industry players to move across the chain in search of defensible positions and building competitive advantage. Hulu was an attempt of content producers to respond to the attack from Netflix. Netflix and Amazon entered the content production as a way to reduce content licensing costs and increase their bargaining position vis-à-vis content producers. Google/YouTube leverages its position in search and aggregation, while a number of device players (Apple, Roku) expanded into distribution and packaging in search of higher margin stages (see figure 7).

Figure 7. Audiovisual industry: Value chain moves

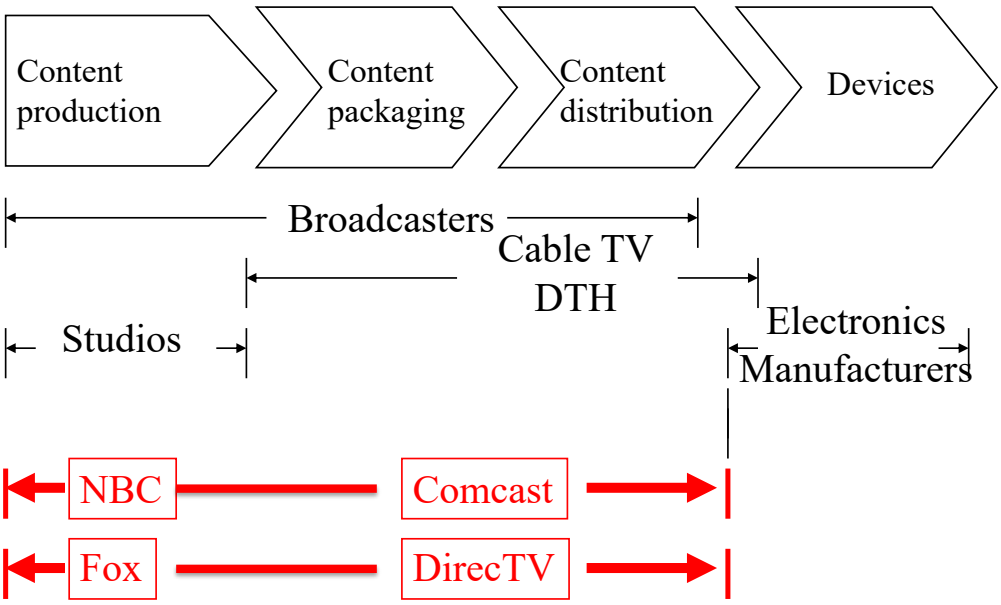


Under this scenario, distribution players vertically integrated to secure access to key content. By moving into content production, Netflix transitioned to a vertical integrated model as a way to lessen its dependence into third party licensing rights.

Not all new entrants were equally successful in their first attempt. In particular, after an initial launch, Google TV presented an overly complex interface and assumed that customers would be willing to sign up for a subscription with Google, and that consumers wanted the complete Internet access experience on their TVs, which is wrong given usage segmentation of devices (users encountered less than optimal experience searching and surfing on Google TV). In a subsequent attempt, Google entered the market via Google Play and YouTube Live. YouTube (Google-owned) leveraged an advertising-based model, buttressed with dominant position in user-generated content. A similar iteration took place with Apple.

Digitization also prompted some additional vertical integration moves across the value chain, such as the Comcast and NBC merger[15] (see figure 8).

Figure 8. Audiovisual Industry: Vertical integration moves



These moves represented a challenge to the pure play distributors of audiovisual content (e.g. pay-TV), as well as the producers of niche programming and cable TV networks dependent on syndicated programming (e.g. Seinfeld reruns, Law & Order) that got squeezed

[15] In December 2009, Comcast announced its intent to acquire a majority stake in the media conglomerate NBC Universal from General Electric (GE). The acquisition was subject to scrutiny from antitrust authorities, concerned about the potential effects of the vertical integration that the acquisition could create, as Comcast is also heavily involved in cable television and internet services in many media markets. The deal went through, however, resulting in Comcast owning 51% of the company until March 2013, when GE divested its stake to give Comcast sole ownership.

out of "a la carte" environment[16]. On the other hand, time sensitive content production companies (sports, cable news) generally benefited from OTT. This includes primarily companies with sports and original programming (such as Disney through ESPN), and producers with strong defined verticals (such as Viacom with Nickelodeon and MTV).

In sum, contrary to what would be expected, vertical integration in the OTT world has driven competitive intensity. With the lowering of barriers to entry, competition has centered on the features of the service, of which content is the most important. Digitization has also changed the formats and lowered barriers to production, so more people can produce content and insert ads to monetize it. Finally, Netflix, Amazon, and Apple have the scale to develop their own content, which combined with the loss of advertising revenues forces content owners to go Direct to Consumer (DTC), which translates into exclusive use of their own content. Contrary with what occurred in the pay-TV area, competition in the OTT era is based on content and many different features such as interface technology, commercial revenue model (subscription vs ads), privacy, and integration with other services, but not necessarily distribution.

II.2. The current state of the audiovisual value chain in advanced economies

As of today, the audiovisual global market is affected by ferocious competition, where players are competing not only on video distribution but in other adjacent industries like content production on the basis of global scale, while adapting content to local consumer demands. Beyond the enhancement of service features, the primary strategy of all distribution players (OTT and non-OTT) has been to vertically integrate towards content acquisition to secure access to libraries that yield service attractiveness, while reducing program acquisition costs.

Video-streaming technology has enabled the entry of new players and consolidation in the telecommunications and entertainment industries with the objective of generating content that will attract and retain customers. These vertical integration moves have been driven by a number of conflicts based on the cost of licensing content such as Dish temporary blackout of Univision and HBO, or the conflict between Time Warner Cable and Fox over distribution rights.

Netflix and Amazon alone are expected to invest over US$ 22 billion on film and TV programming in 2019[17], compared to US$ 21.7 billion in 2018 for NBC, ABC, and CBS. In 2018, Netflix had an $12.04 billion content budget, of which 85% was directed to develop original productions. The overall content budget is expected to climb to US$ 15 billion in

[16] A la carte pay television refers to a pricing model for pay television services in which customers subscribe to individual television channels. For subscription distribution services, a la carte pricing contrasts with the prevailing model of bundling, in which channels are grouped into packages that are offered on an all-or-nothing basis.

[17] Netflix spent US$ 10.23 bn in 2018 on 700 original TV shows and 80 films (called Originals programming),

2019[18]. On the other hand, while Amazon does not disclose how much of its 2019 ongoing $7 billion content budget is dedicated to original programming, it is much less than Netflix[19]. Both OTT players leverage economies of scale to develop programming that allow them to reduce (or even completely avoid) rising licensing budgets[20].

Originally, Netflix started pursuing the development of original content in parallel with licensing deals, in some cases under exclusive arrangements, such as the one that produced House of Cards[21]. It should be noted, however, that many of Netflix originals were not made by the company but commissioned to the same studios that make shows for traditional networks, such as Warner Bros. TV, Sony Pictures TV, Paramount and the like. Along those lines, the term "original " is used to indicate the content and series that are exclusive to its platform. That said, the company is now focusing more on the originals it self-produces, although it does not disclose what portion of the 85% of content budget is dedicated to producing in-house versus commissioning[22]. Based on its success in original programming beyond the United States, Netflix is emphasizing development of foreign-language content, with a particular focus on Latin America and India. The company perceives local language development as a critical component of local expansion. For example, as Netflix looks to expand in Asia, it announced 17 new Asian originals in November 2018[23]. Further expanding into production, Netflix has moved into signing talent deals.

This move coincides with media companies needing (and being able) to have its own, independent distribution channels, which creates a convergence of purpose with regard to vertical integration, resulting in entities such as the Disney/Comcast/Hulu TV/Disney+[24]. According to Disney, Disney+, its upcoming OTT service, is projected to reach between 60 million and 90 million subscribers by the fiscal year 2024, two thirds of whom would be based in markets outside the U.S. The company plans to spend over $1 billion on original content in its first year of operation, increasing to over $2 billion annually by 2024. Competitive intensity with regards to content acquisition is exacerbated by the horizontal consolidation of content production, such as Disney's acquisition of Pixar (2006), Marvel (2009), Lucasfilm (2012) and Fox (2018).

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[18] Spangler, T. (2018). "Netflix content chief says 85% of new spending is on originals," *Variety*, May 14. and Spangler, T. (2019). Netflix spent $12 billion on Content in 2018. Analysts expect that to grow to $15 billion this year", *Variety*, January 18.

[19] Roettgers, J. (2019). "Amazon spent $1.7 billion on content in Q1, but original video investments still unknown", *Variety*, April 26.

[20] As an example, Netflix paid an estimated $1 million per episode for 91 episodes of AMC's Mad Men and acquired three previous and three upcoming seasons of Breaking Bad.

[21] Netflix's first moves into original programming were structured as 'deficit-financing' deals where the company paid a share of a show's production costs and the production company retained ownership to negotiate deals for subsequent windows and international markets. Later, Netflix switched to a 'cost-plus' model that required the company to pay more money upfront but also enabled it to secure ownership rights, thereby putting itself in a position to exploit subsequent revenue windows.

[22] Rodriguez, A.(2019). "Netflix didn't make many of the "originals" that made it famous. That's changing", *Quartz*, February 26.

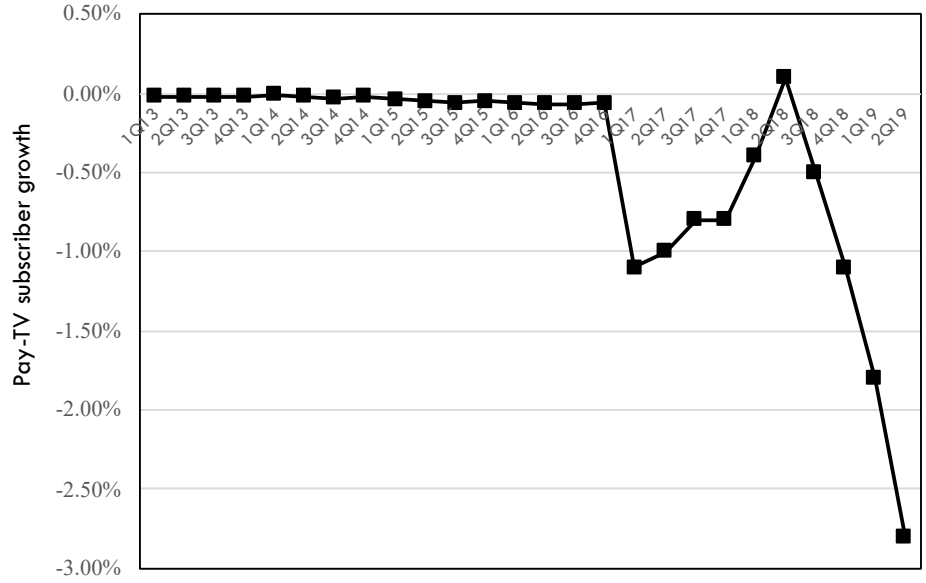
[23] Clark, T. (2019). "The 20 most popular Netflix original TV shows from outside of the US" *Business Insider*, February 28.

[24] The Walt Disney Company Investor Day 2019," *The Walt Disney Company*, thewaltdisneycompany.com/wp-content/uploads/2019/03/disney_investor-day_2019.pdf.)

In another development, content distribution will be starting to segment between general entertainment and sports. The former will migrate to the different on-demand business models (i.e., less expensive subscription VOD, advertising VOD), while sports will remain on TV and live streaming options. This will allow customers that want one or the other content type to segment their demand and avoid purchasing large bundles of unused content.

In parallel with the struggle for customer control based on content attractiveness, traditional pay-TV operators are facing the acceleration of cord-cutting by consumers seeking programming flexibility and cost-effective options. For example, while US pay-TV subscribership has been consistently declining for a decade, starting in 2014 and more importantly in 2018 the decline has accelerated significantly (see graphic 2).

Graphic 2. United States: Total Pay-TV



Note: 2Q18 decrease in cord-cutting caused by the 2018 World Soccer Cup
Source: MoffettNathanson

As Graphic 2 indicates, the loss of pay-TV subscribers in the United States is accelerating: between January and March of 2019, pay-TV lost 1.4 million subscribers. A similar trend can be identified throughout Europe (see table 2).

Table 2. Europe: Total Cable TV penetration of homes passed (2011-2017)

Country	2011	2012	2013	2014	2015	2016	2017
Sweden	97.23 %	99.48 %	97.67 %	92.49 %	91.03 %	92.87 %	91.55 %
Switzerland	96.85 %	94.85 %	92.84 %	91.13 %	86.63 %	83.86 %	81.72 %
Belgium	76.80 %	73.98 %	72.48 %	71.15 %	70.20 %	68.42 %	68.58 %
Netherlands	71.16 %	67.78 %	64.69 %	64.39 %	61.57 %	59.99 %	59.15 %
Germany	63.39 %	61.02 %	59.66 %	58.64 %	58.10 %	57.76 %	57.51 %
United Kingdom	30.01 %	30.51 %	30.02 %	29.85 %	28.95 %	27.78 %	27.45 %
France	27.08 %	26.55 %	26.32 %	25.36 %	24.84 %	25.33 %	26.07 %
Portugal	43.30 %	43.92 %	42.26 %	41.23 %	40.63 %	40.63 %	40.87 %
Austria	58.02 %	55.76 %	55.19 %	51.05 %	49.61 %	47.09 %	45.37 %

Source: HIS Markit. European Broadband Cable 2018

As table 2 shows, all major European cable TV markets have been undergoing a decline in subscribership over the past years.

Where are subscribers that disconnect from pay-TV going? To over-the-top. This business, a subset of the video on demand service, is dominated by Netflix (44.8 % of US streaming households), followed by Amazon 28.7%, and Hulu 11.2%. Each player is focusing on specific levers to compete in the space: for example, Netflix is primarily emphasizing a vertically integrated strategy linking distribution and proprietary content, Amazon includes within this feature, the positioning as a portal to video-on-demand channels (Showtime, HBO), Hulu emphasizes primarily a subscription-based time-shifting consumption of linear content. Beyond these principal players, the OTT segment comprises many more platforms, operating under different business models:

- Transaction based video on demand (iTunes, FilmO, distrify): these platforms do not charge anything to sign up for the service/create a user profile. Instead, the subscriber will pay an amount based on the content he or she watches. Most often this relates to movies but is also used for series and, in particular, for sports and events.
- Advertisement based video on demand (YouTube, Tune.pk, Dailymotion): this model is free for users, although they are free to log in and stream videos, in return for spending time watching commercials.
- Hybrid video on demand (YouTube): services that operate with mixed models as well, where the customer will, for example, pay a monthly fee, which will grant access to parts or certain types of content. Yet, there can still also be extra fees applied to watch particular pieces of content or a live sports event (YouTube Live). Hulu is another example of a hybrid model where subscribers are allowed to choose between a $5.99 monthly fee with commercials, a $11.99 a month commercial free, and a $44.99 a month service that includes live television.

All in all, OTT services present a long tail configuration[25]. Beyond Netflix, and YouTube (each reaches 50% of broadband households) there are 27 platforms with reach between 0% and 1%, and 14 reach between 1 and 2% of broadband households.

The development of the OTT industry based on streaming technology prompted pay-TV operators to enhance their VOD offer as a defensive strategy. Pay-TV operators started including enhanced interactivity and enriched customer services, adding to the traditional video-on-demand, content repackaging, games, music and information[26]. TV everywhere[27]

[25] Engleson, S. (2018). *State of OTT: an in-depth look at today's over the top content consumption and device usage*. Comscore: June.
[26] See BSkyB, the leading pay-TV platform in the UK and Ireland (Evans, 2015).
[27] TV Everywhere (also known as authenticated streaming or authenticated video on-demand)[1] refers to a business model wherein access to streaming video content from a television channel requires users to "authenticate" themselves as current subscribers to the channel, via an account provided by their participating pay television provider, in order to access the content.

was an OTT-based approach aimed at enhancing customer loyalty and building portal functionality.

Recognizing the value conveyed to their customers, pay-TV operators provide now OTT services such as Netflix on their platforms, thus allowing to position themselves as content aggregators from a single access interface. This approach allows them to preserve customers by providing complementary services (broadband, low cost bundles, OTT access)[28], to mitigate the reduction in margins from their content offerings. However, the strategy is not feasible in all cases because some OTT players, such as Amazon, are positioning themselves as aggregators offering access to third party channels and acquiring exclusive rights to specific content. Additionally, traditional pay-TV providers and programmers have launched their own OTT services via virtual Multiple Video Programming Distributor models[29], such as Sky UK's Now TV and the international rollout of HBO Go.

When it comes to global deployment, beyond Netflix and Amazon pervasive presence, the OTT market remains quite fragmented with intense activity of new entrants leveraging local content and network effects (see table 3).

Table 3. OTT share of subscribers (2018-19)

	Netflix	Amazon	Other	
			Share	Players
United States	44.8 %	28.7 %	26.5 %	Hulu (21.4%), HBO Now (6.5%), Disney (1.9%), SlingTV (2.0%)
Europe	43.6%	32.2%	24.2 %	Sky (4%), Viaplay (1.1%), HBO (2.4%), maxdome (1.8%), Salto, ProSiebenSat.1, britbox
India[30]	1.4%	5%	93.6 %	Hotstar (69.4%), Sony Liv (13%), Voot, (10.7%) Yupptv (0.5%), Erosnow, Viu, Jiu Cinema, Speel, Zengatv, JioTV, Zee5, Wynk, Hungama, Altbalaji,
Argentina	48.6 %	2.6 %	48.8 %	Twitch (8.3%), Crunchyroll (3.0%), Claro Video (2.8%), Baby TV (2.5%), Planet Kids (2.1%), Sony Cracle (2.0%)
Chile	43.3 %	2.2 %	54.5%	Twitch (8.3 %), (YouTube (7.3 %), Estadio CDF (4.8 %), Crunchyroll (4.2 %), Claro Video (3.9 %), Baby TV (3.7%)
Colombia	54.6 %	5.2 %	40.2 %	Claro Video (20.5 %), YouTube (10.9 %), WinSportsOnline (10.5%), Movistar Play (7.9%)

Under the model, broadcasters offer their customers the ability to access content from their channels through internet-based services and mobile apps—either live or on-demand, as part of their subscription to the service.

[28] Part of this strategy is prompted by the fact that cable operators are seeing lowered margins from their content offerings, and so to sell more broadband they are facilitating their customers' ability to acquire Netflix within their own offerings.

[29] A *virtual* MVPD (vMVPD) is a service that provides multiple television channels through the internet without supplying its own data transport infrastructure (i.e. coaxial cable, fiber, or satellite technology). These services are also sometimes called "skinny bundles" as they often contain fewer channels than a traditional cable or satellite subscription. They include Sling TV, DirecTV Now, PlayStation Vue, Fubo, Philo, YouTube TV and Hulu Live. This model is different from "pure-play" vMVPDs, services that are exclusively vMVPDs,.

[30] Netflix low share in India is explained by multiple factors: a) late to cut pricing in a heavily cost-sensitive market, b) no coverage of Cricket, the most popular sport in India, c) limited local content compared to competitors, and d) no bundling of video-streaming with mobile phone service.

	Netflix	Amazon	Other	
			Share	Players
Mexico	32.4 %	8.8 %	58.8 %	Claro Video (13.2%), YouTube (6.6%), Twitch (4.8%), Blim (3.5%), Crunchyroll (2.5 %)
Peru	26.9 %	3.5 %	69.6 %	YouTube (8.0%), America TVGO (7.3 %), Claro Video (6.9%), Twitch (5.4%), Crunchyroll (3.1%)

Source: Feldman, D. (2019). Netflix's dominance in US Wanes as Hulu, Amazon gain subscribers; ComScore: Video-streaming in India; McDonald (2018). The OTT hotlist; Soni, S. (2018) How is Netflix performing in India? Business Bureau

All in all, the center of gravity of competition in the audiovisual value chain has moved to video-streaming, where firms, such as Disney and Netflix are struggling for global dominance. As mentioned above, Disney announced in April 2019 the launch of its own video streaming service in November 2019, leveraging the experience acquired through Hulu and ESPN+. This announcement was preceded by the termination of its licensing agreement with Netflix. In addition to these two players, Apple is entering the arena through Apple+ with a significant amount of original content, while Amazon continued to invest heavily in production and Warner Media is planning to launch HBO Max in the U.S. in the Spring of 2020.

In this increasingly competitive context, audiovisual content production has accelerated across the globe, not only in advanced economies. In addition to the investment of global players in both US and "local" content reviewed above, non-US players are ramping up their content development capability. For example, Malaysia-based iFliix, which is available in 22 countries across Southeast Asia, the Middle East, and Africa[31], is investing in Malaysian and other original content, and is planning to add 12 original series and 30 movies through a wholly-owned production company, Studio 2:15.[32] In India local video streaming platform Spuul is producing original shows[33], while other local platforms like Hotstar, Sony Liv, and Voot have increased their content spending significantly since Amazon and Netflix entered the Indian market. Growth in regional content on Indian OTT platforms is "fueled by demand from both local viewers and the international diaspora"[34]. Showmax, the South African OTT platform launched in 2015 and operating in 70 countries is a leading producer of African based content[35].

The growth in content production is driven by strong consumer demand for local content. For example, consumption of OTT video content in Southeast Asia has shifted from a dominant 80% by Hollywood in 2015 to 50% in 2017, with the remainder shared by local

[31] This includes Malaysia, Indonesia, the Philippines, Thailand, Brunei, Sri Lanka, Pakistan, Myanmar, Vietnam, the Maldives, Kuwait, Bahrain, Saudi Arabia, Jordan, Iraq, Lebanon, Egypt, Sudan, Cambodia, Nepal, Bangladesh and Morocco.

[32] Farveen, F. (2019). "iFlix gets aggressive with original content commissioning in 2019", *Marketing*, September 12.

[33] Panjari, S. (2018) "Spuul fine-tuning its content strategy", *Television Post*, April 12.

[34] Blackbrun, D. et al. (2019). *The impact of Online Video Distribution on the Global Market for Digital Content*. NERA Economic Consulting.

[35] Parrott Analytics (2018). *A closer look at SVOD digital originals and content distribution platforms in South Africa*. June 1.

producers[36]. Locally produced series represent 46% of viewing in Vietnam, 35% of viewing in Thailand and 31% of viewing in the Philippines.

In addition, the shift towards local production is a normal competitive response of local OTT platforms, which realize that to better compete with the global players they need to leverage indirect network effects as propelled by local content. **The value proposition of OTT platforms, as two-sided platforms linking content to their audience, is based on the concept of variety.** In this case, indirect network effects increase with the variety of content on one side of the platform. In other words, the more the content offered by the platform is varied and tailored to the needs of the subscribers, the greater the possibility of growing the subscriber base. This is the reason why so many European OTT platforms have such a rich library of local content: UniversCine in France (70%); Flimmit in Austria (67%); Volta in Ireland (62%), and Strefa in Poland (59%).[37]

Variety and personalization are two key variables in enhancing the indirect network effects of OTT platforms. In light of this, and recognizing the desire for local content from the audience, local OTT platforms, such as the ones mentioned above grow their original content. In a competitive response, global platforms, such as Amazon and Netflix strive to match local libraries. Netflix plans to produce or co-produce 221 originals in Europe in 2019, up from 141 in 2018[38].This is the virtuous cycle that fuels the development of localized content across the world[39]. As an enabler, digitization facilitates this virtuous cycle because content creation is becoming less expensive, reducing barriers to entry. As indicated by a study of the UK market, entry into audiovisual production is relatively easy: between 2012 and 2014, 297 new companies entered the UK production market, the majority of which were truly independent[40].

In summary, as of today, the audiovisual global market is marked by ferocious competition, where players are competing not only on video distribution but in other adjacent industries like content development on the basis of global scale, while adapting content to meet local consumer demands. The players are varied, including (a) new entrant competitors that are not just mimicking Netflix but trying to develop offers with different features; (b) incumbents distributors who are responding by developing OTT offers, which has driven consolidation, (c) incumbent programmers who are also trying to develop their own OTT (i.e., DTC) offers because they realize that the lack of direct consumer relationships is a fatal flaw as compared to Netflix and others. In this context, consumers are benefitting massively - never have they had so much content available in so many forms at attractive price points.

II.3. The audiovisual experience in light of theories of value chain dynamics

[36] ContentAsia (2017). *Data: Forecasts*
[37] Source: Fontaine ,G. et al. (2016). *Origin of Films and TV Content in VOD Catalogues in the EU & Visibility of Films on VOD Services*, European Audiovisual Observatory (November).
[38] Ooyala (2019). *State of the broadcast industry 2019*.
[39] See the Claro case study in Katz, R. et al. (2018). *Digital ecosystems: Innovation and disruption in Latin America.* Miami: gA Center for Digital Business Transformation.
[40] Oliver & Ohlbaum (2015). *Trends in TV production: a report to OFCOM*.

The assessment of competitive trends of the audiovisual industry is consistent with an industrial organization view of value chain dynamics, as conceptualized by economists. As originally posited by Adam Smith (1776), "the division of labor is limited by the extent of the market". In other words, he stated that as the size of the market for a good expands from the local town or village to the region, nation, and beyond, participants derive larger benefits from trade, specialization, and economies of scale. In other words, the larger a market, the higher the opportunity for a particular company to emerge as dominant in a particular stage of the value chain, leveraging economies of scale and expertise. Marshall extended Smith's concept stating that over time, a single firm could emerge as dominant in each stage of the production chain (becoming a partial monopolist).

Stigler's (1951) theory of vertical integration and industry life cycle further clarified the concept. The Economics Nobel Laureate suggested that the functional theory of a firm originally presented by Smith can be extended to understand processes of vertical integration throughout the development of an industry. Stigler introduced the concept of a production chain (later called the value chain) and explained that the process of vertical integration and fragmentation of the chain can be illustrated by the life cycle of an industry. According to Stigler, in the origins of the development of an industry, production chains tend to be vertically integrated to satisfy the requirements of development (new products, new production techniques, new relations with consumers). That is, the structure of a new industry is composed of competitors who control all the functions and inputs needed to deliver production to the market. Young firms need to manufacture their own inputs, they must persuade customers to shift purchases to their own products, they must design specialized equipment to manufacture the goods, and they need to build specific distribution channels. However, over time, as customers and independent middlemen become more knowledgeable of the technology and as reliability increases, the incentive to maintain a market presence across the whole value chain decreases and value chain fragmentation emerges. At this point, competitors tend to outsource certain functions to "specialist" firms that offer certain functions at lower costs. However, over time, when industries undergo pricing pressure or competitive disruption and/or product substitution, firms need to reintegrate because the number of scale efficient specialists declines. Stigler also mentions that in subsequent industrial development stages, the search for strategic control of particular functions (such as access to a certain raw material) or customers leads certain firms operating in the production chain to vertically integrate again. This leads to value chain re-integration. Therefore, according to this author, industrial production chains tend to go through processes of vertical integration and fragmentation throughout the life cycle of an industry.

In sum, according to Stigler, value chains tend to fragment and reintegrate across the life cycle of a product. Stigler's theory is particularly relevant to the audiovisual industry in two respects. First, the drive toward vertical integration responds to the specific needs of participants of an industry, whether it is access to inputs or leveraging economies of scale. Second, there is no such thing as a static configuration of an industry, but organizations that undergo changes across a development life cycle. Notice how Stigler's theory closely matches the evolution of the audiovisual industry value chain discussed above.

Beyond outlining the dynamics of vertical integration and value chain recomposition, Stigler differentiates between models of vertical integration. He establishes a distinction between "mundane vertical integration" which is the integration of successive stages within the core business to save on transportation and inventory expenses, and the integration of peripheral or off-site activities for "strategic" considerations. Along these lines, he introduces the concepts of backward, lateral and forward integration. The first one depicts the move of companies into basic materials to reduce transaction costs or for strategic reasons. The second implies acquiring positions into components to achieve efficiency in the supply chain for strategic reasons. Finally, forward integration into distribution is driven by scale, scope and externalities.

Value chain dynamics in the digital ecosystem add another layer of complexity to Stigler's original framework[41]. Opposed to Stigler's view that industries are always integrated at their origin, value chains in digital industries may exhibit extensive fragmentation due to efficiency, knowledge, patents, stock market trend or industry developments. Fragmentation is also enabled by platform modularity. Digitization is an enabler of lower transaction costs between value chain stages, which allows an efficient "fragmentation" of players becoming specialists (Zwass, 1996). These specialists concentrate only on executing one function within their stage and the rules that allow them to connect with complementary activities (Fransman, 2002; Kraft, 2003). However, over time, growing integration emerges driven by strategic considerations (search for enhancing customer value, higher profitability stages, and/or a return to economies of scale). That said, value chain reintegration does not necessarily represent an end developmental point. At later stages of industry development, failure in achieving synergies through cross-ownerships, or incompatible business models, recognition that full integration does not yield strategic superiority could result in a new value chain fragmentation. Therefore, value chain dynamics in digital industries also present stages of fragmentation and vertical integration driven by specific needs of players.

In summary, vertical integration is driven by different motives:

- To leverage economies of scale or scope: unit costs can be reduced by sharing fixed costs;
- To reduce transaction costs: as mentioned above, the internalization of functions can result in costs lower than their acquisition in the market;
- To reduce coordination and control costs: certain assets can be more valuable if used in a coordinated way;
- To implement strategies aimed at meeting demands of an increasingly segmented market price discrimination or product differentiation: integration can result in an opportunity to differentiate the product from competitors or customize offerings;
- To achieve a strategic positioning: integration allows the development of complementary capabilities; and

[41] See Katz, R. *La economía y el ecosistema digital en América Latina*. Madrid, Ariel, 2015.

- To leverage market strength: this could be motivated by the need to exercise dominant positions in the industry or protect margins associated with sunk investments.

The analysis of the audiovisual industry dynamics in light of the industrial organization research literature briefly reviewed above indicates that value chain reconfiguration assumes different models over time, propelled by technology developments and driven by strategic considerations, such as the need to respond to competitive verticalized "direct to consumer" offerings.

III. THE BRAZILIAN AUDIOVISUAL MARKET

The development of the Brazilian audiovisual industry closely mirrors the one analyzed internationally, with the only difference being that timing in value chain disruptions occurred with some time lag. That said, as of today the industry in Brazil is evolving in sync with what is taking place in a global scale.

III.1. The historical development of Brazil's audiovisual market

The Brazilian audiovisual market has undergone a step function growth since the 1990s. A key driver of this growth has been the expansion of the middle class and the parallel development of urbanization. A predominantly rural country in the 1960s, Brazil reached an urbanization rate of 86.31% by 2017.

The broadcasting television industry is comprised by a number of national and regional players with an average daily audience of 40%. As shown in other advanced economies, the Brazilian TV broadcasting audience has declined from 65% in the 1990s driven by the rise in Internet penetration[42], and competition from pay-TV programming, which is more appealing to younger demographics.

The first wave of disruption in the Brazilian audiovisual market took place in the mid-1990s with the development of pay-TV. Brazilian multichannel television comprises by far the largest in Latin America, accounting for 40% of the region's total subscription revenue in 2018[43], although it is positioned among the lowest household penetrations in the region, at 26.2%[44]. In addition to cable TV, television providers also distribute content via DTH. Satellite has been the most-popular TV technology for many years in Brazil, although subscriber numbers have fallen in recent years, reaching 9.8 million in 2018.

As of September 2011, the pay-TV market started to be regulated by the 12.485/11 Law, which opened the market to national and foreign telecommunications companies. The law unified the regulation on transmission via satellite (DTH), cable, or microwave (MMDS), and allowed foreign companies to enter the pay TV distribution market (under the previous rule,

[42] In fact, Internet use has become more popular than watching TV as entertainment activity.
[43] Source: PWC (2019). *Global Entertainment and media Outlook 2019-2023.*
[44] Source: Business Bureau.

their participation was limited to no more than a 49% stake in any one provider). The law also introduced national quotas as compulsory in the programming grid: three hours a week of content produced in Brazil—half of it created by companies with no links to traditional broadcasting groups. To stimulate local production, 30% of the resources of the newly created Audiovisual Sector Fund (FSA) were to be allocated to productions originating in the north, northeast, and mid- west regions.

III.2. The development of OTT platforms in Brazil

The evolution of the Brazilian audiovisual market was significantly changed by the introduction of OTT platforms. While pay-TV subscriptions had been declining partly as a result of the impact of economic variables, a structural change in subscriber behavior triggered a wave of cord-cutting (see table 4).

Table 4. Brazil. Pay-TV subscribership vs. GDP (2013-2018)

	2013	2014	2015	2016	2017	2018	2019 June)
Subscribers	18,021,187	19,569,339	19,121,783	18,821,275	18,124,655	17,514,476	16,096,668
Y-o-Y change		8.6%	-2.3%	-1.6%	-3.7%	-3.4%	-8.1%
GDP per capita (current prices)	12,208.83	12,025.22	8,738.04	8,634.92	9,818.84	10,140.10	9,343
Y-o-Y change		-1.5%	-27.3%	-1.2%	13.7%	3.3%	-7.9%

Sources: IMF; Anatel; Telecom Advisory Services analysis

As table 4 indicates, while there is some correlation between the economic variable and pay-TV subscribership (particularly in 2016 and 2019), the latter has declined consistently since 2016, while the former has oscillated between years of growth and decline. This leads us to conclude that, as in the global case, pay-TV subscribership in Brazil is affected by a consistent decline due to gradual disconnects resulting from a migration to OTT and, in some cases, to piracy options. Video streaming has become increasingly popular in Brazil. As of 2019, OTT penetration represented 75.4% of fixed broadband subscriptions (see table 5).

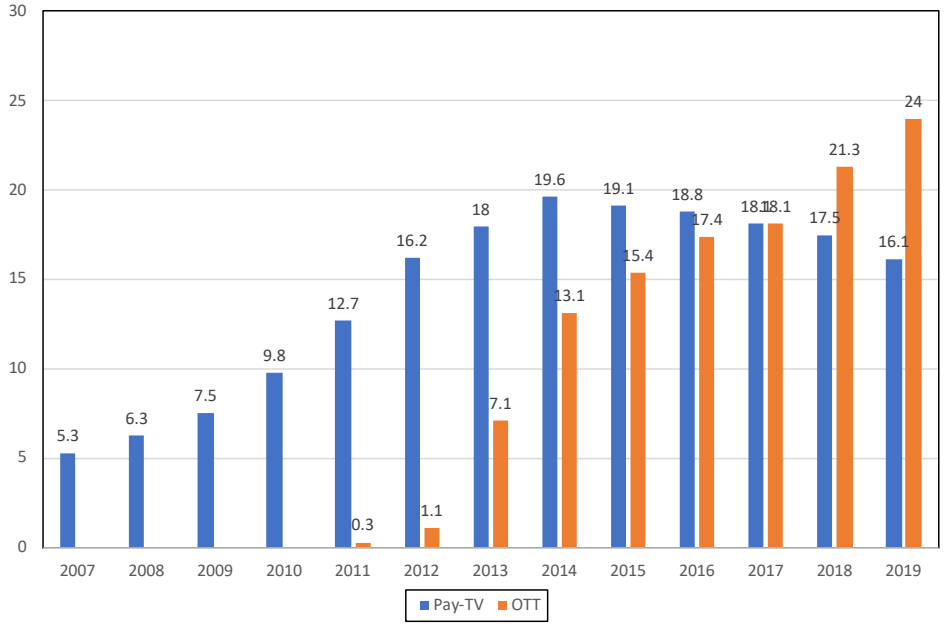
Table 5. Brazil: Fixed broadband subscriptions and OTT penetration (2013-2019)

	2013	2014	2015	2016	2017	2018	2019 (June)
Fixed broadband subscriptions	22,185,749	23,968,352	25,490,706	26,759,384	28,907,867	31,233,004	31,855,590
Fixed broadband HH Penetration	37.7%	40.4%	42.6%	44.4%	47.6%	51.1%	51.7%
OTT Unique subscribers	- - -	13,087,824	15,386,582	17,366,766	18,118,168	21,300,461	24,025,215
Penetration of fixed broadband HH	- - -	54.6%	60.4%	64.9%	62.7%	68.2%	75.4%

Sources: Anatel; International Telecommunications Union; Business Bureau; Telecom Advisory Services analysis

Matching the growth of supply, OTT subscriber growth has been consistently increasing, while, as mentioned above, pay-TV subscription is declining (see graphic 3).

Graphic 3. Brazil: Pay-TV vs. OTT subscribers (in millions)

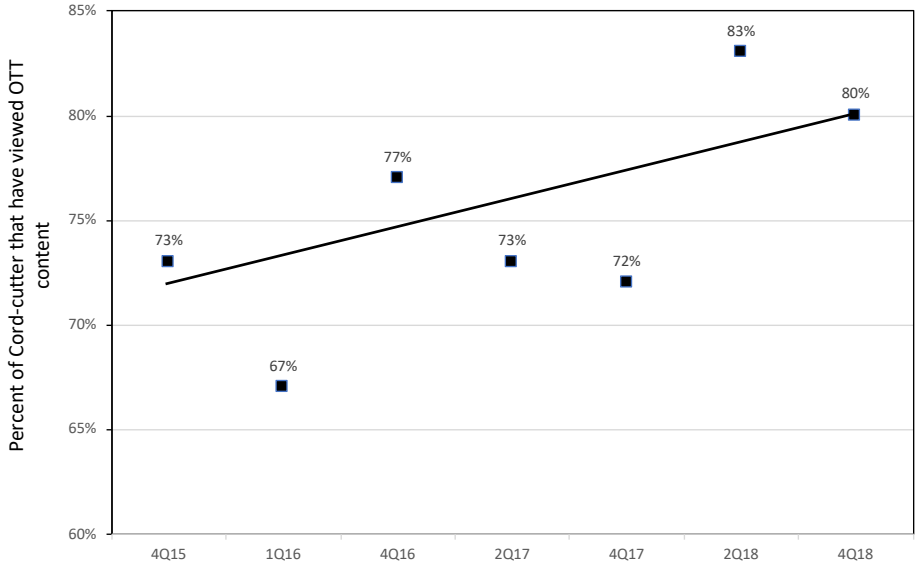


Note: The OTT subscribers between 2010 and 2015 are estimated
Source: Anatel; Ancine; Business Bureau

The inverted trends between cable TV and OTT subscribership indicates the existence of a substitution process taking place between two competing platforms. Market research indicates that so far 16% of broadband households have already disconnected their pay-TV subscription[45]. While, as mentioned above, a large portion (45%) mention affordability as a reason to disconnect, their behavior after cutting the cord indicates a shift towards accessing alternative sources of content, such as OTT. This is confirmed when relating the waves of disconnection of pay-TV subscribers with their OTT consumption (see graphic 4).

[45] Source: Business Bureau.

Graphic 4. Brazil: Consumption of OTT households that have canceled Pay-TV subscription (percent of cord cutters that access OTT) (4Q2014-4Q2018)



Source: Estudio Knack. Habitos OTT en Brasil.

As depicted in the data from Graphic 4, the percentage of cord cutters that have accessed OTT content in the six months after disconnecting is increasing with each survey wave. While 73% of cord cutters indicated OTT accessing in the 4Q15, that percentage has increased to 80% in 4Q18. In other words, OTT is increasingly acting as a substitute for pay-TV over time, confirming the growing competitive intensity between OTT and pay-TV.

III.3. The Brazilian audiovisual industry structure

The Brazilian audiovisual industry is increasingly competitive both within pay-TV and OTT. The Herfindahl-Hirschman Index (HHI)[46] of the pay-TV sector (measured by share of subscribers) has declined 490 points since 2011, reaching 3,498 in 2018 (see table 6).

[46] The Herfindahl-Hirschman Index is metric used to evaluate the degree of market concentration. It is calculated by squaring the market share of each firm competing in the market and summing them up. The index ranges between 0 and 10,000, with the latter value being an indication of a monopolistic market structure. The index decreases with the number of competitors and their disparity in market shares.

Table 6. Brazil: Pay-TV Subscriber Market Share and HHI Index (2011-2018)

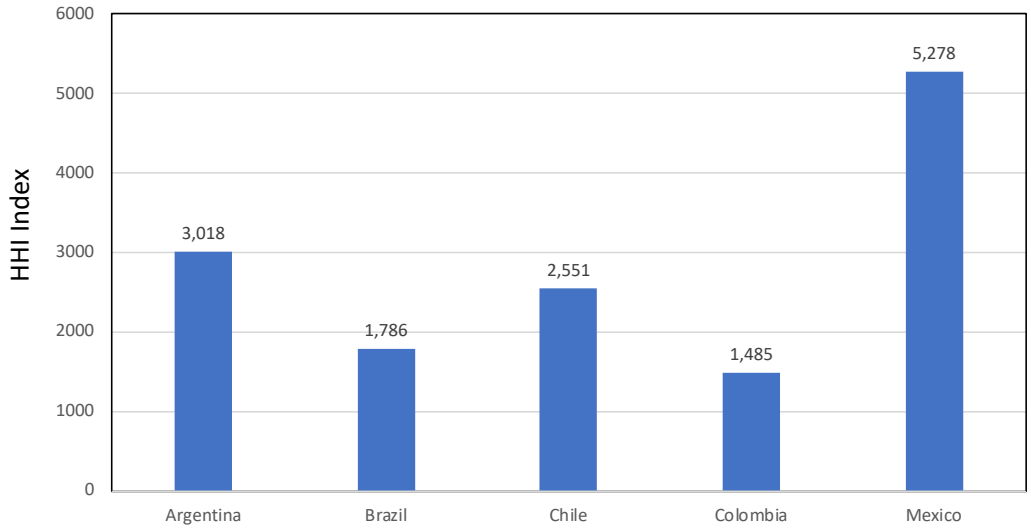
	2011	2012	2013	2014	2015	2016	2017	2018
America Movil	54.9%	52.3%	48.0%	48.0%	52.0%	52.0%	52.0%	51.0%
CTBC	0.7%	0.7%	0.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Nossa TV	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	1.0%	1.0%
Oi	2.8%	4.6%	6.0%	7.0%	7.0%	6.0%	7.0%	9.0%
RCATV	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	1.0%	0.0%
Sky	29.8%	31.2%	35.0%	33.0%	29.0%	27.0%	28.0%	27.0%
Via Cabo	0.8%	0.7%	1.0%	1.0%	1.0%	1.0%	0.0%	0.0%
Vivo + GVT	8.4%	6.3%	6.0%	8.0%	8.0%	9.0%	9.0%	9.0%
Others	2.6%	4.2%	4.0%	2.0%	2.0%	2.0%	1.0%	2.0%
HHI	**3,988**	**3,784**	**3,618**	**3,512**	**3,664**	**3,558**	**3,622**	**3,498**

Sources: ANCINE; Business Bureau; Telecom Advisory Services analysis

The increasing competitive intensity of pay-TV is the result of the growth of recently entrant telecommunications operators, such as Oi and Telefonica.

Additionally, Brazil's OTT industry structure is one of the most competitive in Latin America. In 2018, the HHI for the OTT sector (measured by share of revenues) was 1,789 driven by the high market share of local platforms. As shown in graphic 5, Brazil is the second most competitive OTT market among the large Latin American economies.

Graphic 5. Latin America: OTT Herfindahl-Hirschman Index (2018) (by share of revenues)



Netflix share	53.5 %	40.0 %	47.3 %	30.4 %	48.3 %

Source: Business Bureau; analysis Telecom Advisory Services

As demonstrated in graphic 5, there is a direct relationship between the sector competitive intensity and the share of the dominant OTT player: the lower Netflix' share, the more competitive the market.

As indicated by the HHI index, the competition of subscription-video on demand and transaction video on demand platforms is quite active, as depicted by the number of players and their volume of subscribers (see table 7).

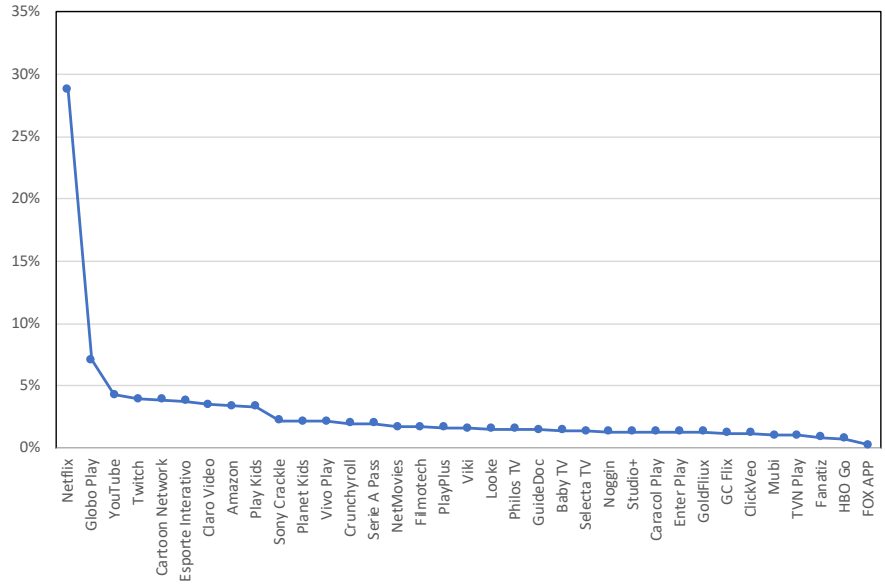
Table 7. Brazil: Subscription video-on-demand platforms (December 2018)

S-VOD		T-VOD	
Platform	**Households**	**Platform**	**Households**
Netflix	14,533,961	Telecine On	1,581,519
Globo Play	3,583,442	PlayStation Store	1,221,173
YouTube Premium	2,162,077	SKY Play APP	1,101,058
Twitch	2,001,923	Now VOD	1,081,038
Cartoon Network Já!	1,981,904	Oi TV	1,041,000
Esporte Interativo	1,901,827	Google Play Movies	760,731
Claro Video	1,781,712	VIVO VOD	660,635
Amazon Prime Video	1,721,654	Microsoft Movies & TV	560,538
Playkids.tv	1,681,615	SmartVOD	540,519
Sony Crackle	1,121,077	iTunes Movies	500,481
Planet Kids (Youyn)	1,106,517	[redacted]	
Vivo play.net	1,081,038		
Crunchyroll	1,014,308		
Serie A Pass	1,000,962		
NetMovies	880,846		
Filmotech	869,407		
PlayPlus	840,808		
Viki	820,788		
Looke	790,370		
Philos TV	780,750		
GuideDoc	760,731		
Baby TV	720,692		
Selecta TV	700,673		
Noggin	680,654		
Studio+	680,654	[redacted]	
Caracol Play	680,654		
Enter Play	671,814		
GoldFlix	660,635		
GC Flix	620,596		
ClickVeo	620,596		
Mubi	527,440		
TVN Play	527,440		
Fanatiz	440,423		
HBO Go	400,385		
FOX APP	140,135		

Source: Business Bureau

As in the case of other international markets, the Brazilian S-VOD market assumes a long tail configuration (see graphic 6).

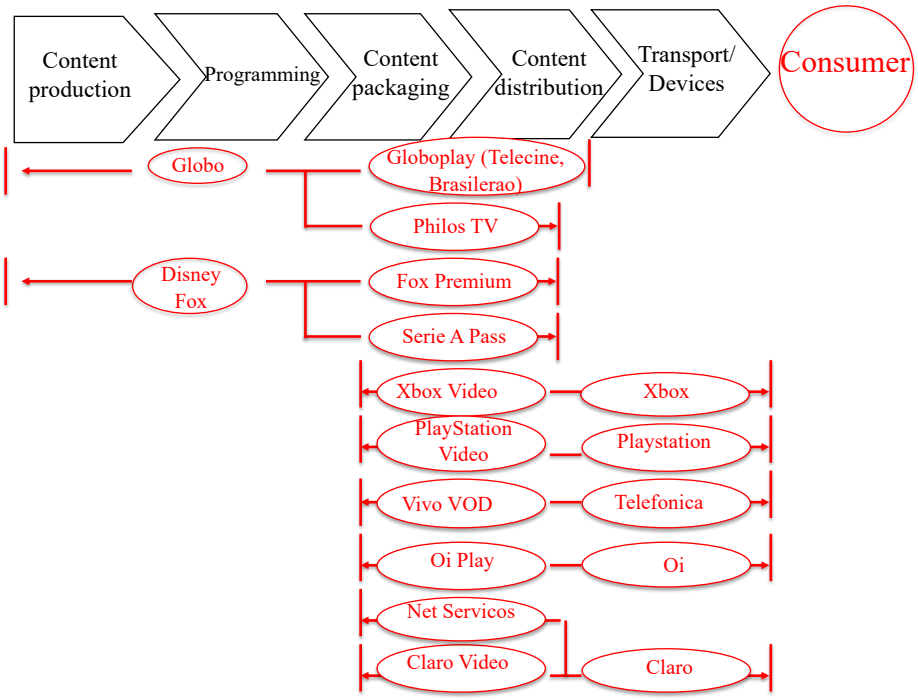
Graphic 6. Brazil: Subscriptions Market share (December 2018)



Source: Business Bureau; Telecom Advisory Services analysis

Moreover, as in the case of the value chain reconfiguration reviewed in the section above, the Brazilian audiovisual industry is undergoing a process of reintegration and increasing competitive intensity. Adding to the presence of Netflix and Amazon, a large portion of the video on demand platforms are owned by players positioned in other stages of the value chain, such as content developers, device manufacturers, or telecommunications service providers (see figure 9).

Figure 9. Brazil: Vertical cross-ownerships (examples)



Source: compiled by the author

As indicated in figure 9, whereas the traditional value chain assumes that only the last companies in the chain (the distributors) have a (direct) customer relationship, now all companies in the chain are trying to develop (or improve upon) direct consumer relationships, a critical feature driving competitive dynamics.

Table 8 provides a systematic analysis of cross-ownerships for OTT players, confirming the massive trend towards vertical integration.

Table 8. Brazil. Ownership of OTT players (December 2018)

	Platform	Ownership	Core Business	Country
S-VOD	Netflix	Netflix	Video production – distribution	US
	Globo Play	Globo	Broadcasting	Brazil
	YouTube Premium	Google	Digital advertising	US
	Twitch	Amazon	Content production – distribution	US
	Cartoon Network Já!	Warner Media	Content Production - Pay-TV	US
	Esporte Interativo	Warner Media	Content Production - Pay-TV	US
	Claro Video	America Movil	Telecommunications – distribution	Mexico
	Amazon Prime Video	Amazon	Content production – distribution	US
	Playkids.TV	Movile	Apps production – distribution	Brazil
	Sony Crackle (*)	Sony	Content distribution	US
	Planet Kids (Youyn) (*)	Google	Digital advertising	US
	Vivo play.net	TVE	Telecommunications – Distribution	Venezuela
	Crunchyroll	Warner Media	Content Production - Pay-TV	US
	Serie A Pass	Disney	Content production – distribution	US
	NetMovies	NetMovies	Content distribution	Brazil
	Filmotech (*)	EGEDA	Content distribution	Spain
	PlayPlus	Grupo Record	Content distribution	Brazil
	Viki	Rakuten Inc.	Content distribution	Japan
	Looke	Looke	Content distribution	Brazil
	Philos TV	Globo	Broadcasting	Brazil
	GuideDoc	Guide Doc	Content distribution	Spain
	Baby TV	Fox Latin America	Broadcasting	US
	Selecta TV	Selecta Media Ltd.	Content distribution	Mexico
	Noggin	Viacom Int.	Broadcasting	US
	Caracol Play	Caracol Television	Content production – distribution	Colombia
	EnterPlay	Enter Play	Content distribution	Brazil
	GoldFlix (*)	GoldFlix RCT	Content distribution	Brazil
	GC Flix	Golden Ceiba Prod.	Content Distribution	Mexico
	ClickVeo	ClickVeo	Content distribution	Uruguay
	Mubi	Bazaar Inc.	Content distribution	US
	TVN Play	TVN de Chile	Content production – distribution	Chile
	Fanatiz	Fanatiz SPA	Content distribution	Chile
	HBO Go	Warner Media	Telecommunications – Pay-TV	US
	FOX APP	Fox Latin America	Broadcasting	US
T-VOD	Telecine On	Globo	Broadcasting	Brazil
	PlayStation Video	Sony Pictures	Equipment	US
	SKY Play APP	ATT	Telecommunications – Pay-TV	US
	Now VOD	America Movil	Telecommunications – Distribution	Mexico
	Oi Play	Oi	Telecommunications – Distribution	Brazil
	Google Play Movies	Google	Digital advertising	US
	VIVO VOD	Telefonica	Telecommunications – Distribution	Spain

	Platform	Ownership	Core Business	Country
	Microsoft Movies & TV	Microsoft Corp.	Equipment	US
	SmartVOD	Vonetize	Content distribution	Brazil
	iTunes Movies	Apple	Equipment – T-VOD	US

Note: (*) These platforms have recently interrupted service.
Source: Business Bureau; ANCINE; compiled by Telecom Advisory Services

III.4. The importance of local content

In fulfillment of one of the goals of the 12.485/11 Law, the percentage of Brazilian content within the pay-TV grid has been consistently growing. Since 2015, the percentage of programming hours dedicated to Brazilian content has been increasing (see table 9).

Table 9. Brazil: Percentage of locally produced program hours by type in pay-TV

	2015		2016	2017
	Non-children	Children		
Advertising	5.3 %	3.6 %	17.1 %	19.7 %
Other	10.5 %	10.7 %	18.0 %	15.2 %
Foreign productions	78.9 %	79.3	52.3 %	47.4 %
Brazilian productions	5.4 %	6.4 %	12.5 %	17.7 %
Independent	- - -	- - -	8.1 %	10.9 %
Affiliated	- - -	- - -	4.4 %	6.8 %

Source: Prepared by ANCINE from programmers' reporting.

Additionally, exclusive and original content underpins the drive for subscribers in the Brazilian OTT market. According to research by IBOPE Intelligence, 56% of Brazilians who use video streaming services said that original content was a key criterion when choosing a service. This has prompted leading global OTT players to commission Brazilian productions[47] and increase their libraries with locally produced content (see table 10).

Table 10. Brazil. Local production of OTT players (June 2019)

	Movies			Series		
	Unique Titles (*)	National Titles	Percent library	Unique Titles (*)	National Titles	Percent library
Netflix	2,757	88	3.2%	1,188	39	3.3%
Amazon Prime Video	2,750	17	0.6%	513	2	0.4%
Globo Play	272	83	30.5%	314	232	73.9%
Claro Video	2,696	63	2.3%	189	62	32.8%
HBO GO	590	5	0.8%	128	13	10.2%
Vivo Play	4,310	469	10.9%	614	244	39.7%
Oi Play	3,930	358	9.1%	1,388	408	29.4%

(*) Only considered unique titles without considering repeated titles (excluding titles under premium packages)
Source: Business Bureau MPC

[47] Netflix has commissioned 11 Brazilian Originals to date, including a second series of sci-fi series 3%, 1950s-set Coisa Mais Linda (Most Beautiful Thing), supernatural thrillers Spectros and The One, and 1990s-set thriller The Faction. Amazon Prime, which launched in Brazil in 2016, made its first foray into original local content by commissioning Diablo Guardian.

Underlining the increasing competition based on local content, global OTT players are building Brazilian production infrastructure. For example, Amazon announced in June of 2019 that it will open in Rio de Janeiro its first office focused on the streaming business outside the U.S. The Rio de Janeiro subsidiary, as reported by local press, will manage the delivery of all outsourced productions for the company in Brazil and will also be the basis for the company's streaming business in South America. Coincidentally, local players are building stronger production capacity to face the encroachment of global platforms. Confirming that it will never license its content to Netflix or Amazon, Globo announced the construction of a large production facility in Rio de Janeiro[48].

The acceleration in the development of local content, coupled with the development of the OTT sector has had a positive impact on the Brazilian audiovisual market. The pay-TV, broadcasting, and OTT markets in 2017 represent total sales of R$ 37.9 billion, which amounts to 0.58% of the Brazilian GDP[49], close to home appliances and higher than the pharmaceutical industry. The audiovisual sector as whole, which includes also the film and videogame subsectors, comprises 335,000 direct and indirect jobs[50], with a direct to indirect multiplier of 2.94[51].

III.4. Shift to digital advertising

Coincidentally, the shift to video-streaming is associated to a change in advertising spending mix, from traditional media (print and broadcast television) to digital (see table 11).

Table 11. Brazil: Advertising revenue (2014-2019)

		2014	2015	2016	2017	2018	2019
Digital advertising	Wired Display	577	628	621	788	941	1,069
	Wired Classified	127	167	188	220	237	249
	Wired paid Search	450	416	392	407	457	493
	Wired subtotal	1,154	1,211	1,201	1,415	1,635	1,811
	Mobile Display	225	312	382	571	784	983
	Mobile Video	24	40	66	103	145	190
	Mobile Paid Search	90	120	145	194	263	334
	Mobile subtotal	339	472	593	868	1,192	1,507
	Total	1,493	1,683	1,794	2,283	2,827	3,318
TV broadcast	Multichannel	291	289	353	400	463	520
	Terrestrial	4,023	4,134	4,198	4,212	4,334	4,440
	Total	4,314	4,423	4,551	4,612	4,797	4,960
Newspaper		862	861	830	750	703	658

[48] Ariens, C. (2019). "This TV network built a massive $50 Million Studio mostly to take on Netflix", Adweek, retrieved from: HTTPS://WWW.ADWEEK.COM/CATEGORY/PROGRAMMING-PERFORMANCE/.
[49] Calculated from revenues of three sub-sectors as reported in Pinho, J. (2019). *A evolução do Mercado audiovisual*. Presentation to Pay-TV Forum as percentage of total GDP in current prices as reported by the IBGE.
[50] Ibid.
[51] Tendências (2016). *The economic impact of Brazil's audiovisual industry*. Sao Paulo.

TOTAL	6,669	6,967	7,175	7,645	8,327	8,936
Digital advertising	22.4%	24.2%	25.0%	29.9%	33.9%	37.1%
TV broadcast advertising	64.7%	63.5%	63.4%	60.3%	57.6%	55.5%
Newspaper advertising	12.9%	12.4%	11.6%	9.8%	8.4%	7.4%

Source: PWC. Global Entertainment and Media Outlook

Between 2014 and 2019, despite the increase of aggregate ad spend, digital advertising spending increased from 22.4% to 37.1%. While TV broadcasting advertising has not declined in absolute terms, digital advertising captured most of the growth in ad spending overall, yielding an increase in share.

IV. BENEFITS OF COMPETITION AND INNOVATION IN THE AUDIOVISUAL MARKET

Are there any benefits to consumers and producers derived from increasing competition and the resulting innovation in the pay-TV industry? Vertical integration, which is a response to the different innovations and changes occurring in the market, represents one of the factors contributing to the creation of more competition and more benefits for consumers (reduced prices, more content, etc.). Thus, we are in the presence of causal relationships acting in both directions: market innovation prompts vertical integration, which in turn, facilitates innovation. The evidence indicates that benefits greatly outweigh any disadvantages that can result from this process of consolidation. In most cases, the benefits to consumers flow from changes in the value chain configuration.

IV. 1. Benefits to consumers

Consumers choose the type of audiovisual platform that provides them with the highest utility (Golsbee and Petrin, 2001). The utility is a function of the needs of consumers versus the characteristics of the platform and its price. In the case of pay-TV (including OTTs), four characteristics are considered:

- Improved customer experience: while the experience of customers ranges from the search of a good to acquisition to consumption and post-acquisition care, the primary focus here is content selection. The key question is, to what extent current competitive dynamics and vertical integration trends in the Brazilian audiovisual market have improved the ability of consumers to find the desired video content.

- Variety of content: it is generally agreed that video content variety is important in strengthening and preserving cultural diversity. A wide variety of content represents a positive contribution to the range and flow of information and ideas in society. However, industry structure and content variety are not necessarily correlated. In fact, some researchers argue that the more concentrated an audiovisual industry, the larger the range of innovative and diverse products due to the ability of large firms to innovate and develop content: witness the resources invested by Netflix and Amazon in content production, mentioned above. Rather than engaging in a causal analysis, we will examine the extent to which sources of content and products have increased

over the past few years. The objective is to verify whether current industry trends represent a positive factor in stimulating content variety.

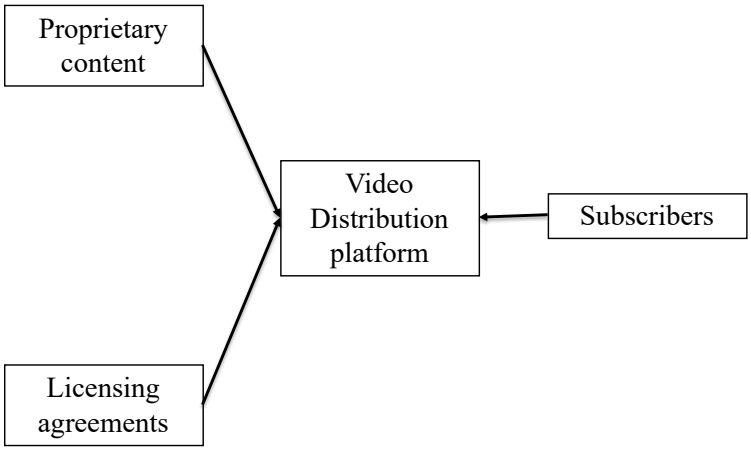
- Pricing: the utility of an audiovisual product is a function of its consumption price. In this case, we will examine pricing trends for similar audiovisual products in Brazil and compare Brazilian prices with that of other Latin American nations to establish their relative affordability level.

- Ease of access: in this case, customer benefit is related to the ability to access video content from a number of alternative sources. The underlying premise in this case is that the multiplication of content consumption points favors the ease of access.

IV.1.1. Improved customer experience

As reviewed in chapter II, content digitization has enabled the emergence of non-traditional players that have disintermediated the historical audiovisual value chain. Despite the gradual reintegration of stages by new players (e.g. Netflix and Amazon moving into content production), it is clear that their strategic advantage relies on their position as multi-sided platforms matching proprietary and licensed content to meet consumer needs (see figure 10).

Figure 10. Video distribution players as Multi-sided platforms



This positioning is not exclusive to OTT "pure play" operators since other distributors such as pay-TV operators, have moved into these models as well, either through entry into video-streaming or enhancing their video-on-demand offer.

Such multi-sided platforms have the capability of matching subscribers with heterogeneous needs (entertainment, sports, child programming) with content availability on the other side. In this context, the customer relationship is key since it enables personalization, recommendations, etc., and generates data that can support alternative business models (such as the ones based on advertising).

The matching capacity results from several value dimensions:

- Reduction of search costs: this is achieved through two functionalities: first, interactive electronic program guides facilitate navigation through the multiplicity of offers; additionally, the platform engine speeds up the retrieval of content information once the subscriber enters the desired programming;
- Recommendation: the platform has the capability to recommend content based on the subscriber prior viewing patterns; and
- Content information access: the platform also provides information on content (reviews, scoring of critics) that supports the subscriber selection.

By capturing subscriber data on viewing patterns and behavior, the video distribution platform builds a competitive advantage based on information asymmetry, which reinforces indirect network effects[52]. On the other hand, the three dimensions of matching capacity mentioned above represent an enhancement of the subscriber viewing experience.

IV.1.2. Variety of content

The competitive dynamics of the audiovisual market in Brazil has prompted an increase in the number of diverse offers of content. Between June 2016 and December 2018, the number of pay-TV channels available to the Brazilian audience increased from 203 to 223. Of these, 123 channels have completely different program grids (see table 12).

Table 12. Brazil: Number of pay-TV channels by genre (2016-2018)

Genres		6/2016	12/2016	6/2017	12/2017	6/2018	12/2018
Films and series	Basic	46	47	49	50	50	50
	Premium	32	32	32	32	32	32
	Subtotal	78	79	81	82	82	82
Entertainment	Subtotal	42	44	44	46	52	52
Sports	Basic	22	22	22	22	22	21
	Premium	18	18	18	18	18	18
	Subtotal	40	40	40	40	40	39
Children	Subtotal	21	20	21	24	26	26
Documentaries	Subtotal	15	16	16	17	17	17
News	Subtotal	7	7	7	7	7	7
Total	Basic	153	156	159	166	174	173
	Premium	50	50	50	50	50	50
Total		203	206	209	216	224	223

Source: Abenee (2019). Assinantes no Mercado de Programação na TV por Assinatura 2019

While not directly comparable, the number of OTT platforms has also increased significantly. In parallel, the launch of video-on-demand platforms in Brazil has been consistently

[52] See Katz, R., P. Dougal, S. de Urquiza and R. Fisch, (2017) *Digital Ecosystems: Innovation and Disruption in Latin America*, Miami: gA Center of Digital Business Transformation.

increasing since 2013, competing directly with pay-TV operators and programmers. As of 2018, there were 83 OTT platforms available to Brazilian consumers[53] (see table 13).

Table 13. Brazil: Number of OTT platforms (by year)

Business model	2013	2014	2015	2016	2017	2018
Subscription VOD-pay-TV	4	4	2	1	0	0
Subscription VOD	2	9	16	15	21	35
Transaction VOD	3	5	5	5	8	10
TV Everywhere	5	9	17	26	34	38
Total	14	27	40	47	63	83

Source: Business Bureau

In sum, competitive intensity has resulted in an exponential growth in content variety.

IV.1.3. Declining prices

Brazil's pay-TV monthly service pricing is the second least expensive among Latin countries, behind Mexico. This is supported by an analysis of the most economic offers from pay-TV operators in each country, with the calculated average prorated by their market share (see table 14).

Table 14. Latin America: Prorated average pricing of most economic Pay-TV offers (August 2019)

Country	Average price – without promotions (in local currency)	Average price – with promotions (in local currency)	Average price – without promotions (in US$)	Average price – with promotions (in US$)	Average price – without promotions (in US$) (adjusted for PPP*)	Average price – with promotions (in US$) (adjusted for PPP*)
Argentina	$ 1,071.24	$ 931.66	$ 22.90	$ 21.70	$ 44.12	$ 41.80
Brazil	$ 76.99	$ 75.86	$ 17.93	$ 17.81	$ 31.97	$ 31.75
Chile	$ 21,789.37	$ 21,660.19	$ 29.45	$ 29.26	$ 50.51	$ 50.17
Colombia	$ 58,971.33	$ 55,796.06	$ 16.52	$ 15.20	$ 38.52	$ 35.43
Ecuador	$ 24.39	$ 24.27	$ 22.49	$ 21.81	$ 42.75	$ 41.45
Mexico	$ 205.03	$ 205.03	$ 10.68	$ 10.68	$ 22.86	$ 22.86
Peru	$ 71.57	$ 71.57	$ 21.80	$ 21.80	$ 45.46	$ 45.46

(*) Purchasing Power Parity factor provided by the International Monetary Fund.
Sources: Operators websites; All data included in Appendix.

As of August 2019, the prorated average of the most economic monthly service offer (adjusted by purchasing parity) of pay-TV in Brazil is US$ 31.75, much more affordable than the rest of large Latin American countries, with the exception of Mexico. The price calculation for Brazil considered the following offers (Table 15):

[53] This statistic excludes 24 free VOD sites such 24 Horas, Cinepata, Cineteca Nacional, and Retina Latina.

Table 15. Brazil. Most affordable offers by operator (August 2019)

Operator	Plan	Number of Channels	Price (without promotions) (in local currency)	Price (with promotions) (in local currency)
América Móvil (NET)	NET Fácil HD	100	$ 69.99	$ 69.99
Sky (DirecTV)	Easy	130	$ 89.90	$ 86.15
Oi	Start HD	126	$ 64.90	$ 64.90
Telefónica (VIVO)	Super HD	42	$ 84.90	$ 84.90

(*) Purchasing Power Parity factor provided by the International Monetary Fund.
Sources: Operators websites

This analysis confirms the fact that intense competition among pay-TV, global and local OTT players is yielding a benefit to Brazilian consumers.

Another validation of this finding can be found in an analysis of prices of the most economic offer of one pay-TV player, DirecTV. Table 16 presents first the current prices for the most economic offer for three product categories, each of them grouped by the number of channels (mini-basic, Basic, and Extended). Prices were then converted to 2015 prices based on the IBVGE inflation data.

Table 16. Pricing of most economic Pay-TV offer by product category (2015-2019) (in Reals)

	Mini-basic		Basic		Extended	
	Plan	Price	Plan	Price	Plan	Price
2015	SKY B FIT 2015 - A	R$ 74.90	SKY B LIGHT I 2015 - A	R$ 89.90	SKY B MIX HD I 2015 - A	R$ 114.90
2016	SKY B SMART 2016 - A	R$ 74.90	SKY B MASTER 2016 - P	R$ 90.90	SKY B ADVANCED 2016 - P	R$ 100.00
2017	SMART 2017 - A	R$ 89.90	MASTER II 2017 - A	R$ 99.90	ADVANCED HD 2017 - A	R$ 134.90
2018	SMART HD 2018 - A	R$ 84.90	MASTER HD 2018 - A	R$ 114.90	ADVANCED HD 2018 - A	R$ 129.90
2019	SMART SD 2019 - A	R$ 69.90	MASTER II SD 2019 - A	R$ 109.90	MEGA PLUS HD 2019 - A	R$ 149.90
In 2015 reals						
2015		R$ 74.90		R$ 89.90		R$ 114.90
2016		R$ 67.31		R$ 81.69		R$ 89.87
2017		R$ 75.80		R$ 84.23		R$ 113.75
2018		R$ 69.21		R$ 93.67		R$ 105.89
2019		R$ 55.56		R$ 87.36		R$ 119.15
Percent decline		-25.8 %		-2.8 %		3.7 %

Source: DirecTV; Telecom Advisory Services analysis

As shown in table 16, in two of the three categories, the price of the most economic offer has been declining, while in the third one, the rate of increase over five years is only 3.7%.

We expect prices to continue to decline in the future as a result of aggressive moves on the part of OTT players. For example, Disney+, the new entrant, will be offered at $6.99 per month, close to half of Netflix' standard US$13 a month plan. This disruptive entry strategy could trigger a wave of price decline among top OTT players. Along the same lines, Globo Play offers an advertisement based service and commercial-free version for approximately US$ 5 a month.

IV.1.4. Ease of access

Value chain integration in the audiovisual market has yielded an acceleration of competitive intensity, which, in turn resulted in the emergence of a multiplicity of access offers co-existing within a single market (see table 17).

Table 17. Products and approach to consuming video content

	Linear	Non-Linear
Managed Operator Network	Offers from public and pay-TV operators	Time-shifted TV content and VOD
OTT	Offers from Network TV stations and own-produced content through the internet without pay-TV intermediation (e.g. Hulu)	Netflix, Amazon Video and other similar services and TV apps

Source: Adapted from Abreu et al. (2016)

As of April 2018, OTT viewing has become both in Brazil and globally a mainstream video consumption medium[54]. In that month 59.5 million US households (which amounts to 63.5% equipped with broadband and Wi-Fi) have used OTT. This percentage has increased 17% since April 2017. Each household viewed 54 hrs. of OTT content per month (an increase of 28% year-over-year).

The number of households accessing OTT platforms in 2019 has reached 24,025,215 (which is equivalent to 75.4% of fixed broadband households, and 34.4 % of all Brazilian households).

IV. 2. Benefits to industry players

In addition to benefits to consumers, vertical integration conveys benefits to industry players, some of which have a positive impact on consumer welfare, while others contribute to overall industry sustainability. Each of these will be reviewed in turn.

[54] Engleson, S. (2018). *State of OTT: an in-depth look at today's over the top content consumption and device usage*. ComScore: June.

IV.2.1. Improved efficiency in bilateral contracting

Research on vertical integration in the audiovisual market posits that such a change in industry structure improves efficiency in bilateral contracting while reducing transaction costs, protecting brand names, and safeguarding intellectual property[55]. The theory of efficient contracting between a buyer and seller was originally proposed by Roland Coase (1937) who suggested that there were a number of avoidable costs of using the price mechanism, among which were the cost of finding out what the relevant prices are and the cost of negotiating and concluding a contract: an integrated firm could avoid such costs. This was further supported by Williamson's (1971, 1974, 1979, 1985) theory of transactions cost, justifying the vertical extent of a firm. According to Williamson (1985), the economic institutions of capitalism have the main goal of economizing on transactions costs. In this context, integration serves to reduce contracting costs or to avoid the risk of opportunistic behavior[56].

This concept is particularly applicable to the negotiation of licensing rights, and a justification of OTT players to backward integrate into content production. It is on the basis of this theory that the National Telecommunications and Information Administration (1988) of the United States argued that "vertical integration allows the cable firm to avoid the transaction costs of obtaining programming" (NTIA, 1988). The same concept is applicable to OTT players entering content production.

IV.2.2. Economies of scale and scope

A vertically integrated audiovisual market helps content distributors to benefit from economies of scale and scope, and find the resources needed for network and programming investments. This could be particularly relevant in markets where it is important to enhance the production of local content which requires more resources. In markets with certain level of concentration, the viability of local players vis-à-vis global operators is enhanced.

In a related dimension, a vertically integrated market allows distributors to easily share information with affiliated producers about viewer tastes and preferences (Waterman & Weiss, 1993b)[57]. This could have a positive impact on program diversity and responsiveness to subscriber needs.

This efficiency theory has been formulated by US regulators arguing that vertical integration has expanded the supply of cable programming in an elastic fashion, thereby improving program diversity for cable subscribers. The FCC stated that vertical integration increased not only the quantity but also the "quality" of program services available to subscribers (Ahn

[55] Gershon, R.A. (2013). *Media, Telecommunications and Business Strategy*. New York: Routledge.
[56] Some theorists have argued that if there are transactions costs, there may be an incentive to combine a number of events or activities into one bundle by arranging long-term contracts, which reduce the uncertainty and risks (Malmgren, 1961). Nothing further away from current rights licensing negotiations.
[57] Waterman, D. (1993). A model of vertical integration and economies scale in information product distribution. *Journal of Media Economics*, 6(3), 23-35.

and Litman, 1997). Higher horizontal and vertical concentration levels in the US cable TV industry have enabled operators to leverage valuable economies of scale and foster investment in more and better program sources, more original programming and a wealth of new viewing options for cable subscribers (FCC, 1990).

Beyond programming resources, within a digital context, pay-TV operators can collect valuable viewer information via online platforms and/or set-top boxes which they can monetize through innovative business models or new productions. Sharing such information might spur innovation in the form of new channels, distribution platforms or advertising formats[58].

IV.2.3. Elimination of double marginalization

Double marginalization occurs when upstream and downstream firms each have pricing power and, taken together, set a double mark-up price, giving rise to excessive retail pricing. In this context, a vertical integration strategy helps distributors to reduce transaction costs and, hence, decrease the level of retransmission fees paid to broadcasters.[59] In this context, vertical integration results in a reduction of the final good price by eliminating a dead weight loss resulting from double monopoly markups on product price and increases consumer welfare because the price of the final product is reduced in the direction of its marginal cost (Waterman, 1993). This benefit could also be applicable to the audiovisual market.

V. REGULATORY IMPLICATIONS

In summary, this study has demonstrated that the traditional value chain of the global and Brazilian audiovisual industries has been constantly disrupted by the entry of new players enabled by the digitization of content. Disintermediation, fragmentation, emergence of specialists, and vertical integration (backward and forward) are all features of the competitive intensity. These trends are not only present in advanced economies but have also entered the Brazilian market, where some players are competing not only on video distribution but in other adjacent industries like content development on the basis of global scale, while adapting content to local consumer demands. Likewise, the lowering of entry barriers in distribution have allowed the development of a vibrant OTT Brazilian sector.

These changes entail tremendous benefits to consumers (e.g. variety of content, ease of access, improved customer experience, low pricing, etc.). The decline in pay-TV Brazilian subscribership has been driven not only by macroeconomic conditions but is constantly stimulated by product substitution. Pay-TV "cord cutters" demonstrate an intense video consumption from OTT platforms. Furthermore, the vertical integration into content

[58] Evens, T. & Berte, K. (2014). Challenges of Digital Innovations: A Set-top Box Based Approach. In J. Bourdon & C. Méadel (Eds.), *Television Audiences Across the World: Deconstructing the Rating Machine* (pp. 234-247). Basingstoke: Palgrave Macmillan.
[59] Evens, T. (2014). "If you won't pay them, buy them! Merger mania in distribution and content markets." *International Journal of Digital Television*, 5(3), 261-265.

production, combined with the public policy remedies with regards to local content development have generated a thriving Brazilian audiovisual production sector.

In this context, we believe regulatory authorities should not over-regulate these businesses (through either content quotas or other restrictions, such as vertical integration limitations). Restrictions to vertical integration, like those imposed on Article 5 of the SeAC Law, are either anti-competitive or detrimental to the protection of the local audiovisual industry and should be removed to avoid stifling competition and diminishing consumers' welfare. Regarding OTT platforms, Brazilian authorities should consider that, rather than regulate them as pay-TV services, it might make more sense to avoid imposing regulatory restrictions and burdens on those innovative services. The objective is to create a level-playing field for pay-TV providers to compete with OTTs, which can be better achieved by gradually eliminating unnecessary restrictions and regulatory burdens on pay-TV services. Furthermore, the restriction contained in SeAC Article 6 which prohibits telecommunications service providers (verticalized or not) to hire local talent for pay-TV productions represents an additional hurdle to verticalization which is detrimental for competition.

Uncertainty as to how ANATEL is going to regulate OTTs in general and whether linear OTTs will be subject to licensing and other pay-TV related requirements might have a deterrent effect on business initiatives to bring innovative OTT offerings into the Brazilian market, with the negative consequences that has over competition and consumers' welfare[60].

Going forward, Brazilian regulators should allow the market to develop naturally, while monitoring it in terms of conventional market structure mechanisms, such as concentration ratios. This is why it is a good time to step back and look at what is going on in the market. If policy makers want to maximize diversity of content, low prices, multiple offers for consumers, they need to eliminate restrictions to vertical integration and allow new entrants without regulatory impediments. This will not reduce competition; on the contrary, it will allow it to flourish.

[60] To note, Vrio's OTT offering for Latin America, DIRECTV Go, has been launched in almost all of the LatAm territory, with a few exceptions, including Brazil. If ANATEL decides to apply the SeAC regime to linear OTTs, other potential launches of OTT offerings in Brazil might be in jeopardy.

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APPENDIX A. Analysis of Latin American Pay-TV pricing

				2019							2015						
País	Operador	Canales	Plan	Market Share	Precio Moneda Local (Sin Promociones)	Precio Moneda Local (Con Promociones)	Precio USD (Sin Promociones)	Precio USD (Con Promociones)	Precio USD PPP (Sin Promociones)	Precio USD PPP (Con Promociones)	Market Share	Precio Moneda Local (Sin Promociones)	Precio Moneda Local (Con Promociones)	Precio USD (Sin Promociones)	Precio USD (Con Promociones)	Precio USD PPP Nuevo (Sin Promociones)	Precio USD PPP Nuevo (Con Promociones)
ARGENTINA					Tipo de Cambio		$ 45.00	$ 45.00									
	Cablevisión	63	Clásico	39.00%	$ 1,121.12	$ 862.40	$ 24.91	$ 19.16	$ 47.99	$ 36.91	41.00%	$ 388.00	$ 388.00	$ 44.01	$ 44.01	$ 60.72	$ 60.72
	DirecTV	150	Prepago Bronce	32.00%	$ 1,020.00	$ 1,020.00	$ 22.67	$ 22.67	$ 43.66	$ 43.66	28.00%	$ 279.00	$ 279.00	$ 31.64	$ 31.64	$ 43.66	$ 43.66
	Telecentro	88	Pack Digital	6.00%	$ 984.00	$ 984.00	$ 21.87	$ 21.87	$ 42.12	$ 42.12	7.00%	$ 349.00	$ 349.00	$ 39.58	$ 39.58	$ 54.61	$ 54.61
	PROMEDIO PONDERADO				$ 1,071.24	$ 931.66	$ 22.90	$ 21.70	$ 44.12	$ 41.80		$ 344.25	$ 344.25	$ 39.04	$ 39.04	$ 53.87	$ 53.87
BRASIL					Tipo de Cambio		$ 4.15	$ 4.15									
	América Móvil (NET)	100	NET Fácil HD	51.00%	$ 69.99	$ 69.99	$ 16.87	$ 16.87	$ 30.08	$ 30.08	51.88%	$ 59.90	$ 49.90	$ 18.85	$ 15.70	$ 33.86	$ 28.21
	Sky (DirecTV)	130	Easy	27.00%	$ 89.90	$ 86.15	$ 21.66	$ 20.76	$ 38.63	$ 37.02	28.91%	$ 54.90	$ 49.90	$ 17.27	$ 15.70	$ 31.03	$ 28.21
	Oi	126	Start HD	9.00%	$ 64.90	$ 64.90	$ 15.64	$ 15.64	$ 27.89	$ 27.89	6.41%	$ 49.90	$ 49.90	$ 15.70	$ 15.70	$ 28.21	$ 28.21
	Telefónica (VIVO)	42	Super HD	9.00%	$ 84.90	$ 84.90	$ 20.46	$ 20.46	$ 36.48	$ 36.48	4.57%	$ 79.90	$ 79.90	$ 25.14	$ 25.14	$ 45.17	$ 45.17
	GVT	42	Super HD	0.00%	$ 84.90	$ 84.90	$ 20.46	$ 20.46	$ 36.48	$ 36.48	3.95%	$ 39.90	$ 39.90	$ 12.55	$ 12.55	$ 22.55	$ 22.55
	Via Cabo	N/C	N/C		N/C	N/C	N/C	N/C	N/C	N/C	0.65%	$ 79.90	$ 79.90	$ 25.14	$ 25.14	$ 45.17	$ 45.17
	PROMEDIO PONDERADO				$ 76.99	$ 75.86	$ 18.62	$ 18.35	$ 33.20	$ 32.72		$ 58.00	$ 51.12	$ 18.25	$ 16.08	$ 32.79	$ 28.90
CHILE					Tipo de Cambio		721.55	721.55									
	Pacifico Cable	59	TV Análoga	3.00%	$ 16,900.00	$ 16,900.00	$ 23.42	$ 23.42	$ 40.17	$ 40.17	2.80%	$ 15,900.00	$ 15,900.00	$ 25.74	$ 25.74	$ 45.06	$ 45.06
	VTR Telefónica S.A.	152	Tv Hogar	32.00%	$ 21,900.00	$ 21,900.00	$ 30.35	$ 30.35	$ 52.05	$ 52.05	36.20%	$ 18,990.00	$ 18,990.00	$ 30.74	$ 30.74	$ 53.81	$ 53.81
	Telefónica (Movistar)	155	Plan HD Pro	19.00%	$ 22,900.00	$ 22,900.00	$ 31.74	$ 31.74	$ 54.43	$ 54.43	20.70%	$ 19,990.00	$ 19,990.00	$ 32.36	$ 32.36	$ 56.65	$ 56.65
	DirecTV	95	Pack Bronce	20.00%	$ 21,400.00	$ 21,400.00	$ 29.66	$ 29.66	$ 50.86	$ 50.86	16.20%	$ 19,490.00	$ 19,490.00	$ 31.55	$ 31.55	$ 55.23	$ 55.23
	Claro	145	Plan HD Pro	12.00%	$ 21,990.00	$ 21,240.00	$ 30.48	$ 29.44	$ 52.27	$ 50.48	17.00%	$ 16,500.00	$ 16,500.00	$ 26.71	$ 26.71	$ 46.76	$ 46.76
	Telefónica del Sur	88	Plan TV Familia	3.00%	$ 19,000.00	$ 19,000.00	$ 26.33	$ 26.33	$ 45.16	$ 45.16	2.90%	$ 16,000.00	$ 16,000.00	$ 25.90	$ 25.90	$ 45.34	$ 45.34
	Entelphone	85	Súper HD	4.00%	$ 20,990.00	$ 20,990.00	$ 29.09	$ 29.09	$ 49.89	$ 49.89	2.90%	$ 18,490.00	$ 18,490.00	$ 29.93	$ 29.93	$ 52.40	$ 52.40
	PROMEDIO PONDERADO				$ 21,789.37	$ 21,660.19	$ 29.45	$ 29.26	$ 50.51	$ 50.17		$ 18,662.72	$ 18,662.72	$ 30.21	$ 30.21	$ 52.89	$ 52.89
COLOMBIA					Tipo de Cambio		$ 3,457.89	$ 3,457.89									
	DirecTV	163	Familia Prepago	17.00%	$ 50,000.00	$ 50,000.00	$ 14.46	$ 14.46	$ 33.71	$ 33.71	20.56%	$ 39,900.00	$ 39,900.00	$ 15.65	$ 15.65	$ 35.50	$ 35.50
	Movistar	51	HD Plus	8.00%	$ 21,900.00	$ 16,425.00	$ 6.33	$ 4.75	$ 14.77	$ 11.07	7.92%	$ 41,500.00	$ 41,500.00	$ 16.28	$ 16.28	$ 36.92	$ 36.92
	UNE EPM (TIGO)	159	Esencial	17.00%	$ 71,454.00	$ 59,545.00	$ 20.66	$ 17.22	$ 48.18	$ 40.15	21.16%	$ 36,740.00	$ 36,740.00	$ 14.41	$ 14.41	$ 32.69	$ 32.69
	Telmex (Claro)	101	Televisión Digital Básica	37.00%	$ 63,900.00	$ 63,900.00	$ 18.48	$ 18.48	$ 43.08	$ 43.08	43.38%	$ 34,000.00	$ 34,000.00	$ 13.34	$ 13.34	$ 30.25	$ 30.25
	Supercable	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	N/C	0.21%	$ 42,809.00	$ 42,089.00	$ 16.79	$ 16.51	$ 38.09	$ 37.45
	PROMEDIO PONDERADO				$ 58,971.33	$ 55,796.06	$ 16.52	$ 15.20	$ 38.52	$ 35.43		$ 36,579.76	$ 36,578.15	$ 14.35	$ 14.35	$ 32.54	$ 32.54
ECUADOR					Tipo de Cambio		$ 1.00	$ 1.00									
	CNT E.P.	81	Plan Súper	22.30%	$ 20.50	$ 20.50	$ 20.50	$ 20.50	$ 38.97	$ 38.97	22.30%	$ 19.32	$ 19.32	$ 19.32	$ 19.32	$ 36.06	$ 36.06
	Grupo TV Cable	110	Familiar	16.39%	$ 22.93	$ 22.93	$ 22.93	$ 22.93	$ 43.59	$ 43.59	16.39%	$ 16.73	$ 16.73	$ 16.73	$ 16.73	$ 31.23	$ 31.23
	Claro	185	Super Plus HD	5.39%	$ 20.00	$ 18.25	$ 20.00	$ 18.25	$ 38.02	$ 34.69	5.39%	$ 23.18	$ 23.18	$ 23.18	$ 23.18	$ 43.28	$ 43.28
	DirecTV	98	Familiar	34.07%	$ 28.34	$ 28.34	$ 28.34	$ 28.34	$ 53.87	$ 53.87	34.07%	$ 28.06	$ 28.06	$ 28.06	$ 28.06	$ 52.38	$ 52.38
	PROMEDIO PONDERADO				$ 24.39	$ 24.27	$ 22.49	$ 21.81	$ 42.75	$ 41.45		$ 22.85	$ 22.85	$ 22.85	$ 22.85	$ 42.66	$ 42.66
MÉXICO					Tipo de Cambio		$ 20.05	$ 20.05									
	TVI, IZZI (Televisa)	60	izzi Pack TV	7.00%	$ 220.00	$ 220.00	$ 10.97	$ 10.97	$ 23.49	$ 23.49	3.00%	$ 179.00	$ 179.00	$ 11.77	$ 11.77	$ 22.90	$ 22.90
	Cablemás (Televisa)	60	izzi Pack TV	7.00%	$ 220.00	$ 220.00	$ 10.97	$ 10.97	$ 23.49	$ 23.49	7.50%	$ 179.00	$ 179.00	$ 11.77	$ 11.77	$ 22.90	$ 22.90
	Cablecom (Wizz Plus)	100	wizzplus TV	3.00%	$ 180.00	$ 180.00	$ 8.98	$ 8.98	$ 19.22	$ 19.22	4.80%	$ 210.00	$ 210.00	$ 13.81	$ 13.81	$ 26.86	$ 26.86
	Cablevisión (Televisa)	60	izzi Pack TV	0.00%	$ 220.00	$ 220.00	$ 10.97	$ 10.97	$ 23.49	$ 23.49	5.60%	$ 179.00	$ 179.00	$ 11.77	$ 11.77	$ 22.90	$ 22.90
	Cablevisión Red (Televisa)	60	izzi Pack TV	0.00%	$ 220.00	$ 220.00	$ 10.97	$ 10.97	$ 23.49	$ 23.49	3.90%	$ 244.00	$ 244.00	$ 16.05	$ 16.05	$ 31.21	$ 31.21
	Sky	230	vetv 1 equipo	37.00%	$ 209.00	$ 209.00	$ 10.42	$ 10.42	$ 22.32	$ 22.32	39.20%	$ 169.00	$ 169.00	$ 11.11	$ 11.11	$ 21.62	$ 21.62
	Dish MVS	23	Dish Junior	18.00%	$ 142.00	$ 142.00	$ 7.08	$ 7.08	$ 15.16	$ 15.16	15.50%	$ 129.00	$ 119.00	$ 8.48	$ 7.83	$ 16.50	$ 15.22
	Megacable	138	Conecta Digital	14.00%	$ 249.00	$ 249.00	$ 12.42	$ 12.42	$ 26.59	$ 26.59	14.60%	$ 199.00	$ 199.00	$ 13.09	$ 13.09	$ 25.46	$ 25.46
	PROMEDIO PONDERADO				$ 205.03	$ 205.03	$ 10.68	$ 10.68	$ 22.86	$ 22.86		$ 173.98	$ 172.33	$ 11.44	$ 11.33	$ 22.26	$ 22.04
PERU					Tipo de Cambio		$ 3.40	$ 3.40									
	Movistar	68	Estándar	58.60%	$ 69.00	$ 69.00	$ 20.29	$ 20.29	$ 42.32	$ 42.32	58.60%	$ 79.00	$ 79.00	$ 25.94	$ 25.94	$ 53.06	$ 53.06
	DirecTV	154	Bronce	16.40%	$ 65.00	$ 65.00	$ 19.12	$ 19.12	$ 39.86	$ 39.86	16.40%	$ 82.00	$ 82.00	$ 26.93	$ 26.93	$ 55.07	$ 55.07
	Claro	118	Básico Satelital	14.80%	$ 89.00	$ 89.00	$ 26.18	$ 26.18	$ 54.58	$ 54.58	14.80%	$ 58.00	$ 58.00	$ 19.05	$ 19.05	$ 38.95	$ 38.95
	PROMEDIO PONDERADO				$ 71.57	$ 71.57	$ 21.80	$ 21.80	$ 45.46	$ 45.46		$ 76.09	$ 76.09	$ 24.99	$ 24.99	$ 51.10	$ 51.10