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QUOTAS AND INCENTIVES FOR THE DEVELOPMENT OF DOMESTIC AUDIOVISUAL PRODUCTION: TRENDS AND ECONOMIC IMPACT ASSESSMENT

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EXECUTIVE SUMMARY

This study is intended to assess the impact of public policies aimed at promoting the development of local audiovisual content. Governments seek to encourage local audiovisual production in order to promote the value of cultural heritage, stimulate economic growth through the development of the audiovisual industry, and leverage comparative advantages in creative industries to increase competitiveness. In order to achieve these goals, authorities implement policies grouped into two main areas of intervention: (i) incentives for the development of a domestic audiovisual production industry (including tax exemptions, cash rebates, financing opportunities, public-private investment in production studios), and (ii) the imposition of local content distribution quotas (i.e., a screen quota on free-to-air broadcasting).

The emergence of Over the Top[1] (OTT) online platforms in the last decade has led many governments to transfer the concept of broadcasting quotas into title quotas within the catalog of such platforms. The empirical evidence generated as part of this study shows that title quotas have not contributed to the development of local audiovisual content. In fact, the increasing 'localization' of the OTT platform catalogs across the world is mainly due to the ongoing competition between operators to meet audience demand. Furthermore, an analysis of the government incentives given to the audiovisual industry, such as tax exemptions, financing opportunities and cash rebates, have positively complemented the natural market trends, contributing to an increase in local production and the subsequent creation of local jobs within the sector.

Based on the evidence of several studies conducted in media industries, local content quotas have had a wide range of negative outcomes:

1) Reduced offering of content with cultural value;
2) Loss of diversity in content as operators strive to fulfil a local content quota that is biased towards a narrowly-defined genre, resulting in the elimination of other content demanded by some audience segments;
3) General content quality erosion, despite the ability of some of the existing local producers to create high-level audiovisual products;
4) Loss of cultural differences, as the local production often ends up mirroring foreign content to meet the local demand for international products; and
5) Increased production costs eventually leading to higher service prices.

In fact, related to the above negative outcomes, local quota requirements have a negative effect on OTTs:

6) Imposing local content quotas may lead OTTs to choose old or low-quality content just to meet the quota requirements;

[1] In general terms, OTTs are defined as platforms and services, such as Google and Skype, that are distributed over the Internet. In the audiovisual sector, the concept applies to the distribution of content that is not dependent upon conventional channels such as over the air TV, cable television, or Direct to Home satellite.

7) Similarly, being compelled to fulfill a quota may force OTTs to cut down on content which cannot count towards the quota, thus reducing diversity; and
8) In the OTT world, an offering conditioned by local content quotas does not imply higher consumption of such content as it is the user who decides which content to download (i.e., as opposed to free-to-air broadcasting, where the content to be consumed is limited to the program guide).

The empirical analysis presented in this study demonstrates that the quotas of local content on OTT platforms have a negative effect on audiovisual production. For example, the statistical analysis of 60 countries for the year 2018 indicates that a 'development-centered' regulatory model implemented by certain countries, combining tax exemptions with reimbursement of expenses and granting of funding, and excluding content quotas in the OTT catalog, resulted in the average launch of 1.96 audiovisual productions per 100,000 inhabitants in one year. On the other hand, a "protectionist" model, based mainly on the imposition of national content catalog quotas, implemented by other countries in the same year, is the least productive (0.26 productions per 100,000 inhabitants).

Empirical evidence indicates the existence of three key factors that shaped the quality and scope of the development of local audiovisual industry:

- In developing countries, audiovisual production tends to increase driven by regulatory incentives, such as tax exemptions, financing opportunities, and cash rebates;
- Supply and demand trends in audiovisual markets are the main explanatory variables driving the growing 'localization' of OTT catalogs; and
- Local production quotas have many undesired effects which are counterproductive to the purpose of developing cultural policies and the audiovisual industry.

Additionally, a series of econometric models developed in the framework of this study where the impact of public policies on the national audiovisual production of 60 countries is measured, indicate that the imposition of a quota of local content for OTT platforms results in a 10% reduction in local audiovisual production. What is the cause of this counter-intuitive effect? In an industrial context where consumers demand local content and the competitive advantage is based on launching national productions, quotas tend to increase production costs, introducing a distortion in the balance of supply and demand, which leads the audiovisual sector to reduce its investment in the development of local content.

Based on this evidence, governments must recognize that, unlike content quotas in OTT catalogs, there are other mechanisms that, according to empirical evidence, generate positive results in the development of local audiovisual production.

Ideally, governments should leave the development of the local audiovisual industry to the dynamics of supply and demand, which are already proving their value in the "localization" of content. In this framework, evidence indicates that public policies of a "developmentalist" model (such as, tax exemptions for local audiovisual production, the granting of financing and the reimbursement of production expenses) are the levers that generate the necessary incentives for the development of the sector. At the same time, the imposition of obligations to view local content on OTT platforms represents a good complement to the incentives for local production. The fight against piracy could be added, which implicitly reduces the resources that could be dedicated to the development of local audiovisual contents.

STUDY OVERVIEW

This study is intended to assess the impact of policies and regulation aimed at promoting the development of the local audiovisual industry. In addition, supply and demand trends impacting the development of local content in the OTT market are also assessed. Based on an analysis of a wide set of regulatory and market factors, the study provides empirical evidence to document the impact of these factors on OTT platform 'content localization.' The study analysis is also supported by econometric models that demonstrate the negative impact of imposing local content quotas on OTT catalogs. This evidence leads to a range of public policy recommendations.

Governments seek to promote local audiovisual production in order to meet three goals:

- **(i) To preserve and promote their cultural heritage value;**
- **(ii) To boost economic growth by developing the audiovisual industry; and**
- **(iii) To leverage the comparative advantage in creative industries, thereby increasing national competitiveness.**

The analysis detailed in this document provides foundational empirical evidence that competitive supply and demand trends are the main explanatory variables driving the increasing 'localization' of OTT catalogs worldwide. These factors have also provided to be dominant historically, as they were proven to be key determinants in the development of local content in subscription TV channels in the mid-2000s.

Furthermore, incentives for the development of the local audiovisual industry, such as tax exemptions, financing opportunities and cash rebates, complement the natural market trends, contributing to increased local production which, in turn, has a significant impact on employment in creative industries. In fact, the growth of OTT platforms focused on local content production in recent years has resulted in a significant number of new jobs in the sector.

On the other hand, local content quotas on OTT catalogs tend to generate negative effects:

- **Reduced offering of content with a cultural value;**
- **Loss of diversity, as the local content ends up being biased towards a particular genre or because, just to fulfill a quota, operators might remove content which is actually demanded by certain audience segments;**
- **General content quality erosion, even if some local producers create high-level audiovisual pieces;**
- **Loss of cultural differences, as the local production ends up being similar to foreign content to further meet the demand for such products;**

- **An offering conditioned to local content quotas does not imply higher consumption of such content (especially true for OTT platforms, in which the user decides which content to access); and**
- **Increased production costs eventually result in increased service prices.**

More fundamentally, when production costs go up, local content quotas represent a financial barrier for a still-developing industry. In fact, the market leader, Netflix, has only recently achieved a profit margin of approximately 4% in geographies such as Latin America.[2]

It is critical for governments to recognize that **audiovisual production is a key contributor to economic growth.** In fact, audiovisual production investment generates multiple direct effects (employment, infrastructure rentals); indirect effects (accommodation, logistics, etc.); and induced economic effects (the spending of workers employed, either directly or indirectly, in the industry). For instance, the audiovisual industry in the European Union contributes US$ 107 billion to the aggregate GDP and employs approximately 1 million people, with an annual increase of 7.5%.[3] In Australia, the film industry represents US$ 2 billion in revenues and employs 94,000 people.[4] In the United States, audiovisual industries (film and TV studios) generate 2.6 million jobs, 927,000 of which correspond to workers directly employed by production studios. This phenomenon is not exclusive of advanced economies. In India, the audiovisual industry generates annual revenues of US$ 3.15 billion and employs 248,600 people.[5] In Brazil, this sector represents 0.46% of the GDP and 335,000 jobs.[6] Beyond the intrinsic importance of the sector, audiovisual content production generates a significant spillover effect into other industries, including advertising, music, digital industries, and even tourism. Therefore, the key economic development question is how to deploy a suitable incentive framework to accelerate the growth of the local audiovisual industry.

Governments implement several mechanisms focused on local content promotion as a tool to encourage the development of the local audiovisual industry. These mechanisms conceived by different government entities (e.g., Ministry of Culture, Ministry of Industrial Development or Ministry of ICT) are deployed around **two main lines of intervention**: **(i) incentives for the promotion of a domestic audiovisual industry, and (ii) the imposition of local content quotas.**

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[2] Netflix profit and loss statement 2019 shows revenues of US$ 2.8 billion in Lain America, generated from 31,470,000 subscribers. Based on expenditure indicators used in the international segment (Netflix does not segment expenses by region, except in the USA), operating expenses in Latin America are estimated at US$ 2.7 billion, with an operating margin of US$ 117.6 million (4.21%) Katz (2020). *Audiovisual OTT business models in Latin America: Recent trends and future evolution*. Geneva: World Intellectual Property Organization.

3 EFADs advocate for a stronger MEDIA Program. EFADs, 3 October 2018.

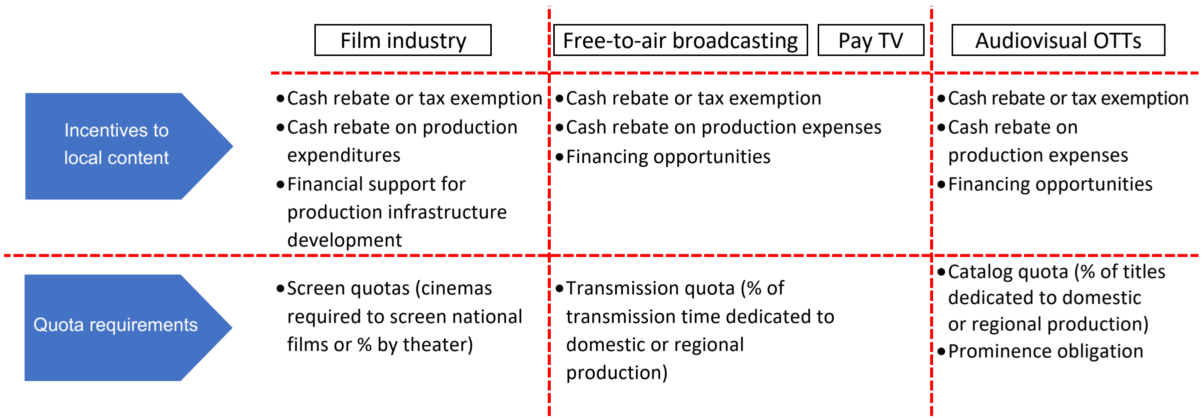
[4] *Screen Producers Australia's submission on the proposed Free Trade Agreement between Australia and the European Union.* Screen Producers Australia.

[5] Neeraj Jain, Tarun Soneja and Japun Ahluwalia, Indywood (2016). *The Indian Film Industry*, Deloitte (September 2016).

[6] Pinho, J. (2019). *A evolucao do Mercado audiovisual.* PAYTV Forum presentation, ANCINE.

Historically, local content quotas have been imposed on different audiovisual media. When film production first began, some governments applied screening quotas, which was later on extended to free-to-air broadcasting transmission time and then, only partially, to subscription TV. With the emergence of OTT online platforms, local content quotas (title quotas in OTT catalogs), or obligations to give prominence to domestic content were considered (see Figure A).

Figure A. Public policy measures in support of domestic audiovisual productions



Source: Telecom Advisory Services

The measures described above can be consolidated around two main lines of intervention: (i) the creation of conditions favorable to the development of a domestic audiovisual industry ('development-oriented' approach), and (ii) the imposition of quotas ('protectionist' approach). The mapping of policies by country regarding free-to-air broadcasting shows that different emphases were put on the prioritization of these approaches (see Figure B).

Figure B. Mapping of policies aimed at promoting domestic content on free-to-air broadcasting.

		‘Developmenta-Oriented’ line of intervention (audiovisual sector)		
		Absence of incentives to domestic production	Tax exemption or cash rebate on production expenses	Tax exemption and cash rebate on production expenses
‘Protectionist’ line of intervention (free-to-air broadcasting)	Absence of quotas on transmission time		• Serbia • United Arab Emirates • Jordan • New Zealand • Dominican R. • Thailand ‘Development-oriented’ model	
	Transmission time quotas on regional content		• Denmark (50%) • Estonia (51%) • Romania (50%) • Switzerland (50%) • Australia (55%) • Georgia (25%) • Germany (50%) • Austria (50%) • Croatia (51%) • Spain (51%) • Slovakia (50%) • Slovenia (50%) • Finland (50%) • Greece (51%) • Ireland (50%) • Italy (50K) • Norway (50%) • Netherlands (50%) • Poland (50%) • United Kingdom • Sweden (50%)	• Belgium (50%) • Iceland (51%) • Portugal (50%) • Hungary (50%) • Czech Republic (50%) • Latvia (50%) • Morocco (5%) • Portugal (50%) ‘Moderate protectionist’ model
	Transmission time quotas on domestic content		• Brazil (80%) • China (70%) • Chile (40%) • South Africa (55%) • Kazakhstan (50%) • Malaysia (80%) • Taiwan (70%) • Venezuela (50%) • Namibia (10%-15%) • France (40%)	• Colombia (50%) • Uruguay (60%) ‘Protectionist’ model

Note: The percentage in parentheses shows the amount of transmission time broadcasters need to dedicate to regional or domestic content.
Source: Telecom Advisory Services analysis

The mapping of public policies and regulations imposed on free-to-air broadcasting yields three typical regulatory models. A ‘development-oriented” model focuses on policies intended to promote domestic production, without imposing screen quotas of any kind. On the other end, a ‘protectionist’ model combines incentives to the local industry while imposing local content screen quotas. Between these two models, a ‘moderately protectionist’ model combines regional production quotas (e.g., Europe) with incentives to domestic audiovisual production. As shown in Figure B, all countries under analysis implement some kind of incentives to stimulate local production.

The subsequent emergence of subscription TV resulted in the occasional application of these models to cable and satellite TV. It is interesting to highlight the fact that only a small number of countries implement protectionist measures on subscription TV, which indicates that the market incentives for the development of local content are sufficient, making additional regulations unnecessary.

As a result of the emergence of OTT online platforms, the concept of screen quota was adapted to catalog quotas. So, while the ‘development-oriented’ policies apply to film production, free-to-air broadcasting, subscription TV, and, occasionally, to OTTs, catalog quotas apply only to OTTs. And, despite the fact that incentives to the development of domestic content apply to film production, free-to-air broadcasting and subscription TV, OTTs end up benefitting since the films or series produced for the first three media may be included as local content in OTT catalogs. The mapping of policies by country regarding the development-oriented and protectionist approaches for OTT platforms indicates again the different emphases placed on both dimensions, resulting in four alternative regulatory models (see Figure C).

Figure C. Regulatory models for the promotion of domestic audiovisual content on OTT catalogs

		'Moderate developmentalist' model		
		Absence of incentives to domestic production	Tax exemption or cash rebate on production expenses	Tax exemption and cash rebate on production expenses
'Protectionist' line of intervention (OTT)	Absence of local content quotas on the catalog	'Moderate Development -oriented' model	• Serbia • Denmark • Switzerland • Switzerland • Brazil • United Arab Emirates • Chile • Thailand • Malaysia • Taiwan • New Zealand • Jordan • Kazakhstan • Dominican R. • Namibia • Finland • Netherlands • United Kingdom • Canada • Australia • Latvia	• Germany • Belgium • Portugal • Iceland • Colombia • Morocco • Uruguay 'Development-oriented'' model
	Regional content quotas on the catalog	'Moderate protectionist' model	• Austria (50%) • Spain (30%) • Slovenia (10%) • Greece (% to be defined) • Ireland (% to be defined) • Italy (30%) • Norway (% to be defined) • Greece (% to be defined) • Poland (20%) • Sweden (% to be defined)	• Croatia (% to be defined) • Slovakia (20%) • Hungary (25%) • Czech Republic (10%) • Romania (20%) • Latvia (50%)
	Local content quotas on the catalog		• China (70%) • France (40%) 'Protectionist' model	

Note: The percentage in parentheses shows the portion of the catalog that should be dedicated to regional or domestic content.
Source: Telecom Advisory Services analysis

The 'moderate development-oriented' model is based on the implementation of certain incentives for the promotion of domestic production, without imposing any catalog quota. This model may be expanded to include more incentives to the domestic production (the 'development-oriented' model). Neither the 'moderate development' nor the 'development' model include local content quota requirements on OTT catalogs. In some cases, recognizing that the imposition of content quotas may be counterproductive, some countries (e.g., Colombia[7]) have implemented prominence obligations according to which OTTs must facilitate access to domestic content in their platforms. The 'moderate protectionist' model combines the imposition of regional content quotas (e.g., European content) with a number of measures aimed at promoting domestic audiovisual production. Finally, the 'protectionist' model prioritizes the imposition of local catalog quotas, with incentives to domestic audiovisual production. As indicated, each of these four models show different policy focus.

A descriptive statistical analysis can already generate some evidence of the comparative impact on local content production resulting from each policy model. To such end, the volume of domestic productions and co-productions per 100,000 population in the countries

[7] The implementation of the respective executive order has been scheduled for February 2021.

in each quadrant has been averaged, for both 2018 and the cumulative volume between 2011 and 2018 (see Figure D).

Figure D. Domestic production (per 100,000 inhabitants) based on the models applied to OTTs

		'Development-oriented' line of intervention		
		Absence of incentives to domestic production	Tax exemption or cash rebate on production expenses	Tax exemption and cash rebate on production expenses
'Protectionist' line of intervention (OTT)	Absence of local content quotas on the catalog		• 2011-2018 average: 0.469 • 2018: 0.495	• 2011-2018 average: 1.610 • 2018: 1.961
	Regional content quotas on the catalog		• 2011-2018 average: 0.383 • 2018: 0.410	• 2011-2018 average: 0.404 • 2018: 0.454
	Local content quotas on the catalog		• 2011-2018 average: 0.241 • 2018: 0.263	

Source: Telecom Advisory Services analysis based on data from the European Audiovisual Observatory

Our analysis shows that the 'development-oriented' model without quotas (upper right quadrant) is more productive in terms of audiovisual production (average of 1.96 films per 100,000 population in 2018). On the other hand, the most 'protectionist' model is the least productive one in terms of production (0.26 films per 100,000 population in 2018). With regard to the difference in content catalog quotas, the regional quota model is more productive than the domestic quota model. While statistics do not clearly report the lower quality of audiovisual content derived from the imposition of quotas, research in other media, such as radio or free-to air broadcasting, shows that imposing a local quota leads to lower quality content (Petrona, 2015; Richardson and Wilckie, 2015; Ranaivoson, 2007; Broughton Micova, 2013).

What explains the higher audiovisual production in countries focused only on incentives implied in the "development-oriented" model to the local industry, without imposing any quota whatsoever? **The reason is that the industry's natural market trends and the resulting competitive pressure already give rise to the necessary incentives to 'localize' OTT content, while incentives to the domestic production under the 'development-oriented' model create conditions that allow operators to respond to such incentives.**

Why is it that the natural supply and demand factors create trends that drive 'content localization'? The OTT value proposition is based on the concept of content variety implicit in the multiple network effects typical of these online platforms. Accordingly, the higher the quantity and variety of content the platforms offer, the higher the value they have for their audiences. Under these conditions, competing OTT platforms strive to get the best and latest content, or exclusive rights on it, so as to increase their respective value propositions. In fact, recent research shows that original content is a key variable in acquiring new users.[8]

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[8] Prince, J. and Greenstein, S. (2018). Does original content help streaming services attract more subscribers?" *Harvard Business Review* (April 24).

Additionally, a significant component of the **OTT value proposition is the inclusion of locally produced programming**. Since subscribers' needs are not consistent —the typical user requires local programming and a complement more focused on his/her linguistic idiosyncrasy— offering rich local media content represents a competitive imperative for OTTs. Local content has a strong leverage impact on competitive dynamics.

In most countries, the OTT market is highly competitive. While in some countries the fiercest competition takes place among global operators, local sites manage to compete quite successfully against multinational platforms. For instance, local OTTs have captured 80.6% of the OTT market in India, 36.7% in Brazil, 29.4% in Mexico, 34.4% in Colombia, 33% in the Netherlands, 49% in the United Arab Emirates, and 46.9% in Venezuela.[9]

What is the impact of different policy models and market dynamics on the development of local content? The answer is based on descriptive empirical analysis, the review of previous research findings, and this study's econometric models.

- **Policy incentives have resulted in increased local content worldwide**: Between 2011 and 2018, global audiovisual production —including film, documentary, and short film productions, and co-productions— has grown 5.1% per year. In contrast, in Latin America and Asia Pacific the increase has been 10.8% and 7.4% respectively. As a result, the United States' share in the worldwide global production market has dropped from 13% in 2011 to 9.6% in 2018, confirming the unprecedented reduction of the its global market share. In contrast, productions made in Latin America, Asia Pacific, and Africa, increased an average of 10% between 2011 and 2018. Latin American productions, including Argentina, Brazil, Chile, Colombia, Costa Rica, Mexico, Peru, and Uruguay, grew from 321 productions and co-productions in 2011 to 659 in 2018.[10] The use of incentives such as tax exemptions, financing opportunities, and cash rebates to the audiovisual industry largely explain this increase.

- **Supply and demand trends are key variables that explain the increasing OTT catalog 'localization':** Regarding OTTs, fierce competition and the nature of user demand (i.e., the possibility subscribers have to opt out at any time) forces providers to continuously strive for introducing new content. The OTT churn rate is 35% (increasing from 28% in 2018).[11] The lack of content meeting users' interest is the second most important reason to opt-out. Therefore investing in local content is one of the most important levers for providers to strengthen users' loyalty.

- In such a context, the audiovisual audience is constantly demanding local content**.** China, Japan, and India OTT catalogs offer more than 40% of local titles.[12] Among the ten most popular YouTube channels, two are from India, three from the USA, and one from Brazil, Russia, Turkey, and the UK, respectively. The higher the local content demand, the more important local productions are in attracting audience. In fact, the

[9] See data and sources in table 2.
[10] Source: Economic Audiovisual Observatory.
[11] Source: Parks Associates (2020). *Understanding and combating OTT churn* (March 12).
[12] Rapid TV News (2020). *SVOD services continue local content push* (May 5).

impact of competitive intensity as a key factor in determining the increased local production has already been made evident in the development of subscription TV. In fact, for many years pay TV channels have developed local content in response to audience demands, in order to secure higher ratings and therefore increased advertising revenues. That is why the 'localization' of subscription TV content has taken place regardless of the imposition of quotas.

This very same effect has been observed in the OTT market, where platforms compete for viewers. **Empirical evidence shows that competitive pressure has led OTT platforms to include a large amount of local content in their catalogs, even before catalog quotas are imposed.** In Europe, according to the European Audiovisual Observatory, 30% of the 302 OTT platform catalogs were already of European origin in 2019, before the implementation of the European Directive on local content to be offered by OTT platforms. Additionally, even the global SVOD service catalogs (e.g., Netflix, Amazon Live, etc.) already included 23% of European films. By 2019, 30% of OTT European content already exceeded the quotas established by regulators in Romania (20%), the Czech Republic (10%), Poland (20%), Hungary (25%), Slovakia (20%), and Slovenia (10%), and was already significant in countries where no quotas were required (e.g., Germany, Belgium, Bulgaria, Denmark, Estonia, Finland, Iceland, Latvia, the Netherlands, Portugal, Switzerland, and the UK). The trend registered in Europe is also observed in Latin America. For instance, in 2019, in Brazil, 23.1% of the seven main OTT catalogs were locally-produced series.[13] Based on the investments made by operators in the production and acquisition of Brazilian content, these percentages are likely to go up as a natural consequence of market dynamics.

- **Local audiovisual production quotas generate many counterproductive unexpected effects.** Economic research on the impact of quotas imposed on local content reveals that, despite the intended goal of promoting local culture and developing a domestic audiovisual industry, quotas distort and alter markets, making it more difficult to achieve optimum social results. This is why well-intended regulations may have negative results.

  It is important to recognize that quotas only impact one side of the business equation the supply and not demand. Consequently, policymakers cannot ensure that a higher OTT local content of unknown quality will meet the demand of users and find responsiveness in the audience (i.e., that users will actually consume such content as expected by regulators). In OTTs, there is no prime time. Therefore, the requirement to include local content on OTTs does not necessarily mean that the audience will end up viewing or accessing those local productions. In fact, quota requirements tend to have paradoxical results: sometimes, it may occur that the content intended to be promoted is viewed by less people. This can be clearly observed when quotas apply to content that does not appeal to consumers. For example, imposing a quota may lead broadcasters to try to offset the foreign content reduction by increasing the

[13] Source: Katz (2020).

number of substitute domestic programs (i.e. programs which resemble the foreign ones), resulting in reduced diversity. In addition, quotas may encourage local artists to try to imitate their international counterparts, thus minimizing the distinctiveness of their local work. Quotas may also result in reduced diversity if less foreign content and, consequently, less geographical variety, is offered. On the other hand, imposing a quota does not guarantee at all that such larger offer of local titles is not met by turning to old, low-quality content. Finally, quotas may be detrimental to the domestic artistic ecosystem. Imposing a quota results in reduced audiences since the content offer may be based, as mentioned above, on less popular titles. This loss of audience derives into reduced OTT revenues as a result of subscribers' opting out, with negative collateral effects on artists and their income from intellectual property rights.

More fundamentally, local content quotas imposed on OTT catalogs question the cost-efficiency of the business, even for the market leader. As mentioned above, Netflix Latin America is estimated to have reached its first profit operating margin (4.21%) in 2019. In order to improve its margins, Netflix needs to continue increasing its number of subscribers while facing other global and local OTT competitors and controlling its operating costs. Cost reductions are also difficult to achieve since they need to continue investing in local content to leverage their own value proposition. In such a context, imposing a quota that forces providers to broadcast lots of local content —or to buy the rights of local audiovisual works — results in increased production expenses. It is difficult to pass these additional costs to the end user in Latin America as the current fee already matches the average user payment capacity. In sum, increased production costs derived from local content quotas represent an entry barrier for new global OTT players. Furthermore, there will be fewer local platforms operating in the market because they cannot afford the higher content production/acquisition costs derived from the quotas. In short, the policy would result in both less global players and less local platforms.

In this study, empirical evidence on the policy impact of local production has been used to build three econometric models. An initial microeconomic model developed for this study shows that the **local audiovisual production volume positively depends on the dimension of the demand and the consumers' preference for local content, while it negatively depends on production costs and regulatory intensity.** Theoretically, if the regulatory pressure on local content quotas exceeds the break-even point, local production tends to decline.

The theoretical model explained above was empirically specified with data for 60 countries. The goal was to quantitatively estimate the impact of catalog quotas on the domestic production volume (that is to say, whether quotas on OTT catalogs contribute or not to increased audiovisual production). The model is based on the income per capita, the audiovisual production costs, the preference of the population for consuming audiovisual products (as measured by cinema attendance and number of OTT subscribers), the competitive intensity in the OTT market (as measured by the platform Herfindahl-

Hirschman Index of industry concentration), the OTT subscribers' income, and the existence of regulatory catalog quotas. The following analytical outcomes were obtained:

- As expected, consumer purchasing power (as measured by GDP per capita) and the preference of the population for consuming audiovisual products (as measured by cinema attendance and the OTT penetration index) are paramount factors that determine an increase in local production. This confirms the hypothesis that the larger the local demand is, the bigger the local production becomes.
- Competitive intensity in the OTT market has a positive impact on audiovisual production. However, the sector requires a moderate level of concentration in order to achieve sufficient economies of scale. This is confirmed by empirical evidence, case studies, and research conducted by other authors regarding the importance of having a moderate level of competition to maximize consumer benefits in digital industries.
- National or regional catalog quotas result in less local production. The estimated impact of catalog quotas on local audiovisual production -- when controlling for per capita GDP, production costs, degree of preference for audiovisual content, and the regional and individual characteristics of each country -- results in an R squared of 0.98. It means the model is taking into account all local production-determining factors. Fundamentally, the impact coefficient of the corresponding variable indicates that **imposing a content quota on OTT platforms is associated with a 10% decrease in local production**. **Why does this effect occur? In a context of intense demand and competitive intensity, quotas tend to result in increased production costs, thereby distorting the supply-demand balance, which leads to decreased investment in local content production.**[14]

Consequently, when there is demand and enough competition, the imposition of catalog content quotas has a negative impact on audiovisual production.

To sum up, recognizing the importance of goals such as promoting the cultural heritage value, developing the audiovisual industry to boost economic growth, and leveraging comparative advantage in creative industries, the evidence produced under this study suggests that governments have three regulatory options:

- **OPTION 1: To foster a 'development-oriented' model that prioritizes incentives aimed at developing the audiovisual industry — sundry tax exemptions, financing opportunities, investment in infrastructure, and cash rebates— allowing the natural supply and demand factors to contribute and create increased OTT catalog 'localization' trends.**

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[14] This evidence is consistent with that presented in Stone, S., Messent, J. and Flaig, D. (2015) *Emerging Policy papers: Localization barriers to trade*. OECD Trade Policy Papers No. 180: *OECD Trade Policy Papers*, No. 180, OECD Publishing, Paris. Http://dx.doi.org/10.1787/5js1m6v5qd5j- where it is stated that 'imposing a local content regulation (LCR) raises domestic production costs for the targeted industry, assuming that prior to the Local Content Regulation (LCR) each producer was free to choose from the most cost-effective source (whether it be domestic or foreign). Thus, an LCR is a government mandated decision to choose a less efficient supplier. The increase in production costs leads to an increase in price' (p. 30).

- **OPTION 2: To impose domestic content prominence obligations such as reserving a substantial portion of the platform home page to spotlight local content, or by publicizing the country of origin or the original language of programs through trailers in order to promote the local culture.**
- **OPTION 3: To impose a content quota on OTT catalogs.**

The advantages and disadvantages of each option were assessed to help identify the most appropriate alternative (see Table E).

Table E. Regulatory options in support of local audiovisual production

Options	Advantages	Disadvantages
• OPTION 1: To foster a 'development-oriented' model that prioritizes incentives aimed at developing the audiovisual industry, by allowing the natural supply and demand factors to contribute to and create 'content localization'	• Promotes the development of local OTTs based on a content demand and production cost balance • Subsequently increases content and diversity • Grows the local audiovisual industry	• Based on evidence, no negative effects
• OPTION 2: To impose domestic content prominence obligations on OTT catalogs	• Provides Latin American users easy access to local content • Challenges the OTT preference algorithms and opens local production to the consideration of Latin American users	• Based on evidence, no negative effects
• OPTION 3: To impose a local content catalog quota	• Based on evidence, no positive effects	• 10% decrease in national production • Fewer platforms due to higher market entry costs • Lower-quality titles • Entry barriers for new players due to higher costs

Source: Telecom Advisory Services

As shown in Table E, there is not a single regulatory model. Latin American governments should understand that, apart from domestic content quotas, there are other mechanisms that, following the empirical evidence, may lead to positive effects. More fundamentally, Latin American governments and regulators need to recognize that the imposition of local content quotas will have unintended negative impacts, while a range of policy levers can result in important national benefits.

Ideally, governments should enable the development of the local audiovisual industry to be accelerated by the powerful dynamics of supply and demand, already proven to deliver great value in 'content localization.' Based on conclusive consistent evidence, Option 1, the 'development-oriented' model, contributes to creating the incentives needed for the development of the industry. At the same time, imposing prominence obligations (Option 2), like the ones applied under the Colombian model[15], nicely complements local production

[15] The implementation of the respective executive order has been scheduled for February 2021.

incentives. To this could be added the fight against signal piracy, which implicitly reduces the use of resources that might be addressed to the development of local content.

Finally, Option 3 introduces very distorting factors that increase production costs and results in negative impacts on the structure and dynamics of the sector. The negative effects of Option 3 can be mitigated by applying regional or linguistic content quotas, in which case the audiovisual sector might leverage Latin American economies of scale to promote regional production. Details of this overview are provided in the main report.

MAIN REPORT

INTRODUCTION

The Latin American audiovisual industry is starting to debate the need of regulating local content production (or not), and how to create enabling environments that contribute to national economic benefits. The emergence and increasing prevalence of OTT platforms in the region, combined with the debates taking place in other parts of the world regarding the need to regulate the local audiovisual production in this new channel, is pushing the issue into the agendas of regional authorities. Public policies aimed to promote the production of local content are not new. As pointed out in this study, the imposition of local content quotas is a long-standing tool, applied by governments worldwide. In recent decades, apart from imposing quotas, many governments have successfully fostered local production by creating financial and tax incentives. The audiovisual industry (especially in developing countries) has become extremely dynamic, capturing global attention and obtaining significant market power partly as a result of such incentives.

It is in this context that the policy regarding the need (or not) to include local content quotas in the OTT catalogs is being considered in many emerging countries. For instance, the Mexican Congress is currently debating the convenience of imposing a 30% domestic content quota on OTT platforms.[16] The ICT Ministry in Colombia has not imposed a local content quota but, as an alternative for promoting its domestic consumption, has requested OTTs to improve the prominence of domestic digital content within the platform.[17] This regulation is combined with the implementation of numerous incentives to local production.

This study reviews and assesses the full range of policies and regulations aimed at developing local audiovisual production. It particularly assesses the OTT market supply and demand trends impacting on platform 'content localization.' Based on a number of policy and market factors, the study provides empirical evidence that documents the impact of policies and regulations on 'content localization.' This analysis is complemented by three econometric models that estimate the impact of quotas in different scenarios. Based on this analysis, a series of recommendations are developed for the regulation of OTT content.

This report is structured around seven chapters (see Figure 1).

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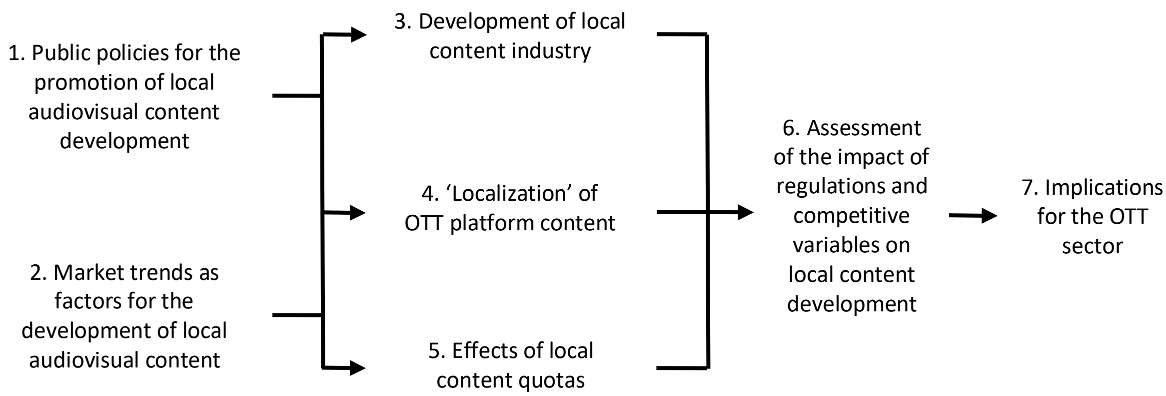
[16] The Finance and Public Credit Commission together with the Legislative Studies Commission of the Mexican Senate have passed a bill stating that digital video platforms must include 30% of domestic content. The regulation states that 'Internet pay TV providers (OTTs), whether domestic or foreign, are obliged to include at least 30% of domestic content in their catalogs'; this applies to platforms such as Claro video, Amazon Prime Video, Blim, HBO Go, and Netflix. The initiative states that OTT service providers listed before the Federal Institute of Telecommunications (IFT, *Instituto Federal de Telecomunicaciones*) will have four months as of the entry into force of the executive order to comply with the 20% domestic production requirement, and one year to fulfill the 30% agreed upon.
[17] Bertran, A. "OTT platforms to have a Colombian content section", *Nextv Latin America*, March 16, 2020. The implementation of the respective executive order has been scheduled for February 2021.

Figure 1. Organization of the study



Chapter 1 discusses the various public policy and regulatory intervention mechanisms designed to promote the development of local audiovisual industries. Based on this analysis, it defines different public policy models based on a combination of protectionist measures and/or industrial incentives. Chapter 2 examines the market variables (demand, and competitive intensity) as additional factors contributing to the development of the local content industry. This provides a comprehensive insight into the variables present in the development of local audiovisual production. After describing the set of factors impacting industry development, it moves on to providing evidence on the world-wide effects of such public policy and market trends. Firstly, Chapter 3 focuses on the state of play of local audiovisual production to determine the importance of the incentive policies implemented by authorities. This is done by presenting descriptive statistics and case studies. Complementing the analysis of the outcome of policy incentives, Chapter 4 explores the share of local production in the OTT platform catalog to demonstrate the relevance of market factors as a 'localization' driver. Alternatively, Chapter 5 explores the counterproductive effects identified in the specialized literature associated with the imposition of local content quotas in the media industry. Having analyzed these three impact areas, Chapter 6 describes a theoretical model and two econometric models used to assess the impact of local content quotas on an OTT provider. The above serves as input for a range of possible recommendation detailed in Chapter 7 for the OTT sector.

1. PUBLIC POLICIES FOR THE PROMOTION OF LOCAL AUDIOVISUAL CONTENT DEVELOPMENT

This chapter describes the historical background and the state of play in the field of the public policy and regulation aimed at promoting local audiovisual content development. It is intended to formulate regulatory models so as to asses, in the subsequent chapters, their respective impact.

1.1. Public Policy Objectives in Support of Local Audiovisual Content

Governments seek to promote local audiovisual production in response to three goals: (i) to promote and enhance their cultural heritage value, (ii) to boost economic growth by developing the audiovisual industry, and (iii) to leverage comparative advantage in creative industries, thereby increasing national competitiveness[18].

Firstly, local audiovisual production has cultural value for both the country's own population and people from abroad. This cultural value is documented in the UNESCO 2005 Convention for the Protection and Promotion of the Diversity of Cultural Expressions, a legal instrument acknowledging and reaffirming the sovereign rights of States to maintain, adopt, and implement policies aimed at protecting and promoting the diversity of cultural expressions. This is based at the same time on the recognition that a country's cultural identity may be threatened by other hegemonic international cultures.

Secondly, audiovisual production represents a major business sector and, hence, a driver of economic development. Audiovisual production investment results in many direct effects (employment, infrastructure rentals), indirect effects (accommodation, logistics, etc.) and induced effects (the number of workers employed, either directly or indirectly). For instance, the audiovisual industry in the European Union contributes US$ 107 billion to the European GDP and employs approximately 1 million people, with an annual increase of 7.5%.[19] In Australia, the film industry represents US$ 2 billion and employs 94,000 people.[20] In the United States, audiovisual industries (film and TV studios) generate 2.6 million jobs, 927,000 of which correspond to workers directly employed by production studios. In Brazil, this sector represents 0.46% of the GDP, and 335,000 jobs.[21] In addition to the sector itself,

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[18] In international trade theory, the law of comparative advantage postulates that certain countries are able to produce certain goods at lower opportunity costs and, hence, supply them at a lower price and gain new markets. In the case of the audiovisual industry, economies of scale give certain countries (e.g., the United States) a competitive edge in the trade of the product concerned. A country ranked as a secondary producer may be placed at a disadvantage in competing with a leading producer not only in its domestic market but also in foreign ones (for instance, Argentina competing with the United States in the Chilean market). Hence, the secondary country (Argentina) implements public policies to reduce the disadvantage (e.g., by subsidizing production) and be better equipped to face off the leading player in other markets.

[19] *EFADs advocate for a stronger MEDIA Program.* EFADs, October, 3, 2018

[20] *Screen Producers Australia's submission on the proposed Free Trade Agreement between Australia and the European Union.* Screen Producers Australia.

[21] Pinho, J. (2019). A evolucao do Mercado audiovisual. PAYTV Forum presentation. ANCINE

audiovisual content production generates a significant spillover effect into other industries, including advertising, music, digital industries, and even tourism.[22]

In the context of the sector's economic clout, governments also fear that, if local audiovisual production is at a competitive disadvantage vis-à-vis content produced by other nations, the country may become a mere consumer of foreign films and series. Moreover, if locally produced content is at a disadvantage in foreign markets, the country loses export revenues and, incidentally, cultural clout (a factor that can be important in the linguistic field).

1.2. Historical Background

Regulations aimed at boosting the development of local audiovisual content date back to the early 20th century, with the advent of the motion picture industry, and have been evolving ever since, by becoming adapted to the changes in the audiovisual value chain. In spite of their evolution over time, the central goals that guided the original definition of policies and regulatory frameworks have remained the same: to protect and promote local audiovisual industries, as well as to preserve cultural heritage value.

In general, governments have striven to accomplish these goals by relying on two types of policies:

- The imposition of local production broadcasting quotas (the 'protectionist' approach); and
- The implementation of incentives aimed at developing the local audiovisual industry (the 'development-oriented' approach).

These two types of policies have not been implemented simultaneously. Content broadcasting quotas were first introduced in the second decade of the 20th century. Back then, several European countries implemented content distribution quotas to safeguard their domestic film industries from the increasing popularity of US productions. This regime remained in place until the end of World War II, when opposition to the screen quota system by the US film industry, strengthened by the US support to the post-war recovery of Europe, culminated in the signature of the Blum-Byrnes Agreement between France and the United States in 1946, adding flexibility to the system by allocating more favorable film distribution quotas.[23] The situation changed with the adoption of the GATT in 1947, which states in Article IV that each member state may maintain screen quotas for film products of national origin. Article IV conceptually relies on the premise that, contrarily to other goods or services (which are regulated under Article III), the audiovisual product has a cultural value and, hence, may be subject to distribution quotas, such as the screen quota (or broadcasting time quota), which are subject to negotiation between countries.

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[22] According to estimates of the Northern Ireland Tourist Board (Tourism NI), Game of Thrones tourists spent US$ 61 million in Northern Ireland in 2018 (Source: G*ame of Thrones tourists spent €58m in North last year*. The Irish Times, 22 April 2019).

[23] Higson, A. and Maltby, R. (Ed.). "'Film Europe' and 'Film America': Cinema, Commerce and Cultural Exchange 1920-1939", Exeter, University of Exeter Press, 1999, pp. 346-397.

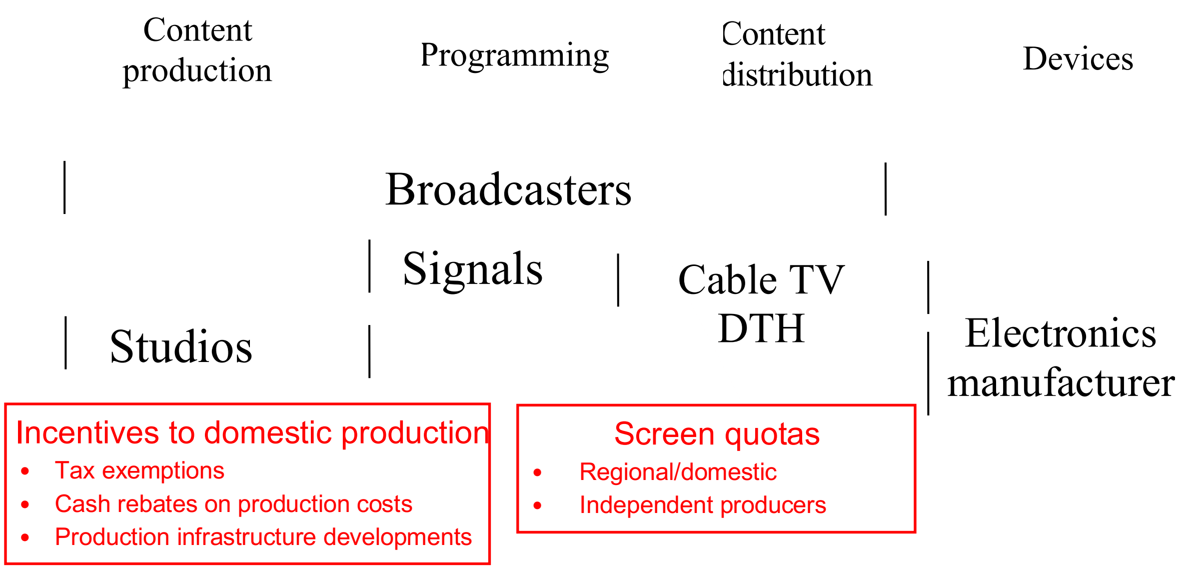
With the advent of television, clashing views of the film product as an economic or a cultural good extended to whether or not Article IV of GATT was applicable to the new medium. The European discussions that resulted in the drafting of the 'Television Without Frontiers' (TVWF) Directive rekindled the debate even when, in fact, it extended film quotas to television. Consequently, regardless of differences across countries beyond the European realm, the application of transmission time quotas on free-to-air broadcasting has been reaffirmed by a significant number of countries.

The imposition of quotas regained visibility in the public policy agenda after the launch of subscription TV. It is worth noting, however, that to-date, the enforcement of quotas in this distribution mode has been less consistent than in free-to-air broadcasting. This is due, in part, to the fact that free-to-air broadcasting is a concession and, therefore, it makes more sense to regulate it in order to safeguard the cultural heritage and foster audiovisual production. Since this is not the case of subscription TV, the number of countries adopting screen quotas, even in the European environment, is much lower than in the case of free-to-air broadcasting.

Concurrently with the imposition of content quotas, authorities have implemented policy initiatives aimed at supporting domestic audiovisual production (the 'development-oriented' approach). These measures impact two stages of the industry's value chain. On the one hand, governments have implemented local production and domestic/foreign co-production incentives, including cash rebates, financing opportunities and production infrastructure initiatives (e.g., subsidized construction of production studios). On the other hand, governments have introduced taxation frameworks and tax exemptions intended to benefit domestic production.

Thus, policies aimed at promoting local audiovisual content development are classified around two types of intervention: (i) incentives to the domestic production (cash rebates, financing opportunities, or tax exemptions), and (ii) screen quotas. The former is the 'development-oriented' approach, while the latter is the 'protectionist' approach. Each approach has an impact on a specific stage of the audiovisual industry's value chain (see Figure 2).

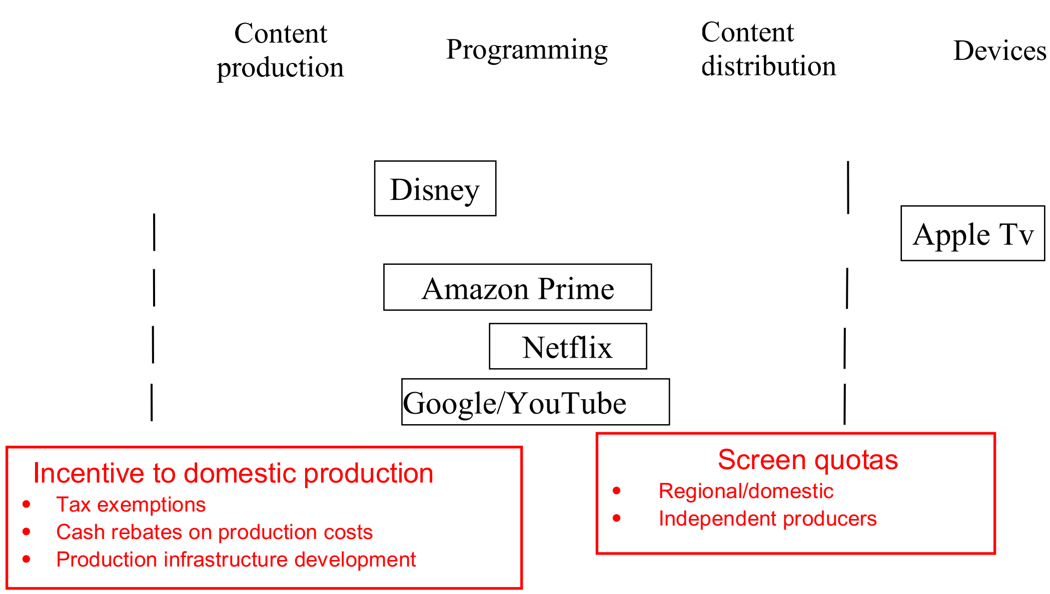
Figure 2. Pre-OTT intervention policies



Source: Telecom Advisory Services

The advent of OTTs as new value chain players has reshaped public policy at multiple levels. The implicit integration of the audiovisual value chain has suggested that the combined impact of the various public policy mechanisms might generate unprecedented pressure on the OTT business model, affecting its sustainability. To meet the challenges of this new distribution model, some countries have translated the screen quota concept to the OTT title catalog. In line with this concept, some authorities have applied a regional or domestic title quota to OTT catalogs (see Figure 3).

Figure 3. Post-OTT policies



Source: Telecom Advisory Services

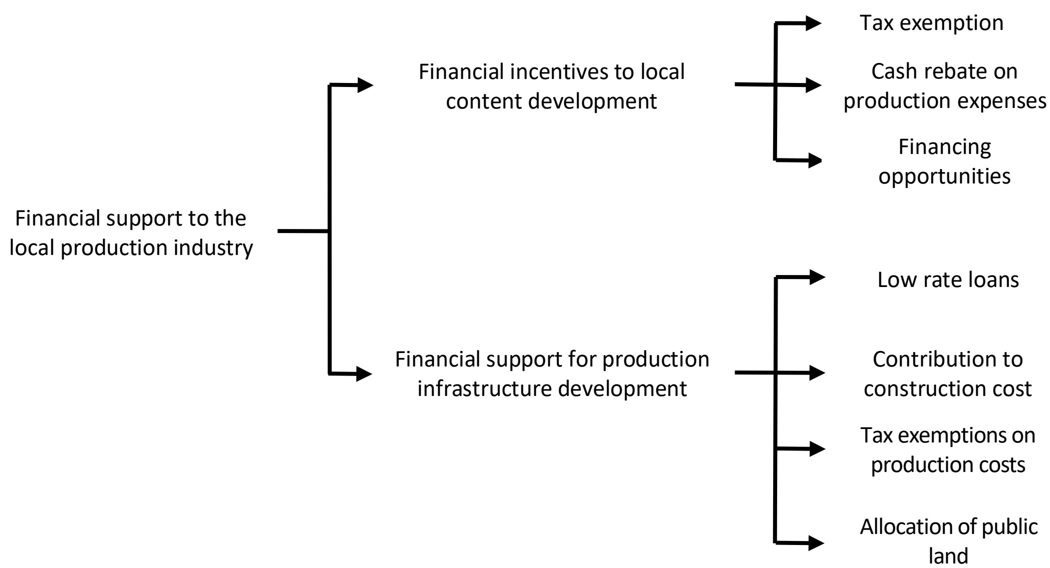
1.3. Types of Public Policies

As shown above, governments have access to a number of mechanisms aimed at promoting the development of local audiovisual content. They may be organized around two categories: (i) government financial support to the local content industry through the creation of development funds, incentives to private audiovisual production in the form of tax exemptions or cash rebates, or (ii) the imposition of screen/catalog quotas. A substitute for quotas, and a more effective alternative for the purposes sought, is the imposition of prominence obligations for OTT providers.

1.3.1. Government Financial Support to Local Audiovisual Production

Financial support to the local content industry may be channeled through local content development incentives or direct financial support to production infrastructure deployment (such as subsidized construction of production studios). Financial incentives to local content development may be offered by way of: (I) tax credits, (ii) cash rebates, or (iii) financing opportunities (see Figure 4).

Figure 4. Initiatives aimed at providing financial support to local content production



Source: Telecom Advisory Services

The first category of financial support to local production consists of production tax refunds ("tax credit"). While in many countries the refunding is automatic and included by producers in the original film budget, in certain cases, refundable tax credit may be capped[24]. Tax relief

[24] Examples of uncapped refunding are the British Columbia production tax credit in Canada, tax credits available in the State of Georgia (USA), and the tax relief for creative sectors in the United Kingdom. Capped refunding is available, for instance in the Czech Republic and the State of California (USA).

is sometimes optional in relation to cash rebates. In other words, producers may choose between tax credits or cash rebates (as is the case of Colombia).

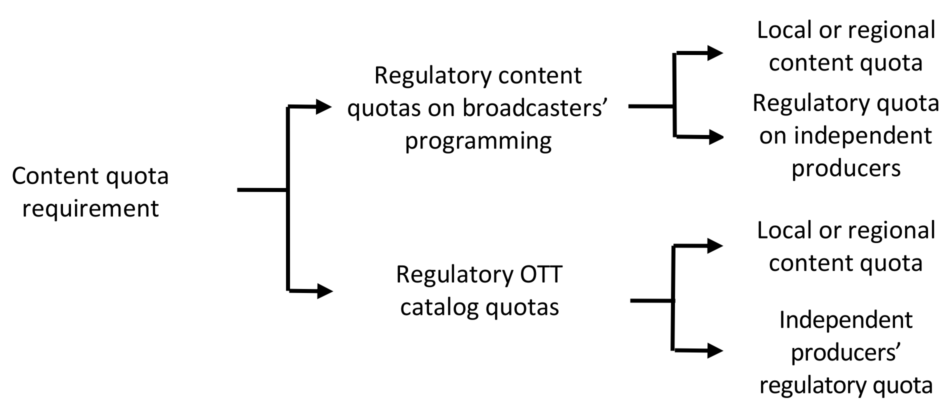
In the case of cash rebates, the producer receives from the government a portion of the original investment as a reimbursement. For instance, in Colombia, film producers receive a 40% reimbursement on film production direct expenditures and a 20% cash rebate on logistic expenses. Originally intended for feature film production, particularly pre-production photography, this incentive has been extended to cover other audiovisual content (including advertising and production of series). Naturally, a number of eligibility criteria must be met to qualify for the rebate, and producers themselves must confirm that it was used for its intended purpose.

Financial support from the public sector for the deployment of audiovisual production infrastructure is mainly oriented to the investment for the construction of post-production studios and platforms, a key factor in boosting market appeal for local production stimulus. Financial support for infrastructure deployment may be granted via low interest loans or direct infrastructure investment within a framework of public-private collaboration. Other infrastructure deployment initiatives include the provision of financial incentives, such as the elimination of the tax exemption cap, or a contribution towards the cost of building production facilities (e.g., through 5% refunds, in the case of New Zealand). Another potential policy is the allocation of public land for the construction of production studios (such as Fox Studios Australia). Annex A contains a summary of financial support policies by country.

1.3.2. Local Content Screen or Catalog Quotas

Screen —or catalog, in the case of OTTs— quota requirements are applicable on domestic or regional content (e.g., European content). For free-to-air broadcasters, quotas are imposed on programming time, while for OTTs, they must be reflected on catalog quotas (defined as a percentage of the number of titles) (see Figure 6).

Figure 6. Models of screen or catalog quotas allocated to local content



Source: Telecom Advisory Services

The European Union has played a key role in laying down common rules in terms of European content quotas for free-to-air broadcasting in member states. Quotas for EU countries are governed by the ‘Television Without Frontiers’ Directive of 1989, under which 50% of the transmission time of free-to-air television broadcasters, save for news, sports programs, and certain pre-determined contents, must be reserved for European productions, 10% of which must be assigned to independent producers. Article 3 of the directive authorizes member states to set out more specific provisions in relation to content quotas. Thus, countries such as France have modified them for free-to-air broadcasting in terms of national priorities (40% must be reserved to French productions), or Spain, where 51% of the transmission time of European productions must be in either Spanish or another country local language (Basque or Catalan).

As far as subscription TV is concerned, local content quotas are very rare. This is due to the fact that, driven by the need to increase their viewership (and hence, their advertising revenue), subscription TV operators have naturally increased their share of domestic production without waiting for a quota to be imposed.

1.3.3. Prominence Obligations

Prominence obligations apply, as expected, only to OTT platforms. These can be fulfilled by reserving a substantial portion of the platform home page to spotlight local content, or by publicizing the country of origin or the original language of programs through trailers. The aim is to highlight local production, ensuring local consumers’ ease of access, while promoting it. Annex B summarizes local content prominence obligations for OTTs by country.

1.3.4. Spillover of Non-Audiovisual Industry-Specific Regulations

Other regulations which are not local production-specific but, nevertheless, have an impact on it are overall tax policy, laws regarding social benefits, migration policies, intellectual property regime and censorship mechanisms. All of these aspects may increase or reduce the frictional costs associated with local production. For example, the value added tax related to the acquisition of supplies may increase production costs. A similar effect might be triggered by limiting or regulating working hours or imposing visa requirements for temporary workers.

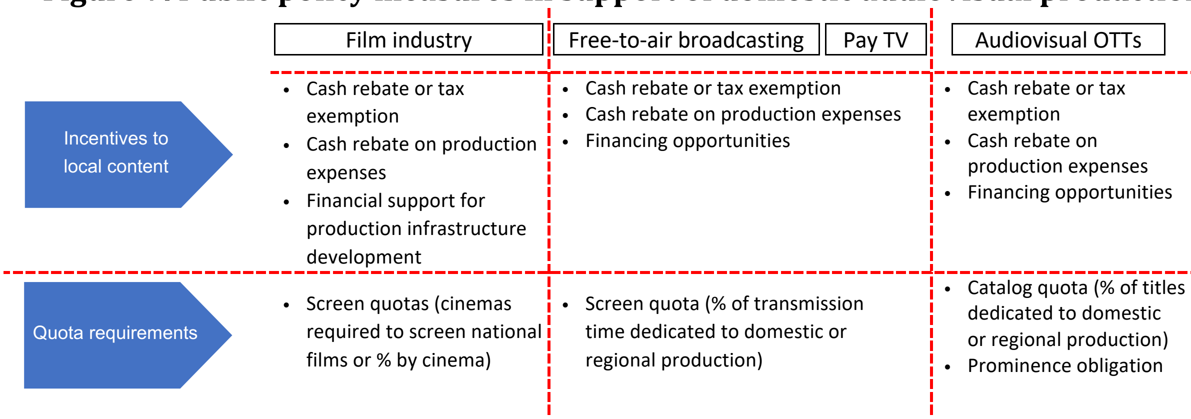
1.4. Public Policy and Regulatory Framework Models

While the policy mechanisms described above may stem from different government divisions such as the Ministry for Culture, the Ministry of ICT, or the Ministry of Industrial Development, they all converge to have an impact in one way or another on the local audiovisual industry. These policies may be aligned around two main lines of intervention:

- Direct incentives intended to boost the domestic audiovisual industry; and
- Imposition of domestic content quotas or related measures, such as obligations to give prominence to domestic production in OTT catalogs.

As explained above, content quotas have been applied to different audiovisual media throughout history. At the dawn of the film industry, governments imposed screen quotas. This requirement was replicated in free-to-air broadcasting and, exceptionally, in subscription TV. With the advent of OTT platforms, quota requirements (in this case, catalog quotas) were extended and/or prominence obligations were introduced for domestic production on site catalogs (see Figure 7).

Figure 7. Public policy measures in support of domestic audiovisual productions



Source: Telecom Advisory Services

The policies described above can be aggregated around two main approaches: (i) the creation of conditions favorable to the development of a domestic audiovisual industry ('development-oriented' approach), and (ii) the imposition of quotas ('protectionist' approach). The 'development-oriented' approach breaks down into three levels based on the relative importance of the initiatives: (a) total absence of domestic audiovisual production incentives, (b) countries offering tax exemptions **or** cash rebates (soft money) and/or cost reimbursements, and (c) countries where the measures mentioned in (b) are simultaneously applied. On the other hand, the 'protectionist' approach presents three levels based on the kind of audiovisual content quotas: (a) countries having no domestic content quotas, (b) countries imposing regional (e.g., European) production or language quotas, and (c) countries applying domestic, rather than regional, production quotas. The mapping of policies by country regarding free-to-air broadcasting shows different levels in the prioritization of these approaches (see Figure 8).

Figure 8. Regulatory models for the promotion of domestic content on free-to-air broadcasting

		'Developmentalist' line of intervention (audiovisual sector)		
		Absence of incentives to domestic production	Tax exemption **or** cash rebate on production expenses	Tax exemption **and** cash rebate on production expenses
'Protectionist' line	Absence of quotas on transmission time		• Serbia • United Arab Emirates • Jordan • New Zealand • Dominican R. • Thailand 'Development-oriented' model	

	Transmission time quotas on regional content		• Denmark (50%) • Estonia (51%) • Romania (50%) • Switzerland (50%) • Australia (55%) • Georgia (25%) • Germany (50%) • Austria (50%) • Croatia (51%) • Spain (51%)	• Slovakia (50%) • Slovenia (50%) • Finland (50%) • Greece (51%) • Ireland (50%) • Italy (50%) • Norway (50%) • Netherlands (50%) • Poland (50%) • United Kingdom • Sweden (50%)	• Belgium (50%) • Iceland (51%) • Portugal (50%) • Hungary (50%) • Czech Republic (50%) • Latvia (50%) • Morocco (5%) • Portugal (50%) 'Moderate protectionist' model
	Transmission time quotas on domestic content		• Brazil (80%) • China (70%) • Chile (40%) • South Africa (55%) • Kazakhstan (50%)	• Malaysia (80%) • Taiwan (70%) • Venezuela (50%) • Namibia (10% -15%) • France (40%)	• Colombia (50%) • Uruguay (60%) 'Protectionist' model

Source: Telecom Advisory Services analysis

The mapping of public policies and regulations allows to identify three typical intervention models. One model, which might be called 'development-oriented', focuses on the application of measures aimed at promoting domestic production. On the other end, there is a 'protectionist[25]' model, which combines incentives to the local industry and imposes domestic production quotas. It is worth noting that all the countries surveyed include some kind of incentive to stimulate local production.

The introduction of subscription TV resulted in the minimum application of the screen quota to cable and satellite TV. For instance, Namibia imposes a 1.5% transmission time quota on subscription TV channels, while Brazil forces them to allocate 3.3 hours a week to domestic content. It is interesting to highlight the fact that only a small number of countries implement protectionist measures, which would indicate that the market incentives for the development of local content are enough, making additional regulations unnecessary.

In response to the arrival of OTT platforms, many countries have considered translating the concept of transmission time quotas typical of free-to-air broadcasting into OTT title catalogs (see Figure 9).

Figure 9. Regulatory models for the promotion of domestic audiovisual content on OTT catalogs

		'Developmentalist' line of intervention (audiovisual sector)		
		Absence of incentives to domestic production	Tax exemption or cash rebate on production expenses	Tax exemption and cash rebate on production expenses
'Protectioni	Absence of quotas on transmission time	'Moderate development-oriented' model	• Serbia • Denmark • Estonia • Switzerland • Brazil • United Arab Emirates • Thailand • Malaysia • Taiwan • New Zealand • Jordan • Kazakhstan • Dominican R. • Namibia • Finland • Netherlands • United Kingdom • Canada • Australia • Latvia	• Germany • Belgium • Portugal • Iceland • Colombia • Morocco • Uruguay 'Development-oriented' model

25 As Broughton Micova (2013) points out, it is reasonable to wonder what the purpose of protectionism is: to foster local industry or to safeguard the cultural heritage?

			• Chile	
	Transmission time quotas on regional content	'Moderate protectionist' model	• Austria (50%) • Spain (30%) • Slovenia (10%) • Greece (% to be defined) • Ireland (% to be defined) • Italy (30%) • Norway (% to be defined) • Poland (20%) • Sweden (% to be defined)	• Croatia (% to be defined) • Slovakia (20%) • Hungary (25%) • Czech Republic (10%) • Romania (20%) • Latvia (50%)
	Transmission time quotas on domestic content		• China (70%) • France (40%) 'Protectionist' model	

Source: Telecom Advisory Services analysis

Based on the mapping of policies focused on OTTs, it is possible to identify four models. The 'moderate developmental-oriented model' is based on only a small number of incentives, without any catalog quota. This model may include a larger number of domestic production incentives (we label this the 'development-oriented model'). In this case, recognizing that the imposition of domestic content quotas might be counterproductive, some countries have implemented prominence obligations according to which OTTs must facilitate access to domestic content in their platforms. The 'moderate protectionist' model combines the imposition of regional content quotas with an assortment of measures such as tax credits and cash rebates, intended to foster domestic audiovisual production, while placing emphasis on a regional (e.g., European) content quota. Finally, the 'protectionist' model prioritizes the imposition of domestic catalog quotas. These four models show different policy focus.

On top of the regulatory initiatives adopted to promote the development of local audiovisual content one should consider the natural market trends and competitive pressure, which *per se* are generating the necessary incentives for OTT 'localization.' This scenario renders the combined implementation of the two types of policy intervention superfluous, as explained in chapters 2 and 3. One option might be, in this context, to prioritize the 'development-oriented' approach, replacing the 'protectionist' policy with market stimuli. For this reason, it is now necessary to discuss the importance of market variables as determining factors for the development of local audiovisual contents.

A descriptive analysis of local production statistics for 60 countries already provides some evidence of the impact each policy model has on domestic content production. To such end, domestic audiovisual production per 100,000 population has been averaged for both 2018 and added to represent cumulative production between 2011 and 2018, for each policy model. The average domestic film production was calculated for the countries in each quadrant (see Figure 10).

Figure 10. Domestic film production (per 100,000 population) according to the domestic audiovisual promotion policy models in OTTs

	'Development-oriented' line of intervention (audiovisual sector)

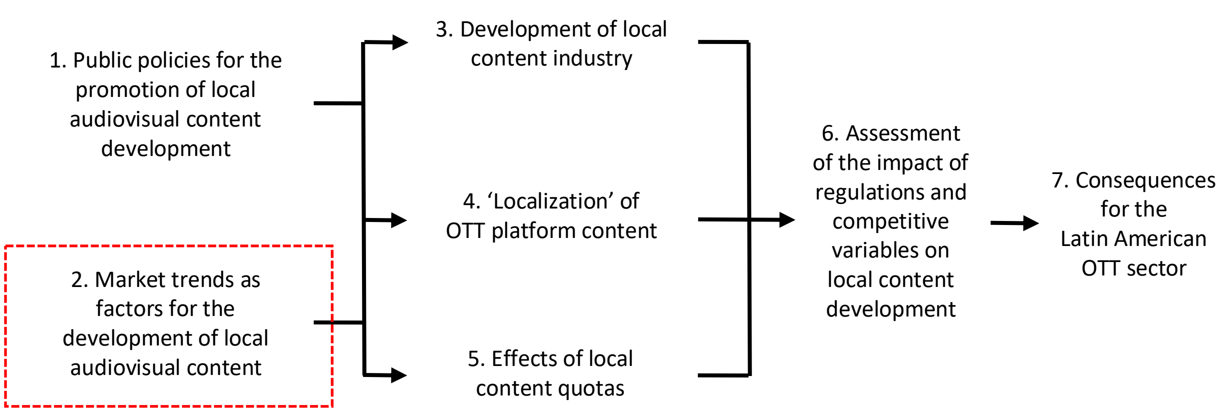
		Absence of incentives to domestic production	Tax exemption or cash rebate on production expenses	Tax exemption and cash rebate on production expenses
‘Protectionist’ line of intervention (OTT)	Absence of local content quotas on the catalog		2011-2018 average: 0.469 2018: 0.495	2011-2018 average: 1.610 2018: 1.961
	Regional content quotas on the catalog		2011-2018 average: 0.383 2018: 0.410	2011-2018 average: 0.404 2018: 0.454
	Local content quotas on the catalog		2011-2018 average: 0.241 2018: 0.263	

Source: Telecom Advisory Services analysis

Our analysis shows that the ‘development-oriented’ model without content quotas is more productive in terms of local audiovisual production (averaging 1.961 films per 100,000 population in 2018). On the other hand, the most ‘protectionist’ model is the least productive one in terms of production (0.263 films per 100,000 population in 2018). With regard to content catalog quotas, the regional quota model is more productive than the domestic quota model.

* * * * *

Chapter 1 has discussed the set of policies and regulations aimed at promoting local audiovisual content development. As anticipated in the introduction, they are being implemented to have an impact on the audiovisual industry supply and demand context. This will be discussed in Chapter 2.



2. AUDIOVISUAL MARKET TRENDS AS EXPLANATORY FACTORS OF LOCAL CONTENT DEVELOPMENT

Regardless of the policy initiatives aimed at promoting local audiovisual production, it is necessary to discuss the role demand and competitive intensity factors play in driving 'content localization.' This chapter addresses these trends, providing empirical evidence and examples of cases where it is possible to verify the existence of these factors.

2.1. OTT Online Platforms as Audiovisual Content Access Enablers

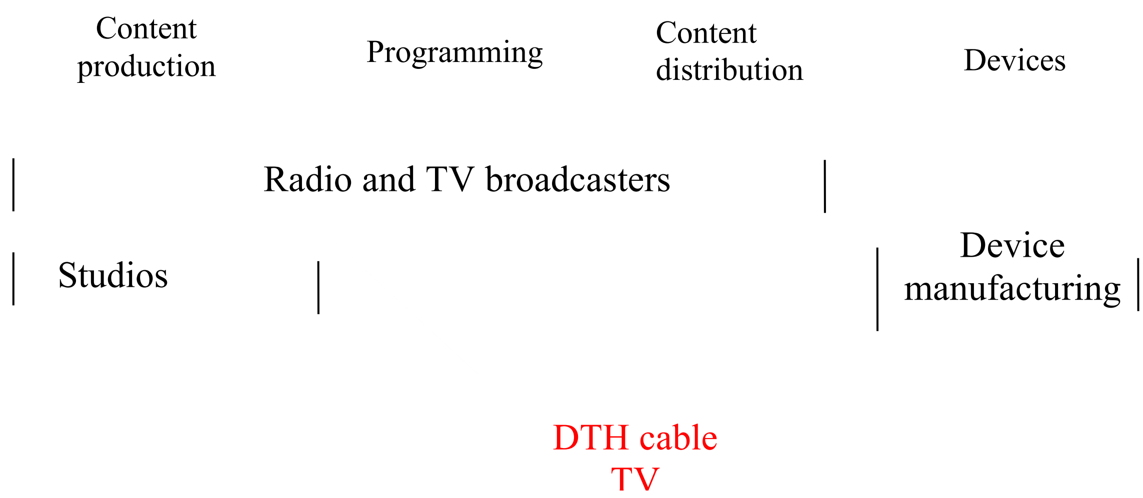
The audiovisual industry has evolved since its origin in the form of successive disruptions in its value chain. These disruptions have resulted in the disappearance, or shift in position, of certain players, the disintermediation of some value chain stages, the emergence of temporary specialists, as well as the occurrence of vertical integration. These changes may be categorized into four distinct periods:

1) The broadcasting era;
2) The subscription TV era;
3) The direct video distribution era; and
4) The OTT era.[26]

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 with the advent of cable TV and in the 1980s with satellite distribution, when free-to-air television was confronted with a new type of competitors (see Figure 11).

[26] This evolution is discussed in detail in Katz, R. (2019). *Changes in The Global and Brazilian Audiovisual Market. Competitive dynamics, impact on consumer welfare, and implications for public policy and competition model*. New York: Telecom Advisory Services LLC

Figure 11. Audiovisual industry: Subscription TV disruption of the Original Value Chain



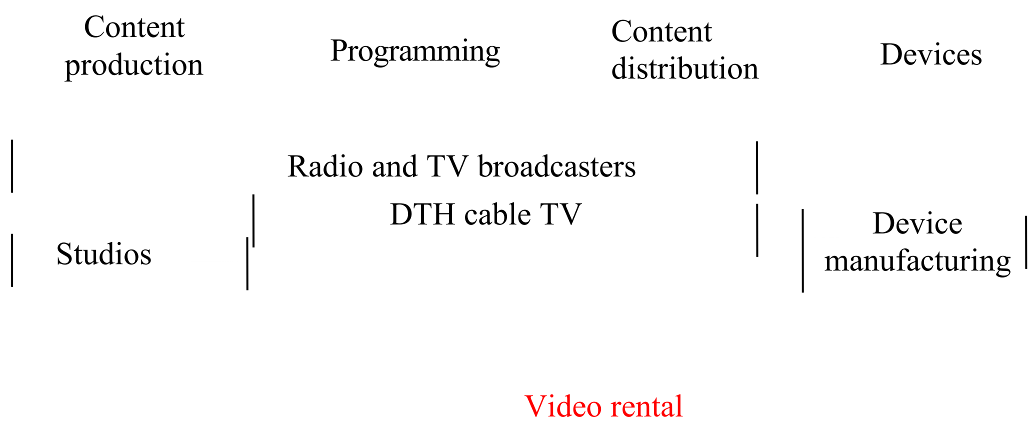
Source: Telecom Advisory Services

By 1990, approximately 70 percent of US households received audiovisual contents through cable or satellite TV, while the average consumer was subscribed to 57 channels[27]. This new form of content distribution spurred demand for program diversity, which resulted, for instance, in the creation of channels such as CNN, Turner, and ESPN. Thus, the ability to deliver a higher volume of content created the need for increased production capacity.

In turn, the value chain of the subscription TV era was challenged by a second wave of technological innovation: the invention of the video cassette, which paved the way for a new content distribution and consumption model. The emergence of video rental stores represented a threat to subscription TV and the film distribution channel (see Figure 12).

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

Figure 12. Audiovisual industry: Video rental disruption



Source: Telecom Advisory Services

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"[28]). 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 tape paid by smaller stores. The entry of chains such as Blockbuster represented a consolidation of the video distribution market, leveraged by its ability to manage content diversity through the long tail[29].

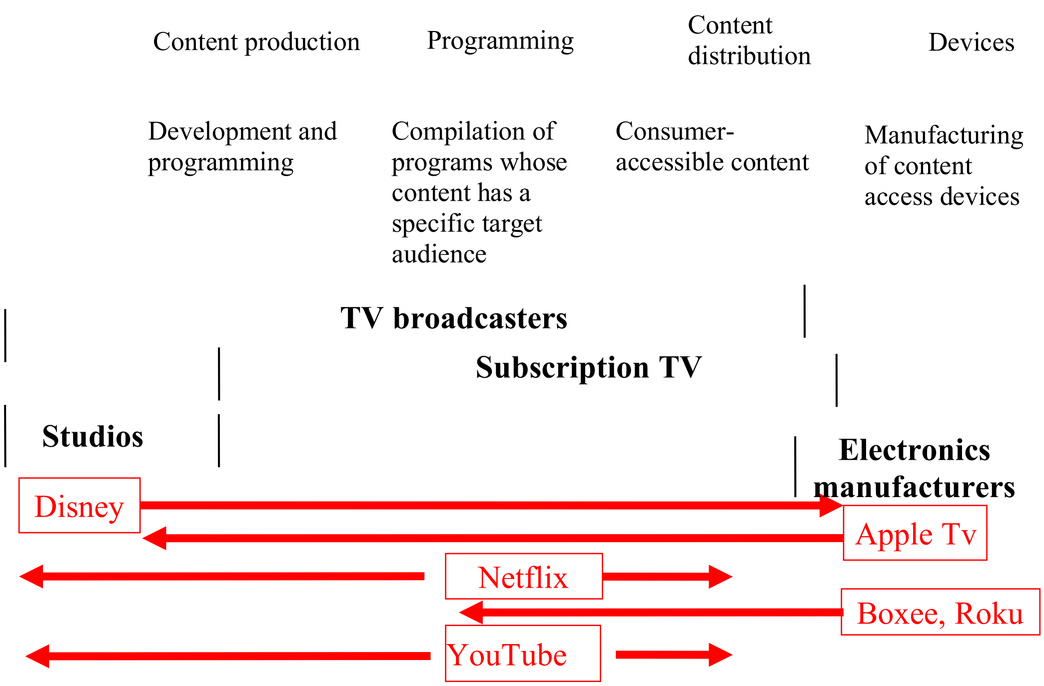
Content digitization, enabled by the development of the DVD technology, led to the entry of Netflix, with a business model based on physical DVD distribution and a centralized catalog. The deployment of fixed broadband and the gradual increase in download speed allowed Netflix to move towards a video streaming OTT platform. The new business model enabled

[28] 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".

[29] See Anderson, C. (2006). The Long Tail: *Why the Future of Business is Selling Less of More*, Hyperion, 2006

not only Netflix conversion but also moves by other players across the value chain and the entry of new market players (see Figure 13).

Figure 13. Audiovisual industry: OTT disruption



Source: Telecom Advisory Services

To a certain extent, the advent of OTT services replicated what had occurred in the audiovisual market in the face of similar disruptions in prior decades. At every disruptive stage, enhanced technological ability to distribute more content led to greater demand, creating a virtuous circle of competition that benefited consumers. While OTT platforms such as Netflix and Apple TV were the first to venture into this segment, they were later joined by audiovisual market newcomers such as Amazon and Netflix[30]. Every disruption generated trends toward vertical integration[31] of content and its distribution. Thus, the entry of OTT platforms has resulted in a rearrangement of the audiovisual value chain, leading to increased competition and transforming content distribution and production models. These trends have resulted in multiple vertical integration modes across the value chain. Technology advances have also reduced audiovisual market access barriers and, in particular, digitization has changed formats and enabled content production, reducing

[30] Walmart acquired Vudu in 2010 to compensate for the loss of DVD sales revenues; in 2019, it set foot in the original content development business.
[31] The concept of vertical integration is used to describe the control exercised by one firm of two or more value chain links, originally in the hands of different companies. This combination occurs with the aim of controlling processes, reducing costs, or improving efficiencies.

economies of scale[32]. This reduction in barriers has allowed audiovisual industry players to move across the different value chain stages in order to consolidate their competitive advantage (for example, the Netflix move into content production and the Disney entry into distribution to defend its content creation business). On the other hand, consumer electronics manufacturers, such as Apple, have backward integrated in the chain to occupy spaces in content distribution and production and, thus, be able to consolidate a dominant position in device manufacturing.

In light of all these moves across the value chain, market positions have evolved, with an evident progress of OTT services and a stagnation, or fall, in the penetration of traditional subscription TV services. The center of gravity in the audiovisual industry has now moved to video streaming, where major global players such as Netflix or Amazon Prime Video, and recently Disney and HBO MAX, are competing for global dominance. The dynamics and virtuous circle created by this trend has enormously benefited consumers, through greater offering and content variety, ease of access, improved quality and user experience, and lower prices.[33]

Finally, these transformations in the supply side have also been associated with changes in consumer behavior patterns. These include the cord-cutting trend, changes in consumption towards an anywhere, anytime modality, and the constant search for original content as factors influencing consumer behavior. In this context, the demand for audiovisual products has undergone several transformations. For instance, cord-cutting in the USA has sped up since 2018, even when the number of content consumption devices has grown exponentially (see Graphic 1).

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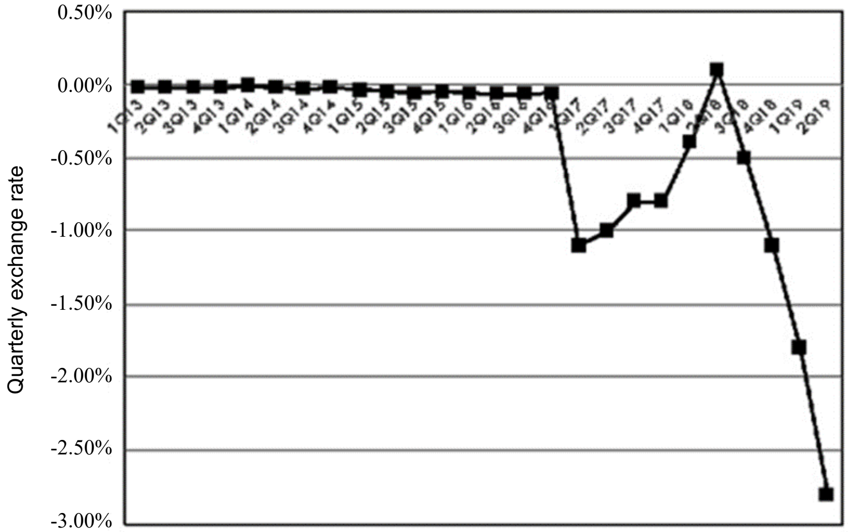
[32] Economies of scale are defined as a reduction in the unit cost of production of a good as a result of an in increase in the production volume.

[33] See Katz, R. (2019). *Changes in The Global and Brazilian Audiovisual Market. Competitive dynamics, impact on consumer welfare, and implications for public policy and competition model*. New York: Telecom Advisory Services LLC

Graphic 1. United States: quarterly change in number of pay TV subscribers



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 1).

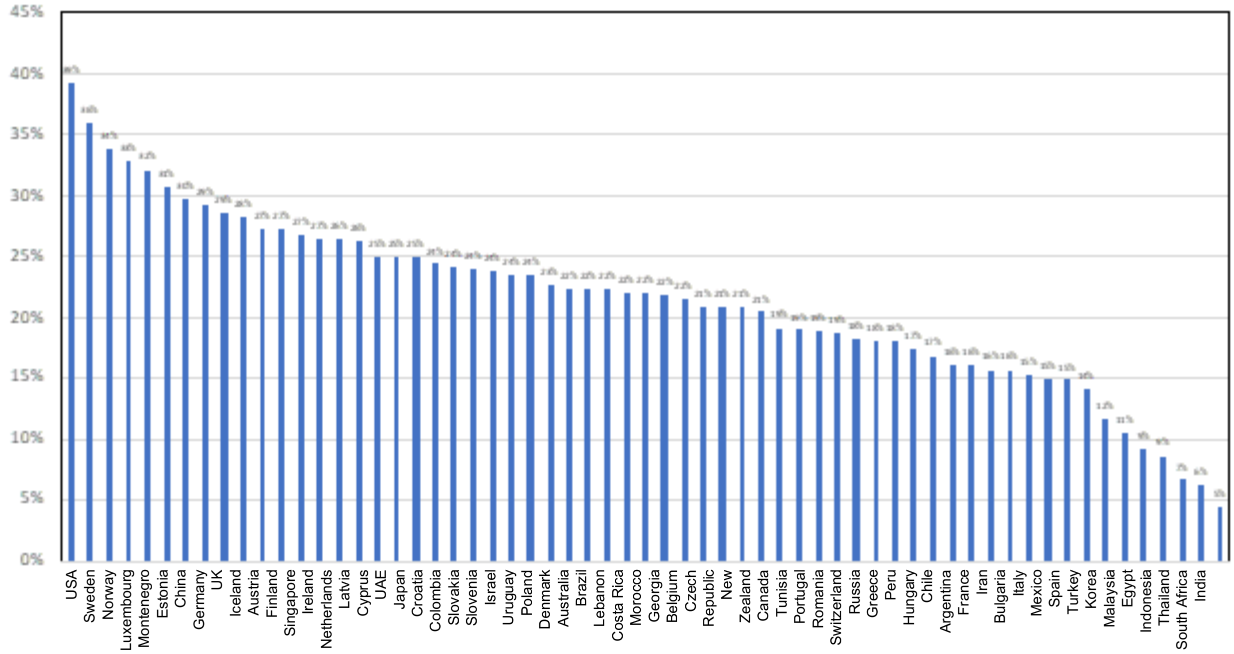
Table 1. Europe: Cable TV penetration of homes passed (2011-2017)

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: IHS Markit. European Broadband Cable 2018

Where are subscribers that disconnect from pay-TV going? Cord-cutters migrate to OTT platforms. Even non cord-cutting households add OTT platforms to their content acquisition modes. The adoption of OTT services has soared in most countries (see Graphic 2).

Graphic 2. OTT video streaming: penetration rate by country (% population) (2020)



Source: Statista

In view of the exponential growth of OTT as a new audiovisual content distribution model joining subscription TV[34] and free-to-air broadcasting, competitors are expected to accelerate their entry in an attempt to capture a portion of the demand. In this context, content represents a key lever to build competitive advantage.

2.2. Original Content and Competitive Advantage

The audiovisual OTT platform market is characterized by fierce competition. Table 2 shows the market shares of the top players by country and the corresponding market concentration index.

[34] Note that subscription TV still represents a key component in the digital content distribution ecosystem. For example, 73% of US households have paid cable or satellite subscriptions. In Brazil, subscription TV penetration amounts to 43% of households.

Table 2. Market shares of OTT providers (in %) and Herfindahl-Hirschman concentration index

	Global platforms								Local/ regional platforms	HHI
	Netflix	Amazon	Hulu	HBO Now	Disney	Sony	YouTube	Other		
Germany (2019)	35.7	46.9	-	-	-	-	-	-	17.49 (15)	3,575
Argentina (2019)	48.91	2.66	-	-	-	2.06	-	13.51 (1)	20.12 (2)	2,548
Brazil (2019)	29.1	3.45	-	-	-	2.24	4.33	14.26 (1)	36.72 (2)	1,060
Costa Rica (2019)	73.56	3.04	-	2.43	-	-	-	4.86 (7)	16.02 (6)	5,626
Canada (2018)	45.00	25.00	-	-	-	-	5.00	5.00 (4)	20.00 (5)	2,950
Chile (2019)	43.25	2.21	-	-	-	1.46	7.29	14.34 (1)	30.04 (2)	2,090
Colombia (2019)	30.04	2.86	-	-	-	1.96	11.28	10.34 (1)	34.36 (2)	1,209
USA (2019)	30.73	27.17	14.70	5.03	8.72	-	1.01	12.03		1,996
Spain	61.22	23.51	-	12.99	-	-	-	2.28	- - -	4,474 (e)
France (2019)	51.62	13.51	-	-	-	-	8.11	3.60	23.16 (15)	4,051
Hungary (2019)	67.4	9.3	7.60	-	-	-	-	11.80 (12)	3.90	4,757
India (2019)	1.40	5.00	-	-	-	13.00	-	-	80.60 (14)	5,127
Italy (2019)	73.00	11.00	8.00	-	-	-	-	5.00 (12)	3.00	5,531
Japan (2019)	59.88	14.77	9.78	-	-	-	-	11.08 (12)	4.49 (12)	3,963
Kenya (2018)	45.00	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	2,970 (e)
Mexico (2019)	32.83	8.87	-	-	-	2.36	6.66	6.62 (1)	29.38 (2)	1,457
Nigeria (2018)	35.00	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	2,545 (e)
Netherlands (2019)	53.60	13.40	-	-	-	-	-	-	33.01 (3)	3,438
Peru (2019)	27.22	3.57	-	-	-	1.91	8.16	8.60 (1)	24.2 (2)	1,032
Czech R. (2019)	63.37	8.81	-	4.02	-	-	-	-	23.81 (8)	4,261
UK (2019)	60.8	25.2	-	-	2.00	-	-	-	1.00	4,459
Russia (2019)	67.37	11.81	9.01	-	-	-	-	6.90 (12)	4.90	4,784
Singapore (2019)	53.49	11.63	4.65	3.49	-	-	5.81	-	20.94 (13)	3,234
South Africa (2019)	67.90	9.20	9.20	-	-	-	-	9.20 (12)	4.50	4,822
Thailand (2019)	27.28	3.81	-	-	-	-	-	-	68.91 (9)	1,623
UAE (2019)	44.66	6.24	-	-	-	-	-	-	49.10 (10)	2,877
Uruguay (2019)	57.36	1.61	-	-	-	1.15	-	9.89 (1)	14.48 (2)	3,391
Venezuela (2019)	18.2	5.05	-	-	-	-	-	14.08 (1)	46.97 (2)	718

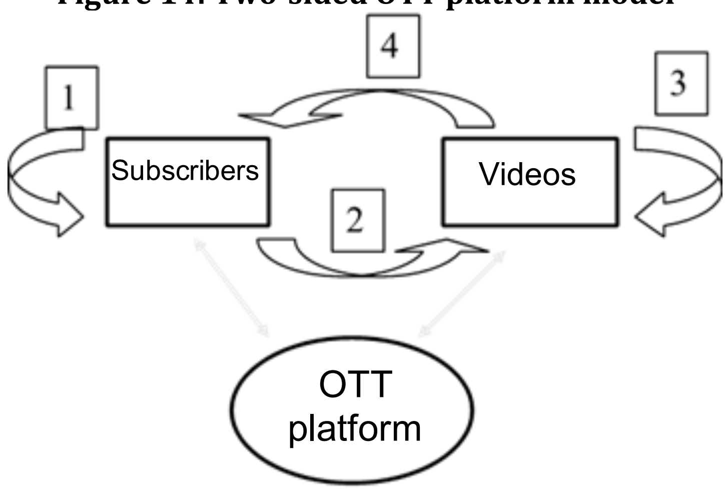
(1) Includes Twitch, Cartoon Network Ja, Esporte Interativo, Baby TV, Mubi.
(2) Includes Blim, Estadio CDF, Globoplay, Claro Video, Playkids, NetMovies, VIVO play, Playplus, Serie A Pass, Planet Kids, Philos TV, Selecta TV, Noggin, ClickVeo, Caracol Play, GC Fix, Enter Play, GoldFix, TVN Play, and Fanatiz.
(3) Includes Ziggo Movies, NL ZIET, RTL XL, and Videoland.
(4) Includes CBS.
(5) Includes Crave TV and other minor sites.
(6) Includes Claro Video, and Blim.
(7) Includes minor sites.
(8) Includes Voyo, My Prime and other minor sites.
(9) Includes Vlu, HOOG, iflix and minor sites.
(10) Includes beIN Connect, Wave, Shahid Plus, Starz Play, icfix and minor sites.
(11) Includes Twitch, Mubi, and BabyTV.
(12) Includes CBSAll Access and DC Universe.
(13) Includes Toggle, Singtel, and StarHub.
(14) Includes HotStar, Voot, and YuppTV.

(15) Includes Orange, MyTF1, Canal VOD, Canal+, SFR Play, SFR Club Video, France TV VOD, Films et Documentaires, TFOU Max, FilmoTV.
(16) Includes Sky Ticket, Maxdome, and Sonstige.
Note: Latin American countries exclude European or Asian sites such as Acorm TV, Studio+, and other minor sites.
Sources: Business Bureau (Latin America); Digital Research (Hungary; Slovakia; Spain; USA; Costa Rica; India; The Netherlands; Czech Republic; Thailand; UAE); Statista (Canada, Kenya)

The statistics in Table 2 show the high degree of competition exhibited by the majority of the countries in the sample. In some cases, the most intense competition occurs among global players, while in other countries local platforms are successful at competing against multinational platforms (e.g., India, Mexico, Colombia, The Netherlands, Thailand, UAE, and Venezuela).

How is the competitive advantage of local OTTs in these markets explained? The key lies in examining the role that content plays in the business model of these platforms. The value proposition of audiovisual OTT platforms is based on the basic two-sided (or multi-sided, if advertising is included in the AVOD models) market model[35]. According to this concept, these platforms link consumers having heterogeneous needs (different needs and tastes) with an audiovisual content catalog (see Figure 14).

Figure 14: Two-sided OTT platform model



Source: Telecom Advisory Services

Following the concept of two-sided symmetry, the OTT value proposition is based on the idea of content variety driving the multiple network effects typical of these online platforms[36]. The higher the quantity and variety of content the platforms offer, the higher the value they have for their audiences. The main network effects are those known as indirect, i.e., effects on both sides of the platform. For instance, the more varied and adjusted

[35] For basic references about bilateral platforms, see Rochet *et a*l. (2003), and Eisenman *et al*. (2006).
[36] The network effect is defined as the effect an additional user of goods or services has on the value of that product to others. Therefore, network effects are economies of scale on the demand side since the benefit for the user —and his/her willingness to pay— increases as the number of platform users or viewers rises. These effects are classified as direct (same-side effect) and indirect (cross-side effect). AVOD platforms include a third side: ads.

to the needs of subscribers the content offered by the platform is, the higher the chance to grow the number of subscribers (indirect effect 4). Variety and personalization are two key variables to boost the indirect network effects of OTT platforms.

Additionally, the larger the subscriber base is, the greater the capacity to make the increased variety of content more profitable (indirect effect 2). Moreover, OTTs may also benefit from direct effects. The more video content offered, the more attractive the platform becomes (direct effect 3). Although audience-side network effects are probably less relevant, they may also be observed since the larger the number of subscribers is, the higher the value the platform has for each of them, as they may share opinions and experiences with more people and, in addition, the platform may benefit from understanding its users' needs and preferences. In conclusion, direct and indirect network effects are a key component of the OTT value proposition (Rohlfs, 2003).

As presented, content constitutes the main platform side, maximizing its value. Content is an essential part of the value proposition and may be divided into two main categories: films and series, without prejudice to other type of additional offers (events, documentaries, sports, etc.). The comparative analysis of investments made by large US audiovisual companies in content acquisition or production shows that OTTs represent the most aggressive sector. In 2019, the estimated content investment made by large free-to-air broadcasting chains and subscription TV providers in the USA amounted to US$ 25.20 billion, excluding sports content, while the estimated investment made by large production studios — many of them vertically integrated with the OTT segment— reached US$ 20.50 billion. On the other hand, pure play OTT content investment was estimated at US$ 29.1 billion.

OTT global investment in content acquisition results in catalog density. Except for the *TV Everywhere* services, the offer of films by OTTs often greatly exceeds the offer of series and events, a fact that can be expected since, unlike films, which are individual products, series include many episodes and, therefore, require more viewing time. Besides that, at the aggregate level, most of the content offer is supplied by platforms following a hybrid business model, while, in average, the offer of films, series, and events is highest in transaction video-streaming services.

OTT platforms may be segmented into generalist and specialist, i.e. focused on one single type of content. The generalist platform leverages the network effects linked to variety, while the specialist platform creates value from offering a particular type of content (e.g., sports in *Fubo*, classics in *The Criterion Channel* and British productions in *Britbox* and *AcornTV*).

Generalist platforms struggle to offer the best and latest content and to have exclusive rights on it to increase the platform value among users. Recent research shows that original content is a key variable explaining new user acquisition.[37] Regarding subscription vieo-streaming services (such as Netflix), fierce competition and the possibility subscribers have to opt out at any time forces providers to continuously strive for introducing new content and foster

[37] See Prince, J. and Greenstein, S. (2018). "Does original content help streaming services attract more subscribers?" *Harvard Business Review* (April 24).

aggressive pricing methods. These platforms are usually the first to present original content, which guarantees higher initial profitability to the respective license holders. TVODs[38] typically offer incentives linked to content price to ensure consumers request access again in the future.

3.2. Local Content as a Strategic Factor

Another significant aspect about the content value proposition is the inclusion of locally produced programming —a factor providing a competitive edge. This strategic advantage component emerged before the advent of OTTs, during the development of the international subscription TV market. In the early days, the international expansion of subscription TV signals was based on content developed in the country of origin and dubbed to local languages. However, the need to increase ratings —the key driver of advertising revenues— led subscription TV global providers to start investing in local production. This process took place in multiple emerging markets and is gradually expanding into the OTT segment.

Offering a product that represents a leap forward in terms of functionality —better technical features and/or more technical capabilities— determines the competitive feasibility of any content provider in the platform market. However, the OTT market features two peculiarities that may widen the range of competitive options. First, as this is a market based on variety platforms, an entry strategy may be focused on increased variety rather than on enhanced technical functionality. Moreover, since subscribers' needs are not homogeneous —the typical consumer requires local programming and a complement more focused on his/her linguistic idiosyncrasy— the challenge may consist in offering richer local content rather than offering a leading technology. In this competitive context, local content becomes a determining lever for all market players.

The demand for local content is a key factor in terms of competition. In certain markets, for example China and India, viewership has always been focused on locally produced series and films. This trend is also present in other countries, such as Japan, Italy and Brazil. For Netflix, 68% of the most popular titles in Japan have been produced locally. In Spain, 25% of Netflix catalog corresponds to local productions[39]. In 2019, Netflix produced or co-produced 221 projects in Europe, up from the 141 in 2018.[40] The strategic motivation of this trend derives from the need to meet audiences' expectations, always pushing for local content. In this regard, local content quotas are a secondary factor to understand Netflix motivation.

The trend towards global growth, combined with the need to constantly release new local content, has led big OTTs to expand into developing countries. For instance, Netflix runs three production studios outside the USA and rents production capacity in many other countries (see Table 4).

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[38] It stands for Transaction Video On Demand and refers to platforms which do not charge consumers for signing up or creating a user name. Instead, users pay only for the specific content they want to consume, e.g., films, series, events or sports. This is the digital version of the transaction model used by VHS or DVD video clubs some decades ago. Apple, Distrify, or FilmO are examples of TVODs.
[39] Thomson, S. (2020). "Ampere: Netflix and Amazon going local but facing more competition" (May 5).
[40] O'Neill (2019). *State of the broadcast industry 2019*. Ooyala.

Table 4. Netflix: International presence

	Offices	Production studios
Europe	• United Kingdom: London • Germany: Berlin • Netherlands: Amsterdam (Regional Office) • Spain: Madrid • France: Paris • Italy: Rome	• United Kingdom: Surrey • Spain: Madrid
Asia Pacific	• Japan: Tokyo • Singapore (Regional Office) • Australia: Sydney • India: Mumbai • Korea: Seoul	
North America	• United States (Los Gatos, New York, Salt Lake City)	• United States: Los Angeles, Brooklyn, Albuquerque • Canada: Toronto, British Columbia
Latin America	• Brazil (Sao Paulo) • Mexico (Mexico City)	• Mexico: Long-term rental studio

Sources: Clarke, S. "A look at Netflix's ever-increasing physical footprint in international territories", *Variety*; Roxborough, S. (2019). "Netflix global real estate grab: How the streamer is expanding from London to Singapore" *The Hollywood Reporter* (August 12).

The trend towards production regionalization to meet the need of local content also affects Amazon. In June 2019, the company announced the opening of a new office in Rio de Janeiro, Brazil, to operate as Amazon regional office, managing all third-party content produced for the Brazilian branch. Amazon's presence in Latin America includes offices in Mexico, Bogota, and Sao Paulo. Similarly, top local companies are increasing their capabilities to compete with global players. Globo has recently announced the building of a new production studio in Rio de Janeiro.[41]

Global platform internationalization has confirmed that having an extended catalog was not enough to capture and keep a higher market share. In fact, the experience showed that local content is as necessary as a broad catalog. The author first analyzed this effect in 2016, in the Mexican case (Katz et al., 2017).

Based on Netflix's early success in the Mexican market, América Móvil launched Claro Video OTT service in 2013, to be offered in Argentina, Brazil, Colombia, Chile, Dominican Republic, Ecuador, Peru, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Uruguay, and Panama. Its goal was to build a strong presence in Latin America by relying on a strategy that combined more content and alliances with local producers (Castañares, 2016). In 2016, local content was the main driver for Claro Video to compete in the Latin American market. The strategy Claro Video used is a clear example of the classic entry into a platform market. In general, the dominance of digital products and services in the market is governed by two comparative advantages: the classic economies of scale and the network effects. Economies of scale represent the economic advantage companies have because of their size, production volume or dimension of operations. According to them, the unit cost of the product tends to decrease

[41] Ariens, C. (2019). "This TV network built a massive $50 Million Studio mostly to take on Netflix", *Adweek*.

as volume increases, as fixed costs can be split among a larger number of units being produced. Significant economies of scale in a company may result in high barriers to entry since competitors may not be able to offer products at comparable prices. Scale is crucial in the OTT market since programming costs account for approximately 50% of operating expenses, after the annual depreciation is charged to the investment.

As the OTT market is based on variety platforms, an entry strategy may be focused on increased variety rather than on enhanced technical functionality. And that is what Claro Video decided to do. Since subscribers' needs are not consistent —the Latin American consumer requires local programming and a complement more focused on his/her linguistic idiosyncrasy— Claro's goal was to offer richer local content. Claro Video's first entry strategy consists in offering more content, mainly local one. Its early successful entry strategy into the OTT market was based on offering a wider content variety and adapting themselves to Latin American content demands.

International platforms have recognized the value of Claro Video's strategy and, as a result, have increased their own local production. According to Baladrón and Rivero (2019), Netflix's original content production in Latin America started in Mexico in 2015 (by producing *Club de Cuervos*) and in Brazil in 2016. Then, under agreements with US producers, *El Chapo* was co-produced by Netflix and Univision and the biographical series of *Luis Miguel,* by Netflix and Telemundo. *Narcos*, a Netflix exclusive and another example to highlight in the region, is a third-party production filmed in Colombia and starred by Brazilian and Colombian actors, among others.

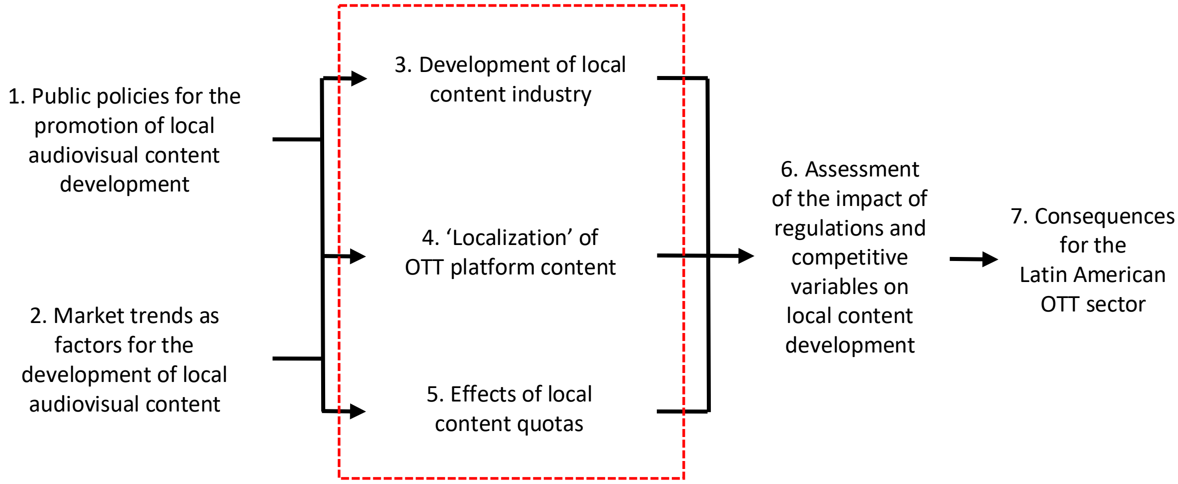
This explains why the need to develop local content has driven global platforms to spare no effort to include local content in their programming.[42] Netflix, for example, is currently prioritizing Latin America and Asia for the development of domestic platforms in local languages. As at October 2018, Netflix offered local content in most Latin American countries. Brazil, Argentina, and Mexico are clearly the countries where the company has gone further in the releasing of local content, which is natural considering the size of those markets. Anyway, the company has released some local content, at least as a national co-production, in every country surveyed.

* * * * *

To sum up, so far we have discussed the two factors that condition the development of a local audiovisual content industry: public policy —in its different models— and the dynamics of supply and demand. The following figure shows how these factors result in local content development. To such end, evidence of three specific effects of different policy models will be examined in the following chapters (see Figure 16).

Figure 16: The effects of public policy and market dynamics on local content development

[42] So far, Netflix has participated in 11 original Brazilian productions, including a second science-fiction series, *3%*, another one set in the 1950s, *Coisa Mais Linda*, *Spectros*, *The One*, and *The Faction*. Amazon Prime was launched in Brazil in 2016 and kicked off original local content with *Diablo Guardian*.



1. Public policies for the promotion of local audiovisual content development
2. Market trends as factors for the development of local audiovisual content
3. Development of local content industry
4. 'Localization' of OTT platform content
5. Effects of local content quotas
6. Assessment of the impact of regulations and competitive variables on local content development
7. Consequences for the Latin American OTT sector

3. THE IMPORTANCE OF INVESTMENT INCENTIVES IN THE PRODUCTION OF LOCAL AUDIOVISUAL CONTENT

This chapter presents evidence that demonstrates the impact of incentives on the local audiovisual content. First, it is important to mention that worldwide audiovisual production grew 5.1% annually year-on-year between 2011 and 2018 (see Table 7).

Table 7. Local audiovisual production (measured in number of local productions and co-productions)

	2011	2012	2013	2014	2015	2016	2017	2018	TACC
World	6,270	6,952	7,290	7,813	7,962	8,506	8,984	8,547	5.1%
Europe	2,035	2,091	2,188	2,228	2,295	2,365	2,407	2,336	2.0%
North America	918	842	866	825	895	889	933	957	0.6%
Latin America	321	379	485	470	523	582	609	659	10.8%
Asia Pacific	2,918	3,570	3,668	4,210	4,154	4,601	4,945	4,818	7.4%
Africa	78	70	83	80	95	91	112	102	3.9%

Source: European Audiovisual Observatory (2015-2019)

Apart from the significant global growth, it can be observed that, in emerging regions, production increased at higher rates than the world average. For example, as shown in Table 7, audiovisual production in Latin America and Asia Pacific grew by 10.8% and 7.4% respectively between 2011 and 2018. As a result, the world production market share of the United States dropped from 13% in 2011 to 9.6% in 2018. Productions made in Latin America, Asia Pacific and Africa, for instance, rose ten percentage points between 2011 and 2018. Although these figures include productions from India (a significant market), the Latin American share also grew. Latin America film production, including Argentina, Brazil, Chile, Colombia, Costa Rica, Mexico, Peru, and Uruguay, grew from 321 films in 2011 to 659 in 2018.

Incentives to the audiovisual industry explain much of this increase. Annex A includes a compilation of incentives to the sector around the world. Latin America has been no exception to this trend, as shown in the examples included in Table 8.

Table 8. Latin America: Initiatives implemented by Latin American governments to promote local audiovisual production

Country	Incentives
Argentina	2018: the National Institute of Cinema and Audiovisual Arts, (INCAA, *Instituto Nacional de Cine y Artes Audiovisuales*) contributed US$ 40.5 million in support of the audiovisual industry 2017: the province of Mendoza set up an audiovisual promotion fund and ordered, through an executive order, that film production be applied lower taxes 2016: the national budget allocated US$ 63 million to support local content production
Brazil	2015: the National Agency of Cinema in Brazil (ANCINE, *Agência Nacional do Cinema*) , implemented a program aimed at digitizing cinema theaters, combined with a subsidy to support local production 2016: the government launched, through ANCINE, an incentive fund for co-productions with 19 countries in the region 2017: the government fostered multiple co-production agreements with other Latin American countries and ratified an agreement with the United Kingdom
Chile	2019: the Production Development Corporation (CORFO, *Corporación de Fomento de la Producción*) implemented a discount program of up to 30% on expenses related to productions fully or partially made in Chile (for films spending over US$ 2 million in the country)
Colombia	2012: Congress passed a law setting forth a 40% discount on production services and 20% discount on logistic expenses for any production that exceeds US$ 470,000, and an additional 15% discount for productions made in Medellin 2020: Executive Order 286 grants a tax benefit to technological value-added industries and creative activities that comply with a minimum investment
Dominican Republic	2010: the government established a 25% tax exemption to every audiovisual production spending a minimum of US$ 500,000
Panama	2019: the government imposed, through a decree, a 15% cash rebate for productions spending over US$ 3 million
Uruguay	2019: the government enacted, through a decree, a 20% discount on expenses made in Uruguay for any national or foreign production spending more than US$ 600,000

Sources: Compilation made by Telecom Advisory Services from Variety, European Audiovisual Observatory, and Olsberg+SPI (2019)

All industry players agree that local production has increased around the world thanks to the financial incentives fostered by the authorities.

4. THE IMPORTANCE OF MARKET VARIABLES IN THE 'LOCALIZATION' OF OTT PLATFORM CONTENT

As explained in chapter 2, apart from the regulatory incentives to the local audiovisual industry, market dynamics play a key role in the increase of local content in OTT platforms. The empirical evidence included in this chapter shows that incentives to domestic production combined with the competitive pressure have driven OTTs to target the production of local content.

The European Audiovisual Observatory, headed by the European Commission, publishes an annual study on the country of origin of audiovisual content offered on OTT platforms. While the methodology and sampling has varied every year since 2017 —when the study was first published—, an assessment of data from the last two editions allows to draw some conclusions on the trends. The samples used for the last two research studies include a different number of platforms. Furthermore, content is defined differently: in 2018, the study included 'TV content', a concept quite similar to series even though it includes one-episode shows —e.g., documentaries—, while in 2019, the study differentiated films from series (see Table 9).

Table 9. European OTTs: An analysis of their catalogs (2018-2019)

		2018	2019
Number of catalogs (*)		• 32 TVOD • 29 SVOD	• 146 TVOD • 136 SVOD
Unique film and series titles	Films		96,989
	Series		13,033
	Total	26,845 (**)	110,022
Volume and % by origin	European	8,501 (32%)	33,467 (30%)
	Non-European	18,344 (68%)	76,555 (70%)

(*) Global services are counted in terms of catalogs for each country.
(**) In the 2017 and 2018 studies, the definition of 'TV content' is similar to that of series, even though it includes documentaries and one-episode shows.
Sources: European Audiovisual Observatory (2018, 2019)

The study determined that in Europe, in 2018, before the formulation of the European Directive, 32% of the OTT content included in the study was of European origin, while in 2019, as the sample and content under study were larger, the European content dropped to 30%. These percentages refer not only to global platforms (including Netflix, Amazon) but also to European ones (e.g., *FimDoo*, *Maxdome*, and *Voyo*). In addition, the global SVOD service catalog already included 23% of European films. Although reports do not break data down by country, 30% of European content exceeds the regulatory quotas in Romania (20%), Czech Republic (10%), Poland (20%), Hungary (25%), Slovakia (20%), Slovenia (10%), Greece, Sweden, and Ireland (% not defined). In many countries with no regulatory quotas (Germany, Belgium, Bulgaria, Denmark, Estonia, Finland, Iceland, Latvia, the Netherlands, Portugal, Switzerland, and the UK), the percentage of European content was significant. In this regard, the inclusion of local content into OTT platforms can be attributed to competiton between global and European OTTs. For instance, in 2019, global OTTs such as Netflix and Amazon featured a larger number of European series than the European platforms: 8,270 vs 2,112 respectively for TVODs, and 10,697 vs. 2,385 for SVODs. The same difference exists in films. Global TVODs that provide services in Europe include 113,805 European film titles while platforms owned by European entities feature 67,952. In other words, if, in order to maximize the value proposition, the goal is to offer a richer European content variety, global platforms are highly efficient. This dynamics also occurs in response to the need to depreciate the cost of licenses paid for acquiring content.

Finally, the percentage of exclusive European titles dropped two percentage points in 2019 largely due to the increased number of non-American titles offered in global platforms, which rose from 1,171 (16%) in 2018 to 2,043 (21%) in 2019. In short, the drop in local content was not a loss of heterogeneity but a rise in diversity.

The variety of domestic content (see Table 10) also confirms the relevance of European titles on European platforms.

Table 10. European OTTs: A national analysis of their catalogs (2018-2019)

	SVOD			TVOD		
	2018	2019		2018	2019	
		Films	Series		Films	Series
France	14%	23%	12%	12%	16%	8%
UK	41%	19%	53%	57%	24%	44%
Germany	27%	14%	24%	4%	13%	18%
Italy	2%	12%	2%	3%	11%	3%
Spain	1%	6%	1%	6%	6%	9%
Belgium	1%	5%	1%	1%	<5%	3%
Austria	1%	3%	2%	<1%	<5%	1%
Denmark	2%	3%	1%	3%	3%	<1%
Sweden	7%	3%	1%	5%	<5%	3%
Netherlands	1%	2%	<1%	1%	3%	4%
Other	4%	10%	3%	8%	24%	5%

Sources: European Audiovisual Observatory (2018, 2019)

The upward trend of local production is directly related to the degree of maturity of the OTT market. The larger the number of either local or global players in the market is, the greater the competitive intensity becomes, which results in the need of increasing local content. This trend will also be observed in Latin America with the entry of Disney+ and HBO MAX, two global players that will join Netflix and Amazon —already available in the market—, added to the increasing importance of local OTTs.

Evidence shows that the gradual rise in regional or domestic production is a consequence of the market trends, supporting the analysis made in chapter 2. Let's now assess the impact of regulatory quotas on local content production.

5. IMPACT OF CONTENT QUOTAS ON THE PRODUCTION OF LOCAL AUDIOVISUAL CONTENT

Economic research on the impact of local content quotas is scarce and mainly focused on free-to-air broadcasting or radio stations. While there is no specific evidence of the impact of local content quotas on OTTs, the cases presented in this chapter are useful to show the effects of regulatory quotas on the market and to open the discussion about their effectiveness. The following lines describe the arguments in favor of quotas, based on surveys made and, then, the main effects associated to their enforcement.

5.1. Arguments in Favor of Quotas

Quotas intended to promote local culture have been justified by the positive externalities theoretically derived from this type of content. Countries that have adopted local content quotas usually argue the need to promote and strengthen their national identity (Manning, 2006; Crampes and Hollander, 2008). Authors like Richardson (2006) or Petrona (2015) argue that regulatory quotas are a mechanism of defense implemented by countries that believe their culture is threatened by hegemonic global influences.

Linked to the above, there is also the idea of introducing quotas as an incentive to develop new local production and talents. In this regard, Kyle and Niu (2017) cite the example of French regulations that force French broadcasters to maintain a minimum percentage of airtime for local music and to always reserve part of those time spaces for new creations.

Beyond the cultural component, research made by Crampes and Hollander (2008) delves into the reasons why regulators carry out this kind of policies. The authors identify a certain paternalist concept of quotas, according to which audience tastes and preferences may be deficient and therefore, regulators would need to intervene. The authors also propose a similar explanation according to which TV broadcasters choose content mainly on the basis of their attractiveness to large audiences, discarding more sophisticated or refined programming, which would justify a corrective intervention on the part of regulators for the benefit of the community. There are also merely economic arguments intended to protect an activity that is relevant to the domestic industry (Manning, 2006).

Finally, several authors have pointed out that, despite the positive intentions detailed above, regulatory quotas may end up generating unexpected market effects, many times the exact opposite of the original goal. Below, a detailed analysis.

5.2. Unexpected Negative Effects of Quotas

Different reasons explain why quotas may result in unexpected negative effects. In general, arguments are based on the economic argument that asserts that regulatory quotas distort and alter the proper operation of the markets and make it even more difficult to achieve optimum social results. This is so partly because it is difficult to quantify the alleged positive externalities associated with local content protection, which would be an argument in favor of quotas provided that they offset the costs. Some authors have demonstrated that local content quotas promote strategic responses on the part of the regulated agent, which may lead to undesirable effects (Kyle and Niu, 2017). Here is a list of some of the undesirable effects which, based on the literature, may result from quota requirements.

5.2.1. Restrictions on the Offering of Content Not Included in the Quotas

A key aspect here is that the total volume of content is subject to a number of constraints, e.g., budget restrictions. Therefore, a larger offering of content of a certain nature (driven by the quota) usually implies a reduced offering of other kind of content that may also be positive for the community and more demanded than the local one. This is the argument put forward by Crampes and Hollander (2008) in their model linked to sports and documentary TV channels, and by Richardson (2006) in his model of local and international music.

5.2.2. Offering a Wider Range of Certain Titles does Not Imply Higher Consumption

As argued by Richardson (2006), quotas only affect one part of the equation: supply. This means that it is not necessarily possible to ensure that this increased supply of local content will be receptive to the public - that is, that it will be effectively consumed by the viewers – as is the desire of the public policy makers.

The author develops a theoretical model for radio stations through which he demonstrates that, although local content quota requirements may result in a larger offering of such content (number of titles or airtime), it does not necessarily mean that the consumption of local music will increase, but rather the opposite —a fall in consumption— may be true. Even if the local content consumption goes up, such increase will always be lower than the original offer growth under any of the scenarios described in the model. Similarly, Crampes and Hollander (2008) theoretical model shows that the effects of quota requirements may be paradoxical and result in a reduced audience for the content the quotas are intended to promote. This can be clearly observed when quotas apply to content that is not the favorite of consumers. This idea may be even more relevant for OTTs, where it is the user who decides which content to see without being conditioned to whatever the broadcaster presents at a certain time, as in free-to-air broadcasting or subscription TV.

There is ample empirical evidence that supports this argument. For instance, Kyle and Niu (2017), who studied the audience of French radio stations, demonstrated that local music audience has dropped compared to a scenario without quotas.

For OTT platforms, the requirement to include local content on OTTs does not necessarily mean that the audience will end up viewing or accessing those local productions. In other words, access to content depends on two determining variables: content quality and user interest.

In the case of content provided by OTTs, it is clear that simply offering more local content does not necessarily result in the actual consumption of such. This is due, in part, to the fact that the preference algorithms recommend users content similar to that they have been recently viewing. So, even if the catalog includes domestic films, it does not mean that those films are viewed and, as a result, the intended development of a cultural identity based on domestic content is not achieved.[43] The obligations imposed in Colombia to give prominence to local content are, perhaps, more useful.[44]

5.2.3. Possible Loss of Diversity

The key to the argument that local content regulation results in the loss of diversity lies in the definition of latter concept. Petrona (2015) states that local-foreign differentiation is not enough to define diversity and offers to take an additional metrics into consideration: the genre. The author understands diversity as a multidimensional concept and suggests that quota requirements may force the broadcaster to compensate the reduced volume of foreign content by increasing the presence of domestic programs which, resembling the foreign ones, might replace them. When the offer is limited, quota regulations may lead the broadcaster to leave out certain content and be focused on the most popular genres, resulting in loss of local and foreign content diversity. The author uses a theoretical model for radio stations to show that the imposition of quotas tends to lead radio broadcasters to offer less genre diversity than when no quotas are required. According to this argument, quotas force radio stations to choose a sub-optimal level of local and foreign content and, therefore, in order to keep the pre-quota level of preferred content among consumers, they need to increase the airtime allocated to popular genres. This effect is also addressed in the research published by Richardson and Wilkie (2015), in which they warn that quotas may result in a shift from foreign to domestic content in genres where the former used to prevail. This might limit the addition of new local content to these specific genres, leading to local culture 'internationalization' (this is further discussed in 6.2.5).

Blackburn et al (2019) also demonstrated a loss of diversity in OTTs using content in iTunes (UK) and Wuaki.TV (Italy). In the first case, as iTunes hosts 23% of European content, an alternative to attain the 30% quota would be to leave part of the non-European, US content out, which would not increase the total European volume and would result in reduced diversity. The same result would be obtained by Wuaki.TV in Europe.

Diversity loss may also occur the other way around. That is what Richardson (2006) argues when he states that local content can be more biased towards certain genres. For example, if most local productions are comedies, then a local content quota will bias the total offering towards that genre, which is not necessarily the favorite genre of the audience.

5.2.4. Impact on Content Quality and Repetitions

Imposing a local quota may lead the OTT to choose old or low quality content just to meet the quota. That is what Petrona (2015) arguments. Similarly, Richardson and Wilkie (2015) state that quotas may be met by simply increasing the existing content offer, eliminating the incentives to promote new talent or local productions.

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[43] See Chong, D. (2020). "Deep dive into Netflix's recommender system." *Towards data Science*, April 30. Y Baye et al. (2015).

[44] The implementation of the respective executive order has been scheduled for February 2021.

There is empirical support for this argument. A study carried out by Ranaivoson (2007) based on data from French radio stations confirmed that the percentage of French music aired increased from 1997 to 2005 (in compliance with the quota) but, paradoxically, the number of titles in French dropped during that very same period. The reason is that the title turnaround (the broadcasting mean value is one song a week) grew from 3.3 in 1997 to 6.6 in 2005. In terms of quality, Broughton Micova (2013) determined that the increase in local production in Macedonia free-to-air broadcasting was made based on journalistic programs where politicians and members of the civil society were interviewed, thereby broadcasting mostly unappealing content.

In the case of Video-on-Demand OTT services, the imposition of a fee doesn't ensure that the increased supply of titles will not be met by resorting to old or low-quality content.

5.2.5. Local Content Quotas May be Detrimental to the National Culture

As already mentioned in 5.2.3 above when discussing the loss of diversity, some authors argue that quotas may encourage local artists to try to imitate their international counterparts, thus minimizing the distinctiveness of their work. The reason is that, as Petrona (2015) claims, although quotas may increase the volume of content offered, they do not guarantee the domestic nature of such.

The argument is largely explained by Richardson and Wilkie (2015). The authors propose a theoretical model to explain how the music industry works and the impact quotas have on local content. They use this tool to model entry, contracting and broadcasting decisions made by music bands, record companies and radio stations, respectively, as well as decisions made by consumers about the radio stations they tune in and the music they acquire. According to the model, a local content quota results in a larger 'internationalization' of domestic music. They argue that, although quotas foster the entry of local content suppliers, that will only be true in the genres and styles which are the most sought after and which resemble the most their international counterparts. This leads to what authors call the '*Canadian Divas Effect*', citing examples such as Celine Dion, Shania Twain and Avril Lavigne —all Canadian singers—, who look like American singers and preserve little traits of the Canadian culture in their original work.

Similarly, Manning (2006) carries out a study on regulatory quotas in Australia and argues that it is really difficult to claim that a bigger offer of local content actually promotes domestic culture. The author states that the most popular local TV shows —*Neighbors* and *Home and Away*— have little to do with the Australian culture. In assessing the Australian case, he ends up stating that it cannot be alleged that quotas have actually contributed to the promotion of national culture and identity.

In turn, Kyle and Niu (2017) argue that quotas may be detrimental to the domestic artistic ecosystem. As they explain, imposing a quota results in a reduced audience since the content offer may be based on less popular titles. This loss of audience derives into reduced OTT revenues (in their example, they make reference to advertising, but this concept may also impact subscription-based business models). The loss of revenues may bring negative collateral effects on artists and their income from intellectual property rights.

When assessing the Latin American OTT business, Katz (2020) shows that, in terms of profitability, Netflix's net revenues amount to US$ 1.866 billion, after taxes. However, cash flow results are negative (US$ -2.887 billion in 2019) due to their strategic decision to invest in original content. Netflix was forced to turn to bond markets in order to finance their investment (in 2018, the company had a long-term debt of US$ 10.4 billion, considerably higher than the US$ 6.5 billion of 2017). Regarding the Latin American market, Katz (2020) believes that 2019 is the first year Netflix has had positive profitability (margin: 4.21%). Based on this value, in order to improve margins, Netflix should continue increasing the number of subscribers —facing other global and local OTT competitors—, while controlling their operating costs, which is also difficult since they need to continue investing in local content to leverage their own value proposition.[45] In this context, being forced to produce locally impacts production costs, which are eventually transferred to the final consumer.

5.3. Loss of General Welfare

According to economic theory, the aforementioned negative effects of the quotas may result in a loss of the general social welfare. Social welfare, as defined in the model proposed by Richardson (2006), includes all different players involved. In other words, it is the summation of consumers' utility, broadcasters' benefits, and advertiser-related surpluses. The author questions the presence of a positive externality associated to local content. In the absence of this type of externality, the author confirms that quota requirements clearly reduce the general welfare. In the presence of any externality, the global effect in terms of welfare will depend on how positive the externality is. In any case, the model proves that, the stricter the quota requirements are, the more the social welfare is monotonically reduced, with changes in its composition. As to broadcasters and advertisers, there is a monotonic reduction of surpluses when the quota is increased, while the effect is ambiguous among consumers.[46]

However, it is evident that quotas distort the proper operation of the market and generate costs. Justifying a quota will only be possible as the positive theoretical externalities offset such costs, which is difficult. The difficulty to define and measure the externalities is a real problem.

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[45] The analysis of Netflix's situations brings up a key question regarding the long-term profitability of a pure play model. In the case of Amazon Prime Video, this is different since the service should not be considered separately but within the framework of its contribution to the core distribution business. In other words, SVOD contributes to the consolidation of Amazon's relationship with its retail customer base. For Apple, Apple+ is an initiative intended to gain share in the consumer electronics market (in fact, it is similar to iTunes in that intent). Last but not least, in the case of Disney, Disney+ is an additional monetization strategy of their library of 7,500 TV episodes and 500 films.

[46] Social welfare is the sum of the producer surplus (that is, his/her margins), the consumer surplus (that is, the difference between his/her willingness to pay and what he/she actually pays) and some surplus for the Government. Based on the aforementioned, this research states that when quotas increase, social welfare (i.e., the sum of all surpluses) shows a downward trend. Margin reduction results from higher content production costs. As to the audience, the result is not clear, maybe because it is difficult to measure the willingness to pay for a free asset such as the radio or free-to-air broadcasting.

Actually, there are authors that say that the exclusive use of economic theory may not be enough to assess the effects of local content quotas. Hay (2000), for example, acknowledges the economic theory potential to assess the impact of regulations. He claims that, particularly about audiovisual content, a rigorous analysis should also include inputs from other social sciences, such as political sciences, psychology, sociology, or cultural studies.

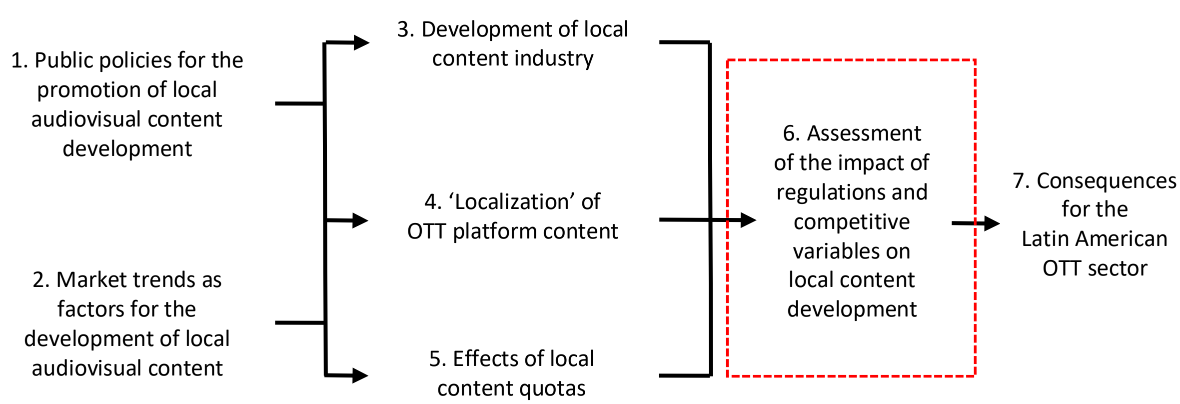
* * * * *

In summary, empirical evidence of the three factors that condition the development of the local content industry has been presented. The conclusions that may be drawn from such evidence are:

- Audiovisual production in developing countries has grown as a result of regulatory incentives, tax exemptions and cash rebates;
- Supply and demand trends are the main explanatory variables of the increasing 'localization' of OTT catalogs; and
- Local production quotas may have many unexpected effects which are counterproductive to the purposes of developing cultural policies and the audiovisual industry.

Below, we specify several econometric analysis intended to test the impact of local content quotas on audiovisual production (see Figure 17).

Figure 17: The effects of public policy and market dynamics on local content development



6. ECONOMETRIC MODEL FOR ASSESSING THE IMPACT OF LOCAL CONTENT QUOTAS

This chapter is intended to rigorously test the extent to which local production quotas impact on the development of domestic audiovisual content. To that end, we firstly prepared a theoretical model, which was then empirically estimated under different specifications.

6.1. Theoretical Model for Explaining Audiovisual Production Determining Factors

The purpose of the microeconomic model described below is to explain the determining factors of audiovisual production, and lay the foundations for the empirical estimate to be performed in the next section.

The baseline assumption is an economy with two categories of players: the consumers of audiovisual products and the firms that produce them. For the sake of analytical simplicity, producers are assumed to sell audiovisual goods directly to consumers, although in section 6.2., the empirical estimate performed will be controlled for different distribution modalities. Consumers' utility[47] is represented by a Cobb-Douglas function:

$$U(AUD, X) = AUD^{\theta} X^{1-\theta}$$

In this function, AUD represents the volume of audiovisual content consumed, while X identifies all other goods (grouped as composite goods). The parameter measures the intensity of consumers' relative preferences for audiovisual content. For example, the subscribers of an OTT service seek access to audiovisual content (series or films) meeting their preferences in terms of gender, language, cultural idiosyncrasy, etc. These users make their decisions based on a maximization of the utility function subject to a budget constraint represented as:

$$INGRESO = P(AUD) + X,$$

where P is the price of the audiovisual products (i.e., the monthly subscription fee in the case of SVOD, or the program download price for TVOD), while the price of other goods in the economy is normalized to 1 for the sake of simplicity. The consumer problem is solved by expressing the demand for audiovisual content as:

$$AUD = \frac{\theta INGRESO}{P} \qquad [1]$$

Thus, the demand for audiovisual goods depends positively on the consumers' income and the intensity of their preferences for the type of content sought, and negatively on price.

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[47] Based on the concept of marginal utility, it is possible to develop a consumer's demand curve by associating preferences and budget constraints, among other factors.

On the supply side, audiovisual film producers operate with a technology such that their cost function is modeled as[48]:

$$COSTO(C, REG, AUD) = (Ce^{\delta REG})AUD$$

where the term C includes other components associated with variable costs (salaries, production costs, etc.), and REG represents the cost associated with the intensity of regulatory constraints. In this respect, the model assumes that the stricter the regulation is, the higher the associated costs result, which can be explained by the fact that the regulation entails a distortion of optimal market operation, which in turn implies monitoring and bureaucratic costs (Alesina et al., 2005)[49]. This was already explained in Chapter 5 in the research surveyed, and is supported by the OTT experience (the greater the local content quota in the catalog, the higher the content acquisition cost and the lower the chances of leveraging economies of scale in program production). Therefore, marginal cost is defined as follows:

$$CMg = \frac{\partial COSTOS(AUD)}{\partial AUD} = Ce^{\delta REG}$$

The price level at which production companies will be willing to offer audiovisual contents is the result of equalizing$P = CMg = Ce^{\delta REG}$. Replacing it in equation [1], we obtain the break-even level of audiovisual content output resulting from market supply and demand:

$$AUD = \frac{\theta INGRESO}{Ce^{\delta REG}} \qquad [2]$$

Therefore, the break-even level of audiovisual output in a market will depend positively on consumers' level of relative preferences and income, and negatively on costs and regulatory intensity. Theoretically, if the regulatory pressure on local content quotas exceeds the break-even point, local production tends to decline.

6.2. Empirical Model Estimation

Based on equation [2], by applying logarithms to linearize, adding a constant term, a measure of competitive intensity and parameters to measure the level of incidence of the respective variables, the empirical specification to be econometrically estimated is obtained:

$$\log(AUD) = \mu + \alpha \log \theta + \beta \log INGRESO - \Upsilon \log C - \delta REG + \Omega COMP + \varepsilon \qquad [3]$$

This model seeks to demonstrate that audiovisual output depends on the size of product demand (as measured by income), controlled for the average production cost and the

[48] The cost function presented implicitly assumes constant returns to scale. The validity of this assumption is discussed below.
[49] It should be noted that, in the absence of regulatory intervention, $REG = 0$ and hence, the cost function is simplified to: $COSTO = C(AUD)$

application of local production quotas. The signs of each variable indicate the initial hypotheses: (i) the greater the local demand, the higher the output, (ii) the application of quotas impacts negatively on domestic output. Therefore, the model variables are as follows:

- AUD, which measures the number of locally or co-produced films annually (weighted per 100,000 inhabitants to normalize any cross-country difference of scale);
- θ is a parameter that measures consumers' preference for audiovisual content;
- $INGRESO$ is measured based on the GDP per capita of each country;
- C is the average historical budget per film in each country;
- REG is a binary variable that takes the value 1 if regional or local content quotas are imposed on OTT services (and 0 if not);
- $COMP$ is a measure of competitive intensity (Herfindahl – Hirschman index for the SVOD segment) which, as discussed in previous chapters, is a variable that can explain the interest of OTTs in developing local production;
- Ɛ represents the error term that is assumed to meet the desired properties.

In addition, models will be run adding controls for audiovisual content level of preference to provide for potential cross-country differences in the value of θ and the multiple distribution modalities. Preference is measured on the basis of the SVOD penetration rate and cinema attendance frequency.

As it was difficult to construct a complete base in view of the numerous missing data, average annual values were taken in the last three-year interval with information available for variables having a temporal dimension. On the contrary, other data such as the binary variable associated with the presence of a quota, the cost of films, and the ARPU and SVOD HHI penetration variables are only available for a single period, as a result of which it is impossible to estimate a panel that allows to control for country fixed effects.

To estimate equation [3], we have constructed a sample of 60 countries for which reference variable data is available. Table 11 summarizes the description and source of the variables used.

Table 11. Variables used for the econometric model

Variable	Description	Source
Local films per 100,000 inhabitants	Local film production per 100,000 inhabitants. Average annual production by country 2016-2018	European Audiovisual Observatory
GDP per capita	GDP per capita (US$) at current prices PPP. Annual average 2016-2018.	World Bank
Cost of films	Historical average budget per production (US$). Measurement errors were omitted and missing data was approximated by levels in similar countries.	The Numbers/Telecom Advisory Services analysis
OTT quota	Binary variable taking the value 1 in case of a quota imposing the obligation to transmit a certain percentage of local or regional content on OTT platforms.	Telecom Advisory Services compilation
SVOD penetration	Percentage of SVOD users in the population. Latest available data (2020).	Statista/World Bank
Cinema penetration	Annual average cinema attendance frequency per capita. Annual average 2015-2017	UNESCO
SVOD HHI	Herfindahl – Hirschman index, SVOD market 2018.	Telecom Advisory Services survey
SVOD ARPU	Revenue per SVOD user (US$), as proxy price. Latest available data (2020).	Statista
Cinema ticket	Average cinema ticket price (US$). Annual average 2015-2017.	UNESCO

Note: In absence of data about the reference period, the closest available data was used.

The dependent variable is film production, without specifying the platform or media where it is transmitted. Therefore, this series includes films that may be later on exhibited in cinemas and/or SVOD. For this reason, both variables (CINEMA and SVOD), not just one, must be considered as potential controls.

Model estimation, under different specifications, is detailed in Table 12.

Table 12. Estimation of the content quota model

	[I]	[II]	[III]	[IV]	[V]	[VI]
Dependent variable: Log (local films per 100,000 inhabitants)						
OTT quota	-0.553***	-0.852*	-0.396*	-0.592***	-0.556***	-0.105*
	[0.197]	[0.498]	[0.226]	[0.204]	[0.190]	[0.058]
Log (GDP per capita)	0.731***	0.712***	0.541**	0.177	-0.971*	-0.050
	[0.183]	[0.173]	[0.206]	[0.291]	[0.512]	[0.148]
Log (Average cost)	-0.013	-0.004	0.065	-0.002	-0.007	-0.001
	[0.082]	[0.083]	[0.101]	[0.077]	[0.067]	[0.018]
SVOD HHI			0.001***			
			[0.000]			
SVOD HHI (Squared)			-0.000***			
			[0.000]			
Log (SVOD penetration)				0.423*	0.756	0.095
				[0.240]	[0.649]	[0.164]
Log (Cinema penetration)				0.350**	1.311***	0.110
				[0.173]	[0.335]	[0.108]
Dependent variable: Log (SVOD penetration)						
Log (GDP per capita)					0.233**	0.234**
					[0.102]	[0.101]
Log (SVOD ARPU)					-0.282**	-0.283**
					[0.131]	[0.131]
Log (Cinema ticket)					0.409***	0.409***
					[0.146]	[0.146]
Dependent variable: Log (Cinema penetration)						
Log (GDP per capita)					0.929***	1.021***
					[0.134]	[0.148]
Log (Cinema ticket)					-0.891***	-0.944***
					[0.211]	[0.214]
Log (SVOD ARPU)					0.315*	0.200
					[0.174]	[0.192]
No identification test		10.675*				
Weak identification test		2.128				
Fixed effects by region	YES	YES	YES	YES	YES	YES
Control for unobservables	NO	NO	NO	NO	NO	YES
R-squared	0.65	0.64	0.74	0.69	0.51†	0.98†
Remarks	60	60	44	60	59	59
Estimation method	OLS	IV-2SLS	OLS	OLS	3SLS	3SLS

*Note: ***p<0.01, **p<0.05, *p<0.01. Robust standard deviations in parenthesis.* (†) refers to the estimate of the main equation of structural equation modeling.

All estimates include fixed effects by region to control for possible differences associated with each country's reality. Firstly, the different countries are assumed to have homogeneous preferences toward audiovisual content; therefore, no differences are considered in parameter θ in the model specification[50]. In column [I] estimate, developed using the Ordinary Least Squared (OLS) method with robust standard deviations, it can be noted that the OTT quota-associated coefficient is negative and statistically significant at 1%,

[50] Otherwise, differences in preferences are captured by regional fixed effects.

suggesting that the presence of a local content quota entails a regulatory intervention that generates distortion and reduces audiovisual supply, in accordance with the literary reviewed in Chapter 5 and the above-described theoretical model. As far as control variables are concerned, the GDP per capita ratio is positive and significant at 1%, as expected (i.e., it confirms the hypothesis that, the greater the local demand, the higher the local production), while the one associated to the average cost per film is negative, but not significant. In anticipation of the existence of potential endogeneity across variables associated with quota and film production, column [II] replicates the previous estimate through the Instrumental Variables method (IV), remaining the quota coefficient negative, which is increased in absolute value terms and now is significant at 10%. Although the instruments used are markedly exogenous[51] and the model is identified (the no identification test rejects the null hypothesis at a level of 10%), weak identification may not be ruled out. In any case, and since the IV estimate with exogenous instruments seems to validate the previous result, moving on to the OLS analysis is assumed to be appropriate.

While both [I] and [II] estimates evidence the negative relationship between the presence of content quota and audiovisual content output, it is best to approach the ratio with caution, as its considerable magnitude suggests that it might be capturing unobservable effects, especially in a context of absence of panel data with which it would be possible to control for fixed effects. In fact, the R-squared of 0.65, while representing an adequate level of adjustment in these circumstances, also suggests that a non-negligible portion of the variability in local film production is not being explained by the model. Therefore, we assayed alternative specifications through the remaining columns in Table 12 in order to add robustness to the analysis.

In an attempt to mitigate the omission of relevant variables, the estimates reported below added, as mentioned above, more control variables. To control for level of competitive intensity of the audiovisual industry, the estimate in column [III] adds SVOD HHI as a regressor (both at level and squared). In other words, we sought to include competitive pressure as a variable explaining the increased local production. Introducing the competitive pressure variable considerably improves the level of adjustment of the model (the R-squared is now 0.74), and reduces the magnitude of the quota-associated coefficient, suggesting that in prior estimates this variable may have captured effects of omitted variables (it stays negative and significant at 10%). The fact that the HHI is significant in both specifications (positive value at level, and negative value when squared) suggests a non-linear inverted

[51] To be adequate, the selected instruments must meet a two-fold criterion: they must not only be endogenous but also have explanatory power over the potentially endogenous variable. For the search of doubtlessly endogenous instruments, the literature has normally resorted to variables associated with natural, historical, geographical or climatic conditions which, in turn, may contribute to explaining certain current cross-country differences in terms of idiosyncrasies, cultures, institutional aspects or different propensities toward regulation, democratic quality or the rule of law. By way of example, Mishra and Daly (2007) use the indexes of religious, ethnic and linguistic fragmentation as instruments. Daude and Stein (2007) rely on instruments such as the ethnic and linguistic fragmentation indexes as well as the percentage of English-speaking population. Acemoglu et al. (2001) use settler mortality rates and temperature. In this case, we use the linguistic and ethnic fragmentation indexes of Alesina et al. (2003), together with the temperature (at level and as binary variables) as instruments, since they are markedly exogenous variables but, at the same time, may explain certain propensity to regulate.

U-shaped effect, which might indicate that the sector requires a certain optimum level of concentration (economies of scale), while keeping the relevance of competitive pressure beyond it[52]. However, missing data around this variable leads to a 27% loss in the sample, a relevant percentage when the sample is scarce. Therefore, the following estimates in Table 12 will be performed without incorporating this regressor.

From column [IV] onwards, there is a relaxation in the assumption that countries do no differ in their relative preferences toward audiovisual content and, to control for that, SVOD and cinema penetration in the population are introduced as regressors. These variables also allow to control for different content distribution modalities. The argument is that in countries where individuals are more prone to consuming audiovisual products (which is evidenced by the greater SVOD subscription and cinema attendance), the market is more extensive and, therefore, audiovisual production should be higher. The estimate reported in column [IV] maintains the quota effect (negative and significant at 1%), while both controls introduced are positive and significant, which implies that, in markets where SVOD services and cinema attendance are higher, there is a higher number of films produced per inhabitant.

It is worth mentioning, however, that such estimate may be impacted by the presence of endogeneity. This may be attributable to the fact that, just as a higher propensity toward audiovisual content will lead to higher production of this type of content, the opposite may also be true, i.e., greater audiovisual supply may, in turn, prompt people to sign up for SVOD or go to the movies. To control for this potential problem, column [V] replicates the estimate above, but now through a system of simultaneous equations further estimating the demand for SVOD services and the cinema attendance, respectively, as a function of the level of income and the prices of both services. The quota-associated result is maintained, while the price coefficients for secondary equations suggest that SVOD services and cinema might be substitutes for each other.

So far, the results seem consistent in suggesting a negative relationship between the presence of a quota and the production of films per inhabitant. However, the magnitude of the coefficient a priori appears to be too high. This, combined with the R-squared levels of estimates, seems to suggest that there is still certain variance in the dependent variable that is not explained by the model in spite of the successive controls introduced. All this, in turn, may be causing the quota variable to capture part of the effect of those unobservables, which might be preventing a precise estimation of the parameter. Unavailability of panel data to control for fixed effects in column [I] to [V] estimates is what may be explaining this peculiarity.

To mitigate this problem, we undertook a two-step estimate that would allow us to control for individual country unobservables. To that end, at a first stage, the model was estimated as a panel, omitting those variables for which the temporal dimension was not available and, hence, rendered this type of estimate impossible. This allowed us to identify individual country coefficients which, at a second stage, were added as a vector for regressors in the full cross-

[52] Under the inverted-U theory, in certain industries there is an optimum level of concentration in the markets that maximizes the level of investment and innovation; higher concentration beyond the optimal level results in reduced investment, and so does more fragmentation.

section model, reproducing the estimate in column [V], but now controlling for these unobservables. Column [VI] estimate yields a highly relevant result: the quota variable remains negative and significant (at 10%) and now its coefficient is considerably lower in magnitude as, having controlled for unobservables, it is no longer absorbing the effects associated with omitted variables. The R-squared of this estimate (0.98) explains that the model is capable of estimating almost entirely the variance of the dependent variable. Thus, it is possible to affirm that once it has been controlled for GDP per capita, film costs, level of preferences toward audiovisual content, regional binary variables, and individual country unobservables, **a content quota on OTT platforms is associated with a 10% reduction in the film output per 100,000 inhabitants.** Consequently, if local content development is to be promoted, it would be advisable to consider other regulatory alternatives to quota imposition.

In spite of the robustness of this relationship, it is prudent not to jump into categorical conclusions as to causality, since the lack of adequate data has prevented panel estimation, as well as the assessment of pre- and post-quota imposition changes in specific markets. In any case, it seems evident that the relationship between the presence of an obligation of this nature and the number of new local releases is negative, and that is compatible with the literature review summarized in Chapter 5.

Although the previous estimates have confirmed the negative association between quotas and content production, such specifications do not contemplate the distinction between local or regional quotas, or other audiovisual promotion alternatives. Therefore, taking the base model as a reference, we re-estimated it, now introducing the respective dummies which identify the model adopted by each country as regulatory variables: the ‘developmentalist’ model (no regional quota), the ‘developmentalist’ model (with a regional quota), and the ‘protectionist’ model described in Chapter 3[53]. The results are shown in Table 13.

[53] Consequently, the listed countries for which data is available for econometric estimation are classified into the following groups: (i) ‘Moderate developmentalist’ model: Serbia, Denmark, Estonia, Switzerland, Brazil, United Arab Emirates, Chile, Thailand, Malaysia, Taiwan, N. Zealand, Jordan, Kazakhstan, Dominican Republic, Namibia; (ii) ‘Developmentalist’ model: Germany, Belgium, Portugal, Iceland, Colombia, Morocco, and Uruguay; (iii) ‘Moderate protectionist’ model: Austria, Spain, Slovenia, Greece, Ireland, Italy, Norway, Poland, Sweden, Croatia, Slovakia, Hungary, Czech Republic, Romania, Latvia; (iv) ‘Protectionist’ model: China, France.

Table 13. Estimate of the impact of alternative regulatory models for promoting local content

	[I]	[II]	[III]	[IV]
Dependent variable: Log (Audiovisual production)				
Log (GDP per capita)	0.751***	0.751***	0.742***	0.728***
	[0.201]	[0.198]	[0.191]	[0.183]
Log (Average cost)	-0.029	-0.017	-0.022	0.006
	[0.080]	[0.082]	[0.084]	[0.089]
‘Developmentalist’ model	0.090			-0.185
	[0.201]			[0.232]
‘Developmentalist’ model (with a regional quota)		-0.335		-0.725
		[0.423]		[0.481]
‘Protectionist’ model			-0.418**	-0.613**
			[0.202]	[0.254]
Fixed effects by region	YES	YES	YES	YES
R-squared	0.61	0.61	0.63	0.65
Remarks	60	60	60	60
Estimation method	OLS	OLS	OLS	OLS

*Note: ***p<0.01, **p<0.05, *p<0.01. Standard deviations in parenthesis.*

The results shown in Table 13 indicate that the ‘protectionist’ model yields the worst results in terms of audiovisual production, and the result is robust when dummies are individually (columns [I] to [III]) or jointly (column [IV]) introduced to the model. As for the ‘developmentalist’ models described, even though the coefficient obtained with an imposed regional quota is larger than the one obtained with no imposed quota, the difference is not statistically significant. Hence, the evidence is clear in suggesting that the ‘developmentalist’ model is more favorable than the ‘protectionist’ one if a content production quota is to be imposed, and that the way to prevent it from having negative effects would be that it be of moderate nature (e.g., regional) and accompanied also by other alternative incentives, such as those stipulated in the ‘developmentalist’ model.

7. PUBLIC POLICY OPTIONS

The analysis detailed in this document provides the basis to conclude that supply and demand trends are the main explanatory factors of the increasing OTT catalog 'localization.' Furthermore, incentives to the audiovisual industry, such as tax exemptions and cash rebates on production expenses, contribute to increased local production. In this context, domestic audiovisual content quotas tend to produce undesirable effects: (i) reduced offering of content with a cultural value; (ii) loss of diversity, as the local content ends up being biased towards a particular genre (for example, soap operas); (iii) eroded content quality, to the extent that the local content included may be of very poor quality; (iv) loss of cultural differences, as the local production ends up resembling foreign content to further meet the demand for foreign products; and (v) increased production costs with their potential impact on service prices.

To sum up, recognizing the importance of goals such as promoting the cultural heritage value, developing the audiovisual industry to boost economic growth, and leveraging comparative advantages in creative industries, the evidence produced in this study suggests that governments have three regulatory options:

- **OPTION 1: To foster a 'developmentalist' model that prioritizes incentives aimed at developing the audiovisual industry —sundry tax exemptions and cash rebates on production expenses and infrastructure investment— allowing the natural supply and demand trends to act freely upon the increased OTT catalog 'localization.'**
- **OPTION 2: To impose domestic content prominence obligations on OTT catalogs in order to promote the local culture.**
- **OPTION 3: To impose a content quota on OTT catalogs.**

The advantages and disadvantages of each option were assessed to help identify the most appropriate alternative.

Table 14. Regulatory options in support of local audiovisual production

Options	Advantages	Disadvantages
• OPTION 1: To foster a 'development-oriented' model that prioritizes incentives aimed at developing the audiovisual industry, by allowing the natural supply and demand factors that contribute 'content localization'	• Promotes the development of local OTTs based on a content demand and production cost balance • Subsequently increases content and diversity • Grows the local audiovisual industry	• Based on evidence, no negative effects
• OPTION 2: To impose domestic content prominence obligations on OTT catalogs	• Provides Latin American users easy access to local content • Challenges the OTT preference algorithms and opens local production to the consideration of Latin American users	• Based on evidence, no negative effects
• OPTION 3: To impose a local content catalog quota	• Based on evidence, no positive effects	• 10% decrease in national production • Fewer platforms due to higher market entry costs • Lower-quality titles • Entry barriers for new players due to higher costs

As shown in Table 14, there is not a single regulatory model. Latin American governments should understand that, apart from domestic content quotas, there are other mechanisms that, following the empirical evidence, may lead to positive effects. The concept of quotas may not be applied to a model such as OTTs, which give users freedom of choice.

Ideally, governments should leave the development of the local audiovisual industry to the dynamics of supply and demand, which is proving its value in content 'localization'. Based on evidence, Option 1, the 'developmentalist' model, contributes to creating the incentives necessary for the development of the industry and offering incentives and tax credits. At the same time, imposing prominence obligations (Option 2), like the ones imposed under the Colombian model[54], nicely complements local production incentives. To this could be added the fight against signal piracy, which implicitly reduces the use of resources that might be addressed to the development of local content.

Finally, Option 3 introduces a very distorting element that increases production costs and has a negative impact on the structure and dynamics of the sector. The negative effects of Option 3 could be mitigated by applying a regional or linguistic content quota, in which case the audiovisual sector might leverage Latin American economies of scale to promote regional production.

[54] The implementation of the respective executive order has been scheduled for February 2021.

ANNEXES

Annex A, Compilation of Initiatives Aimed at Providing Financial Support to Local Audiovisual Production

Measure	Case	Program
Tax credit	Australia	20%-40% tax credit on production expenses
	Belgium	40-45% tax credit on investment by countries which have signed treaties of trade reciprocity
	Canada (British Columbia)	16% tax credit on production costs
	Colombia	35% tax credit (optional in relation with cash rebates on production costs)
	Spain	15%-35% tax deduction, depending on the region
	USA (New York)	30%-40% tax exemption on labor expenses
	France	30% tax credit on local expenses
	Hungary	Up to 25% tax credit on production expenses
	Ireland	Up to 32% cash rebate on production and post-production expenses
	Iceland	25% tax credit
	Italy	Up to 30% cash rebate on production expenses
	Latvia	30% tax credit on production expenses
	Morocco	20% tax exemption on production expenses
	Namibia	VAT exemption on qualifying products
	Portugal	25%-30% tax credit
	Czech Rep.	66% rebate on tax on salaries paid to foreign staff employed in productions
	Dominican R.	25% cash rebate on development, pre- and post-production expenses
	UK	25% tax credit on all audiovisual local production
	Uruguay	VAT exemptions on qualifying items
Cash rebate on production expenses	Germany	20%-25% cash rebate on production costs
	Austria	25% cash rebate on production and co-production services, 20% cash rebate on Austrian productions
	Belgium	Cash rebate on production expenses in Flemish regions
	Chile	Up to 30% cash rebate on audiovisual production expenses
	China	Up to 40% cash rebate on production expenditure in the Quingdao region
	Colombia	40% cash rebate on production expenses and 20% on logistical expenses
	South Korea	20-25% cash rebate on production costs
	Croatia	25%-30% cash rebate on production expenses in developing regions
	Estonia	20%-30% cash rebate on eligible production expenses
	United Arab Emirates	30% cash rebate on eligible production expenses
	Slovakia	20% cash rebate on production expenses
	Slovenia	25% cash rebate on audiovisual production spend
	Finland	25% cash rebate on production costs
	Georgia	25% cash rebate on production costs
	Greece	35% cash rebate on production costs
	Hungary	30% cash rebate on production expenses
	Iceland	25% cash rebate on production costs
	Jordan	10% cash rebate on eligible production expenses
	Kazakhstan	30% audiovisual production subsidies
	Latvia	20%-25% cash rebate on production expenses
	Malaysia	Up to 30% cash rebate on eligible production expenses
	Morocco	20% cash rebate on eligible production expenses

	Norway	Up to 25% cash rebate on eligible production expenses
	New Zealand	Contribution of up to 25% toward domestically produced content
	Netherlands	Up to 35% cash rebate on production expenses
	Panama	15% cash rebate on eligible production expenses
	Poland	30% cash rebate on eligible production expenses
	Portugal	25% cash rebate on production expenses
	Czech Rep.	20% cash rebate on production costs
	Serbia	25% cash rebate on production expenses
	Sweden (Västra Götaland)	Up to 30% automatic cash rebate on film and TV production spend
	South Africa	Up to 25% cash rebate on eligible production expenses
	Switzerland	20% cash rebate on production expenses
	Thailand	15% cash rebate on production costs
	Taiwan	Up to 30% cash rebate on production costs incurred in Taiwan
	Uruguay	20% cash rebate on production expenses
Financial support for production infrastructure development	Ontario (Canada)	Provision of information about available production spaces and support for new production studio investment
	Queensland (Australia)	Granting of low interest loans for building studios
	Taiwan	Funding for building new studios
	Sweden (Västra Götaland)	Public investment in production infrastructure development

Source: Telecom Advisory Services compilation

Annex B. Compilation of Prominence Obligation-Related Measures

Country	Prominence Obligation
Germany	None
Australia	None
Austria	Specify local production in site
Belgium	Ensure attractive presentation of local content
Bulgaria	Attractive presentation of local content
Canada	None
China	Foreign OTTs do not operate in China
Colombia	Content highlighted in home page
Denmark	None
United Arab Emirates	None
Slovenia	None
Slovakia	None
Estonia	None
Spain	None (although updates are expected)
Finland	None
France	Promotion images and trailer availability
Greece	None
Croatia	None
Hungary	None
Ireland	None
Iceland	None
Italy	European production designated section
Jordan	None
Kazakhstan	None
Latvia	None
Latvia	None
Morocco	None
New Zealand	None
Netherlands	None
Namibia	None
Norway	Not specified
Poland	Identification of content origin, promotion materials
Portugal	Functionality allowing users to search by origin
UK	None
Czech Rep.	None
Dominican R.	None
Romania	Promotion of local content in home page, classification of content by nation of origin
Sweden	None
Switzerland	None
Taiwan	None
Uruguay	None

Source: Telecom Advisory Services compilation

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