



PHILIPPINES IN VIEW



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Preface

Disclaimer

Information Validity

The information contained in this report is prepared from data gathered in the first half of 2017 and believed to be correct and reliable at the time of writing. Whilst Pioneer Consulting Asia has exercised all reasonable endeavors to ensure that the contents of the report are accurate and up to date, it does not accept liability for any information which may not be accurate.

Our Approach

It should be understood that some information contained in the accompanying report was obtained verbally from third parties without written documentation. In certain cases, publicly available sources were not available for independent verification. Where possible, Pioneer Consulting Asia has sought to verify the information supplied by checking multiple sources.

A third-party agency was contracted by CASBAA to conduct an intensive study about Philippine audiences and their consumption of pirated content. The study was based on a survey of a representative sample of consumers in urban areas across the Philippines and only included respondents who watched free to air television and either Pay-TV or online videos or all three. Referenced to as the CASBAA 2017 Market Research Study herein, data excerpts and insights from that study were used in this report where applicable.

Use of Information

The report has been prepared for information purposes only and is intended for CASBAA and its members. The report must not be acted on or relied upon for any investment decisions or other specific actions without further study.

1. Executive Summary

1.1. Market Overview

While the addressable market for Pay-TV in the Philippines has grown, it is still far from the maturity levels of some other countries in the region. The most extensive household survey in the country, conducted by the Philippine Statistics Authority, reported that TV penetration in the Philippines stood at 76% as of end-2014, equivalent to 17.1 million households with TV sets. In terms of growth in TV households, this translated to a CAGR of 4.10% per year since 2010, or about 1.5x higher than population growth. Broadband¹ connections also grew during this period, at a more aggressive rate, a total of 24.4 million estimated broadband connections as of end-2016, up from 7.3 million in 2011. Of this total, 90% was reported to be wireless broadband connections, or about 22 million versus 2.4 million fixed broadband connections.

1.2. Pay-TV Market Estimates

Based on our research, estimates on the number of Pay-TV subscribers in the Philippines ranged widely from 3 to 7 million subscribers, which made it difficult to pin down a universally acceptable figure. We talked to different industry stakeholders, including Pay-TV operators, content programmers, regulators and industry association representatives, and each party provided a different estimate and rationale. Issues raised included manipulation of subscriber number reporting to content programmers, unknown volume of illegal connections, and under-reporting of revenues to regulators, among others.

1.3. Pay-TV Operators

DTH player Cignal TV overtook Sky Cable in 2015 to become the largest Pay-TV operator in the country by volume of subscribers. It attained a reported 1.6 million subscriber count as of end-2016, and had been growing at a CAGR of 39% from 2013 to 2016. Cignal TV is owned by MediaQuest Holdings and is part of the PLDT group. It is cross-marketed heavily with other relevant PLDT brands such as PLDT Home and Smart to sell bundled packages with DTH and IPTV solutions. It also announced in July 2017 the launch of Cignal TV Entertainment, its entry into original content creation through partnerships with local production companies. Cignal TV also has exclusive partnerships with branded content partners such as Ultimate Fighting Championship (UFC), Bloomberg TV, and was the launch partner of Fox+ (as part of the PLDT Group).

Sky Cable, while no longer the largest Pay-TV operator by subscriber numbers, continued to be the biggest industry player in terms of revenues. In 2015, it reported gross revenues of PHP 8 billion against PHP 5.2 billion in revenues for Cignal TV. In a major strategic move, it launched its DTH product, Sky Direct, in March 2016. In a matter of nine months, Sky Direct

¹ Data connection that provides speeds of 1 megabit per second (mbps) or more

acquired over 100,000 new subscribers and helped Sky Cable break through the 1 million subscriber mark at the end of 2016. In 2016, Sky Cable also shifted focus to marketing its bundled service called OneSky, which included Sky Broadband, Sky Cable and its wireless broadband product, SkyMobi (under an MVNO deal of ABS-CBN with Globe Telecom).

Aside from these two giants, the local Pay-TV industry is composed of a handful of medium-sized players (such as GSat, Cable Link, Converge ICT, Asian Vision, etc.), and a long tail of small provincial operators. It is estimated that there are 1,200 Pay-TV licenses issued, operated by about 800-900 unique systems or companies. These small operators had anywhere from 1,000 to 60,000 subscribers, mostly on analog systems, but a few have already transitioned to digital, including fiber networks. There are two industry associations active in the market, the Philippine Cable TV Association (PCTA), and the Federation of International Cable TV and Telecommunications Association of the Philippines (FICTAP). These groups have been regularly consulted by regulators for policy and industry planning feedback. FICTAP also initiated and won a bid with the Philippine government for its Free Public Wi-fi project, and this was farmed out to its various member cable companies across the country.

1.4. Pay-TV Average Revenue Per User (ARPU)

Sky Cable's monthly ARPU was reported to be PHP 628, which is similar to previous years. Signal TV's ARPU was not publicly available, but we derived an estimate by looking at their subscription revenues in 2015 versus reported subscriber count, which resulted in a notional ARPU of PHP 292. (This figure should be used with caution, as it does not account for variation in plans and prices.)

1.5. Pay-TV Content and Programming

According to Kantar Media TV Audience Measurement (Cabled Individuals) 2016, the two highest rated cable channels were Cinema One and Pinoy Box Office – both movie channels that feature local or Tagalog titles. These were followed in the list by kids channels, local TV news, educational channels, and then general entertainment. Of the Top 15 TV-Cable/DTH channels, 8 were local channels and 7 were foreign. In terms of channel lineup for Pay-TV, about 50% was composed of international entertainment channels, followed next by local entertainment at about 15%, and then by news and kids. There was also an increase in volume of home TV shopping programming, as it dominated off-peak hours.

1.6. Adoption of DTT, OTT and Video-on-Demand Platforms

The government through the Department of Information and Communications Technology (DICT) mandated a full switch-over to digital TV by 2023. To support this, in February 2017 the government unveiled its Digital Terrestrial Television Broadcasting migration plan, laying out the programs to support this goal over the next 6 years.

ABS-CBN started marketing its DTT-box product called ABS-CBN TV Plus as early as December 2015, and has already reported sales of 2.3 million units as of end-2016. That

service now covers 15 key geographic areas with an estimated reach of 40 million individuals. GMA 7 has reportedly set aside over PHP 400 million for its digital upgrade, and has targeted to start broadcasting a digital signal within 2017. GMA also unveiled a prototype DTT set-top box and digital device which combines media viewing and operation of internet-enabled apps for the TV set at home. Also, the local consumer electronics market already stocks branded and unbranded DTT boxes (RCA, Tomiko, Wow!), and DTT enabled TV sets (TCL, Haier, etc.).

Multiple global OTT players entered the Philippines market in the last several years, starting with HOOQ and iFlix in the first half of 2015. Both HOOQ and iFlix followed very similar strategies of acquiring local content, partnering with major telcos and using a subscription business model with a low entry point. Netflix officially launched in the Philippines in January 2016. HBO Go is exclusively available to Sky Cable subscribers, while Fox+ has partnered with PLDT/Smart/Signal to tap their subscribers. Niche players Viu and Tribe have also launched. iWantTV of ABS-CBN also remains popular, with exclusive access to ABS-CBN content. While official subscriber numbers are not available, results from the CASBAA 2017 Market Research Study conducted in urban areas showed that 62% of those surveyed tried using a paid VOD service in the past 6 months, and 30% use one on a daily basis.

1.7. Piracy and Unauthorized Distribution

Online piracy and signal theft are the two most prevalent types of illicit content access in the Philippines. Online piracy involves accessing or viewing content such as movies, TV shows and other proprietary video content from online sources who do not possess the rights to distribute the content. On the other hand, signal theft involves illegally obtaining a Pay-TV signal, and viewing or distributing that through unofficial channels that are unauthorized by the channel's rights owner.

Based on the CASBAA 2017 Market Research Study of "connected" urban consumers, online piracy activities were comprised of the following most-frequently used sources: copying of illegally downloaded video files via flash drive, accessing unauthorized free streaming sites, downloading torrent files, and lastly, using unauthorized mobile apps for video streaming. While these pirated sources were used in the past 6 months by 52% – 86% of total survey respondents, they do not rank high in consumers' preferences for viewing (as determined by repeated use). Viewing on free official websites (YouTube, Facebook, Vimeo, etc.) was the most frequently used source (63%), even beating out Free-to-Air TV (60%). This is followed by Pay-TV and then by Paid-VOD, making free streaming sites the 5th most-popular option, though highest ranked across pirated sources. Respondents cited lack of enforcement and the claim that "everybody else does it anyway" as reasons for the high incidence of piracy.

On the other hand, signal theft incidence has gone down significantly according to industry stakeholders we interviewed, largely driven by the migration to digital. It remains a more prevalent issue for analog Pay-TV operators. Stakeholders repeatedly expressed concern about signal theft using DTH decoders, which are widely available. In some cases that were shared, offenders would use a valid DTH signal and distribute that illegally to multiple

viewers. In some other cases, signals from other territories, like from neighboring Indonesia, would be shown illicitly. The prevailing view of programmers, regulators and Pay-TV operators we interviewed is that self-policing efforts to protect one's own content or revenue streams would be the approach most likely to be successful. Some Pay-TV operators and program distributors have set up teams to investigate such incidents and disrupt the unauthorized use of the signal through box switch-offs, etc.

1.8. Regulatory Environment

The National Telecommunications Commission (NTC) still functions as the primary regulatory body overseeing the Pay-TV industry, although it is now an agency under the newly formed Department of Information and Communications Technology (DICT). As of the writing of this report (June 2017), the NTC was finalizing its implementing guidelines for OTT players operating in the country, and had a target to release these within 2017. One of the main issues raised by Pay-TV operators was the need to relax geographic franchise rules for Pay-TV companies to remain competitive. Since Pay-TV licenses are issued at the municipal level, they do not enjoy the same market opportunity as OTT providers, who can sell to virtually anyone in the country. Other regulatory and administrative issues include implementation of the DTT migration plan, and enforcement assistance to Pay-TV operators who identify cases of signal theft. The NTC does not believe that preventing the illegal retransmission of copyrighted content falls within its responsibilities, and has reiterated that cases of commercial piracy should be filed by content owners with the Intellectual Property Office.

2. Philippine TV, Video and Broadband Market Environment

This section provides an overview of the market environment in which the Pay-TV industry is situated. It lays down various factors that affect the industry's performance and prospects such as its economic profile, geographic spread, consumer behavior and preferences, device and access statistics, a snapshot of the key players and the competitive landscape.

2.1. Economic Environment

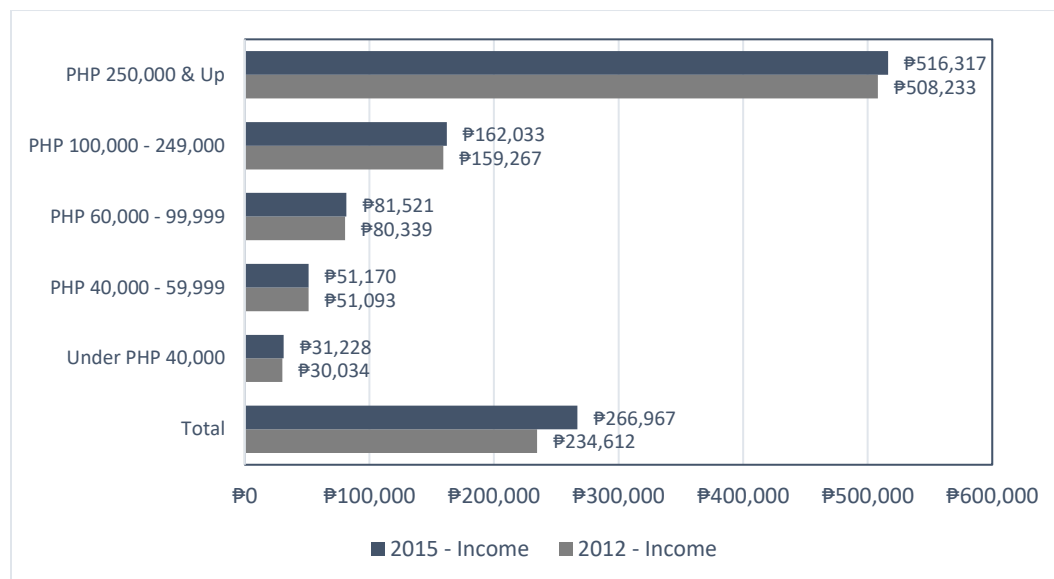
Prospects for the Philippine economy are bullish. The International Monetary Fund (IMF) stated that the country is expected to lead growth in Southeast Asia, due primarily to higher public infrastructure spending and very strong domestic consumption. Estimates peg Gross Domestic Product to grow by 6.8% in 2017, and by 6.9% in 2018 – higher than in Vietnam, Indonesia, Thailand or Malaysia.

The country's president, Rodrigo Duterte, elected in 2016, has been fast tracking public spending and is targeting a total of PHP 8 trillion in infrastructure projects. Among the priorities are a subway in Metro Manila, the first railway in Mindanao, and the installation of a National Broadband Network (NBN). The NBN is expected to bring high speed connectivity at an affordable price to more Filipinos in the countryside. This is in addition to the robust consumer spending that has steadily seen an increase due to the strength of the US dollar which is the dominant currency of remittances from Overseas Filipino Workers (OFW), and the influx of global business process outsourcing / call center operations establishing their presence in the country and employing hundreds of thousands of Filipinos.

The most recent Family Income and Expenditure Survey by the Philippine Statistics Authority (PSA) reported that the average income of Filipino families increased by 14% from 2012 to 2015. Converted into USD, this amounts to US\$5,339 in 2015 up from \$4,692 in 2012. While overall income increased, the combined amount spent on communications and recreation / entertainment went down during the same period, from \$185 in 2012 to \$129 in 2015.

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Exhibit 1 Average Income by Family, Grouped by Income Class: 2012 VS 2015 (in PHP)

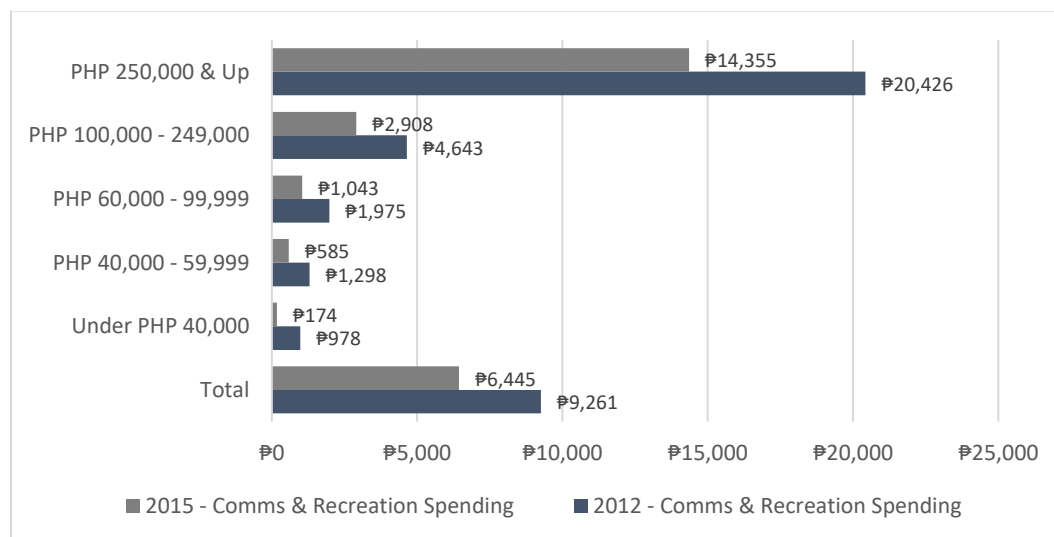


Source: Philippine Statistics Authority, Family Income and Expenditure Survey

Exhibit 1 above displays the breakdown of family income by income classification, comparing 2012 and 2015 figures. Significant growth came primarily from the higher income classifications, with the PHP 250,000 and up segment growing by approximately PHP 8,000, and the next segment of PHP 100,000 – PHP 249,000 families growing by about PHP 3,000. The lower three income groups grew marginally by less than PHP 100 to PHP 1,000 only.

The family income and expenditure survey further showed a breakdown of expenses per category. In **Exhibit 2** below, the average annual expense for communications and recreation / entertainment is displayed grouped by income classification. Across all segments, the figure dropped in 2015 from 2012.

Exhibit 2 Average Family Income VS Spending on Communications & Recreation, 2012 VS 2015 (by Income Class)



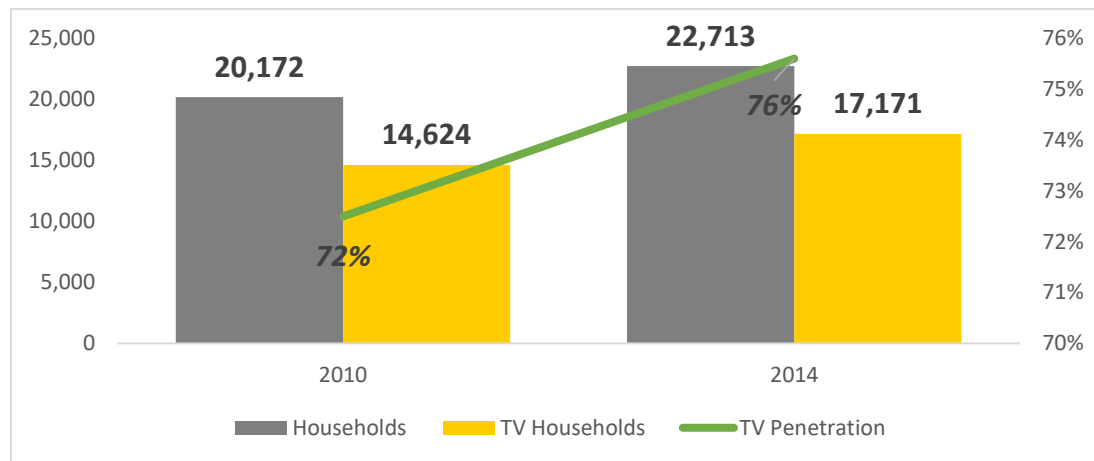
Source: Philippine Statistics Authority, Family Income and Expenditure Survey

2.2. TV Penetration

The total population of the Philippines was recorded at 100.98 million in the 2015 National Census, with an annualized growth rate of 1.72%. The number of total households was reported at 22 million for the same period, with an average of 4.4 persons per household. Among the regions, Southern Tagalog had the highest number of households with 3.4 million, followed by Metro Manila with 3.10 million.

Shown below in **Exhibit 3** is the household TV penetration rate in the country, based on data obtained from the Philippine Statistics Authority. The penetration rate of TV households in the country increased, from 72% in 2010 to 76% in 2014. During this period, household population grew from 20.1 million to 22.7 million, or approximately 13%, which translates into 2.6 million homes. While household population grew, the penetration of those with TV sets at home grew by an even higher 17% during the same period, reaching 17.1 million households in 2014 from 14.6 million in 2010.

Exhibit 3 Household TV Penetration Rate 2010 vs 2014

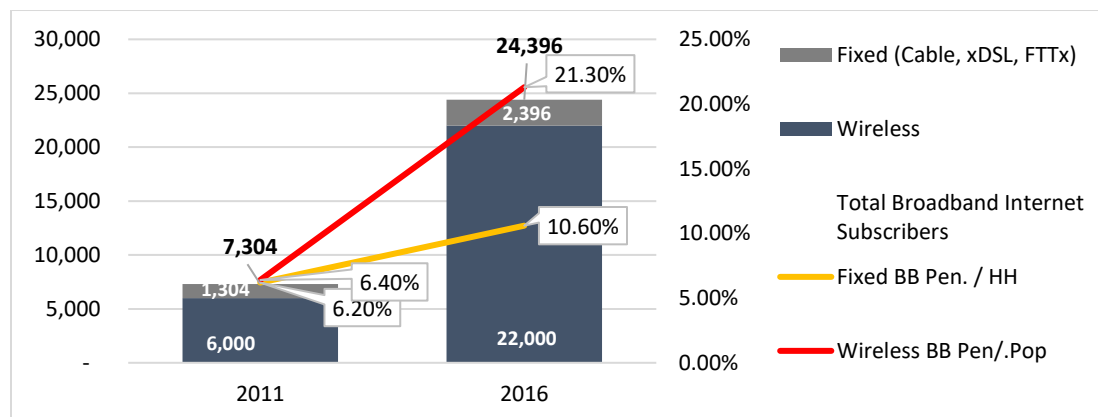


Source: Philippine Statistics Authority p. 2014 Annual Poverty Indicators Survey, 2010 Censuses of Households

2.3. Fixed & Wireless Broadband Penetration

Total broadband subscribers in the Philippines grew from 7.3 million in 2011 to approximately 24.4 million as of end-2016. This was driven primarily by the tremendous growth of the wireless broadband segment, which accounted for nearly 95% of the new subscribers during this period. **Exhibit 4** below illustrates this in detail, as the number of wireless broadband subscribers grew from 6 million in 2011 to 22 million in 2016. In terms of penetration rate, wireless broadband stands at 21.30% penetration of the total population, while fixed broadband is at 10.6% penetration of total households.

Exhibit 4 Broadband Subscribers & Penetration Rate, 2011 VS 2016

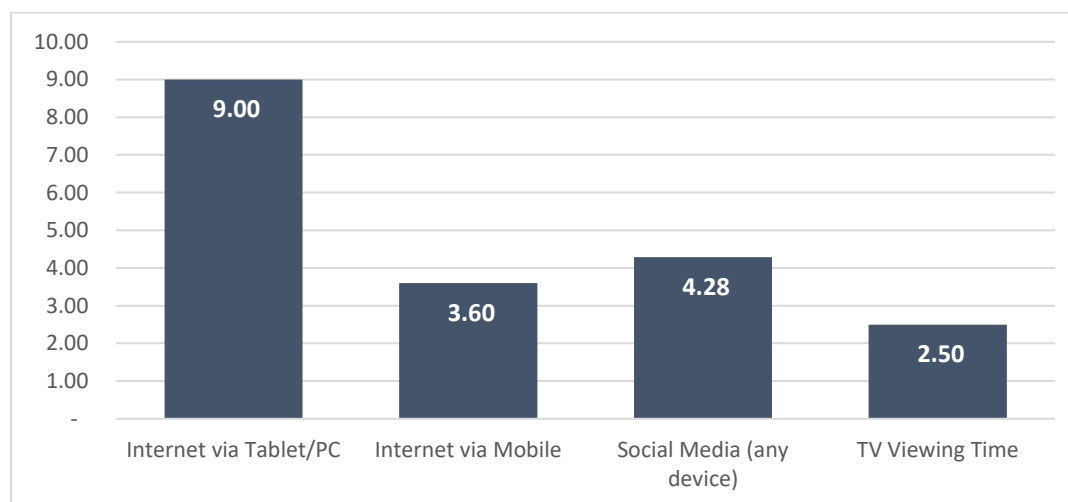


Note: Broadband is defined by Media Partners Asia for this chart as a data connection that provides speeds of 1 megabit per second (mbps) or more
Source: Media Partners Asia

2.4. General TV and Online Viewing Behavior

Exhibit 5 below presents the media habits of a typical Filipino online user, displaying how much time was spent per day online by device, on social media, and watching TV. While not based on a probability sample, this gives a good indicator as to how much time per activity a person spends. The data shows that most time is spent on the internet via a tablet / PC at 9 hours a day. Internet via Mobile is just over a third of that, at 3.6 hours a day. According to this data, a typical Filipino spends 4.28 hours on social media (regardless of the access device), and just 2.5 hours/day viewing TV.

Exhibit 5 Survey of Online Users - Average Hours Spent per Media (Daily)



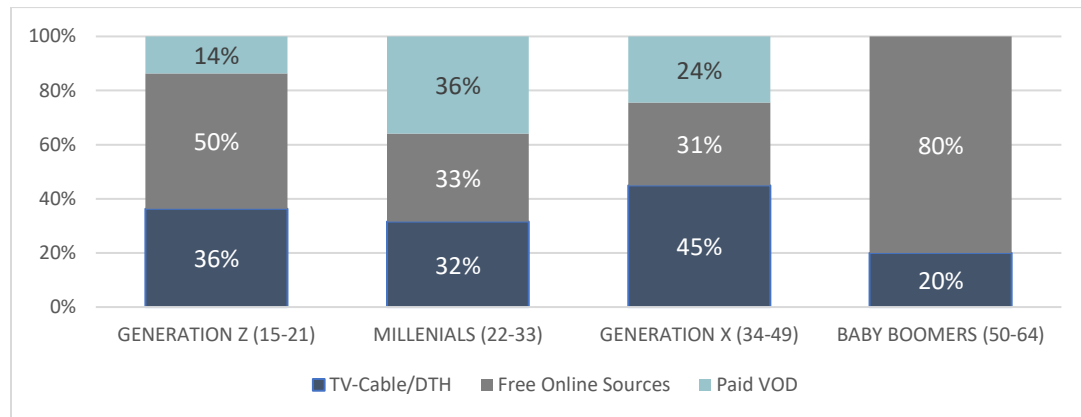
Source: We Are Social Digital Report 2017 - Southeast Asia

Data from the CASBAA Research Study 2017 provides more details on viewer profiles. **Exhibit 6** below displays a breakdown of respondents by principal source of video by age. With Generation X users, TV-Cable/DTH remained the most-used source with a 45% share of

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total respondents (in this study, the term TV-Cable/DTH encompasses all forms of Pay-TV including cable, DTH and IPTV). Millennials' usage is more equally spread out, with Paid VOD, TV-Cable/DTH and Free Sources each securing between 32% to 36% of the market, a nearly equal mix. Generation Z displayed a different skew, with 50% of respondents indicating that they use Free Sources. In this question, Free Online Sources were defined as sources of video content that do not require a fee to watch, and included both legitimate sources (YouTube, Facebook, Vimeo, etc.) and pirated or illegitimate sources (such as free streaming websites, torrents, flash drive video downloads, etc.). After Free Online Sources, Generation Z users used TV-Cable/DTH most often, and lastly, Paid VOD.

Exhibit 6 Breakdown of Principal Video Source Grouped by Generation

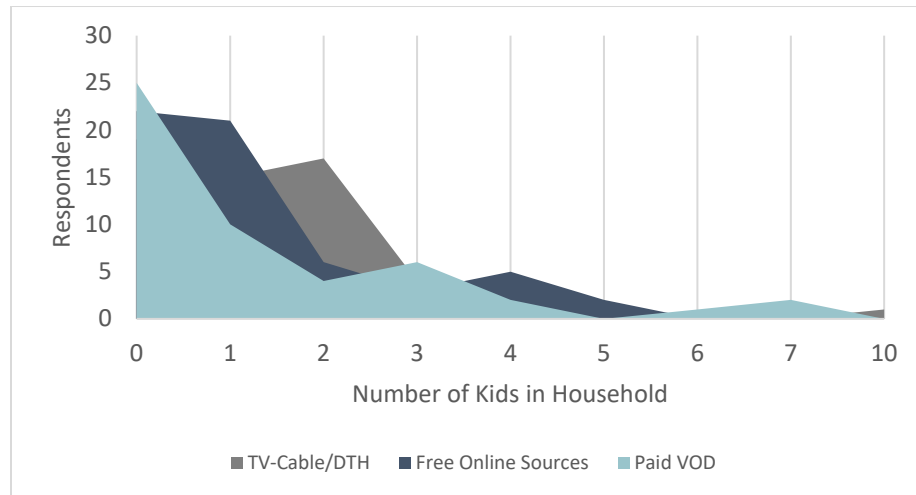


Note: Sample size of Baby Boomers is too small and should be analyzed with caution

Source: CASBAA 2017 Market Research Study

Another interesting characteristic we saw in the CASBAA 2017 Market Research Study is that the number of kids in the household is a strong indicator of the type of video content principally used. Those with no kids at home or mostly living alone, tended to use Paid VOD as their main video source. This shifts to using Free Online Sources when there is 1 kid, and then shifts again to TV-Cable/DTH when there are 2 kids. This is demonstrated in **Exhibit 7** below.

Exhibit 7 Cross-tab of Number of Kids in Household and Principal Source of Video



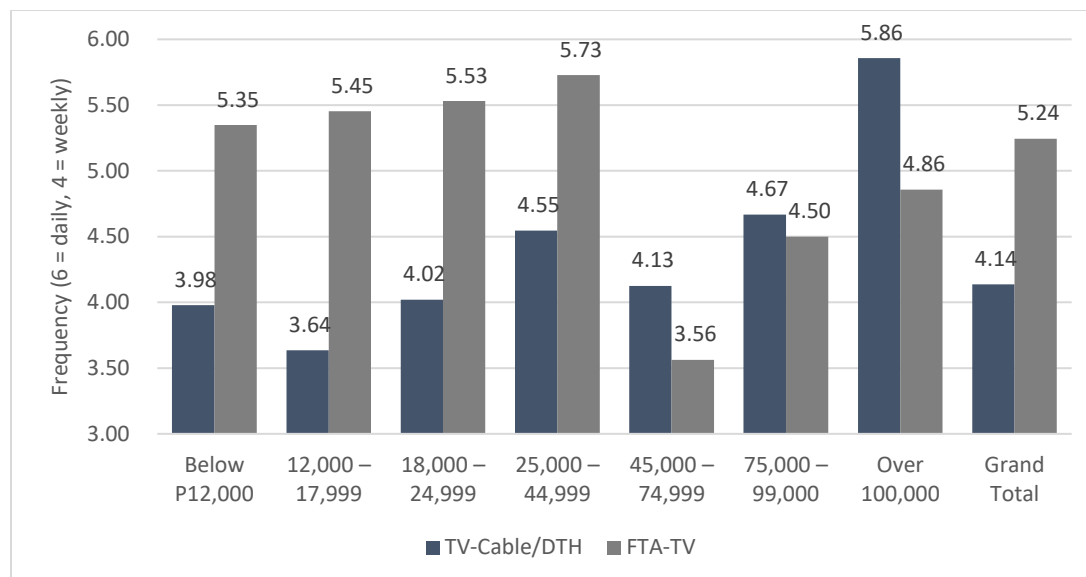
Source CASBAA 2017 Market Research Study

2.5. Pay-TV and FTA in Relation to Philippine Social Strata

From our interviews with industry stakeholders, a generally accepted estimate is that 90% of the national TV audience consumes free-to-air content, and the remaining 10% went to Pay-TV. The FTA audience is split between ABS-CBN and GMA, combined both players account for 80-85% share of the market.

Exhibit 8 below displays a comparative view of frequency in watching Pay-TV versus FTA-TV by income classification. The frequency rating was a scale, with 6 signifying once a day viewing, 5 as several times a week, 4 as once a week, and 3 as several times a month. This data reveals that those with incomes from below PHP 12,000 to PHP 44,999 watch significantly more FTA-TV than Pay-TV, by almost two times. This trend stops for those with incomes of PHP 45,000 and up, when overall FTA-TV frequency drops and Pay-TV takes the lead. At the highest income classification, Pay-TV is used almost 20% more than FTA-TV.

Exhibit 8 Average Frequency of Viewing Pay-TV vs FTA-TV, by Income Classification



Source: CASBAA 2017 Market Research Study

2.6. Changing Viewing Behavior in the Philippines

Results from the CASBAA 2017 Market Research Study show some indication of an ongoing shift in viewing patterns and preferences of Filipinos in urban areas. The following section sets out the key findings.

2.6.1. Usage Trends in Consuming Video Content

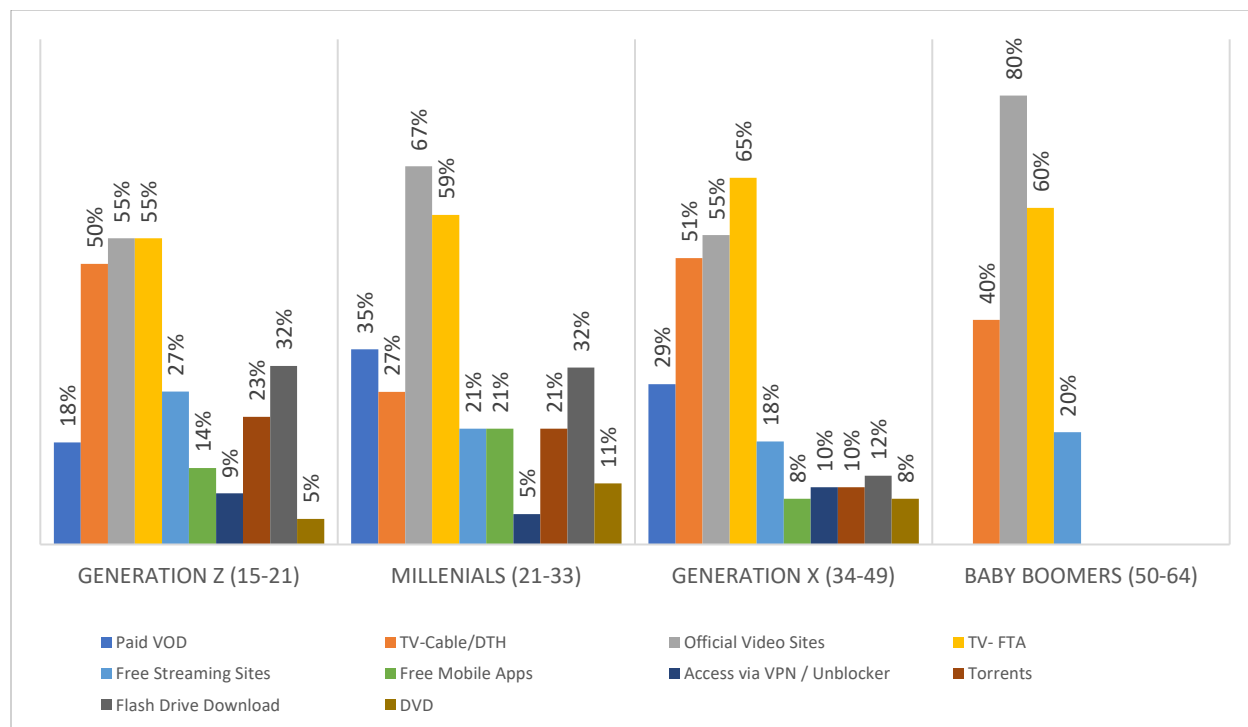
One of the main components of the study involved profiling the different sources of video content utilized by the respondents. This included both free and paid sources, and both legitimate and illicit sources. The respondents rated their usage on a Likert Scale of 1 to 7, with the highest rating signifying use several times a day, and the lowest signifying non-use of that channel. The time frame was set to be within the past 6 months.

2.6.1.1. Most Used Sources of Video Content

Exhibit 9 illustrates the most popularly video sources used daily, and grouped by age generation of respondents. The percentages are against total respondents of that category. For clarification, Official Video Sites stands for legal or authorized sites showing video content – such as YouTube, Facebook, news websites, tv channel websites, etc.

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Exhibit 9 Video Sources Used Daily, Grouped by Age (% of Total Respondents)



Note: Sample size for Baby Boomers is too small, and should be analyzed with caution

Source: CASBAA 2017 Market Research Study

Generation X

- Free-to-Air TV remains popular with Generation X -- it ranks highest, with 65% of respondents using it daily. This is followed by Official Video Sites (55%), and TV-Cable/DTH (51%). The number of Paid VOD viewers is equivalent to less than half of FTA-TV, with just 29%. The most-used pirated source of video is Free Streaming Sites, at 18% of respondents, which makes it more popular than Torrents. The usage of pirated sources is not very popular with the Generation X segment overall, with official and authorized sources out-performing daily usage of all pirated sources.

Millennials

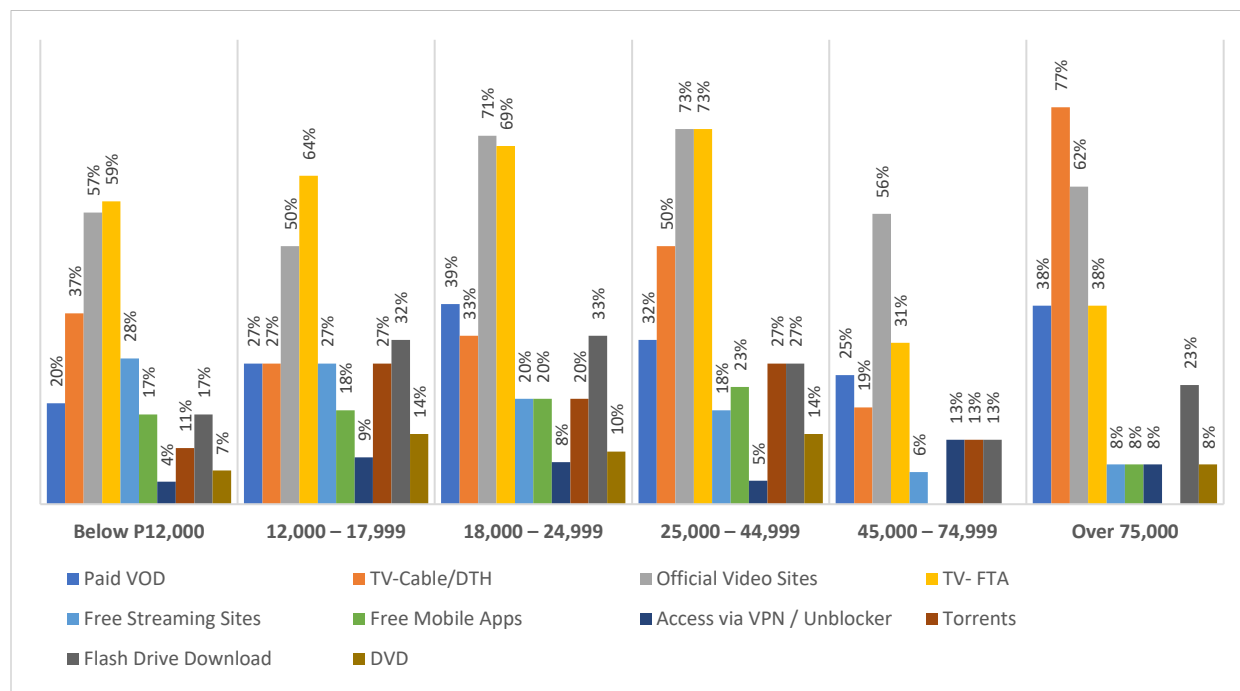
- The trend for Millennials is quite different. The most popular source is Official Video Sites, at 67% of total - this figure almost matches the rate Generation Xers watching FTA-TV (65%) daily. FTA-TV still ranks high with Millennials, it comes in second with 59%. When compared to all other age groups, one key difference is that there are more Millennials watching Paid VOD (35%) over TV-Cable/DTH (27%). The ratio of users consuming pirated content also almost doubles compared to Generation X, with 21% of Millennial respondents indicating they watch on Free Streaming Sites, Torrents, and Free Mobile Apps on a daily basis. Watching Flash Drive Downloads is also prevalent at 32%. This is higher than TV-Cable/DTH, and almost as high as Paid VOD.

Generation Z

- Generation Z respondents show less variation, the top 3 options are used almost equally – FTA TV (55%), Official Video Sites (55%) and TV-Cable/DTH (50%). Pirated use is also most prevalent in this age group, led by Flash Drive Download (32%), Free Streaming Sites (27%), and Torrents (23%).

To provide further insights into usage trends, we have included a breakdown of video sources used by income bracket in **Exhibit 10**.

Exhibit 10 Video Sources Used Daily, Grouped by Monthly Income Class (% of Total Respondents)



Source: CASBAA 2017 Market Research Study

This data highlights that both FTA-TV and official video sites dominate usage for the lower income brackets, from below PHP 12,000 to PHP 44,999. The drop in FTA-TV viewership is very apparent from PHP 45,000 and above, decreasing by almost half. While the figure for Official Video Sites drops in the PHP 45,000 to PHP 74,999 income bracket, the fall is not as steep, and actually, almost equals the usage rate of the below PHP 12,000 income bracket. TV-Cable/DTH usage shoots up for the highest income bracket of over PHP 75,000, with 77% saying that they watch daily. This is, in fact, the highest ratio across all income brackets and video sources.

Usage of pirated channels is comparatively low for the two upper income brackets, quite similar in ratio to the Generation X and Baby Boomer profiles. Pirated use appears to be most prevalent in the two lowest income classifications, with Free Streaming Sites and Flash Drive Download being the

most prevalent. Of all the sources, it is actually Flash Drive Download that is the most consistent in ratio across all income classifications, ranging from 17% to 33%.

2.6.1.2. New Trends in Watching Video Content

While FTA-TV remains highly popular for consuming local news and entertainment shows, our study also revealed some new trends in the way that Filipino viewers watch video content.

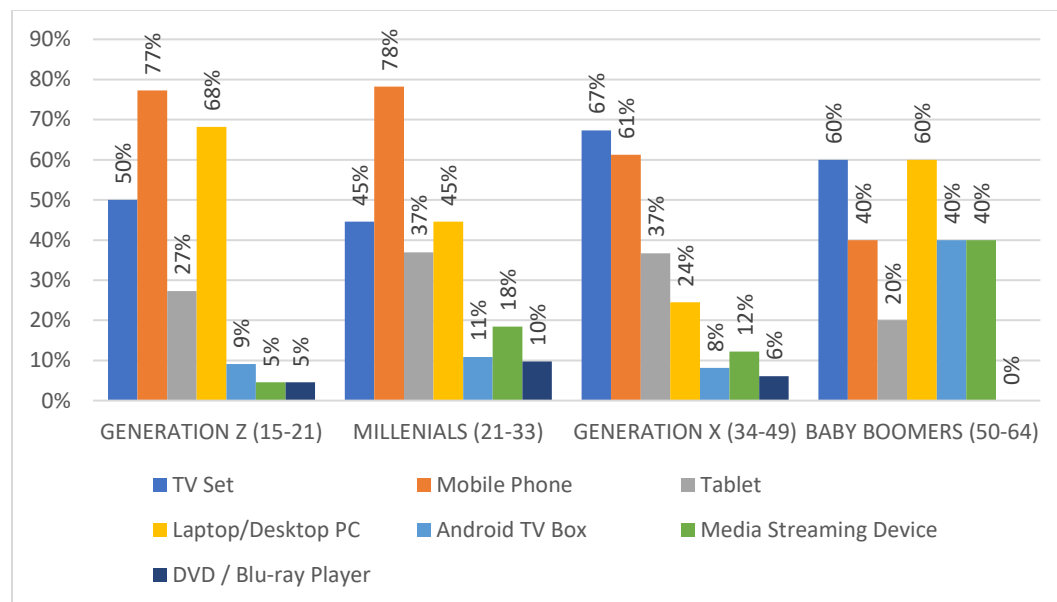
From our interviews with respondents, we noted that the popularity of viewing on Official Video Sites is driven by watching *short-format* content. Factors include both the need for conservation of internet access / data plan, and the popularity of such videos on social media sites. Respondents from different profiles shared that what they watch usually includes comedy clips from US talk shows (Ellen, James Corden and Jimmy Fallon), videos from local YouTube creators, viral videos of local news, entertainment and current affairs, and videos from social networks. Because they are mostly using mobile devices and watching on the go (e.g. at work, while commuting, etc.), they only have a short attention span. They reserve watching full TV episodes or movies for when they get home and get to have a better viewing environment.

Another behavior that we encountered is the watching of *live streams from illicit sources* (content includes movies, sports shows, live events, and TV episodes). This behavior was seen across all income brackets irrespective of preferred video sources. This behavior was usually driven by urgency and timeliness, such as catching the NBA playoffs, or watching a Manny Pacquiao boxing match, and the live feed of the Ms. Universe pageant, which was held in Manila in early 2017. People without immediate access to a TV set, such as those in transit or at work, resorted to looking for live video feeds. This was usually done by finding links shared by people on Facebook, using Facebook Live, or free streaming sites hosting live links.

2.6.2. Devices Used Most Frequently

Exhibit 11 details the same age generation grouping as above, but this time showing usage of various devices to watch their preferred video content. The respondents ranked from 1 to 7 how frequently they used each device. The chart below shows the percentage of those who answered 6 and 7, to signify those who watch daily, or several times a day.

Exhibit 11 Devices Used Daily, Grouped by Age (% of Total Respondents)



Note: Sample size for Baby Boomers is too small, and should be analyzed with caution

Source: CASBAA 2017 Market Research Study

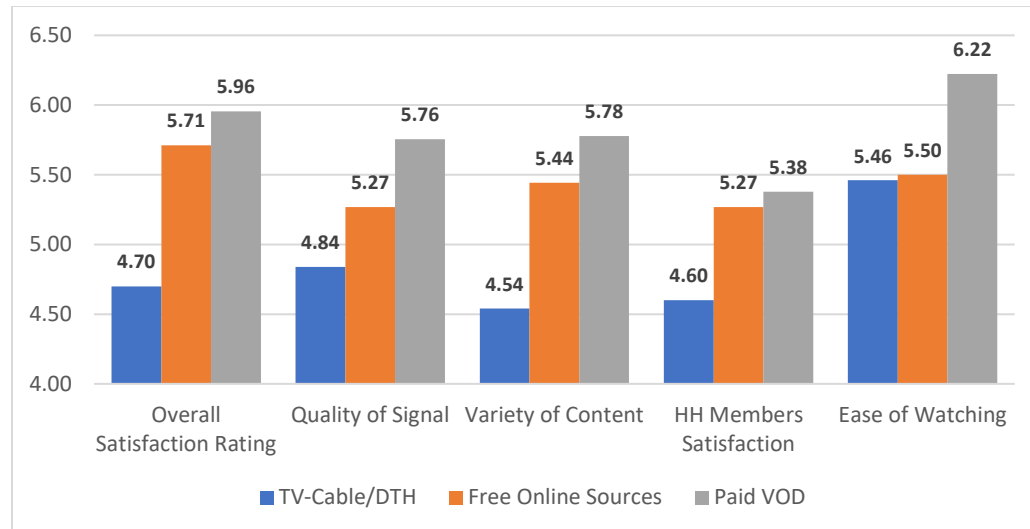
The younger age brackets -- Generation Z and Millennials -- both rate mobile phones as their most frequently used device. A key difference though lies in the gap for the second most popular choice. For Millennials, mobile phone was by far the top option, at 78% of respondents. This was followed by laptop, TV and tablet, which have similar shares of 45%, 45% and 37% respectively. In comparison, for Generation Z, the lead of mobile phones was slim at 77%, closely followed by laptops at 68%. This means that their device usage was more mixed, with heavier usage across devices on a daily basis. Generation X users, on the other hand, most-frequently used a TV set to watch video (67%), followed closely by mobile phones (61%).

Use of internet-enabled devices for viewing and casting was still low. Streaming devices like Chromecast & Roku ranged between 5% and 18%, while Android TV boxes only ranged between 8% and 11% across age groups.

2.6.3. Satisfaction Ratings

In the CASBAA 2017 Market Research Study, we also asked respondents to rate their satisfaction level with their self-reported principal source of video content. This is summarized in **Exhibit 12** below, based on a scale of 1 to 7, where 7 was very satisfied and 1 was very unsatisfied. The neutral point is 4. Aside from overall satisfaction, the attributes evaluated included clarity of reception or quality of the signal, variety of content from the point of view of the respondent, satisfaction of household members, like kids or senior citizen family members, and lastly, accessibility or ease of watching.

Exhibit 12 Viewer Satisfaction Rating, Grouped by Principal Video Source



Source: CASBAA 2017 Market Research Study

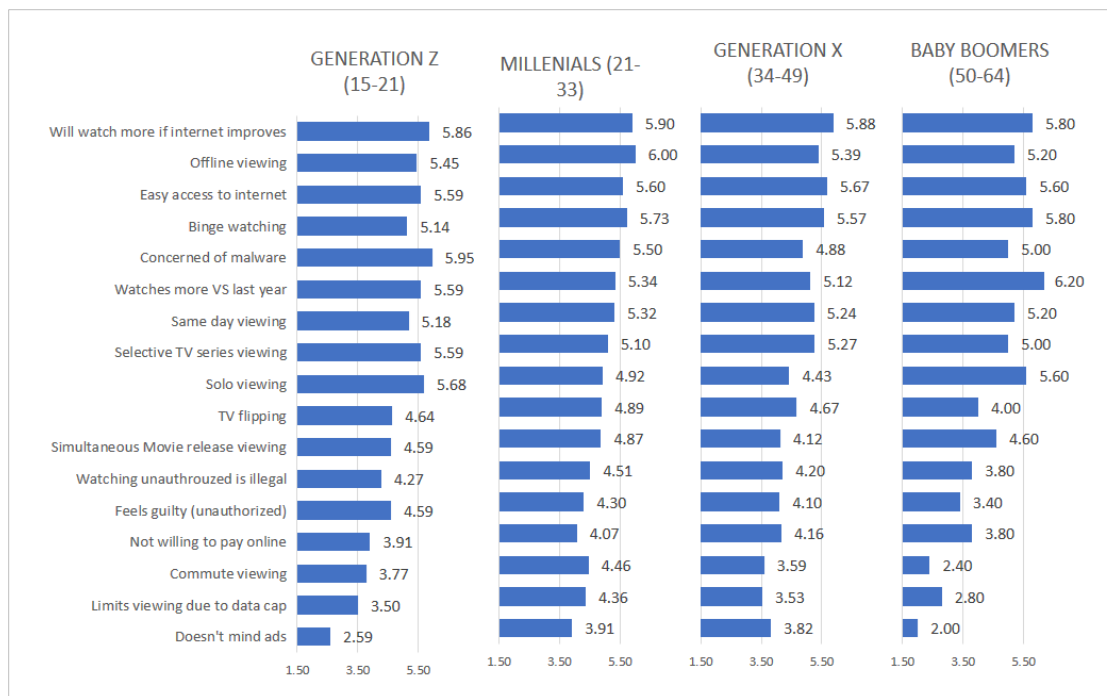
The rankings are consistent across all major groups – Paid VOD has the highest satisfaction, and TV-Cable/DTH has the lowest, garnering lower scores than Free Online Sources, such as free streaming sites and torrents. TV-Cable/DTH satisfaction was rated as near neutral, resulting from the fact that consumers didn’t find any of the attributes highly satisfying. TV-Cable/DTH gains some traction under ease of use, but is still ranked last behind Paid VOD and Free Online Sources. Despite issues with poor quality, cumbersome search and exploration, and the threat of malware, Free Sources were still seen as providing a satisfying overall viewing experience. Paid VOD users, on the other hand, have shown very high satisfaction levels. From the qualitative interviews conducted, users consistently commended the automatic adjustment of quality to ensure a “no buffering” experience, and appreciated the variety of content available. It should be noted that, in the study, of the Paid VOD respondents, about 90% of respondents watched four OTT services: Netflix (37%), iFlix (23%), iWantTV (16%), and HOOQ (15%).

2.6.4. Viewing Sentiments and Values

The following section presents results of viewer sentiments and values grouped by age and by principal video source. Respondents were asked to rate how important an issue or need was to them when they consume video content. This was again a 7-point Likert Scale, with 7 signifying a very important attribute, and 1 as not important to them all. The value analysis is based on a combination of attributes, such as affordability, quality of content, user experience, sensitivity to consuming pirated content, and video access scenarios.

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Exhibit 13 Viewer Sentiment & Value Average Rating, Grouped by Age



Note: Sample size for Baby Boomers is too small, and should be analyzed with caution

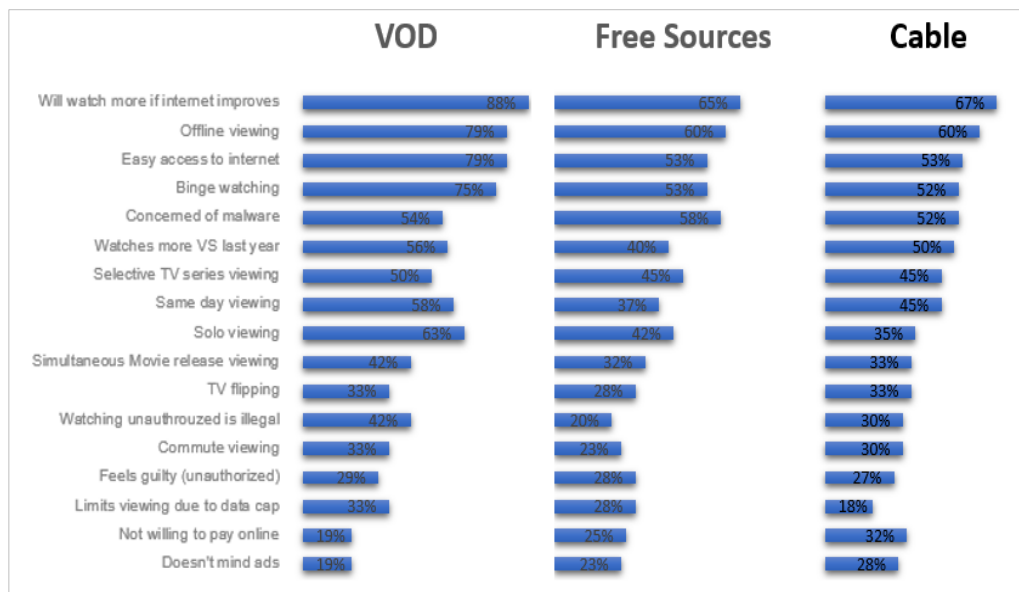
Source: CASBAA 2017 Market Research Study

In **Exhibit 13**, we grouped the values and attributes by generation. Some of the similarities across groups included the importance of internet accessibility. Most felt strongly that if internet access improved, both in speed and cost, they would consume more video content. Easy access to internet was also rated highly across all segments. After this, the ability to watch offline was rated as the most important.

Other key highlights included:

- Generation Z tended to have the highest rating for solo viewing, and they also had the highest sensitivity to being exposed to malware – in fact, this was their highest rated attribute. They also felt most guilty when watching illegal content, but in the overall scale it is rated a 4.59, which is slightly above neutral.
- Millennials were the most concerned with watching during their daily commute. They rated this factor as a positive 4.56, whereas the other groups scored this factor less than 4.0, indicating it is not very important to them. Millennials were also most concerned about internet data caps. Of all the attributes, Millennials rated offline viewing as most important to them.
- Generation X users had the lowest rating for solo viewing, indicating that they tend to prefer watching video with other people. They were least concerned with malware, and had the least interest in watching movies at the same time as their cinema release.

Exhibit 14 Viewer Sentiment & Value % of 6-7 Rating, Grouped by Principal Video Source



Source: CASBAA 2017 Market Research Study

Exhibit 14 above shows grouping by principal source of video content, which are Paid VOD, Free Sources and TV-Cable/DTH (i.e. Pay-TV). This chart highlights the relation between respondents' viewing values and their choice of viewing source. This is displayed by the percentage of respondents who assigned a 6 or 7 to a given value, in order to indicate the total volume of respondents who feel an attribute is urgent, or highly important to them.

Among the VOD respondents, nearly 79% to 88% strongly rated the importance of the following attributes: dependence on internet service to watch more; offline viewing; easy access to internet; and, binge watching. Only 33% of VOD users strongly agreed that limitation in viewing due to data caps mattered to them, which would indicate that their issues with their current internet provider are not the data limitation or throttling, but potentially the available speeds and pricing tiers. A key difference worth highlighting is that the majority of VOD users (63%) rated solo viewing as important, compared to less than 50% of those who preferred watching on Free Sources and TV-Cable/DTH.

For the Free Sources group, there was less intensity with the top 3 attributes only applying to 58% to 65% of the respondents. The top attributes were: dependence on internet service to watch more; offline viewing; and, exposure to malware. The feeling of guilt for watching pirated sources was the lowest among this segment, with only 20% strongly agreeing they felt guilty for watching illicitly sourced content.

The TV-Cable/DTH group's trend is similar to Free Sources in that the proportion of intensity for the attributes and values represented a lower proportion of total respondents than in the VOD group, with the top 3 attributes ranging from 53% to 67% of total users. Their highest rated attributes are: dependence on internet service to

watch more; offline viewing; and, easy access to internet. The TV-Cable/DTH group had the lowest ratio for solo viewing, and, predictably, had the least concern with data caps.

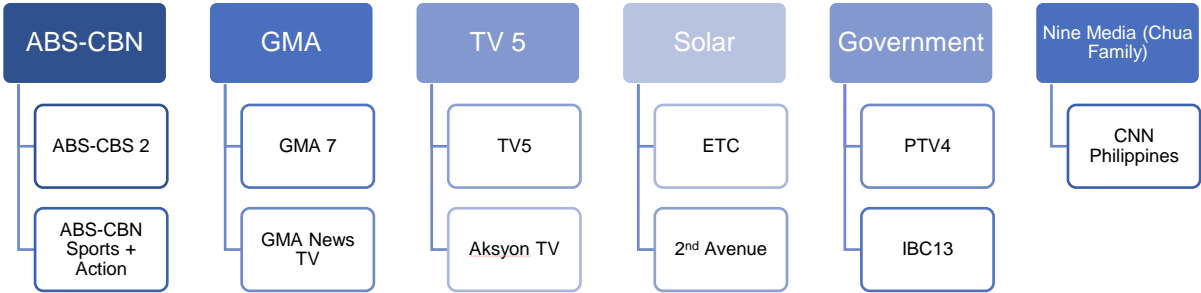
3. Overview of Philippine Free-To-Air (FTA) Broadcasting

The following section gives an overview of the Philippines FTA TV industry landscape and its key players. It provides a summary of business scope, descriptions of strategies and programs implemented, and financial information, where available.

3.1. TV Industry Landscape and Key Players Overview

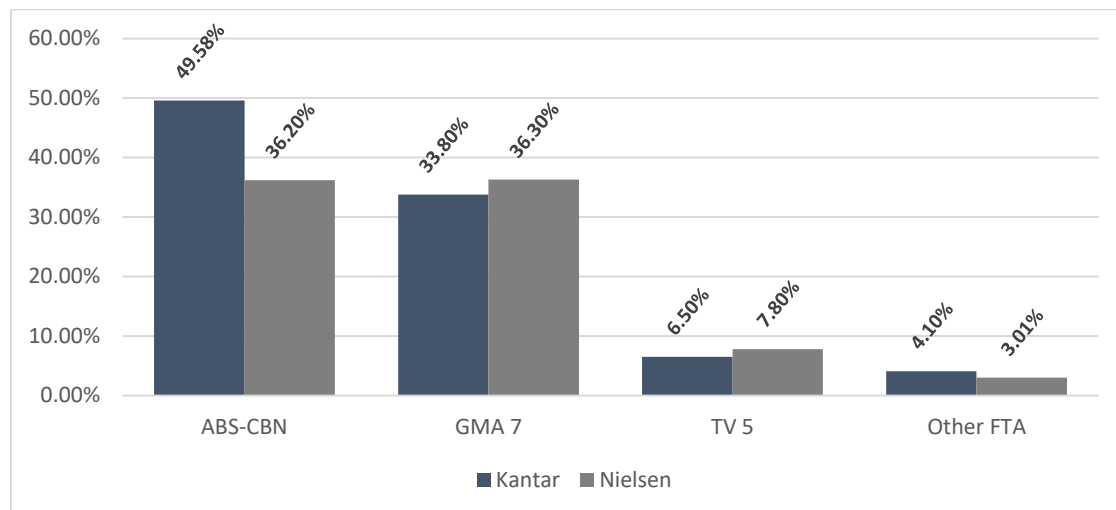
While the National Telecommunications Commission (NTC) reported over 435 broadcast TV stations with a license to operate across the country, there are only three players that dominate the market: ABS-CBN, GMA7 and TV5. The smaller players include government owned and operated channels (PTV 4, IBC 3), church-owned channels (INC TV, NET 25), and other privately-owned players like Solar, CNN Philippines, and shopping TV channels. **Exhibit 15** below shows a summary of media ownership for popular FTA channels.

Exhibit 15 Ownership of Main FTA Channels



Based on Nielsen’s January – June 2016 National TV Audience Measurement Report, the 3 top media conglomerates account for 85% of the total national audience share. The remaining 15% is spread very thinly across the other national and provincial broadcasting channels. For instance, the newly launched CNN Philippines had a 0.75% share, while Solar Entertainment’s ETC channel recorded a 0.15% share. The comparative audience measurements between Nielsen and Kantar are shared below in **Exhibit 16**.

Exhibit 16 Audience Share of FTAs, 2016 Nielsen VS Kantar



Source: Nielsen Television Audience Measurement - Ratings & Audience Share 2016 Urban National, and Kantar Media TV Ratings Measurement - Total Day National Audience Share 2016

In the Philippines, both a congressional franchise as well as a Certificate of Public Convenience from the NTC are required to operate a terrestrial broadcast TV station. (This is in order to acquire the dedicated broadcasting frequency.) In Metro Manila, this is limited to 23 channels, which are all already issued. As such, entities that wish to enter into the TV business usually partner with other entities who already possess a franchise. Such is the case with 2nd Avenue of Solar, which broadcasts through Rajah Broadcasting Network, and CNN Philippines, which broadcasts through the Radio Philippines Network, or RPN9.

3.2. Main FTA Broadcasters

3.2.1. ABS-CBN Corp.

The largest media and entertainment conglomerate in the country, ABS-CBN Corp. (ABS-CBN) holds interests in FTA and Pay-TV, radio, online media, print, movies, telecommunications, content production and other related businesses. It is a publicly traded company, but the controlling stake is owned by the Lopez Group of Companies. The conglomerate's non-media businesses include power and energy, property development, and manufacturing.

Exhibit 17 below shares a summary and grouping of the main business interests of the ABS-CBN group.

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Exhibit 17 ABS CBN Business Interests



Source: ABS-CBN Annual Report Presentation 2016

ABS-CBN operates two flagship FTA channels: ABS-CBN Channel 2; and, a new sports-focused channel ABS-CBN Sports + Action, which launched in January 2014 to replace its old format Studio 23. In total, including provincial operations, the network runs 39 VHF stations, 41 UHF stations, and 8 cable channels. Audience Share TV Ratings is a highly disputed space in the Philippines, with ABS-CBN using Kantar, and GMA 7 using Nielsen. Kantar reported an annual average of 44.7% of audience share for ABS-CBN in 2016, while Nielsen reported a lower 37.58% share for January to June 2016, but this figure was still higher than GMA 7's audience share. ABS-CBN has been very successful at producing primetime soaps, entertainment game shows, lifestyle talk shows, and news and current affairs programmes.

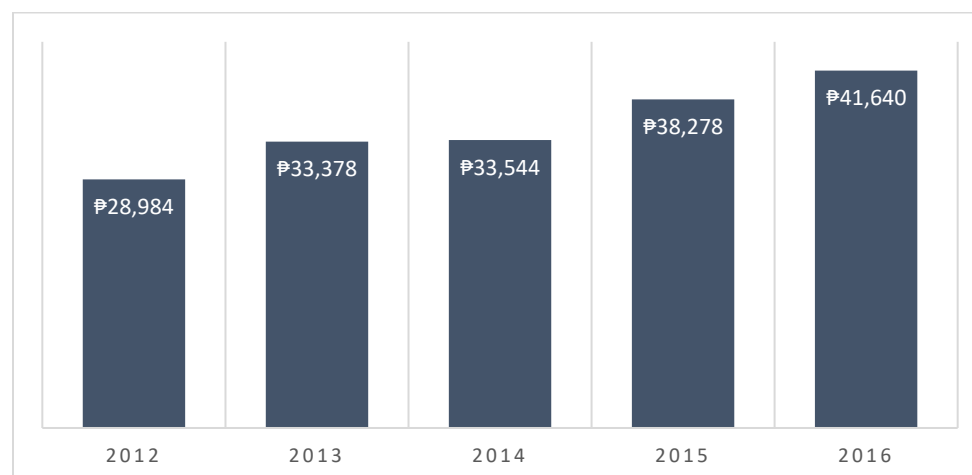
Primarily a cable TV business, the Sky brand has diversified to offer access solutions in cable TV, direct-to-home satellite, fixed and wireless broadband, and video-on-demand services. 2016 was a banner year, as it surpassed one million subscribers. This was driven by an aggressive 46% growth in broadband subscribers, and its successful launch of Sky DTH that attracted over 120,000 subscribers in 8 months. Sky now offers the largest selection of Pay-TV channels in the Philippines, with over 200 channels, including exclusive channels from the ABS-CBN network, and 64 HD channels. In 2015, it also launched SKYmobi, a pocket-wifi service that provides wireless broadband connectivity and exclusive access to Sky Cable content. This is enabled through SKY On-demand, an encrypted video-on-demand service. Another growth enabler is ABS-CBN Mobile, a mobile virtual network operator (MVNO) deal with Globe Telecom, which the group is leveraging to spread and monetize its content.

Exhibit 18 below details the annual revenues of ABS-CBN, from 2011 to 2016. The group hit revenues of PHP 41.6 billion in 2016, growing 8.8% from the previous year. While it

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did not grow as aggressively as in 2015, which saw 14.1% growth, it continued to see an upward trend after experiencing flat growth in 2014.

Exhibit 18 ABS-CBN Net Revenues (in PHP Millions)



Source: ABS-CBN Annual Report Presentation 2016

Also provided in **Exhibit 19** below is a view of operating revenues and income, grouped together by business unit. This is aligned with the grouping of businesses detailed in Exhibit 17 earlier.

Exhibit 19 ABS-CBN Operating Revenues & Income by Business (in PHP Millions)

	Operating Revenues			Operating Income		
	2014	2015	2016	2014	2015	2016
<i>Media Networks & Studio Entertainment</i>	₱24,645	₱28,511	₱30,568	₱5,030	₱4,719	₱6,179
<i>Cable, Satellite & Broadband</i>	₱7,764	₱8,083	₱8,761	₱404	₱186	₱219
<i>Digital & Interactive Media</i>	₱653	₱712	₱781	-₱2,134	-₱1,155	-₱1,265
<i>Consumer Products & Experiences</i>	₱482	₱971	₱1,520	-₱126	-₱157	-₱193

Source: ABS-CBN Annual Report Presentation 2016

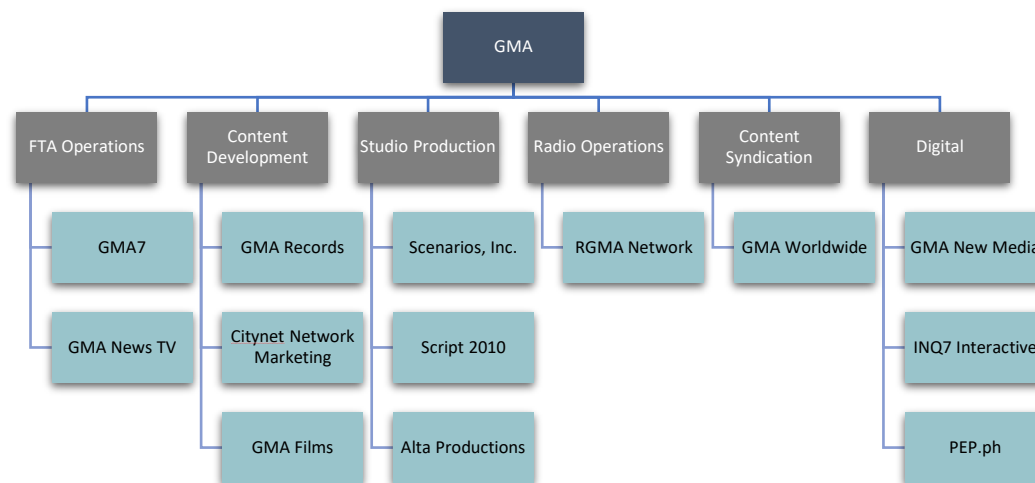
3.2.2. GMA Network Inc.

GMA Network Inc. (GMA) is one of the country's largest media entities, and is engaged primarily in television and radio broadcasting. As of end-2016, it owned 47 VHF and 41 UHF television stations throughout the country, and its signal reached an estimated 98% of all TV households in the Philippines. Its flagship station, GMA 7, is one of the two most popular FTA channels on TV, and it also operates a sister station, GMA News TV (co-owned with Zoe Broadcasting Network). Aside from its TV business, GMA also operates 19 FM radio stations and 4 AM stations, and has other business interests in

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digital media, music recording, film distribution, stage design, post-production, and content syndication. They do not have any Pay-TV businesses or operations as of the time this report was published. **Exhibit 20** below maps out the different business units under GMA.

Exhibit 20 GMA Business Interests



Source: GMA Annual Report 2016

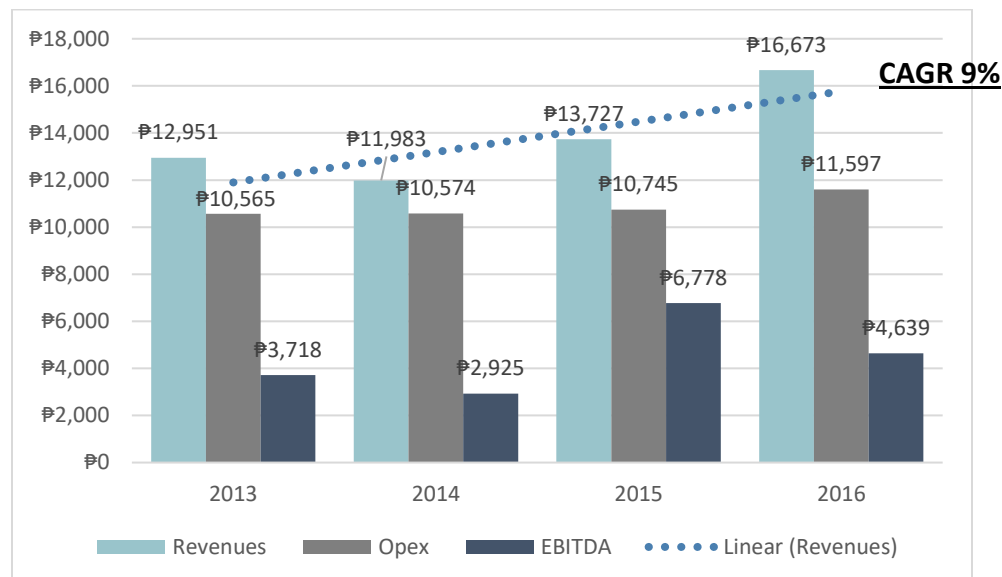
GMA Network went public in 2007. According to its 2016 Annual Report, 90% of GMA's business is derived from broadcasting. Revenues from its international business contributed 8%, and its other businesses (film, new media, etc.) generated approximately 2% of total revenues.

GMA 7 also reported that it regained leadership in audience share, as of 2016, over ABS-CBN 2 in the highly coveted regions of urban Luzon and the greater Manila area. Audience ratings are highly contested by the two top-players, and both interchangeably announce ratings leadership. For audience measurement, GMA has exclusively utilized the services of Nielsen, while ABS-CBN has relied on Kantar's systems.

Consolidated revenues grew by 21% in 2016, driven by increased political advertising spending from the national elections (reported at PHP 1.5 Billion), and an upswing in regular advertising placements due to its ratings leadership in key markets. Other platforms also reported positive performance -- GMA News TV revenues grew by 10% compared to the previous year, and international business grew by 15% to PHP 1.542 billion from growth in GMA Pinoy TV's global subscriber numbers, and channel launches with OSN (Middle East) and StarHub (Singapore).

Exhibit 21 below illustrates the revenue growth trend of GMA from 2013 to 2016. Its CAGR was 9% during this period.

Exhibit 21 GMA Financial Highlights 2013 - 2016



Source: GMA Annual Report 2016

3.2.3. TV5 Network Inc.

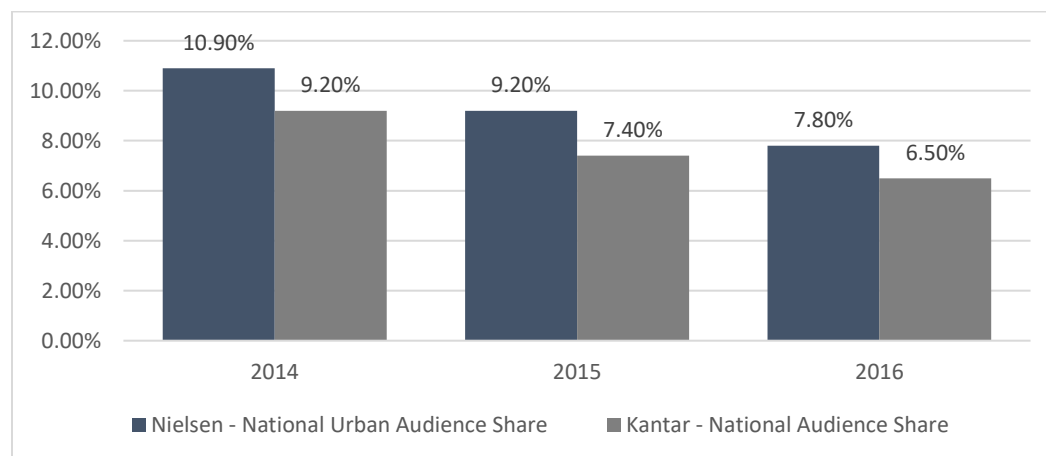
After ABS-CBN and GMA, the third major player in the TV industry is TV5. Although it trails behind the two giants in terms of audience ratings, it is backed by the PLDT group which gives it tremendous leverage in terms of access to technology and resources. TV5 is solely owned by MediaQuest Holdings Inc., which is a wholly owned subsidiary of the PLDT Beneficial Trust Fund, and not owned by PLDT directly because of two laws. The first is the 100% Filipino ownership rule for media companies and the second as set forth in The Telecommunications Policy Act of 1995 states that a single entity cannot be engaged in both telecommunications and broadcasting under a single franchise. Aside from TV5, also under the MediaQuest umbrella are the Nation Broadcasting Corporation (NBC), Cignal TV, The Philippine Star newspaper (51%), Business World Publishing Corporation (70%), production house Unitel Group (30%), and AKTV (80%).

TV5 has expanded its programming lineup with a mix of both locally produced and foreign content. It partnered with Marvel Studios for its kids' timeslots, it acquired exclusive rights to show the Ultimate Fighting Championship (UFC) from ABS-CBN in 2016 and World Wrestling Entertainment (WWE) from Fox in 2017, and it partnered with Viacom International to show MTV programs. On the local side, its continued broadcast of Philippine Basketball Association (PBA) games remains a strong draw, and strengthened entertainment shows from a partnership with Sari Sari Network of Viva Entertainment have improved its mix. These recent changes were introduced, as

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audience share for TV5 had been declining between 2014 and 2016, as shown in **Exhibit 22** below.

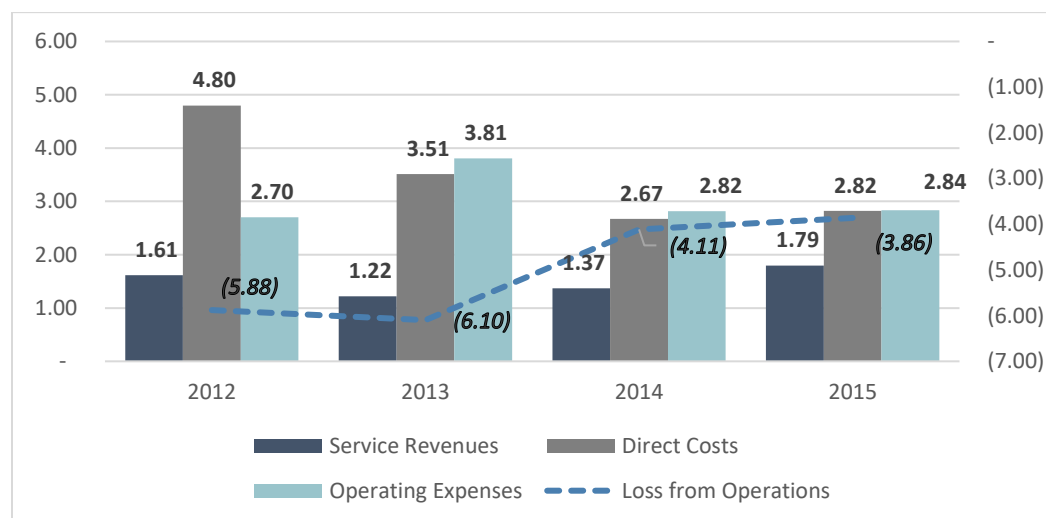
Exhibit 22 TV5 Audience Share 2014 - 2016



Source: Nielsen Television Audience Measurement - Ratings & Audience Share 2016 Urban National, and Kantar Media TV Ratings Measurement - Total Day National Audience Share 2016

In a news report from Business World dated May 22, 2017, TV5 Chairman Manuel V Pangilinan was quoted as stating that he sees TV5 breaking even by 2019. Official financial reports for 2016 from the Securities and Exchange Commission have yet to be released, but based on 2012 to 2015 figures, TV5 has managed to trim direct costs from PHP 4.8 billion to PHP 2.82 billion, while posting revenue growth at a 3.59% CAGR over the same period. This is illustrated further in **Exhibit 23** below.

Exhibit 23 TV5 Network Operating Income 2012 - 2015 (in PHP Billions)



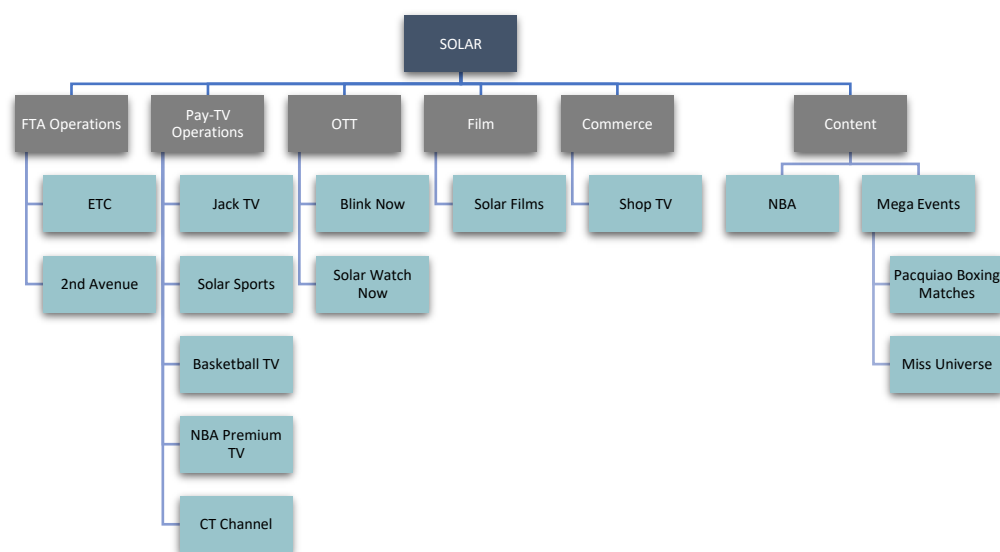
Source: TV5 Financial Statements 2013 and 2015

3.2.4. Solar Entertainment Corporation

Solar is a diversified player in the local TV entertainment industry. As of end-2016, it operated FTA channels and Pay-TV channels, produced its own TV shows, offered various content on block time arrangement with local TV channels, ran a film distribution business, owned exclusive broadcast deals for mega-events, and developed digital media services. It also owned Domestic Satellite Philippines Inc. (DOMSAT), which marketed VSAT-based and BGAN-based Virtual Private Networks in the country. Solar is privately owned by the Tieng Family, which also has business interests in other areas, such as food distribution, real estate development, mining, and e-gaming.

Exhibit 24 details the various business interests in the media space under Solar, and the brands that it operates and/or partners with.

Exhibit 24 Solar Entertainment Business Interests



Source: Solar Corporate Website and Press Reports

Solar’s FTA and Pay-TV channels primarily broadcast a mix of entertainment and sports programs. ETC and 2nd Avenue target the young adult demographic with a skew towards female-oriented programming consisting of US-sourced sitcoms, talk shows, and entertainment news. It also offers local content via its in-house produced TV magazine shows, and airs other local programs, such as Project Runway Philippines. ETC is broadcast using Southern Broadcasting Network Channel 21, which is a wholly owned subsidiary of Solar. 2nd Avenue, on the other hand, is broadcast on FTA TV via a block time agreement with Rajah Broadcasting Network Channel 29.

Solar also generated revenues from other streams, such as e-commerce, program distribution, and licensing of mega-events. Shop TV is a 24-hour home TV shopping channel on Pay-TV and it also has a block time arrangement with channels such as GMA News TV, BEAM TV and on other Solar TV channels. Solar also won rights for exclusive

broadcast of highly-popular mega events with local audiences, such as Manny Pacquiao boxing matches, and the Miss Universe pageant which was held in Manila in 2017. It also holds exclusive rights over NBA broadcasting, for which it had filed a legal case against ABS-CBN, over claims of unpaid carriage fees. As of the time of this report going to press, the case is yet to be resolved.

In terms of new technologies, Solar subsidiary Omni Media Ventures entered into a joint venture agreement with SM Prime Holdings to operate Blink Now, a video-on-demand streaming service. SM Prime, which holds 60% of the venture, operates the largest network of cinemas and entertainment facilities in the country (bowling alleys, ice skating, etc.). Both parties announced their USD 20 million investment into the venture, to expand the service, and , to develop the capability to show movies right after their cinema run. On a smaller scale, Solar also launched its own video-on-demand catchup product called Solar Watch Now, available on web, Android and iOS. The service was free of charge, but content was limited to its studio produced shows only.

Solar is also reportedly venturing into the DTH business, according to multiple industry stakeholders we spoke to. Their view is that Solar is developing a nationwide DTH service that will be free of charge to consumers, with revenues to be generated solely from advertising. Representatives at the National Telecommunications Commission confirmed that Solar applied for a Certificate of Public Convenience to operate and maintain a *Nationwide Direct-to-Home User Satellite Broadcast System*. The application had no mention of the business and revenue model it intended to set up.

3.2.5. Other Players

CNN Philippines went on the air in March 2015, broadcasting on FTA TV via Radio Philippines Network (RPN) Channel 9. It is owned by Nine Media Corporation, which bought out the 34% stake of the Tieng Family (Solar Entertainment Corp.), and entered into a brand licensing agreement with Turner Broadcasting System to launch CNN Philippines. It is the fifth local franchise of CNN in Asia, after CNN Indonesia, Turkey, Arabic and India. Its programming lineup is composed of local news shows and international reports from the CNN global network, lifestyle and current affairs shows made by local producers, and select programs from CNN US, and their Headline New Network, which is broadcast during the overnight hours.

Government-owned IBC 13 was given the green light to commence a privatization process by former Philippine president Benigno Aquino III in January 2016. A floor price of PHP 1.977 billion was set, and it's believed that it could be sold for up to as high as PHP 10 billion, according to the Presidential Communications Operations Office Chief, Martin Andanar, who is spearheading the privatization. Proceeds from the sale are planned to be used for the modernization of the primary government TV station, PTV 4. IBC 13 was reportedly operating at a loss amounting to PHP 45.26 million from 2010 to 2014, and received operational subsidies amounting to PHP 23.56 million in 2015. Several prominent business and political leaders have publicly declared interest in the

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bid, such as San Miguel Corporation COO, Ramon Ang, and business tycoon and former governor, Chavit Singson.

Home TV shopping has also seen a resurgence in popularity in the Philippines in the past three years. As of May 2017, there were ten home TV shopping programs on air, with a few dominating airtimes. Solar-owned Shop TV is available 24 hours, and sells products from the Home Shopping Network (HSN) US. It airs on 2nd Avenue, Basketball TV, GMA News TV, GMA 7, BEAM TV, and Jack TV. TV Shop Philippines airs on IBC, Cignal TV, Living Asia Channel, PTV, Telenovela Channel, and BEAM TV. O Shopping is a joint venture between ABS-CBN and South Korean home TV shopping company, CJ O Shopping Corp. O Shopping grew revenues by 23% to PHP 824 million in 2016, as reported at the ABS-CBN annual stockholders meeting. It airs on ABS-CBN, Sky, Destiny, iWantTV and PTV. TV5 also operates its own home shopping program called Shop Japan.

BEAM TV, or Broadcast Enterprises & Affiliated Media, is an FTA channel that was acquired by Globe Telecom through Bethlehem Holdings Inc. (BHI) in 2009. BHI is an investee of the Globe Group Retirement Fund, and not owned by Globe directly because of the 100% Filipino ownership rule for media companies and the regulation disallowing a single entity to be engaged in both broadcasting and telecommunications. As of May 2017, its programming has been composed of home TV shopping shows, and a few current affairs and lifestyle programs. In April 2015, it was reported that BHI invested PHP 200 million for the DTT roll out of BEAM, and they projected a 2 to 3-year timeframe to complete these upgrades. According to BHI President, Steve Macion, the strategic plan is to operate a commercial-grade TV channel using the ISDB-T standard, in compliance with the DTT requirements of the NTC. Aside from BEAM TV, BHI also owns Altimax, a commercial direct-to-home satellite television operator.

For a complete list of FTA channels with nationwide coverage licensed by the National Telecommunications Commission (NTC), please refer to **Exhibit 25** below.

Exhibit 25 List of FTA Channels VHF and UHF with Nationwide Coverage

#	Channel	Owner of Legislative Franchise	Remarks
VHF Channels			
2	ABS-CBN	ABS-CBN Corporation	
4	PTV4	People's Television Network	Public / government owned and operated
5	TV5	TV 5 Network Inc.	
7	GMA7	GMA Network Inc.	
9	CNN Philippines	Radio Philippines Network	Formerly RPN9, it is now broadcasting CNN operated by Nine Media Corp
11	GMA News TV	Zoe Broadcasting Network	Joint venture with GMA Network
13	IBC13	International Broadcasting Corporation	Public / government owned and operated
UHF Channels			
21	ETC	Southern Broadcasting Network	
23	ABS CBN Sports + Action	ABS-CBN Corporation	
25	Net 25	Eagle Broadcasting Corporation	
29	2 nd Avenue	Rajah Broadcasting Network	Currently broadcasting Solar Entertainment's 2 nd Avenue
31	BEAM TV	Broadcast Enterprises and	Formerly E! Philippines

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Affiliated Media			
35	DBS-TV	Delta Broadcasting System	
37	UNTV	Progressive Broadcasting Corporation	Formerly NUTV 37
39	SMNI	Sonshine Media Network International	
41	Aksyon TV	Nation Broadcasting Corporation	Operated by TV5 Network Inc.
45	Hope Channel	Gateway UHF Broadcasting	
49	INC TV	Christian Era Broadcasting Service	
Inactive Channels			
27	Citynet TV	GMA Network Inc.	Closed 2011 due to cost rationalization measures
33	Light Network	Zoe Broadcasting Network	Shifted to digital broadcasting
43	Crossover	Mareco Broadcasting Network	Radio station simultaneous broadcast
47		TV5 Network	
68	Intervision 68	Byers Communications	

Note: This table excludes provincial stations / channels

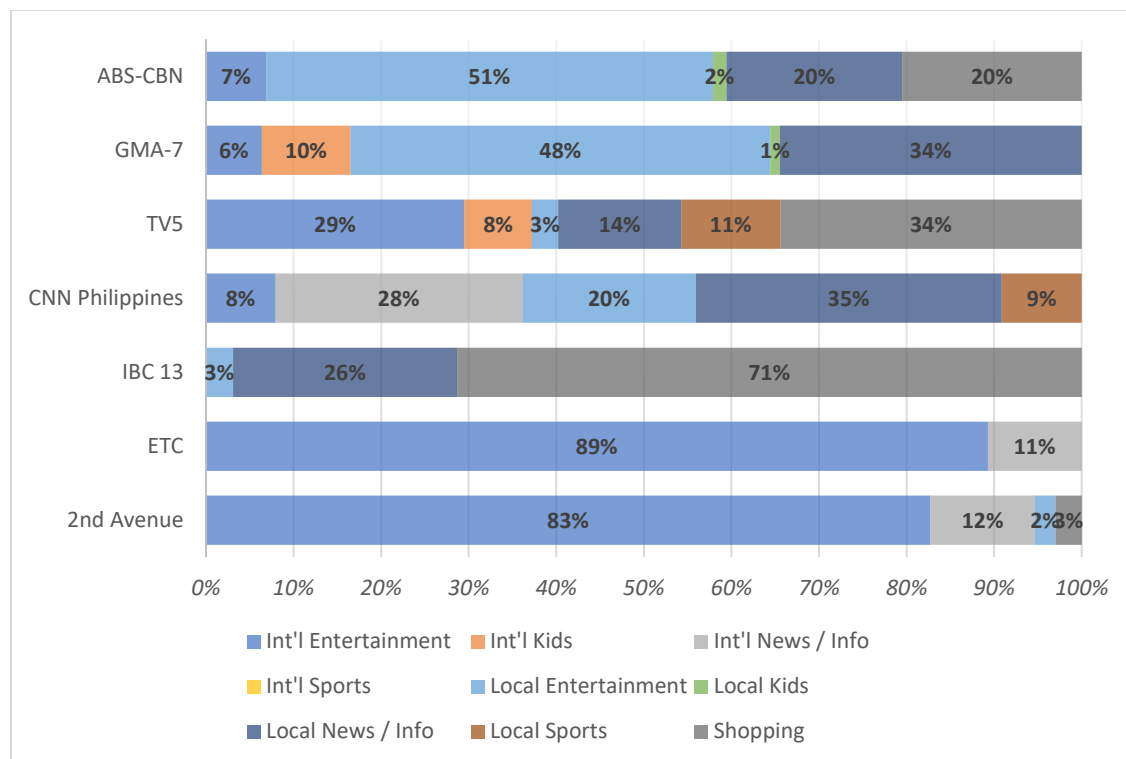
Source: National Telecommunications Commission, TV Station Websites and Press Reports

3.3. FTA Content and Programming

The broadcast programming mix for flagship FTA channels is summarized in **Exhibit 26** below. This is based on published TV schedules for the month of May 2017. The chart details the programming mix for top FTA channels, ABS-CBN, GMA and TV5, and other local FTA channels, such as CNN Philippines, IBC 13, ETC, and 2nd Avenue. It is grouped together by foreign and local programs under the following categories: news; sports; entertainment; kids; and, shopping. The information is aggregated based on airtime hours.

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Exhibit 26 Programming Split by Hours- Flagship FTA Channels



Source: Analysis of Published TV Schedules and Programming May 2017

The leading local channels, ABS-CBN and GMA, showed consistent focus on local entertainment programming, with an allocation of approximately 50% their airtime. In our 2013 Philippines-in-View report, this was 54% and 52% respectively.

ABS-CBN also allotted 20% of its airtime to its shopping programming, O Shopping, though mostly for off-peak and midnight schedules. The channel also showed a slightly diminished share of local news, from 25% in 2013 down to 20% in 2017. All sports programs have been eliminated from its lineup, given the launch of its sister sports channel, ABS-CBN Sports + Action. Combined, kids programming has also dwindled to 2% of its airtime, from 11% in 2013.

GMA showed an increased share of Local News shows, up to 34% from just 12% in 2013. This was done as the share of kids programming dropped from 20% to 11%, and international entertainment was reduced from 16% to 7% in 2017.

For the other channels, Solar-owned ETC and 2nd Avenue both dedicated the majority of their airtime to international entertainment, which is aligned with their drive for “match-airing”, or the same day showing as the US release for popular TV shows. Shopping programming has increased to populate dead airtime hours across various channels. CNN Philippines and TV5 both allocated a flat spread of mixed programming, as they have both re-formatted their offerings in the past year.

3.4. FTA Switchover to Digital

The Department of ICT announced its Digital Terrestrial Television Broadcasting (DTTB) migration plan in February 2017. The goal is to have 95% of the country's households switch to digital terrestrial television by 2023. The country's shift to digital broadcasts will help keep the industry at pace with technological innovations, provide better public service, and ensure the competitiveness of the country's broadcast industry.

The DTTB migration plan is a partnership between various government offices and industry players, with the goal of tackling all policy, regulatory, technical and fiscal concerns. It includes policy implementation and regulation by the National Telecommunications Commission (NTC), funding from the Department of Finance, the provision of incentives to small scale broadcasters by the Department of Trade and Industry, e-waste management by the Department of Environment and Natural Resources, economic impact planning by the National Economic Development Agency, and budgeting a of financial subsidy for the purchase of set-top boxes by the Department of Social Welfare and Development.

The DTTB migration was set in motion when the NTC issued its Memorandum Circular No. 07-12-2014 at the end of 2014, which details the implementation rules and regulations for DTT broadcast services. Under the circular, analog VHF TV operators that are granted the authority to provide DTTB services are required to simulcast digital broadcasts with their analog TV services within one year. Any who fail to comply will lose their frequency to other qualified UHF operators.

The switch to digital will benefit consumers with a better viewing experience given the wider selection of channels, and improved sound and picture quality. The Philippines is adopting Japan's DTT system (Integrated Services Digital Broadcast Terrestrial (ISDB-T)), which is equipped with an Emergency Warning Broadcast System. This is valuable to a country prone to natural calamities, like earthquakes and typhoons. The dropping cost of digital television sets and the increased availability of decoder boxes should help make the switch to DTT smoother for consumers.

In a statement made at the Digital TV Summit 2017, an NTC official estimated that a small broadcaster would need PHP 50 million in investments to shift to Digital TV broadcast, and added that the NTC is studying subsidy options for small broadcasters to facilitate the transition. The large broadcasters -- ABS-CBN, GMA and TV5 -- have earmarked between PHP 400 million to PHP 2 billion for the transition.

3.5. DTT Market Adoption

ABS-CBN was first to market its DTT service when it launched its TV Plus set-top box in December 2015. ABS-CBN claimed that it had sold 2.3 million units as of end-2016. Initially introduced at PHP 2,500 per unit, the price has been brought down to PHP 1,499, and the set-top boxes can be easily purchased from a vast network of retailers online and offline in its coverage areas. On top of FTA channels, the ABS-CBN TV Plus box also includes encrypted DTT access to exclusive ABS-CBN channels, previously only available on Pay-TV, such as

DZMM Teleradyo, the Knowledge Channel, Cinemo, and Yey (kids). Also bundled is an ABS-CBN mobile SIM which enables viewing of paid content. As of May 2017, the coverage area spans 15 locations across the country, including Metro Manila, Cebu, Davao, Bacolod, and Benguet, among others. The areas reach a total of approximately 40 million people, or about 9 million households.

GMA 7 announced that it has set aside a PHP 417 million budget for the set-up cost to cover Metro Manila with its DTTB signal. The actual plans of GMA have not been announced, but company officials have stated that GMA will start broadcasting its digital service within 2017. Also unveiled during a business conference in Manila in October 2016 was a digital receiver prototype that converts screens of devices into a Smart TV. Engineered as a hybrid receiver for digital TV and online digital media set-top box in one by GMA subsidiary, New Media, the device has already been issued a patent by the Philippine Intellectual Property office.

CNN Philippines started conducting its DTT testing as early as January 2016, and as of July 2017, has reportedly set-up DTV facilities east of Manila in the upland area of Antipolo. Users within the vicinity have reported access to both SD and HD configurations. Likewise, BEAM TV announced that it earmarked PHP 200 million for its facilities upgrade, which included the migration to DTTB.

Various devices capable of receiving DTT signals have also been introduced in the market, and are popularly called “black boxes.” Brands include RCA, Tomiko, Wow!, in addition to ABS-CBN TV Plus. Prices of these devices range from PHP 1,499 to PHP 2,499, and they can be purchased through retail chains and e-commerce online stores. Several TV brands have also started to market DTT-ready televisions sets, such as Panasonic, TCL, Haier, and Skyworth.

4. Philippine Pay-TV Structure

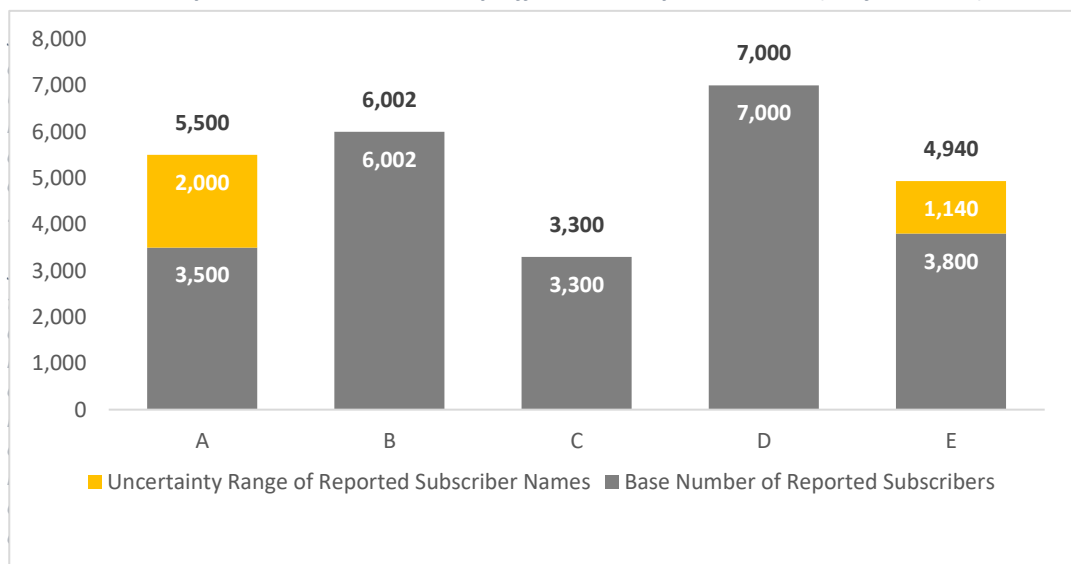
The following section takes a deeper look into the Pay-TV industry in terms of overall market size and growth trends, key players, revenues and pricing strategies, content and programming, industry innovations and technology issues, and a discussion on how piracy is affecting the industry.

4.1. Pay-TV Subscribers – Market Size

Obtaining a single acceptable figure on the total number of Pay-TV subscribers in the country was not feasible, as different stakeholders we interviewed had widely differing views. This can be attributed to disparate opinions on the amount of under reporting that occurs. This is usually related to operators’ discounted subscriber figures, unaccounted subscribers from illegal connections and signal theft, under reported income, etc. Interestingly, one point raised during our interviews was the assertion that, more than illegal connections, the uncertainty variance comes primarily from under declaration by cable operators, because it is customary for them to keep subscriber numbers highly confidential. One cable operator representative mentioned that they would only consider publishing subscriber numbers if they started selling advertising spots on cable.

Presented below in **Exhibit 27** is the compendium of all these views, coming from a sample of Pay-TV operators, industry groups, programme providers, and government regulators. The estimates range from a low of 3.3 million to a high of 7 million. Research firm Media Partners Asia estimated the number to stand at 3,359 million as of end-2016, and projected an increase to 3,741 million by end-2017.

Exhibit 27 Total Pay-TV Subscribers Estimated by Different Industry Leaders '000s (as of June 2017)



Source: Stakeholder Interviews

4.2. Pay-TV Subscribers – Growth Trends

The total count of Pay-TV subscribers in the Philippines continues to grow, posting a growth rate of 10-12% per annum from 2011 to 2016.

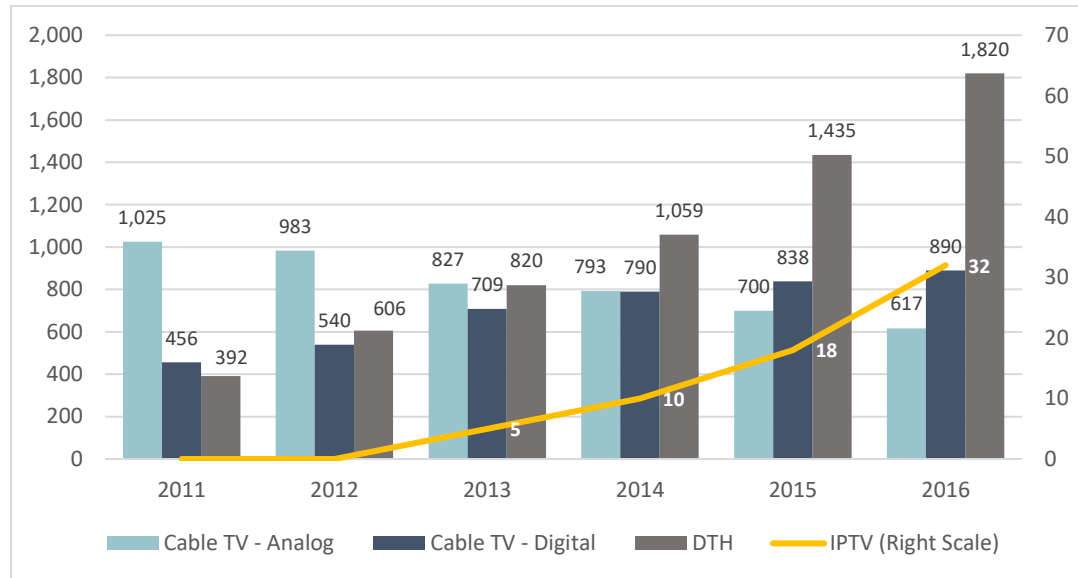
The growth was attributed to different factors, including access to new markets through the availability of DTH, continued decline of purchase costs for television sets, and the proliferation of low-cost and easy-to-pay cable subscription plans introduced in the market. On the other hand, the growth of broadband connections has been a double-edged sword for the cable operators we interviewed – new subscribers tend to prioritize getting an internet plan over a TV-Cable/DTH subscription, hence relegating TV-Cable/DTH to a value-added service, or simply an incentive for customers to sign up. The benefit to cable operators is that they can charge higher subscription fees for internet plans (compared to Pay-TV only), thereby increasing their ARPUs. One small-scale owner we interviewed said she could now charge PHP 1,000 / month for internet plans only, when before she made just PHP 500 / month on stand-alone Pay-TV.

Presented in **Exhibit 28** below is a breakdown of the growth in Pay-TV subscribers by type of product. The bulk of the growth was contributed by DTH, which grew 4.6x from 392,000 subscribers in 2011 to 1.820 million in 2016. The DTH share of total Pay-TV subscribers grew from 20% of the market to take a majority share of 54% in 2016. This is expected to further

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grow, as Sky Cable launched its own DTH service in 2016. Digital cable grew at a steady 14% CAGR over the same period, and comprised 60% of all cable subscribers in 2016, as compared to 30% of total cable subscribers in 2011. The popularity of analog cable has clearly waned, with an acute drop in its subscribers from 1.025 million in 2011 down to 617 million in 2016.

Exhibit 28 Pay-TV Subscribers by Product in '000s (2011 -2016)



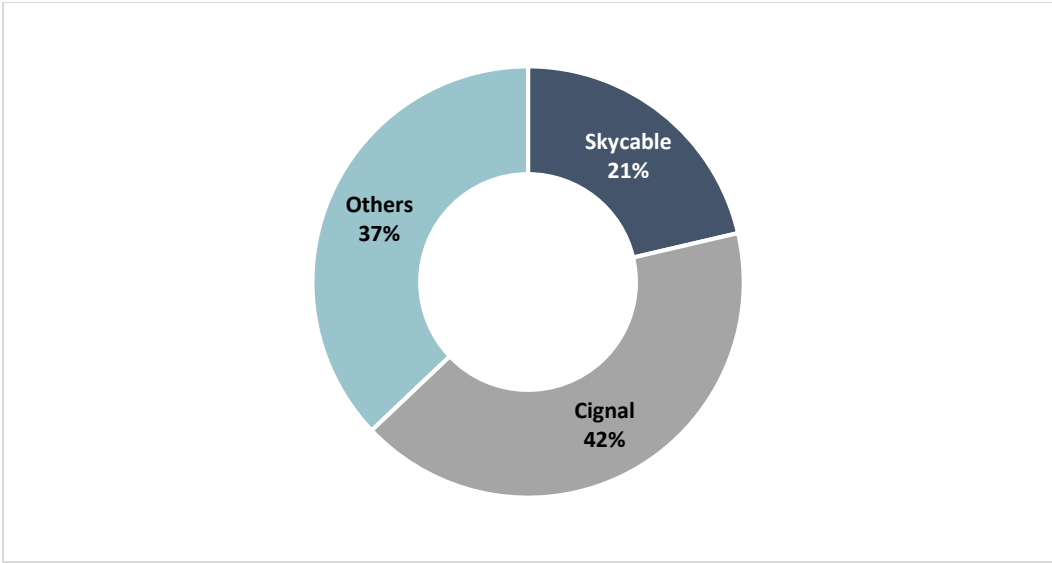
Source: Media Partners Asia

4.3. Pay-TV Operators' Market Share and Subscriber Growth

The Pay-TV market in the Philippines is dominated by two giants who combined make up approximately 63% of the market. The balance is composed of small to mid-sized players operating on a local to regional level.

Exhibit 29 below shows the market share of major players in the Pay-TV industry as of 2016. Cignal TV is the largest Pay-TV player in the market in terms of subscribers, with a 42% share versus 21% for Sky Cable. In the 2013 CASBAA Philippines-in-View report, Sky Cable was the leader, with a 45% share versus Cignal TV's 25% share. Since then, Cignal TV has grown aggressively to take the leading position.

Exhibit 29 Pay-TV Operators' Market Share Based on Subscribers (Dec 2016)



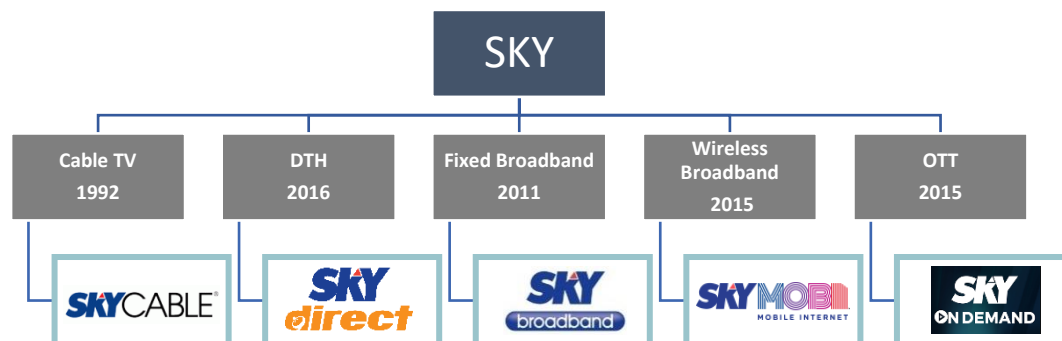
Source: Company Reports and Key Informant Interviews (CASBAA)

4.3.1. Sky Cable

Sky Cable is the Pay-TV business of media conglomerate ABS-CBN. It contributed 21% of gross revenues of the entire conglomerate in 2016, and is assigned an important role in ABS-CBN's corporate strategy to generate recurring subscription revenues, and to serve the affluent Upper C to A market demographic. It operated in 35 localities around the country as of April 2017. The overall population in the localities in which Sky Cable operates totals over 52 million, or approximately 11.9 million households (just over half of the national total). With Sky Direct, Sky's new DTH service, coverage expanded nationwide, with marketing to 251 localities around the country. Nationwide coverage was restricted based on the permit Sky Direct received from the NTC which awarded it these localities for a validity period 18 months.

Exhibit 30 below details the different products offered by Sky Cable, including Pay-TV, internet, OTT, etc.

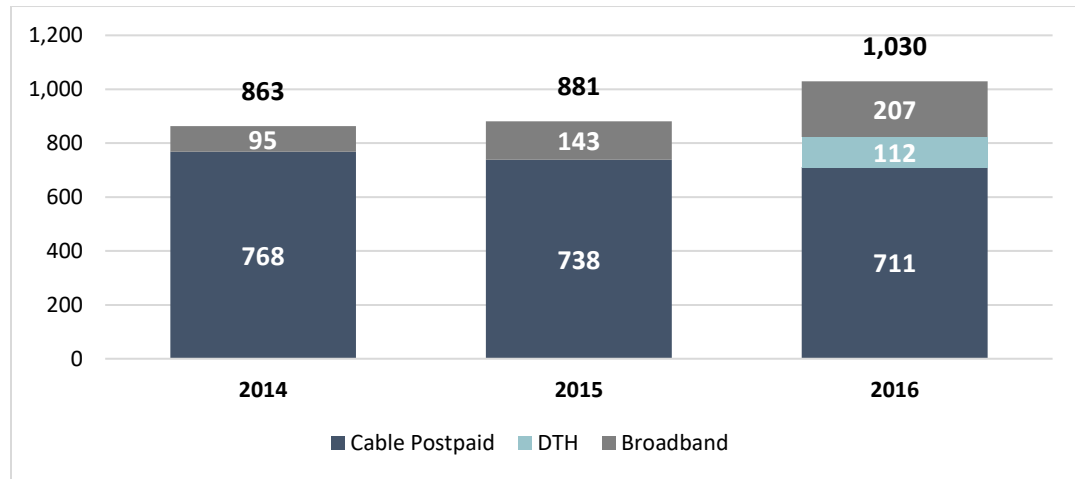
Exhibit 30 Sky Cable Product Lineup



Sky Cable has positioned itself to become an all-access provider for content within the ABS-CBN ecosystem. No longer limited to cable TV, Sky now offers other products to deliver content to its audiences. Aside from its high-speed fixed broadband product, Sky Mobi was introduced in 2015 as a way for subscribers to stay connected even on the go. This is part of the ABS-CBN MVNO deal with Globe, and Sky Mobi is in the process of upgrading to offer LTE speeds which typically average 7-10 megabits per second (mbps) in the Philippines. Sky Cable also offers an OTT service called Sky OnDemand, which is an encrypted service exclusive to Sky Broadband and Mobi users, and offers both live TV and catch-up video on-demand for popular Pay-TV channels. Adoption is slow; Sky OnDemand reported 8,147 users, up from 1,376 in 2015. By comparison, Sky's DTH service, Sky Direct, which launched in 2016, has already acquired over 100,000 users within its first year of operations.

In 2016, Sky achieved a milestone when it exceeded the one million subscriber mark. This was buoyed by the over 100,000 newly acquired DTH users, and over 70,000 new broadband users (growth of over 50% from the previous year). Its cable subscriber base recorded a net loss, as total subscribers shrunk by 3.5%. Since 2016, Sky has been aggressively marketing its new OneSky brand, which is a bundled service that incorporates TV-Cable/DTH and fixed + mobile internet into a single plan. Sky Cable projects stronger growth figures as DTH growth ramps up and the OneSky brand bundles are pushed to the market more aggressively. The following chart in **Exhibit 31** details the dynamics of Sky's subscriber growth by product from 2014 to 2016.

Exhibit 31 Sky Subscribers by Product in '000 (2014 - 2016)

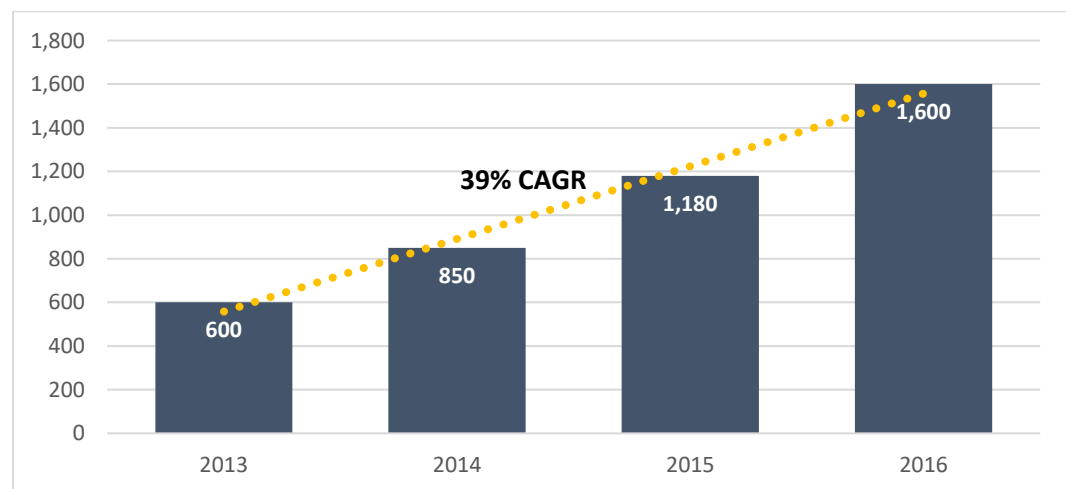


Source: ABS-CBN Annual Report Presentation 2017, 2016

4.3.2. Cignal TV

Cignal TV is owned by MediaQuest Holdings, and is the Pay-TV business of the PLDT Group. It was launched as a DTH service in 2009, and in 2015, it surpassed Sky Cable in subscriber count to become the largest Pay-TV company in the country. It is estimated to have 1.6 million users as of end-2016. As shown in **Exhibit 32** below, subscriber growth of Cignal TV has recorded a CAGR of 39% from 2013 to 2016.

Exhibit 32 Cignal TV Subscriber Count, in '000 (2013-2016)



Source: Cignal TV Press Reports 2013 - 2017

Recently, Cignal TV has secured several key partnerships. On the distribution front, it cooperates closely with parent company PLDT, to be included as a bundle with the various PLDT home offerings, such as the TVolution service, which is a Roku powered device that comes with over 50 streaming channels including Cignal TV, iFlix, Youtube,

etc. Cignal TV add-on plans are likewise available for PLDT Home Fibre packages. On the content front, it also closed exclusive content partnership agreements with established content providers such as Bloomberg TV Philippines, which launched in 2015 (together with TV5), and the Ultimate Fighting Championship (UFC), which switched from ABS-CBN to partner with Cignal TV. As of May 2017, it was also testing a new OTT product for its users.

In July 2017, it announced the launch of Cignal TV Entertainment, described as a full entertainment brand of original content designed to cater to the tastes of the Filipino market. For the production of content, Cignal TV has partnered with Sari Sari Network, Unitel Productions, the IdeaFirst Company, Content Cows Company, Fox International and Masque Valley Productions.

4.3.3. Global Satellite (GSat)

GSat is a DTH player in the local Pay-TV industry that started operations in 2009. It is owned by Global Broadcasting and Multimedia Inc., and First United Broadcasting Corporation, which also operates Global News Network (GNN), a television and radio station that broadcasts to 14 provincial locations and is available on Pay-TV. In August 2016, GSat upgraded to the new SES-9 satellite to improve reception and signal quality.

When we interviewed executives from GSat for this report, they shared that their most popular subscription is the entry-point PHP 99 plan, which is used by the mass market audience to get clear reception for FTA channels. They also pride themselves in establishing a very robust and proactive dealer network across the localities where they operate, in order to ensure fast installation and quick-response service. Their primary thrust is to maintain good relations with their dealers and to make GSat the most profitable partner for them. GSAT declined to provide us with its number of subscribers, however, according to technology blog, [Tech the Truth](#), GSat had 250,000 subscribers across the Philippines in 2016.

4.3.4. Others – Small to Medium Operators

For this report, we also spoke to a selection of smaller (provincial) Pay-TV operators to obtain a fuller view of developments in the industry. These included small and medium scale operators, in both rural and urban localities outside of Metro Manila. Some of the stakeholders were officers of the industry associations, such as the Philippine Cable TV Association (PCTA), and the Federation of International Cable TV and Telecommunications Association of the Philippines (FICTAP). What we found was a thriving and growing set of operators, far from the floundering image that has been painted in the past.

Overall market-size estimates point to about 1,200 operating licenses which translates to between 800-900 unique systems nationwide. (This is because licenses are given on a municipal level, and therefore a single system can cover multiple license areas.) A

unique system refers to a single company, such as Sky Cable, which operates in over 30 license areas. The smaller provincial companies have subscriber bases anywhere from 1,000 to 60,000.

The PCTA has 337 members, and of this figure, approximately 30% offer broadband internet services on top of cable TV, and the remaining 70% offer cable TV only. FICTAP, on the other hand, reports 500 members.

The following is a summary of trends and issues that are prevalent among this segment of cable TV operators, as highlighted in our stakeholder interviews:

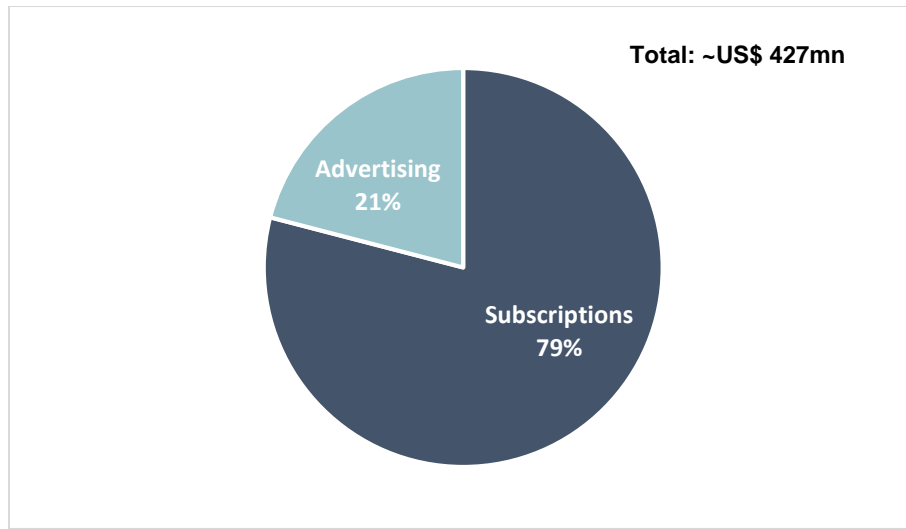
- There is consolidation among programmers, and the overall cost of programming has gone down significantly. At the same time though, operators have lost their appetite for buying programs, as consumers now prefer buying internet.
- Consumption of internet content is more prevalent and in-demand. This includes OTT, pirated content, or just online browsing on Facebook, YouTube, etc.
- A growing number of cable systems are starting to invest and upgrade their systems to digital and fiber. This is driven by next generation family members taking over the business, and the decreasing CAPEX requirements for procuring these upgrades.
- Even in rural areas, there is higher demand for internet than for Pay-TV. This is driven by students who need access for school, families who want to communicate with family members who work overseas (OFW or Overseas Filipino Workers), and those who want access to social media and other digital content. Cable TV is now prevalently offered as a free add-on to internet plans. Up to 80% of new connections are for internet-only connections.
- The cost of wholesale internet bandwidth has gone down dramatically.
- The collective strategic value of the small to medium scale players with regards to their capability for providing the last mile of coverage is immense. For instance, securing rights of way for laying cable is not a challenge for them. This is due to the broad coverage of their existing facilities in their present areas, coupled with the strong relations cable operators have with the local governments, and other partners in the locality, such as electricity cooperatives, banks, commercial establishments, etc.

4.4. Pay-TV Industry and Major Operator Revenues

Exhibit 33 below highlights the estimated revenue split of advertising vs subscription revenue for the Pay-TV industry in 2016.

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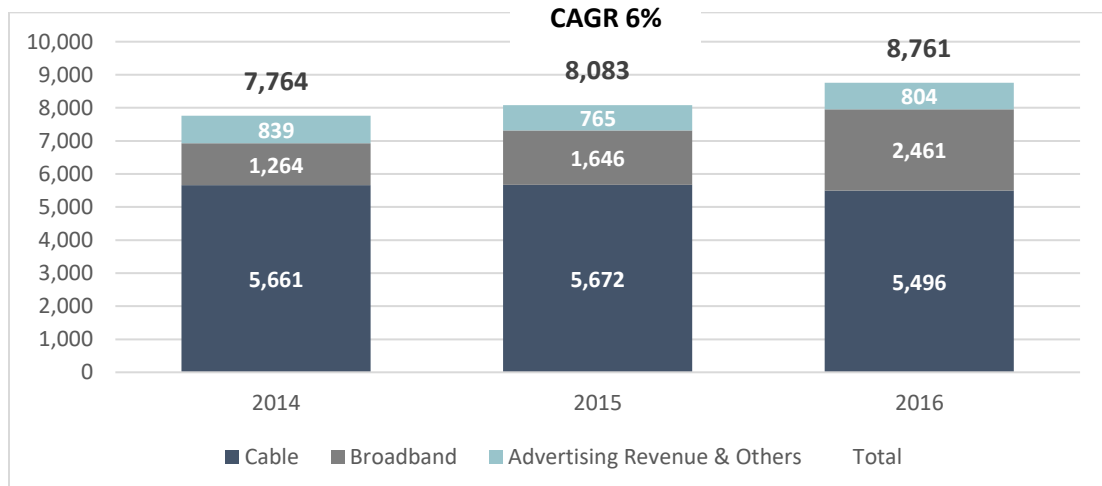
Exhibit 33 Revenue Split Advertising VS Subscriptions 2016



Source: Media Partners Asia Reports

Exhibit 34 below displays the actual financial performance that Sky Cable achieved in the past 3 years. The company is growing at a slower pace than that of the industry, primarily because it was slow to commence growth of its DTH business, which only started in 2016. Revenue growth of Sky Cable is coming from broadband revenues primarily, in part due to its bundled plans. Broadband revenues grew by 49% in 2016 to PHP 2.461 billion. Sky Cable also showed less revenue contribution from advertising than that of the industry projection, with just 9% vs the estimated 21% above.

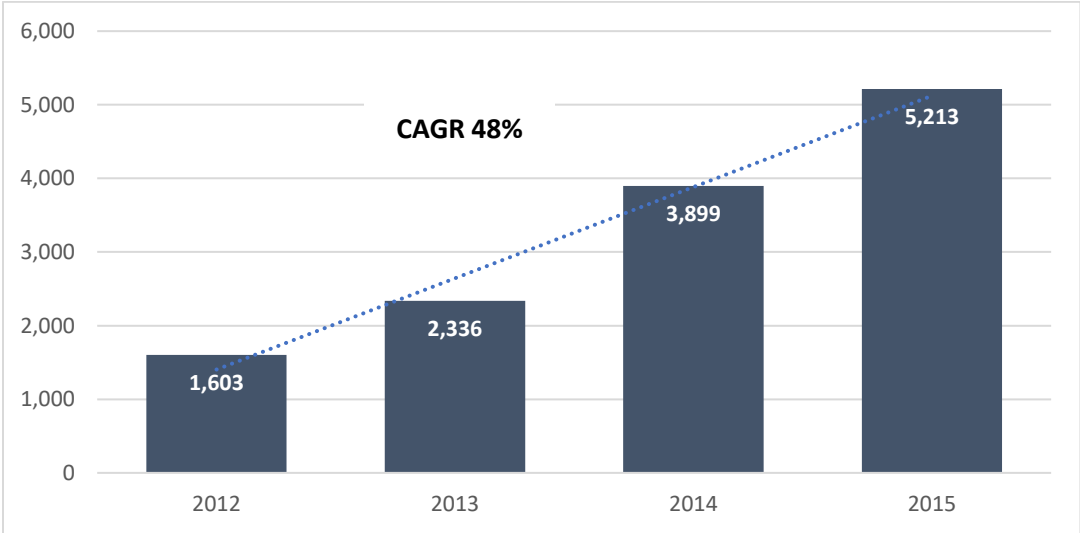
Exhibit 34 Sky Cable Revenues by Type in '000 (2014-2016)



Source: ABS-CBN Information Request, May 2017

In comparison, Exhibit 35 shows that Signal TV, which began from a relatively low base in 2012, showed tremendous growth in revenues through 2015, growing at a CAGR of 48%.

Exhibit 35 Cignal TV Gross Revenues in '000 (2012 - 2015)



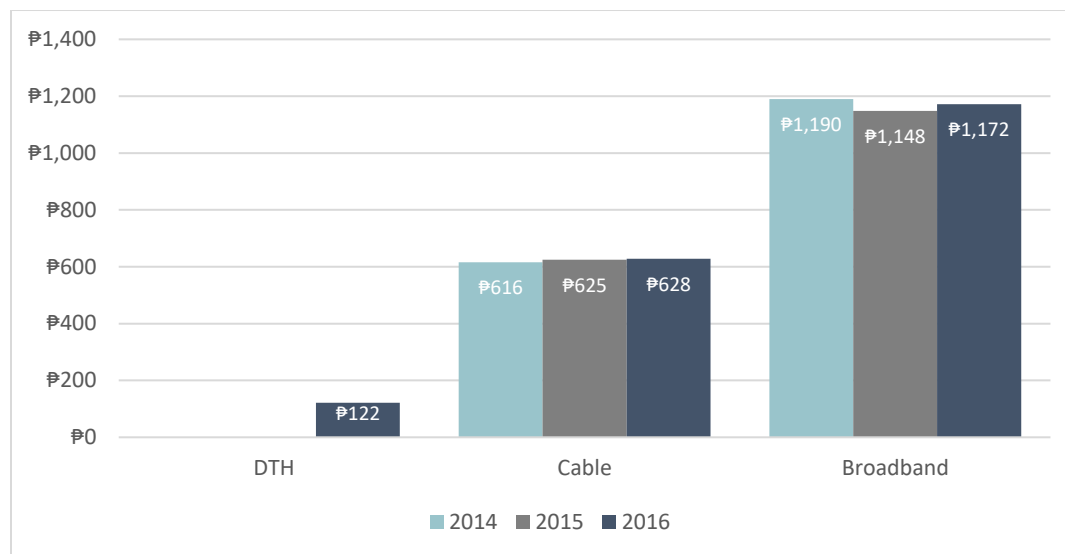
Note: Breakdown of advertising revenues was not available
Source: Cignal TV Financial Statements SEC Filing

4.5. Pay-TV Average Revenue per User (ARPU)

As of end-2016, Sky Cable reported a monthly ARPU for cable TV at PHP 628 or about \$12.50, and about PHP 1,172 for broadband or about \$23.44.

Exhibit 36 below shows the ARPU of Sky Cable for the past 3 years, with a breakdown by product type. DTH, which was launched in 2016, has no information from the previous years. For the other products, ARPU has been flat.

Exhibit 36 Sky ARPU by Product (2014-2016)



Source: Sky Cable Company Report

ARPU numbers of Cignal TV were not available, but should be much lower. For an indicative view, we looked at the publicly reported subscription revenues of Cignal TV vs its end-of-year subscriber count. This resulted in an ARPU of PHP 292 per month in 2015.

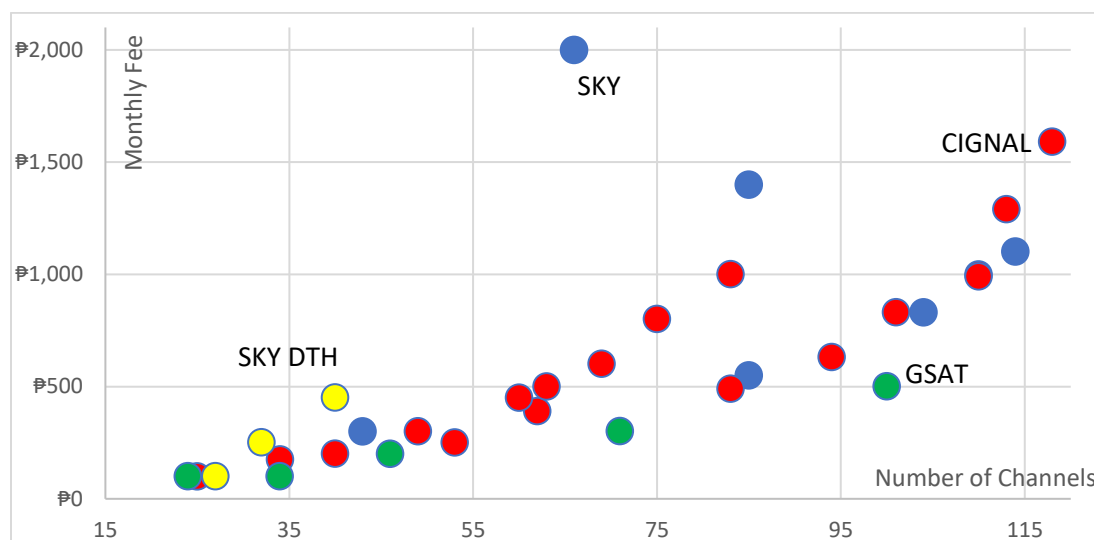
4.6. Pay-TV Pricing – Payment, Entry, Recurring and Top-up Fees

Sky Cable has discontinued heavily marketing its pre-paid offerings, except in relation to its newly launched DTH service. For its PHP 99 DTH plans, Sky Cable is strictly enforcing a pre-paid-only term. GSat only accepts pre-paid payment -- it does not entertain post-paid terms even for its higher value packages. Cignal TV, on the other hand, heavily markets both pre-paid and post-paid offers, and its current customer mix is roughly 80% pre-paid and 20% post-paid. This is a reversal of its previous strategy to upgrade pre-paid to post-paid, when in 2013, 55% of its base was post-paid and a smaller 45% was pre-paid.

The entry-fees of Pay-TV range from PHP 1,599 to PHP 5,280, and vary depending on the type of plan a customer is availing. It's customary to charge an amount for the box / receiver plus a one-time installation fee. Cignal TV also requires a 1-month deposit for its higher value post-paid plans.

Plotted below in **Exhibit 37** are the range of plans offered by Sky, Cignal TV, and GSat for both cable TV and DTH services. It is apparent that the highest concentration of offers is in the lower brackets of below 55 channels and below PHP 500. In terms of strategy, Cignal TV seems to have flooded the market with plan increments across all price points. GSat is hovering at the low end of the market, with plans all under the PHP 500 range. Sky's offerings are more dispersed, but are on the outer fringes of both price and quantity of channels.

Exhibit 37 XY Chart of Pay-TV Monthly Fees, as of May 2017

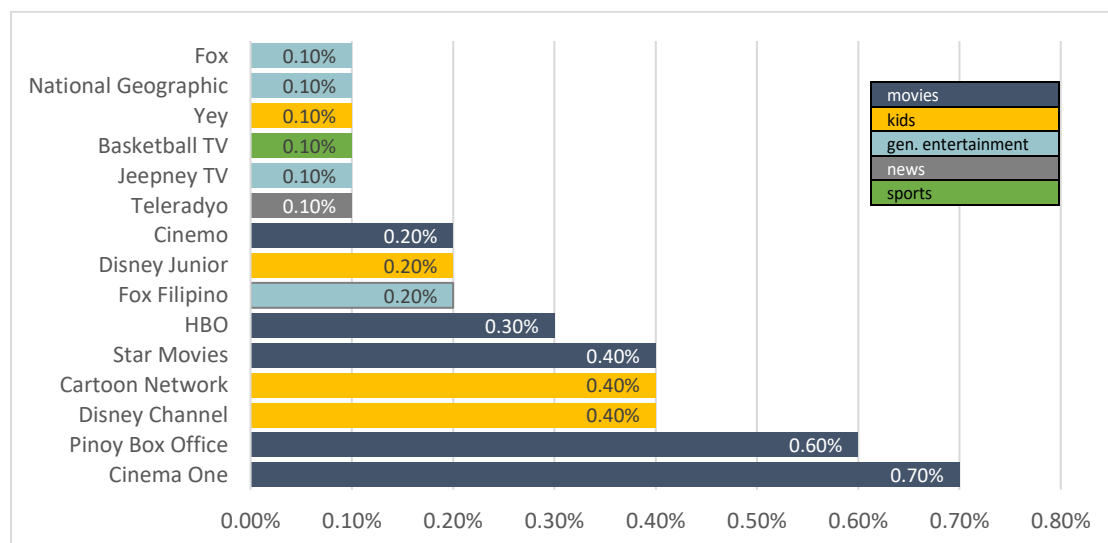


Source: Published Rates from Pay-TV Websites

4.7. Pay-TV Content and Programming

The top-rated cable channels in the Philippines are those that feature movie programming. Interestingly, the first and second most popular are local-language, Tagalog movie channels. Out of the top 15 cable channels, 5 are dedicated movie channels, followed by kids programming (international), and then general entertainment. There is only one news / public affairs channel in the top group, which is a local one. Of the top 15 channels, 8 are produced by local content providers, and the remaining 7 are international outfits. This is illustrated in detail below under **Exhibit 38**.

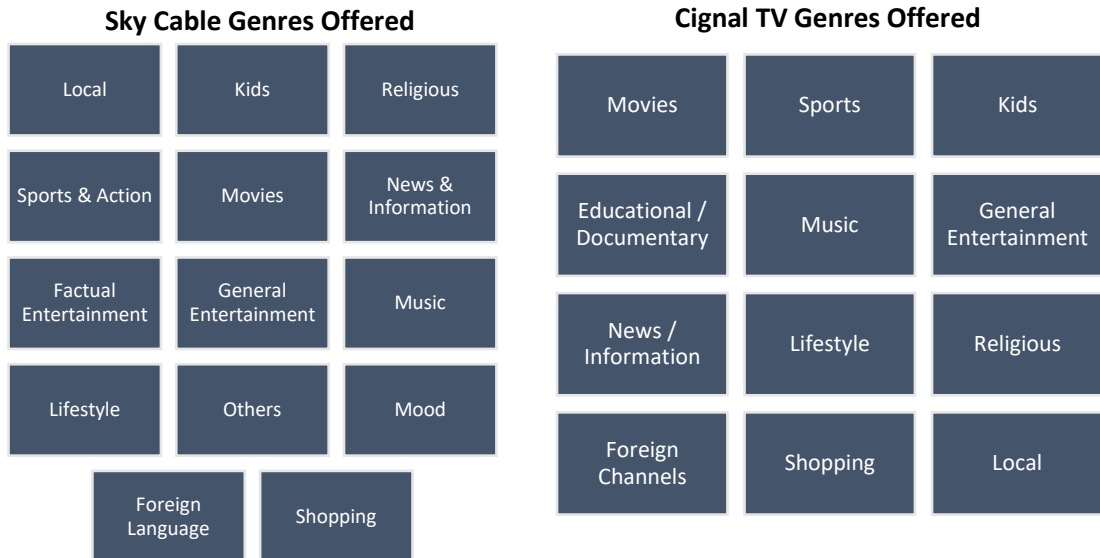
Exhibit 38 Top Cable TV Channels (March 2017)



Source: Kantar Media TV Audience Measurement – Cabled Individuals

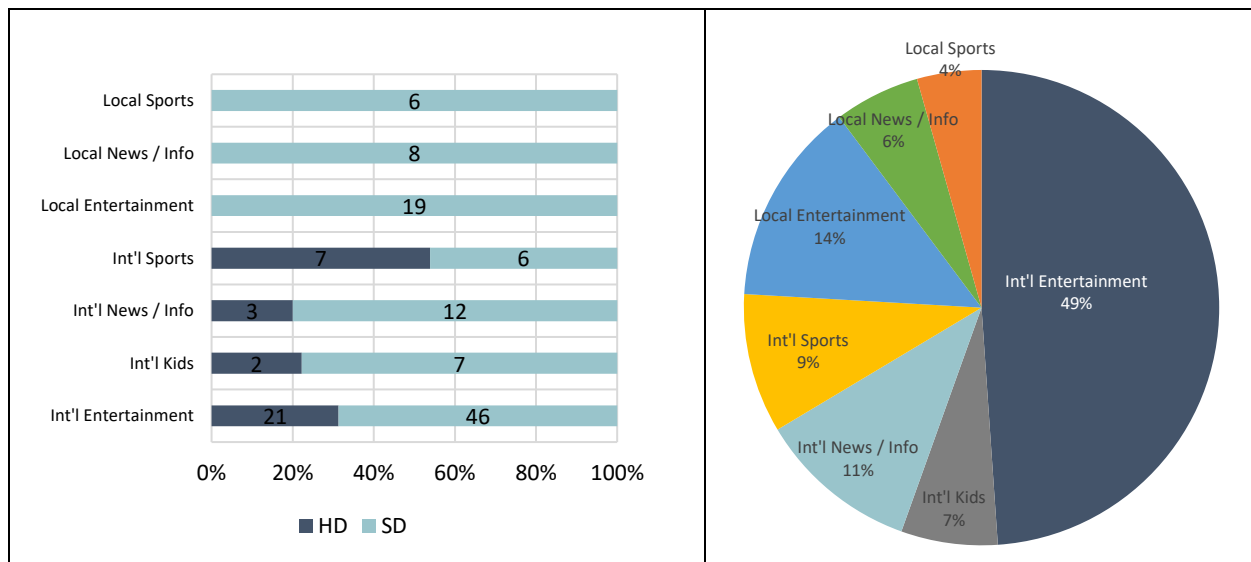
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As reflected in the below summary of the different genres offered by Pay-TV giants Sky Cable and Cignal TV, there is not much differentiation between the type of programming each offers.



In terms of channel demographics, Cignal TV offers a total of 137 channels on its menu, 25% of which are in HD, and the remaining 75% are in SD. The HD channels of Cignal TV are all from international content providers; they do not have local channels in HD. In terms of mix, the top 3 categories are international entertainment (49%), local entertainment (15%), and then international news (11%). This is further illustrated in **Exhibit 39** below.

Exhibit 39 Cignal TV Channel Demographics, by Category and HD/SD Quality (May 2017)

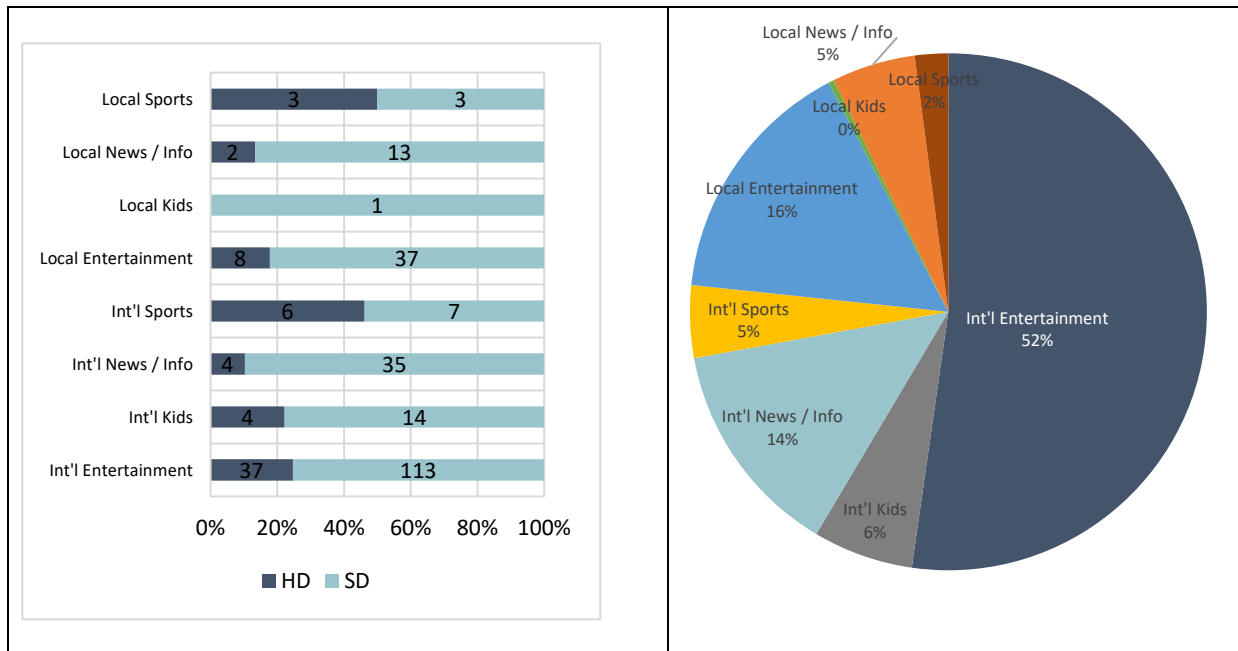


Source: Cignal TV Published Channel List Analysis

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Sky Cable has a wider selection, with 287 channels offered in total. Some of Sky Cable’s channels are not included in the regular plans, but only as premium add-on. Only about 115 channels are included in their regular plans. Sky has a total of 64 HD channels, equal to about 22% of its total line-up. Sky has HD channels across all categories, except local kids. In terms of the top 3 channel categories, the biggest is international entertainment at 52% of all channels, followed by local entertainment at 16%, and lastly, international news / info at 14%. This is illustrated in **Exhibit 40**. Sky Video OnDemand also gives access to 30 plus channels for live streaming using its official app.

Exhibit 40 Sky Channel Demographics, by Category and HD/SD Quality (May 2017)



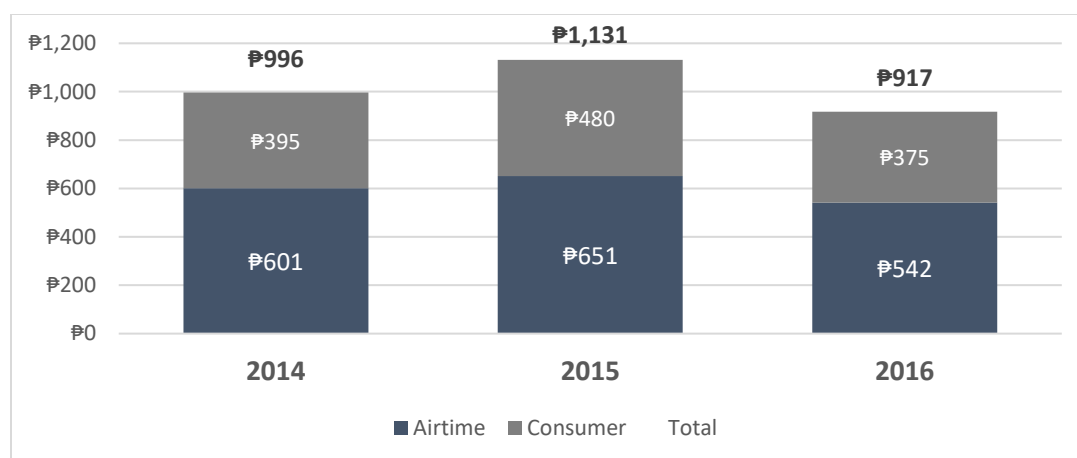
Source: Source: Sky Cable Published Channel List Analysis

4.8. Pay-TV Audience Measurement & Advertising

Sky Cable leverages the measurement tools that are being used by ABS-CBN, and in particular, the report “Kantar Media TV Audience Measurement – Total Cabled Homes” is monitored for performance and ratings of its cable channels.

Illustrated in **Exhibit 41** below are the revenues generated from the cable channel operations of ABS-CBN. This suite of channels includes ANC News, DZMM Teleradyo, Lifestyle Channel, ABS-CBN HD, Sports + Action HD, Cinema One, MYX, the Knowledge Channel, Tag, and Jeepney TV, among others. Combined, the channels account for a 23% audience share of nationwide cable channels only viewing, with carriage on over 356 active cable operators nationwide.

Exhibit 41 Gross Revenues - ABS CBN Cable Channels 2014-2016, in PHP Millions



Source: ABS-CBN Annual Report Presentation 2016

In our Interviews for this report, it was brought up by several stakeholders that there is a need for better and more complete audience monitoring tools. The traditional method of installing monitoring boxes in households no longer captures the total viewing behavior of audiences given the continued fragmentation of viewing devices and screens. This will become especially urgent once cable operators plan to sell advertising slots more aggressively.

Some stakeholders pointed out that pushing for advertising revenues would be more attractive to large scale operators than small ones. The small operators reported that they have no space for displaying ads other than on community channels, which work more as a public service rather than an advertising platform. However, space is available because people do not watch the community channels. A couple of operators reported they make more in commissions from home TV shopping sales than from ad sales. The large-scale operators, on the other hand, are more likely to have EPG display solutions available to them.

Sky Cable already displays advertising on its EPG. Cignal TV, in August 2016, announced it would procure solutions from Inview, a broadcast and OTT software and service specialist, for middleware for its set-top boxes. This solution includes a high-quality user interface that can deliver advertisements to audiences. Its integrated advertising service includes the capability to display banners that viewers can click on to visit a full-page advertisement. Advertising revenues of Cignal TV were not available on their financial statements.

Other feedback from our interviews included the need for better subscriber profiling in order to sell advertising more effectively. At the moment, the operators capture hardly any information that would be useful for selling to advertisers. While the set-top boxes can capture viewing patterns and preferences if setup correctly, one industry professional stated that this needs to be coupled with richer demographic information of subscribers. The stakeholder we spoke to shared the view that options could include partnering with a research firm to conduct surveys to profile subscribers better - this could include

information, such as income classification, lifestyle preferences, educational and employment background, etc.

Sky Cable advertising revenues amounted to PHP 804 million in 2016, about 9% of its gross revenues. This figure was PHP 839 million in 2014, and PHP 765 million in 2015, showing no clear growth trend in recent years.

Aside from advertising, other sources of revenue growth mentioned during the interviews included reselling of advertising for content producers, institutional sales (hotels, resorts, schools, etc.), commissions from home TV shopping, and minor sales opportunities from community channel advertising (particularly for small-scale provincial operators).

4.9. Business Development and Other Industry Opportunities

Strengthening of the consortiums among the smaller players, such as PCTA and FICTAP, will be of strategic value for their members and potential partners. Interconnectivity will immensely increase their strategic value, and cooperation will allow them to have a stronger position and more leverage when negotiating with internet bandwidth suppliers, content producers, hardware vendors, etc.

An example of a successful endeavor, in this regard, is the FICTAP participation in the government's national Free Public Wifi project. The project is in line with the Internet for All initiative of the Philippine Government, and aims to convert public spaces into free wifi hotspots – this includes public schools, local government offices, libraries, social welfare offices, transport terminals, and health centers. The government's target is to install 14,000 hot spots with priority for 4th class to 6th class municipalities. The project was awarded to multiple groups, including FICTAP as a consortium, Globe, PLDT and other providers. Progress has been slow, primarily due to the rights of way / government permit road blocks.

4.10. Technological Issues in the Philippine TV Industry

This section covers the conditional access systems (CAS) used by the Pay-TV operators, as well as the corresponding satellite details used by DTH providers.

4.10.1. Transmission and Conditional Access Systems (CAS)

4.10.1.1. Sky Cable

Sky Cable implements Digital Video Broadcasting-Cable (DVB-C), a digital television signal transmission standard, through Sky Cable Digital. This adoption of digital video broadcasting is an effort to curb cable piracy and illegitimate connections.

Sky Cable uses a Digibox, a digital set-top addressable box, which allows for digital video compression or distribution, and uses the DVB-C broadcast

standard to allow subscriber access to the digital infrastructure. This results in an improved viewing experience for subscribers, providing sharper picture quality, customizable viewing preferences, relevant programming information through a real-time onscreen program guide, and an in-house mail function, which enables Sky Cable to send important messages and notifications to subscribers.

The Digibox carries programming with encryption to mitigate signal piracy. Specifically, it uses the International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC) 7816 smart cards, which convey digital signals to the receiver in order to decrypt the programming for viewing. The smart card is offered to all subscribers with SD and HD boxes. It stores the owner's information, as well as their corresponding subscription plan.

For its conditional access system, Sky Direct uses the Verimatrix encryption system to scramble data and protect its content from signal piracy.

4.10.1.2. Sky Direct

Setting up a Sky Direct subscription package requires a satellite dish antenna, a set-top box (IRD), and a remote control. It uses the DVB-S2 digital television broadcast standard in the Ku band to provide standard definition (SD) and high definition (HD) TV broadcasts. As of May 2016, Sky Direct has been using the SES-9 satellite for its full broadcast.

4.10.1.3. GSAT

GSAT first launched its DTH service in 2008 on the NSS-11 Ku-band satellite. In October 2016, it successfully migrated to SES-9, which gave it additional capacity to offer HD and SD channels, and to upgrade MPEG-2 channels to MPEG-4 and MPEG-5. For its conditional access system (CAS), GSAT employs Conax technology to secure its content from signal piracy.

DTH broadcast signals require a 60 cm satellite dish antenna, a remote control, an IRD, and a smart card. The IRD, which can be operated by the remote, decodes the signals received from the dish. The smart card generates authorization of the Entitlement Management Message (EMM) and the Entitlement Control Message (ECM) decryption and interpretation, in order to verify consumers' access to the content.

4.10.1.4. Signal TV

Reception of Signal TV's broadcast requires a 60cm satellite dish antenna, a remote control, and a set-top box or Integrated Receiver-Decoder (IRD), which is the digital decoder or receiver for DTH signals. In terms of satellites,

MediaScape adopts the SES-7 satellite to provide direct optimal coverage to its target markets. For pre-paid subscribers, Cignal TV has a pre-paid electronic loading system that is supported by the pre-paid loading platform of Smart Communications, Inc.

Cignal TV Digital TV adopts the Digital Video Broadcasting-Satellite Second Generation (DVB-S2), a digital television broadcast standard succeeding the DVB-S system.

With an increased available bitrate over similar satellite transponder bandwidth, DVB-S2 provides better performance than earlier digital television broadcast standards, and is claimed to provide a 30% performance enhancement over DVB-S. It allows Cignal TV to accommodate both SD and HD TV broadcasts, including all interactive services available on their satellite TV service. With the supplement of video compression improvements, an MPEG-4 AVC high definition television (HDTV) service can be transported using a similar bandwidth as for DVB-S on MPEG-2 standard definition television (SDTV). For its encryption system, Cignal TV uses Cisco VideoGuard.

As of September 2016, it was announced that Cignal TV had procured the services of Conax to utilize its cardless content protection technology. Based on flagship Conax Contego unified security hub, Conax's cardless technology will provide complete platform protection for Cignal's new generations of SD, HD and hybrid set-top boxes, including middleware from other third-party providers.

4.10.1.5. Dream Satellite TV

Dream's content is broadcast through Koreasat 5 (Mugunghwa 5) in DVB-S and NTSC color format. To protect from signal theft and ensure exclusive access to official subscribers, Dream uses the Nagravision 3 Encryption System. Early in 2017, Dream reported that it was in talks with Korea-based KT Corporation to broadcast via the Koreasat 7 satellite. Its target was to operationalize this within 2017.

5. Video Content Piracy in the Philippines

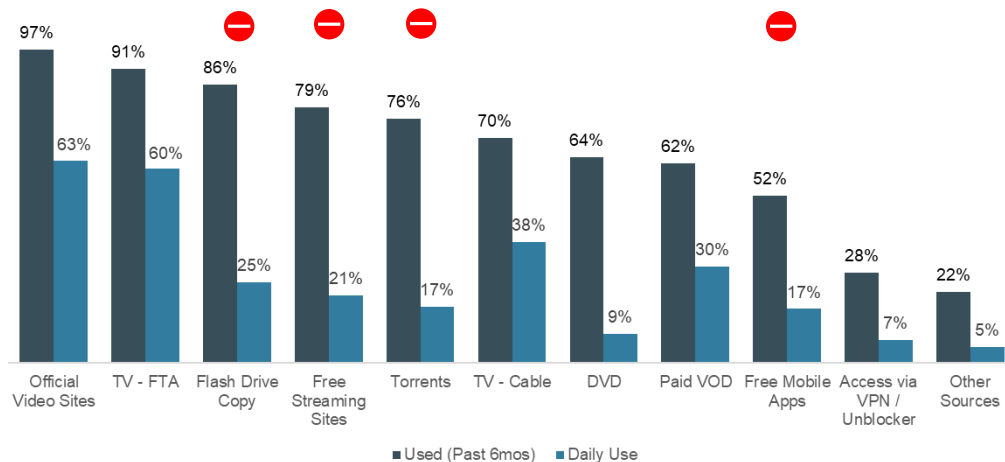
The following chapter discusses trends, issues and findings from the CASBAA Audience & Piracy Study relating to video piracy in the Philippines. The first section focuses on the consumer side, and is based on results of the viewer survey commissioned by CASBAA and insights from qualitative interviews with key informants. The following section delves into the various stakeholder views on the topic of piracy.

5.1. Consumer Piracy in the Philippine Pay-TV Market

Parallel to the preparation of the PIV Report, CASBAA also commissioned a consumer study on the topic of piracy and general audience trends/preferences in the Philippines. The following section shares some of the highlights from this study.

Exhibit 42 below is a summary of the different sources of video content that are popularly accessed. This includes both authorized and illicit sources mixed together in one list. We asked respondents to rate which ones they used most frequently, and to flag which ones they have not used in the past 12 months (to eliminate non-users). Also marked with a red violator icon are the options that are considered likely to include large quantities of illicit or pirated programming.

Exhibit 42 Usage & Preference of Video Content by Source – Probable Pirated Sources are Marked w/ Red Violator



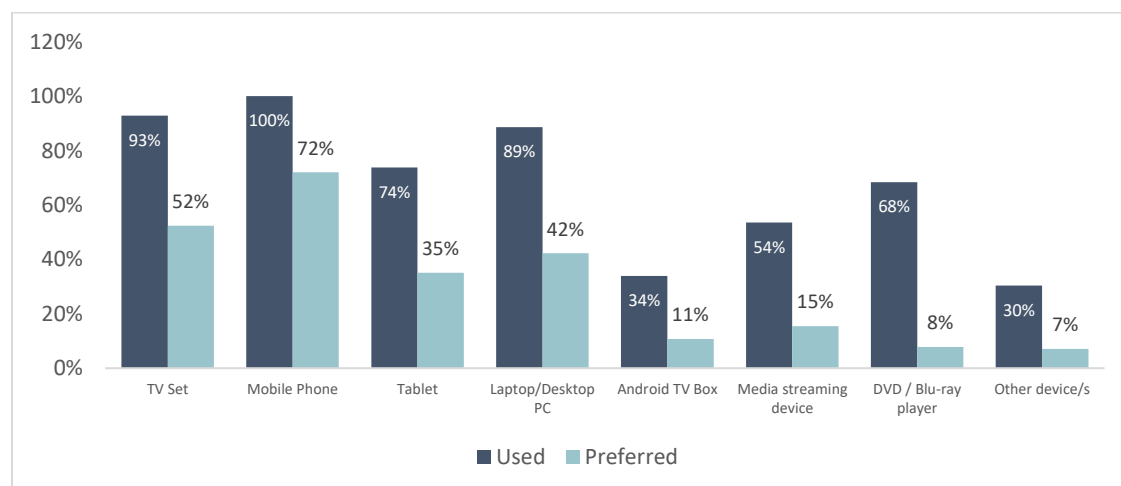
Source: CASBAA 2017 Market Research Study

Interestingly, more people in this urban sample used official websites (like YouTube and Facebook) at 97% of respondents versus FTA TV at 91%. The next most popularly used source is flash drive copies, presumably sourced for illegally downloaded content. The use of free streaming websites for occasional consumption was more prevalent than torrent downloading, and was, in fact, used even more than TV-Cable/DTH viewing. Usage of Paid

VOD and TV-Cable/DTH were close to each other, at 62% and 70%. However, TV-Cable/DTH consumers were much more reliable viewers, with 54% of those having used TV-Cable/DTH at all saying that, in fact, they watch every day. In terms of daily use (a proxy for preference), official video sites and FTA TV still led the pack. This was followed by TV-Cable/DTH and Paid VOD. It's clear that, based on daily usage, unauthorized sources represented a substantial portion of video consumption – but not as high as legitimate sources.

Like the previous chart, **Exhibit 43** below measures usage and preference, but this time by access device type. In terms of usage, mobile phones were ranked number one, with 100% usage for all respondents. This was followed by TVs at 93%, then laptop / desktops at 89%. The data also shows that Android TV Box usage was at 34%, or about 1/3 of total online video watchers, and less popular than other media streaming devices like Chromecast, which was at 54%. In terms of preference, mobile phones led the pack at 72% of respondents claiming they use them to watch video more than once a day. This was followed by TVs at just 52%, and laptops / desktops at 42%.

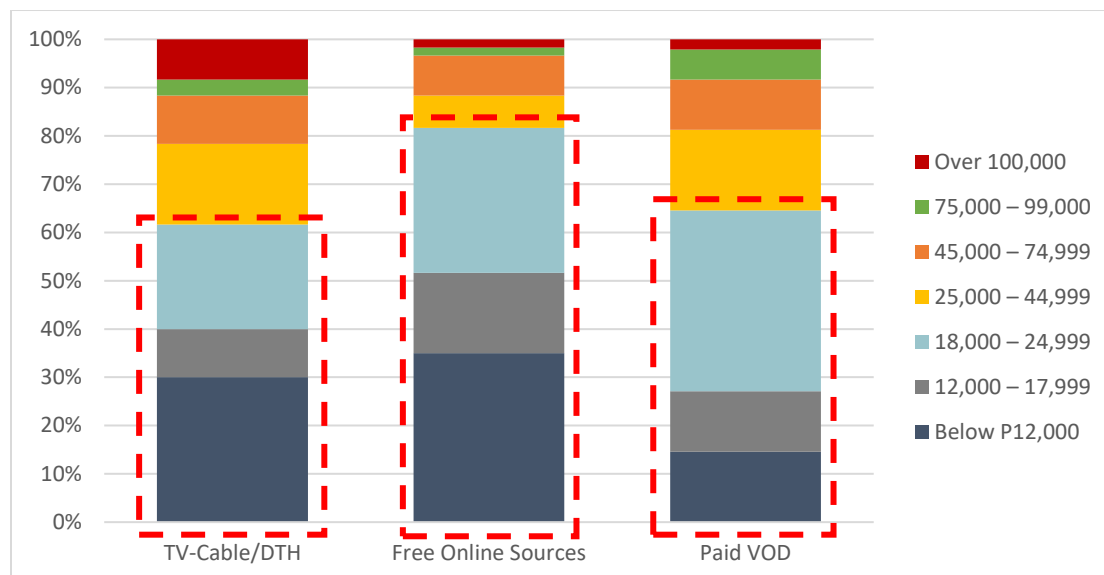
Exhibit 43 Usage and Preference by Device, Displayed as Percentage of Total Respondents



Source: CASBAA 2017 Market Research Study

Looking at media source by income levels highlights the fact that users of “Free Sources” tend to be comprised of lower income profiles. Over 80% of free source users had an income of up to PHP 24,999 per month. This number is closer to 60% for TV-Cable/DTH and VOD users. This is shown below in **Exhibit 44**.

Exhibit 44 Monthly Income Demographics by Media Source



Source: CASBAA 2017 Market Research Study

The following section presents the survey results for viewing attribute factor rating, where we asked survey respondents to rate how much they agreed or disagreed with a selection of statements related to their video content viewing habits. The results are grouped based on the respondents' preferred source for viewing content. The options included statements regarding the attractiveness of content, viewing preferences, sentiments, access points, and affordability. The objective was to identify the dynamic factors that influence a user's behavior, and provide insight into which factors were valued over others.

This is presented in detail in **Exhibit 45** below. Also note that in the table below, the top 3 attributes per column are marked in green, while the bottom 3 are marked in orange. Interestingly, most of the top and bottom ranked attributes were common factors across all groups, such as binge watching, offline viewing, and having access to wifi.

Exhibit 45 Factor Rating Viewing Attributes - Grouped by Preferred Source

*rating scale of 1-7, 7 is strongly agree and 1 is disagree

	Free Streaming	Free Mobile Apps	TV-FTA	TV-Cable/DTH	Paid VOD
Watches episodes at the same time as US release	5.63	5.75	5.38	5.41	5.70
Enjoys binge watching and marathon viewing	6.09	6.21	5.64	5.67	6.22
Not bothered by TV commercials	3.71	3.82	3.98	3.56	3.72
Watches solo most of the time	5.37	5.07	4.94	4.90	5.38
Loves flipping through TV channels	5.26	5.43	5.08	5.30	4.88
Only watches specific shows he / she follows	5.60	5.25	5.13	5.37	5.42
Believes that watching via free stream sites is illegal	4.26	4.57	4.33	4.24	4.90

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Limits watching via streaming due to data cap	4.34	4.18	4.27	3.71	3.78
Watches videos when commuting or stuck in traffic	4.54	4.75	4.41	4.43	4.72
Offline viewing is important to me	5.97	6.07	5.82	5.56	6.24
I have easy access to wifi to download used for offline downloads	5.97	6.32	5.63	5.67	6.34
Watches more TV / video / movies versus 12 months ago	5.83	5.82	5.51	5.60	5.86
Catches the latest released movies in cinema houses	4.74	4.93	4.88	4.71	4.88
Gets concerned with malware from unknown sites	5.46	5.68	5.58	5.25	5.58
Feels guilty when watching free / pirated video	4.20	4.64	4.42	4.27	4.40
Will watch more if internet service improves	6.09	5.64	5.95	5.84	6.44
Not willing to pay any amount for videos online	4.00	3.86	4.05	4.25	3.96

Source: CASBAA 2017 Market Research Study

5.2. Stakeholder Views on Piracy in the Philippines

In the previous section, we saw the prevalence and lack of inhibition in the consumption of pirated content from the side of consumers. Commonly mentioned feedback about why respondents chose to pirate included lack of enforcement, and the entitled thinking that “everybody else does it anyway.” During key-stakeholder interviews for this PIV report, we discussed various approaches and views from industry stakeholders on how this can be combated collectively to make the industry more competitive.

From the medium to large scale operators we spoke to, the prevailing attitude was that commercial policing efforts for large offenders is most effective. Their view is that piracy among consumers will be difficult to curb, and they would rather focus anti-piracy efforts on smaller Pay-TV operators, or businesses that steal signals. With the advent of digital set-top boxes, illegal cable TV connections have been reduced, but DTH operators have continued to experience signal theft. Their sales agents on the ground, or consumer tips usually notify operators of suspected cases of signal theft, and they can then easily fingerprint the connected device and “kill” the signal. This has become a never-ending task, as the perpetrators usually have multiple boxes as backup and just switch as needed. In bigger cases involving operators who steal signals, medium and large scale operators believe they should engage the NTC or the police to conduct a raid and confiscate illicit equipment, though such raids have not taken place frequently.

The programmers or content producers have a similar approach to policing connections and reporting on operators who steal signals. One distributor even established an in-house investigation team, whose sole purpose is to patrol the country to check and apprehend establishments that are found to be using an illegal connection. As a collective initiative, an informal industry group composed of local content producers was established around 2012-2014. Their goal was to band together and stop providing content to Pay-TV operators who used illegal connections for content belonging to any member of the group. However, the group fizzled out after a couple of years.

The programmers want the NTC to be more proactive in policing and shutting down operators who steal content, but upon talking to the NTC, the regulator's official position is that these are cases of infringement of intellectual property. Hence, the NTC believes that owners of the content should file such cases with the Intellectual Property Office instead. This is a challenge because most of the content owners are located overseas, and only have distributors acting on their behalf in the Philippines. This is also the reason why some Pay-TV operators act boldly and continue to steal signals, as they know that the dynamics make it difficult to convert complaints into a legal case, which minimizes the risk to them.

At this time, no new regulations or policies from the regulators that will change the handling of such cases are pending or actively being considered. Operators and producers continue to police large scale offenders, while simultaneously exploring technological solutions to stop signal theft. In July 2016, Conax announced that it closed a contract to supply security solutions to Cignal TV with its cardless content protection system. This is envisioned to protect Cignal TV's signal with a combination of hardware and software security measures.

6. Advancements in OTT, VOD and Other Alternatives

This section will talk about the emergence of substitutes or alternatives to Pay-TV, such as OTT service providers and telco operators, and to share ways in which they are disrupting and influencing the overall landscape. With the continued improvement of broadband services by the telecommunications operators -- prices have dropped and speeds have accelerated -- OTT adoption continues to grow in the country.

6.1. Key OTT Players in the Philippines

While not exhaustive, the following section details key players in the OTT space who have launched in the local market through various promotions, partnerships and other similar marketing efforts.

From the CASBAA 2017 Market Research Study, Netflix was top of mind among video-on-demand players, due to the popularity with local audiences of its original productions, such as 13 Reasons Why, Stranger Things, and Riverdale, among others. Its local content catalog is reportedly less than 10% of the full US selection, but it's been continuing to expand with new additions. Unique shows, such as Jo Koy comedy shows, the documentary series Abstract, and the Korean movie Okja, are also attracting new users. Local telco players have embraced Netflix, and it is often a tentpole offer in their broadband plans. Globe Telecom, for instance, is giving away up to six months free Netflix bundled with their home fixed and mobile broadband plans, while PLDT offers a standard one-month free trial. The introduction of offline viewing has boosted Netflix's mass popularity, and power-users prefer Netflix because it offers content in ultra HD quality.

iFlix entered the market prior to Netflix and primed the market for OTT SVOD services with its early marketing and promotional campaigns. iFlix has partnered with PLDT in the Philippines, who was also an early investor in the SVOD service. Aside from its global

catalogue, iFlix has also invested in acquiring local content, and thus offers a good selection of local movies and TV shows. In addition, iFlix secured exclusive catch-up rights for top-rated GMA 7 shows. Its numbers have reportedly grown significantly since its launch, helping it to gain better footing when acquiring content from producers. It plans to use this leverage to further enhance its content offerings. Recently, iFlix announced that it will be producing original content, and that it has, in fact, already signed some big stars in the Philippines, and in the region. Next to Tribe, it offers the lowest monthly subscription rate at PHP 129/month, with a further reduction to PHP 99 for Smart users.

HOOQ, a joint venture between Sony, Warner Bros and Singtel, naturally partnered with Globe Telecom in the Philippines market, as Globe itself is partially owned by Singtel. HOOQ entered at almost the same time as iFlix, and was part of the early wave of SVOD platforms in the country. Similar to iFlix, HOOQ invested in acquiring local content, and has one of the widest selections of local movies and shows in the market. In addition to partnerships with ABS-CBN and GMA 7, it has also acquired the entire libraries of Viva and Regal Films. It is also continuing to push towards creating original content via an indie-film competition, and plans to create a web series after the popular Filipino movie "On-the-Job." HOOQ also very recently cut its tariff, and plans to offer a 7-day access package for a low price of PHP 59, in a bid to acquire more users. It has also started to offer movie rentals of just-released films. The service is aggressively pushed by Globe Telecom, which offers access to HOOQ as part of their mobile and broadband offers.

iWantTV is the OTT service of media giant ABS-CBN, and has employed a freemium monetization strategy. It is arguably the largest OTT player, with 6.4 million users as of end-2016. This is a 40% jump from 2015, which it ended with 4.6 million users, and a significant increase from 2014, which it ended with 2.5 million users. Users can watch the latest 3 episodes of all ABS-CBN shows, plus stream ABS-CBN FTA channels, radio broadcast channel MOR, and O Shopping for free. Premium users get to view all shows and episodes, and gain access to other exclusives. Premium access can be obtained by purchasing airtime load via ABS-CBN mobile, and through a partnership with Smart / PLDT. On average, users watch 320mins of iWantTV / TFC content every month, according to the ABS-CBN 2016 Annual Report. As ABS-CBN appears set to retain market leadership by producing top-rated content, iWantTV will be a major force in the OTT space.

Fox+ and HBO Go are catch-up and value-added services offered by Pay-TV players. Fox+ has partnered with Cignal TV and PLDT, and HBO Go is exclusive with Sky Cable. Access to these services is protected -- viewers need to have an active subscription for the respective service's channels with a Pay-TV provider. Both apps come free with premium plans, and can be availed for an add-on cost for the lower value plans. Their range of content is not as wide as that of the other OTT providers, but demand for highly sought after shows like Game of Thrones, or the Walking Dead, which are released on the same day as their U.S. broadcast, makes them a good proposition.

Tribe and Viu are similar in their focus on Korean and Asian content, and the hybrid freemium monetization model they employ. Both providers show ads as a tool to acquire additional revenue to help them afford to keep subscription rates low. Feeding into the Korean craze, both providers offer catch-up viewing of the latest Korean shows. The shows

are also dubbed in English in short turnaround times from the first airing of the shows in their home markets. Viu even offers subtitling in the Tagalog language. Tribe provides linear-TV access as well, and highlights other types of content like e-games and e-sports coverage. Tribe offers one of the lowest fees at just PHP 30 for 7 days and PHP 69 for 30 days. Viu, on the other hand, offers free access, limited to 3 offline downloads and SD streaming quality. With the Viu premium plan, available for PHP 129 for 30 days, streaming is upgraded to HD quality, downloads are unlimited, and fewer ads are displayed.

Blink Now is a joint venture between Solar Entertainment and SM Prime, operator of the largest cinema network in the Philippines. It is an SVOD and TVOD service, with movie rentals and TV series viewing options. The current library is very limited, and the user interface has a lot of room for improvement. But, with the backing of SM Prime and their goal to enable movie rentals on the day after the cinema release, this service should be closely watched by competitors.

Provided below as **Exhibit 46** is a summary of popular OTT service providers in the Philippines.

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Exhibit 46 Popular OTT Players Operating in PH Market, May 2017

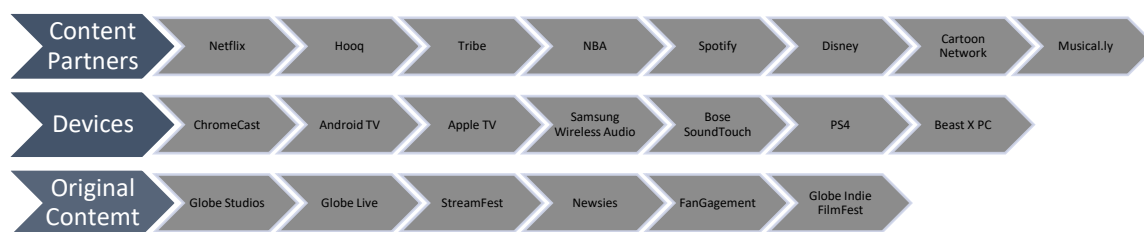
Provider	Catalog	Entry-level Fee	Revenue Model	Partners	Plans	Local Content	Catchup Release	Offline Viewing
Netflix	30,000 hours	₱370	Subscription (monthly)	Globe (marketing)	₱370 - 1 screen ₱460 - HD, 2 screens ₱550 - 4k, 4 screens	×	×	✓
iFlix	30,000 hours	₱129	Subscription (monthly)	PLDT (investor)	₱129 – 30 days	✓	✓	✓
HOOQ	35,000 hours	₱59	Subscription (monthly) Rentals - latest movies	Globe (marketing)	₱59 - 7 days ₱149 - 30 days ₱369 - 90 days ₱729 - 180 days ₱1,339 - 360 days ₱125 - movie rental	✓	×	✓
iWantTV	not reported	₱10	Freemium Pay-per-view	ABS-CBN	Free - 3 episodes + livestream ₱10 - 1 day ₱40 - 7 days ₱99 - 30 days	✓	✓	×
Fox+	11,000 hours	₱390	Subscription (monthly)	PLDT/Cignal TV / Smart-exclusive for subscribers	₱390 - 30 days	×	✓	✓
HBO Go	1,800 hours	Free	Subscription (monthly)	Exclusive for Sky Cable HBO subscribers	₱350 - HBO Pack Add-on for Sky subscribers	×	✓	×
Tribe	not reported	₱30	Low monthly subscription Ads (to help defray costs)	Globe (marketing)	₱30 - 7 days ₱69 - 30 days ₱199 - 90 days	×	×	×
Viu	10,000 hours	Free	Freemium	Inquirer Group	FREE - 3 downloads, SD, Ads ₱129 - 30 days HD, unlimited downloads, less ads	×	✓	✓
Blink	2,000 hours	₱60	Movie Rental TV Subscription (monthly)	SM Prime & Solar (Owners)	₱60 - 150 for rental ₱250 unlimited streaming	×	×	×

6.2. Other Non-OTT Players and Channels

6.2.1. Telecommunications Operators

While Globe Telecom has primarily served as a data access provider for OTT providers, it has also acted as a content distributor in some scenarios, and effectively blurred the lines between the two roles. As part of its strategy to increase usage and stickiness, and to dominate the home, Globe has developed programs and offers for this. Globe has employed a three-pronged approach of securing content providers, and providing the devices / hardware to facilitate further engagement.

While Netflix, HOOQ and Tribe are primarily aggregators of content, this has not stopped Globe from partnering directly with producers, such as the NBA, Sports Illustrated, Disney, Cartoon Network, etc. Globe can theoretically enjoy better margins, if the economics of the minimum guarantee and conversion to paying subscriptions become successful.



The fact that Globe is also offering devices as part of their plans supports the case that they are focused on building engagement and stickiness. With a Chromecast or AppleTV device, users can easily set-up home TV sets to stream a wide selection of content. This option is a direct substitute for Cable/DTH TV viewing.

PLDT is employing a similar strategy, with a push to market its Roku-powered media device called the TVolution. This device brings content to the television at home, which means it is no longer the exclusive domain of Pay-TV plans. In fact, Signal TV is offered as a streaming channel on TVolution devices, in this case, making the aggregator the content source. On the mobile side, Smart has already started to offer livestream services for selected Fox channels to its subscribers. This includes channels, such as Natgeo People, Fox Sports, Fox News, etc. How Smart intends to monetize this strategy is still unclear.

6.2.2. Digital Media Platforms

YouTube's popularity as an entertainment platform that rivals traditional FTA and Pay-TV has solidified in the past couple of years. With the popularity of its Creators Program, YouTube has cultivated unique, home-grown, entertaining and massively popular digital personalities, with audiences that rival traditional media volumes. One piece of

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feedback from the key-informant interviews we conducted was that older demographics preferred branded content from the likes of Netflix, HBO, etc., while teens preferred local and home-produced content from their favorite YouTube channels. While the monetization journey is still unclear, as even YouTube has tried different approaches to generating revenues, what is clear is that, for now, the eyeballs of the next generation are going to YouTube and similar outfits that offer content that attracts them.

Exhibit 47 below is a list of the top 15 YouTube channels in the Philippines with their estimated audience size, to provide some scale to this shift. Of the top 15, 8 channels are individual, non-celebrity, or non-network channels.

Exhibit 47 Top 15 YouTube Channels Philippines, as of June 2017

Rank	Channel	Subscribers (in '000)	Views (in '000)	Type
1	ABS-CBN Entertainment	5,881	8,319,035	Network - Entertainment
2	ABS-CBN News	3,038	2,343,798	Network - News
3	Kids' Toys	2,393	2,876,288	Creator - Kids
4	fliptopbtles	2,208	916,889	Creator - Music/Dance
5	Ranz Kyle	2,021	228,481	Creator - Music/Dance
6	GMA Network	1,940	2,426,631	Network - Entertainment
7	KAYCEE & RACHEL in	1,539	1,207,434	Creator - Kids
8	GMA News	1,479	1,595,987	Network - News
9	ABS-CBN Starmusic	1,472	784,934	Network - Entertainment
10	Wish 107.5	1,233	400,971	Network - Entertainment
11	Niana Guerrero	939	55,713	Creator - Dancer
12	ANS-CBN Star Cinema	786	408,880	Network - Entertainment
13	beutyklove	676	92,681	Creator - Beauty
14	JamichTV	671	153,080	Creator - Relationships
15	Mike Inel	656	85,794	Creator - Artist





Source: VidstatsX Philippines Top YouTube Channels Report

Similar to YouTube, Facebook has risen in popularity as a broadcasting tool thanks to its Facebook Live service. The potential benefits and impact of live broadcasting are massive, but, at the same time, the ease of using the tool makes it prone to abuse. The fact that Facebook's audience is so immense makes the Facebook Live tool even more powerful, due to its potential to reach a wide audience.

Provided below in **Exhibit 48** are some examples of how Facebook Live has been utilized, both for public interest and for illicit content piracy:

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Exhibit 48 Sampling of Facebook Live Video Streams June 2017

 <p>NASA Live Stream From Space Watch the world go by live from the ISS. UNILAD was live October 20, 2016 · 8,517,772 Views</p>	<p>NASA Space Walk</p>	<p>8,517,772 views</p>
	<p>pirated Pacquiao VS Horn Boxing Match</p>	<p>159,000</p>
	<p>pirated Columbiana (Movie) Live Stream</p>	<p>713</p>
 <p>LIVE! We're live streaming Roger Federer's practice... Wimbledon was live June 29 · 1,201,899 Views</p>	<p>Wimbledon Federer Practice Tennis Match</p>	<p>1,201,000</p>

7. Regulation of the Philippine TV Industry

This section talks about the various regulatory, policy and implementing guidelines for the Philippines Pay-TV industry. Information here is gathered from industry stakeholder interviews, review of policies, and key-informants from the NTC.




7.1. Key Stakeholders in Philippine TV Regulation

The TV industry in the Philippines is regulated by multiple stakeholders, coming from both the public and private sectors. Regulatory policies and guidelines emanate from the government, through agencies like the DICT, NTC, etc. Standards for cooperation and business development come from private and public groups. The section below discusses the prevailing issues relevant to today's market.

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7.1.1. Media Regulatory Bodies

These are the official government bodies tasked to monitor and develop the Pay-TV industry further:



Regulatory Body	Roles and Responsibilities
<p>Department of Information & Communications Technology</p> 	<ul style="list-style-type: none"> • Is the primary policy, planning, coordinating, implementing, and administrative entity of the Executive Branch of the government that will plan, develop, and promote the national ICT development agenda • Development of a National Broadband Plan to accelerate the deployment of fiber optic cables and wireless technologies to improve internet speed • Provision of Wi-Fi access at no charge in selected public places including parks, plazas, public libraries, schools, government hospitals, train stations, airports, and seaports • Development of a National ICT Portal • Will oversee the following attached agencies / offices: <ul style="list-style-type: none"> • National Telecommunications Commission (NTC) • National Privacy Commission (NPC) • Cybercrime Investigation & Coordinating Center
<p>National Telecommunications Commission (NTC)</p> 	<ul style="list-style-type: none"> • Regulate and supervise radio and television broadcast stations, CATV, and pay television • Grant certificates of public convenience, and necessity or provisional authority to install, operate, and maintain telecommunications, broadcast, and CATV services • Regulate the installation, operation and maintenance of radio stations both for private and public use, and the provision of public telecommunications services • Monitor the operation of all telecommunications and broadcast activities • Enforce applicable domestic and international laws, rules and regulations, prosecute violation thereof, and impose appropriate penalties or sanctions
<p>Movie and Television Review and Classification Board (MTRCB)</p> 	<ul style="list-style-type: none"> • Review and classify motion pictures, television programs and related promotion materials and commercials for TV and cinema, applying as a general standard contemporary Filipino cultural value • Movies and programs shown by Filipino television channels are reviewed and classified by the board. The board may suspend, reject or cancel programs, but cannot revoke broadcast licenses

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<p>Optical Media Board (OMB)</p> 	<ul style="list-style-type: none"> • Regulate the manufacture, mastering, replication, importation and exportation of optical media • Issue licenses and handle registration of any person, establishment or entity that engages in one or more of the businesses or activities enumerated under the Optical Media Act
<p>Intellectual Property Office (IPO)</p> 	<ul style="list-style-type: none"> • Administer and implement the State policies declared in Republic Act (RA) 8293, known as the Intellectual Property (IP) Code of the Philippines • Examine applications and registrations to intellectual property owners of Copyright and Related Rights, Trademarks and Service Marks, Geographic Indications, Industrial Designs, and Patents

7.1.2. Self-Regulatory Bodies



These are the self-regulatory bodies that help to foster harmony and synergy within the players of the industry:

Regulatory Body	Roles and Responsibilities
<p>Association of Broadcasters of the Philippines (KBP)</p> 	<ul style="list-style-type: none"> • The foremost broadcast media organization in the country, composed of owners and operators of radio and television stations (Regular Members), and the radio and television stations themselves (Associate Members) • Broadcast industry's self-regulatory body which implements and enforces a code of conduct for broadcast stations
<p>Ad Standards Council of the Philippines</p> 	<ul style="list-style-type: none"> • Handles screening of advertisements, with or without advertising claims for FTA, Pay-TV and digital • Presides over hearings of disputes on advertisements which pertain to the content of the advertisements on any form of media including FTA, Pay-TV and digital • Provides resolution of dispute on advertisements arising from procedures of the ASC

7.1.3. Industry Affiliates

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These industry associations are composed of Pay-TV operators nationwide, from small/micro to large enterprises:

Regulatory Body	Roles and Responsibilities
<p>Philippine Cable TV Association (PCTA)</p> 	<ul style="list-style-type: none"> Formed in 1987 by small independent cable television operators to promote and protect their interests, and to put the then infant cable television industry on the map of respected Philippine business Works closely with the NTC in formulating policies governing the industry
<p>Federation of International Cable TV and Telecommunications Association of the Philippines</p> 	<ul style="list-style-type: none"> The largest non-profit organization of cable television operators from all over the country. Works with the NTC and legislature in safeguarding and formulating policies governing the industry Organizes its members into a single unified body on matters of policy, and business development opportunities

7.2. Major Policy and Regulatory Issues

This section talks about some of the prevailing issues that are important and relevant to Pay-TV players today. These were corroborated by in-depth interviews conducted with key stakeholders in the industry.

7.2.1. Intellectual Property

The NTC made it clear that cases regarding intellectual property (arising from piracy in particular) have to be brought up with the Intellectual Property Office. The NTC has no control over such cases.

7.2.2. OTT Regulations

The NTC has already drafted implementing guidelines for OTT operators, and targets to issue the final approved memo before the end of 2017. The required set of public consultations have already been completed, and the memo is currently being finalized for passage. Pay-TV operators have voiced their disagreement, primarily due to the issue of the liberalization of the Cable TV coverage area. Cable TV operators are limited by geographic coverage, and need a congressional franchise to be cleared for business. The objection of cable TV operators is that OTT providers have no geographic limitation and minimal regulatory requirements, unlike the strict rules they face. The request of

cable TV operators was to be automatically classified as an OTT provider as well, in order to be able to enjoy the same freedom and benefits. The NTC is reportedly supportive of a more liberal approach to regulating cable TV players, but this will only be confirmed once the official memo is released.

In connection with this, the NTC is also conducting a review of the policy limiting the number of players within a coverage area. The intention is to apply a calculation based on household demographics, to estimate how many providers an area can support without negatively impacting revenue potential. Hearings for this have already been completed, and the guideline is targeted to be released within Q3 2017.

7.2.3. Signal Piracy

The NTC has an enforcement group, which has police powers to act on complaints and other suspected illicit activities. Activation of this unit must be initiated by a complaint followed by a due investigation.

Companies and operators are also taking it upon themselves to police and investigate cases on their own. This is the case with HBO distributor Cable Boss, which has an investigation unit that visits their different service areas to observe and catch signal piracy offenders in action. Usually, they can resolve such issues in conjunction with the Pay-TV operator without involving the NTC. The source of channels that are illegally retransmitted can frequently be identified; if Cable Boss' agents see any illegal or dubious retransmission, they usually report to the originating Pay-TV operator to "fingerprint" the device. When this is done, the device can be decommissioned remotely. The issue is that offenders may have easy access to additional set-top boxes, and when one is confiscated or decommissioned, they can easily switch to a new one. Pay-TV stakeholders believe that controlling the illicit devices – their sales and distribution – will have positive results.

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APPENDIX: Directory of Key Executives – Pay-TV

COMPANY / ORGANIZATION	DESCRIPTION	KEY EXECUTIVES	CONTACT INFORMATION
Sky Cable Corporation	Pay- TV Operator DTH Operator	March Ventosa - COO	6th Floor, ELJ Communications Center, Eugelio Lopez Drive, Quezon City, Philippines 1103 asventosa@skycable.com +63 2 924 4101
Converge ICT	Cable TV Operator	Mar Santos – COO	Reliance IT Center, 99 E. Rodriguez Jr. Avenue, Pasig City, Philippines 1604 mpsantos@convergeict.com
Converge ICT	Cable TV Operator	Dennis Uy - President & CEO	Reliance IT Center, 99 E. Rodriguez Jr. Avenue, Pasig City, Philippines 1604
SignalTV	DTH Operator	January Anne Cornejo Inigo - Vice President, Strategic Business Development	SignalTV HQ, 5th Floor, LaunchPad, Reliance cor Sheridan Streets, Mandaluyong City, Philippines 1550 jcinigo@signaltv.com +632 689 3100 loc 53157
SignalTV	DTH Operator	Guido Zaballero - Vice President, Marketing	SignalTV HQ, 5th Floor, LaunchPad, Reliance cor Sheridan Streets, Mandaluyong City, Philippines 1550
SignalTV	DTH Operator	Jane Basas - President & CEO	SignalTV HQ, 5th Floor, LaunchPad, Reliance cor Sheridan Streets, Mandaluyong City, Philippines 1550
SignalTV	DTH Operator	Erwin Galang - Head of Regulation and Industry Affiliation	SignalTV HQ, 5th Floor, LaunchPad, Reliance cor Sheridan Streets, Mandaluyong City, Philippines 1550 evgalang@signaltv.com.ph
GSat	DTH Operator	Lorlyn Gardia-Velarde - General Manager	First Global Building, 6th Floor #122 Gamboa Street, Legaspi Village, Makati City, Philippines +63 2 882 9999
GSat	DTH Operator	Philip Chien - President & CEO	First Global Building, 6th Floor #122 Gamboa Street, Legaspi Village, Makati City, Philippines +63 2 882 9999
PCTA - Philippine Cable TV Association	Industry Association	Ralph B. Casino - President	Unit 504, Taipan Place Condominium, F. Ortigas Jr. Road, Ortigas Center, Pasig City Philippines 1605 secretary@pcta.org.ph +63 2 638 8541
FICTAP – Federation of International Cable TV and Telecommunication Association of the Philippines	Industry Association	Estrella "Neng" Juliano - Tamano - National Chair	Suite 1607 Sunset View Towers, Roxas Blvd., Pasay City, Philippines secretariat@fictap.com.ph +63 2 833 1087

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COMPANY / ORGANIZATION	DESCRIPTION	KEY EXECUTIVES	CONTACT INFORMATION
iFlix Philippines	OTT Operator	Sherwin Dela Cruz - Country Manager	The Playground, 26th Floor, Trade & Financial Tower, 32nd St. cor 7th Ave., Bonifacio Global City, Taguig, Philippines sherwin@iflix.com
Hooq	OTT Operator	Jane Walker – Country Manager	Bonifacio Global City, Taguig, Philippines jane@hooq.tv
Tribe Now	OTT Operator	Steven Santos – Country Manager	Bonifacio Global City, Taguig, Philippines steve@tribenow.tv
ACCION Asian Cable Communications	Program Distributor	Reuel Dominguez - President & CEO	24 Emerald Avenue, Ortigas Center, Pasig City Philippines 1605 reueldominguez@yahoo.com.ph +63 2 636 0067 to 70
Cable Boss	Program Distributor	Baby Zarate - Assistant Vice President, Network Distribution	6th Floor Renaissance Tower D, Meralco Ave., Pasig City Philippines 1600 babyz@cableboss.ph +63 2 6337361 loc 151
Cable Boss	Program Distributor	Timothy Bautista - Vice President & COO	6th Floor Renaissance Tower D, Meralco Ave., Pasig City Philippines 1600 timothyb@cableboss.ph +63 2 633 7361



About CASBAA

CASBAA is the Asia Pacific region's largest non-profit media association, serving the multi-channel audio-visual content creation and distribution industry. Established in 1991, CASBAA has grown with the industry to include digital multichannel television, content, platforms, advertising, and video delivery. Encompassing some 507 million connections within a footprint across the region, CASBAA works to be the authoritative voice for multichannel TV; promoting even-handed and market-friendly regulation, IP protection and revenue growth for subscription and advertising, while promoting global best practices.

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