SPOTX

# TOTAL VIDEO: THE ECONOMICS AND MARKETPLACES OF CONVERGENCE

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## The Economics and Marketplaces of Convergence

### Introduction

Disruption in media has reached a point of normalcy. It's impossible to read through the trade publications without coming across at least one feature on media companies investing in tech platforms, big-tech firms making plays for content, or whispers of studios eyeing the acquisition of distribution platforms. If you're a seller or a buyer on the front lines of the TV or digital video business, it's enough to make your head spin. Disrupting disruption would be the only thing truly disruptive to an industry whose long-term viability lies in simultaneously executing strategies of expansion and consolidation.

As frenetic as the industry's pace of change may seem today, there's likely some good news on the horizon. By the end of this decade, the industry will have completed its realignment, driven by the need to effect stable marketplaces across all streams and all screens. However, between here and that horizon there is certain to be an acceleration of M&A activity spanning wide swaths of the industry, focused on aligning the modern value centers of media—content, distribution and data.

Programmers and Multichannel Video Programming Distributors (MVPDs) are in a race to expand consumer availability of their entertainment services beyond traditional channels, as internet-based MVPDs like SlingTV and SonyVUE and the increasing popularity of direct-to-consumer apps challenge the value proposition of legacy distribution.

Indeed, consumers seeking variety in programming and the option to view their entertainment selections across an expanding array of devices and platforms are at the core of the most dramatic shift in audience the industry has ever seen.

Among the general public, there is no longer a boundary separating TV and video—live TV can be watched on a smartphone and YouTube clips can be streamed on the living room big screen. But from the perspective of media buyers and sellers, these silos are stubbornly enduring. TV and video are still largely valued as separate media vehicles, exacerbating the challenge of seamlessly engaging audiences splintering across time and device.

Technology and emerging competencies facilitating a fluidity of data, however, are easing the burdens of targeting audiences across content platforms. The ability to enumerate audience fulfillment beyond age and gender demographics is powering cross-screen campaigns with first- or third-party data, all but eliminating the institutional barriers of disparate currency systems used to value TV and video.

Convergence is rapidly approaching. Some might argue it's already here, evidenced by wholesale transformations in distribution protocols, an emerging ubiquity of content across platforms and marked shifts in the complexion of audience within traditional TV.

Understanding the macroeconomics of this transition provides media owners with the insights necessary to protect rate integrity and maximize yield as their core business transitions from selling 30-second avails to the monetization of individual impressions.

## The drivers of convergence

The industry has long used the term "convergence" to describe its vision of TV and digital video advertising transacting seamlessly within a singular marketplace. While digital video is an inherently device-targetable medium, capable of passing key audience attribute data from publisher to buyer at the moment of an ad opportunity, TV has operated for a half-century on the pre-scheduled placement of a 30-second ad, valued on proxy currency systems.

## Driver #1: Infrastructure

Elements of TV, such as autonomous set-top box addressable ad serving and QAM-based channel switching have given MVPDs the ability to refine and enumerate audience fulfillment, albeit on a technologically-limited scale. However, in the long run these will not be the enduring platforms of advanced audience targeting within linear TV.

The rise of IP-based content distribution in the US is achieving scale at a breakneck pace— AT&T, for example, kicked off the 2017 TV season with an announcement that it will transition all of its DBS video subscribers over to its DIRECTV Now streaming platform by 2020.

For broadcasters that have until now lacked the infrastructure to offer targeted advertising executions, the adoption of ATSC 3.0 is moving forward with all deliberate speed.

Modeled off the hybrid broadband TV (HbbTV) standards common across Europe, ATSC 3.0 promises consumers the ability to stream over-the-air TV content to any device on their home Wi-Fi networks through broadband-enabled antennas or dongles plugged into their TVs.

While improving measurement standards, ATSC 3.0 also provides media owners with real-time audience discovery and device-level ad targeting capabilities, representing a significant evolution to TV stations' traditional ad model.

Smart TV manufacturers are also getting into the ad game. Samsung announced in October that it would be offering similar capabilities to media owners and advertisers, facilitating targeted ad deliveries within local TV station inventory through its connected TV consoles.

## Driver #2: Shifting Audiences

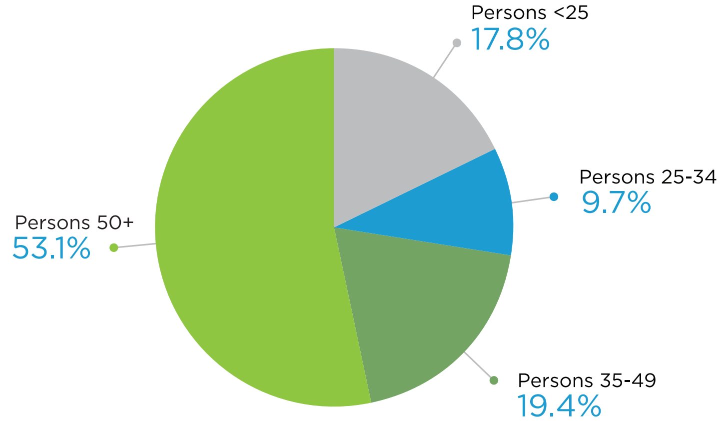
The face of TV in the US has changed significantly in the last year. Comparing the time spent among TV, multimedia devices, and desktop and smartphone video through the first half of 2016 to the same period of 2015 demonstrates how quickly the landscape is shifting.

While Nielsen reports through the first two quarters 2016 TV viewing among all measured persons (Aged 2+) was flat to 2015, key demos are looking to alternate platforms for their TV and video content. Persons under the age of 25 spent 9.6% less time watching TV year-over-year.

Despite representing only 37% of the tuning population, adults over the age of 50 represented nearly 53% of all TV viewing in the first half of 2016. In fact, this is the only demo that saw significant year-over-year gains in time spent with traditional TV.

TV's Total Engagement by Age 2Q'16

*Source: Nielsen, The Total Audience Report 2Q'16*




In order to understand where audiences are growing, we normalized the Nielsen Total Audience Report across four media channels: Live+DVR Timeshifted TV, Multimedia Devices (Roku, Apple TV, etc.), Video on a PC and Video on a Smartphone.

This normalization converts the monthly cumulative reach of each vehicle and the monthly time spent with each into a statistic we refer to as "cumulative engagement hours."

This effectively creates an apples-to-apples comparison of audience across vehicles: time spent x reach= cumulative engagement hours.

For example, the monthly time spent with TV among persons 2+ in 2Q'16 was 137 hours 4 minutes.

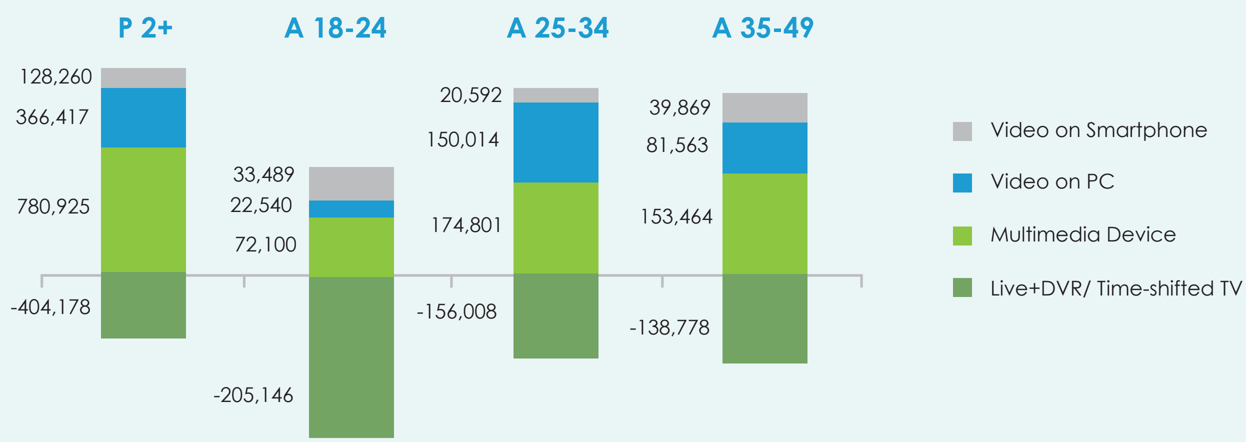
TV had a cumulative monthly reach of 284.8 million persons 2+.

This yielded 39.2 billion cumulative engagement hours in 2Q of 2016 (137:04 x 284.8 million= 39.2 billion cumulative engagement hours).

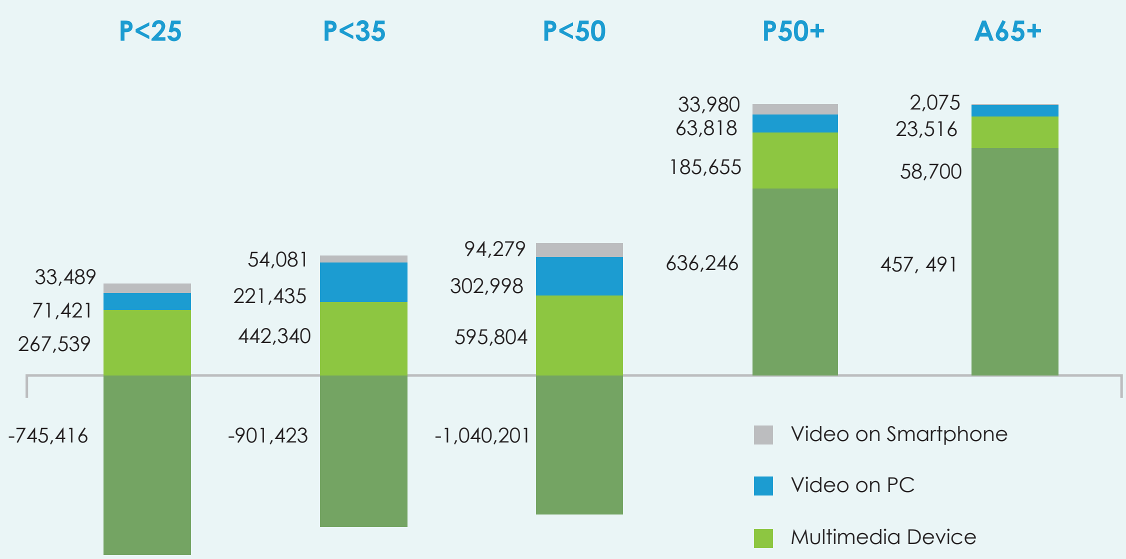
The shifts in audience year-to-year from TV to multimedia devices and digital video are extremely pronounced in younger demographics, with overall gains in streaming video among persons 2+ more than offsetting decreases in time spent with TV.

## Year-to-Year Changes in Monthly Cumulative Engagement Hours

*(000's) 1H 2016 vs. 2015*




***How to read:*** The net YTY changes in cumulative engagement hours by medium are stacked to 100% on absolute value, with the X-axis representing a zero value. A cumulative loss in YTY engagement hours will push the stacked bar lower, and a cumulative gain in total engagement hours will push the stacked bar higher. A bar evenly dissected by the X-axis represents zero net gain.




*Source: Nielsen, The Total Audience Report, 1Q & 2Q Editions*

While some of these shifts may seem rather austere—745 million monthly TV engagement hours displaced among persons under the age of 25—it's important to put this in context. TV still represents 7.2 billion monthly engagement hours among the under-25 population.

The value of TV in monthly engagement hours for persons 2+ was nearly 41 billion in the first half of 2016. This is largely why TV ad demand has continued to grow year-over-year, despite expanding universes of "cord cutters" and "cord shavers."

But while the impact of audience migration to video has yet to show any significant material effect on TV's role as the cornerstone of multi-channel advertising campaigns, it's also the very reason the industry needs to give careful consideration to the rise of addressability.

Simply put, the current audience economics of linear TV for media owners are unfavorable to marketplaces predicated on the ability to ubiquitously serve ads at the device level.

## An impression-based valuation of TV

At $72 billion in 2016 ad spending, traditional linear TV is a beast, but so is digital media. 2017 is the year eMarketer projects spending to tilt in the favor of digital, with the two combining to form a $234 billion ad economy by 2020.

## US TV* vs. Digital Ad Spending, by Device, 2014-2020

*billions*

| | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|
| **TV*** | **$68.54** | **$68.88** | **$70.60** | **$72.01** | **$73.81** | **$75.29** | **$77.17** |
| **Digital**** | **$49.69** | **$59.61** | **$68.82** | **$77.37** | **$86.61** | **$96.11** | **$105.21** |
| --Mobile | $19.15 | $31.59 | $43.60 | $52.76 | $61.20 | $69.15 | $77.10 |
| --Desktop/laptop | $30.54 | $28.02 | $25.22 | $24.62 | $25.42 | $26.95 | $28.11 |
| **Digital video***** | **$5.24** | **$7.66** | **$9.84** | **$11.72** | **$13.39** | **$15.15** | **$16.69** |
| --Desktop/laptop | $3.70 | $4.77 | $5.60 | $6.33 | $7.07 | $7.95 | $8.63 |
| --Mobile | $1.54 | $2.88 | $4.24 | $5.39 | $6.31 | $7.20 | $8.06 |
| **Total media ad spending** | **$171.34** | **$182.78** | **$192.02** | **$201.32** | **$212.20** | **$223.11** | **$234.25** |

*Note: *includes broadcast TV (network, syndication & spot) & cable TV;*
***includes advertising that appears on desktop and laptop computers as well as mobile phones, tablets and other internet-connected devices, and includes all the various formats those platforms;*
****includes advertising that appears on desktop and laptop computers as well as mobile phones, tablets and other internet and laptop computers devices; includes advertising that appears before, during or after digital video content in a video player*

*Source: eMarketer, March 2016*

Outside the obvious spending capacity flowing to TV, exactly how big is TV in terms of potential audience? And as the infrastructures supporting impression-level monetization within TV content scale, how does the capacity of audience within TV measure against the video standards of 100% viewability, mezzanine creative, platform addressable, etc.?

Traditional TV in the first half of 2016 showed an average monthly total of 40.9 billion cumulative engagement hours among persons 2+. Annualized, that's 491 billion total hours of TV.

On average, there's about 14 minutes of ad time per programming hour in linear TV, meaning the average person sees the equivalent of 28 30-second ads every hour.

If we assume that at least 65% of our collective TV tuning time is spent with ad-supported programming (65% of 491 billion engagement hours) that equates to about 17.8 trillion potential ad impressions in TV (28 30-second ads per hour x 491 billion hours x 65%).

# Audience Capacity of TV Inventory:

According to Nielsen

**286.1 Million**

People in the US averaged more than

**137 Hrs/Month**

watching TV in Q2 '16 or

**39.2 billion**

Cumulative Engagement Hours per month.

Assuming that 65% of TV time is spent with ad-supported content, there are nearly

**25.5 billion**

of ad-supported cumulative engagement hours per month.

At an industry average of 14 minutes of ad time per programming hour, the monthly capacity of 30-second avails in TV approximately stands at

**705.6 billion impressions**

Annualized, that's roughly

**8.5 trillion impressions**

The shear capacity of audience within TV has provided an institutional hedge against cord-cutting. The demo leading the adoption curve of multimedia device usage, Adults 18-34, increased their 2Q multimedia device usage by a cumulative 271.3 million engagement hours over 2Q 2015, spending a collective 742 million hours a month with multimedia devices.

Despite this demo's migration into alternate content distribution platforms, there are still 1.27 trillion annualized Adult 18-34 ad impressions within linear TV. To put this in context, if you took the entirety of today's TV demand, $72 billion, and used it to exclusively buy impressions in this demo, the gross effective CPM would be $56.69 ($72 billion / 1.27 trillion impressions).

This is obviously a hyperbolic and largely academic demonstration, but underscores the enormity of audience supply within traditional TV, despite persistent audience migrations. But in IPTV and ATSC 3.0 environments, the discoverable intersection of audience and content may very well test the extremities of such examples.

The reality is that device-level monetization (as opposed to selling 30-second ad units) means TV media owners could shed more than half of today's traditional TV audiences, across all demographics, and still retain enough supply to meet today's demand, all while maintaining historical demo CPMs.

Herein lies the biggest challenge media owners face with the rise of ubiquitous device targeting rolling out across IPTV platforms and emerging standards such as ATSC 3.0.

John Landgraf, FX Networks' chief executive, cautioned TV critics in August that the industry is "ballooning into a condition of oversupply."

Existing ad loads within TV, along with the concentric marketplace channel conflict created between network and spot TV inventory represent hurdles to landing softly within the era of convergence.

Thus, we are likely to see more programmers follow the lead of National Geographic Channel, TNT, TruTV and NBC in proactively scaling back ad time (Adweek, Jason Lynch, May 2016).

In the context of FX's Landgraf's assessment of TV hitting a ceiling of 500 scripted programs, the industry's balloon is actually in audience, which at 14 minutes per programming hour, will need to be scaled back dramatically to accommodate TV consumption "on the go."

## From spots to impressions

TV and digital video have two distinct business models.  The broadcast ad delivery model, defined as a singular ad insertion point into content delivered in a one-to-many model of distribution, monetizes 30-second avails. The value of ad opportunities are based on estimated ratings, which themselves maintain a market-driven monetary exchange value—cost per point.

By default, the absolute supply-side measure of inventory value within the broadcast ad model is the unit rate.

In a sense, unit rate is also the vessel of value within digital video streams, however, in the digital ecosystem, unit and audience are interchangeable constructs - without audience, there is no inventory.  What constitutes "audience" within video (data, 3rd party verifications, etc.) is a condition of sale between buyer and publisher, but the singularity of audience and inventory are presented as absolute.

As audience segments toggle among distribution platforms and devices, so must the commercial value of audience attributes. This is fundamental to media owners achieving cross-screen marketplace stability.

The transition of TV inventory from the 30-second ad unit to a molecular monetization of impressions hinges on cross-channel data fluidity, re-centering the value of audience within scalable and open-ended combinations of audience attributes.

## Economics of calibration

Reconciling the economies of traditional TV with expanding pools of "TV " audiences in channels that monetize at the device level begins with establishing a continuity of audience.

Activating data fluidity across channels is essential to establishing a holistic view of a media owner's audience. Recognizing audience segments universally across channels is the distinction separating multi-screen executions and fulfilling cross-screen campaigns.

The econometrics of convergence, where TV and video are valued through equitable means and common marketplace workflows, suggest not that TV should be more like digital, but that digital video must be more like TV.

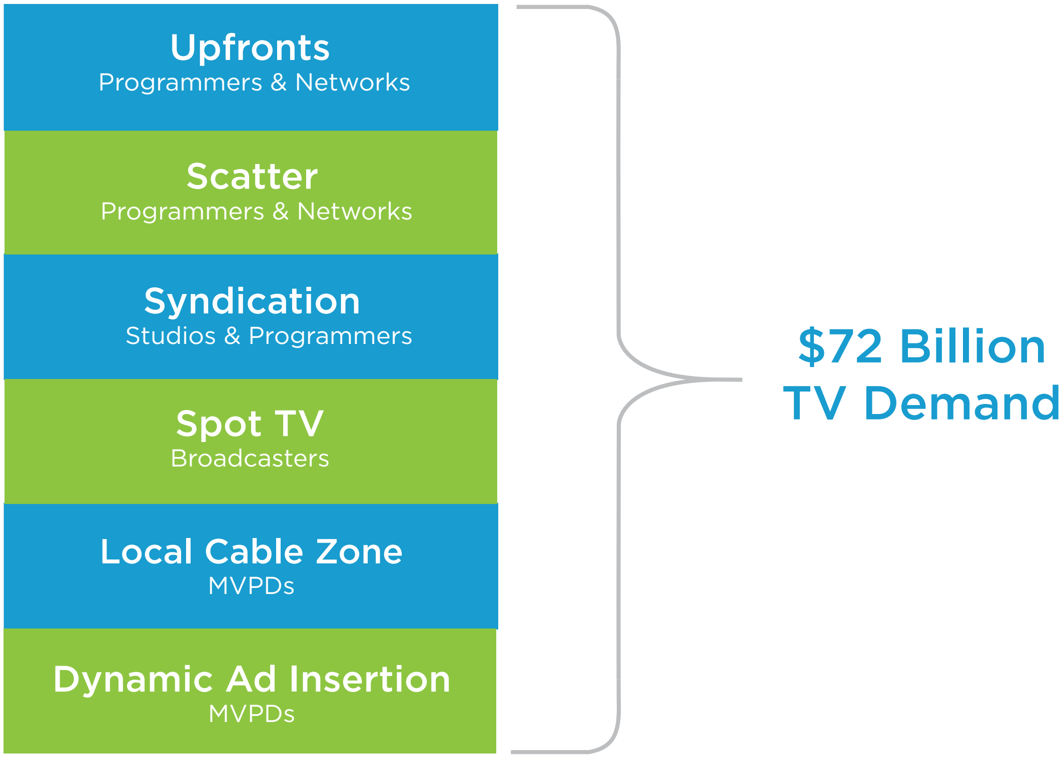
Programmers represent the fountainhead of TV inventory, wielding greater influence on market economics than their downstream distribution partners, whose center of influence vests in the scale of carriage.

The democratization of content that's underway—SVOD and direct-to-consumer apps— portends a certain reconfiguration of existing business models that reflect this balance of value between content and distribution within emerging marketplaces.

TV stations and MVPDs, representing the layers of TV closest to the consumer, have much more at stake as marketplaces converge. Local TV audiences trade at substantially higher CPMs than they do in network TV. This CPM amplification is a function of geographic rate discrimination in which CPMs scale upward as the footprint for the ad delivery is refined to a DMA or a cable zone.

The most refined geography an advertiser can buy within the one-to-many TV ad model is the cable zone. In most markets, the cable zone logically commands some of linear TV's highest demographic CPMs.

Economically, the challenge shouldn't be seen as a digital video vs. linear TV proposition, but in unicast vs. broadcast audience fulfillment. The chief objective as convergence comes about is safely transferring the value of a business model based on selling 30-second ad units to one driven entirely by the value of device-level metadata.




These represent the channels of supply in a 2017 TV marketplace valued at $72 billion. The trickle-down economics of TV ad sales effects an amplification of CPM down the value chain of distribution, sustaining local TV marketplaces.

## TV's call to arms

Given the evolving complexities across the ad business, more significant industrial shifts are to be expected, focused on aligning the modern value centers of media.

Media business models evolve. For example, affiliates and distributors pay for TV content in today's ecosystem, which is a complete inversion of TV's founding economics. Indeed, the industry has moved far beyond the original value construct of media: content.

Over the years, distribution emerged as another equitable value center, as the two created the symbiotic relationship necessary to create a product called "viewers."

As advertisers moved toward valuing expanding arrays of content, based largely on viewership, distribution became equally influential in establishing the economics of the modern TV ad business.

Today's industry disruption is driven largely by the emergence of a third value center: first-party user data.

Deep user data has become the MVPD's greatest asset, adding value to the strength of its distribution, but it is also providing the capital for tech giants like Google and Apple to leverage the future of media.

An arms race is underway between media giants on one side and big tech on the other. As the concepts of distribution expand from managed networks and set-top boxes to SVOD platforms and devices, two sides of the theater are making aggressive moves toward a center representing nothing less than a dominating share of access to the consumer population.

If a studio can get its content directly to the consumer within its own distribution infrastructure and value all ad inventory therein on proprietary, single-source user insights, it can sustain a marketplace capable of managing user-level rate integrity across all screens.

The largest companies in the world are in the business of building the "human index," developing empirical insights into how we interact with online and offline technologies. And like all other data-driven initiatives these companies are pursuing, when applied to TV content and distribution, the value add of user-level insight is substantial.

It only seems fitting that these companies, each rich in capitalized data, will aggressively pursue the largest studios and distribution platforms in the world over the coming months.

## Destination: convergence

It's undeniable that the flurry of activity and investments we see today across and between media and technology will result in a singular workflow for monetizing TV and digital video content. But the road to convergence as infrastructure and distribution platforms scale necessitates resolution of several critical path items for media owners to protect their long-term business interests.

1. Activation of cross-channel data fluidity. The ability to ingest and apply the insights of first- and third-party data seamlessly across content distribution channels provides a foundational element for achieving holistic yield management.

2. Achieving digital and TV audience rate parity. Targeting ads at a device level requires a portability of value from the one-to-many ad distribution business model to unicast ad decisioning, discouraging buyers from channel discrimination created by asynchronous pricing mechanisms.

3. Reduction of ad loads. Many programmers have been proactive in the last year in reducing their ad loads, but the industry must move away from its existing average load of 14 minutes per programming hour. Within a unicast ad model, 14 minutes an hour creates an overabundance of audience supply, while simultaneously adding pain to the "on-the-go" viewing experience

4. Economic reconciliation of concentric programming marketplaces. Today, advertisers option the reach of a target consumer through specific programming at either a national or DMA level, measured against bottom line efficiencies in CPM. Eventually, buying network inventory presents a lower out-of-pocket expenditure as local TV activations scale.

   In a device-targeted marketplace, the upward mobility of CPM is naturally capped by the ability of the advertiser to incur the "waste" of broadcast ad delivery channels at comparable out-of-pocket expense. The CPM ceiling for reaching a specific consumer segment in ABC's "Modern Family" is a derivative measure against the cost of reaching the entire Modern Family audience-- targeted ad delivery at a total cost of $100,000 must present substantive nuanced value against buying the entire audience for the same cost.

As the industry transitions to unicast ad delivery, the coexistence of concentric broadcast avails at both the DMA and network levels could pose some economic challenges for media owners.  For instance, the multiple on CPM valuations that currently exist between network programming and 210 individual spot TV marketplaces is an unsustainable construct within unicast ad marketplaces capable of determining the value of an ad opportunity at a device level.

Content, distribution and data are converging as equitable value centers of the modern ad industry.  They're creating the true currency of the media business, which of course, is audience. A tipping point is nearing, as evidenced by Nielsen's most recent insights on media engagement.

What we desire to measure as an industry will continue to evolve into perpetuity.  How we assemble, create, target, analyze and optimize a media mix to drive measurable outcomes will be tied together by a common denominator of value; Data-- its fluidity across distribution channels is inevitable as we move to understanding audiences holistically.

In the convergence of total video, audience is fluid, yet seamlessly monetizable across all screens, all streams.

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