The Relationship Between Movie Theatre Attendance and Streaming Behavior

Survey insights

April 2018

EY
Building a better
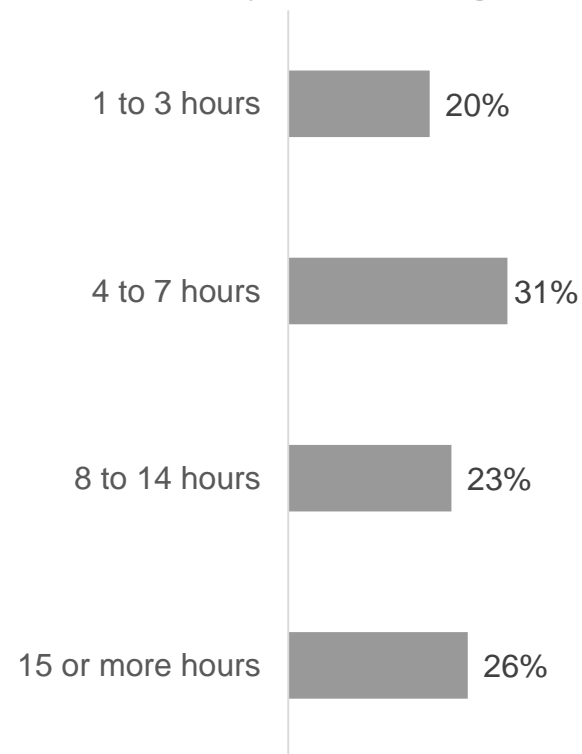working world

Overview

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I: About this study

► All results in this study are based on an EY survey fielded in February 2018 that asked questions about:

  ► Movie theatre attendance in 2017

  ► Streaming consumption in 2017

  ► Demographic information (race, age, income, etc.)

► The survey included 2,002 respondents, roughly 80% of whom saw at least one movie in theatres in 2017.

► Unless otherwise noted, the survey results presented in this study only include respondents who saw at least one movie in theatres and streamed at least one hour of online content per week in 2017. These 1,418 respondents are called "dual-consumers" (DC's).

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II: Movie theatre attendance and streaming consumption

Think back to January 2017 – about a year ago. During the 12 month period from January through December 2017, about how many times did you go to the movies at theatres?

Visits	Percentage
1	10%
2	15%
3	12%
4	11%
5	8%
6	10%
7	5%
8	6%
9	2%
10 or more	21%

Mean*:
5 visits

Think back to January 2017 – about a year ago. During the 12 month period from January through December 2017, on average, how many hours per week would you say you spent streaming online-subscription content or downloads from any of the following services?

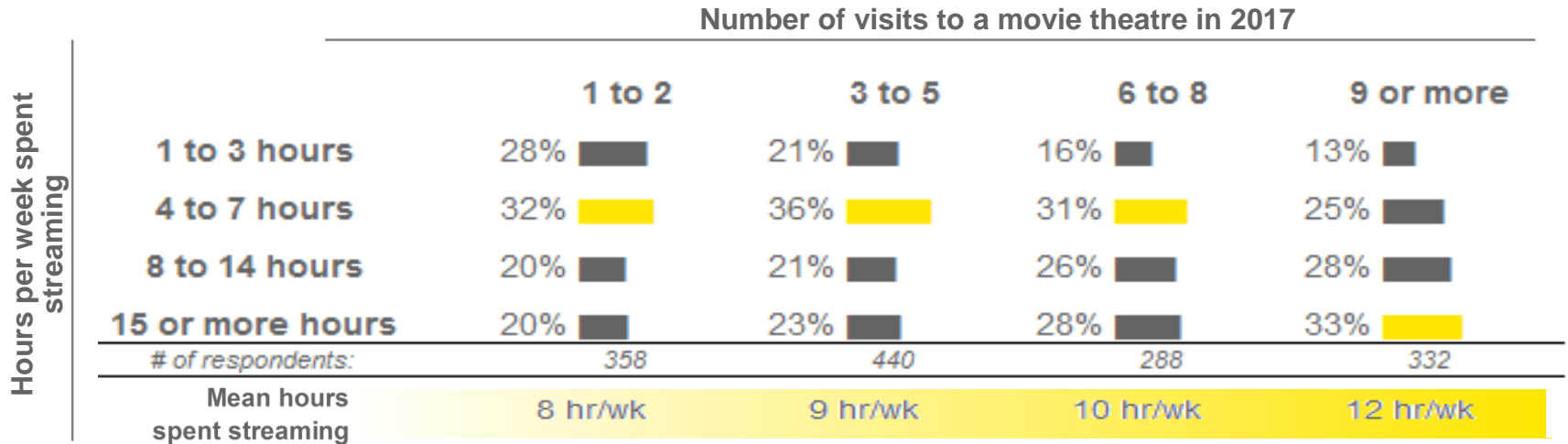| Hours	Percentage
1 to 3 hours	20%
4 to 7 hours	31%
8 to 14 hours	23%
15 or more hours	26%

Services: Netflix, Hulu, Amazon Video, HBO, Showtime, Starz, Redbox, iTunes/Pay-Per-View On-Demand

*Means are reported as 95% trimmed means.

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Positive relationship between movie theatre attendance and streaming behavior

Movie theatre attendance and streaming consumption are positively related – those who attend movies in theatres more frequently also tend to consume streaming content more frequently

	Number of visits to a movie theatre in 2017			
Hours per week spent streaming	**1 to 2**	**3 to 5**	**6 to 8**	**9 or more**
1 to 3 hours	28%	21%	16%	13%
4 to 7 hours	32%	36%	31%	25%
8 to 14 hours	20%	21%	26%	28%
15 or more hours	20%	23%	28%	33%
# of respondents:	358	440	288	332
Mean hours spent streaming	8 hr/wk	9 hr/wk	10 hr/wk	12 hr/wk

Of dual-consumers (DC's) who visited a movie theatre twice at most in 2017, 28% streamed less than 4 hours per week.

Of DC's who reported 9 or more visits to a movie theatre in 2017, only 13% streamed less than 4 hours per week.

Of DC's who visited a movie theatre twice at most in 2017, only 20% streamed online content for 15 or more hours per week.

Of DC's who reported 9 or more visits to a movie theatre in 2017, 61% streamed online content for 8 or more hours per week, and 33% streamed at least 15 hours per week.

Note: Columns may not sum to 100% due to rounding.
*Means are reported as 95% trimmed means.

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Nearly half of those who did not visit a movie theatre in 2017 did not stream online content

Online streaming behavior of those who did not visit a movie theatre in 2017

Did not stream	48%	
1 to 3 hours	13%	
4 to 7 hours	13%	
8 to 14 hours	11%	
15 or more hours	14%	

# of respondents who did not visit a movie theatre in 2017:	*401*
Mean hours spent streaming	5 hr/wk

Of those who didn't visit a movie theatre in 2017, nearly half (48%) didn't stream any online content.

Of those who did not visit a movie theatre at all in 2017, only a quarter (25%) streamed online content for 8 or more hours per week.

Note: Numbers may not sum due to rounding.
*Means are reported as 95% trimmed means.

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Relationship of movie theatre attendance and streaming behavior by race/ethnicity

The positive relationship between movie theatre attendance and streaming consumption is strongest among whites, as those who attended movie theatres at most twice spent an average of 8 hours per week streaming, compared to 12 hours per week for those attending 9+ times.

Movie theatre visits vs. streaming hours per week - White Dual-Consumers

	1 to 2	3 to 5	6 to 8	9 or more
1 to 3 hours	30%	19%	15%	14%
4 to 7 hours	32%	37%	28%	21%
8 to 14 hours	20%	22%	27%	29%
15 or more hours	18%	23%	30%	36%
# of respondents:	229	275	172	177
Mean* hours spent streaming	8 hr/wk	9 hr/wk	10 hr/wk	12 hr/wk

Movie theatre visits vs. streaming hours per week - Black Dual-Consumers

	1 to 2	3 to 5	6 to 8	9 or more
1 to 3 hours	28%	28%	16%	13%
4 to 7 hours	28%	38%	39%	19%
8 to 14 hours	19%	15%	18%	31%
15 or more hours	26%	19%	27%	37%
# of respondents:	43	79	44	62
Mean* hours spent streaming	9 hr/wk	8 hr/wk	9 hr/wk	12 hr/wk

Movie theatre visits vs. streaming hours per week - Asian Dual-Consumers

	1 to 2	3 to 5	6 to 8	9 or more
1 to 3 hours	31%	28%	39%	11%
4 to 7 hours	28%	33%	26%	41%
8 to 14 hours	14%	25%	17%	27%
15 or more hours	28%	15%	17%	22%
# of respondents:	29	40	23	37
Mean* hours spent streaming	9 hr/wk	7 hr/wk	8 hr/wk	10 hr/wk

Movie theatre visits vs. streaming hours per week - Hispanic Dual-Consumers

	1 to 2	3 to 5	6 to 8	9 or more
1 to 3 hours	37%	21%	9%	14%
4 to 7 hours	23%	38%	36%	30%
8 to 14 hours	21%	17%	36%	21%
15 or more hours	19%	23%	19%	35%
# of respondents:	70	86	75	86
Mean* hours spent streaming	8 hr/wk	9 hr/wk	10 hr/wk	12 hr/wk

Movie theatre visits vs. streaming hours per week - Non-Hispanic Dual-Consumers

	1 to 2	3 to 5	6 to 8	9 or more
1 to 3 hours	26%	21%	18%	13%
4 to 7 hours	34%	35%	29%	24%
8 to 14 hours	19%	21%	22%	30%
15 or more hours	20%	22%	31%	33%
# of respondents:	288	354	213	246
Mean* hours spent streaming	8 hr/wk	9 hr/wk	10 hr/wk	12 hr/wk

*Means are reported as 95% trimmed means.

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Relationship of movie theatre attendance and streaming behavior by age group

Movie theatre visits vs. streaming hours per week - Millennial Dual-Consumers

	1 to 2	3 to 5	6 to 8	9 or more
1 to 3 hours	26%	20%	13%	11%
4 to 7 hours	33%	36%	33%	24%
8 to 14 hours	19%	22%	26%	31%
15 or more hours	22%	22%	29%	35%
# of respondents:	243	308	192	200
Mean* hours spent streaming	8 hr/wk	9 hr/wk	10 hr/wk	12 hr/wk
	Millennials = Ages 18-37			

Movie theatre visits vs. streaming hours per week - Generation X Dual-Consumers

	1 to 2	3 to 5	6 to 8	9 or more
1 to 3 hours	27%	24%	23%	13%
4 to 7 hours	35%	30%	16%	32%
8 to 14 hours	20%	20%	26%	26%
15 or more hours	18%	25%	35%	29%
# of respondents:	74	83	57	82
Mean* hours spent streaming	8 hr/wk	9 hr/wk	11 hr/wk	11 hr/wk
	Generation X = Ages 38-52			

Movie theatre visits vs. streaming hours per week - Baby Boomers Dual-Consumers

	1 to 2	3 to 5	6 to 8	9 or more
1 to 3 hours	49%	27%	22%	24%
4 to 7 hours	18%	42%	38%	20%
8 to 14 hours	21%	13%	27%	22%
15 or more hours	13%	18%	14%	33%
# of respondents:	39	45	37	49
Mean* hours spent streaming	6 hr/wk	7 hr/wk	8 hr/wk	10 hr/wk
	Baby Boomers = Ages 53-72			

► The positive relationship between movie theatre attendance and streaming consumption is also evident across different age groups.
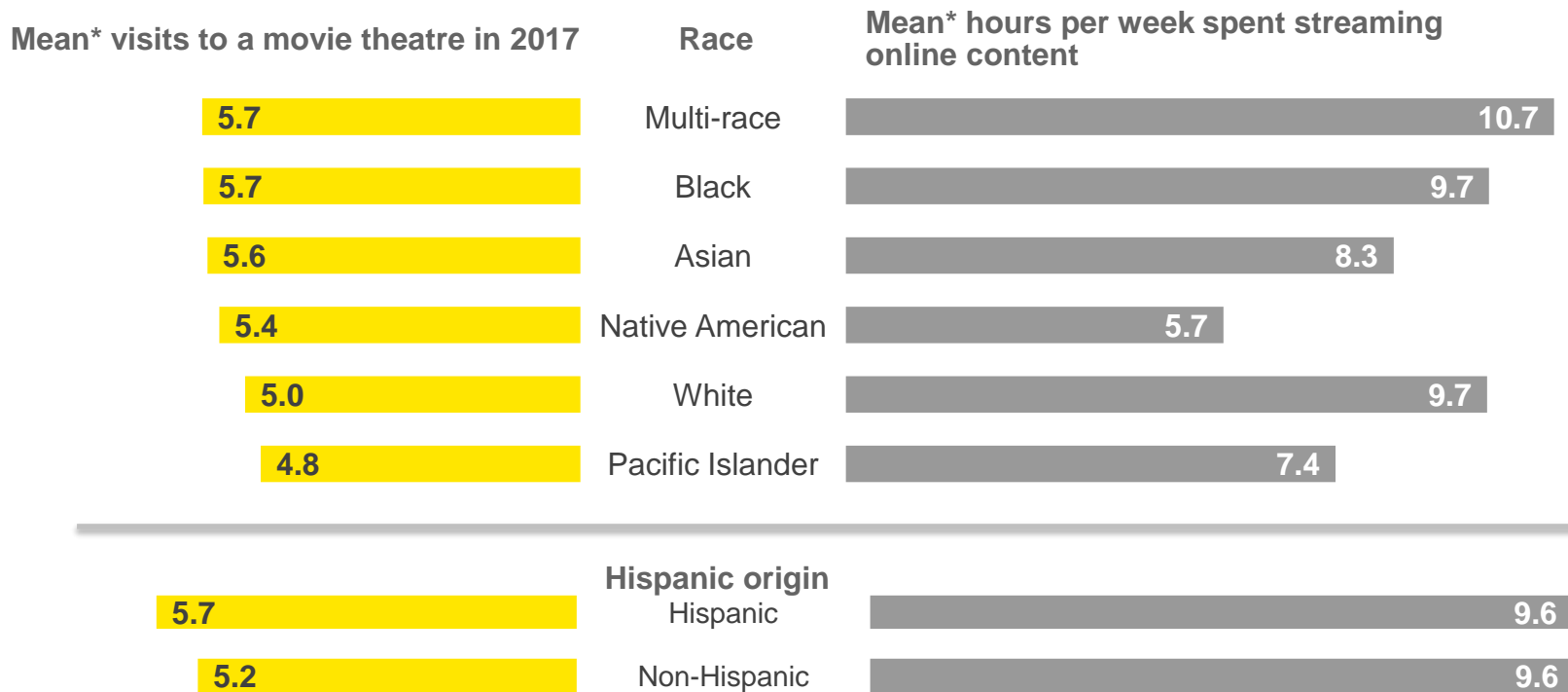
► Of those survey respondents that visited a movie theatre 9 or more times in 2017, Millennials, Generation X, and Baby Boomers all, on average, streamed 10 or more hours of online content per week.

Note: Generation ranges are defined based on the Pew Research Center graphic titled '*The Generations Defined.*'
Note: 'Silent Generation' is not shown as no movie attendance range includes more than four respondents.
*Means are reported as 95% trimmed means.

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Movie theatre attendance and streaming behavior by race/ethnicity

Mean* visits to a movie theatre in 2017	Race	Mean* hours per week spent streaming online content
5.7	Multi-race	10.7
5.7	Black	9.7
5.6	Asian	8.3
5.4	Native American	5.7
5.0	White	9.7
4.8	Pacific Islander	7.4

Hispanic origin

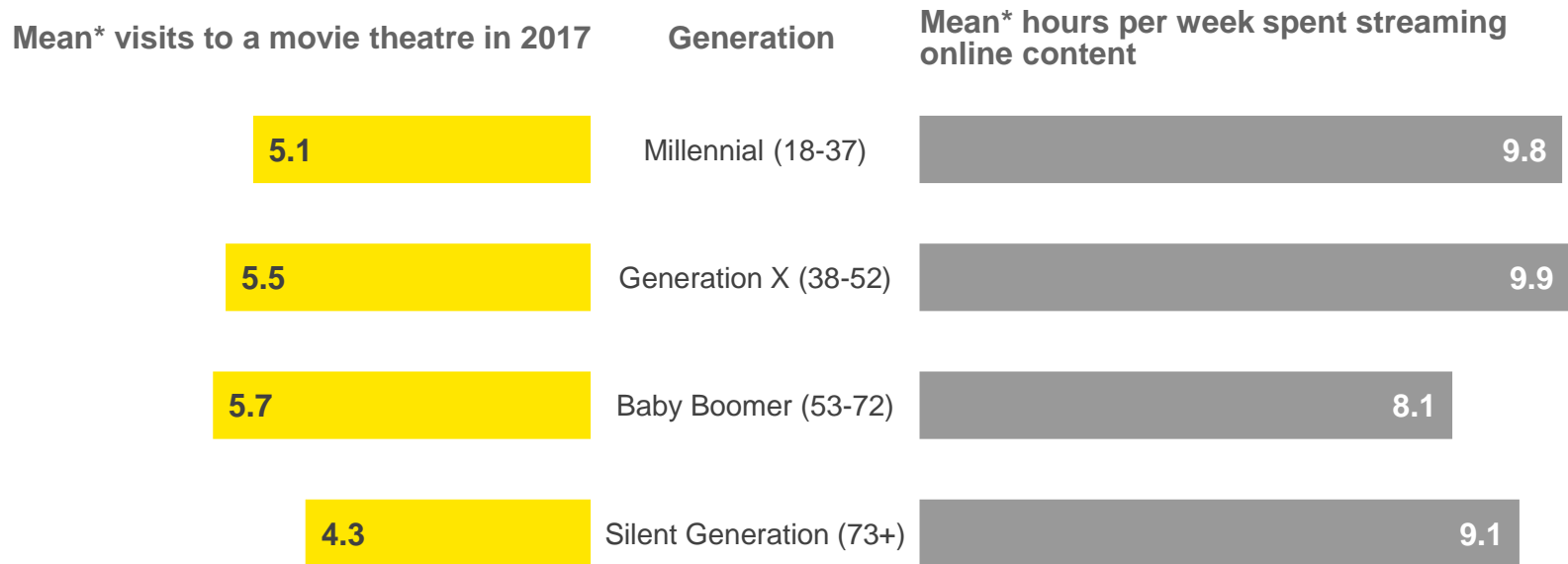|		
5.7	Hispanic	9.6
5.2	Non-Hispanic	9.6

► Those who identified as multi-race exhibited the highest mean movie theatre visits and online content streaming behavior among all race groups.

► Those who identified as Hispanic reported a higher mean visits to a movie theatre than Non-Hispanics.

Note: Questions on race and Hispanic origin were distinct and single-choice. The response options for the single-choice race question were White, Black, Native American, Asian, Pacific Islander, and Multi-race.
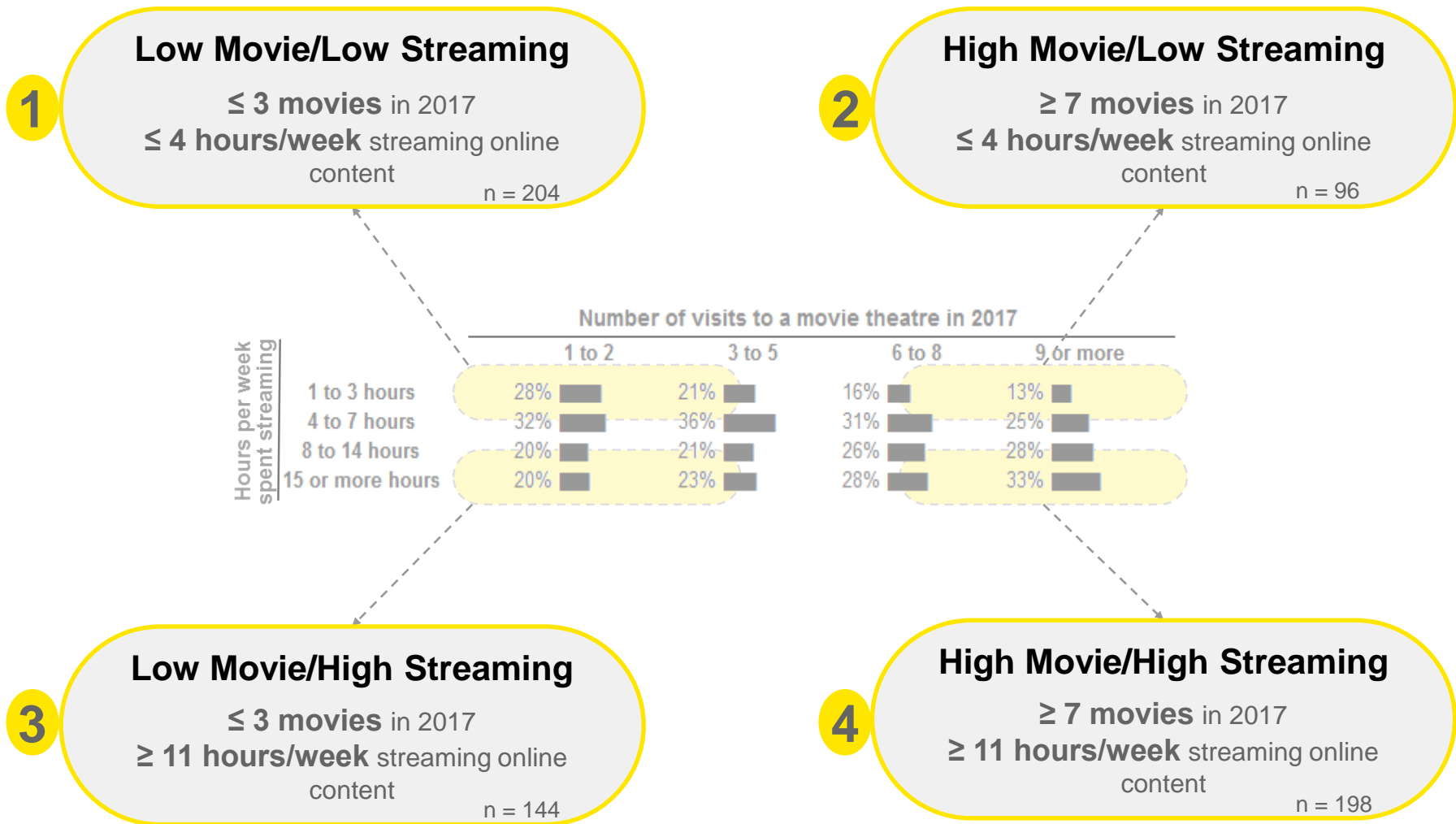*Means are reported as 95% trimmed means.

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Movie theatre attendance and streaming behavior by age group

Mean* visits to a movie theatre in 2017	Generation	Mean* hours per week spent streaming online content
5.1	Millennial (18-37)	9.8
5.5	Generation X (38-52)	9.9
5.7	Baby Boomer (53-72)	8.1
4.3	Silent Generation (73+)	9.1

► Baby Boomers, on average, are the largest consumer group of movies in theatres, while Millennials and Generation X averaged the highest number of hours per week spent streaming online content.

► Those age 73+ had the lowest mean movie theatre visits; Baby Boomers streamed online content for the fewest average number of hours.
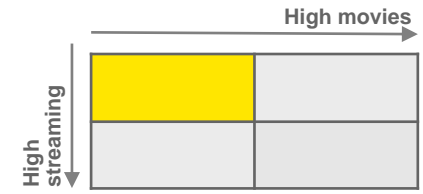
Note: Generation ranges are defined based on the Pew Research Center graphic titled 'The Generations Defined.'
*Means are reported as 95% trimmed means.

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III: Quadrant Analysis: Segmenting dual-consumers into four quadrants

1 **Low Movie/Low Streaming**

≤ **3 movies** in 2017

≤ **4 hours/week** streaming online content

n = 204

2 **High Movie/Low Streaming**

≥ **7 movies** in 2017

≤ **4 hours/week** streaming online content

n = 96

Number of visits to a movie theatre in 2017

Hours per week spent streaming	1 to 2	3 to 5	6 to 8	9 or more
1 to 3 hours	28%	21%	16%	13%
4 to 7 hours	32%	36%	31%	25%
8 to 14 hours	20%	21%	26%	28%
15 or more hours	20%	23%	28%	33%

3 **Low Movie/High Streaming**

≤ **3 movies** in 2017

≥ **11 hours/week** streaming online content

n = 144

4 **High Movie/High Streaming**

≥ **7 movies** in 2017

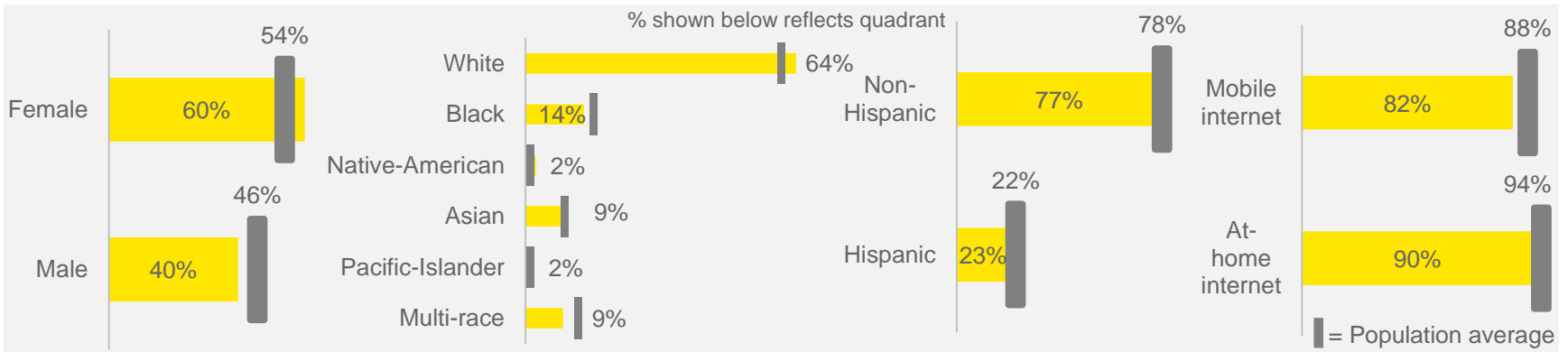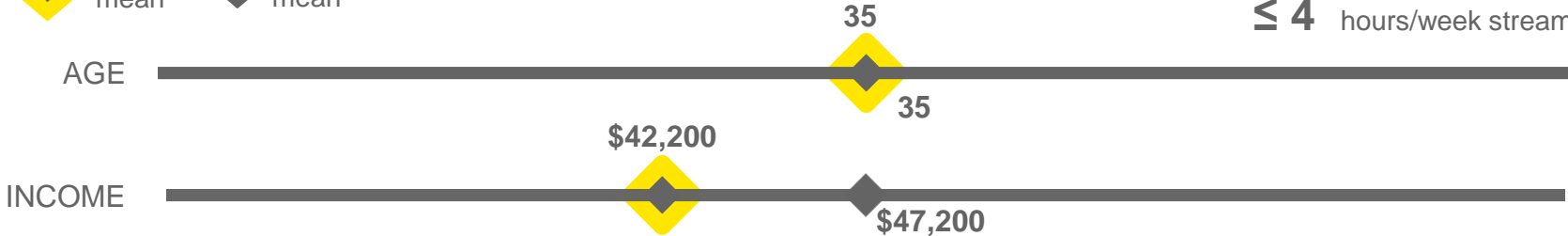≥ **11 hours/week** streaming online content

n = 198

Note: Only 642 of the 1,418 dual-consumers fall into one of the four quadrants. The remaining 776 dual-consumers reported 4 to 6 movie theatre visits and 5 to 10 hours of streaming online content.

The Relationship Between Movie Theatre Attendance and Streaming Behavior

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Low-movie/Low-streaming:
Quadrant profile

High movies

High streaming

◆ Quadrant mean ◆ Population mean

≤ **3** movie visits in 2017

≤ **4** hours/week streaming

AGE
35
35

INCOME
$42,200
$47,200

% shown below reflects quadrant

Female 60% — 54%
Male 40% — 46%

White 64%
Black 14%
Native-American 2%
Asian 9%
Pacific-Islander 2%
Multi-race 9%

Non-Hispanic 77% — 78%
Hispanic 23% — 22%

Mobile internet 82% — 88%
At-home internet 90% — 94%

▮ = Population average

42%
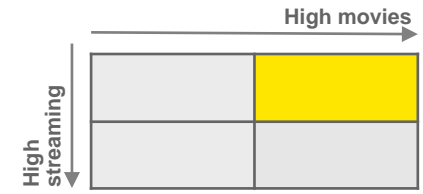*of quadrant has never been married**

50%
of quadrant has at least one child under 17**

# of respondents
204 (14% of 1,418)
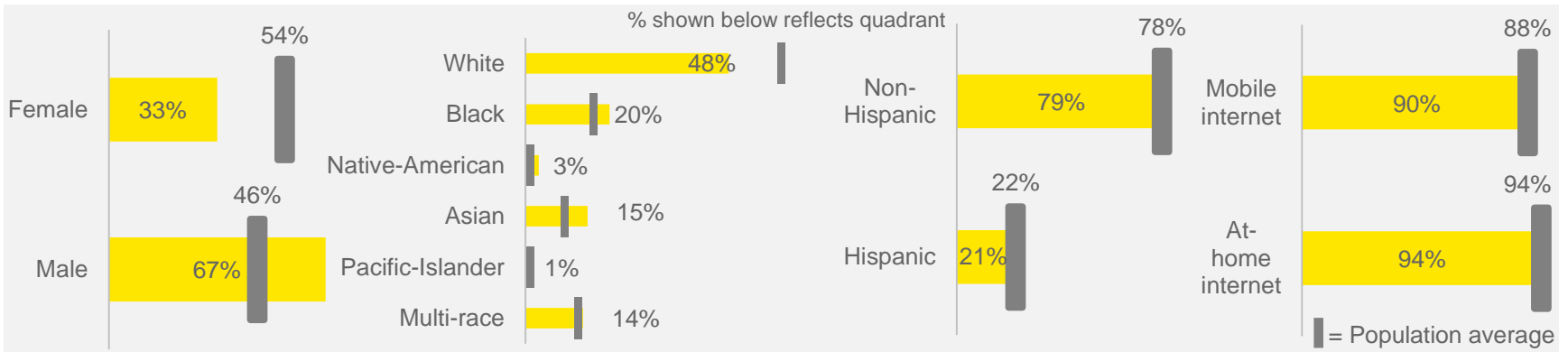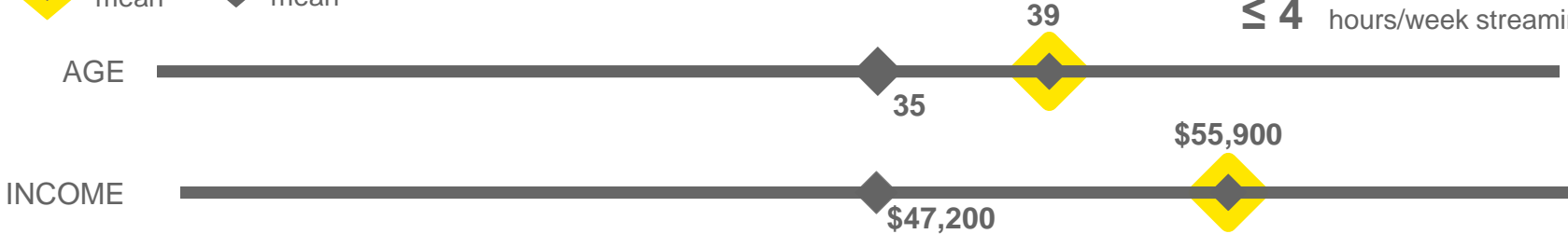
*40% of all respondents have never been married

** 51% of all respondents have at least one child under 17

EY

High-movie/Low-streaming:
Quadrant profile

High movies

High streaming

Quadrant mean ◆ Population mean ◆

≥ 7 movie visits in 2017

≤ 4 hours/week streaming

AGE

39

35

INCOME

$55,900

$47,200

% shown below reflects quadrant

Female 33% — 54%
Male 67% — 46%

White 48%
Black 20%
Native-American 3%
Asian 15%
Pacific-Islander 1%
Multi-race 14%

Non-Hispanic 79% — 78%
Hispanic 21% — 22%

Mobile internet 90% — 88%
At-home internet 94% — 94%

| = Population average

34%
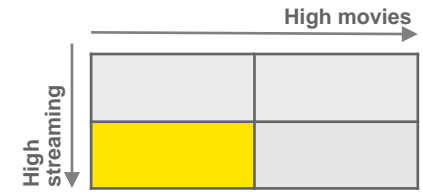*of quadrant has never been married**

44%
of quadrant has at least one child under 17**

# of respondents

96 (7% of 1,418)
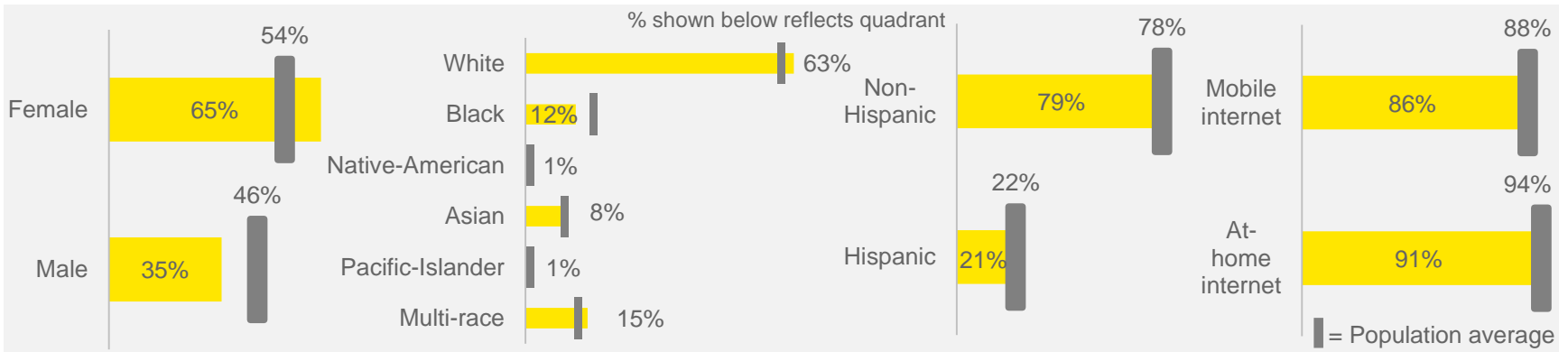
*40% of all respondents have never been married

** 51% of all respondents have at least one child under 17

The Relationship Between Movie Theatre Attendance and Streaming Behavior

EY

Low-movie/High-streaming:
Quadrant profile

Quadrant mean ◆ Population mean

≤ **3** movie visits in 2017

≥ **11** hours/week streaming

AGE — **33** (Quadrant) — **35** (Population)

INCOME — **$39,700** (Quadrant) — **$47,200** (Population)

% shown below reflects quadrant

	Quadrant	Population average
Female	65%	54%
Male	35%	46%

Race	Quadrant
White	63%
Black	12%
Native-American	1%
Asian	8%
Pacific-Islander	1%
Multi-race	15%

	Quadrant	Population average
Non-Hispanic	79%	78%
Hispanic	21%	22%

	Quadrant	Population average
Mobile internet	86%	88%
At-home internet	91%	94%

▮ = Population average

45% of quadrant has never been married*

56% of quadrant has at least one child under 17**

# of respondents

144 (10% of 1,418)
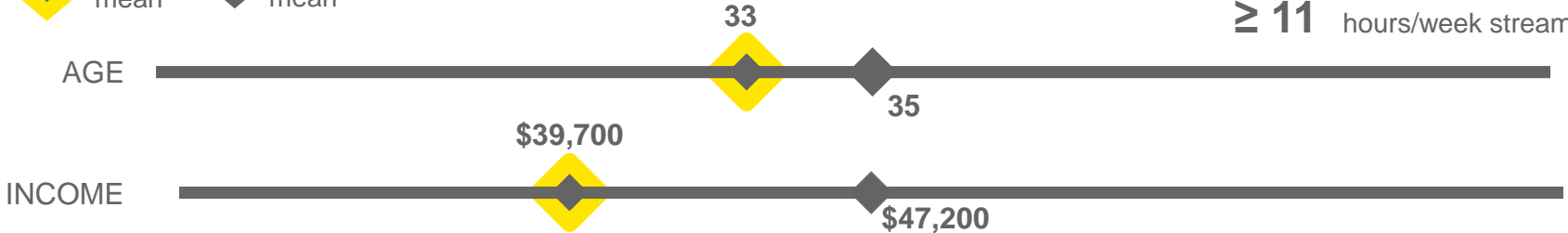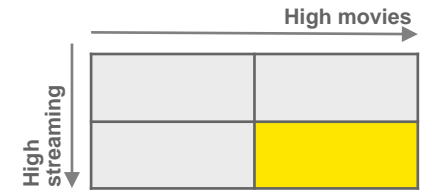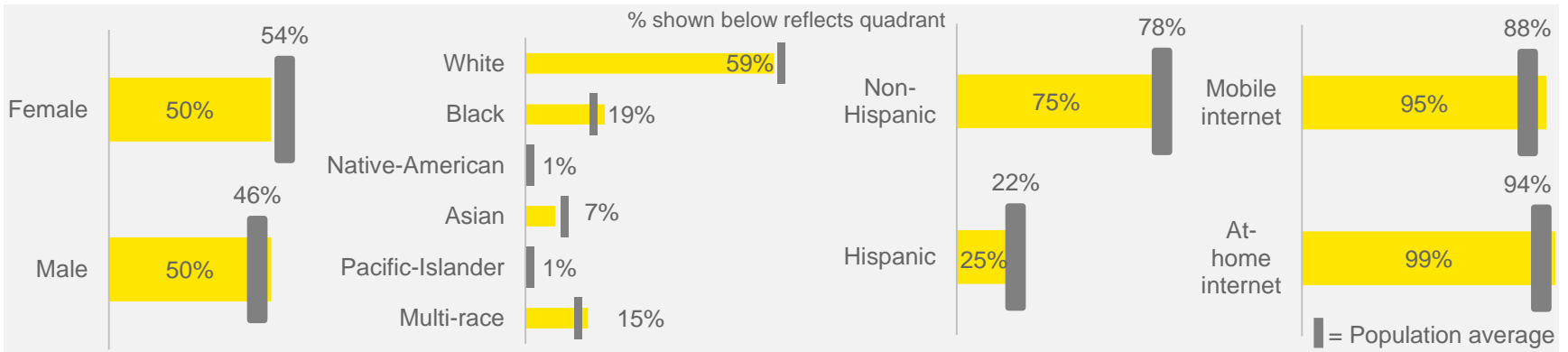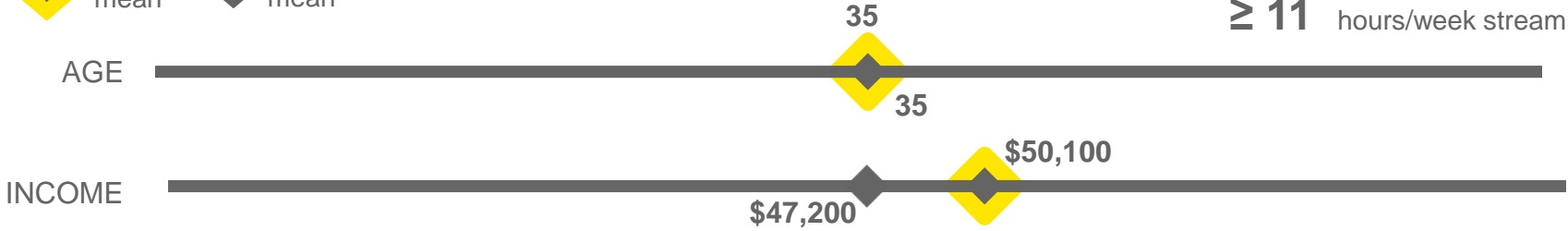
*40% of all respondents have never been married

** 51% of all respondents have at least one child under 17

EY

High-movie/High-streaming:
Quadrant profile

High movies

High streaming

Quadrant mean
Population mean

≥ 7 movie visits in 2017

≥ 11 hours/week streaming

AGE
35
35

INCOME
$50,100
$47,200

% shown below reflects quadrant

Female	50%	54%	
Male	50%	46%	

White	59%	
Black	19%	
Native-American	1%	
Asian	7%	
Pacific-Islander	1%	
Multi-race	15%	

Non-Hispanic	75%	78%
Hispanic	25%	22%

Mobile internet	95%	88%
At-home internet	99%	94%

= Population average

40%
*of quadrant has never been married**

57%
*of quadrant has at least one child under 17***

# of respondents

198 (14% of 1,418)

*40% of all respondents have never been married

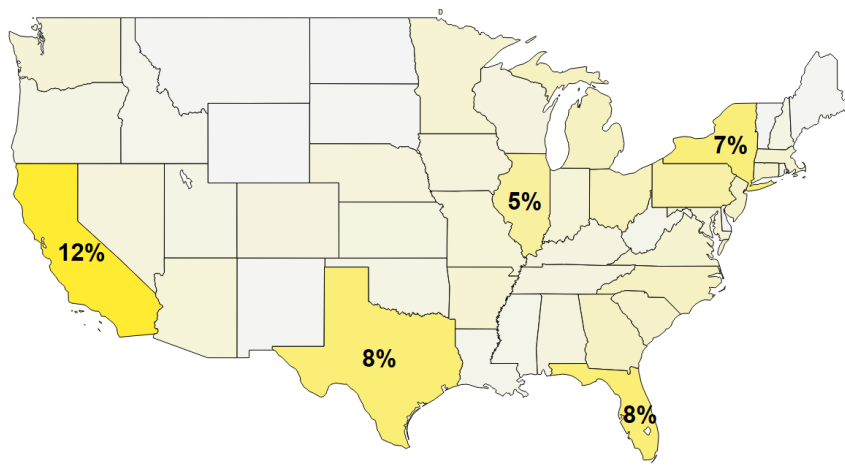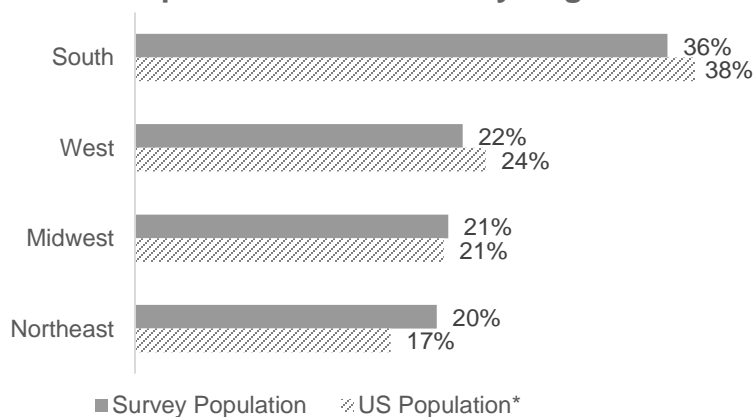** 51% of all respondents have at least one child under 17

EY

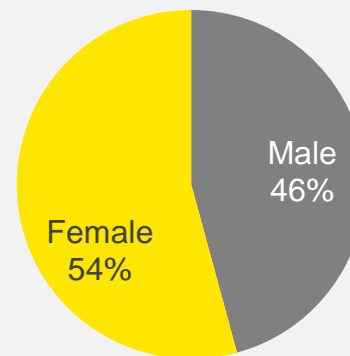# IV: Appendix

EY

A: Demographics

Demographics of dual-consumers

Location

Population Breakdown by Region

- South: 36% / 38%
- West: 22% / 24%
- Midwest: 21% / 21%
- Northeast: 20% / 17%

■ Survey Population ▨ US Population*

*Source: US Census Bureau 2017 state population estimates

Gender

Male 46%
Female 54%

Generation

- Millennial (18-37): 67%
- Generation X (38-52): 21%
- Baby Boomers (53-72): 12%
- Silent Generation (73+): 1%

n = 1,418

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Demographics of dual-consumers

Marital Status

- Married — 50%
- Never married — 40%
- Divorced — 6%
- Separated — 2%
- Widowed — 1%

Race

- White — 60%
- Black — 16%
- Native American — 1%
- Asian — 9%
- Pacific Islander — 1%
- Multi-race — 12%

Hispanic — 22%
Non-Hispanic — 78%

■ Hispanic
■ Non-Hispanic

Note: Respondents were asked about Hispanic origin in a separate question.

n = 1,418

Number of Children

- None — 40%
- 1 — 23%
- 2 — 23%
- 3 — 9%
- 4 — 3%
- 5 or more — 2%

Age of Children
n = 852

- All children less than 6 — 31%
- Oldest child between 6 and 11 and at least one child less than 6 — 15%
- All children between 6 and 11 — 10%
- Oldest child between 12 and 17 and at least one child less than 12 — 12%
- All children between 12 and 17 — 10%
- Oldest child greater than 17 and at least one child less than 17 — 6%
- All children greater than 17 — 16%

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Access to high-speed internet

Access to wired high-speed internet at home

No
6%

Yes
94%

Access to wireless high-speed internet within household

No
12%

Yes
88%

n = 1,418

EY

Demographics of non dual-consumers

Race

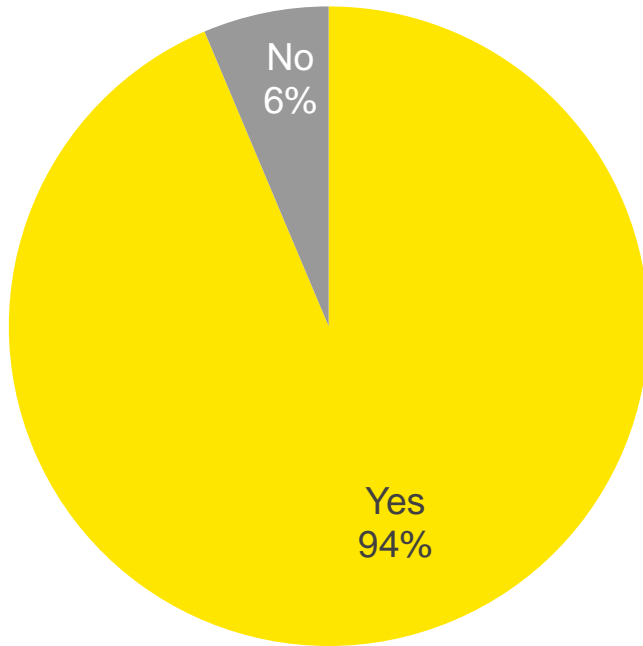|	
White	73%
Black	14%
Native American	2%
Asian	5%
Pacific Islander	0%
Multi-race	6%

Pie chart:
- 11% Hispanic
- 89% Non-Hispanic

■ Hispanic
■ Non-Hispanic

Note: Respondents were asked about Hispanic origin in a separate question.

Generation

Millennial (18-37)	33%
Generation X (38-52)	23%
Baby Boomers (53-72)	41%
Silent Generation (73+)	4%

n = 584

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B: Methodology

Survey quality

Two main types of error are considered in survey research; variable and systematic errors. **Variable errors** are the cumulative effect of the total error for a particular observation, either positive or negative. When the frequency of variable error is high, the data are often referred to as 'noisy', since vari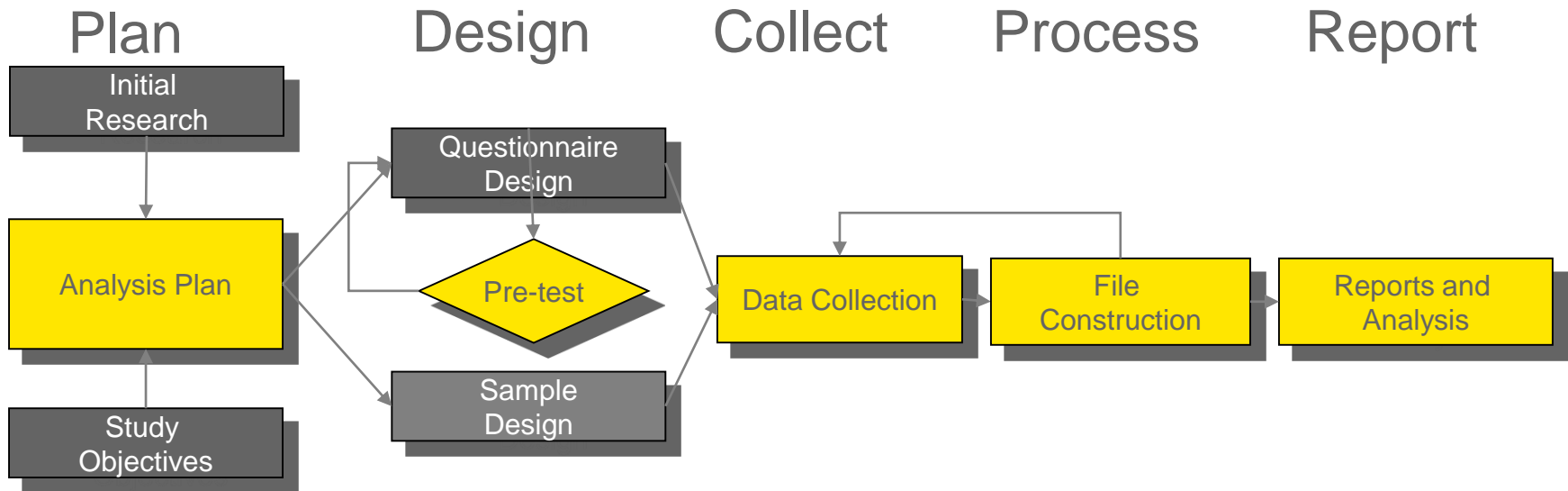able error limits our ability to understand what the data are telling us. **Systematic errors** arise from faults in the measurement process; these errors lead to bias.

Variable errors are unavoidable, but can be reduced using appropriate techniques of statistical inference. Systematic errors can be reduced by making improvements to the survey process – these errors are the chief focus of our survey quality process.

Survey error can also be classified by its two main sources – sampling error and non-sampling error. Sampling error arises from basing an estimate for the population value on a sample rather than the entire population. In general, sampling error contributes to increased variability in the data. It is measurable and often can be reduced by increasing the sample size or using more sophisticated sample designs.

Non-sampling errors are those arising from sources other than sampling. They tend to contribute to the systematic errors which can be mitigated through good survey practice. On the next page, we describe the steps we have taken to mitigate survey error at each of the five survey stages outlined in the figure below.

Plan	Design	Collect	Process	Report

Initial Research

Analysis Plan

Study Objectives

Questionnaire Design

Pre-test

Sample Design

Data Collection

File Construction

Reports and Analysis

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Steps taken to mitigate survey error

Steps taken at each stage to mitigate survey error

Plan

- Coordinated with National Association of Theatre Owners (NATO) to develop research objectives
- Consulted EY Media and Entertainment (M&E) group to align research objectives with survey design

Design

- Developed a survey questionnaire to achieve research objectives
- Partnered with a panel vendor to deploy the survey on the web to 2,002 target respondents
- Extensively tested the web survey tool for coherence and logic
- Targeted respondents based on the demographic profile of movie goers provided by NATO

Collect

- Checked quality of incoming data through the collection period
- Collected data in an efficient manner in early February 2018

Process

- Reviewed responses to flag outliers as needed
- Used trimmed means to reduce the impact of outliers

Report

- Reviewed survey results with EY Media and Entertainment (M&E) group for industry insight
- Identified key differences between subgroups throughout report
- Used analytic techniques like cross-tabulation to derive deeper insight and segment the survey population

EY