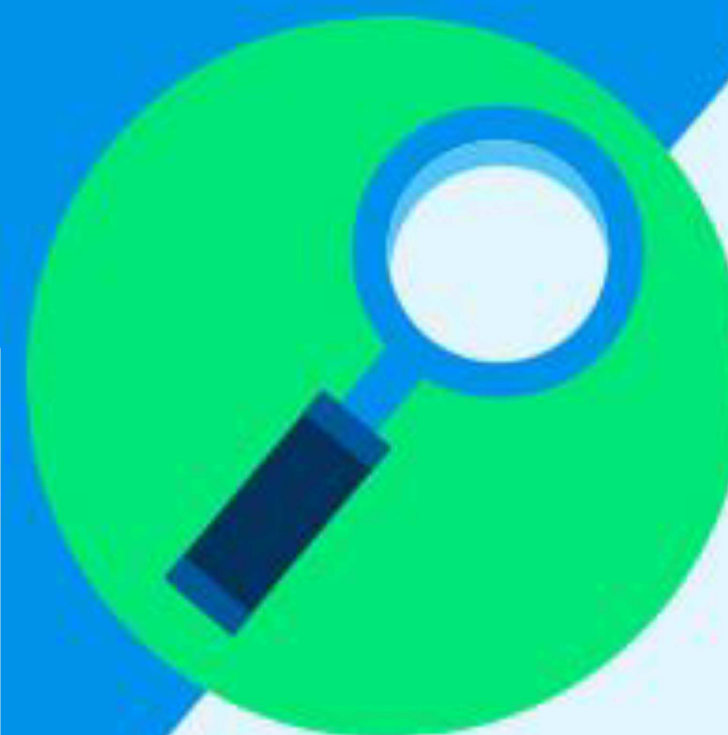


The Art of Data Storytelling

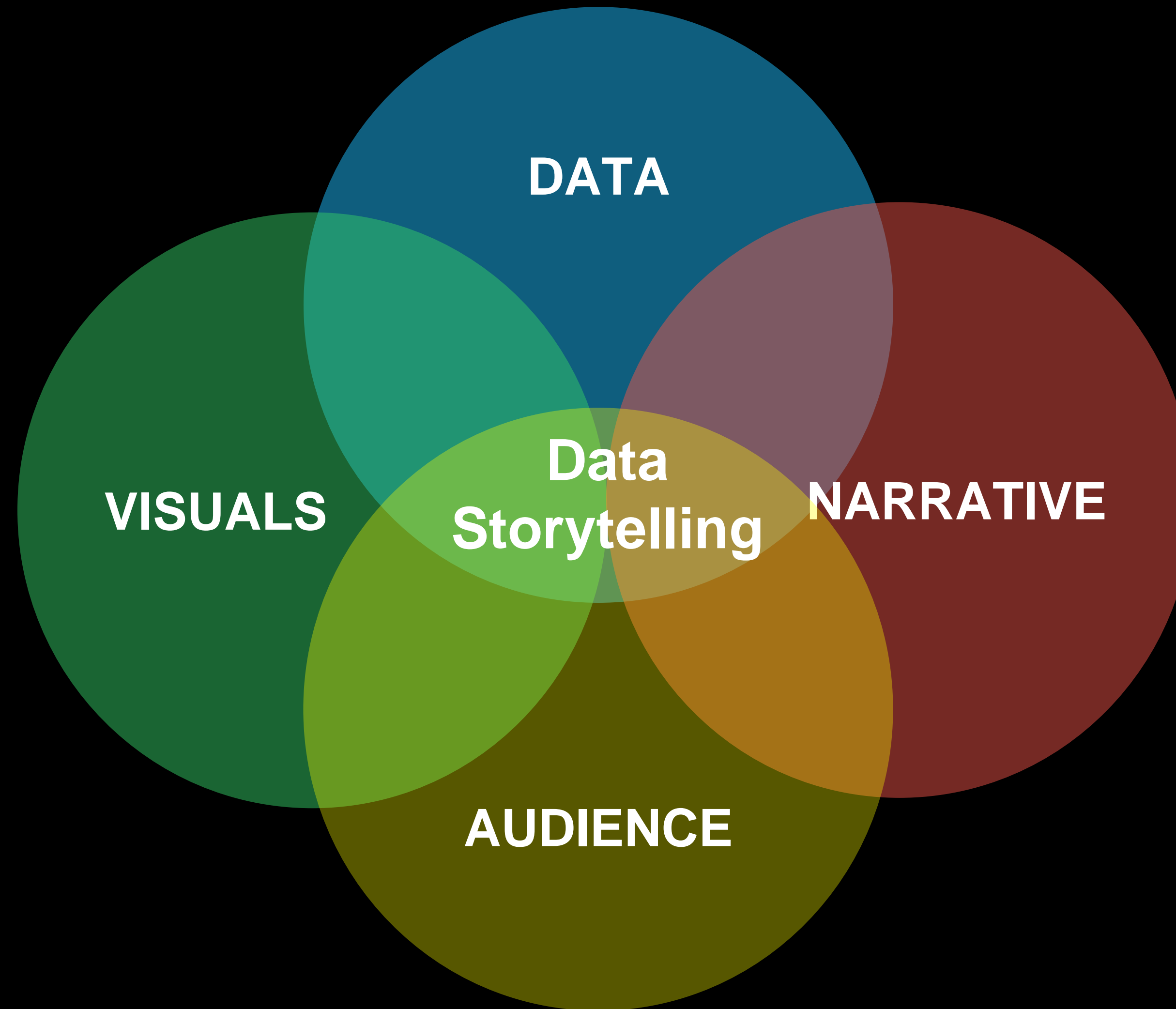
The Essential Data Science Skill
Everyone Needs

Isaac Reyes, Data Scientist

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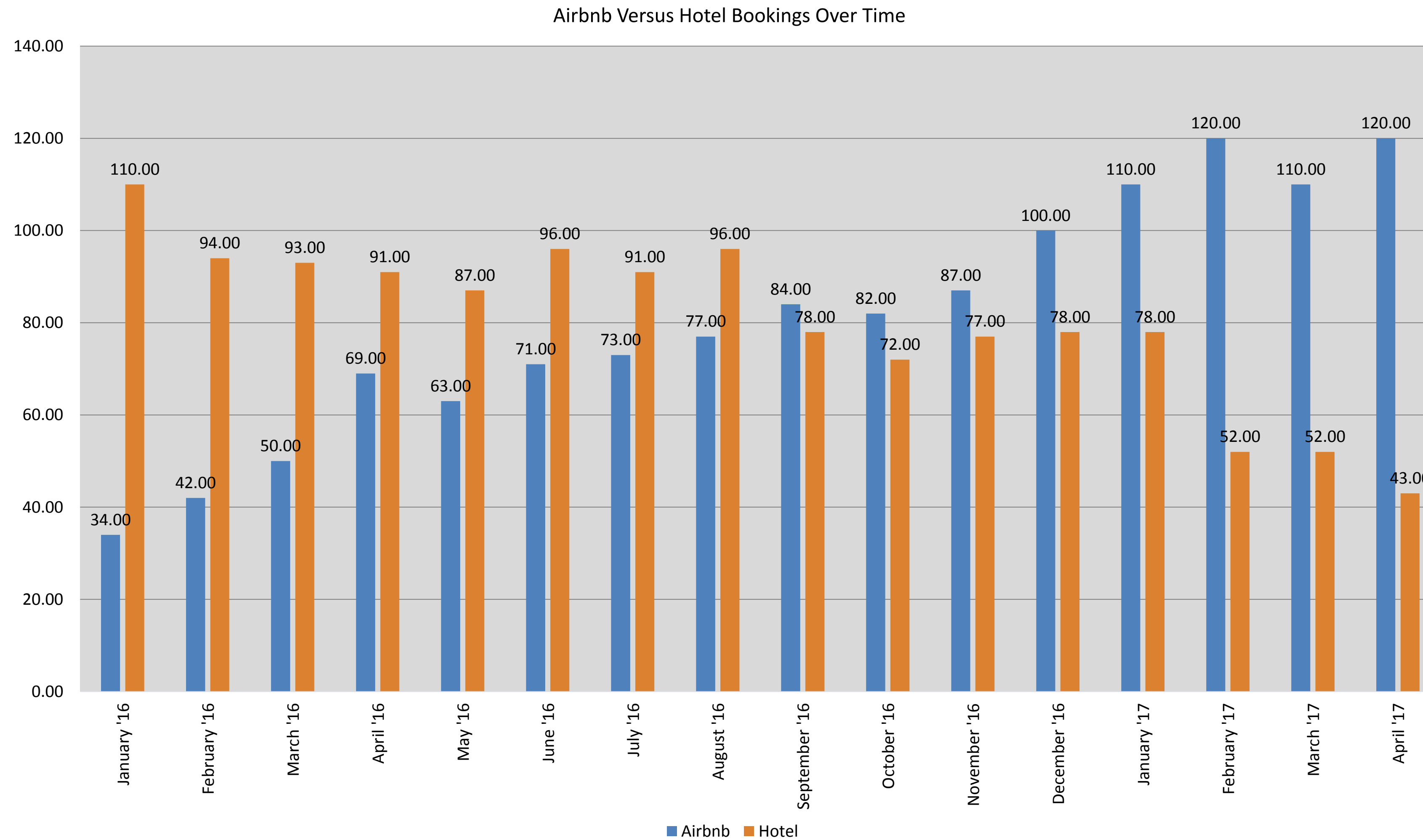


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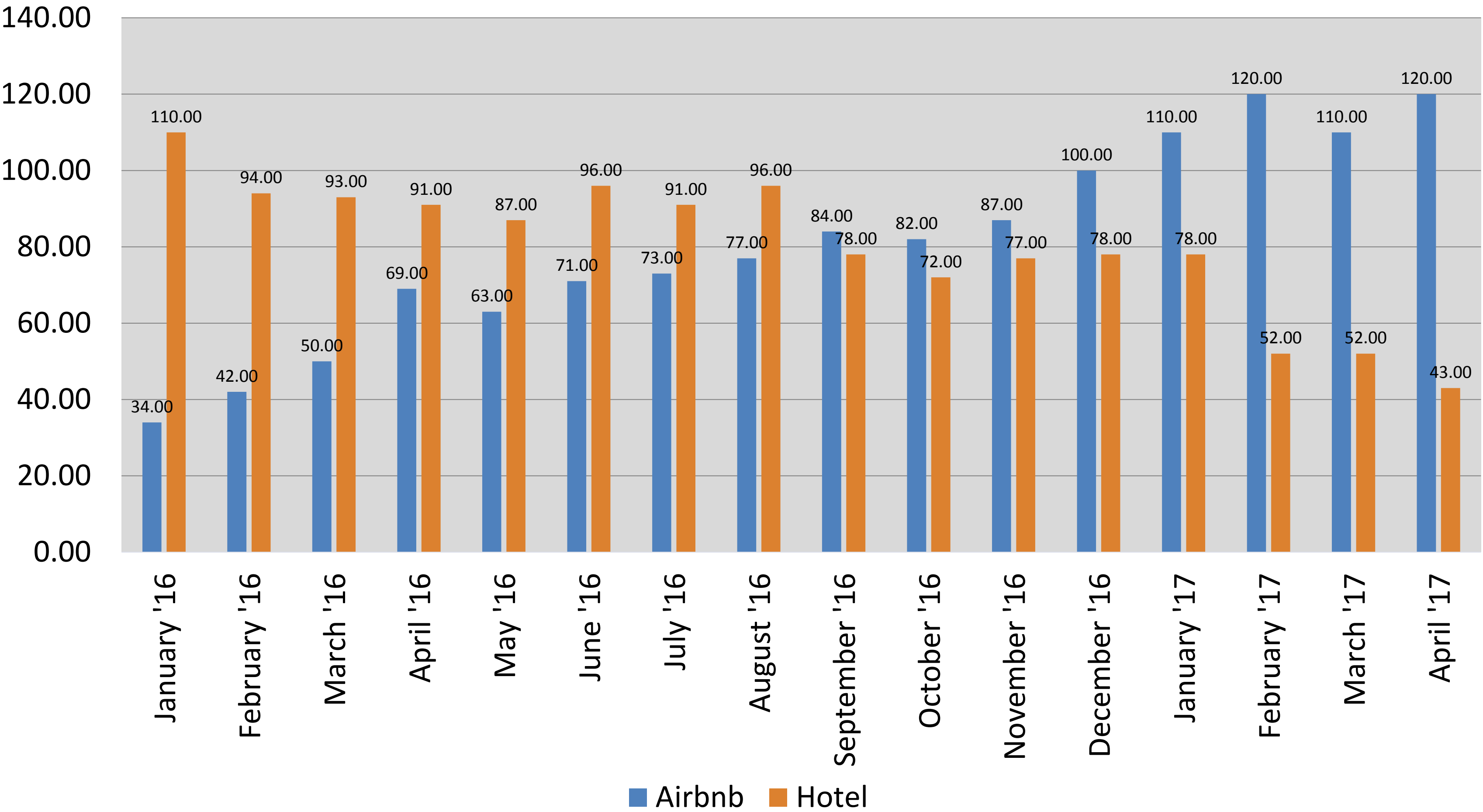


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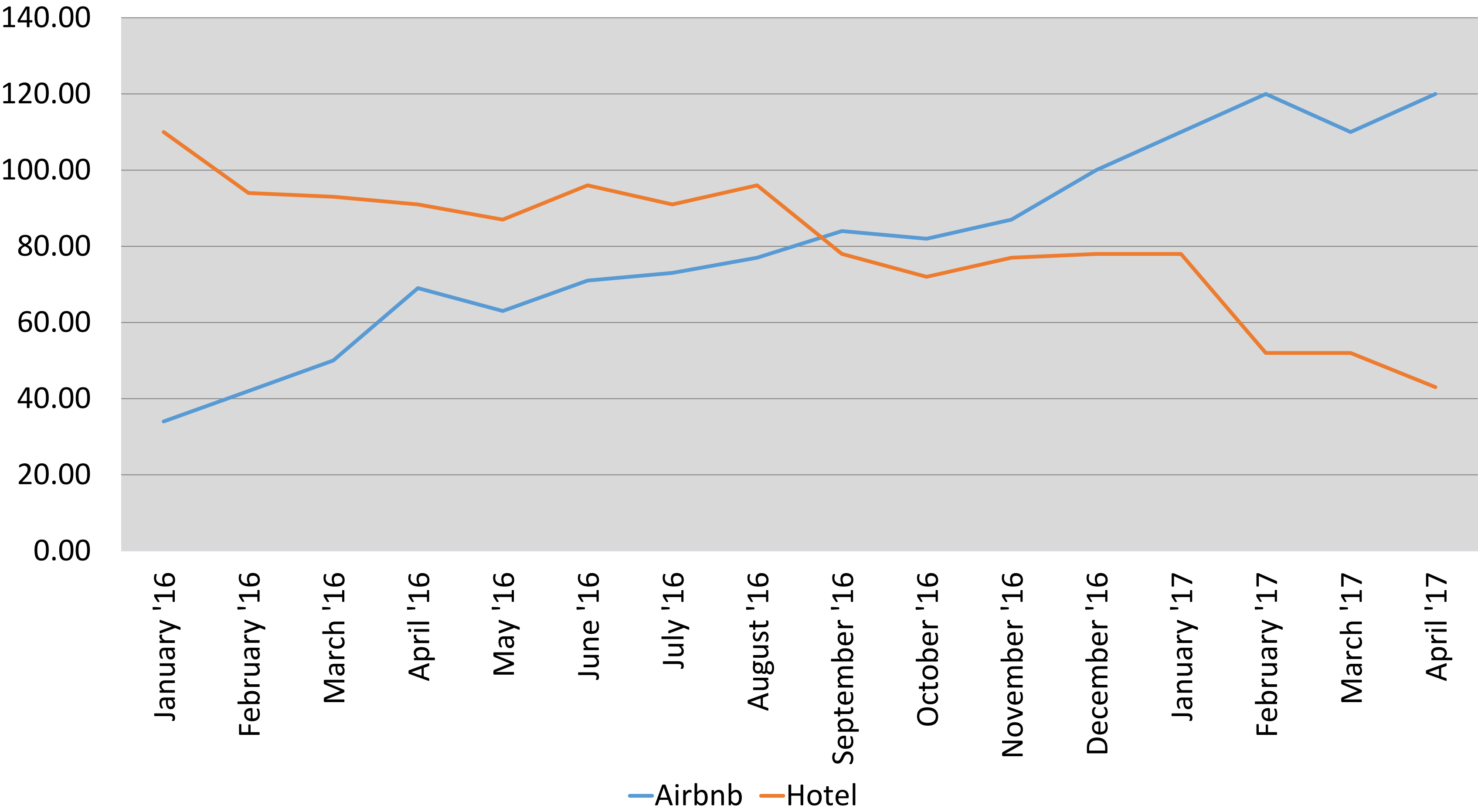
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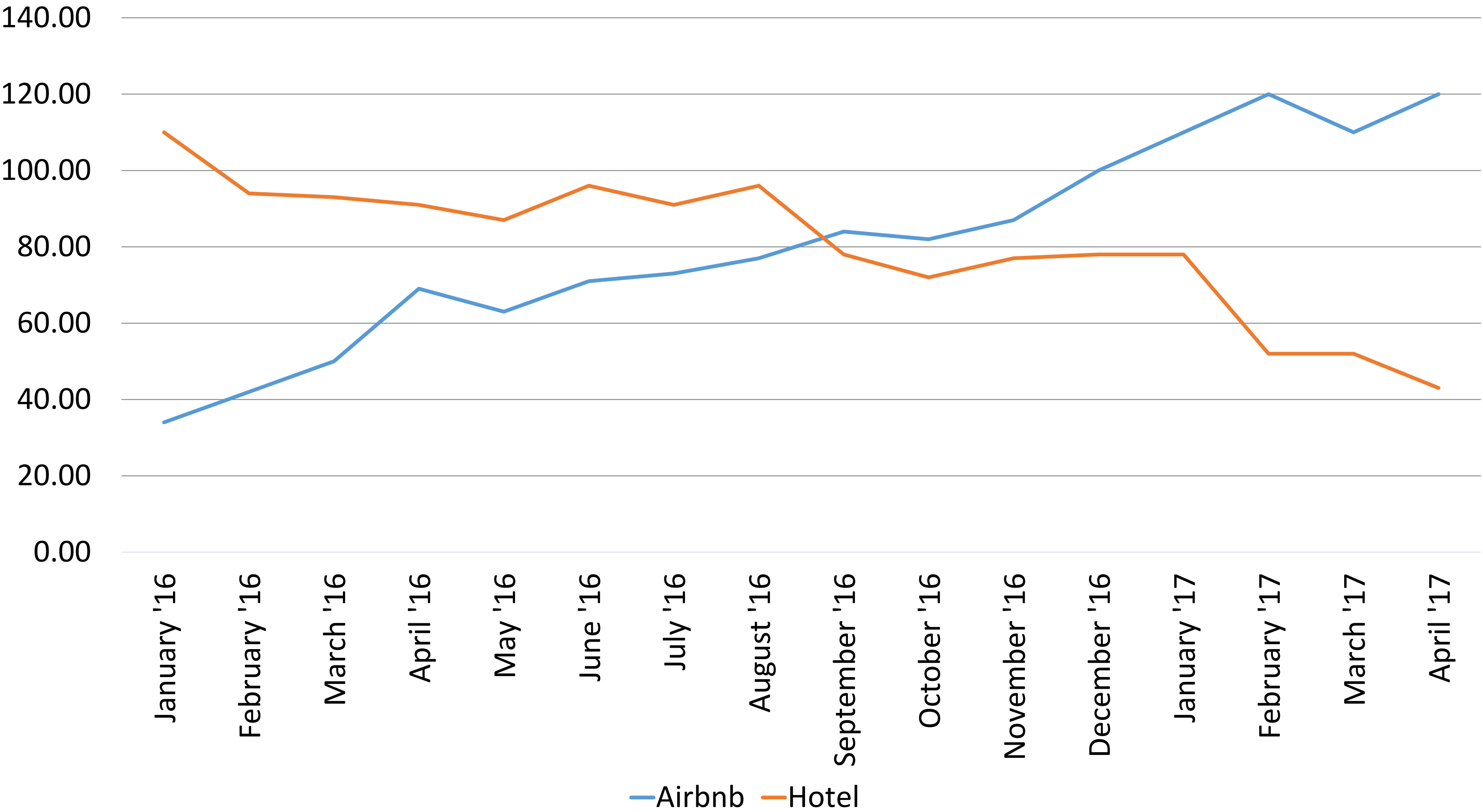
Airbnb Versus Hotel Bookings Over Time



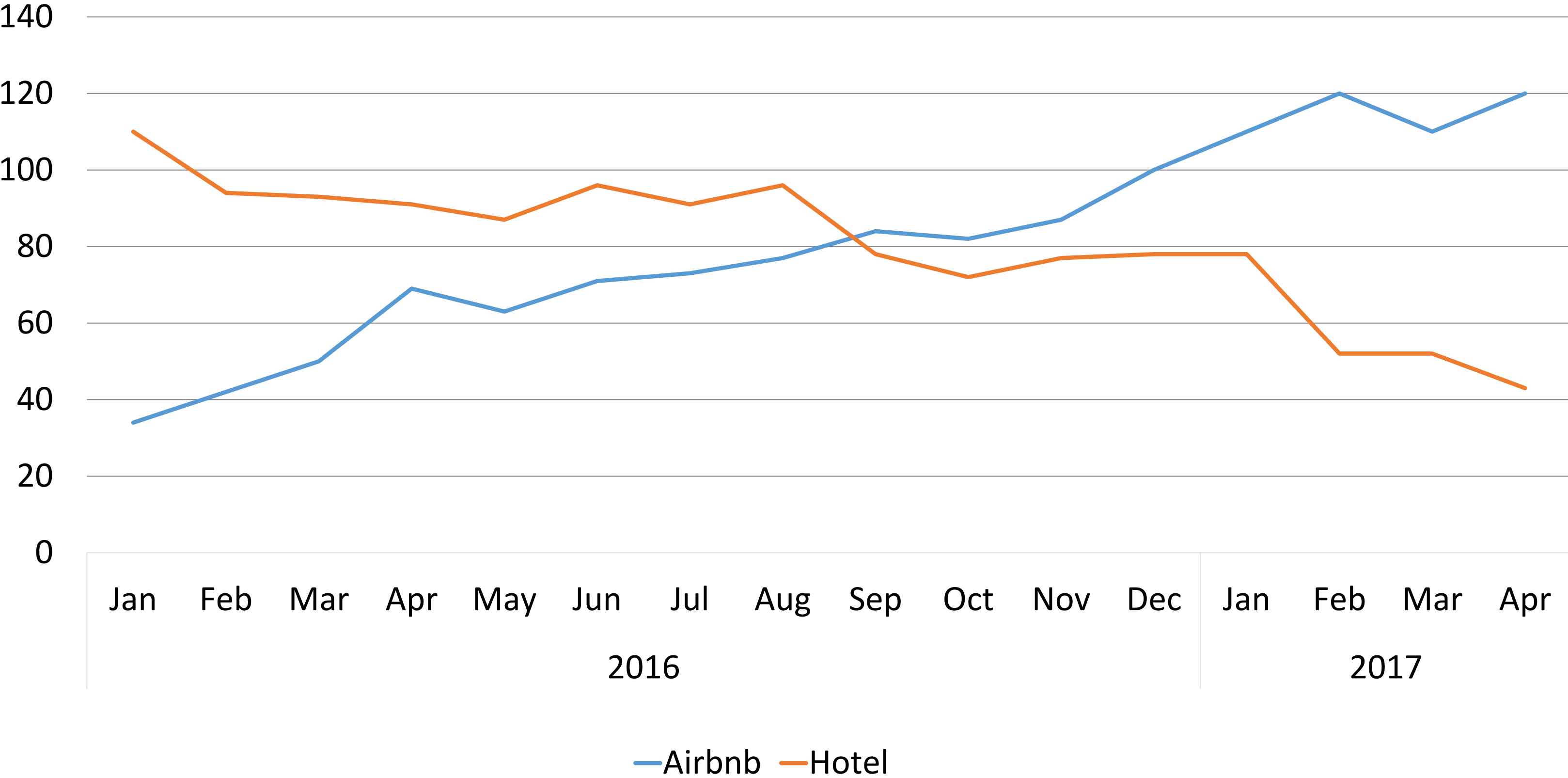
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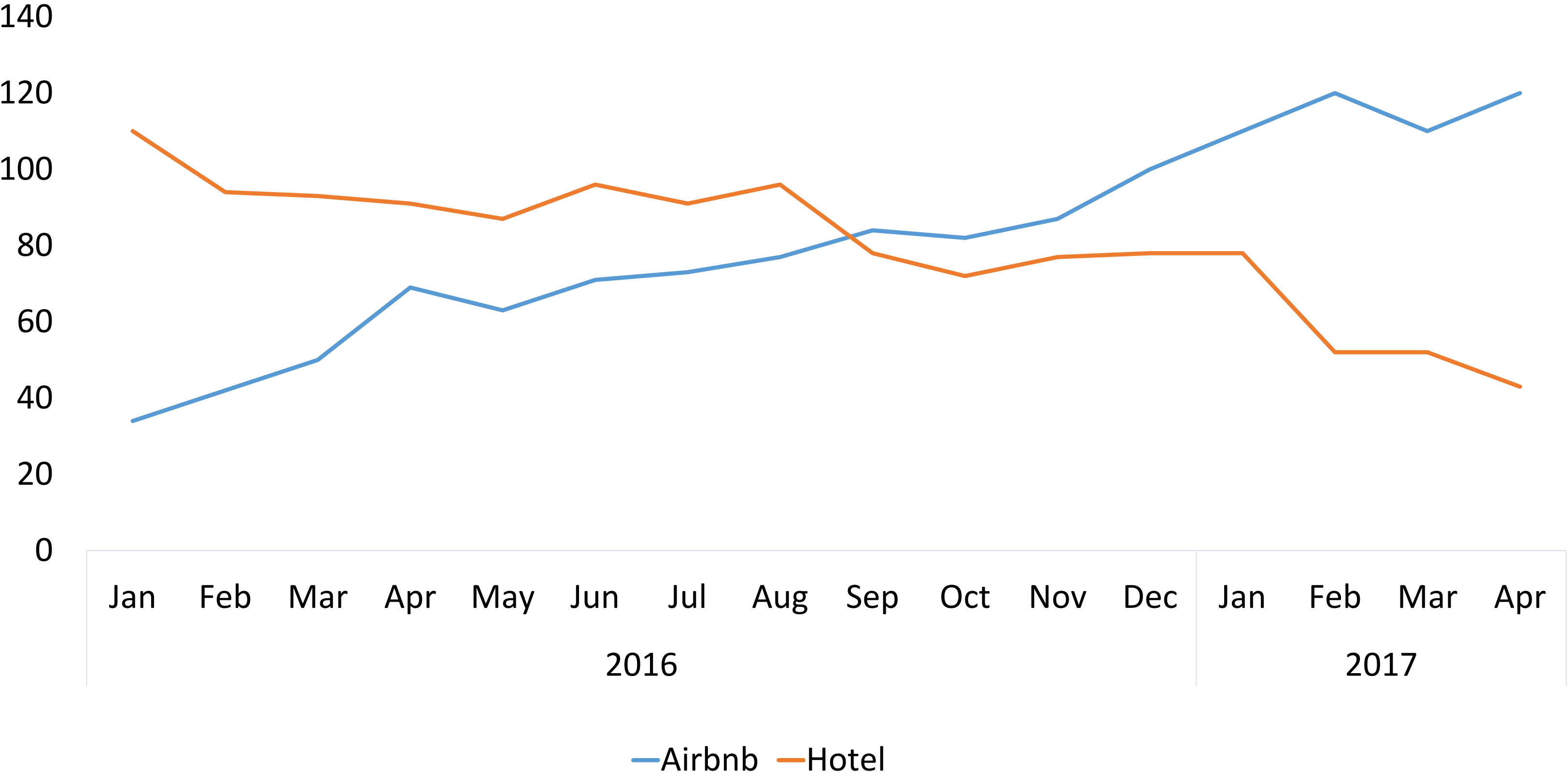
Airbnb Versus Hotel Bookings Over Time



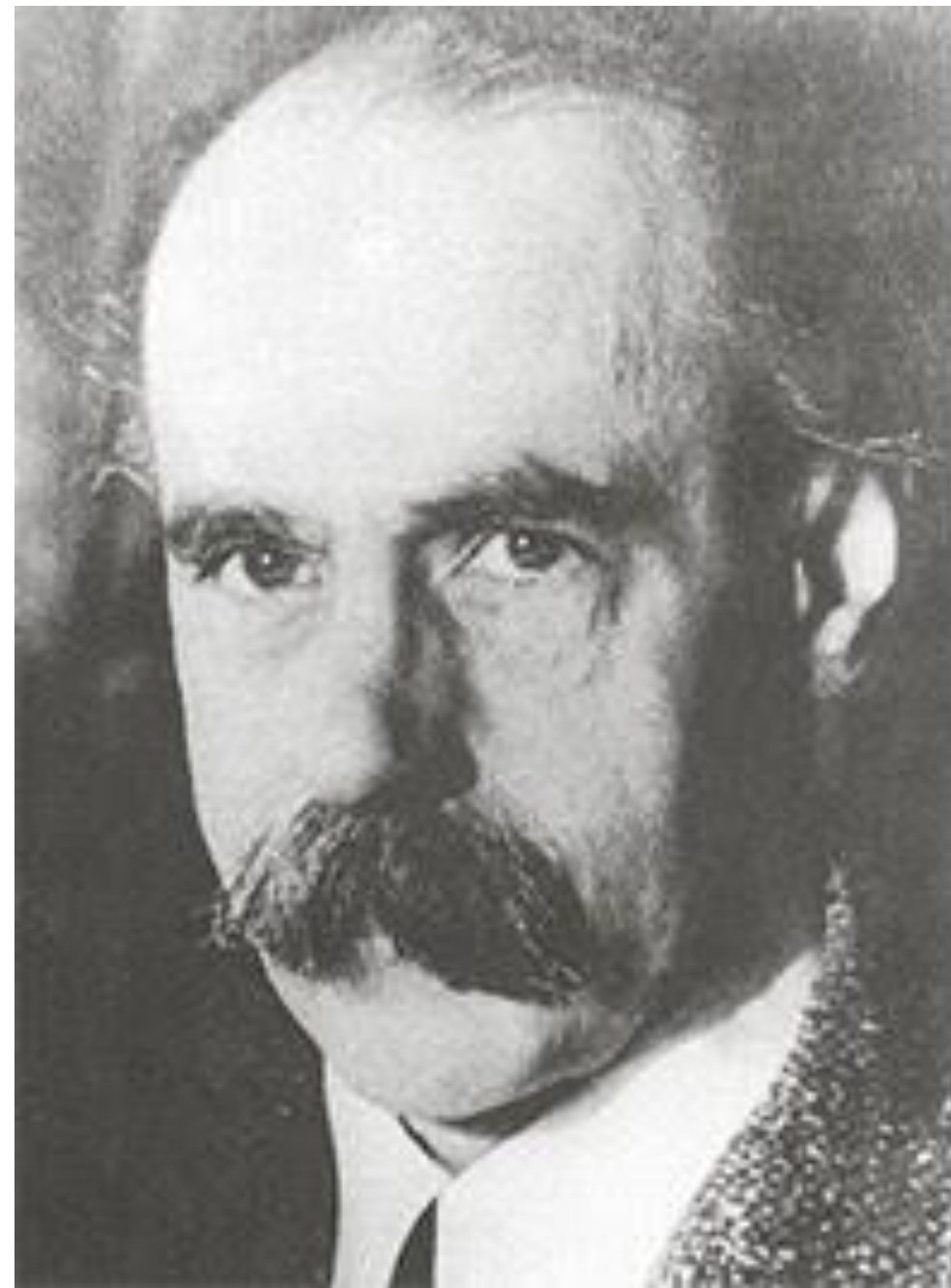
Airbnb Versus Hotel Bookings Over Time



Airbnb Versus Hotel Bookings Over Time



The Gestalt Laws of Visual Perception



Max Wertheimer

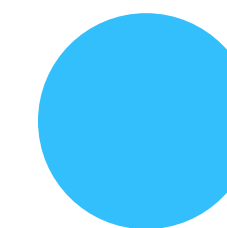
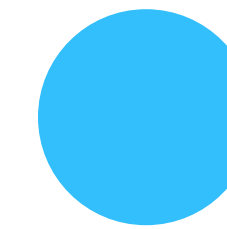
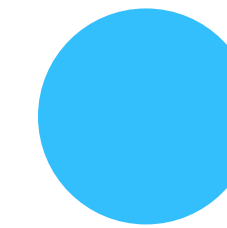
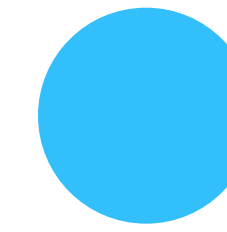
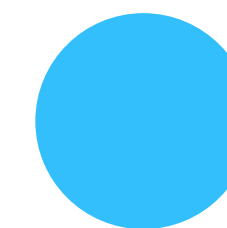
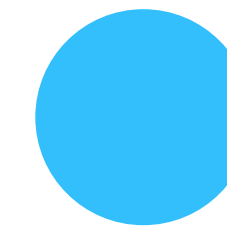
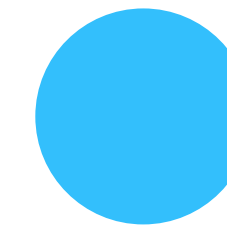
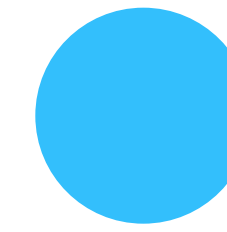
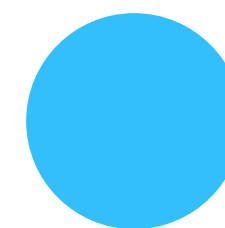
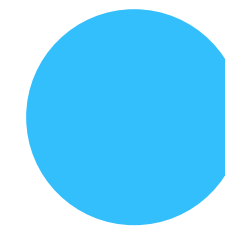
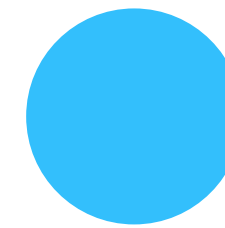
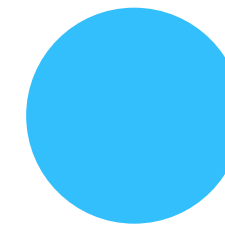


Kurt Koffka

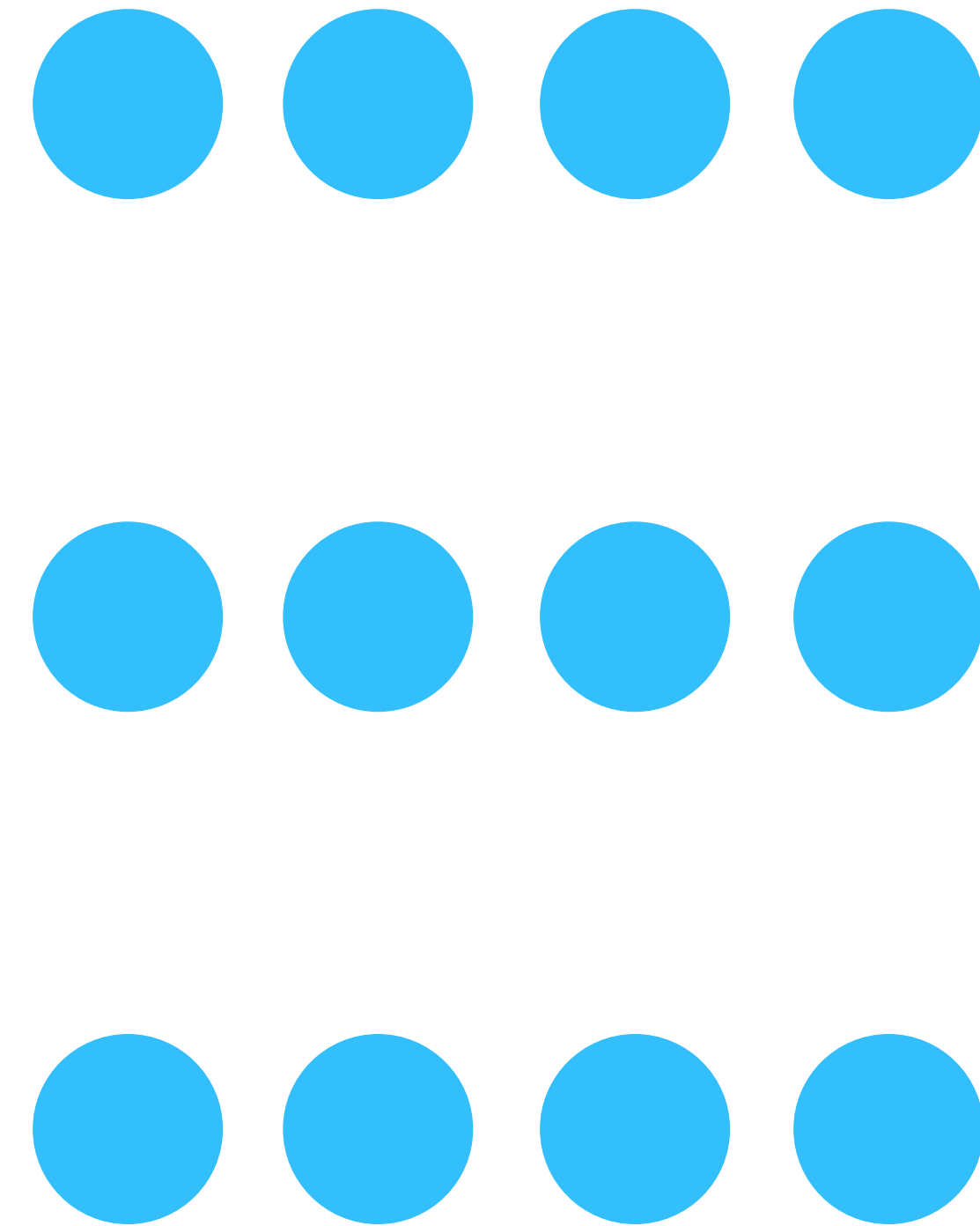


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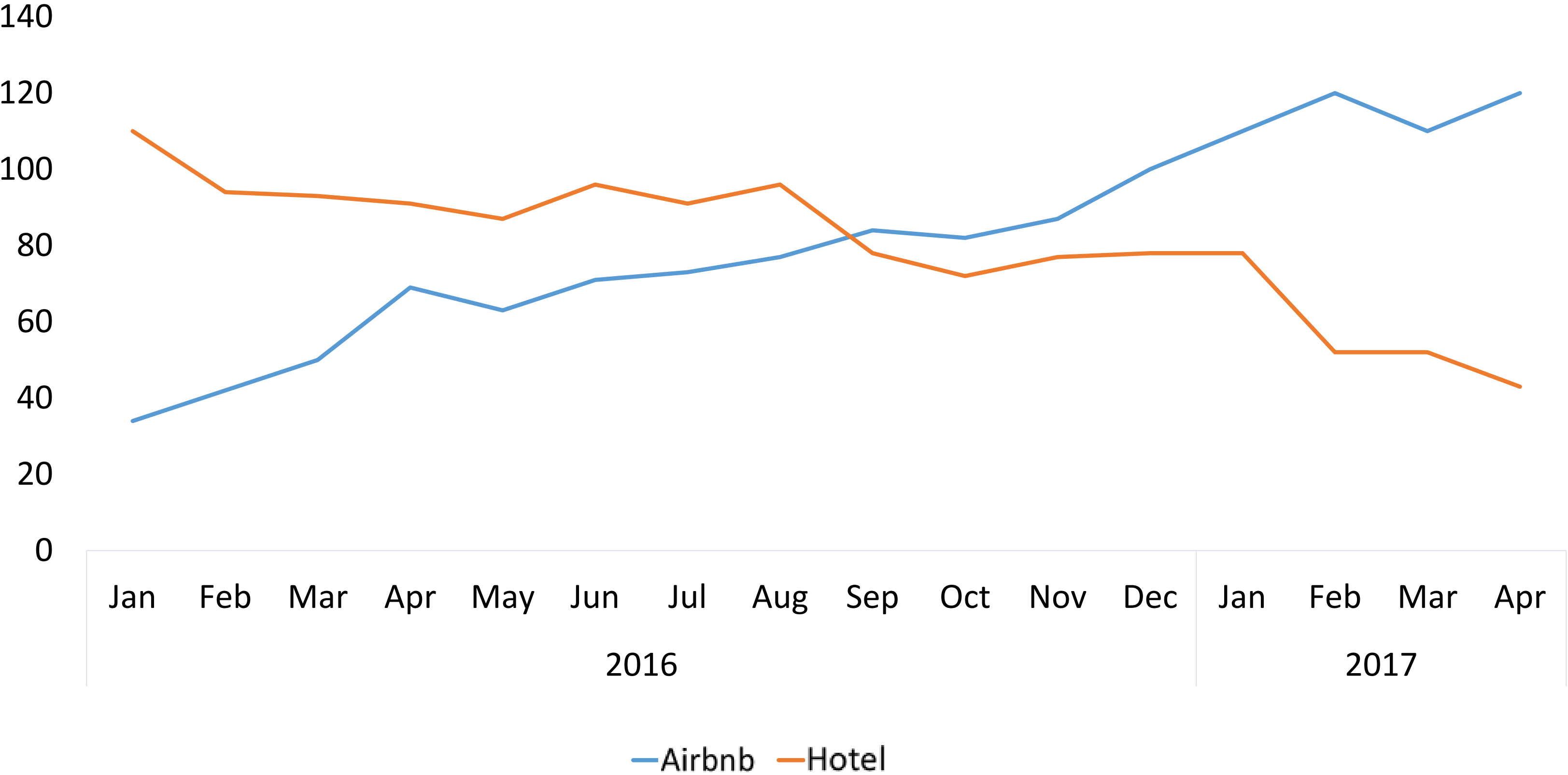
The Gestalt Law of Proximity



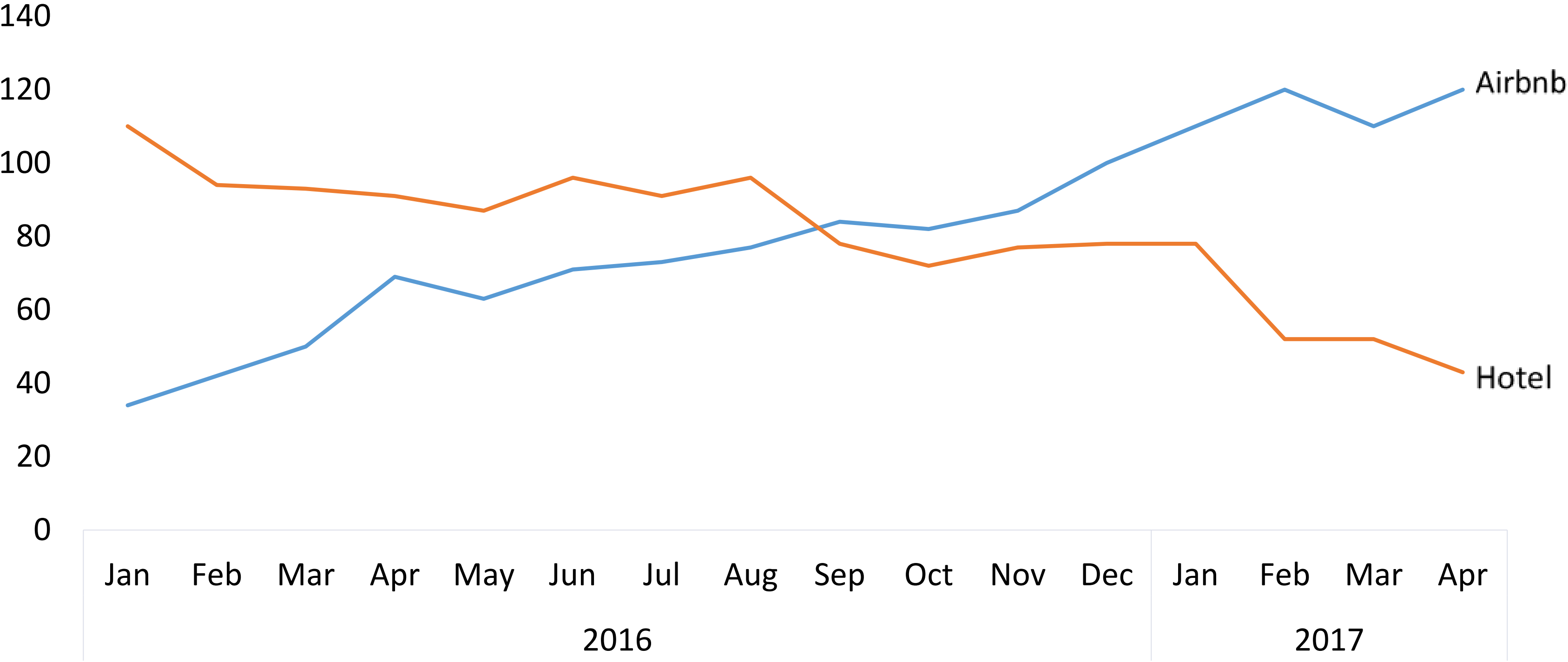
The Gestalt Law of Proximity



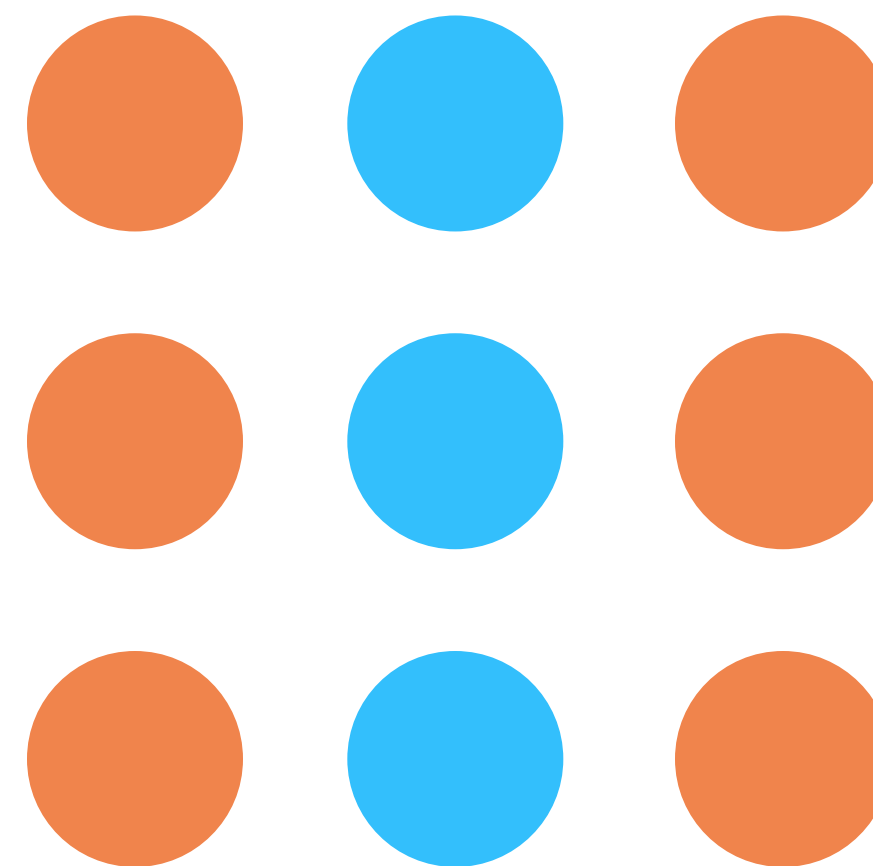
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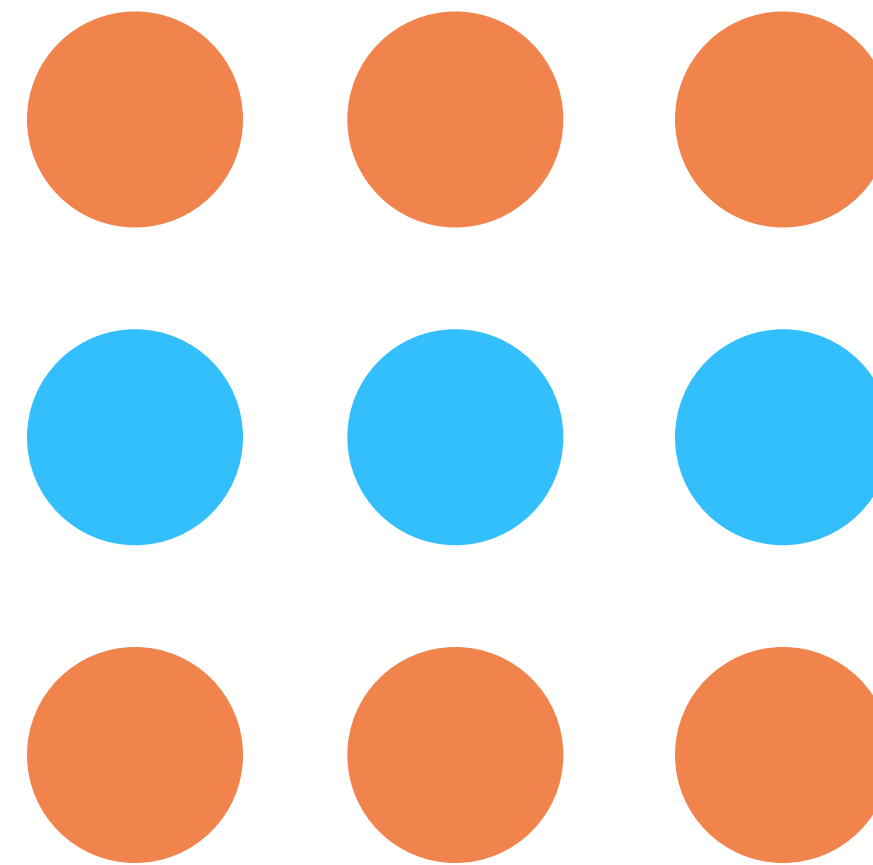
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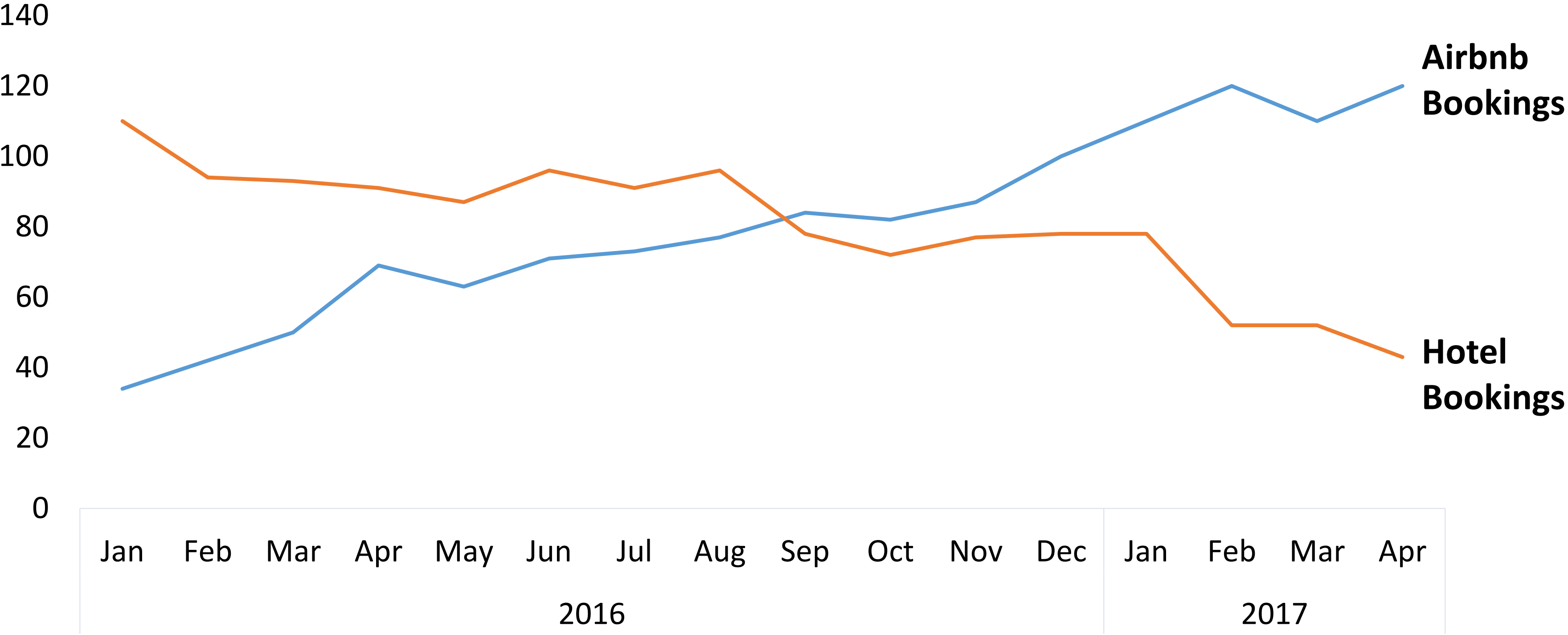
The Gestalt Law of Similarity



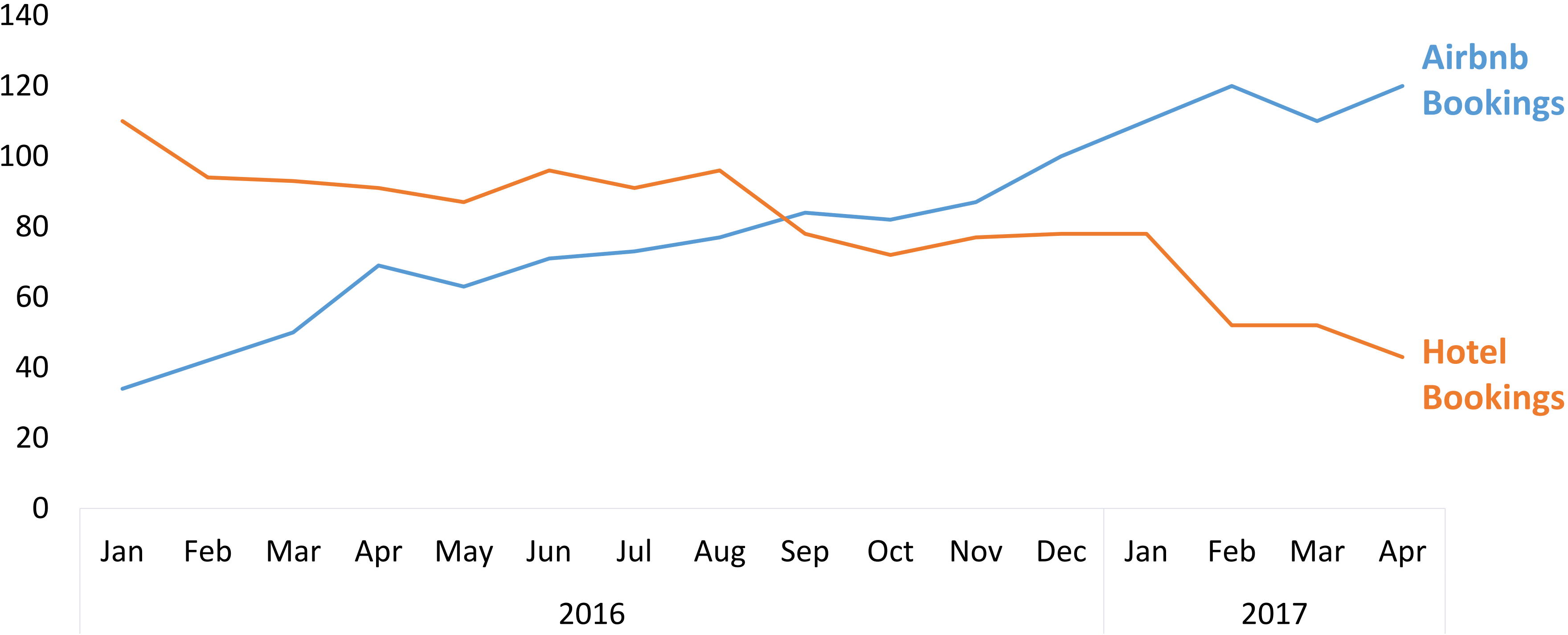
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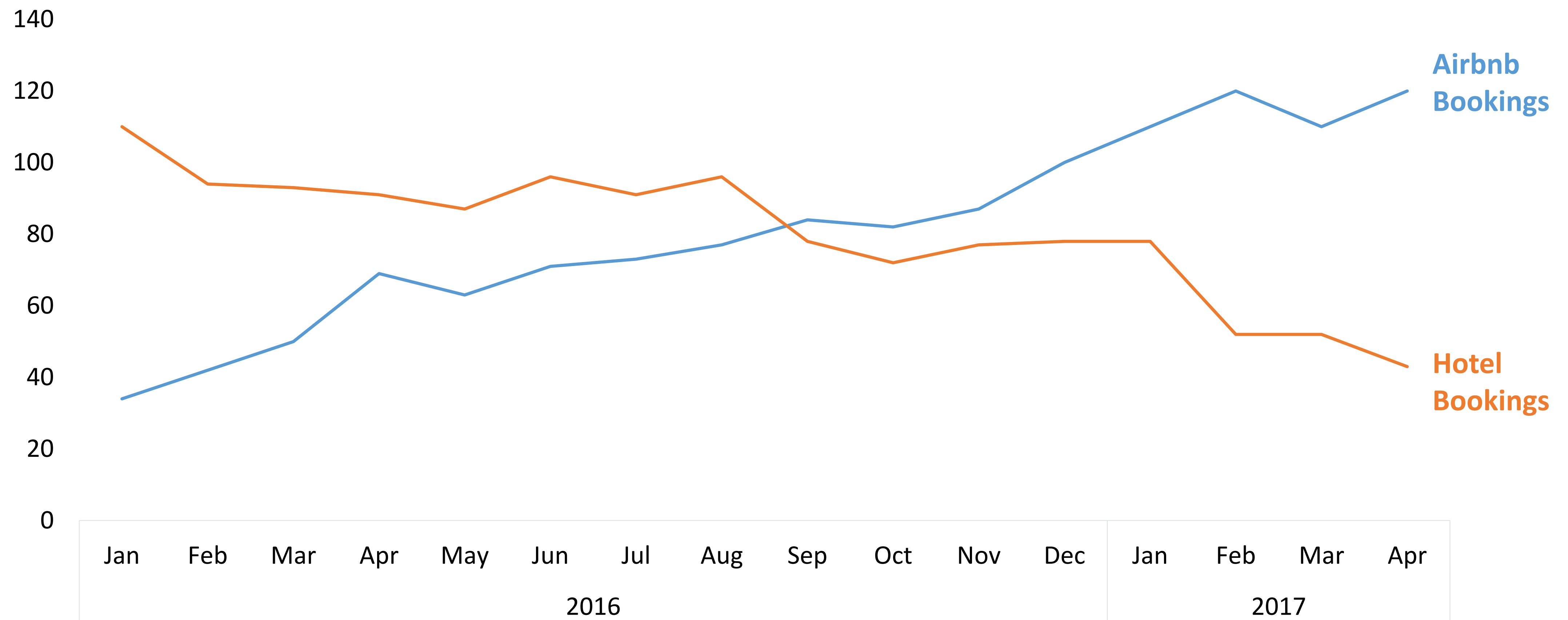


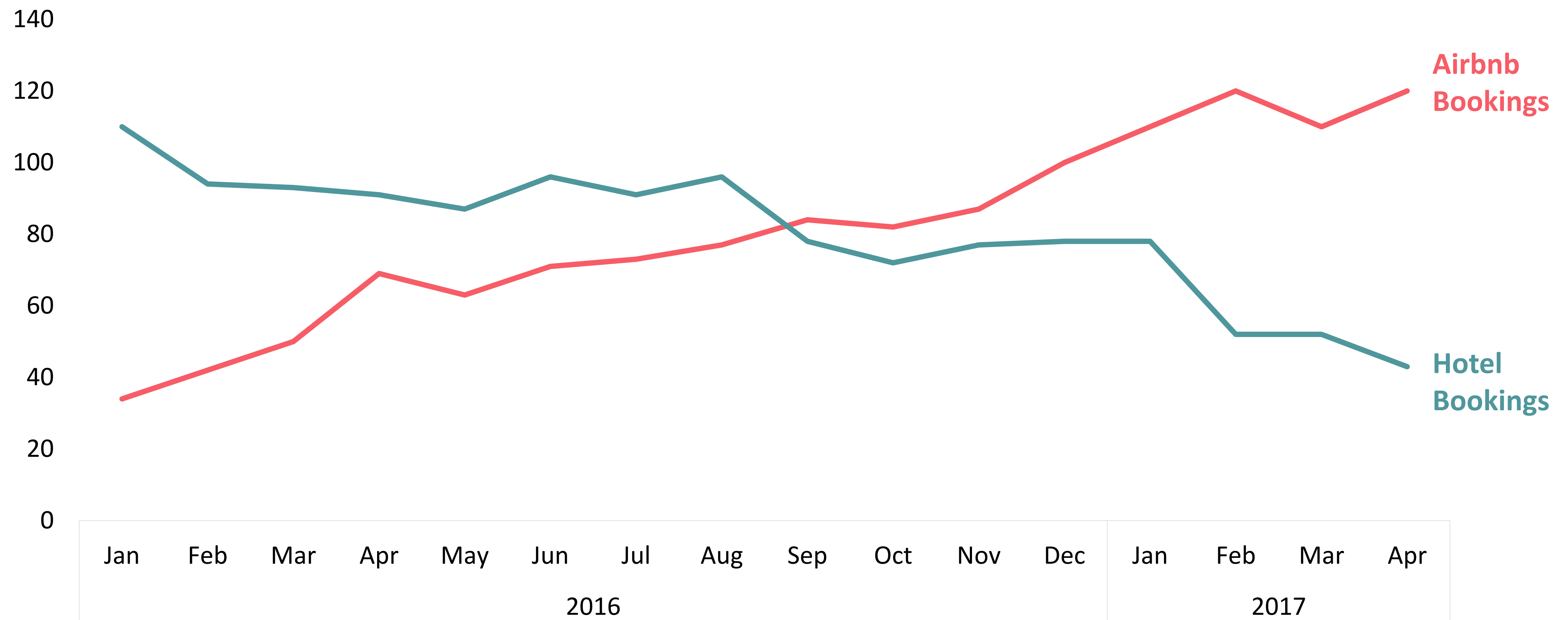
Airbnb Versus Hotel Bookings Over Time

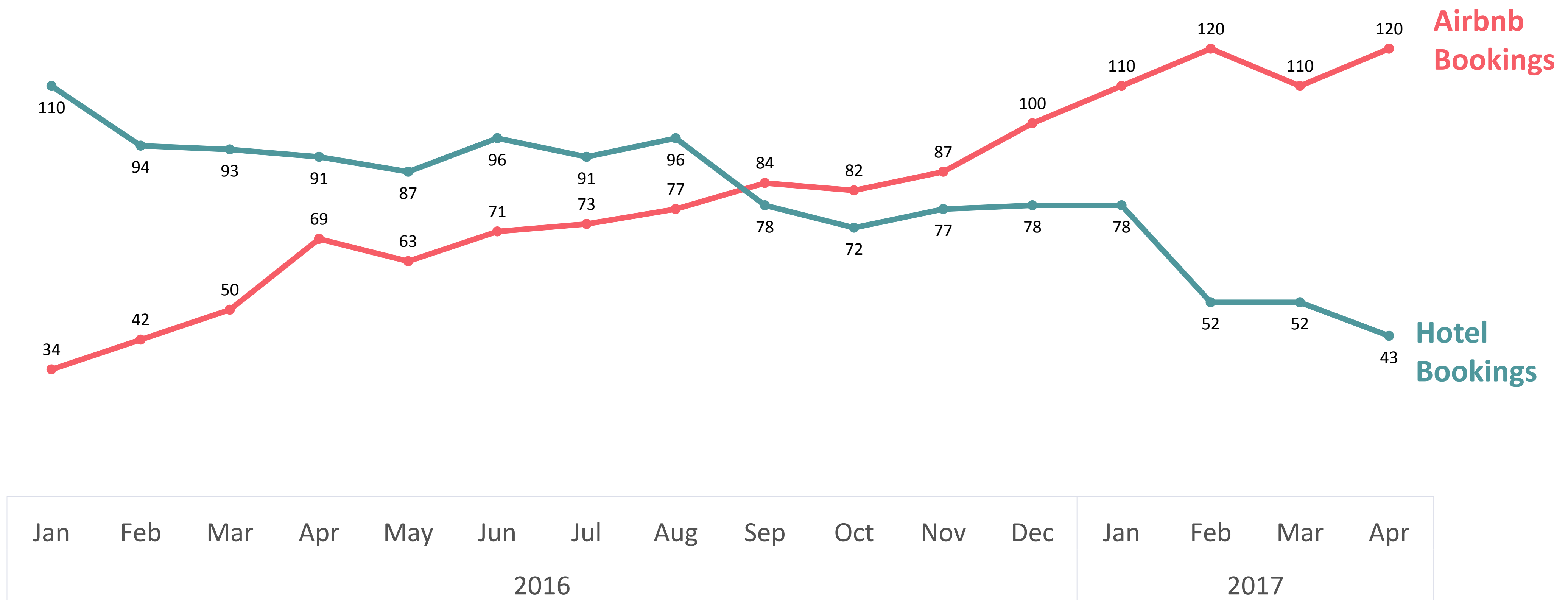


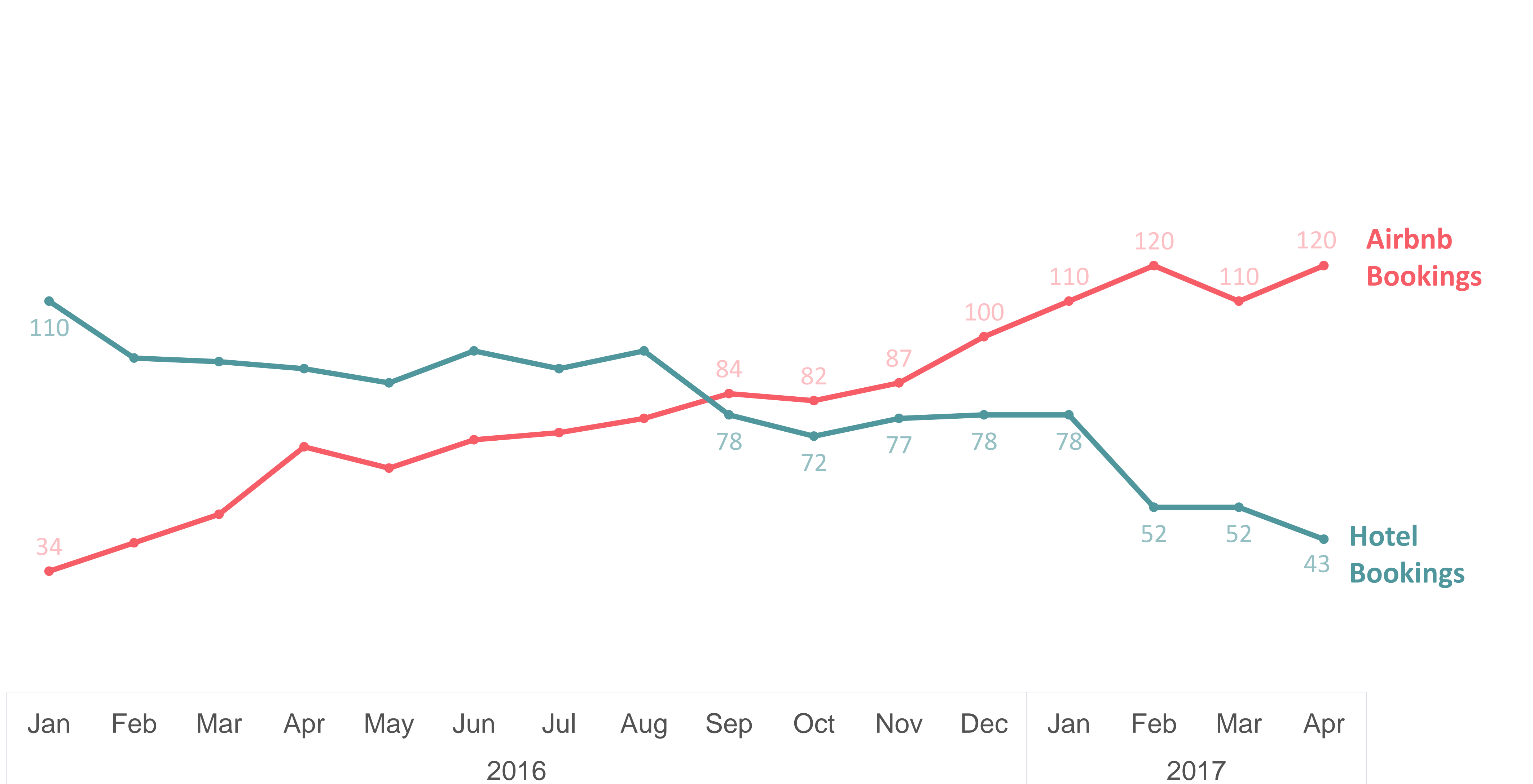
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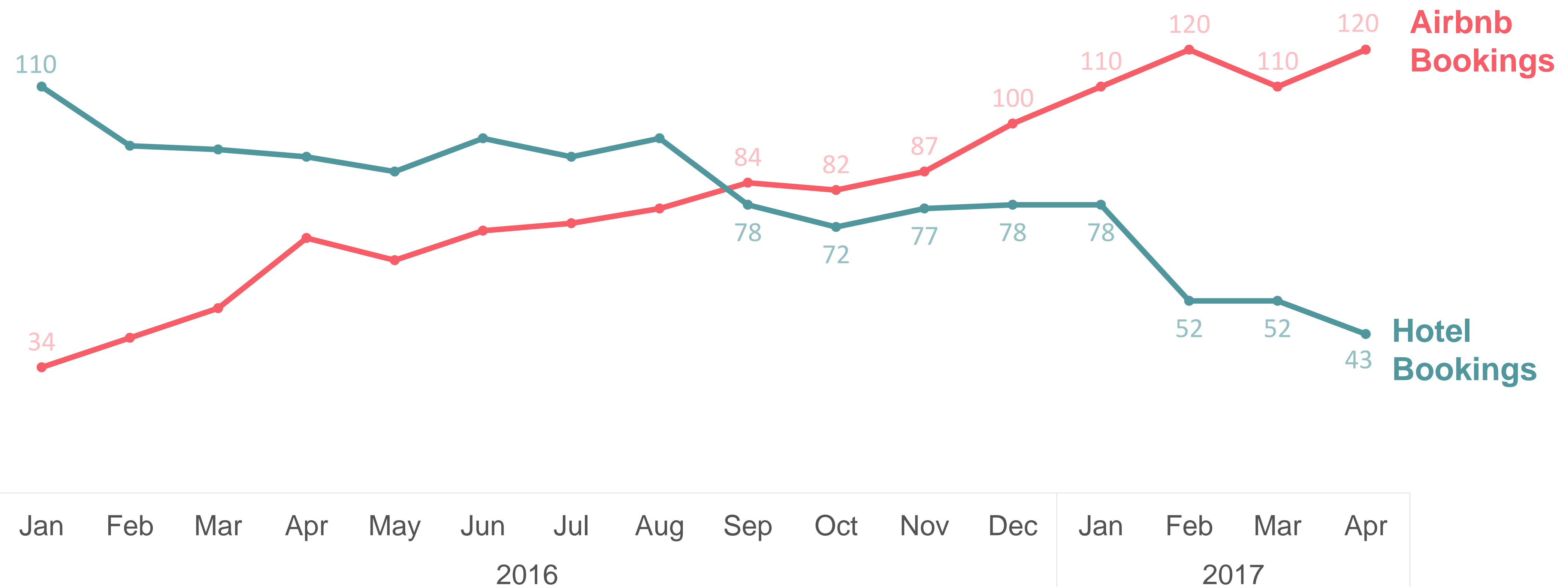






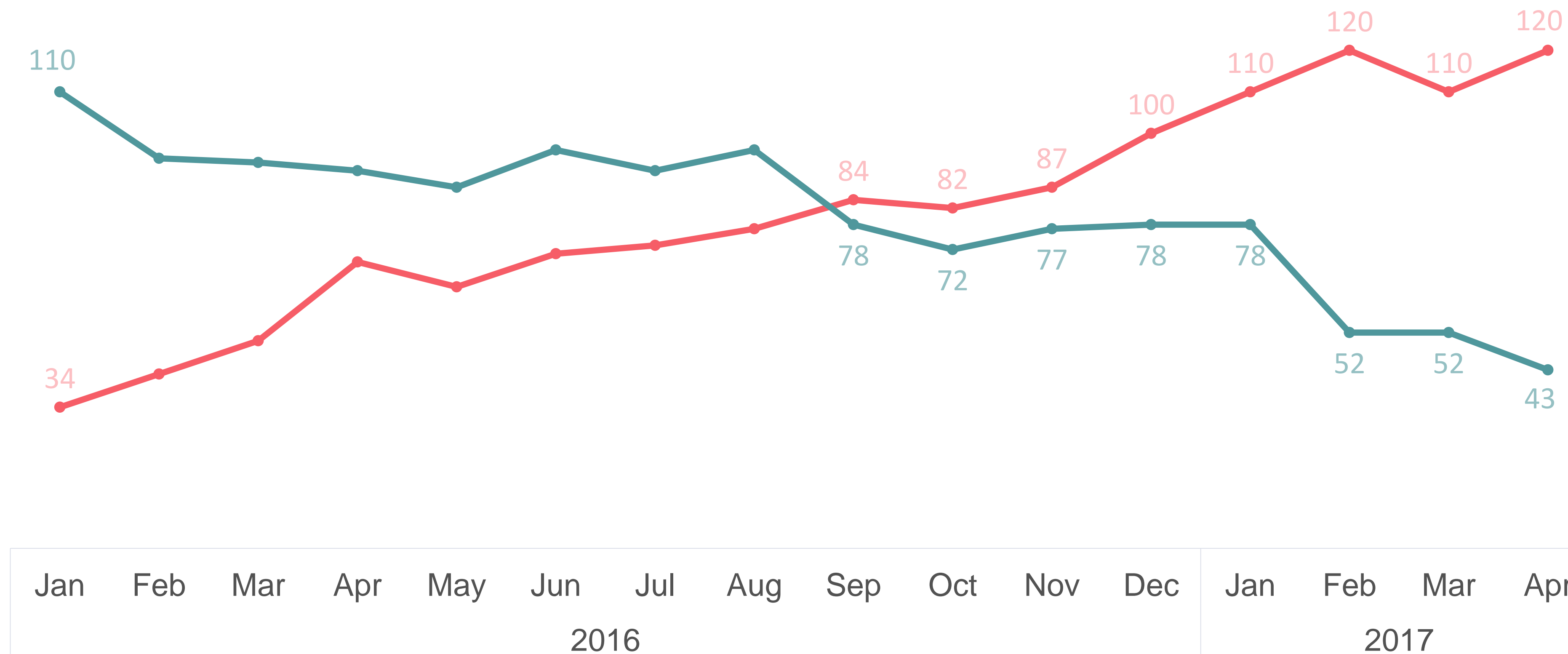
The Unstoppable Rise of the Shared Economy

Airbnb Bookings now outnumber Hotel Bookings 3 to 1



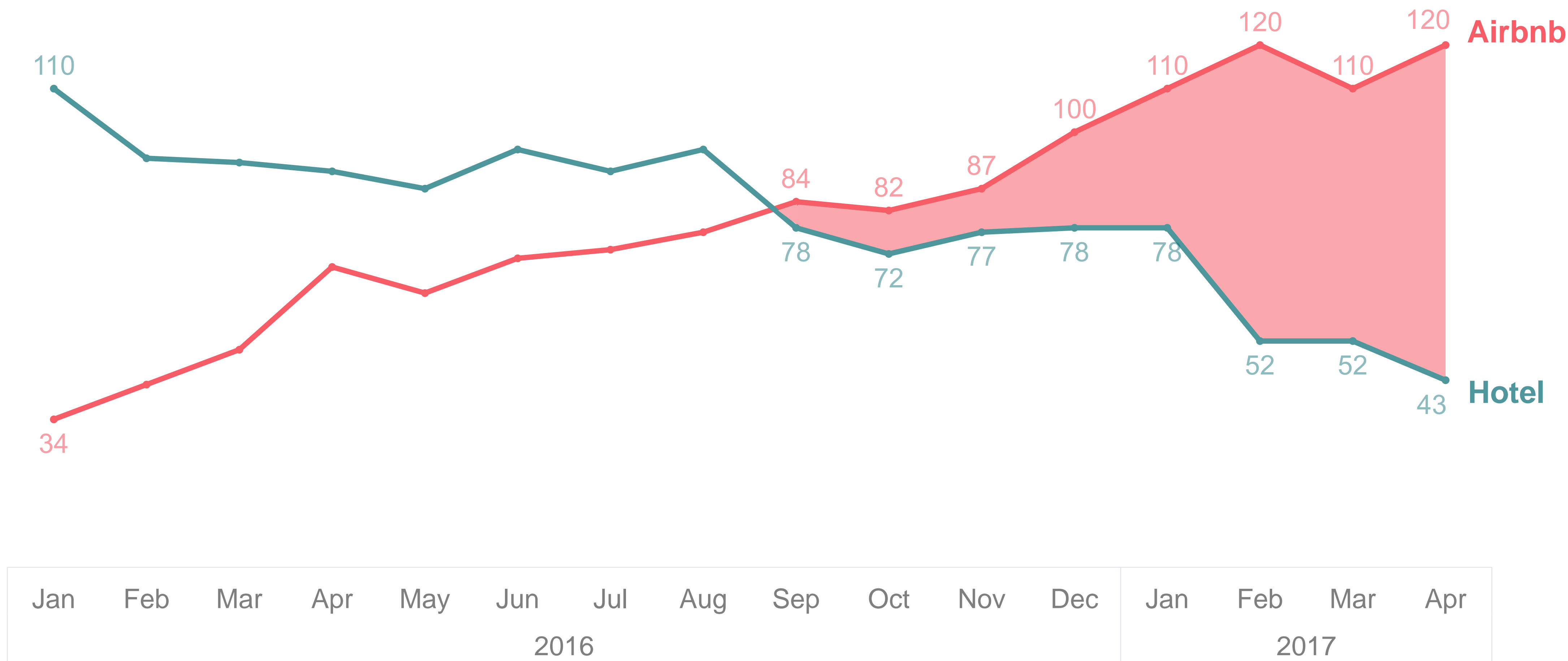
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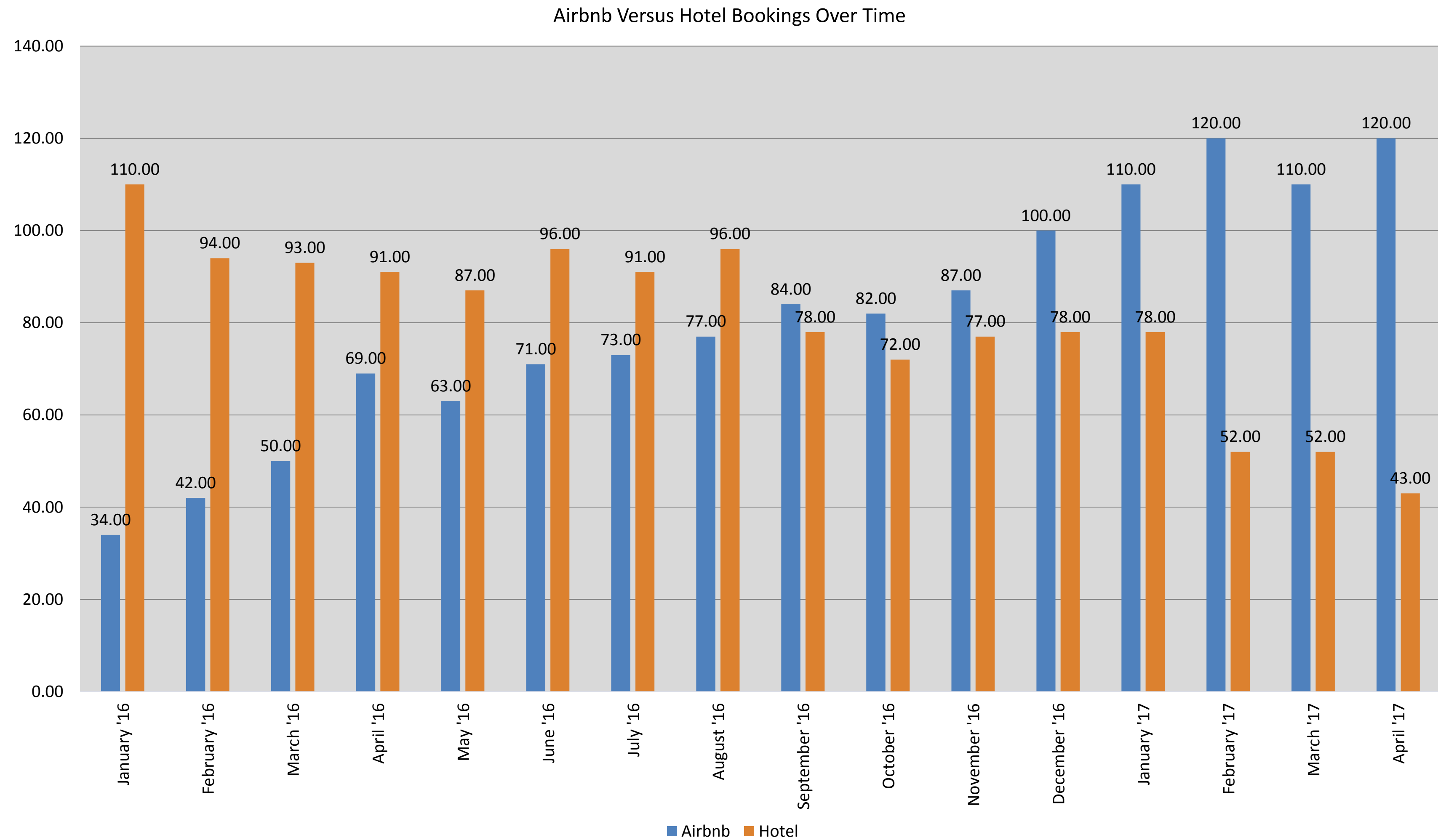


Liquidate hotel investments and divert capital to Airbnb

Airbnb Bookings now outnumber Hotel Bookings 3 to 1



D-



KEYS TO DATA STORYTELLING



VISUALS

WHAT'S HAPPENING

Apple will log about how many 'phone calls or emails you send and receive' to give your device a 'trust score'



Isobel Asher Hamilton · Sep. 19, 2018, 12:03 PM ·  968

This SoftBank-funded startup was founded by a 24-year-old to glam up budget hotels, and it's just launched in the UK



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 60.55

7,427.87 (0.80%)

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12,410.35 (0.70%)

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CAC 40

 26.52

5,478.11 (0.50%)

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Dow Jones

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26,656.98 (1.00%)

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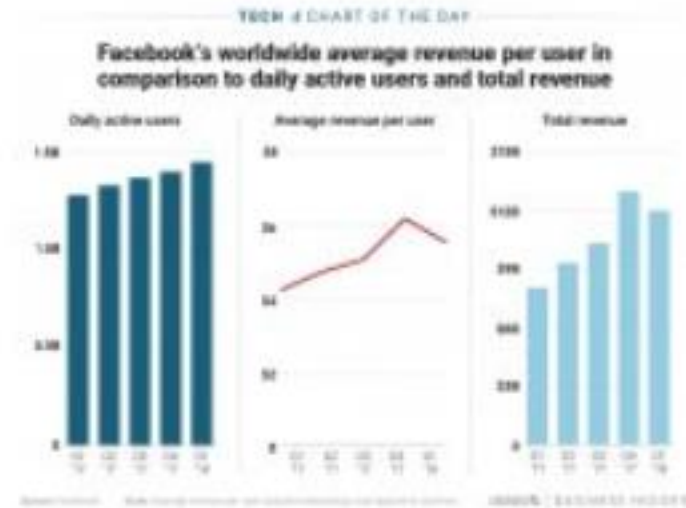
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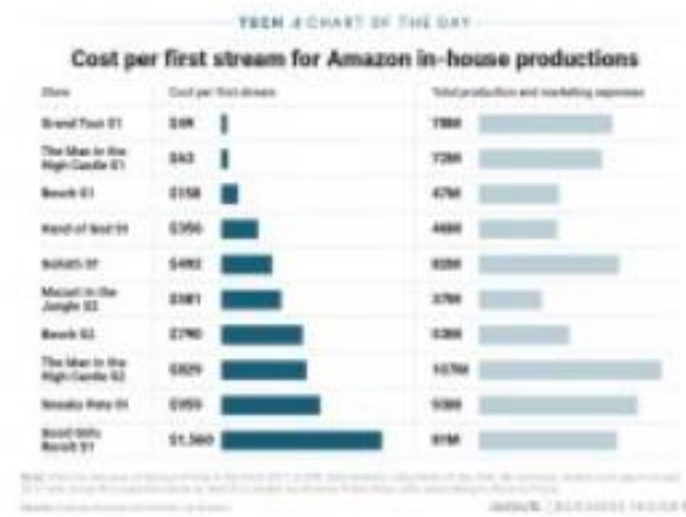
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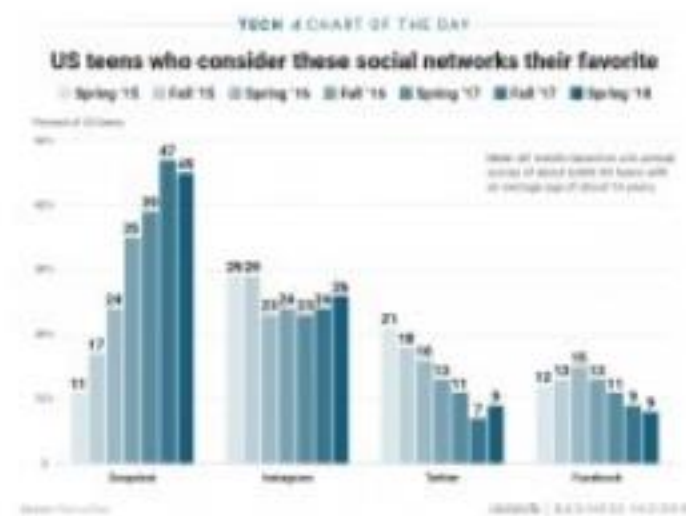
Facebook increased its daily active users in Q1, but revenue dipped

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Snapchat's grip on teenage users is loosening, but the only real threat is Instagram

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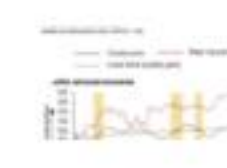


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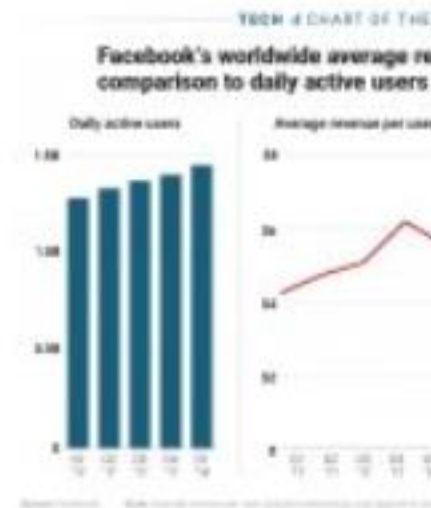


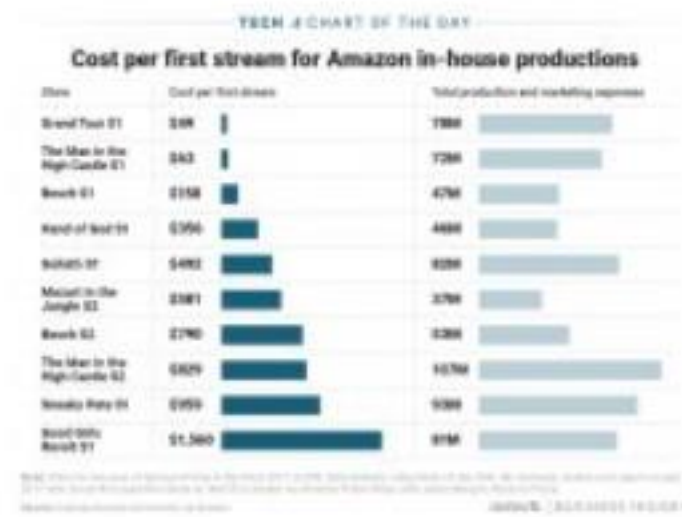
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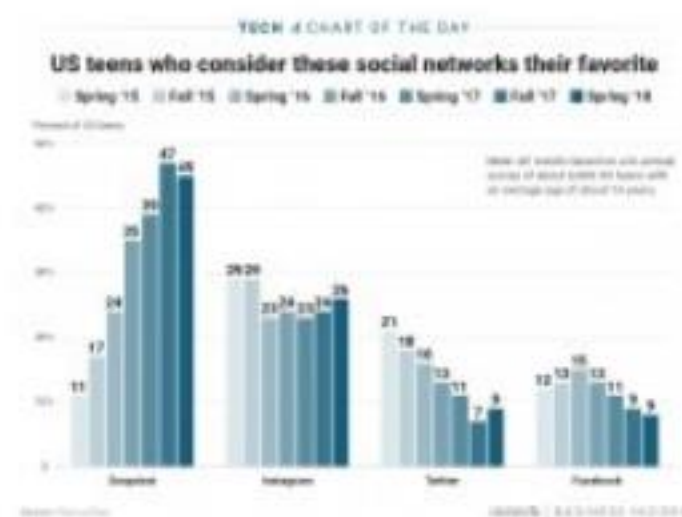
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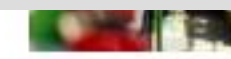
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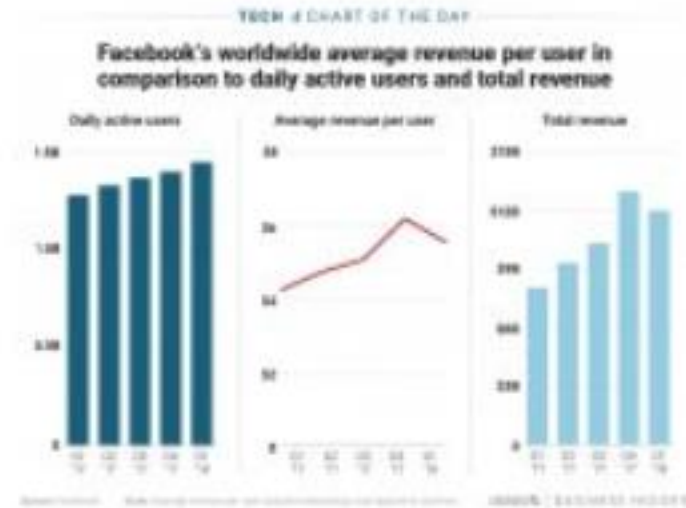
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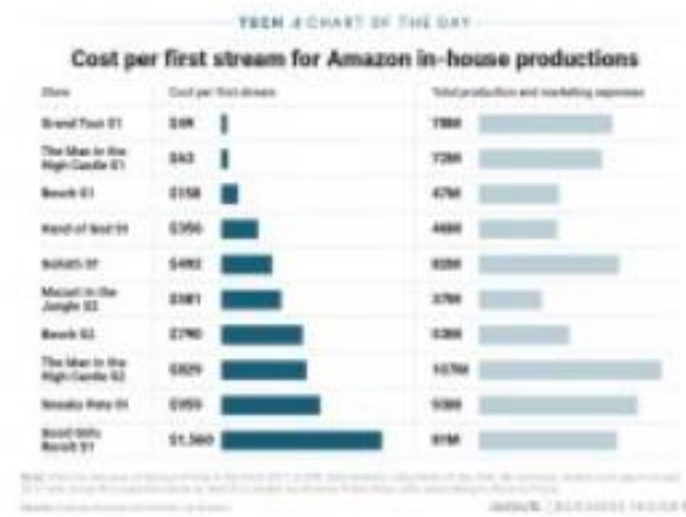
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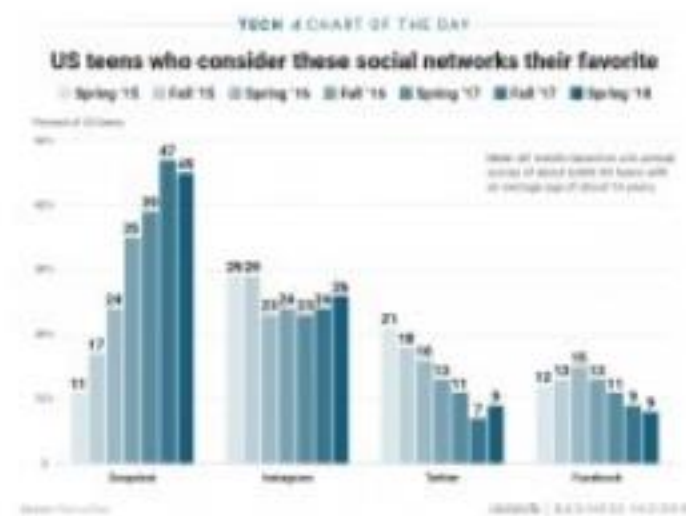
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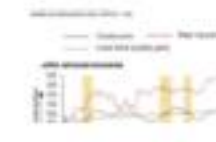


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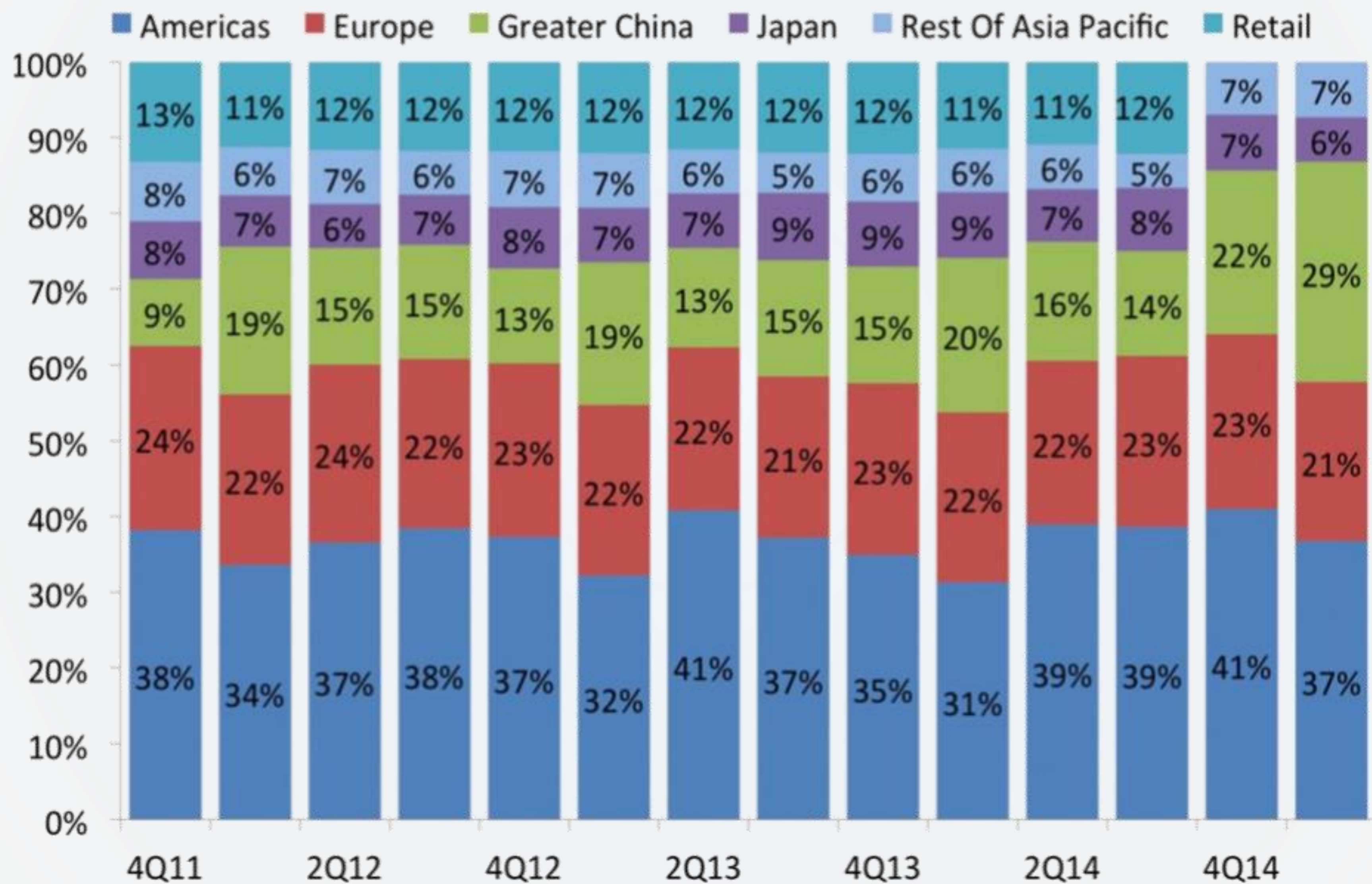
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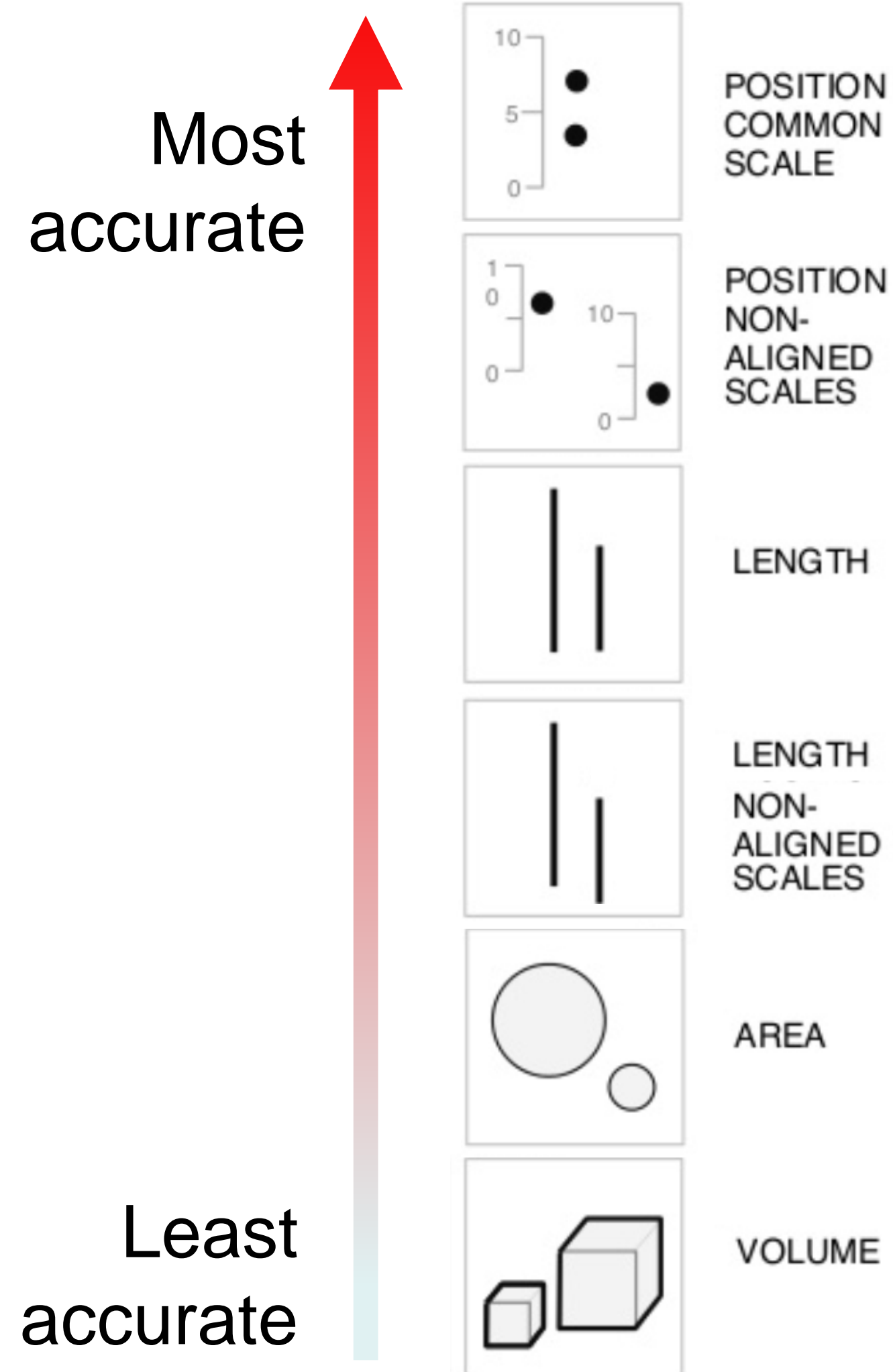


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Apple Global Revenue Share

By Region And By Retail Sales





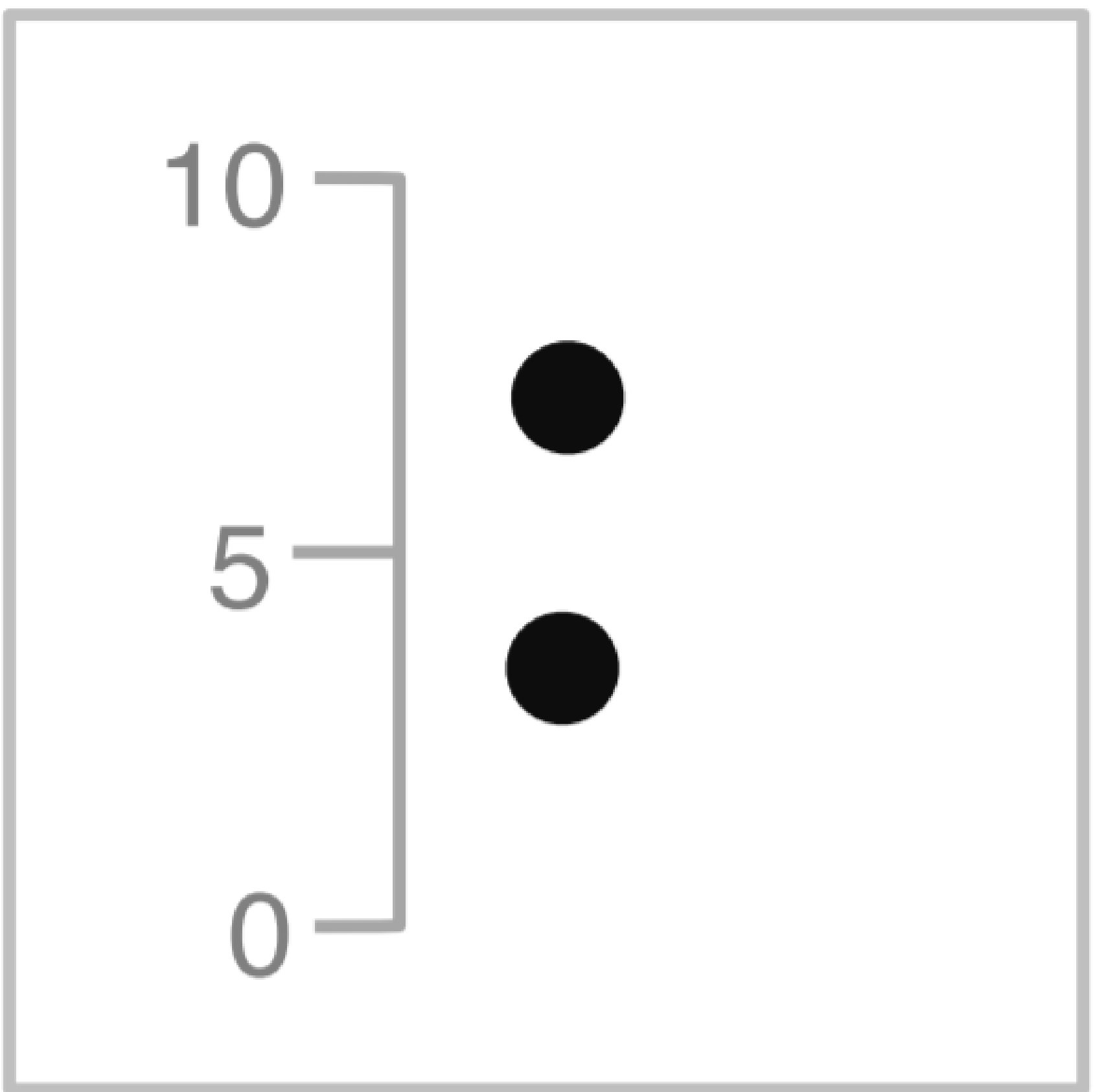
Ranking of Elementary Perceptual Tasks

William S. Cleveland
and Robert McGill

Most
accurate



Least
accurate



Most
accurate



POSITION
COMMON
SCALE



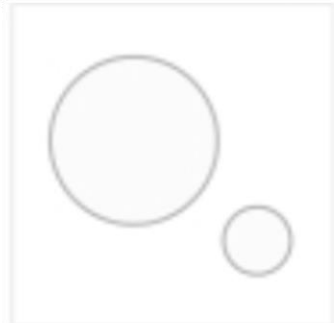
POSITION
NON-
ALIGNED
SCALES



LENGTH



LENGTH
NON-
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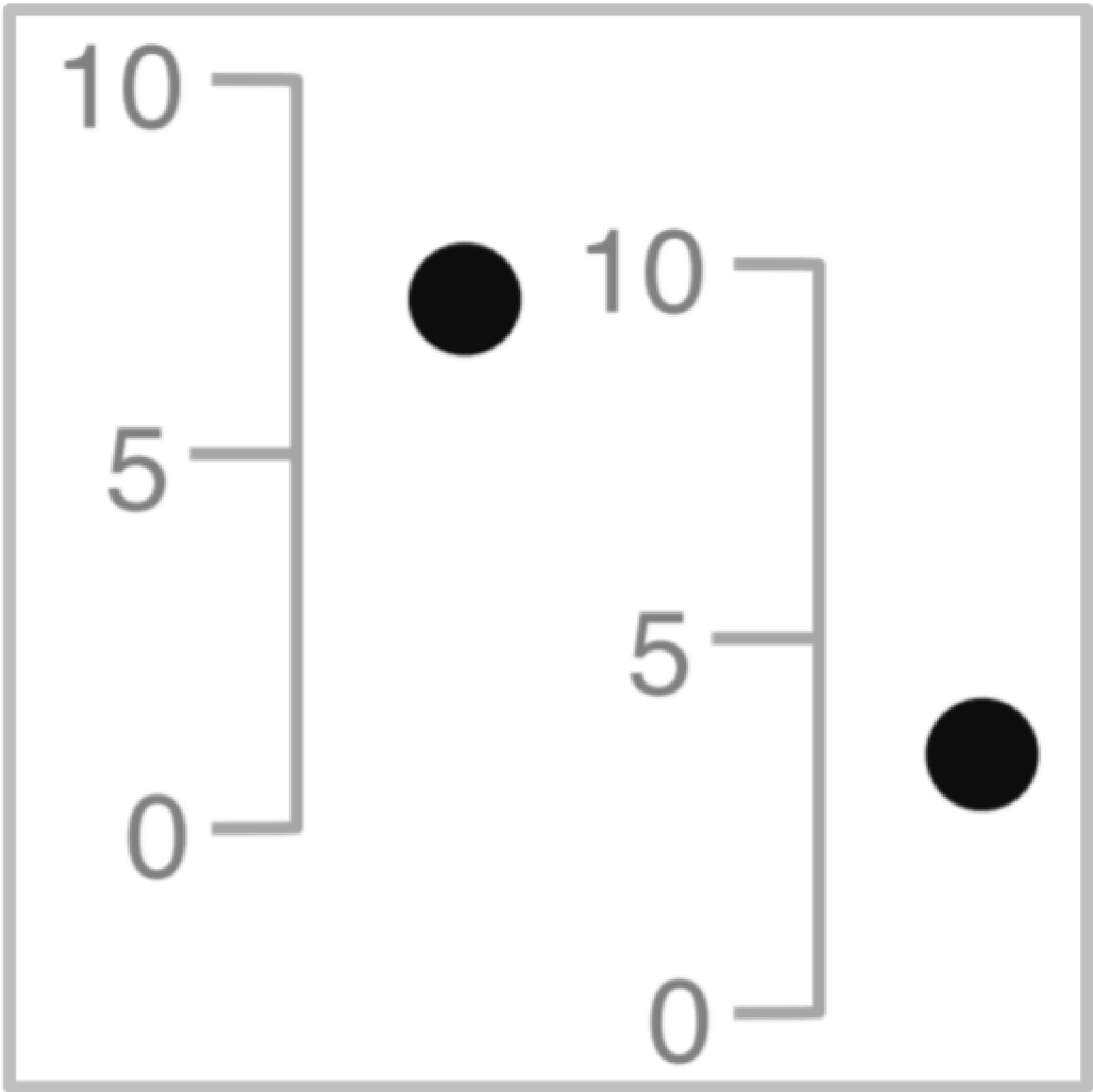


AREA



VOLUME

Least
accurate



Most
accurate



POSITION
COMMON
SCALE



POSITION
NON-
ALIGNED
SCALES



LENGTH



LENGTH
NON-
ALIGNED
SCALES

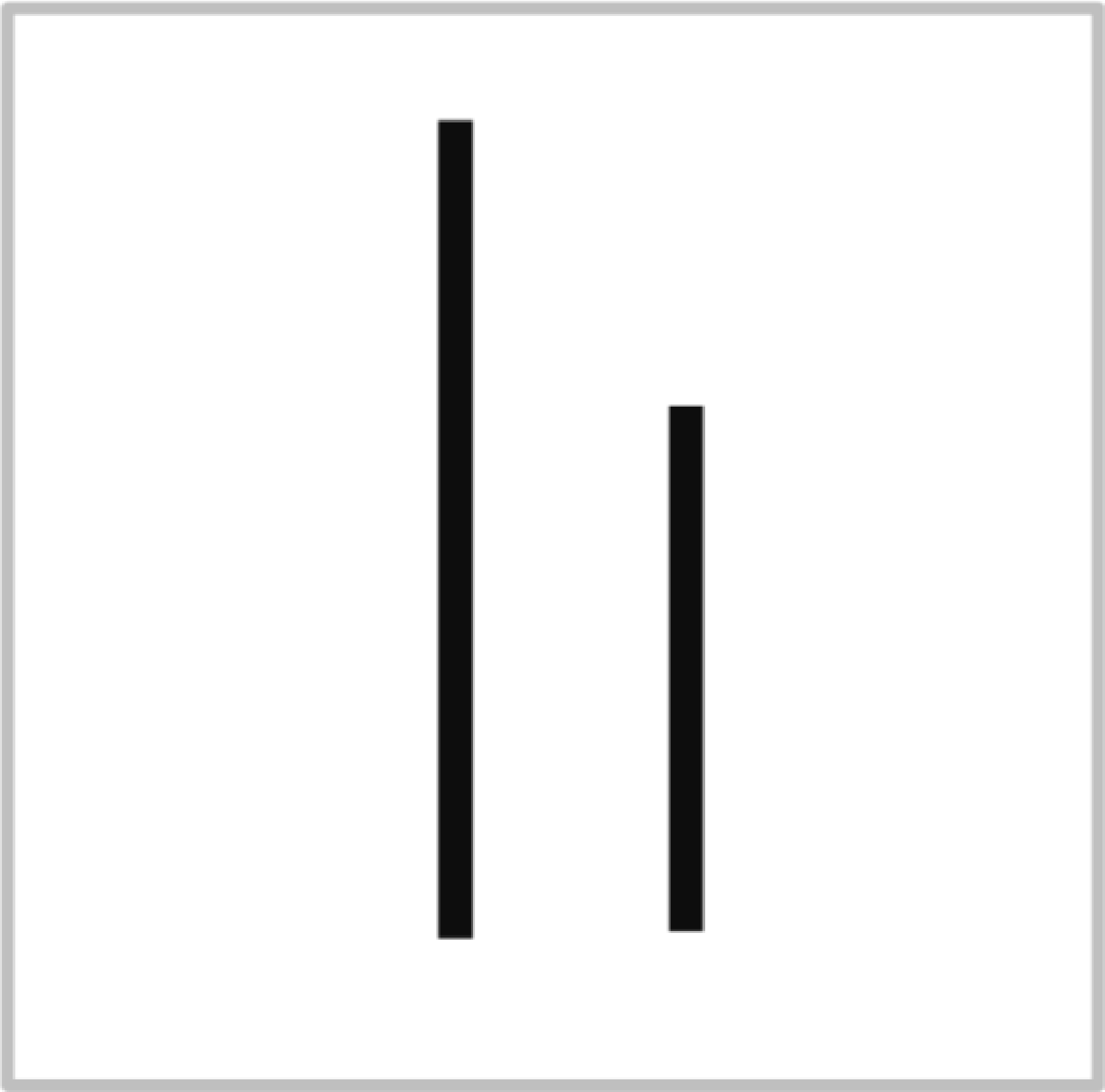


AREA



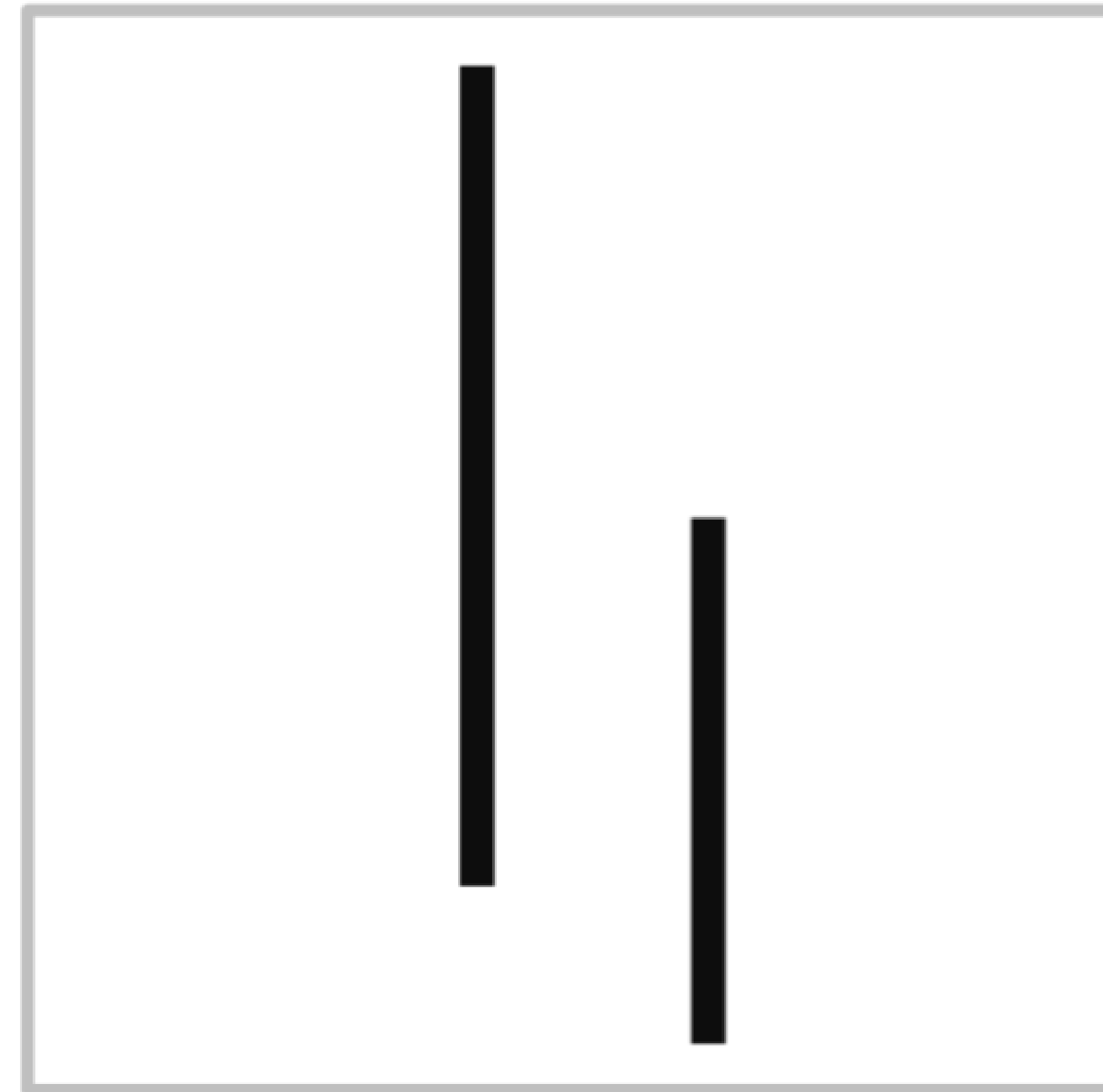
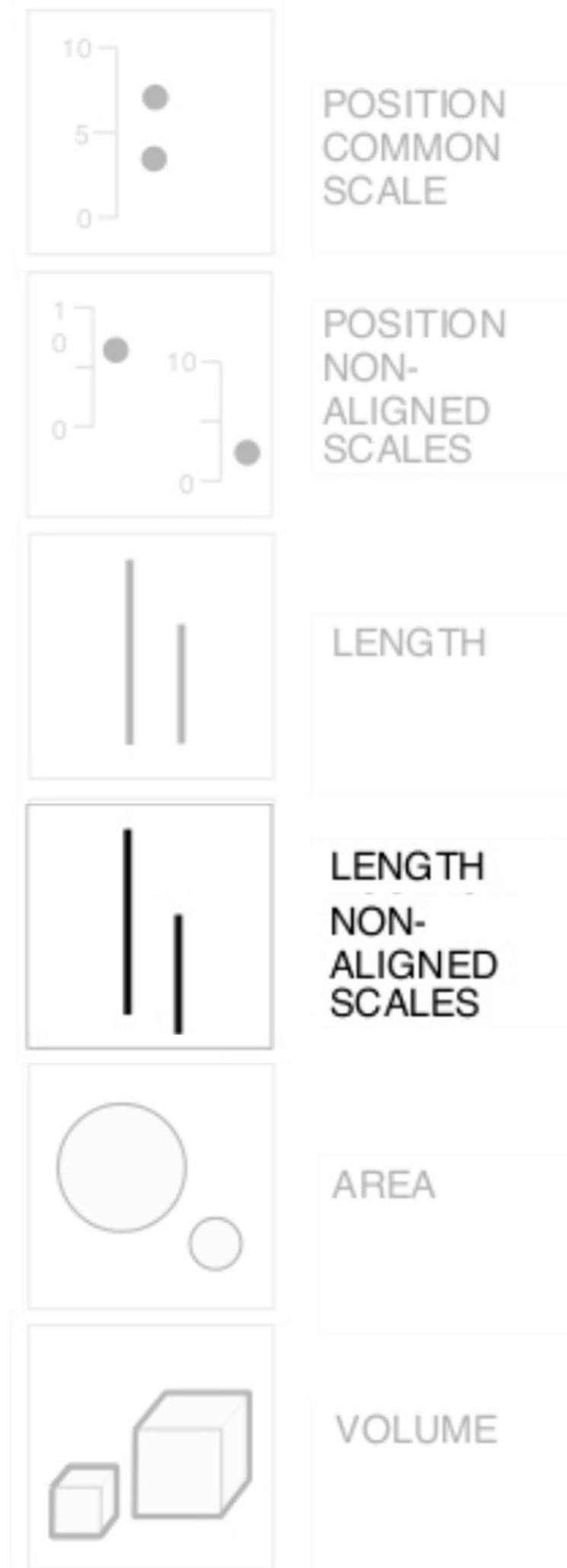
VOLUME

Least
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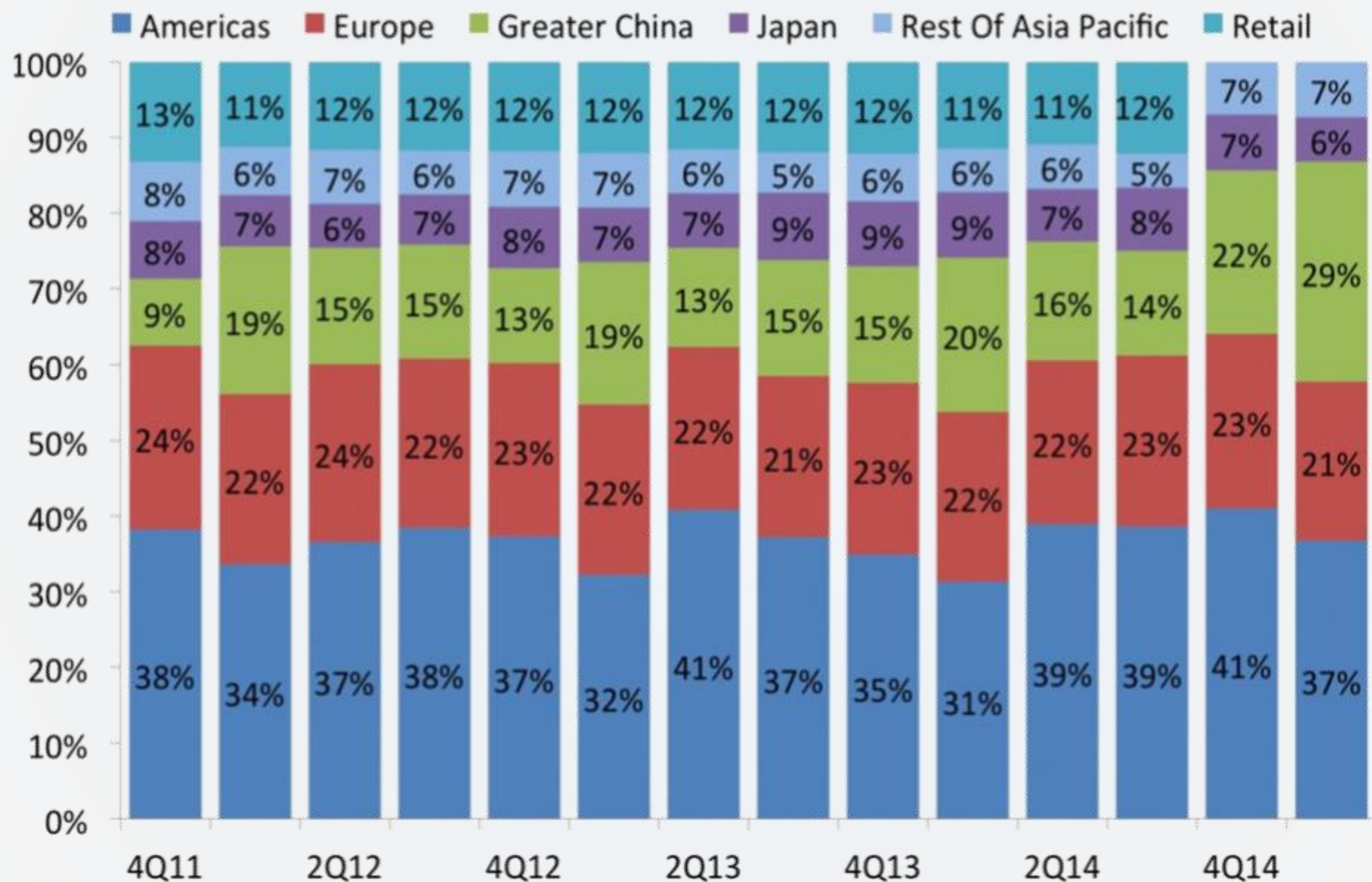
Most
accurate

Least
accurate

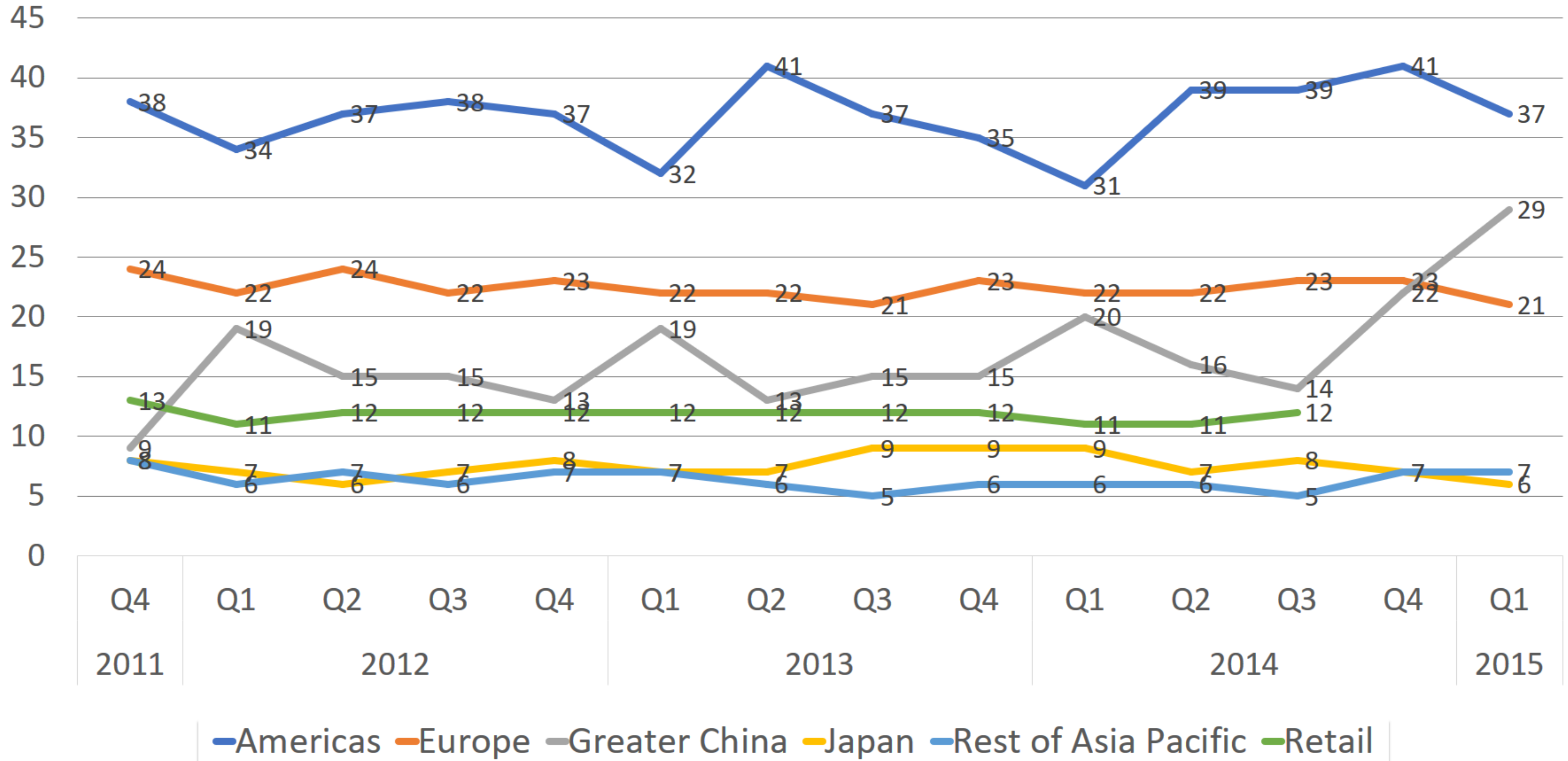


Apple Global Revenue Share

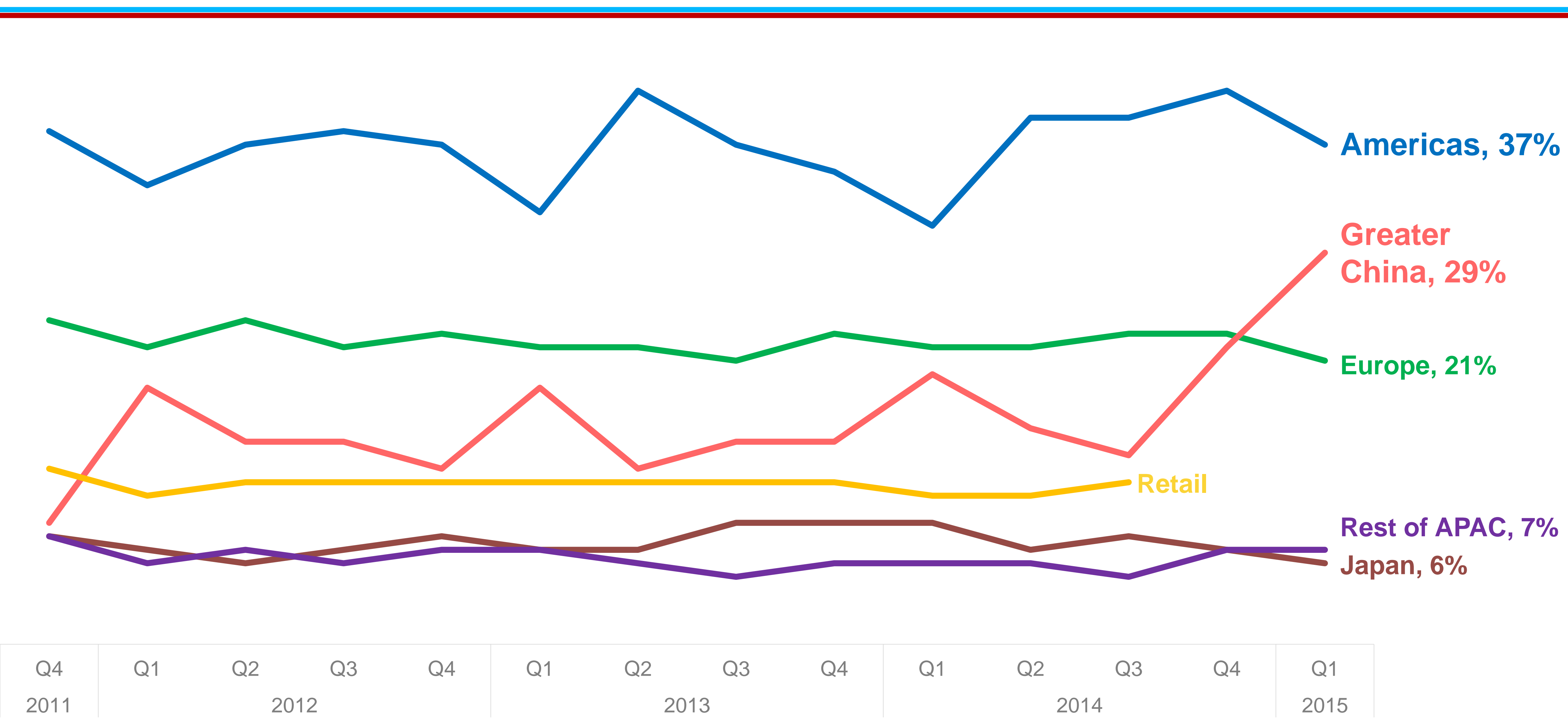
By Region And By Retail Sales



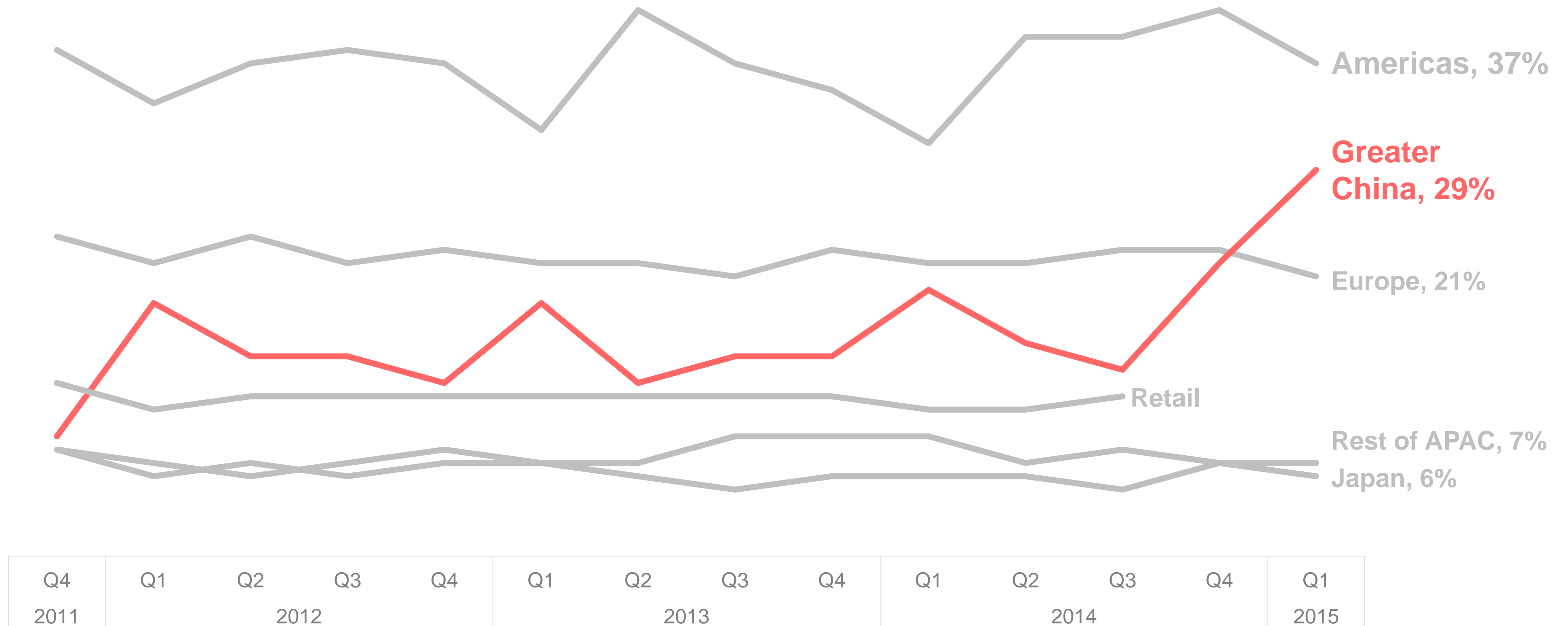
Apple's Global Revenue Share by Region Over Time



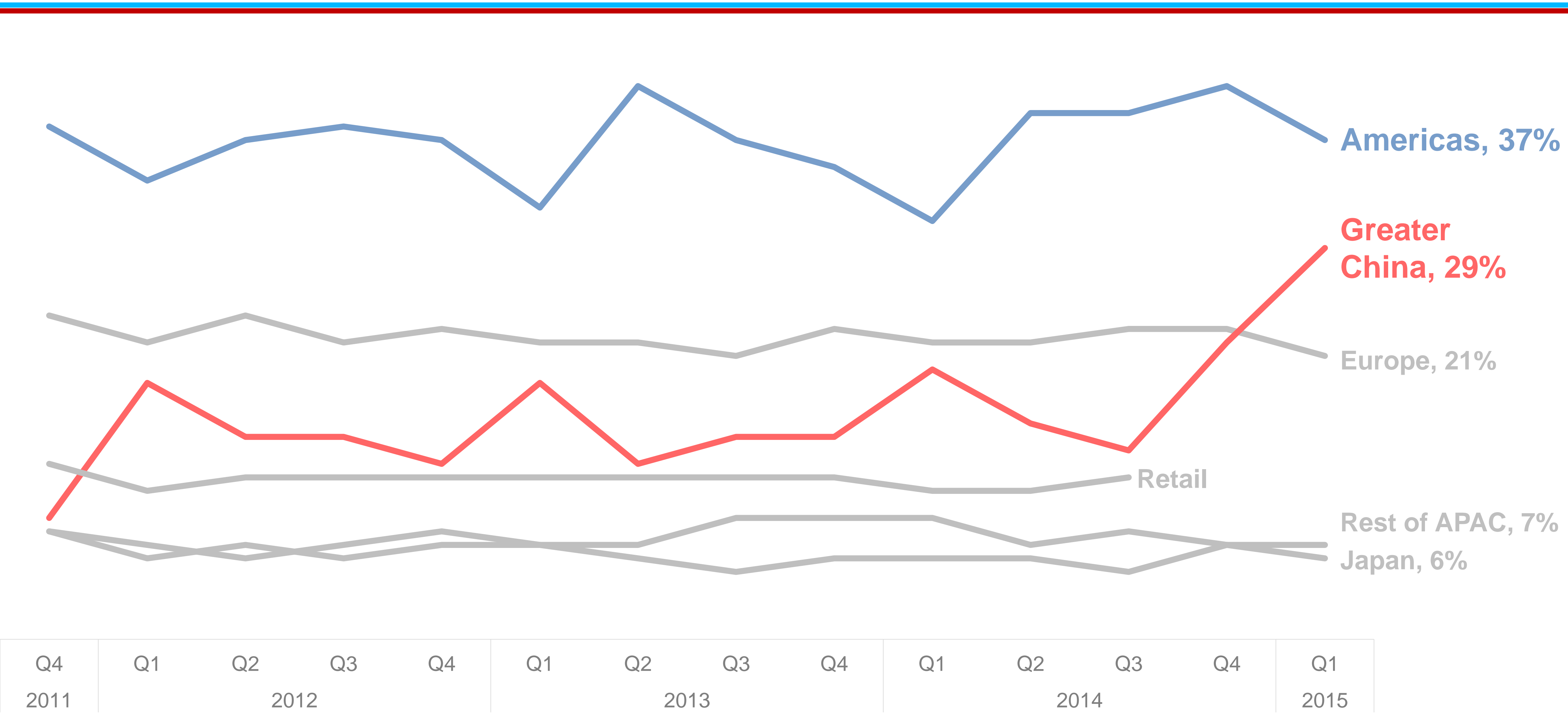
Apple Global Revenue Share by Region Over Time



Greater China is now Apple's second most important market



Greater China is poised to surpass the **Americas** as Apple's most important market



Most
accurate

Least
accurate



POSITION
COMMON
SCALE



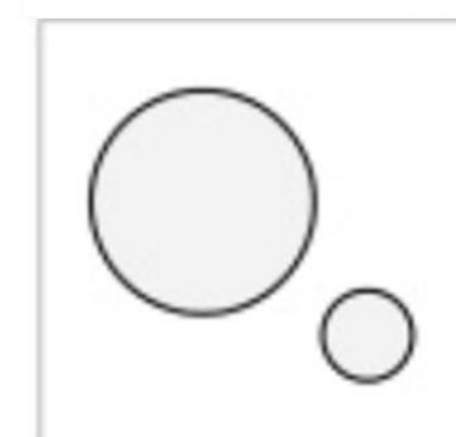
POSITION
NON-
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SCALES



LENGTH



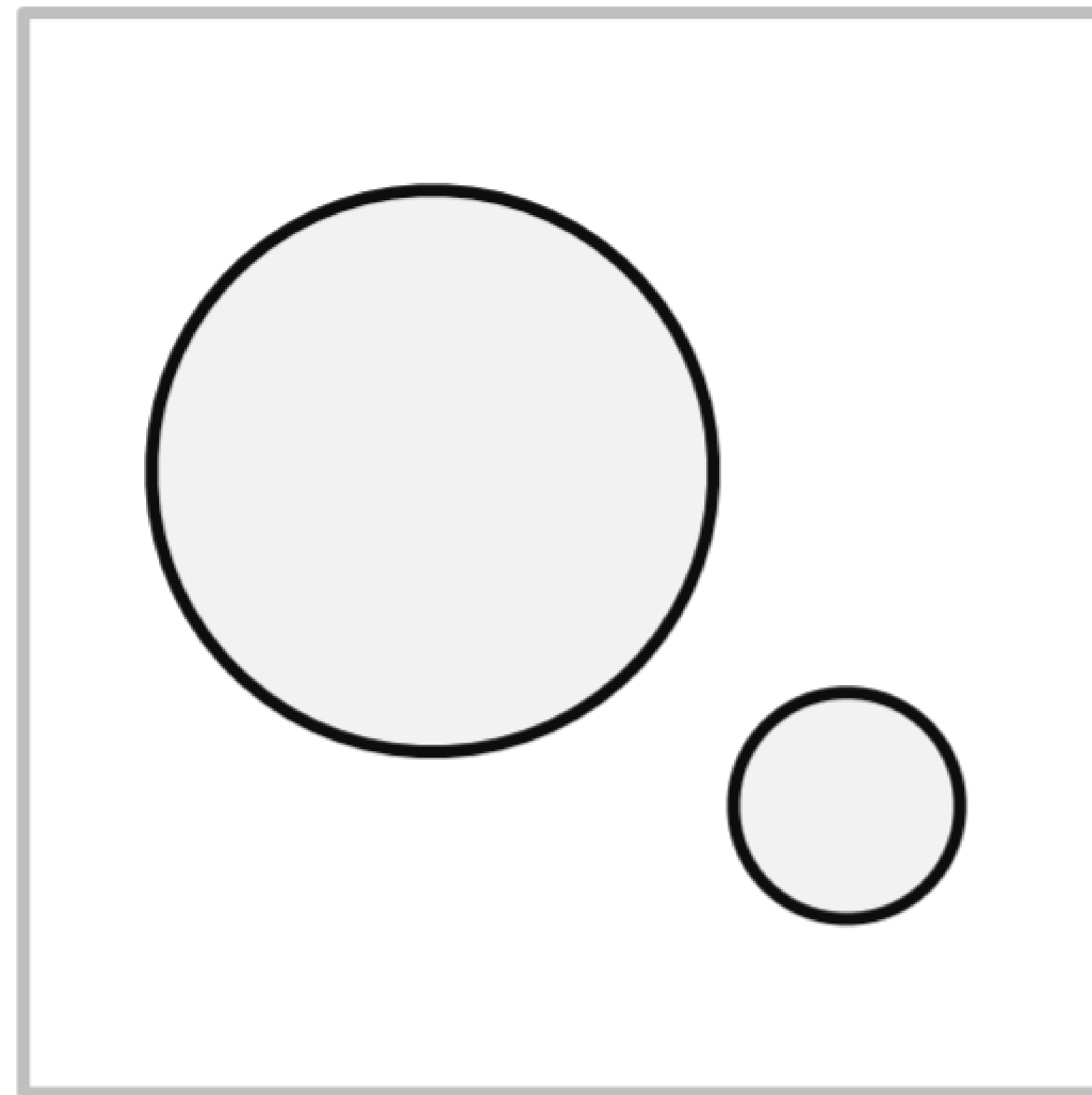
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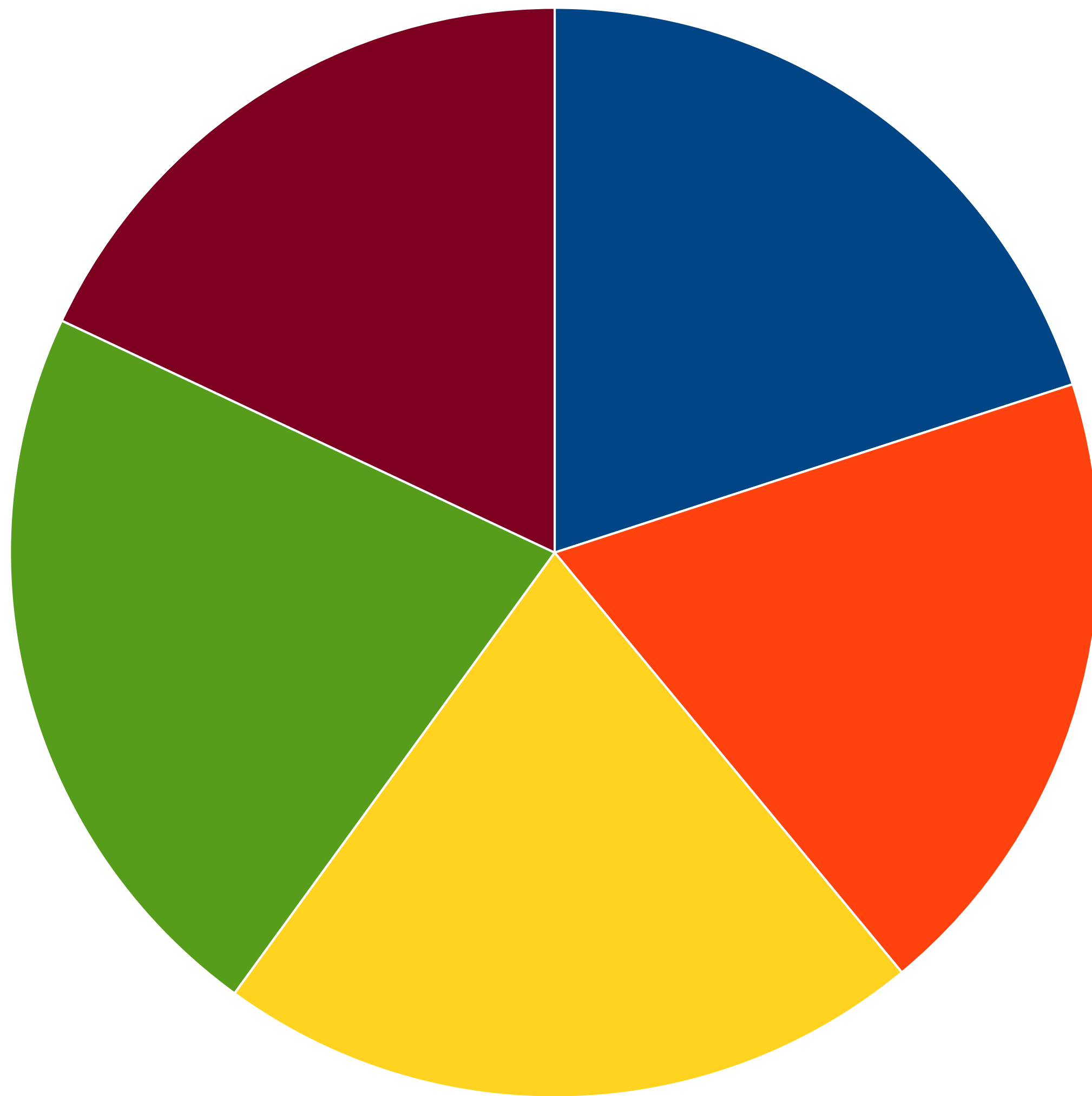


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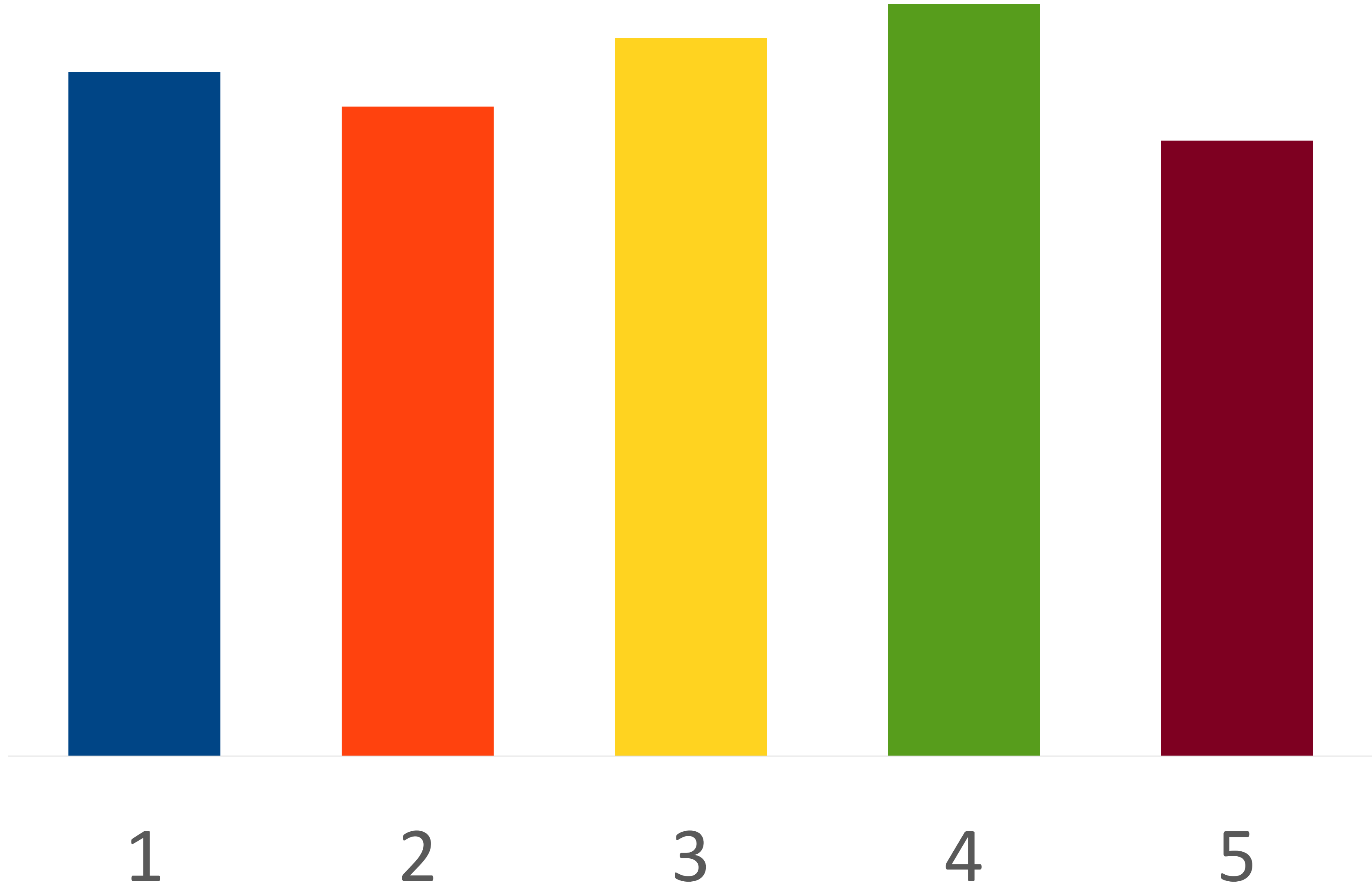


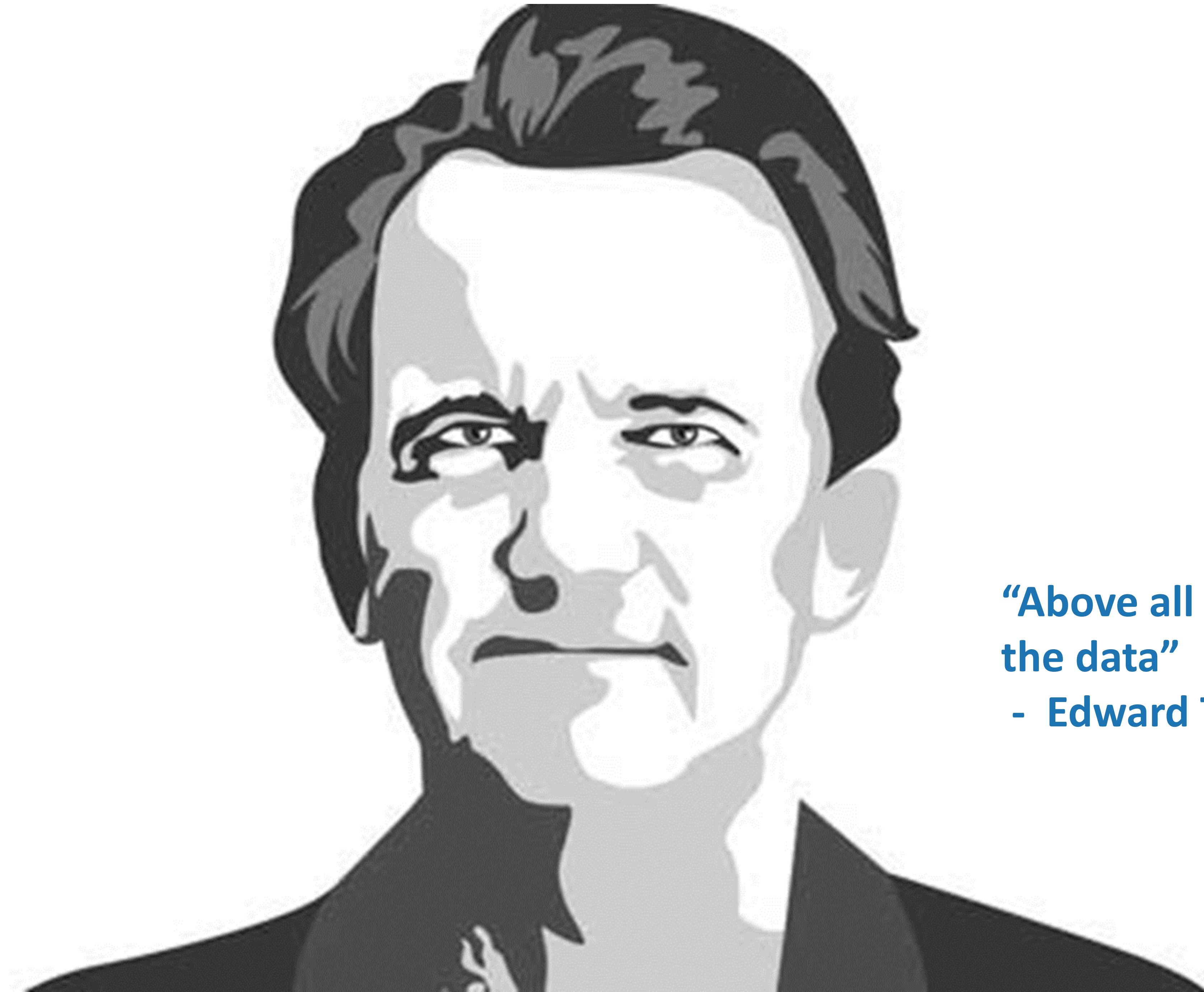
VOLUME





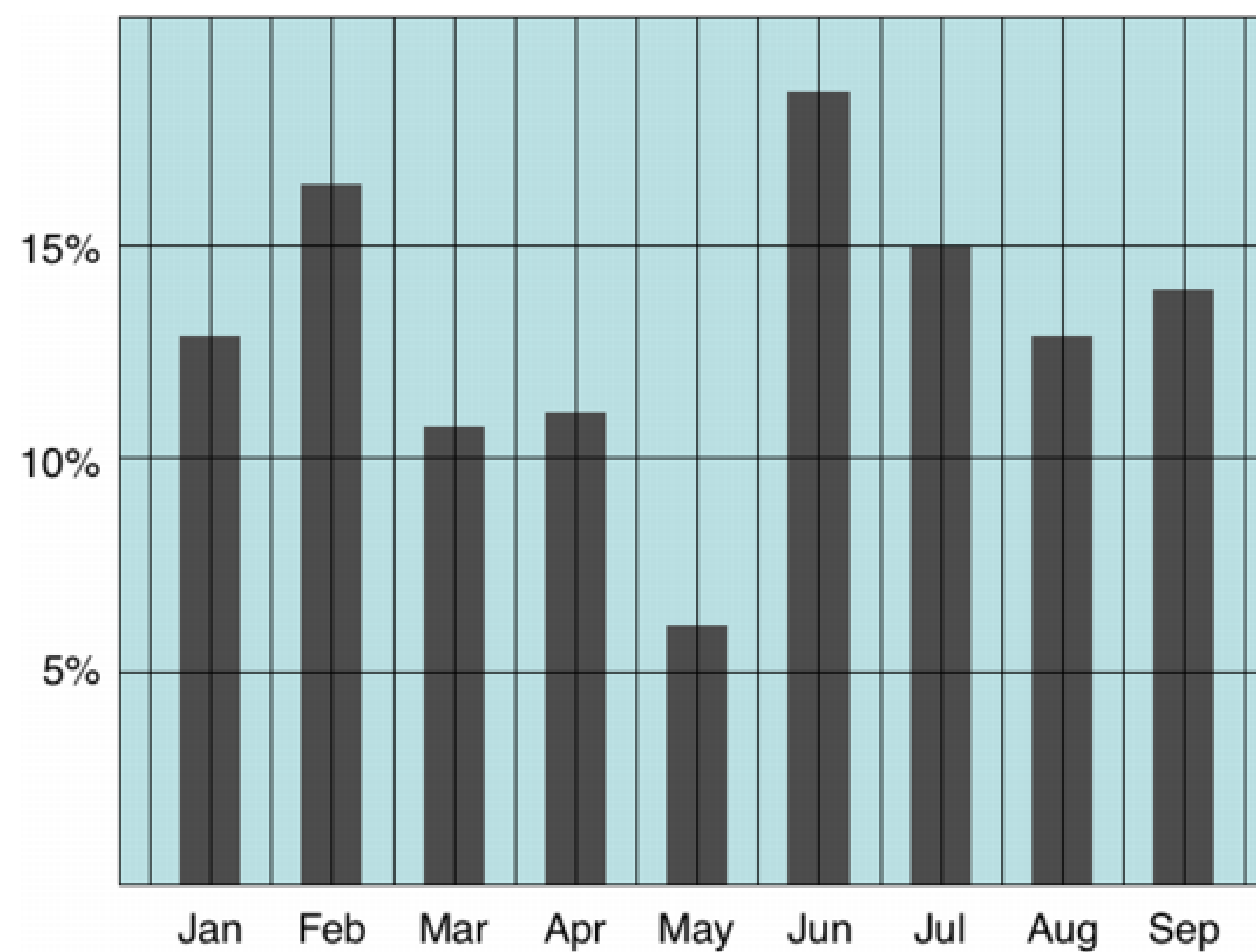
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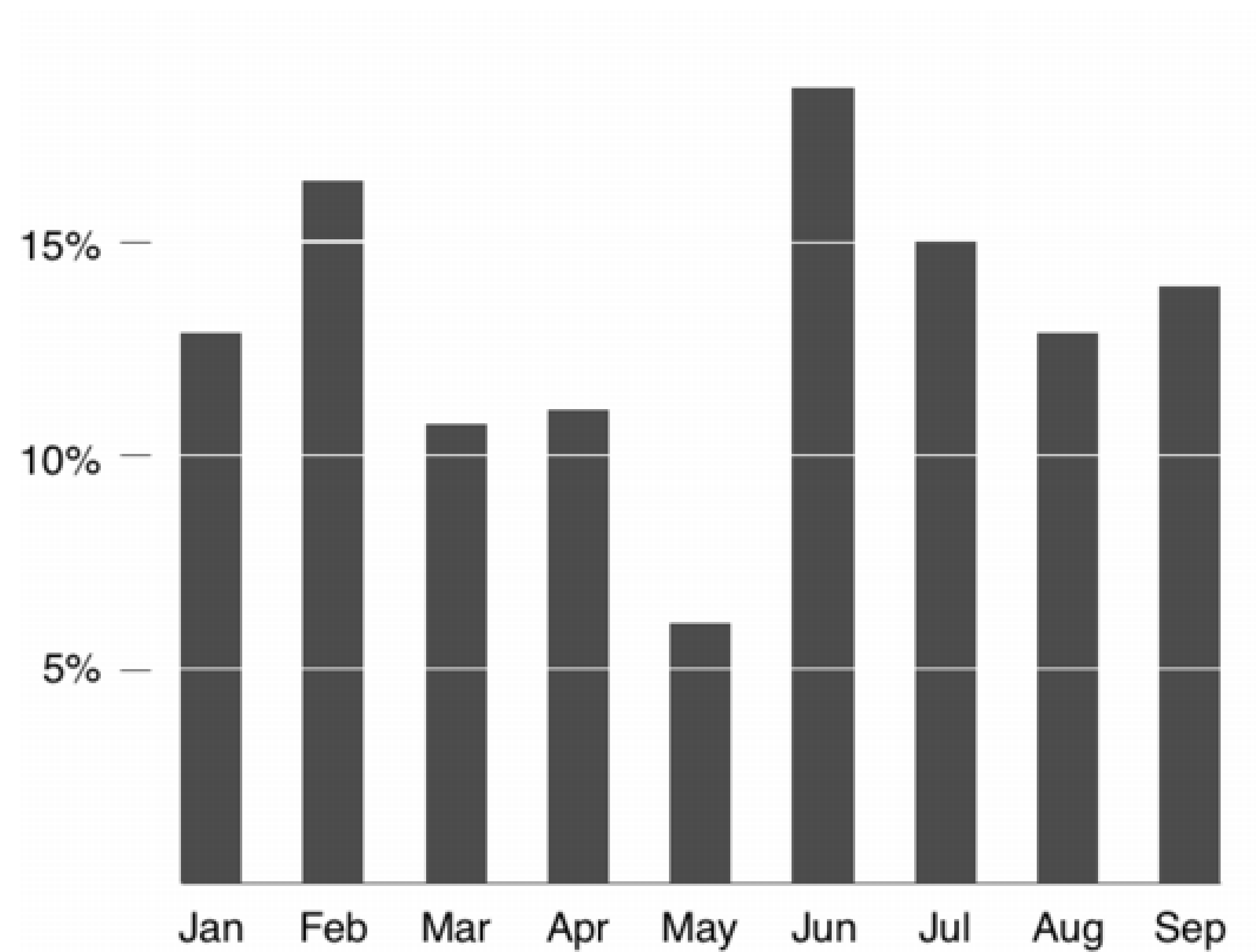


**“Above all else, show
the data”
- Edward Tufte**

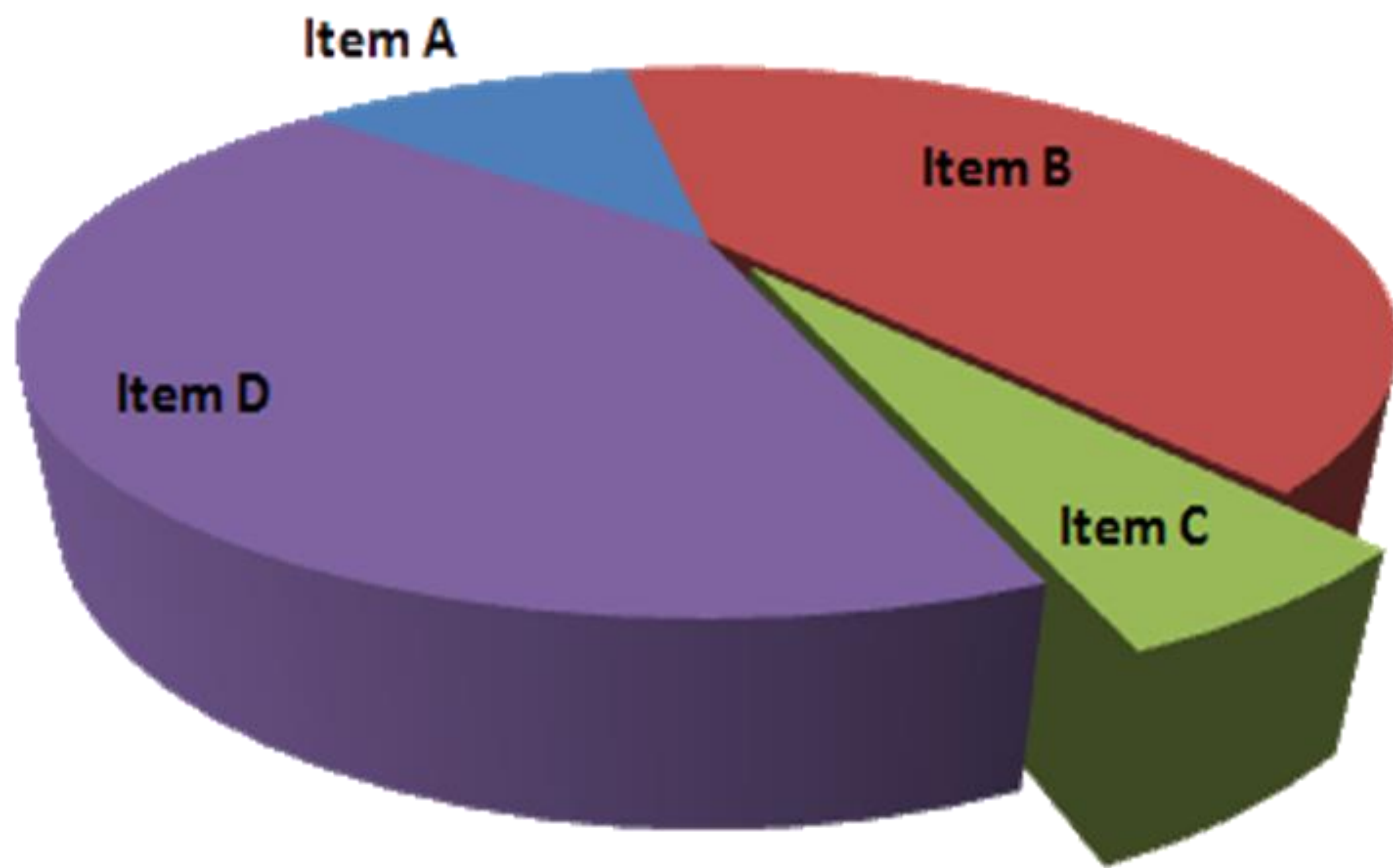
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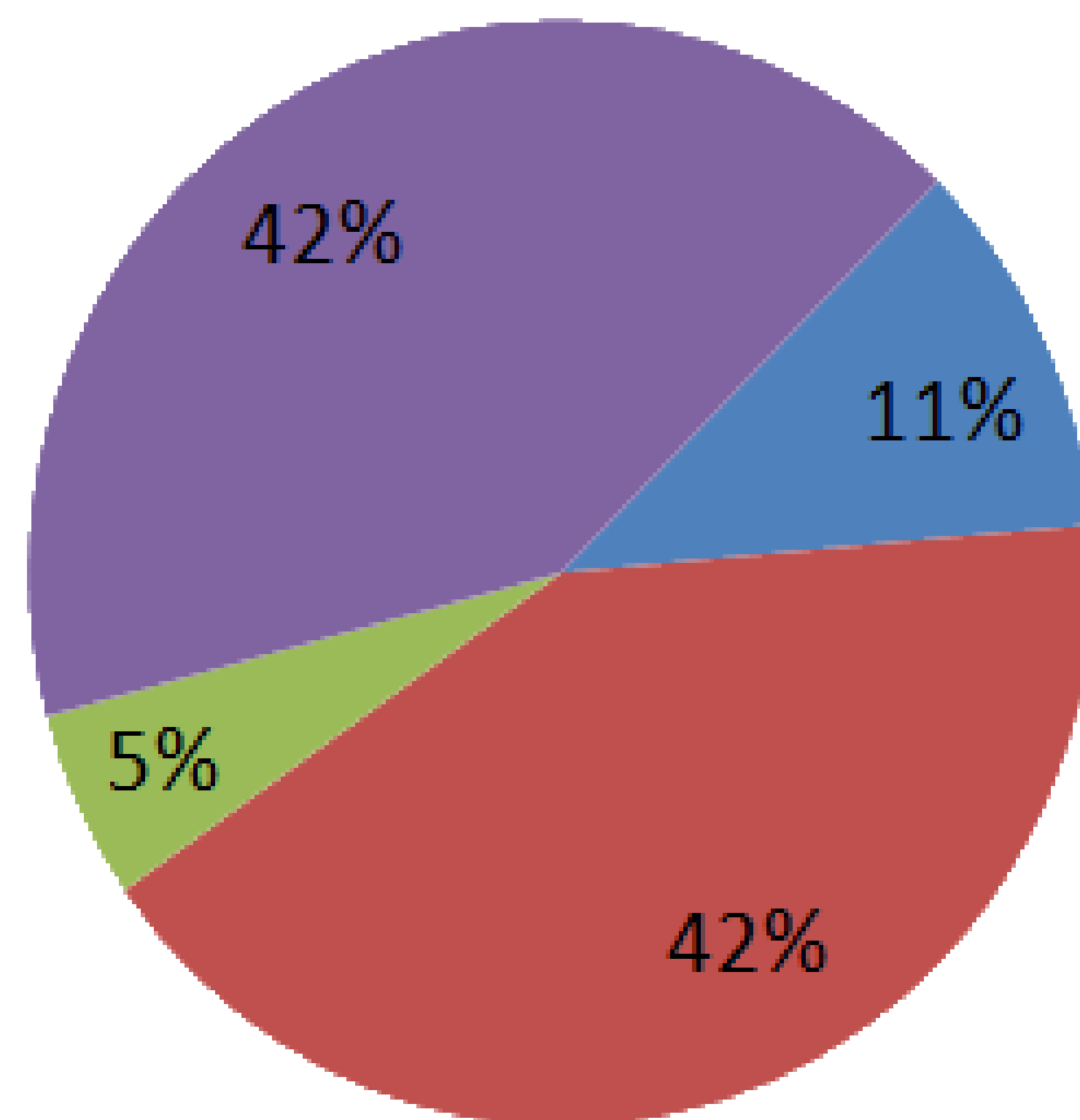
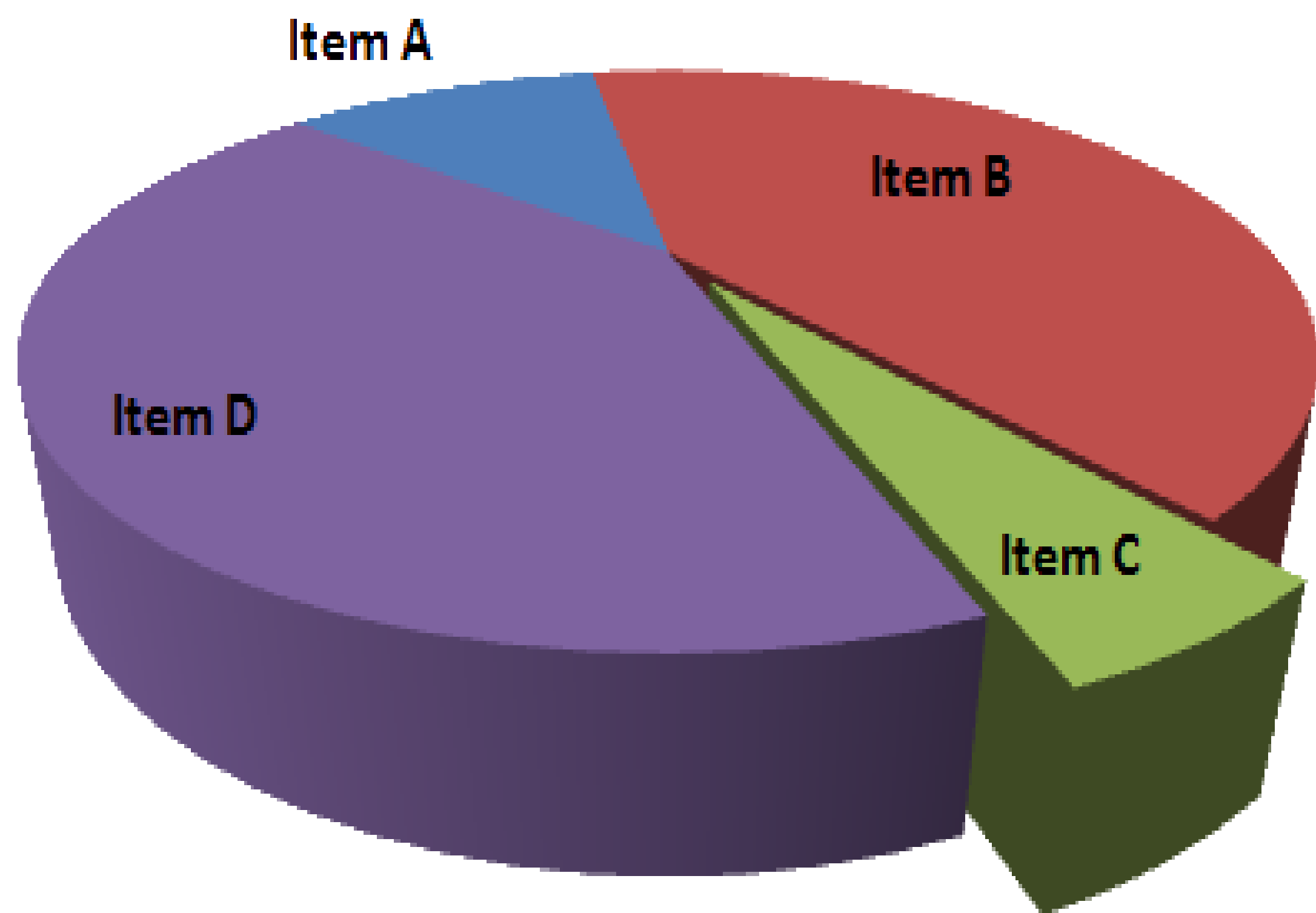


High data-ink ratio



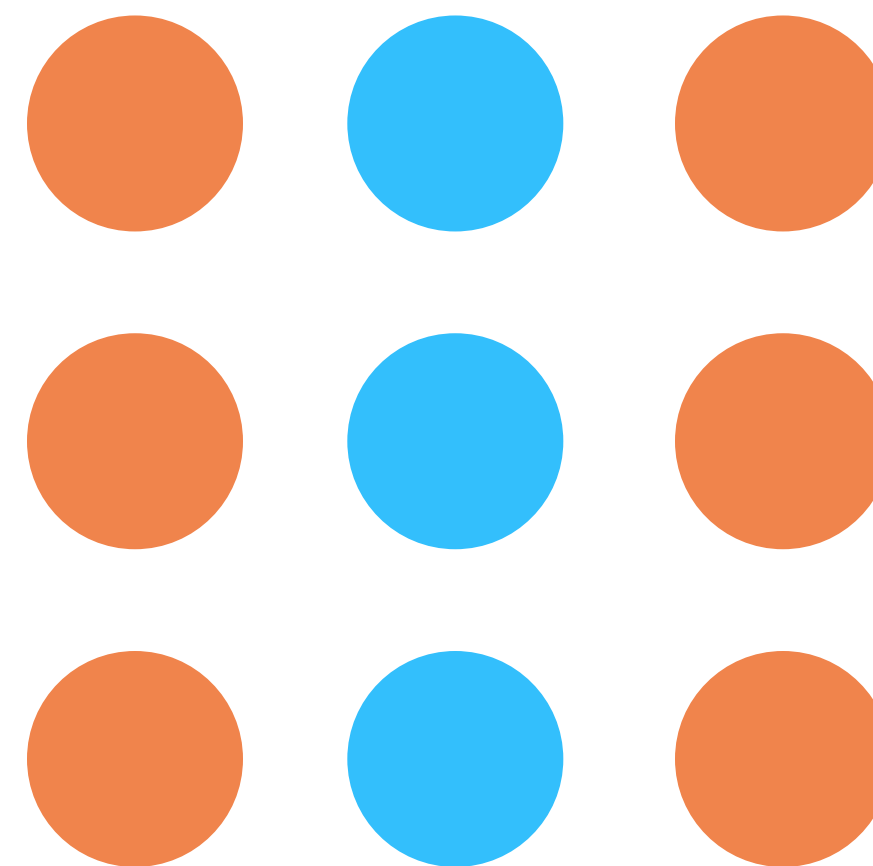
$$\text{Data-ink ratio} = \frac{\text{Data-ink}}{\text{Total ink used to print the graphic}}$$



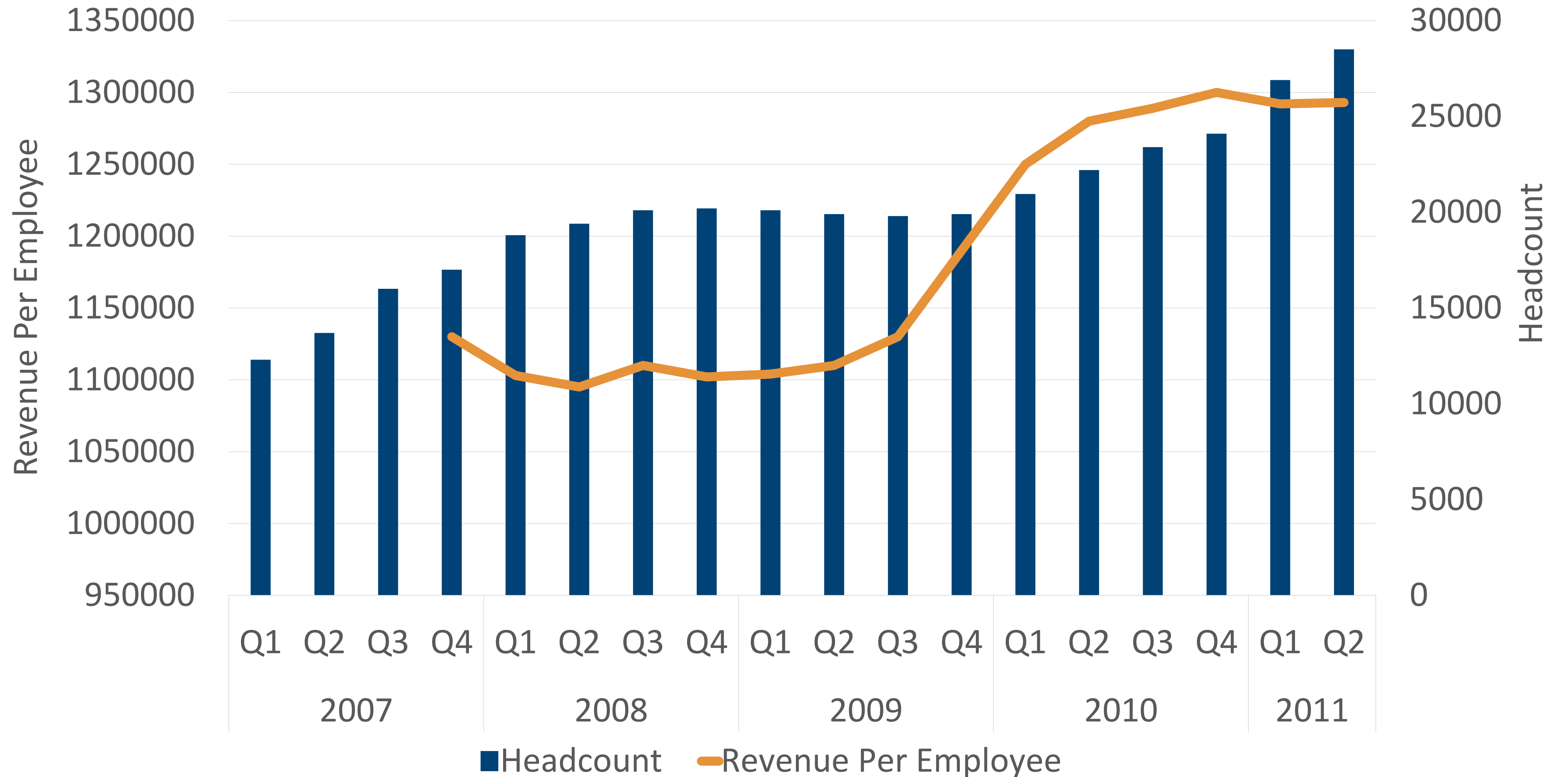


- Item A
- Item B
- Item C
- Item D

The Gestalt Law of Similarity

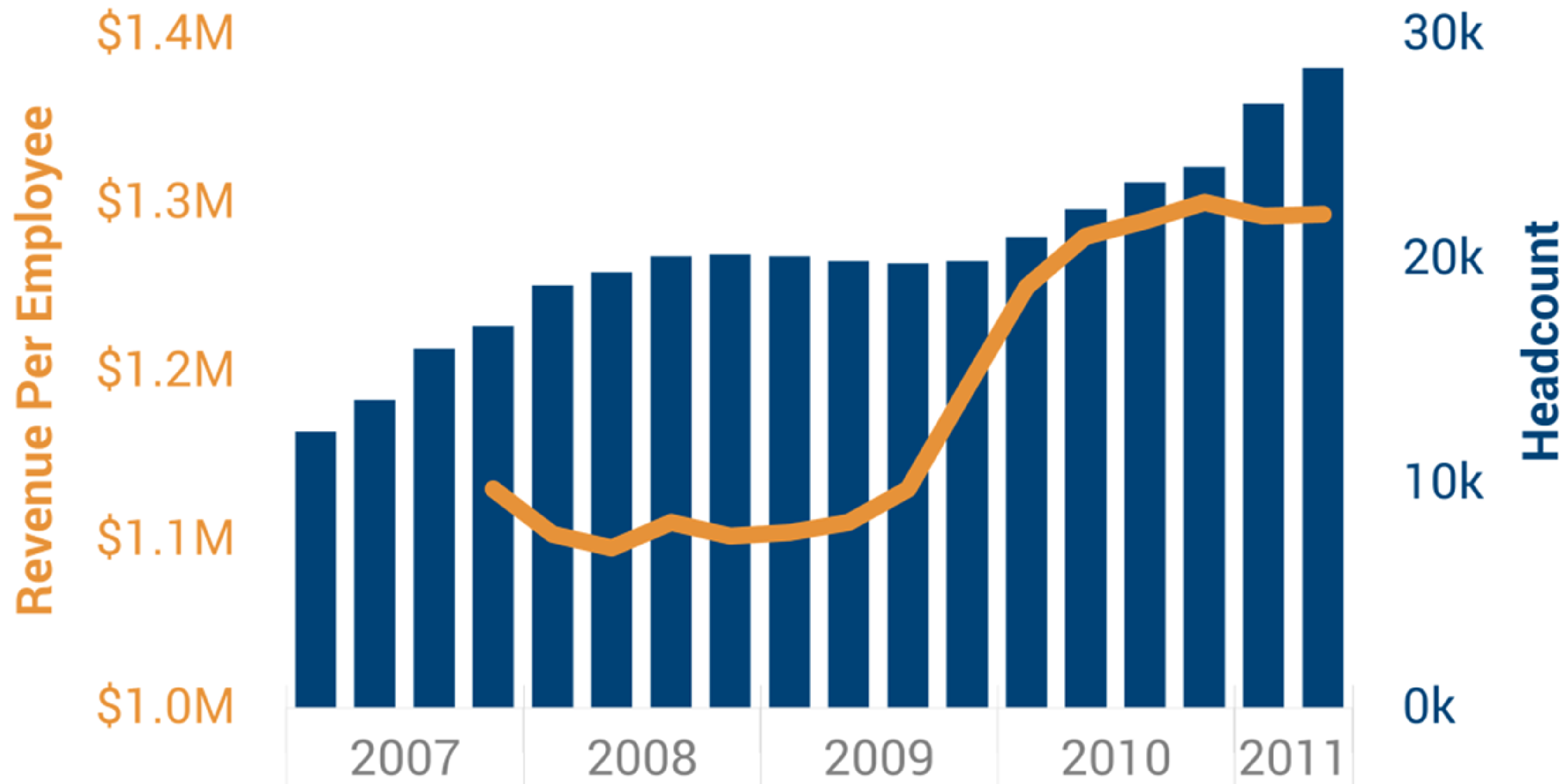


Google LLC Headcount Versus Revenue Per Employee Over Time

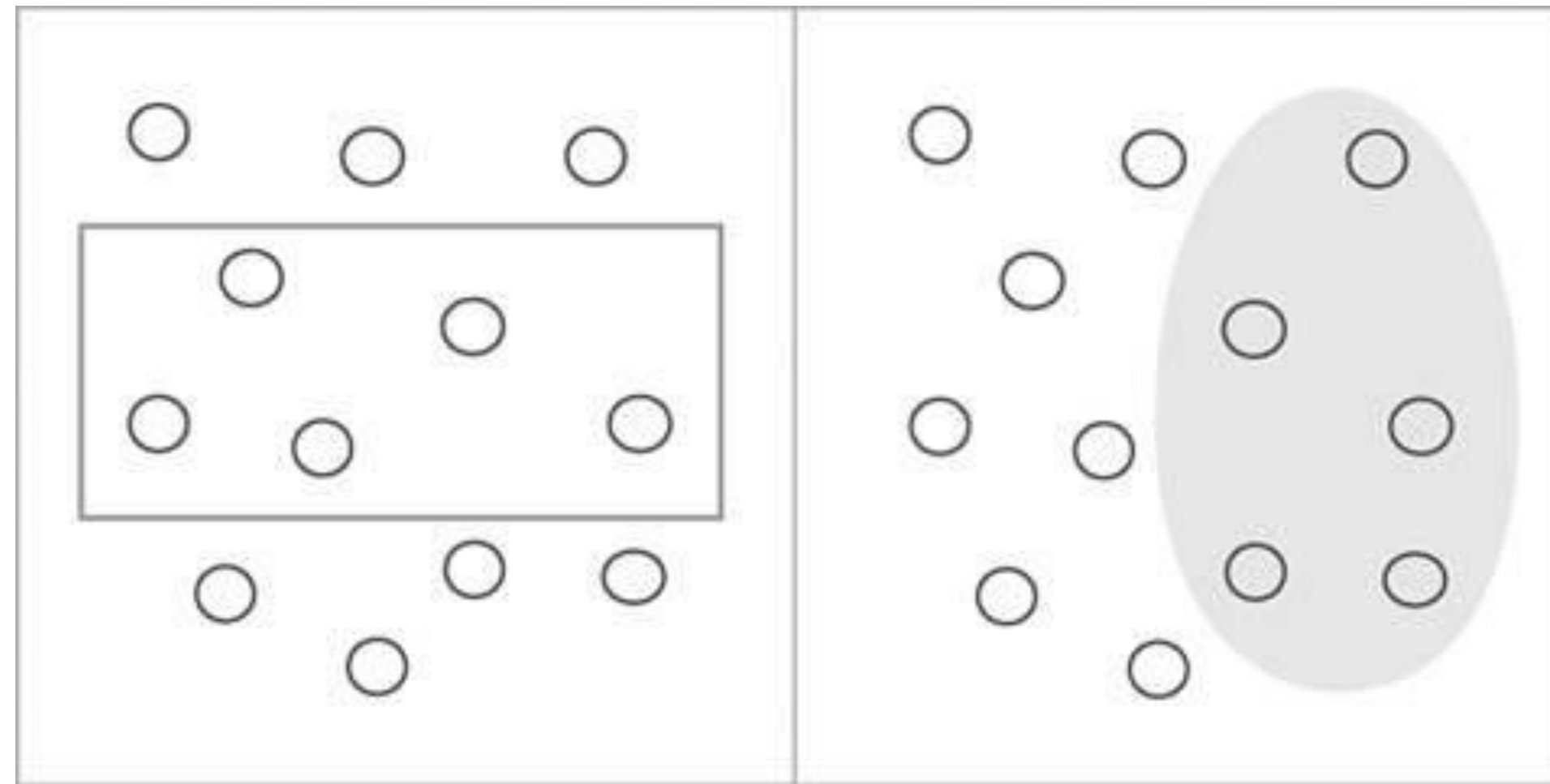


Google's revenue per employee *grew* while headcount tripled

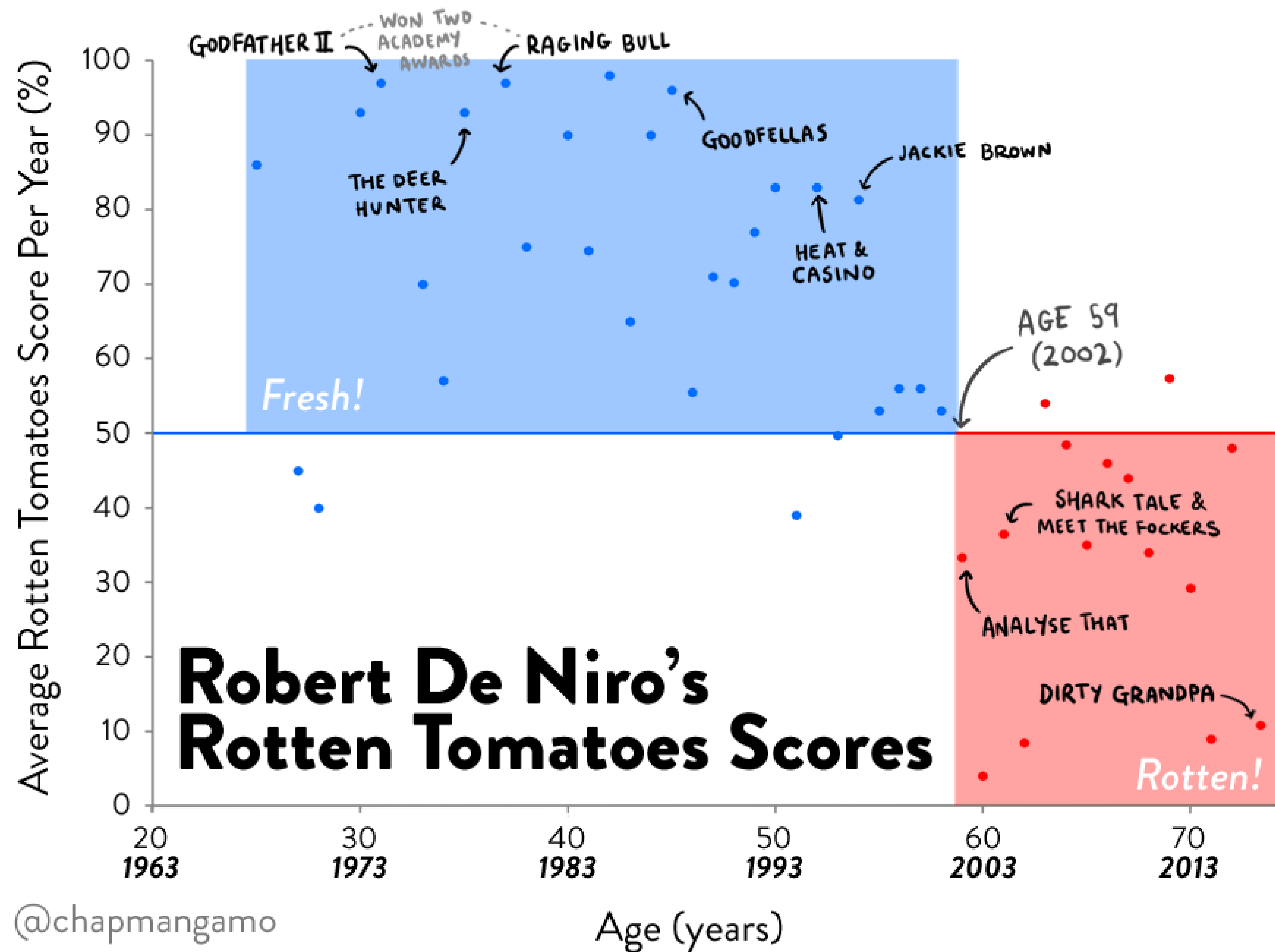
For most companies, *revenue per employee* falls as headcount grows



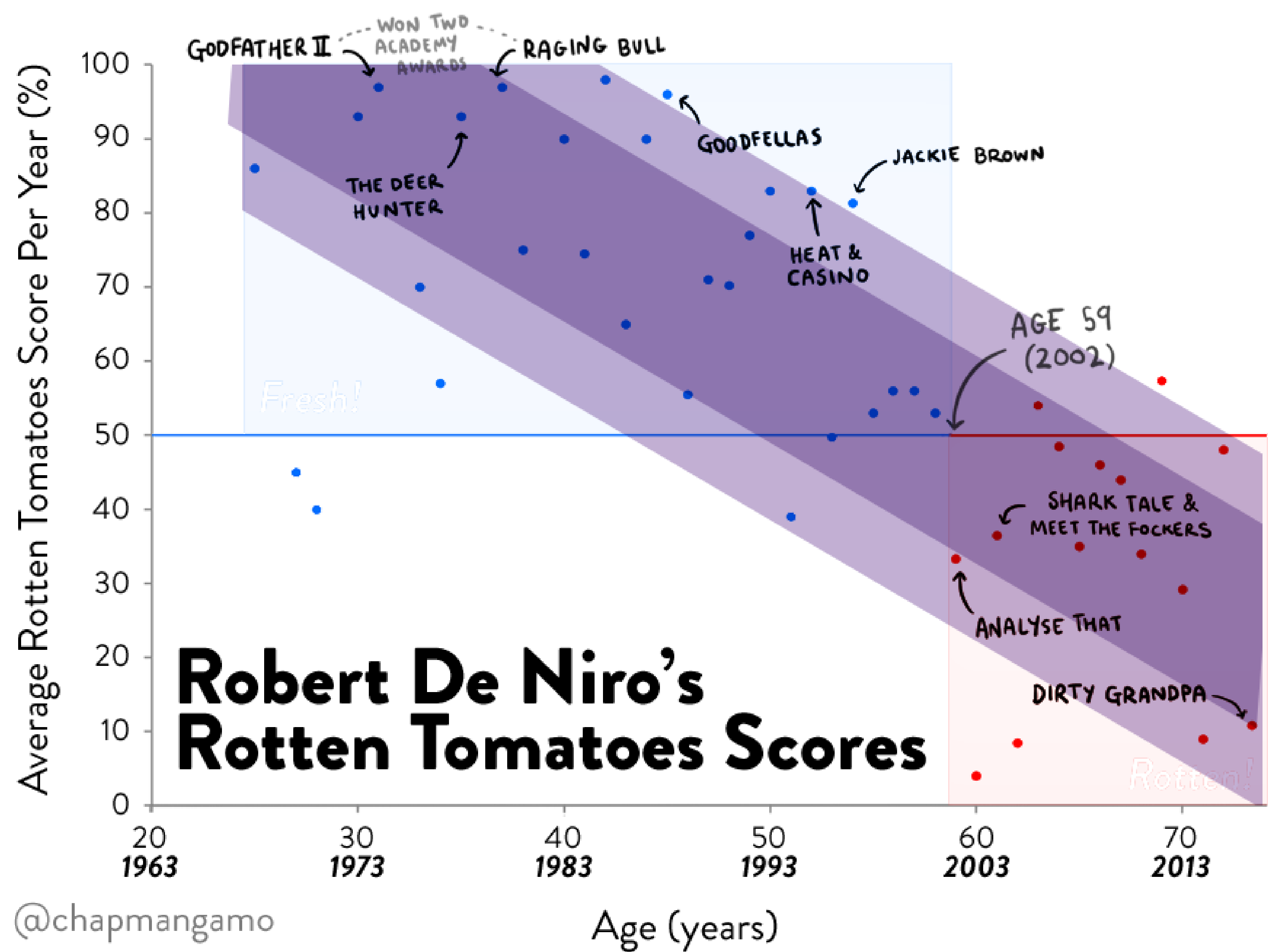
Gestalt Laws: Enclosure



“People say data analysis is boring, but you can calculate the exact moment that Robert De Niro stopped caring.” - @chapmangamo



“People say data analysis is boring, but you can calculate the exact moment that Robert De Niro stopped caring.” - @chapmangamo



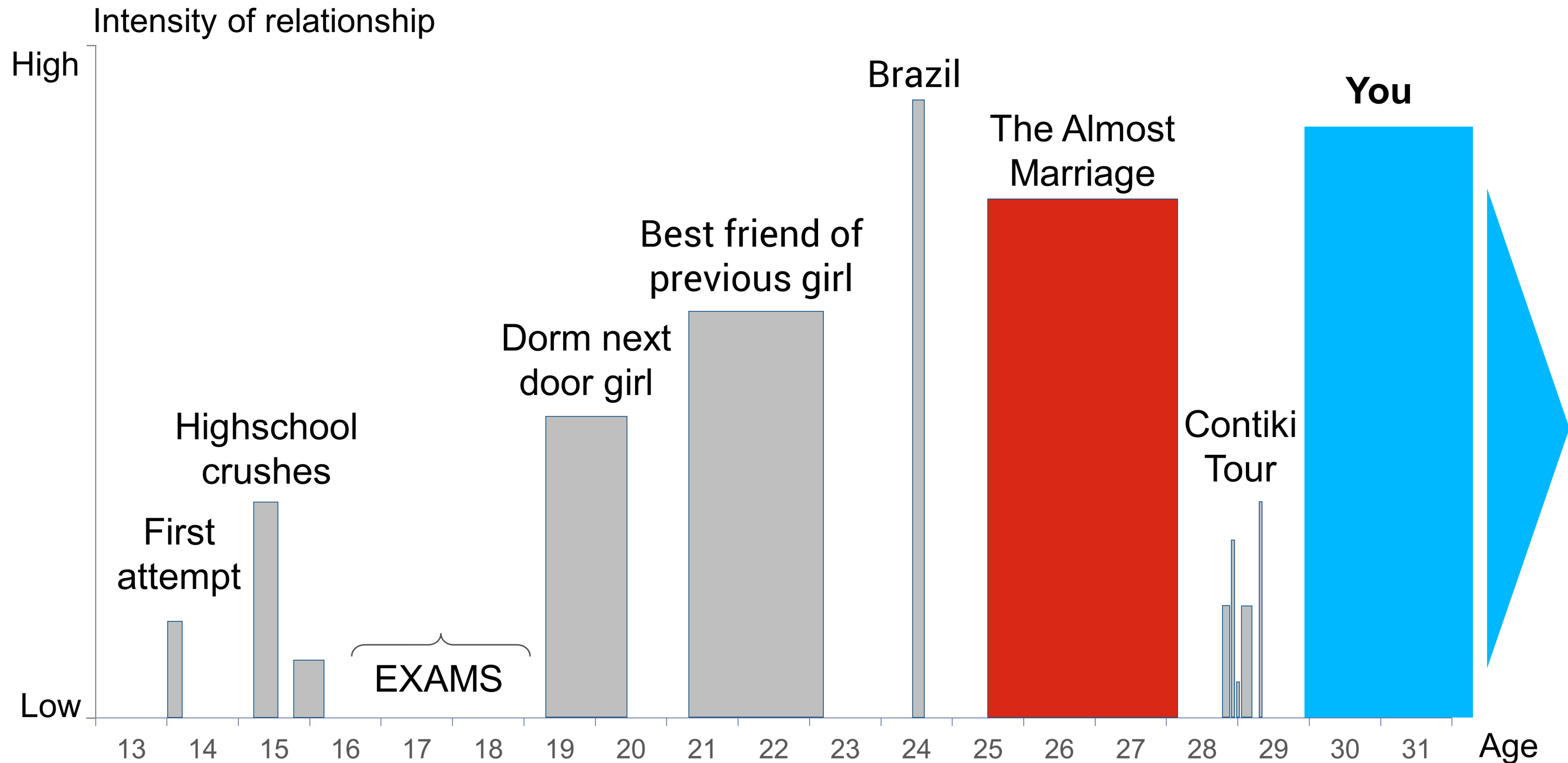
KEYS TO DATA STORYTELLING



NARRATIVE

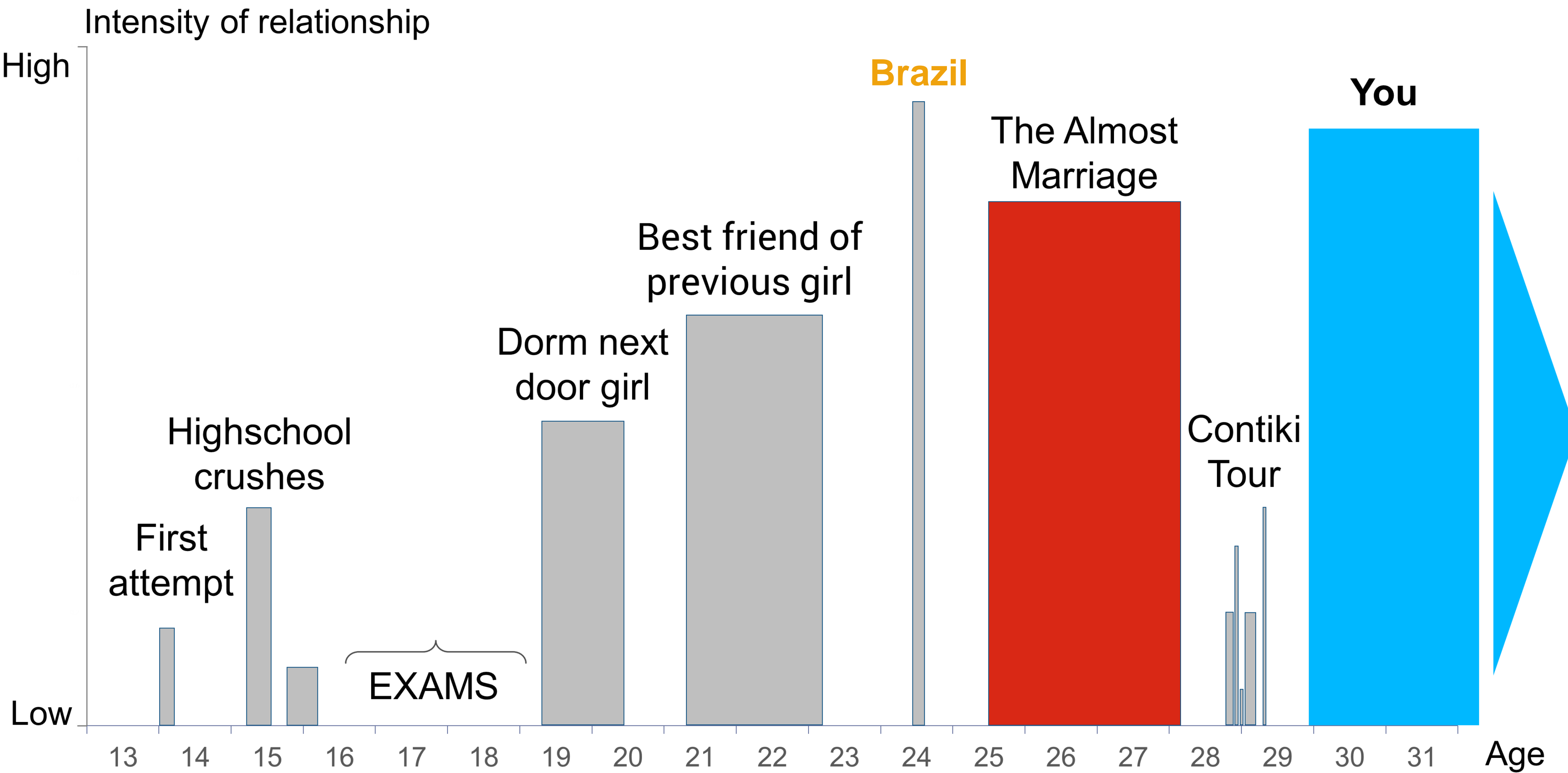
~~Intensity of relationship versus age~~

Replace with
storytelling title

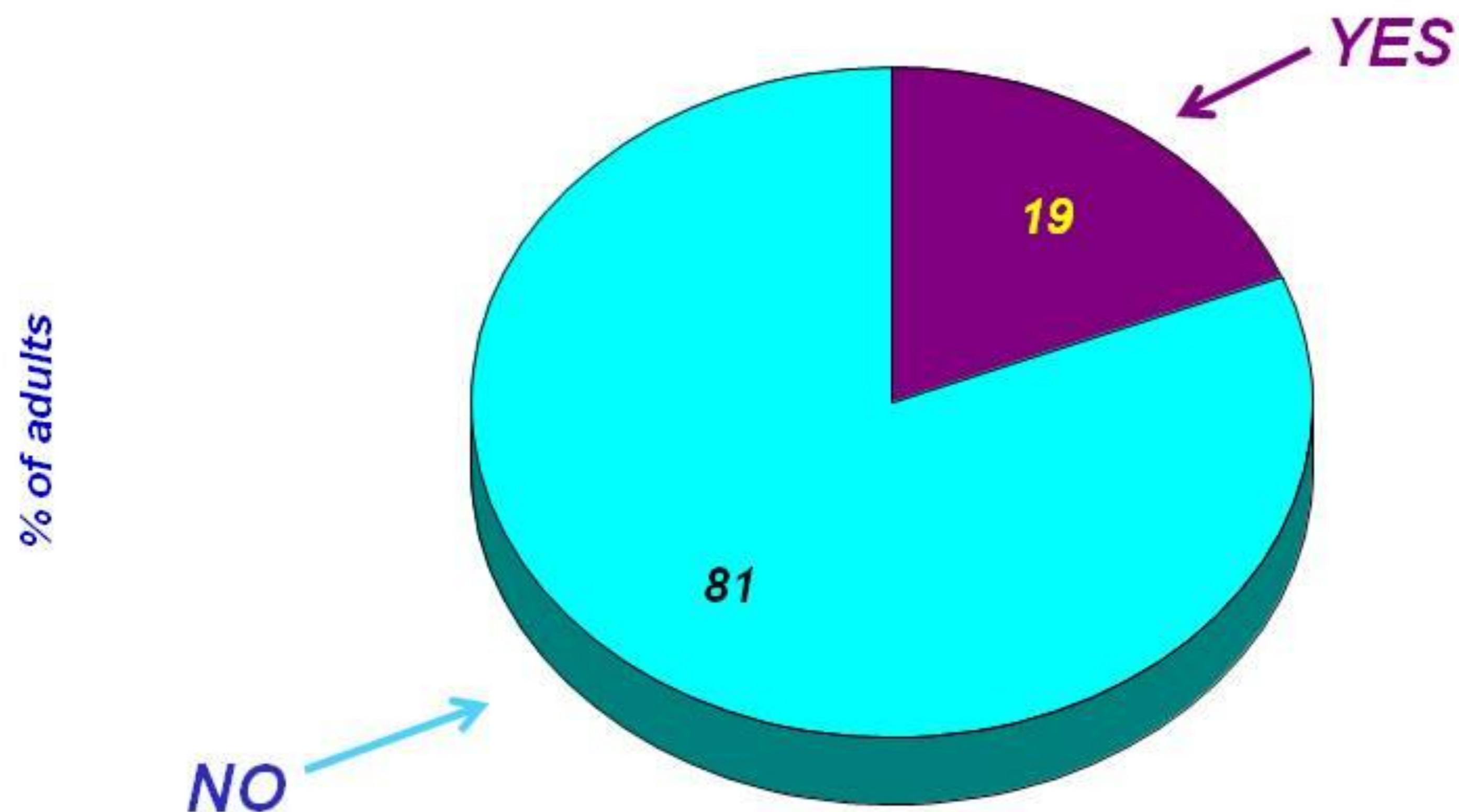


My relationships have increased in intensity and length over time

I also no longer speak to **Isadora**



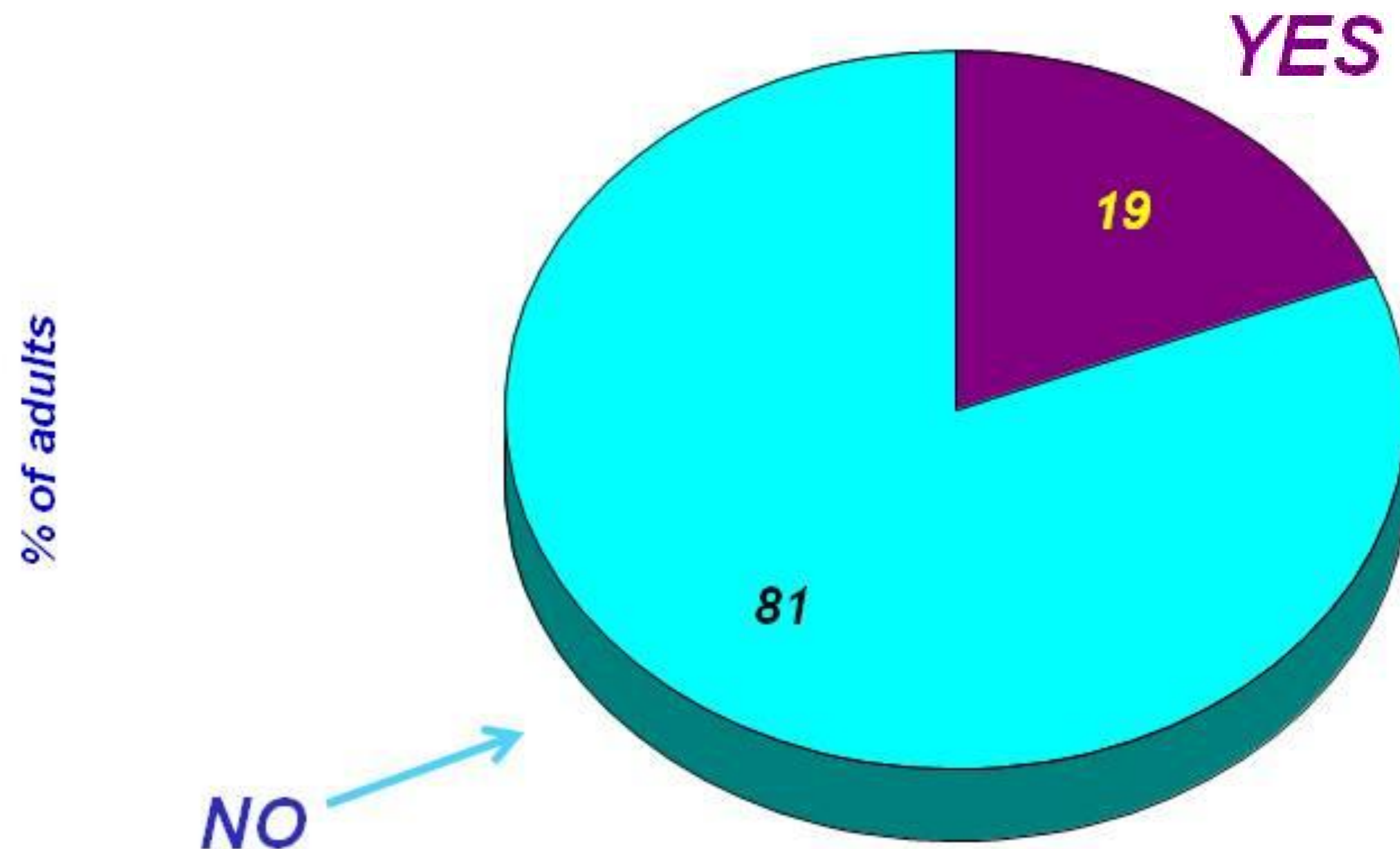
EXPERIENCE OF FALLING IN-LOVE WITH MORE THAN ONE PERSON, **TOTAL PHILIPPINES**, DEC 2016



Note: No answer (0.2%) responses are not shown.

Q175. Naranasan na po ba ninyo na umibig ng higit pa sa isang tao ng magkasabay?

EXPERIENCE OF FALLING IN-LOVE WITH MORE THAN ONE PERSON, **TOTAL PHILIPPINES**, DEC 2016



Note: No answer (0.2%) responses are not shown.

Q175. Naranasan na po ba ninyo na umibig ng higit pa sa isang tao ng magkasabay?

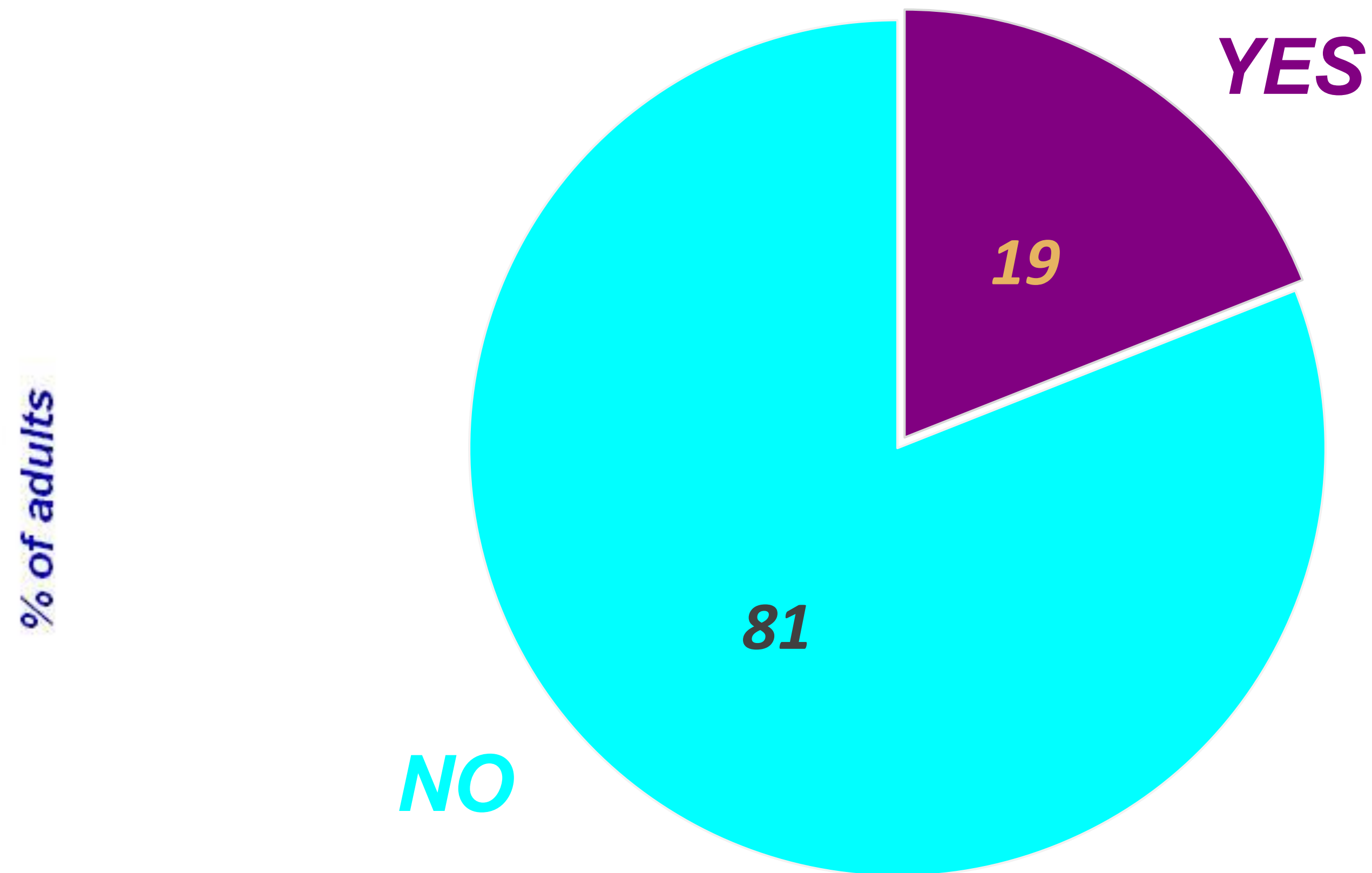
EXPERIENCE OF FALLING IN-LOVE WITH MORE THAN ONE PERSON, **TOTAL PHILIPPINES**, DEC 2016



Note: No answer (0.2%) responses are not shown.

Q175. Naranasan na po ba ninyo na umibig ng higit pa sa isang tao ng magkasabay?

**EXPERIENCE OF FALLING IN-LOVE WITH MORE THAN
ONE PERSON, *TOTAL PHILIPPINES*, DEC 2016**



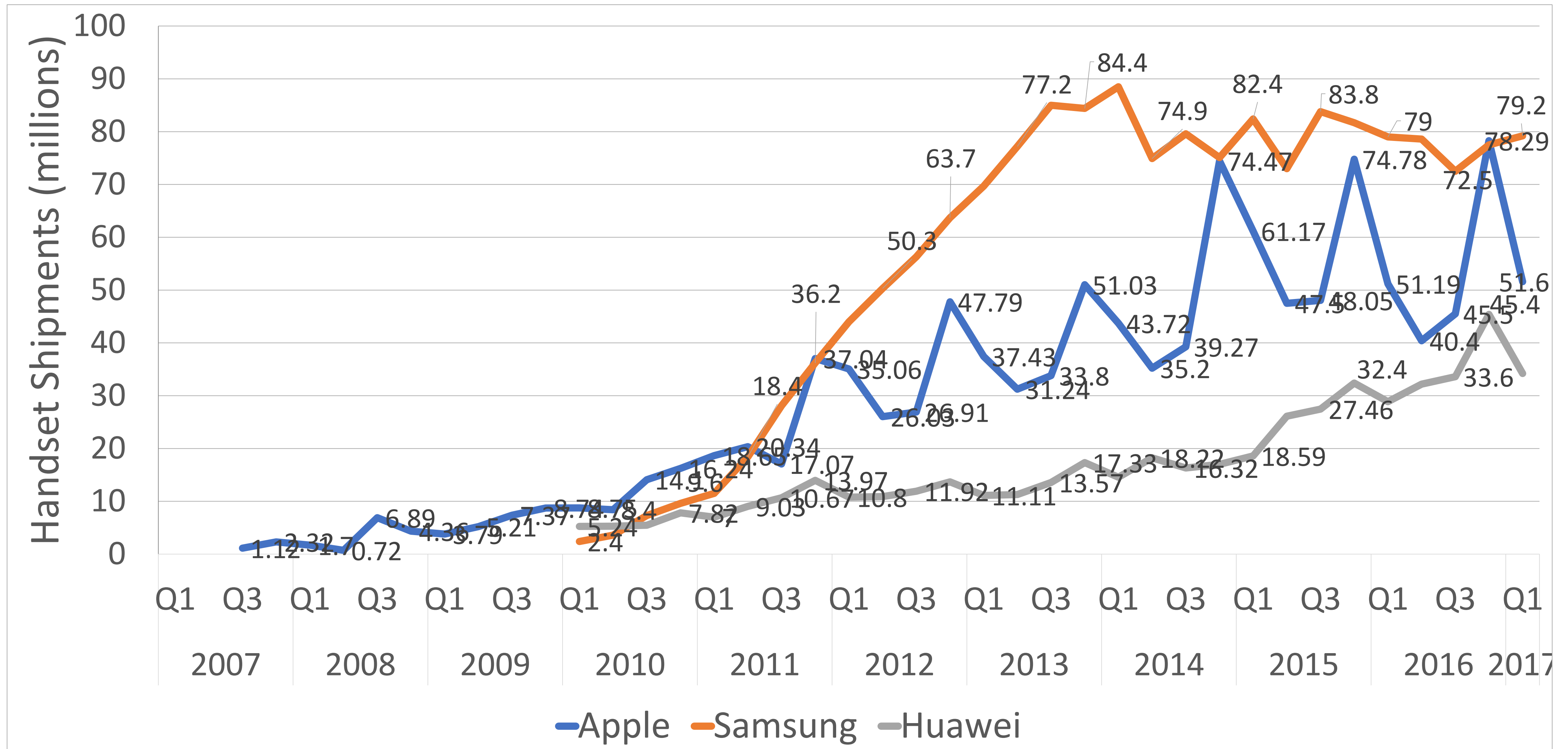
Note: No answer (0.2%) responses are not shown.

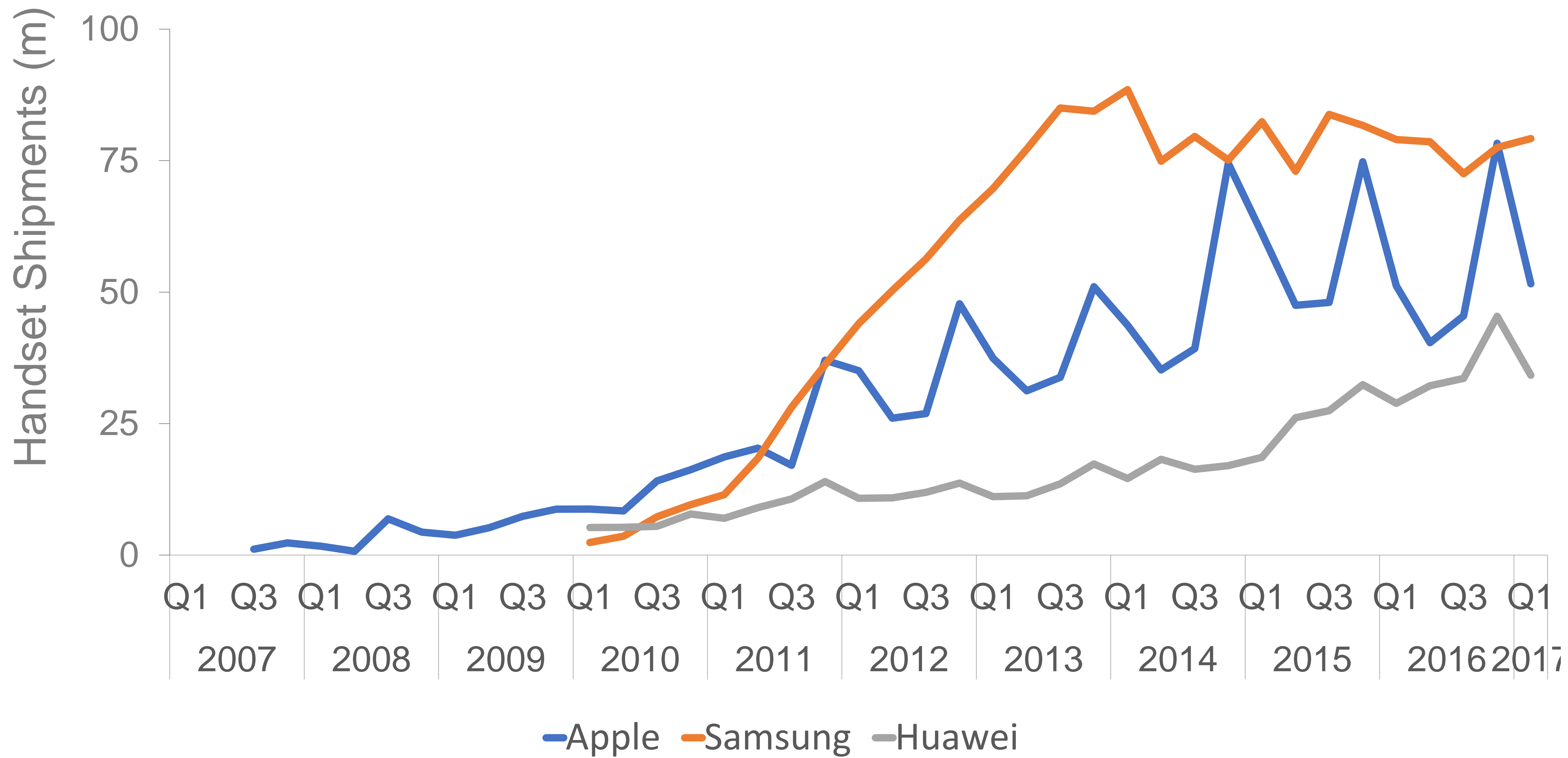
Q175. Naranasan na po ba ninyo na umibig ng higit pa sa isang tao ng magkasabay?

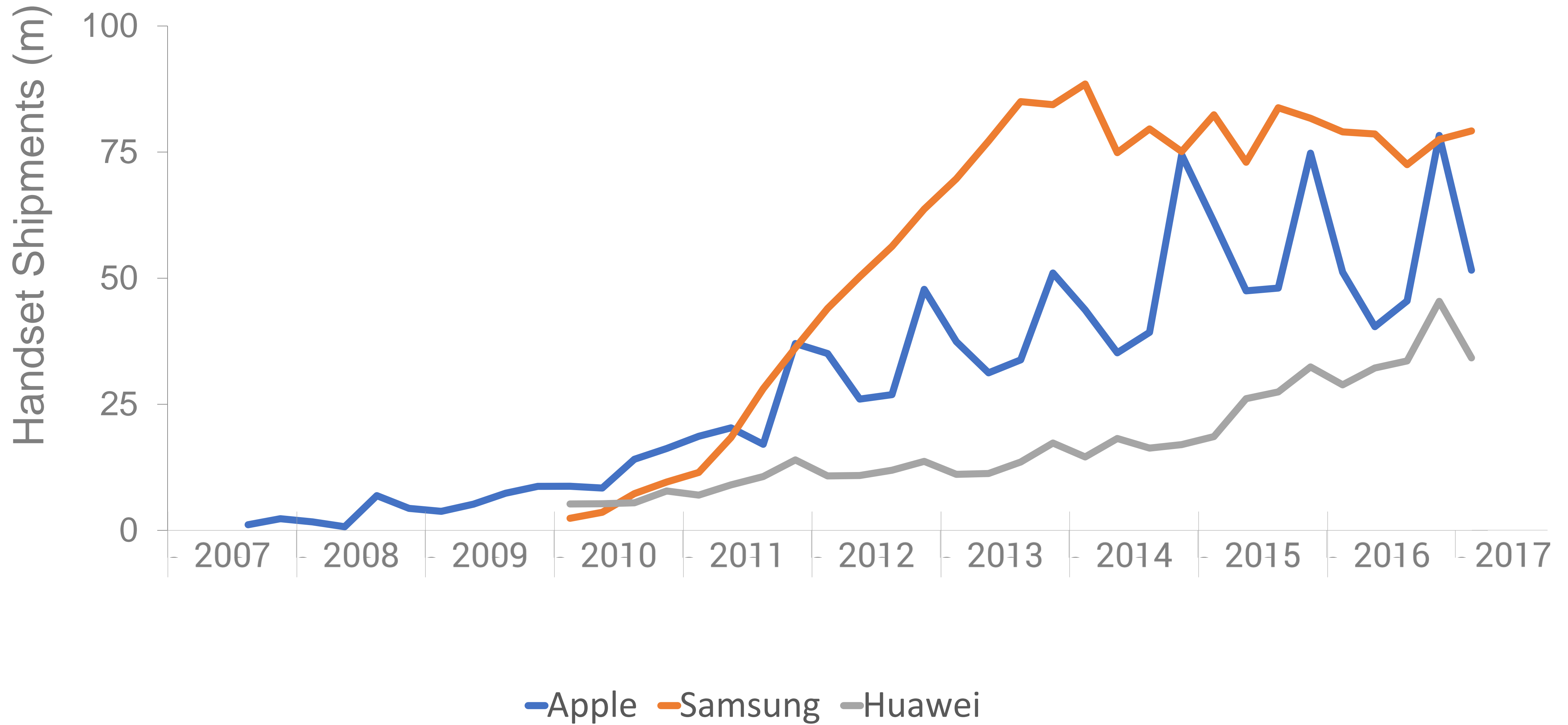
19% of Filipinos have experienced falling in
love with **more than one person**



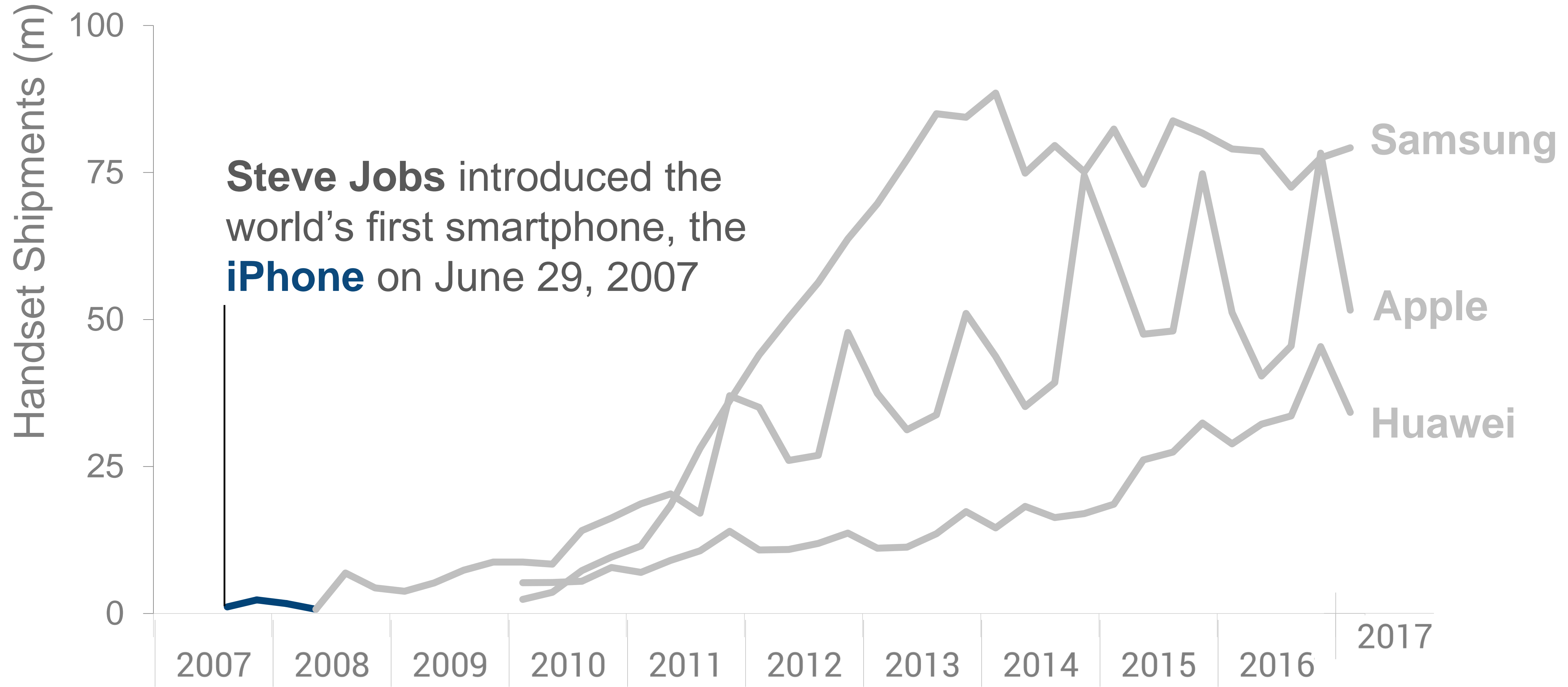
Smartphone handset sales by company over time



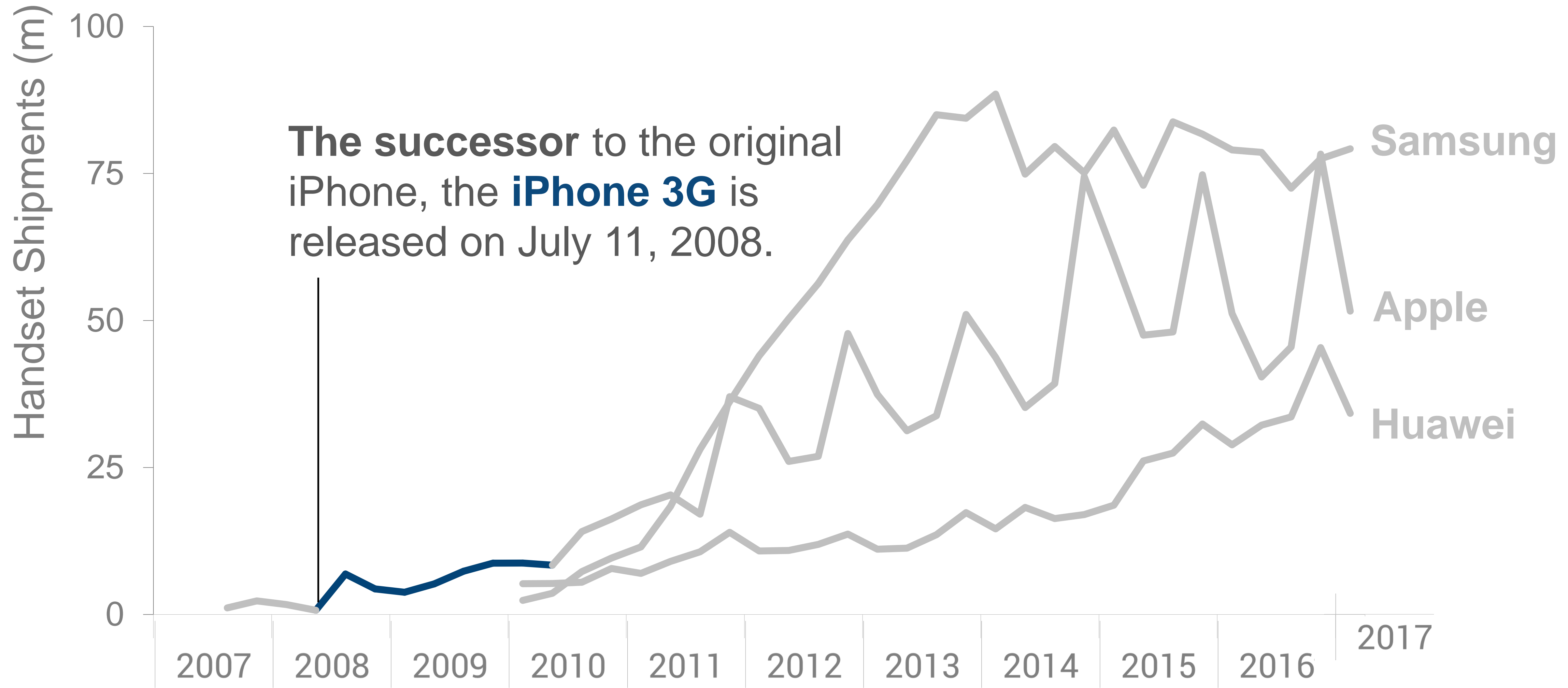




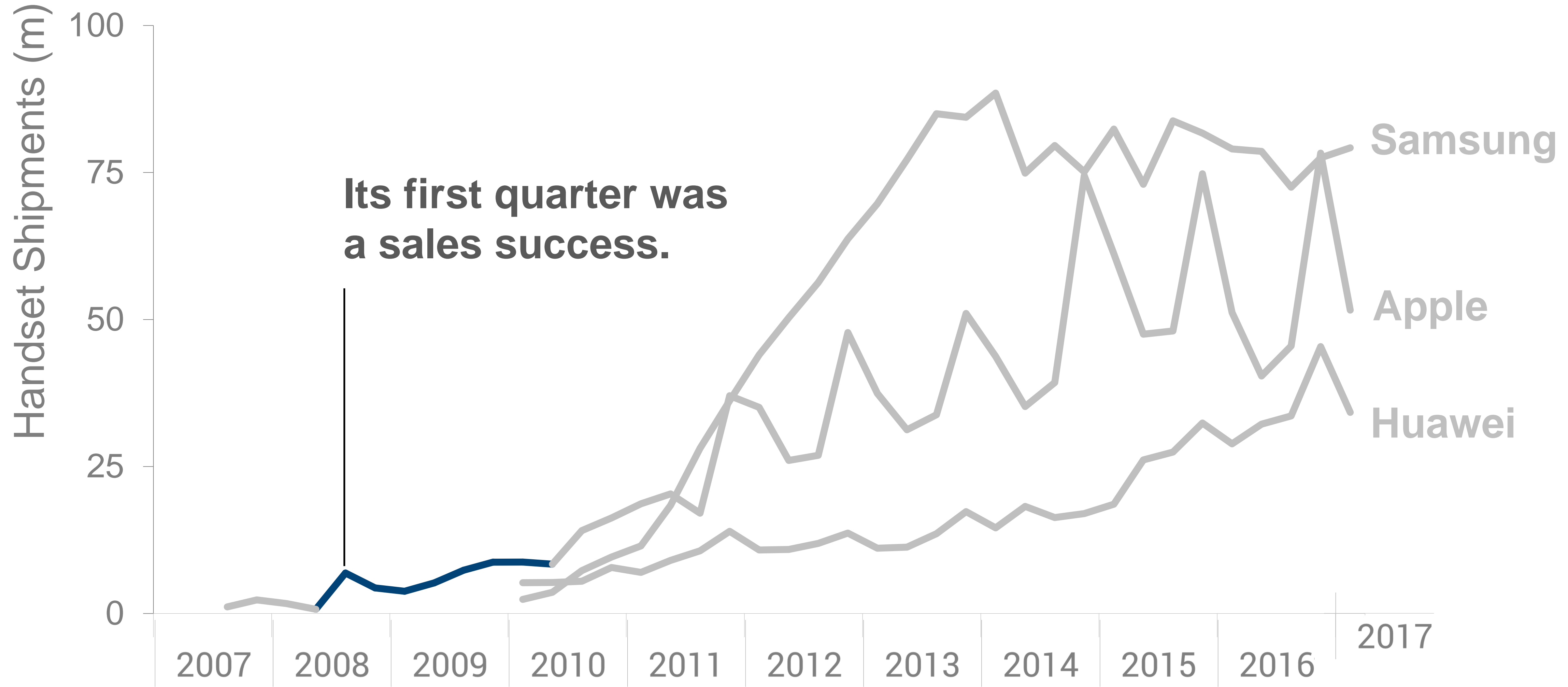
The Smartphone Market is Born



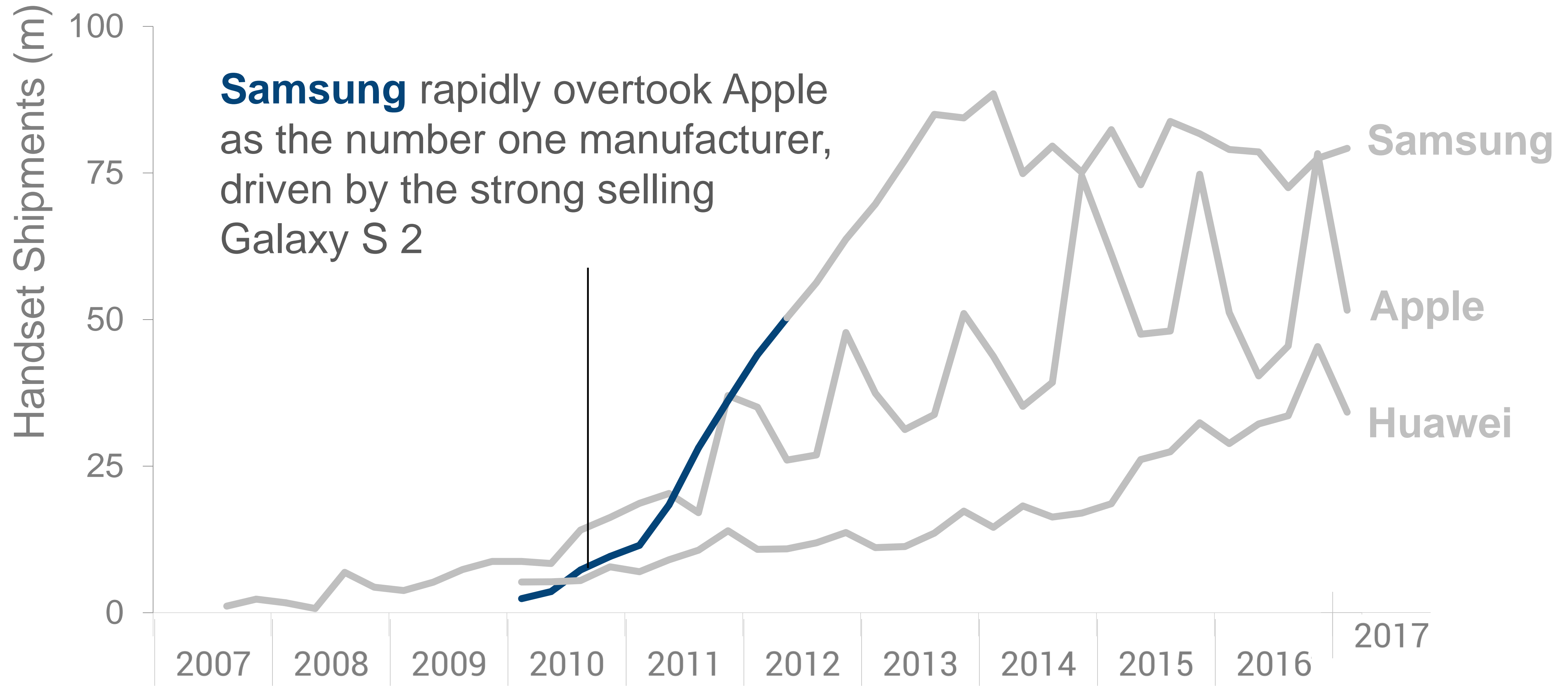
The Smartphone Market is Born



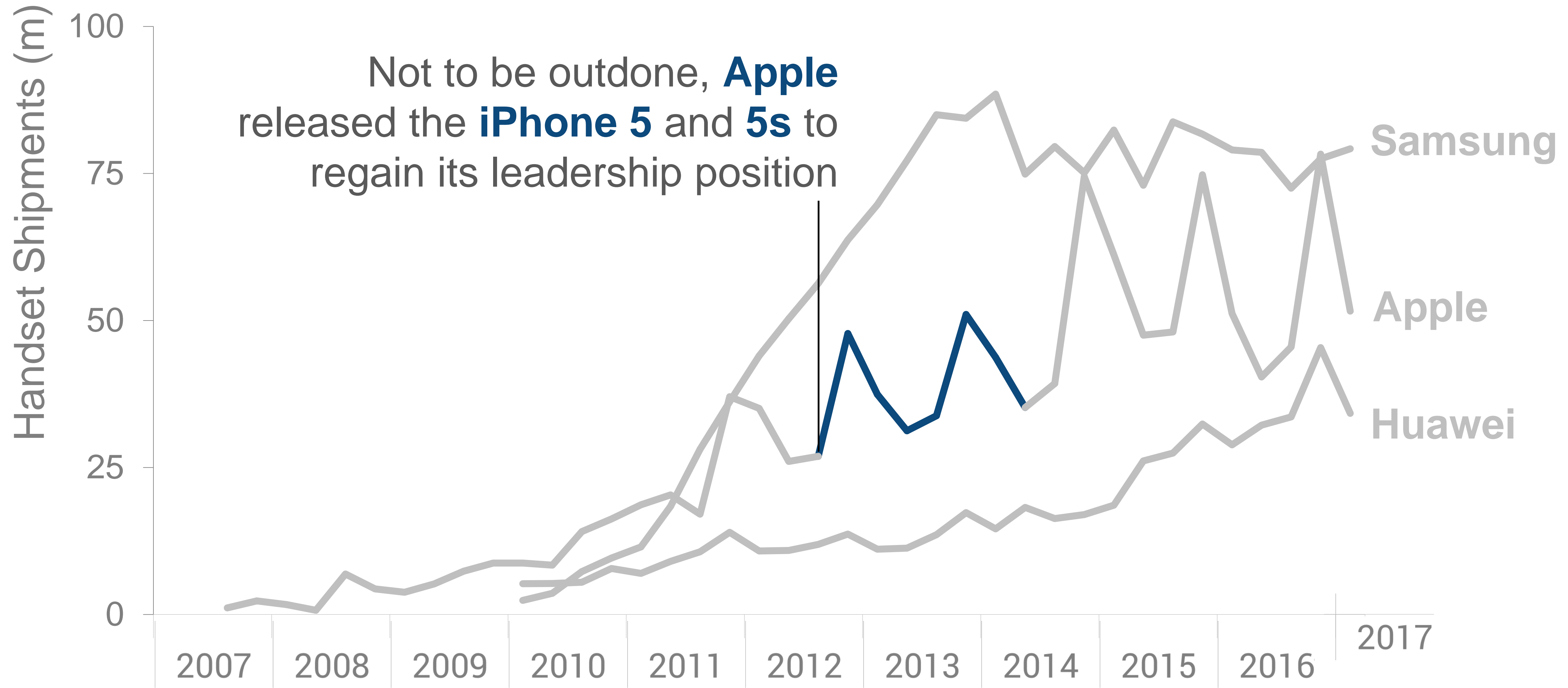
The Smartphone Market is Born



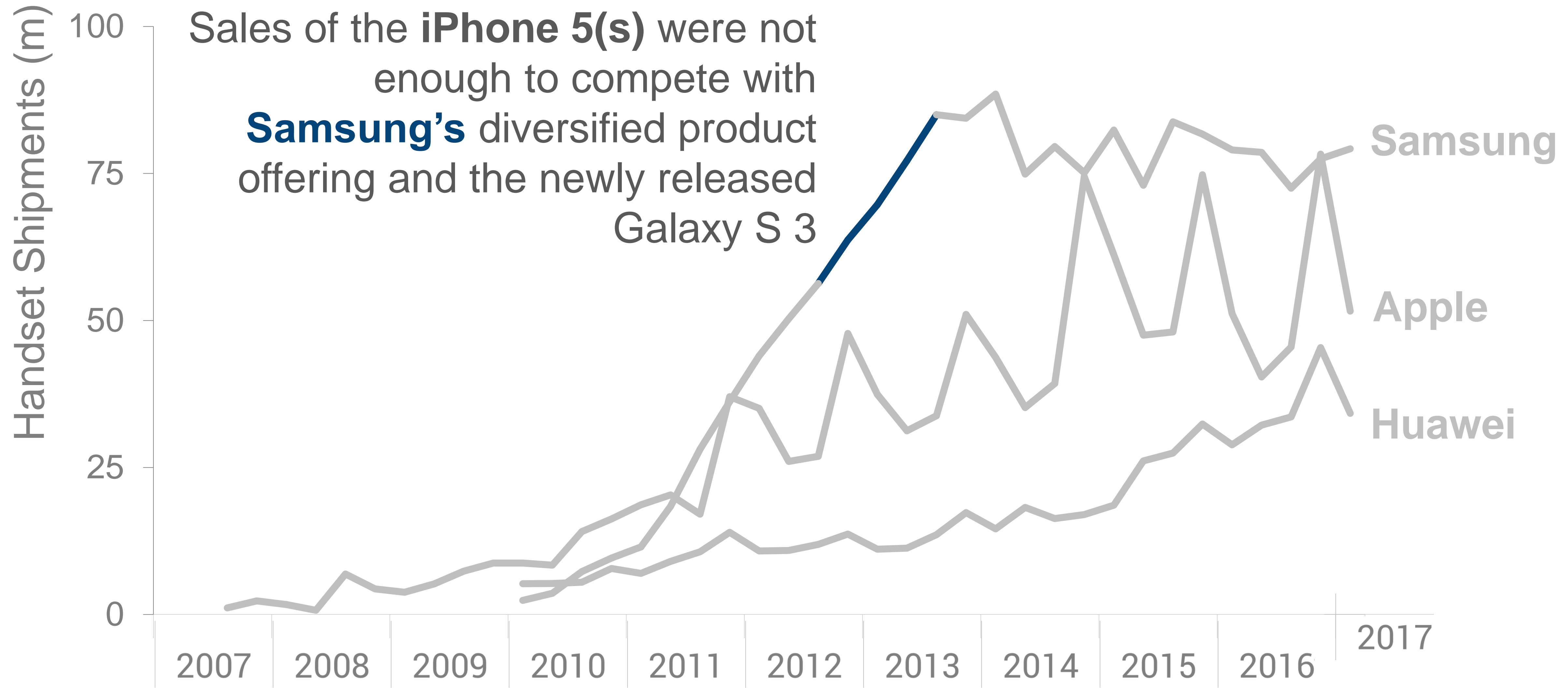
Samsung enters the fray



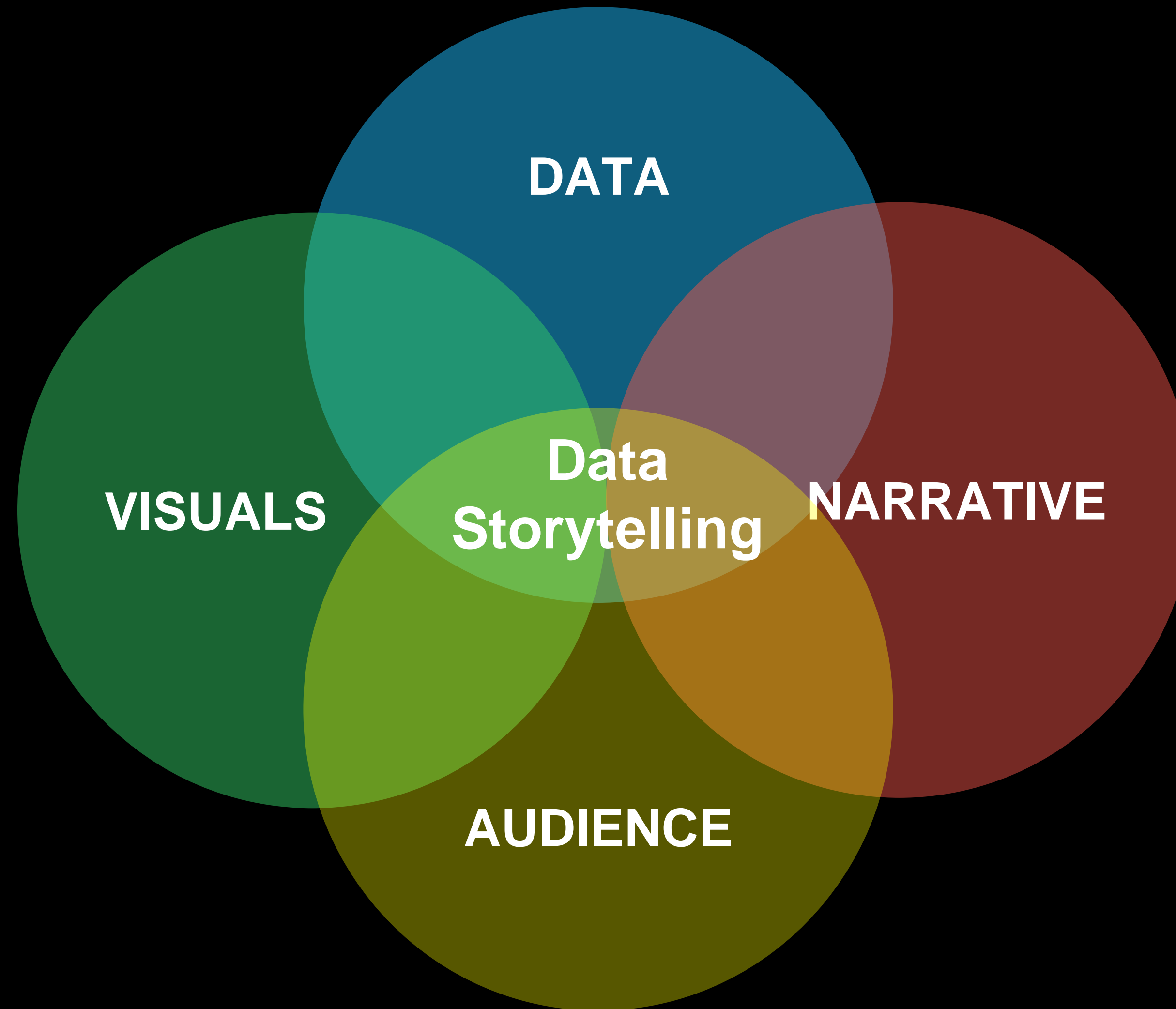
Apple fights back with the five



Samsung extends its lead



KEYS TO DATA STORYTELLING



The Art of Data Storytelling

The Essential Data Science Skill
Everyone Needs

Isaac Reyes, Data Scientist
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