



ONLINE

Growth Strategies

Forecasting Demand: Part 3

Jagmohan Raju, Joseph J. Aresty Professor of Marketing

Demand Decomposition

- Demand decomposition is a well known method
- We shall use two examples
 - The first example we shall consider is an example of estimating demand for car sharing in Philadelphia
 - The next one is demand for toothbrushes in India

Demand Decomposition: Uber in Philadelphia

- Figure out Philadelphia population
- Multiply that by those who need transportation
- Multiply by those who prefer personal transportation over public transit
- Multiply by those who do not own their own car
- Multiply by those who will prefer Uber over other means, such as taxi

Demand Decomposition: Uber in Philadelphia

- In this application, we have two steps where we said... those who prefer A over B
- How do we find this out?
 - Once way to do it is to ask for people's preferences or intentions
- However, people often do not report their intentions accurately
- There are methods available to make intention measurement a better predictor of behavior

Toothbrush Demand in India

- Let us think of a company wanting to better understand demand potential for toothbrushes in India
- A demand decomposition model is a useful method in this particular example as well

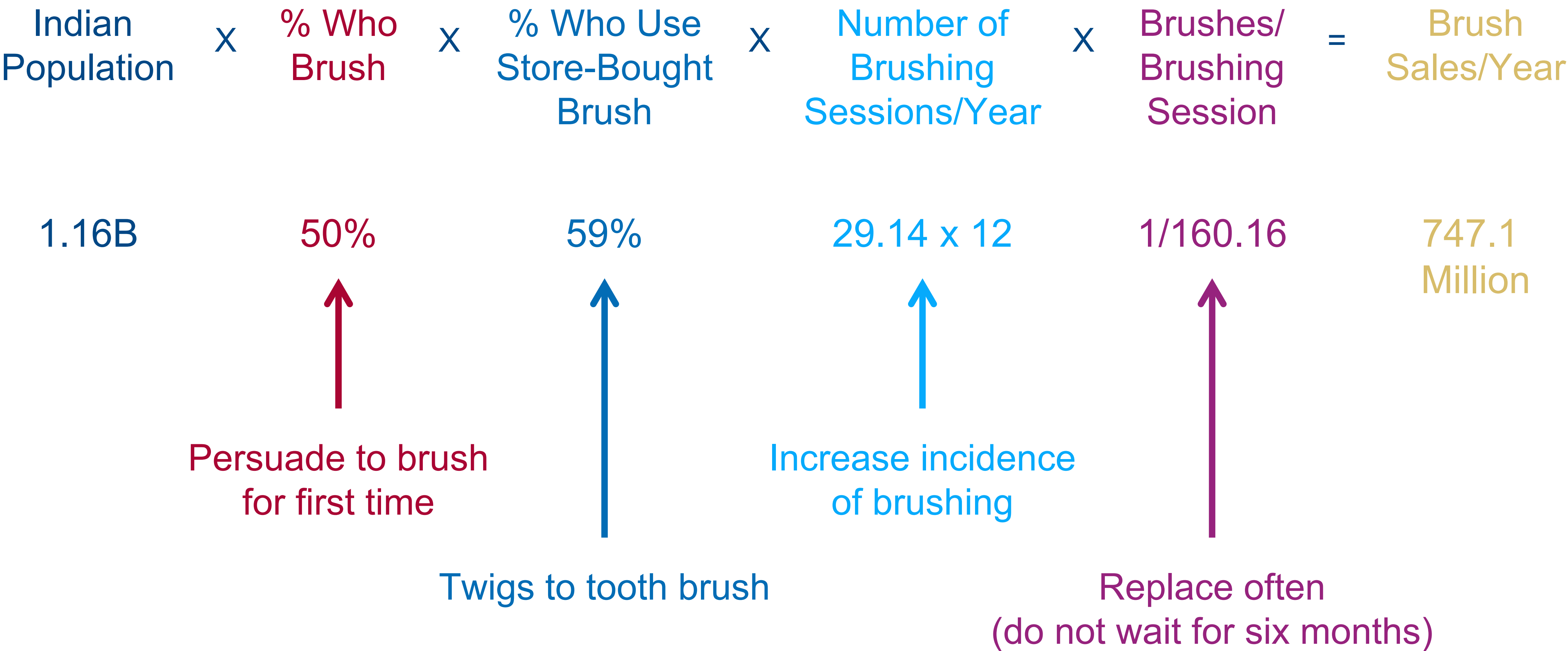
Toothbrush Demand in India

- We start at the highest level— what is the population of India?
 - This number is readily available
- Next, we look at how many people brush their teeth with some form of device or another
 - Some people use Neem twigs, and others use a regular toothbrush
 - These data are usually available from studies published by the government and other organizations such as the ADA

Toothbrush Demand in India

- The next step will be to look at frequency of brushing
 - This varies in every country, but varies probably more in India
 - This data will come from surveys
- Finally, after how many sessions of brushing is a brush replaced on average?
 - There is variance here as well across the population, and this can be obtained by surveys
- The company in question did all this and came up with a nice demand model

Market Expansion Alternatives



Toothbrush Demand in India

- Based on this model, we can also come up with ideas on how to increase demand for toothbrushes in India
- We could persuade more people to brush
- We could urge people who use twigs to shift to a toothbrush
 - Maybe an entrepreneur could come up with an inexpensive toothbrush
- Or one could urge users to replace their brushes more often
- So demand decomposition allows us to also identify levers that can be used to increase demand for our product

Summary

- Forecasting demand is probably one of the most critical aspects of launching a new venture
- We studied this in three different ways
 - Using the ACCORD model developed by Professor Everett Rogers to examine whether or not our idea has a good chance of becoming successful
 - We discussed qualitative methods such as using expert opinions, benchmarking, and combining forecasts
 - Finally, we studied demand decomposition, often referred to as the chain rule



Wharton
UNIVERSITY *of* PENNSYLVANIA

ONLINE