Lecture 6: Market Sizing

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AITI Entrepreneurship Component
Estimate Market Size

• How many cocoa beans Hershey buy for its US chocolate bar business?
• How many pizzas were eaten in Accra last week?
• How many customers will use the SMS billing system you developed?
Solving the problem

• There is no accurate answer to this type of questions, but...
• There is a right way to approach the problems
• Structured approach:
  – Top down
  – Bottom up
Favorite Example: Chocolate

• Top-down approach: Estimate the total market for Hershey’s chocolate bars first
• Step 1: Make an educated guess how many chocolate bars each person eats in a year:
  0 to 4/5/….. every week
  Assume 1.5 on average per week, 6 per month, 72 per year.
Favorite Example: Chocolate

• Step 2: Estimate how many Hershey’s chocolate bars are sold to each person annually?

A big chocolate company: assume 30% market size

\[ 72 \times 30\% \approx 22 \]

• If you want to refine it: old and young portion of the population do not eat that many chocolate bars: assume 25% of the US population belong to that group
Favorite Example: Chocolate

- Step 3: US population: 300 million people
  75% of them eat 22 Hershey’s chocolate bars on average annually:
  About 5 billion Hershey’s chocolate bars sold annually

- Final step: Assume 3 beans for each chocolate bar: 15 billion beans bought by Hershey for its chocolate bars per year
Summary

• Get the structure right first
• You could always re-estimate a more accurate answer: eg. market size of Hershey in the chocolate business
• You could put more constraints: number of chocolate sold vary with seasons, etc.
Back to fufu: How did you approach the problem?
Discussion: 2 to 3 people group
10 minutes
There is no need to follow the example I gave.
How much fufu

- Kg of total fufu per year = Number of fufu × 2 kg/fufu

Number of fufu per year = Number of fufu per day × 365

Number of fufu per day = Number of students × fufu per student per day (your estimates)
Application to your mobile apps

• Top down: Estimate the overall market and then filter with the proportions you intend to capture.
• Bottom up: Identify the market segment, and then estimate the size and growth individually
• The analysis could get more complex depending how you want to segment your customers
SMS school bills to parents

• Send school bills and grades to parents over SMS
• Parents can check balance
• Parents can pay bill via SMS
SMS school bills to parents

• Top down approach
  - Size of Ghana population: 25 million
  - 15% (10/64) school age: 25 million × 15% = 3.8 million students
  - 3 kids per family: 3 kids and 2 parents => 2.5 million parents
  - 80% own mobile phones: 2.5 million × 0.8 = 2 million parents use mobile phones
  - 3% use the SMS bill system: 0.06 million!
  - Estimate the growth rate of the market and the share your system could capture