

Group H

The Pizza Survey Team

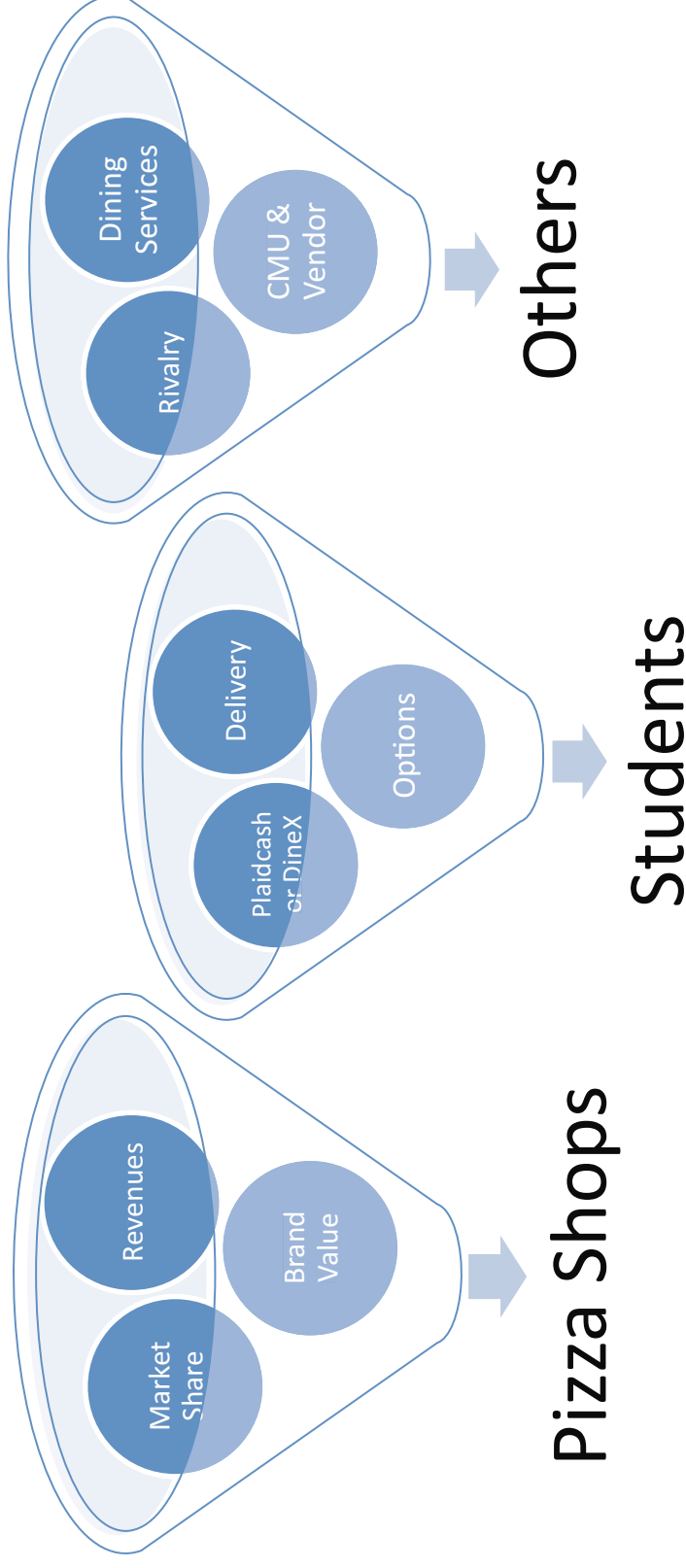


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Everybody loves pizza!

- What characteristics of pizzas and pizza shops appeal to the undergraduate students enrolled in the Pittsburgh campus of Carnegie Mellon University?



Questionnaire

Questions we propose to study include:

- Determine how often people eat pizza and order for delivery, and where their favorite pizza place is
- Compare the quality of pizza in chains to that of smaller, local places and what gives rise to this difference in quality
- Examine each aspect of a pizza shop (pizza quality, non-pizza products, cost, business hours, delivery) and the influence of each on where one chooses to order from

Question:

What time of day do you typically order pizza? Mark all that apply.

- ☐ 4:00 a.m. – 10:00 a.m.
- ☐ 10:00 a.m. – 2:00 p.m.
- ☐ 2:00 p.m. – 6:00 p.m.
- ☐ 6:00 p.m. – 11:00 p.m.
- ☐ 11:00 p.m. – 4:00 a.m.

Question:

How many times per week do you eat food from a campus dining restaurant (Entropy, trucks, hot dog stand, all other dining locations included)?

- ☐ 0
- ☐ 1-2
- ☐ 3-5
- ☐ 6-10
- ☐ 10-15
- ☐ 15+

Sampling

- Used a custom Ruby script to download the Andrew IDs for all CMU Pittsburgh undergrads
- Used population list to sample 800 undergrads
- Each person's e-mail address was encoded using the SHA-1 hash algorithm
- E-mails were sent using another custom Ruby script

Survey

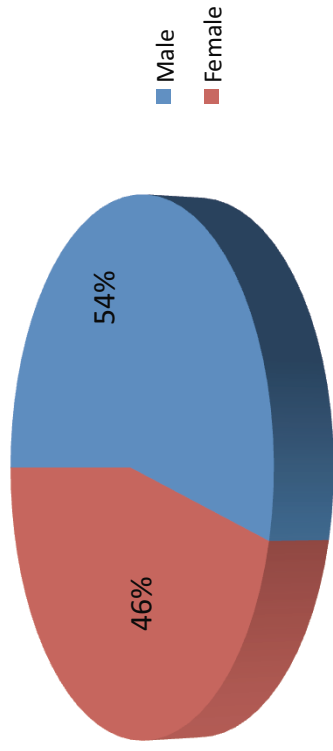
- Conducted using Google Docs
- The unique ID for each person allows for re-contact as well as filtering double responders
- All communication done in software so the researchers never know what SHA-1 corresponds to which e-mail address in results

Gotchas

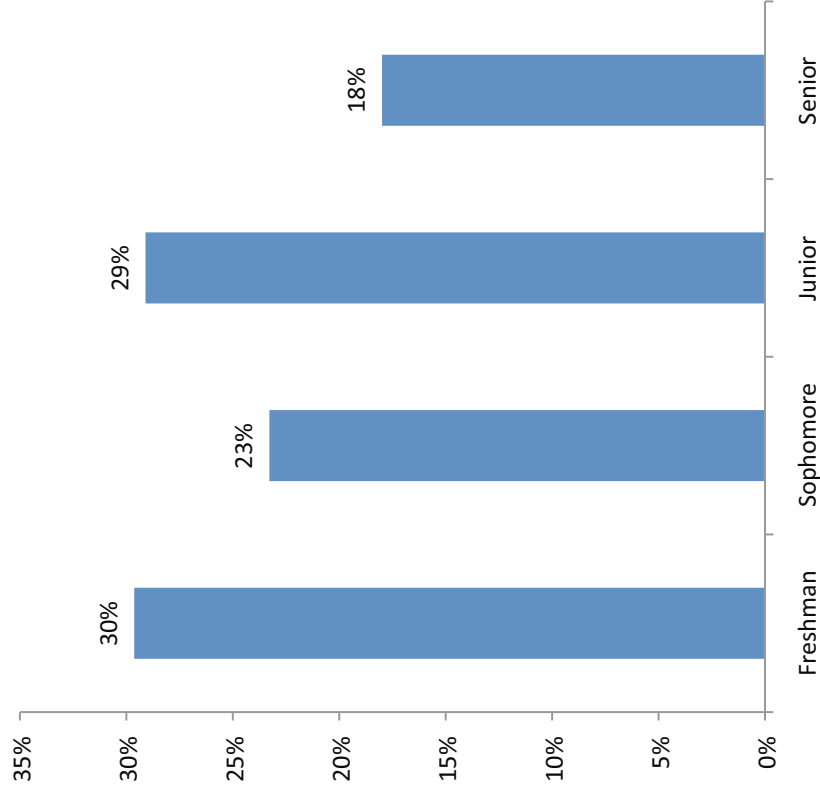
- CMU's directory service allows my script to accidentally import alumni
- Google Docs encodes number ranges (eg 10-15) as dates (10/15/2010)

Demographics

Gender

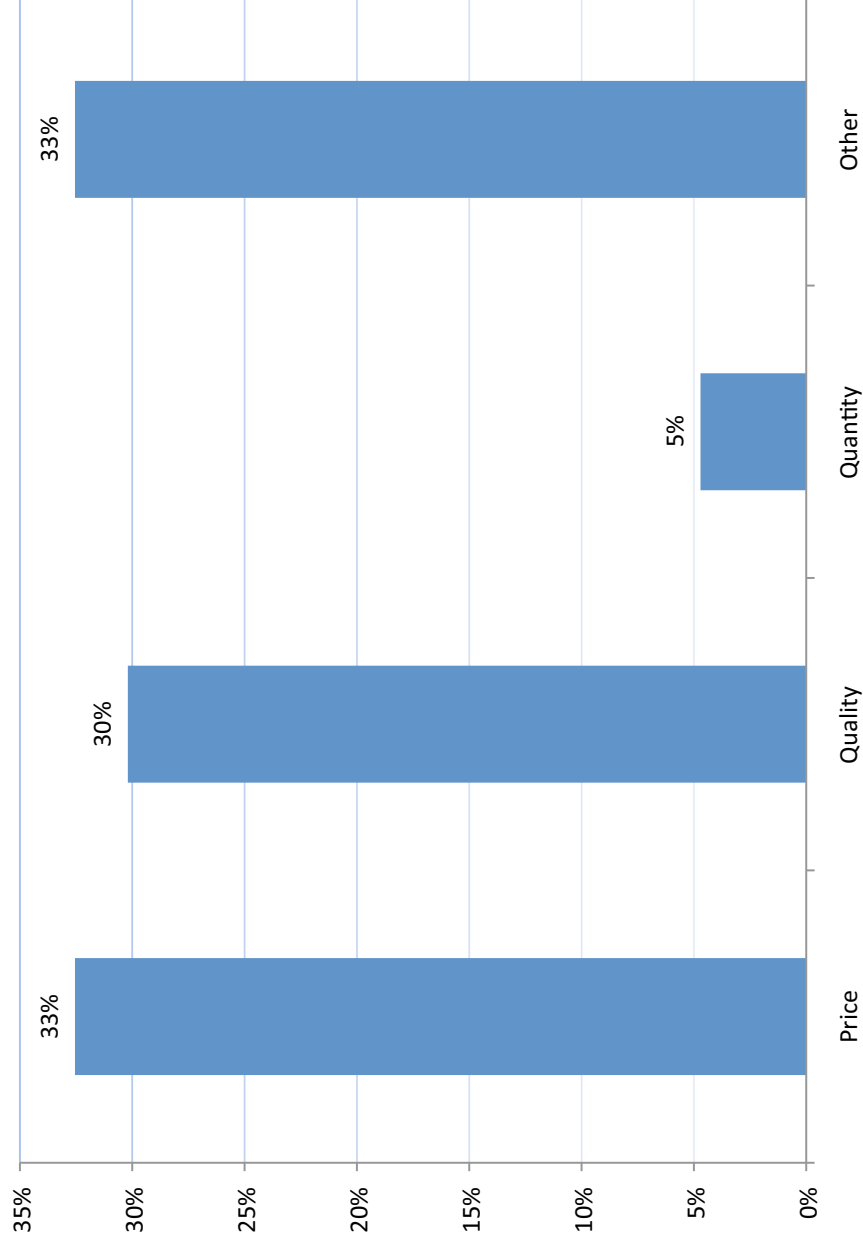


Class



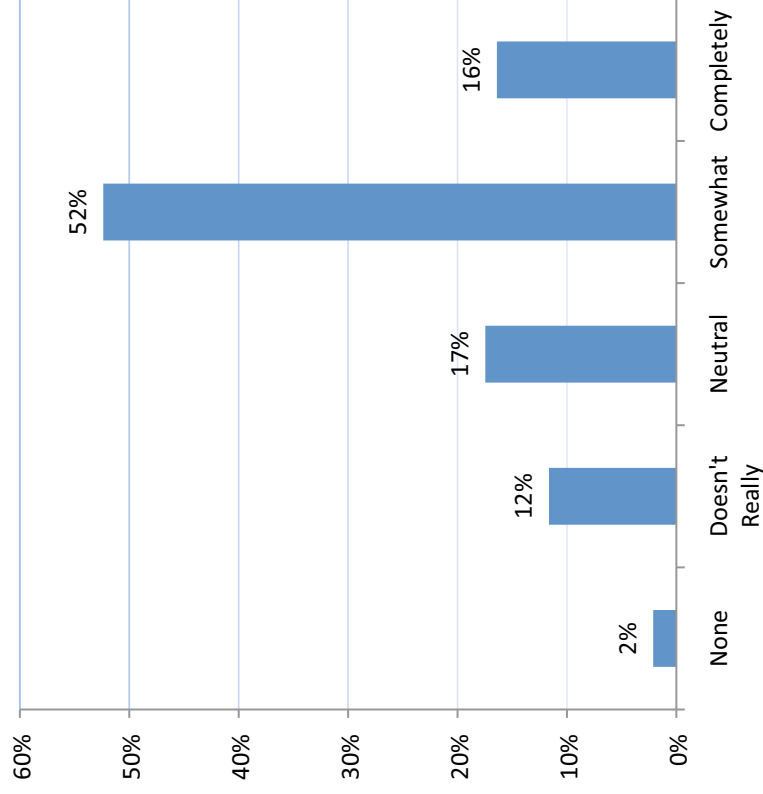
Pizza Variables

Most Influential Factors in Pizza Consumption

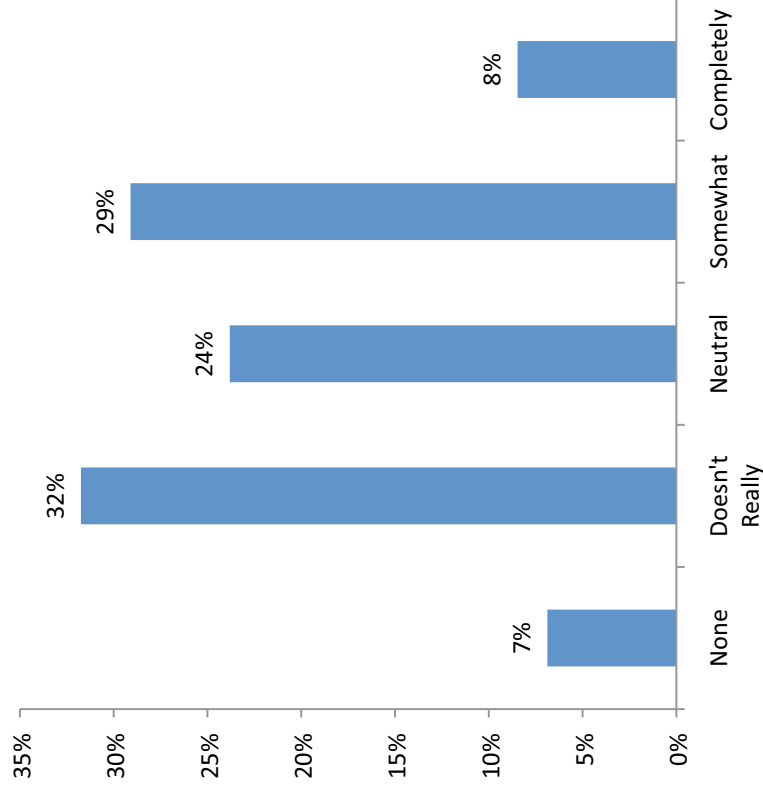


Pizza Variables

**Effect of Pizzeria's Prices
on Pizza Consumption**



**Effect of Pizzeria's Proximity on
Pizza Consumption**



Nonresponse

People like pizza. And Amazon gift cards.

20% response rate within a few hours

24% response rate in less than a day.

Responses still rolling in.

Email wording, timing, and future mailings.

Nonresponse

Not much to do about unit nonresponse.

Survey is set up so that all non-demographic questions appear on the final page; little possibility for useful imputation.

Conclusion

Deadline for survey responses is April 12

- Put weights on underrepresented strata if responses are not representative of target population
- Response rate goal was nearly reached within the first few hours, so no major adjustments needed to deal with nonresponse

Conclusion

- Create charts and graphs based on data extracted from Google Docs
- Build regression to predict pizza consumption using variables mentioned in survey
- Determine significance of variables and potential interactions
- Compare our analysis to current business operations of various pizzerias, suggest improvements