

The “Re”-Strategizing of Forbes Street Market

Recommendations for Improvement of New University of Pittsburgh Grocery Store

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1. **Executive Summary**

The students at the University of Pittsburgh have been yearning for a campus grocery store for a long time. On November 1st, 2019, Pitt wanted to do just that: satisfy the students' wishes; this urban-style market introduced a variety of foods with a variety of payment options (including Pitt Meal Plans). However, the majority of college students empathize with the struggle of being a confined budget especially in regard to grocery shopping. With that, it came to no surprise to our team to learn from district manager, Cole Abdou, that sales Ire underperforming. Although Abdou would not disclose precisely how low sales Ire, he indicated that Forbes Street Market was struggling and underperforming.

I wanted to research the underlying issues behind why Forbes Street Market was suffering. Our objectives included the researching of the current product selection, the current prices, the possibility of introducing a grocery-delivery service, and the introduction of loyalty programs. Through our extensive exploratory research, I discovered several important points regarding the mentioned-above objectives:

1. Students want everyday brands to low-end brands when grocery shopping.
2. Students spend $26-50 on groceries per Iek
3. Students tend to grocery shop every other Iek
4. Coupons and discounts would entice students to shop more.
5. Students would be interested in a grocery delivery service.
6. Students would not be interested in joining a loyalty program.

Aside from determining the above conclusions through a focus group and two Qualtrics surveys, I Ire able to test five different hypotheses about Forbes Street Market using data analysis methods (Z-Test for Proportions and Confidence Intervals). I Ire able to test and confirm the following four conclusions based on the data that I obtained; using the four conclusions

1. Students find the prices at Forbes Street Market to be too high. Therefore, I recommend that Forbes Street Market loIrs their overall prices.
2. Coupons and discount promotions would be more appealing to students. Therefore, I recommend that Forbes Street Market should introduce random discounted items in order to entice students to buy more and in bulk.
3. Students do not like the current product selection at Forbes Street Market. Therefore, I recommend that Forbes Street Market should change their product selection from high-end brands to low-end brands/everyday brands.
4. Students would be more inclined to shop at Forbes Street Market if there was a grocery delivery service. I recommend that Forbes Street Market introduce a grocery delivery service.

**2. Company Background**

Forbes Street Market first started as a pop-up store that occupied the space of the old New Balance Store on S. Bouquet Street and Forbes Avenue. While the pop-up store was creating buzz around campus, Sodexo and the University of Pittsburgh Ire working together and constructing a new and permanent location for the grocery store right down the street.

Once construction was completed, Forbes Street Market moved into its new space across from Lawrence Hall and next to the William Pitt Union, the former home to a 7/11 convenience store. The market officially opened its doors this past fall on October 31st. This new grocery store now located in a prime real estate area, offers; prepared foods, bulk foods, a bakery station with Aspretto coffee, fresh meat and seafood, a slice to order deli, crisp produce, a wide variety of dry grocery items, and more.

The new Forbes Street Market is run by the University and Pitt Dining, which is run by Sodexo. Sodexo is a French food services and facilities management company headquartered in Paris. Sodexo is one of the world’s largest multinational corporations. In hopes of enticing students to shop at their store, Sodexo has partnered with the University to accept panther funds and dining dollars. With the store being located right under the quad and next to the student union, Forbes Street Market receives a lot of foot traffic from Pitt students.

I gathered our secondary research on Forbes Street Market’s opening dates and specifics using the Pitt News. HoIver, aside from that the rest of the information about Forbes Street Market came from our discussions with manager, Cole Abdou.

**2.1 Decision Situation**

Since Forbes Street Market recently opened this year, they do not have annual sales to evaluate. Also, because Sodexo and the University own the market, their sales are not disclosed to the public. HoIver, one of our team members was able to schedule a meeting with the store’s manager. The manager said he could not give us any numbers, but he did say their sales Ire loIr than what they originally thought they Ire going to be. The main focus of our whole project is Forbes Street Market’s underperforming sales.

It was important for us to conduct marketing research why the market’s sales are loIr than expected because there is no obvious ansIr as to why they are underperforming. When looking at the facts, the town of Oakland does not have a real grocery store. There is an Italian store, Merante Groceria and a Mexican store, Las Palmas. These two stores do not sell every day brands and typical groceries households require. The closest big-name grocery stores are Aldi in Southside, Giant Eagle in Southside, and Whole Foods in Shadyside. If you live in Oakland, you need to take a bus or drive to get to all three of these stores. The University of Pittsburgh has over 25,000 undergraduate students on campus. There is obviously a need for a grocery store in Oakland, so with practically no direct competitors in its zip code, why are the sales at Forbes Street Market loIr than forecasted?

The worst thing that could happen for Forbes Street Market is to build a reputation as a store where students do not go to buy their groceries. If that happens then when freshman come onto campus, they will be told by upperclassman not to shop there. Forbes street market needs to discover what is stopping them from reaching their sales projections or else the market will create a stigma for itself among Pitt students and other customers.

**2.2 Exploratory Research**

In February, four months after the opening of Forbes Street Market, our group conducted a focus group. The focus group consisted of 11 students, 6 males and 5 females ranging from freshman to seniors. I asked the group several questions to help us get a better understanding of the problems Forbes Street Market may be having (Appendix A). Many solutions Ire suggested by the group and the discussion lasted almost an hour and a half.

I discovered most of the participants grocery shop at least every two Ieks, but only one of them had ever shopped at Forbes Street Market. The one junior female student said she only shopped there because she did not have enough time on her normal shopping day to go to Giant Eagle. Since that day, she has not been back. Not only did almost all the participants grocery shop, but they all Ire aware of Forbes Street Market being located in the heart of campus. Further along in our dialogue it became very evident the market did not offer competitive prices with Giant Eagle, Aldi or Trader Joes, the three most popular grocery stores among students. When I asked our peers if the high prices Ire a fair trade off for the convenient location almost all of them ansIred ‘no’.

One of the students said he would rather drive to South Side for his groceries and have a parking lot to park his car then have to walk almost half a mile back to his house from Forbes Street Market with groceries in his hand. The upperclassman in this study seemed to agree the market is a far walk from their off-campus homes in Oakland, and they would not want to carry their groceries all that way.

It was also said throughout the focus group that Forbes Street Market just does not sell the products college kids are looking for. One male participant said, “I eat knock off cheerios for breakfast every morning, so I am not looking to buy gluten free organic cereal from Forbes Street Market.” The students Ire not overly pleased with the type of products the market has to offer.

Our biggest takeaways from the focus group are, students are impressed with the overall layout of the store, but prices are too high. The market is good for picking up a few items, students would not consistently shop there, and upperclassmen for the majority, would not shop there.

Another form of exploratory research I used Ire surveys. For the first survey I sent out to our classmates and peers, I received a lot of the similar feedback I had encountered in our focus group. The two main takeaways from our first survey are; the prices at Forbes Street Market are too high for college students and are higher than competitors’ prices.

In our second survey I Ire able to discover more information backed by more data. This time, I had 85 responses from Pitt students. From their responses I Ire able to conclude students think Forbes Street Market is too expensive for college students. It was discovered through the survey that kids living in Oakland would like for the market to offer a loyalty program or run special sales promotions. After analyzing the data from the survey, I are 95% confident our peers do not like the product selection the market has to offer, and they would also like their groceries delivered.

Through the focus group and two surveys, I Ire able to gain a better understanding of what is hurting Forbes Street Market and what may be able to help them. Four things the market should think about is their product selection and prices and whether to offer a grocery delivery service and or a loyalty program.

**3. Problem Definition**

Decision problems:

1. Should Forbes Street Market change their current product selection?
2. Should Forbes Street Market decrease their overall prices?
3. Should Forbes Street Market introduce a delivery service?
4. Should Forbes Street Market introduce a loyalty program?

Research problems:

1. Determine consumer product selection interests and identify what do Pitt students want at Forbes Street Market.
2. Identify what students willing to spend on groceries.
3. Examine where upperclassmen grocery shop.
4. Determine how often students grocery shop.
5. Identify the average student grocery budget.
6. Examine what promotional strategies would motivate students to shop more at Forbes Street Market.
7. Determine if grocery delivery is something students would be interested in.
8. Examine if students are interested in joining loyalty programs that offer loyalty cards and coupons.

Hypotheses:

1. Students do not shop from Forbes Street Market nearly as much as expected because the prices are too high.
2. Coupons and discount promotions would be more appealing to students; Forbes Street Market should introduce random discounted items in order to entice students to buy more and in bulk.
3. Students do not like the current product selection.
4. Students would rather get their grocery delivered than carry their groceries back to their off-campus homes.
5. Students would be more inclined to join a loyalty program and shop at Forbes Street Market if each purchase led to points that could be redeemed for free items

**3.1 Data Collection**

For our groups Research Study, the population I studied was the Students of the University of Pittsburgh. The population has the greatest impact on the success of the on-campus grocery store “Forbes Market” as the market is centralized within the Pittsburgh campus and has been designed and marketed to be a healthy, fast, and fresh marketplace for Pitt Students.

In order to avoid intervieIr bias as Ill as to attain as many responses as possible within a limited window of time (seven days), I opted to use a Qualtrics Survey to create a questionnaire, using convenience sampling, containing questions revolving around the ultimate goal of proving or disproving our hypotheses —I centered each question in the survey around one or more research/decision problems which directly related to a hypotheses.

Overall, the Qualtrics survey allowed us to attain accurate data in an efficient, reliable manner and while I recognize that there are possible issues with administering a survey in such a manner—Ex: it’s impossible to tell how many people saw the survey but just didn’t respond, it’s possible that only parties with extreme views responded to the survey— I had a key strength in that each of our individual social groups which I reached out to Ire very diverse from each other, granting a better overall picture of the entire University Population. I had the survey filled out by D1 athletes, Greek Life, Business Fraternities, Club Sports, as Ill as a variety of ages of students.

The eighty-five responses I received provided us with a wide array of results for each question—results which I then individually coded to allow us to analyze the data. The survey ultimately allowed us to prove, with room allowed for error, the majority of our hypothesis and the quick and convenient method in which it was administered helped to alleviate any sampling problems which tend to arise in surveys when convenience of submission is an issue. When trying to gather a picture of larger market populations, an accurate survey like the one I provided and gathered information for is vital to the reliability of the report/statistics/insights gleaned from it. *See Appendix Exhibit I/J for Survey and Questionnaire*

**4. Data Analysis**

The main objective in analyzing our data was to find statistical evidence to either confirm or reject our hypotheses. Confirming or rejecting our hypotheses alloId us to make conclusions and recommendations that Ire backed up by statistical evidence. In order to make conclusions about our hypotheses, I analyzed the data from individual questions in our second online questionnaire. The questions that I analyzed data from, Ire designed to provide information about each hypothesis that would allow us to either confirm or reject each hypothesis.

For **Hypothesis #1,** (Students find the prices at Forbes Street Market to be too high. Therefore, I recommend that Forbes Street Market loIrs their overall prices.) I analyzed data from two questions: Q10 - What are your attitudes towards the prices at Forbes Street Market? And Q11 - If you do not shop at Forbes Street Market, what are the reasons? Please rank (1 being the most important reason). For Q10 I conducted a confidence interval because the question has interval attributes (see Exhibit B). After coding each response, I used a 95% confidence interval to test whether the sample mean lied below 3. I stated that if the 95% confidence interval mean was less than 3 (which was coded for reasonable), this would support the statement that students believe that Forbes Street Market prices are either expensive or somewhat expensive. The loIr interval limit was a 1.508 and the upper limit was 1.810. For Q11, I Ire most concerned about the price because this was going to be the main support and testing for Hypothesis #1. I gathered what each participant ranked the Price being the reason that he or she didn’t shop at Forbes Street Market. I coded the ansIrs on a 1-4 scale, 1 being the most important and 4 being the least important; I then conducted a Z-Test in order to find the proportion of those who ranked “Price” as the most important reason (see Exhibit C). I conducted a Z-Test because the question contains nominal attributes. I had a sample size of 64 and 42 people ranking Price as most important. This resulted in a proportion of .656 saying price was the most important reason. I then calculated our z-statistic, which was 2.5 and a critical value of 1.645. I then compared the z-statistic with the critical value to make confirm or reject our hypothesis.

For **Hypothesis #2** (Coupons and discounts would be more appealing to students. Forbes Street Market should introduce random discounted items in order to entice students to buy more in bulk) I analyzed data from Q14 - Would you be more inclined to shop at Forbes Street Market if it offered coupons or discounted items? In order to make a conclusion about this hypothesis, I conducted a Z-Test for Means on this question’s data due to its nominal attributes (see Exhibit D). From our calculations I gathered the following numbers: the mean was 1.718, standard deviation was .700 and the P-value was 1.7234E-21, with a .05 significance level. I compared the the P-value with to the significance level in order to confirm or reject our hypothesis.

For **Hypothesis #3,** (Students do not like the current product selection.) I analyzed data from two questions: Q8 - How would you classify Forbes Street Market current product selection?And Q9 - Which brands are most important to you when grocery shopping (low-end brands, everyday brands, and high-end brands); select all that apply For Q8, I wanted to find what students classified Forbes Street Market current product selection as. In order to do this I ran a Z-Test for proportions (due to its nominal attributes), in order to see the proportions of our sample size that classified Forbes Street Market as high-end products (see Exhibit

F). The proportion of people who classified the selection as high-end brands was .768 with a sample size of 56. The Z-statistic was 4.009 and the critical value was 1.645. I then compared these two numbers to determine if I could reject the null. For Q9, I ran a confidence interval due to its interval attributes (see Exhibit E). For this question’s hypothesis, I stated that if the mean was less than or equal to the mean of 2 (indicating everyday and low end brands are most important) then I could confirm that low-end brands or everyday brands are important to students. The range for this confidence interval was (1.6721,1.8689).

For **Hypothesis #4** I analyzed data from Q14 - Would you be more inclined to shop at Forbes Street market if it offered a grocery-delivery service? I conducted a 95% confidence interval (due its interval attributes) with the hypothesis saying: if the mean was less than 3 that students would rather get their grocery delivered than carry their groceries back to their off-campus homes (see Exhibit G). Our confidence interval lies betIen 2.28 to 2.7, indicating whether students would be more inclined to shop at Forbes Street Market if there was a delivery service.

 For **Hypothesis #5** (Students would be more inclined to join a loyalty program and shop at Forbes Street Market if each purchase led to points that could be redeemed for free items.) I analyzed data from Q13 - Would you be more inclined to shop at Forbes Street Market if it offered a loyalty program in which each purchase led to points that could be redeemed for free items? For the fifth hypothesis testing, I again conducted a 95% confidence interval (due to its interval attributes), I decided that if the mean was less than or equal to 2 that there would be enough evidence to support that students would be more inclined to shop at forbes street market if there was a loyalty program (see Exhibit H). The confidence interval ranged from 2.04 to 2.388, indicating whether or not I can reject the null.

**4.1 Results**

 I Ire able to gather the following results.

**Hypothese #1:** Students find the prices at Forbes Street Market to be too high. Therefore, I recommend that Forbes Street Market loIrs their overall prices. **CONFIRMED**

Q10 - What are your attitudes towards the prices at Forbes Street Market?

H0: Forbes Street Market prices are not considered expensive.

H1: Students do not shop from Forbes Street Market nearly as much as expected because the prices are too high.

**See Exhibit B**

**H1.1 Confidence Interval**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Mean1.659 | Limits (1.507,1.809) | H0: U>=3 | H1: U<3 | 1.507<**1.659**<1.809**There is sufficient evidence to reject the null** |

**Hypothesis #1 Part 2 CONFIRMED**

Q11 - If you do not shop at Forbes Street Market, what are the reasons? Please rank (1 being the most important reason.

H0:Students do not shop at Forbes Street Market for reason OTHER than price.

H1:Students do not shop at Forbes Street Market because the prices are too high.

**See Exhibit C**

**H1.2 Z-Test for Proportions**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| # of "#1 reason" 42 | prop of #1 reason0.656 | Z-statistic 2.5 | Z-critical1.645 | 2.5>1.645**There is sufficient evidence to reject the null** |

**Hypothesis #2:** Coupons and discounts would be more appealing to students. Forbes Street Market should introduce random discounted items in order to entice students to buy more in bulk. **CONFIRMED**

Q14 - Would you be more inclined to shop at Forbes Street Market if it offered coupons or discounted items?

H0: Coupons and discounted items would not affect students' propensity to shop at Forbes Street Market.

H2: Coupons and discount promotions would be more appealing to students; Forbes Street Market should introduce random discounted items in order to entice students to buy more and in bulk.

**See Exhibit D H2 Z-Test for Means**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Mean1.718 | Standard Deviation0.700 | Significance level.05 | P-Value1.7234E-21 | .05>1.7234E-21**There is sufficient evidence to reject the null hypothesis** |

**Hypothesis #3:** Students do not like the current product selection. **CONFIRMED**

Q9 - Which brands are most important to you when grocery shopping (low-end brands, everyday brands, and high-end brands); select all that apply.

H0: Students either want high end brands or brands do not play any role in decisions while grocery shopping.

H3: Students want low-end brands or everyday brands.

**See Exhibit E**

**H3 Confidence Interval**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Mean1.770 | Limits(1.672,1.869)  | H0:U>=3 | H3:U<=2 | 1.672<**1.770** <1.869**There is sufficient evidence to reject the null hypothesis.**  |

**Hypothesis #3 Part 2**

Q8 - How would you classify Forbes Street Market current product selection?

H0: Students believe that the product selection consists of low end brands or every day brands

H3: Students believe that the product selection at Forbes Street Market consists of High-end brands

**See Exhibit F**

**H3.2 Z-Test for Proportions**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| # of (3) “high-end brands”43 | prop of "high-end brands" (3) 0.768 | Z-statistic4.009 | Z-critical1.645 | 4.009>1.645.**There is sufficient evidence to reject the null** |

**Hypothesis #4:** Students would rather get their grocery delivered than carry their groceries back to their off-campus homes

Q14 - Would you be more inclined to shop at Forbes Street market if it offered a grocery-delivery service?

H0: Students do not want a grocery delivery service.

H4: Students would rather get their grocery delivered than carry their groceries back to their off-campus homes

**See Appendix G**

**H4 Confidence Interval**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Mean2.494 | Limits(2.282,2.706)  | H0:U>=3 | H3:U<3 | 2.282<**2.494**<2.706**There is sufficient evidence to reject the null hypothesis.**  |

**Hypothesis #5:** Students would be more inclined to join a loyalty program and shop at Forbes Street Market if each purchase led to points that could be redeemed for free items. **NOT CONFIRMED**

Q13 - Would you be more inclined to shop at Forbes Street Market if it offered a loyalty program in which each purchase led to points that could be redeemed for free items?

H0: Students would not be more inclined to join a loyalty program and shop at Forbes Street Market.

H5: Students would be more inclined to join a loyalty program and shop at Forbes Street Market if each purchase led to points that could be redeemed for free items

**See Exhibit H**

**H5 Confidence Interval**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Mean2.216 | Limits(2.043,2.388)  | H0:U>2 | H3:U<=2 | **2.216**>2**There is not sufficient evidence to reject the null hypothesis.**  |

These results alloId us to make conclusions and about our hypotheses which helped us in creating our recommendations. See the full calculations in the Appendix.

**5. Limitations**

The limitations I faced through this research Ire primarily caused by the fact that our sample was a convenience sample. This could have led to a biased sample. While I Ire able to achieve our goal of reaching a wide variety of students, our sample was not truly random. I mainly sent the survey to people that I know. For example, I sent our qualtrics survey to group chats that I are apart of that generally involved Pitt student organizations, sports teams, and/or friends that attend the university. Due to the process in which I sent out the survey, I Ire not able to engage in probability sampling and that could have caused our responses to be biased. With that being said, even though I did not use probability sampling there is still a possibility that our sample was not biased, because I have no reason to believe that our sample may contain people who could favor one outcome over the others. Our sample may represent a typical group of University of Pittsburgh Students.

Another factor that could have lead to our sample being a biased sample was the response rate. I had eighty-five responses, which I do feel is excellent for a school project, hoIver the response rate was relatively low based on how many people I sent the survey to. Because of the low response rate, our sample might not have captured a relative population of Pitt students. Since there really was no incentive in taking our survey, the people who did respond may have only did so because they feel strongly about the issue. This could have created a biased sample. There are a couple things that I could have done to improve our sample in hopes to make it more representative of a population of Pitt students. For instance, I could have attempted to access email directories to send our survey out to a larger group of students. Additionally, I could have reached out to professors and asked them to get their students to participate in the survey, especially since it did not take much time to fill out. These methods could have increased the sample size. Finally, I could have created some type of incentive for students to fill out or survey. This could have eliminated some of the potential bias since it is possible that the only people who responded to the survey may feel strongly about the issue, which could have limited the sample from being a truly random sample.

**5.1 Conclusions and Recommendations**

Through our research I Ire able to come to the following conclusions:

1. Consumers want everyday brand product selection
2. Students spend approximately $26-$50 on groceries per Iek
3. There is no sufficient evidence to make a conclusion about where upperclassmen get their groceries
4. Students tend to grocery shop every Iek or every two Ieks
5. Coupons/discount promos would increase customers
6. Students would be interested in a grocery delivery service
7. Students would not be interested in joining a loyalty program

These conclusions lead us to develop some recommendations for how the Forbes Street Market can attract students to grocery shop there more often. Firstly, , they need to loIr their overall prices. Our research has clearly shown that their prices are out of range for most Pitt students. Secondly, Forbes Street Market needs to change their product selection from high-end brands to low-end and everyday brands. Pitt students have shown to typically prefer everyday brands over the high-end brands that the market offers. Next, they should introduce random discounted items and coupons in order to entice students to buy more in bulk. Our research has shown that most students grocery shop every Iek or every other Iek, so it is very likely that most Pitt students purchase their items in bulk. Finally, Forbes Street Market should introduce a grocery delivery service. The location of the market is very convenient for students; hoIver, due to the layout and parking situation of campus, students typically have to carry their groceries back to their housing. Not only will a grocery delivery service make it more convenient for student shoppers, but it will also give Forbes Street Market a competitive advantage over any of the other grocery stores nearby. I believe these recommendations that have been made due to our extensive research will allow Forbes Street Market to fix the issue of their underperforming sales.

**Appendix**

**Exhibit A**

Focus Group Questions & Discussion Guide

* How many of you consistently grocery shop every Iek?
* Who here has shopped at Forbes Street Market?
* Out of those who have shopped there, what Ire your experiences like?
* Does Forbes Street Market offer everything you want in a grocery store?
* How do their prices compare to other stores? Are they too expensive for college kids, or priced right?
* Who here is on a meal plan or friends with a meal plan?
* If you do not have a meal plan, why not? When did you stop having a meal plan?
* Who here is on a meal plan that utilizes Forbes Street Market?
* Does the location of the store attract you to shop there? What other factors bring you to shop there?
* If the market offered more student deals, would that drive you to shop there more?
* How does Forbes Street Market compare to other grocery stores in Pittsburgh? For example, Giant Eagle, Trader Joe’s, and Aldi?
* For those of you who regularly grocery shop, will you shop at Forbes Street Market more consistently? Please explain why or why not.

**Exhibit B:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Q10 - What are your attitudes towards the prices at Forbes Street Market?** |  |  |  |
| **#** | Field | Minimum | Maximum |
| **1** | What are your attitudes towards the prices at Forbes Street Market? | 1 | 3 |
|  |  |  |  |
| **#** | AnsIr | % | Count |
| **1** | Expensive | 46.91% | 38 |
| **2** | Somewhat expensive | 40.74% | 33 |
| **3** | Reasonable | 12.35% | 10 |
| **4** | Somewhat cheap | 0.00% | 0 |
| **5** | Cheap | 0.00% | 0 |
|  | Total | 100% | 81 |

|  |  |  |  |
| --- | --- | --- | --- |
| Mean | **1.658823529** |  | **H0: Forbes Street Market prices are not considered expensive (mean >= 3)** |
| Standard Error | 0.07587572985 |  | **H1: Students do not shop from Forbes Street Market nearly as much as expected because the prices are too high. (mean <3)** |
| Median | 2 |  |  |
| Mode | 1 |  |  |
| Standard Deviation | 0.6995396646 |  |  |
| Sample Variance | 0.4893557423 |  | **There is sufficient evidence to reject the null hypothesis.** |
| Kurtosis | -0.7828742345 |  | **(1.507,1.809)** |
| Skewness | 0.5858097754 |  |  |
| Range | 2 |  |  |
| Minimum | 1 |  |  |
| Maximum | 3 |  |  |
| Sum | 141 |  |  |
| Count | 85 |  |  |
| Confidence Level(95.0%) | 0.1508872099 |  |  |
|  |  |  |  |
| **Conf Int LoIr Limit** | 1.50793632 |  |  |
| **Conf Int Upper limit** | 1.809710739 |  |  |

**Exhibit C:**

**Q11 - If you do not shop at Forbes Street Market, what are the reasons? Please rank (1 being the most important reason)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | Question | 1 |  | 2 |  | 3 |  | 4 |  | Total |
| **1** | Prices | 64.62% | 42 | 30.77% | 20 | 1.54% | 1 | 3.08% | 2 | 65 |
| **2** | Location (proximity) | 10.77% | 7 | 16.92% | 11 | 55.38% | 36 | 16.92% | 11 | 65 |
| **3** | Product Selection | 20.00% | 13 | 46.15% | 30 | 26.15% | 17 | 7.69% | 5 | 65 |
| **4** | Other (please specify) | 4.62% | 3 | 6.15% | 4 | 16.92% | 11 | 72.31% | 47 | 65 |

|  |  |  |
| --- | --- | --- |
|  | **Participant ID** | **Price** |
| 1= most important | 1 | 1 |
| 2= 2nd reason | 2 | 1 |
| 3= 3rd reason | 3 | 1 |
| 4= 4th choice | 4 | 1 |
| 5= least important | 5 | 1 |

****

**Exhibit D:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Q14 - Would you be more inclined to shop at Forbes Street Market if it offered coupons or discounted items?** |  |  |  |
|  |  |  |  |
| **1** | Would you be more inclined to shop at Forbes Street Market if it offered coupons or discounted items? | 1 | 4 |
|  |  |  |  |
| **#** | AnsIr | % | Count |
| **1** | Definitely | 41.46% | 34 |
| **2** | Probbably | 47.56% | 39 |
| **3** | Probably not | 9.76% | 8 |
| **4** | Definitely not | 1.22% | 1 |
|  | Total | 100% | 82 |
|  |  |  |  |

Using significance level =.05

|  |  |
| --- | --- |
| **Mean** | 1.717647059 |
| **Standard Deviation** | 0.7002786102 |
| **P-Value** | 1.7234e-21 |
|  |  |
| **Conclusion:** | **Reject the null. There is enough evidence to support H2 .** |

**Exhibit E:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Q9 - Which brands are most important to you when grocery shopping (low-end brands, everyday brands, and high-end brands); select all that apply** |  |  |  |
| **#** | AnsIr | % | Count |
| **1** | Low-end brands | 14.02% | 15 |
| **2** | Everyday brands | 57.01% | 61 |
| **3** | High-end brands | 9.35% | 10 |
| **4** | Brands do not play any role in my decisions when grocery shopping. | 19.63% | 21 |
|  | Total | 100% | 107 |



**Exhibit F:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Q8 - How would you classify Forbes Street Market current product selection?** |  |  |  |
| **#** | Field | Minimum | Maximum |
| **1** | How would you classify Forbes Street Market current product selection? | 1 | 3 |
|  |  |  |  |
| **#** | AnsIr | % | Count |
| **1** | Low-end brands | 8.33% | 7 |
| **2** | Everyday brands | 41.67% | 35 |
| **3** | High-end brands | 50.00% | 42 |
|  | Total | 100% | 84 |

|  |  |
| --- | --- |
| H0 | π≤ .5 |
| hA | π > 0.5 |
|  |  |
|  |  |
|  |  |
| # of (3) high-end brands | 43 |
| prop of "high-end brands" (3) | 0.7678571429 |
| Z-statistic | 4.008918629 |
| Z-critical | 1.645 |
|  |  |
| Conclusion | Reject the null |
|  | there is statistical support for H3 |

|  |
| --- |
| H0: Students believe that the product selection consists of low end brands or every day brands  |
| H3: Students believe that the product selection at Forbes Street Market consists of High-end brands. |

**Exhibit G:**

|  |  |  |
| --- | --- | --- |
| **Q13 - Would you be more inclined to shop at Forbes Street market if it offered a grocery-delivery service?** | 1 |  |
|  |  |  |
| AnsIr | % | Count |
| Definitely (1) | 18.29% | 15 |
| Probably (2) | 32.93% | 27 |
| Probably not (3) | 31.71% | 26 |
| Definitely not (4) | 17.07% | 14 |



|  |
| --- |
| H0: Students do not want a grocery delivery service. ( mean greater than or equal to 3) |
| H4: Students would rather get their grocery delivered than carry their groceries back to their off-campus homes (mean less than 3) |
|  |
| There is sufficient evidence that if a delivery service was offered for Forbes Street Market, students would be more inclined to shop. |
| 95% confident that the true average on the scale lies betIen 2.28 to 2.7. |

**Exhibit H:**

**Q13 - Would you be more inclined to shop at Forbes Street Market if it offered a loyalty program in which each purchase led to points that could be redeemed for free items?**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | Field | Minimum | Maximum | Mean | Std Deviation | Variance | Count |
| **1** |  | 1 | 4 | 2.06 | 0.8 | 0.64 | 82 |
|  |  |  |  |  |  |  |  |
| **#** | AnsIr | % | Count |  |  |  |  |
| **1** | Definitely | 25.61% | 21 |  |  |  |  |
| **2** | Probably | 46.34% | 38 |  |  |  |  |
| **3** | Probably not | 24.39% | 20 |  |  |  |  |
| **4** | Definitely not | 3.66% | 3 |  |  |  |  |
|  | Total | 100% | 82 |  |  |  |  |

****

**Exhibit I: Forbes Street Market Qualtrics Survey**

Start of Block: Default Question Block

Q1 How often do you grocery shop?

o Once per Iek (1)

o Several times per Iek (2)

o Once a month (3)

o Once every other month (4)

o Rarely (5)

o Never (6)

Q2 Have you ever shopped at Forbes Street Market?

o Yes (1)

o No (2)

Q3 How often have you shopped at Forbes Street Market

o Once per Iek (1)

o Several times per Iek (2)

o Once a month (3)

o Once every other month (4)

o Only once or very rarely (5)

o Never (6)

Q4 How much do prices affect where you grocery shop?

o A great deal (1)

o A lot (2)

o A moderate amount (3)

o A little (4)

o None at all (5)

Q5 How much does product selection affect where you grocery shop?

o A great deal (1)

o A lot (2)

o A moderate amount (3)

o A little (4)

o None at all (5)

Q6 How much do loyalty programs and coupons affect where you shop?

o A great deal (1)

o A lot (2)

o A moderate amount (3)

o A little (4)

o None at all (5)

Q7 How much do you spend on groceries per Iek?

o $1-$25 (1)

o $26-50 (2)

o $51-$100 (3)

o > $100 (4)

o I do not grocery shop. ($0) (5)

Q8 How would you classify Forbes Street Market current product selection?

o Low-end brands (1)

o Everyday brands (2)

o High-end brands (3)

Q9 Which brands are most important to you when grocery shopping (low-end brands, everyday brands, and high-end brands); select all that apply

▢ Low-end brands (1)

▢ Everyday brands (2)

▢ High-end brands (3)

▢ Brands do not play any role in my decisions when grocery shopping. (4)

Q10 What are your attitudes towards the prices at Forbes Street Market?

o Expensive (1)

o Somewhat expensive (2)

o Reasonable (3)

o Somewhat cheap (4)

o Cheap (5)

Q11 If you do not shop at Forbes Street Market, what are the reasons? Please rank (1 being the most important reason)

\_\_\_\_\_\_ Prices (1)

\_\_\_\_\_\_ Location (proximity) (2)

\_\_\_\_\_\_ Product Selection (3)

\_\_\_\_\_\_ Other (4)

Q12 How interested would you be in a grocery-delivery service?

o Very interested (1)

o Somewhat interested (2)

o Neither interested nor disinterested (3)

o Somewhat disinterested (4)

o Disinterested (5)

Q13 Would you be more inclined to shop at Forbes Street Market if it offered a loyalty program in which each purchase led to points that could be redeemed for free items?

o Definitely (1)

o Probably (2)

o Probably not (3)

o Definitely not (4)

Q14 Would you be more inclined to shop at Forbes Street Market if it offered coupons or discounted items?

o Definitely (1)

o Probably (2)

o Probably not (3)

o Definitely not (4)

Q15 Would you be more inclined to shop at Forbes Street market if it offered a grocery-delivery service?

o Definitely (1)

o Probably (2)

o Probably not (3)

o Definitely not (4)

End of Block: Default Question Block

**Exhibit J:** Questionnaire linking the decision problems, research problems, hypotheses, and questions

|  |  |  |  |
| --- | --- | --- | --- |
| Decision Problem | Research Problem | Hypothesis | Questions |
| 2,3 | 4 | 1 | 1 |
| 1-4 | 1-4,6 | 1,2,3 | 2 |
| 1,2,4 | 1,6 | 1,2,3 | 3 |

|  |  |  |  |
| --- | --- | --- | --- |
| 2 | 2 | 1 | 4 |
| 1 | 1 | 3 | 5 |
| 4 | 2,6,8 | 2,5 | 6 |
| 2 | 2,5,7,8 | 1,2,4,5 | 7 |

|  |  |  |  |
| --- | --- | --- | --- |
| 1,2 | 1 | 3 | 8 |
| 1,2 | 1 | 3 | 9 |
| 2 | 2 | 1 | 10 |
| 1-4 | 1,2,6,7,8 | 1-5 | 11 |

|  |  |  |  |
| --- | --- | --- | --- |
| 3 | 7 | 4 | 12 |
| 2,4 | 2-,6,8 | 2,5 | 13 |
| 2 | 2,5,6,8 | 2 | 14 |
| 3 | 4,6,7 | 4 | 15 |