Project Topic: Customer's Satisfaction of SDSU's Dairy Bar

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Company Name: SDSU Dairy Bar

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1.0 Executive Summary

In order to make an informed decision by the management of Diary Bar, the following managerial problems needs to be addressed: Are customers satisfied with the current ice cream flavors? Is the space, including the tables and chairs, at the Dairy Bar enough for customers? Are customers aware of the non-dairy products such as cookies, cake, sandwiches and so on that Dairy Bar sells? In this regard, the marketing research problems are stated as follows: examining customer's satisfaction about the current ice cream flavors, determining how customers feel about the space provided at the Dairy Bar, determining the awareness of customers about the non-dairy products such as cookies, cake, sandwiches and so on.

The survey method we used is an in-person survey. With a concise and straightforward questionnaire, we were able to analyze a sample group that represents our target population. This method also helped increased the response rate of our respondents. Our sampling frame was made up of SDSU students of the 2017/2018 academic year. Due to time constraint and since little time is needed for convenience sampling, we employed convenience sampling in our data collection. Our ideal sample size was 988 but due to time constraint, we worked with a sample of 158. SPSS statistical software was used in analyzing our results. Based on our findings, we make the following recommendations; although we have more of our respondents who are aware of the non-dairy products of the Dairy Bar, the small numbers must not be overlooked. The Dairy Bar and its management should increase its advertisements and promotions to attract more customers. Although, we had many respondents who are not satisfied with the prices at the Dairy Bar, they are still willing to visit the Dairy Bar over and over again based on good customer service. The management of the Dairy Bar is advised not to overlook the outcry of customers based on price dissatisfaction, hence price cuts can help attract more customers. Emphasis must be placed on customer service as our respondents placed premium on that rather than on prices.

2.0 Background and Secondary Data Analysis

Organization: The SDSU Dairy bar is an ice cream manufacturing company located in Brookings, South Dakota on the SDSU campus. It was established in 1910. They have more than 60 flavors of rich homemade ice cream and sherbet which are served daily and can also be purchased in half gallon containers. The SDSU Dairy Bar is also a part of the Brookings Great 8 Passport program which encourages visitors and locals to explore our one-of-a-kind attractions.

The marketing research project that we have undertaken as part of our Marketing Research coursework to measure the satisfaction of customers of the Dairy Bar at SDSU is our collective effort. In this report, we measure the satisfaction level of customers of the Dairy Bar at SDSU based on the current ice cream flavors that the SDSU Dairy Bar offers. At the same time, we considered and estimated the awareness level of the customers based on the non-dairy products such as cookies, cake or sandwich and so on of the Dairy Bar. We started the research proposal by discussing with our client to find out the satisfaction level of customers to boost up their business and profit. The ultimate target of our research is to assist the Dairy Bar to materialize any modifications with the current ice cream flavors if needed. In addition to the main focus, if our research findings give us results indicating that customers are not aware of the non-dairy products, then the management of the Dairy Bar might focus on some promotions and advertisements informing the customers about their non-dairy items.

Since we have no secondary data available, we are relying solely on primary data. The method of data collection will be through administering questionnaires via personal interviews. Details of the primary data collection method through survey is discussed in the survey method section of our research design. Some literature related to this topic has also been reviewed to give us a fair idea

on how to measure and run our analysis. This will also help us in our results discussion and reporting.

So far, with our understanding of the research progress, we conducted a descriptive research. Since we are measuring the satisfaction level of customers of the Dairy Bar, it was appropriate to conduct descriptive research. Moreover, we developed hypothesis to test the satisfaction level and awareness of customers based on the current ice cream flavors and non-dairy products such as cookies, cake, sandwiches and so on. We structured our questionnaire in such a way that each question has a direct correlation with our objectives.

3.0 Objectives

For an informed decision to be made by the management of the Diary Bar, the following managerial problems need to be addressed: Are customers satisfied with the current ice cream flavors? Is the space, including tables and chairs at the Dairy Bar enough for customers? Are customers aware of the non-dairy products such as cookies, cake, sandwiches and so on that Dairy Bar sells? In this regard, the marketing research problem are stated as follows: examining customer's satisfaction about the current ice cream flavors, determining how customers feel about the space, tables and chairs provided at the Dairy Bar, determining the awareness of customers about the non-dairy products such as cookies, cake, sandwiches and so on. At the end of this project, the management of the SDSU Dairy Bar can make an informed decision as whether to run more promotions and advertisements to make their non-dairy products known to customers, reduce prices, increase or make more space available, add more flavors to the current ice cream flavors available and attract more customers. This decision will be based on the responses from customers through this survey. A positive or negative response to such questions, will help the management

to decide on what to do to help the Dairy Bar grow and to provide its quota to the customers and the Brookings community at large.

The specific objectives of the study will be: examining customer satisfaction about the current ice cream flavors, finding out customer's awareness about the non-dairy products of the Diary Bar, determining how customer's feel about the space, table and chairs in the Dairy Bar and examining customer's satisfaction concerning the pricing of the Dairy Bar as compared to others.

4.0 Research Design and Methodology

4.1 Survey Method

The survey method we have chosen to use is an in-person survey. With a concise and straightforward questionnaire, we can analyze a sample group that represents our target population. The larger the sample size, the more reliable our results will be. We have chosen this method because we believe people are more likely to answer our questionnaire if it is given to them in person. Furthermore, a questionnaire is an effective way to gather information for statistical analysis for our research project.

4.2 Sampling

The target population will be SDSU students of the 2017/2018 academic year, which our sample will be drawn from. SDSU is located in Brookings, South Dakota. Presently, the number of enrolled students is about 13000. From which 53% students are female and the rest of them are male. There are almost 1000 international students enrolled at SDSU and student diversity is recognizable. Our sampling frame will consist of SDSU students of the 2017/2018 academic year. Due to time and resources constraint, convenience sampling is the most efficient way to gather our data for analysis purposes in a timely fashion. This approach will be implemented by issuing out

questionnaires to students standing at vantage points on SDSU campus. Also, passing students that we come across on campus would be surveyed. Places of such convenience will be The Union, Frost Arena, the Wellness Center and the Art Museum. The questionnaire we made includes 16 questions which mainly relates to satisfaction level of customers on the products of the Dairy Bar. Our ideal sample size of this is 988, but due to time constraint, we will be working with a sample of 158.

Indeed, we are unable to work with the ideal sample size because of time and resource constraints, we believe this can have a negative impact on our findings as the sample size is quite smaller than the ideal sample size. This therefore will not be representative of the true population and hence not representative enough.

Note:

Sample size calculation

$n = \frac{Z^2 S^2}{E^2}$

$Z = 1.96$, $S = \frac{6-1}{6} = \frac{5}{6}$ $E = 5\% = 0.05$

$n = \frac{(1.96)^2 (5/6)^2}{(0.05)^2} = 1067.11$, $n \approx 1068$

The correction factor is calculated below to aid in the ideal sample size selection

n/N=1068/13000=0.082 >5%, since n/N is larger than 0.05, we do the following calculations

n=1068/ (1+0.082) = 987.060, n ≈ 988. Base on this new n, our ideal sample size is 988.

Before administering the questionnaires, we met with our client and discussed the questions together. Though, all the questions seemed good, we were made to add only one question to the

already developed questionnaire. A pretest of our questionnaires was carried out with some few potential participants prior to the data collection. We didn't face any ambiguity or whatsoever that necessitated changes or redesigning our questionnaire**.**

5.0 Results Discussion

5.1.0 Single variable Analysis

5.1.1 Year

For our research analysis of SDSU dairy bar's customer satisfaction measurement we have selected 158 participants based on the eligibility that they are students of SDSU, and that they have visited the SDSU Dairy Bar within the last month or have experience of visiting at least once in last semester. There was no missing data for any of our participants. Out of 158 participants only 2(1.3) did not disclose their years. We received 49(31%) and 44(27.8%) responses from sophomores and juniors respectively; these are the highest numbers from any year who participated in our survey. Among others, 25(15.8%) and 33(20.9%) other responses are from freshman and seniors respectively. Only 5(3.2%) participated from graduate years. When we see the percentile level of our analysis for the year of respondents we can explain 75 percent of respondents fall below seniors and 50 percent fall below juniors in this analysis. Therefore, from our analysis of the year of participants we can suggest that the student-customers of SDSU Dairy Bar consists mainly of sophomores and juniors. (*Details in Appendix A: page 26)*

5.1.2 Age

It can be observed that the most occurring age category are those respondents who have ages that fall within 16-20. It can also be seen that the lower quartile of the respondents has ages that fall outside or less than the 16-20 age category. More so, the middle quartile of the respondents has their age categories outside or less than the 16-20 age category and the upper quartile of the

respondents have their age categories less than the 21-25 age category. Out of the total of 158 respondents, 89 respondents comprising 56.3% belong to the age category 16-20, 61 respondents comprising 38.6% belong the age category21-25, 7 respondents, comprising 4.4% also have their ages falling within the category 26-30 and only 1 respondent comprising 0.6% has his or her age over 30years. The bar graph depicting this age category clearly shows that the age group with the highest respondents is 16-20, followed by 21-25 and the least is those above the age 30.

This age statistic reflects that of the general SDSU population as SDSU has younger student population than the aged population. This follows the fact that we have more undergraduate students and less of the graduate students and hence we are likely to see younger students than more aged ones. (*Details in Appendix A: page 26).*

5.1.3 Gender

From the statistics of the Gender category, it is seen that we have 158 valid responses and no missing values. Out of these, we have more male responses than females. This does not generally reflect the entire population as we have more females than males enrolled at SDSU, so, due to time and other constraints, we stick to this imbalance. From the gender statistics table, we observe that 54 of our respondents comprising 34.2% were females as against 85 respondents representing 53.8% of male respondents. We also recoded 18 respondents representing 11.4% who decided not to disclose their gender status to us. Unfortunately, we had only 1 respondent representing 0.6% who didn't respond to his or her gender status. The bar graph clearly illustrates this gender dichotomy with the highest been males followed by females. Although, this gender statistic does not reflect that of the general SDSU population as we have more females than males in SDSU, we still believe that this will not impact our results, since we do not have any gender sensitive questions in our questionnaire. (*Details in Appendix A: page 27).*

5.1.4 What mainly takes you to the Dairy Bar?

Out of 158 respondents, we had 127(80.4%) respondents that go to the Dairy Bar mainly to buy dairy products, while only 11(7%) respondents visit the Dairy Bar to buy non-dairy products. At the same time 20(12.7%) respondents visit the Dairy Bar for other purposes such as to see the different items of dairy and non-dairy products, to use the internet, to enjoy the environment, or to meet with friends. It is an indication that 138(87.3%) respondents visit the Dairy Bar for buying purposes and the rest of the respondents go there with non-buying intentions. Though we had 62(39.2%) respondents saying that they were aware of the non-dairy products, only 11(7%) go there to buy these non-dairy products. The main attributable reason to this fact is that most respondents are not satisfied with the prices of the non-dairy products. Another probable reason could be that these nondairy products such as coffee, cookies and so on are accessible all over campus. (*Details in Appendix A: page 27).*

5.1.5 Will you like to order Dairy Bar products online?

We can see here that we had no missing values and 158 valid observations. The charts show that most people would not prefer to order items from the Dairy Bar online. Out of the responses, it shows that 84 respondents representing 53% of customers would not prefer to order Dairy Bar products online and 74 respondents representing 47% of customers would like to order items from the dairy bar online. Though we had a considerable number of respondents who are interested in ordering Dairy Bar products online, we conclude that the Dairy Bar should not make online ordering available, since those not in favor of this services outweighs those in favor of it. Also, most of the online preferred products are ice cream, which is likely to get melt even before it gets the customers destination. (*Details in Appendix A: page 28).*

5.1.6 Are you aware of the nondairy products of the Dairy Bar?

For the statistics for the awareness concerning the non-dairy products of the Dairy Bar, we have 0 missing values and 158 valid values. There were 96 respondents that said they were aware representing 60.8%, while the number of respondents saying they were unaware was 62 representing 39.2%. The bar graph clearly shows the difference between respondent awareness. The majority of the respondents answered that they were aware of the nondairy products of the Dairy Bar. Although we had 62 respondents representing 39.2% saying they are not aware of the nondairy products, this number is still not negligible. We therefore suggest to the Dairy Bar and its management that more advertisement and promotions should be put in place to capture more customers. (*Details in Appendix A: page 28).*

5.2.0 Cross Tabulation

5.2.1 Relationship between what takes a customer to the Dairy Bar and satisfaction level about space

H_0: There is no relationship between Space Provided and what takes a respondent to the Dairy Bar

H_1: There is a relationship between the Space provided and what takes a respondent to the Dairy Bar

From the Chi-Square test, it can be seen that the Pearson Chi-Square value is 8.565 with 1 degree of freedom and a probability value of 0.003 which is much lesser than 0.05. This indicates that there is enough evidence to reject the claim that there is no relationship between the satisfaction level of the space provided and what takes a respondent to the Dairy Bar. Hence, we reject the null hypothesis that there is no relationship between space provided and what takes a respondent to the Dairy Bar. We then conclude that the space provided and what takes a respondent to the Dairy Bar are not independent.

To determine the relative strength of the relationship or how much variation is explained in the dependent variable, we use the Cramer's V. It can be seen that the Cramer's V coefficient is 0.233 which indicates very little relationship between the variables. Although, these variables are correlated, their relative strength is low indicating a low correlation. This also confirms our results that the space provided and what takes a respondent to the Dairy Bar have a relationship, but a weak one. Though this is a weak association, we advise the management of the Dairy Bar to at best improve it or keep it as it is. (*Details in Appendix A: page 30).*

5.2.2 Relationship between how often a customer visits the Dairy Bar and satisfaction level about ice cream prices

H_0: There is no relationship between ice cream price satisfaction and how often a respondent visits the Dairy Bar

H_1: There is a relationship between ice cream price satisfaction and how often a respondent visits the Dairy Bar

The results from the Chi-Square tests shows that the Pearson Chi-Square value is calculated to be 9.139 with 2 degrees of freedom. The probability of the test is calculated to be .010. The value .010 is less than .05. This shows that we reject the null hypothesis that there is no relationship between satisfaction about ice cream prices and how often a respondent visits the Dairy Bar. This means there is a relationship between ice cream price satisfaction and how often a respondent visits the Dairy Bar. We conclude that our results did give us an indication that the two variables are related.

Using Cramer's V we can discover the strength of the relationship of the two variables. The coefficient value from the result is .240. This number shows that the strength of the correlation between the two variables is low. With more respondents, we would possibly have different responses allowing for us to be able to have a strong correlation between the variables. We

therefore say that how often a customer visits the Dairy Bar has some relation with whether they are satisfied with the prices of the ice creams or not. (*Details in Appendix A: page 31).*

5.2.3 Relationship between how often a customer visits the Dairy Bar and their satisfaction with the prices of the nondairy products.

H_0: There is no relationship between how often the customer visits the Dairy Bar and their satisfaction with the prices of the nondairy products.

H_1: There is a relationship between how often the customer visits the Dairy Bar and their satisfaction with the nondairy products.

It is shown that the Pearson Chi-Square value is 8.630 with 2 degrees of freedom and a probability value of .013 which is smaller than .05. This shows that there is enough evidence to reject the null hypothesis that there is no relationship between how often the customer visits the Dairy Bar and their satisfaction with the prices of the non-dairy products. The variables can be concluded as dependent.

To determine the relative strength of the relationship or how much variation is explained in the dependent variable, we use the Cramer's V. It can be seen that the Cramer's coefficient is .234 which indicates very little relationship between the variables. Although they are correlated, the strength is low indicating low correlation. (*Details in Appendix A: page 31).*

5.2.4 Relationship between satisfaction level about ice cream flavors and what takes a customer to the Dairy Bar

H_0: There is no relationship between how satisfied a customer is with ice cream flavors and what takes a customer to the Dairy Bar

H_1: There is a relationship between how satisfied a customer is with ice cream flavors and what takes a customer to the Dairy Bar

In our cross tabulations result, all of the expected counts are above 5. The Pearson Chi Square test is 49.07 with 2 degrees of freedom and a probability value of 0.00. Comparing the probability value with level of significance, we decide whether there is a relationship between how satisfied a customer is with ice cream flavors and what takes a customer to the Dairy Bar or not. Base on the probability value of 0.00, we reject the null hypothesis at 5% significance level and conclude that there is a relationship between how satisfied a customer is with ice cream flavors and what takes a customer to the Dairy Bar. Hence, it is believed that customers visit the Dairy Bar because they are satisfied with the ice cream flavors.

The Cramer's V value indicates the strength of the association between what takes a customer to the Dairy Bar and their satisfaction with the current ice cream flavors. The Cramer's V value is 0.557 that shows a moderate correlation between the two variables. This implies that there is a moderate association between how satisfied a customer is with ice cream flavors and what takes a customer to the Dairy Bar. (*Details in Appendix A: page 32).*

5.2.5 Relationship **between w***hat takes a customer to the Dairy Bar and how satisfied customers are with the customer service*

H_0: There is no relationship between what takes a customer to the Dairy Bar and how satisfied customers are with the customer service

H_1: There is a relationship between what takes a customer to the Dairy Bar and how satisfied customers are with the customer service

In this cross tabulation analysis, we have chosen two variables *what takes a customer to the Dairy Bar and how satisfied are they with the customer service* in SDSU dairy bar. We have observed that no cells in cross tabulations fall below five counts, so we can conclude that our Chi-Square results and Cramer's V results are reliable. The Pearson Chi-square value of 10.270 with 2 degrees

of freedom shows that the probability value is 0.006 which is below the benchmark significant level of 0.05. Based on our test statistics and the corresponding probability value, we have enough evidence to reject the null hypothesis and conclude that there is a relationship between what takes a customer to the Dairy Bar and how satisfied customers are with the customer service. Although, in terms of correlation as measured by Cramer's V, we observe that what takes a customer to the Dairy Bar and how satisfied customers are with the customer service has a correlation coefficient of 0.255 which does not demonstrate a strong correlation but still the correlation between the two variables helps to conclude that people go to the Dairy Bar for dairy products because they are satisfied with the customer service at the establishment. This is to say that customers are not sensitive to price versus the services offered to them by the employees of the Dairy Bar. Hence better customer service will increase the patronage of the products of the dairy bar. (*Details in Appendix A: page 33).*

5.2.6 Relationship between whether a customer purchases nondairy Product and whether they are satisfied with the prices of the nondairy products.

H_0: There is no relationship between whether a customer purchases nondairy Product and whether they are satisfied with the prices of the nondairy products.

H_1: There is a relationship between whether a customer purchases nondairy Product and whether they are satisfied with the prices of the nondairy products.

With the chi-square test, we can see that the Pearson Chi-Square value is 7.722 with 3 degrees of freedom. The probability value of the test is .052. The value of .052 is greater than .05, so we fail to reject the null hypothesis. So, we are unable to reject the claim that there is no relationship between whether a customer purchases non-dairy products and whether they are satisfied with the prices of the non-dairy products. Therefore, we conclude that there is no relationship between whether a customer purchases non-dairy

products and whether they are satisfied with the prices of the non-dairy products. We conclude that customers are not sensitive to price of the non-dairy products and hence their purchase of the non-dairy products is not dependent on whether the prices increase or not. (*Details in Appendix A: page 34).*

5.2.7 Relationship between whether a customer purchases ice cream or not and the satisfaction level with the prices of ice cream.

H_0: There is no relationship between whether a customer purchases dairy product or not and the satisfaction level with the prices of the dairy products.

H_1: There is a relationship between whether a customer purchases dairy product or not and the satisfaction level with the prices of the dairy products.

With the chi-square test, we observe that the Pearson Chi-Square value is 6.282 with 4 degrees of freedom. The probability value associated with this statistic is .179. The value .179 is greater than .05, so we fail to reject the null hypothesis that there is no relationship between whether a customer purchases dairy products or not and the satisfaction level with the prices of the dairy products. We conclude that as to whether a consumer purchases ice cream or not is not dependent on their level of satisfaction about the prices of ice cream. This is an indication that although a lot of the respondents had concerns with the prices of ice creams, they will still buy the ice cream. (*Details in Appendix A: page 35).*

5.3.0 Discussion of Regression Results

To help us determine how well the model fits the data, we use the R-Squared. R-squared is a statistical measure of how close the data are to the fitted regression line. It is also known as the coefficient of determination, or the coefficient of multiple determination for multiple regression. It indicates the variation in dependent variables that is collectively explained by the independent variables. 100% is the indication that all the variation is explained by independent variables around its mean while 0% indicates that the model is not able to explain any of the variations near to mean.

The ANOVA on the other hand is a way to find out if survey or experiment results are significant. In other words, they help you to figure out if you need to reject the null hypothesis or accept the alternate hypothesis. Basically, you're testing groups to see if there's a difference between them.

5.3.1 Regression

5.3.1.1 Goodness od fit: R-squared

In our model, the R-squared value is 0.164. So, we can say that 16.4% variation in *how likely a customer is to visit the Dairy Bar within one month* is explained by *Satisfaction about ice cream prices, customer service satisfaction, how did a customer find out about the Dairy Bar* (*through*: *advertisement, internet or a friend*). A high R-squared value is expected, but since human behavior is simply hard to predict, and since we have a significant predictor, we still accept this R-squared value and consider our model as fit.

5.3.1.2 ANOVA

H_0: The model has no explanatory power

H_1: The model has explanatory power

In our second model, we observed an F = 5.97. The p-value associated with this F-value is very small (0.00). With the help of probability and the significance value, we can draw a conclusion whether the independent variables reliably predict the dependent variable or not. Because the p-value (0.00) is less than the significance level of 0.05, we reject the null hypothesis and conclude that the independent variables reliably predict the dependent variable. Overall, our model has explanatory power.

5.3.1.3 Regression Equation and interpretation

$Y=1.615+0.125X_1+0.244X_2+0.350X_3-0.180X_4-0.102X_5$

Where, (*Y= How likely a customer will visit the Dairy Bar within one month, X_1= How satisfied a customer with the price of ice cream prices at the Dairy Bar, X_2= How satisfied a customer is with the customer services provided at Dairy Bar.* How a customer finds out about the Dairy Bar, measured by; *X_3= Advertisement, X_4= Through a friend, X_5= Internet)*

From the regression results, we observe that the only variable that significantly explains *how likely a customer will visit the Dairy Bar within one month* is *how satisfied a customer is with the customer services provided at Dairy Bar*. This variable is significant at a probability value of 0.001. Unfortunately, the remaining variables such as, *how satisfied a customer with the price of ice cream prices at the Dairy Bar* are not significant in explaining how likely a customer will visit the Dairy Bar within one month. This tells us that irrespective of whether a customer is satisfied with the prices of ice cream or not, so long as they get good customer service, they are likely to visit the Dairy Bar even more within one month. This is to say that customers are less sensitive to the prices of ice creams as compared to customer service. (*Details in Appendix A: page 36).*

6.0 Conclusion and Recommendation

In sum, this survey has revealed that over 60% of our respondents knows about the non-dairy products of the Dairy bar. However, less than 15% of them buy these non-dairy products. Again, over 80% of the responses indicated that they are not satisfied with both ice cream and non-dairy product prices. Nonetheless, our cross tabulations and regressions revealed that customers, though not satisfied with the general prices of the Dairy Bar, are willing to go there to purchase both ice cream and non-dairy products, though non-dairy product patronage by these responses are quite low. What this implies is that customers are less price sensitive and hence, place premium on customer services from the Dairy Bar. Indicating that they are willing to visit the Dairy Bar even if the prices are not reduced and provided they receive good customer service. The survey also

revealed that although most of the customers are satisfied with the current ice cream flavors, over 40% of our respondents suggested new flavors they will like to purchase or see at the Dairy Bar. Some of these new flavors suggested are; *winter flavors, butter brickel, blue moon, candy toppings, caramel and cookie dough, skittles, chocolate with peanut butter, strawberry flavors, seasonal flavors and candy cane.* Considering that some of our respondents would like to order online, that percentage was only 47% versus the 53% who would not like to Dairy Bar products online, we cannot forgo it. Some of the things they will want to order online are but not limited to; *ice cream and cake, cheese, coffee, meat sticks, chocolate shake, cookies and cream and meat and cheese.* Our recommendation to the management of the Dairy Bar is as follows; although we have more of our respondents who are aware of the non-dairy products of the Dairy, the small numbers must not be overlooked. The Dairy Bar and its management should increase its advertisement and promotions to attract more customers. Although, we had quite many respondents who are not satisfied with the prices at the Dairy Bar, yet they are willing to visit the Dairy Bar over and over based good customer service. The management of the Dairy Bar are advised not to overlook the outcry of customers based on price dissatisfaction, hence price cuts can help attract more customers. But emphasis must be placed on customer service as our respondents placed premium on customer service than on prices.

7.0 Limitations and Learning experience

Our major limitation has been that of time. We had a limited time to go through this survey. Another challenge also had to do with our data collection, we had a little challenge as we got some students who were unwilling to respond to our survey due to reasons know to them.

On the flip side, we, the research students, have gained considerable knowledge by going through this survey. We have come to know much about the Dairy Bar and what it does. We have learned

a great deal in terms of using scientific means to study human behavior towards something. The knowledge we have acquired is going to help us in the long run as we exit school and enter the world of work.

8.0 Cover Letter with Implied Consent

Marketing Research Survey – **Customer's satisfaction of SDSU's Dairy Bar** Date:10/10/2017

Survey Cover Letter

Dear Respondent:

We, SDSU marketing Research students of the Fall 2017 academic year, are conducting a student research project entitled "**Customers satisfaction of SDSU's Dairy Bar**" as part of ECON 476/576 Marketing Research course at South Dakota State University. The purpose of the study is to determine customer's satisfaction about SDSU's Dairy Bar, finding out customer's awareness about the non-dairy products of the Diary Bar and how customers feel about the space provided by the Dairy Bar.

You as a student of SDSU are invited to participate in the study by completing the attached questionnaire.

We realize that your time is valuable and have attempted to keep the requested information as brief and concise as possible. It will take you approximately 10 minutes of your time. Your participation in this project is voluntary. You may withdraw from the study at any time without consequence.

There is no compensation for responding nor is there any known risk. Your responses are strictly confidential. When the data and analysis are presented, you will not be linked to the data by your name, title or any other identifying item. Copies of the project will be provided to our Marketing Research instructor at South Dakota State University. Thank you for taking the time to assist us in our educational endeavors.

Your consent is implied by the return of the completed questionnaire. Please keep this letter for your information. If you have any questions, now or later, you may contact us via emails provided below. Thank you very much for your time and assistance. If you have any questions regarding your rights as a research participant in this study, you may contact the SDSU Research Compliance Coordinator at 605-688-6975, SDSU.IRB@sdstate.edu.

Sincerely,

Marketing Research Team:

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9.0 Questionnaire

Directions: Please indicate your response by checking the appropriate box next to each question.

Demographics Information

What is your major?_____

Circle your grade level: ☐ Freshman ☐ Sophomore ☐ Junior ☐Senior ☐ Graduate

What is your age? ☐ 16-20 ☐ 21-25 ☐ 26-30 ☐ >30

What is your gender? ☐ Male ☐ Female ☐ Prefer not to disclose

1. How did you find out about the Dairy Bar?

   ☐ Advertisement ☐ Through a friend ☐ Internet ☐ Promotion
2. What mainly takes you to the Dairy Bar?

   ☐ Dairy Products ☐ Non-dairy Products ☐ Other
3. How often do you visit the Dairy Bar?
   (Where: Once a week = 1, Twice/more a week = 2, Once a month = 3, Once/less a semester = 4, Never = 5).

   ☐ Once a week ☐ Twice/more a week ☐ Once a month

   ☐ Once/less a semester ☐ Never
4. Would you like to order Dairy Bar products online? ☐ Yes ☐ No
5. Do you purchase ice cream from the Dairy Bar? ☐ Yes ☐ No
6. If you are not purchasing ice cream from the Dairy Bar, why not?

   ☐ Medical Advice (Health Grounds) ☐ No liking / taste ☐ Feel it Costly
7. Are you aware of the non-dairy products of the Dairy Bar, such as cookies, cake, sandwiches and so on? ☐Yes ☐No
8. Do you purchase any of the non-dairy products from the Dairy Bar listed in question 7?

   ☐ Yes ☐ No
9. If you are not purchasing the non-dairy products listed in question 7 from the Dairy Bar, why not?

   ☐ Medical Advice (Health Grounds) ☐ No liking / taste ☐ Feel it Costly

Please indicate your level of satisfaction by marking the appropriate box that applies to each question, *(where: Very satisfied = 1, Satisfied = 2, Neutral = 3, Unsatisfied = 4, Very Unsatisfied = 5, Never been there = 6).*

	Very satisfied	Satisfied	Neutral	Unsatisfied	Very unsatisfied	Never been there
10. How satisfied are you with the current ice cream flavors?						
11. How satisfied are you with space, table and chairs provided by the Dairy Bar?						
12. How satisfied are you with the ice cream prices at the Dairy Bar?						
13. How satisfied are you with the prices of the cakes, cookies and sandwiches at the Dairy Bar?						
14. How satisfied are you with the customer service?						

15. What sort of new ice cream flavors do you expect form the dairy bar?

---

16. How likely will you visit the Dairy Bar within one month?
(Where: Mostly likely = 1, Likely = 2, Unlikely = 3, Most Unlikely = 4)

☐ Most likely ☐ Likely ☐ Unlikely ☐ Most Unlikely

Appendix A: Single variable analysis

Year

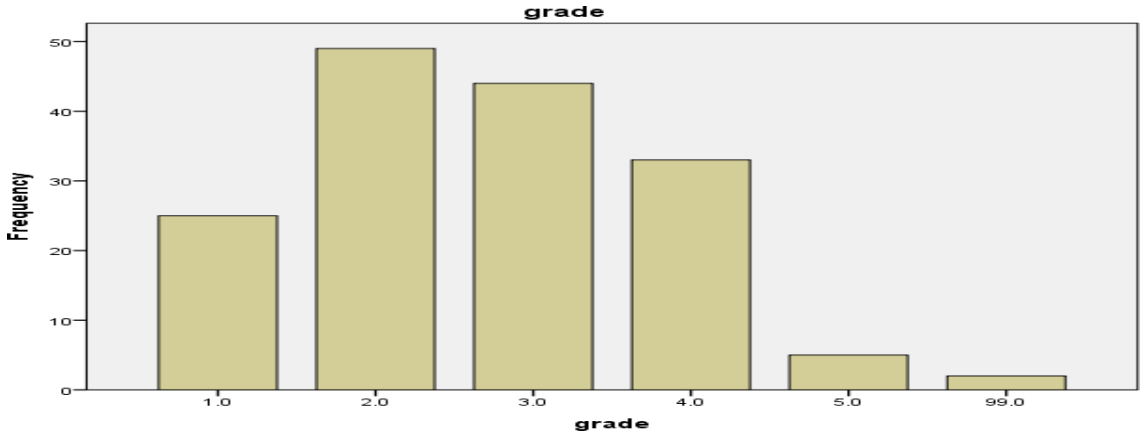
Statistics

grade

N	Valid	158
	Missing	0
Mode		2.0
Percentiles	25	2.000
	50	3.000
	75	4.000

grade

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.0	25	15.8	15.8	15.8
	2.0	49	31.0	31.0	46.8
	3.0	44	27.8	27.8	74.7
	4.0	33	20.9	20.9	95.6
	5.0	5	3.2	3.2	98.7
	99.0	2	1.3	1.3	100.0
	Total	158	100.0	100.0	



***Note**: (1=Freshman, 2=Sophomore, 3=Junior, 4=Senior, 5=Graduate, 99=No response)*

Age

Statistics

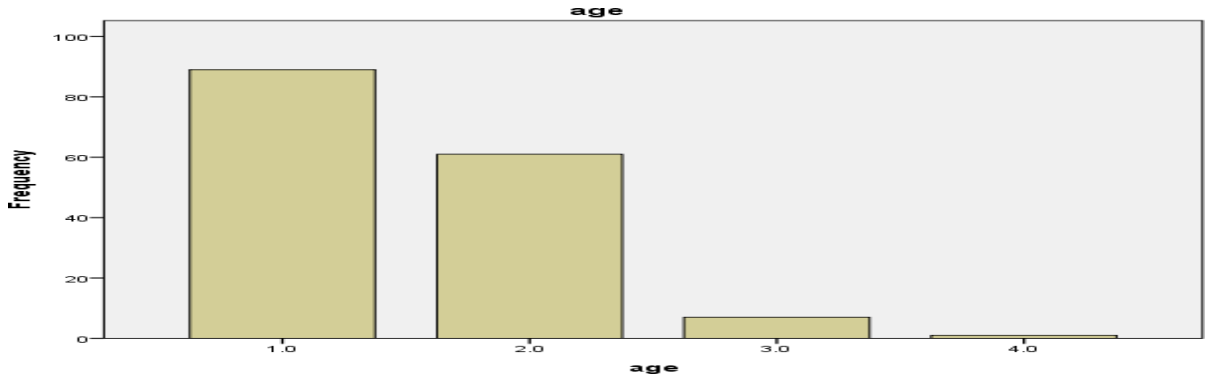
age

N	Valid	158
	Missing	0
Mode		1.0
Percentiles	25	1.000
	50	1.000
	75	2.000

age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.0	89	56.3	56.3	56.3
	2.0	61	38.6	38.6	94.9
	3.0	7	4.4	4.4	99.4
	4.0	1	.6	.6	100.0
	Total	158	100.0	100.0	

***Note**: (1=16-20, 2=21-25, 3=26-30, 4= Greater than 30)*



Gender

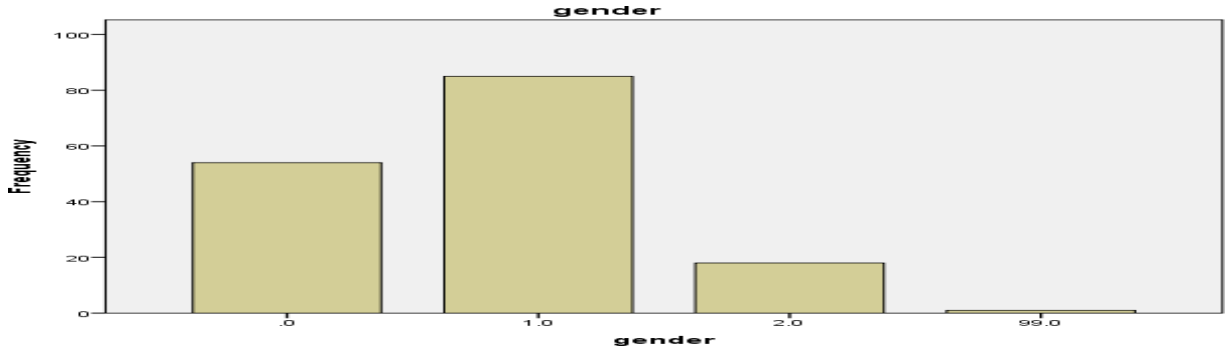
Statistic

gender

N	Valid	158
	Missing	0
Mode		1.0

gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.0	54	34.2	34.2	34.2
	1.0	85	53.8	53.8	88.0
	2.0	18	11.4	11.4	99.4
	99.0	1	.6	.6	100.0
	Total	158	100.0	100.0	



What mainly takes you there, order online, nondairy awareness?

Statistics

		What takes you to the Dairy Bar?	What do you want to order online	Are you aware of the nondairy products?
N	Valid	158	158	158
	Missing	0	0	0
Mode		1.0	.0	1.0

What takes you to the Dairy Bar?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.0	127	80.4	80.4	80.4
	2.0	11	7.0	7.0	87.3
	3.0	20	12.7	12.7	100.0
	Total	158	100.0	100.0	

***Note**: (1=Dairy Products, 2=Non-dairy Products, 3=Other)*

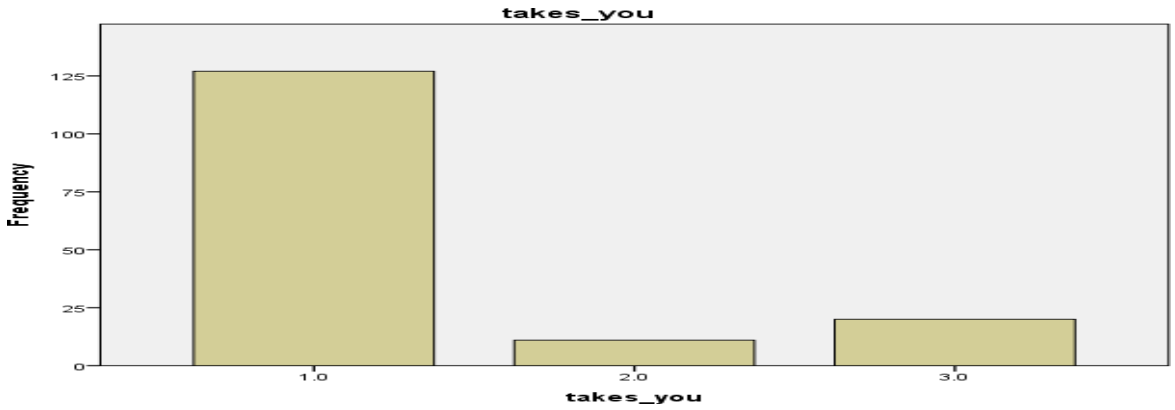
Will you want to order Dairy Bar Product online?

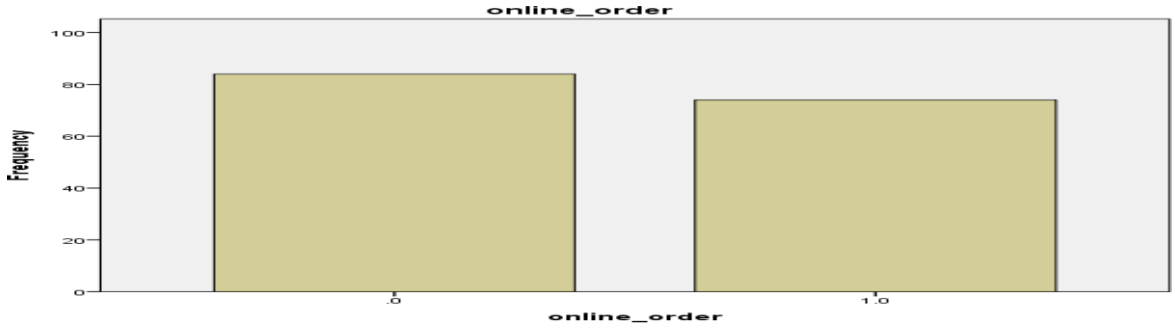
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.0	84	53.2	53.2	53.2
	1.0	74	46.8	46.8	100.0
	Total	158	100.0	100.0	

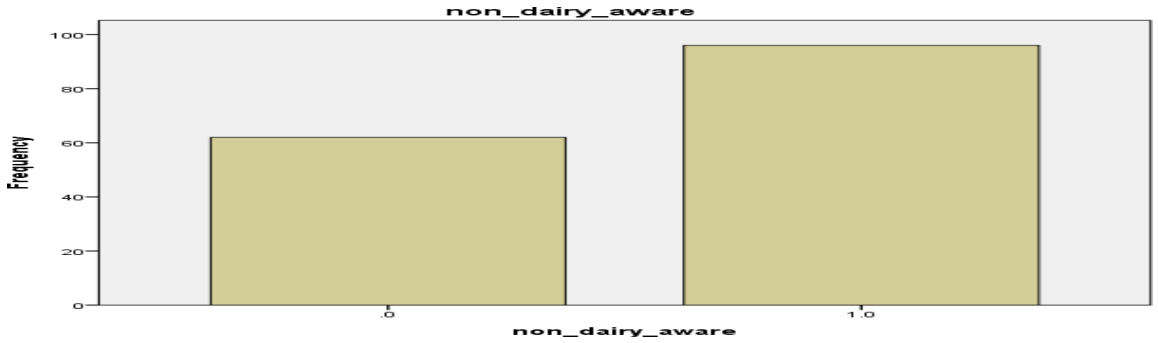
Are you aware of the nondairy products?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.0	62	39.2	39.2	39.2
	1.0	96	60.8	60.8	100.0
	Total	158	100.0	100.0	

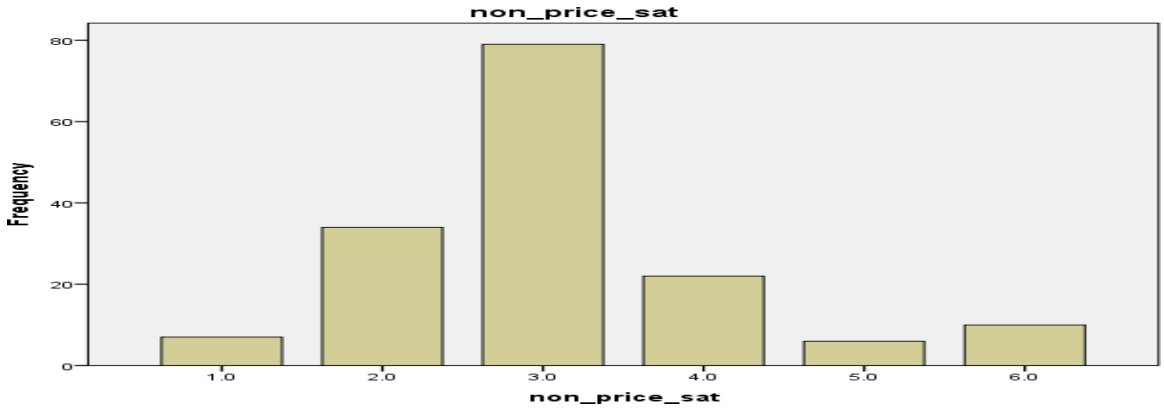
***Note**:(0=No, 1=Yes)*






non_dairy_aware
Frequency
100
80
60
40
20
0
.0
1.0
non_dairy_aware


ice_price_sat
Frequency
60
50
40
30
20
10
0
1.0
2.0
3.0
4.0
5.0
6.0
ice_price_sat


non_price_sat
Frequency
80
60
40
20
0
1.0
2.0
3.0
4.0
5.0
6.0
non_price_sat

Appendix B: Crosstabulations

What takes you to the Dairy Bar and satisfaction level with the space provided

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
What takes you to the Dairy Bar * satisfaction level with the space provided	158	100.0%	0	0.0%	158	100.0%

What takes you to the Dairy Bar * Satisfaction level with the space provided crosstabulation

			Satisfaction level with the space provided		
			1.00	2.00	Total
What takes you to the Dairy Bar	1.00	Count	70	57	127
		Expected Count	62.7	64.3	127.0
	2.00	Count	8	23	31
		Expected Count	15.3	15.7	31.0
Total		Count	78	80	158
		Expected Count	78.0	80.0	158.0

Note: *(What takes you to the Dairy Bar: 1-Dairy Products, 2=Non-dairy Products); (Satisfaction level with the space provided: 1= Satisfied, 2= Not Satisfied)*

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	8.565[a]	1	.003		
Continuity Correction[b]	7.432	1	.006		
Likelihood Ratio	8.879	1	.003		
Fisher's Exact Test				.005	.003
Linear-by-Linear Association	8.511	1	.004		
N of Valid Cases	158				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 15.30.

b. Computed only for a 2x2 table

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.233	.003
	Cramer's V	.233	.003
N of Valid Cases		158	

How often a customer visits the Dairy Bar and the satisfaction level with the prices of the ice creams

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
How often a customer visits the Dairy Bar * satisfaction level with the prices of the ice creams	158	100.0%	0	0.0%	158	100.0%

How often a customer visits the Dairy Bar * the satisfaction level with the prices of the ice creams crosstabs

			satisfaction level with the prices of the ice creams		
			1.00	2.00	Total
How often a customer visits the Dairy Bar	1.00	Count	5	22	27
		Expected Count	9.7	17.3	27.0
	2.00	Count	33	35	68
		Expected Count	24.5	43.5	68.0
	3.00	Count	19	44	63
		Expected Count	22.7	40.3	63.0
Total		Count	57	101	158
		Expected Count	57.0	101.0	158.0

Note: *(How often a customer visits the Dairy Bar: 1= Once a week, 2= Twice/more a week, 3=Once a semester or never); (Satisfaction level with the prices of the ice creams: 1= Satisfied, 2= Not Satisfied)*

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.139[a]	2	.010
Likelihood Ratio	9.396	2	.009
Linear-by-Linear Association	.054	1	.816
N of Valid Cases	158		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 9.74.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.240	.010
	Cramer's V	.240	.010
N of Valid Cases		158	

How often a customer visits the Dairy Bar and the satisfaction level with the prices of the nondairy products

Case processing summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
How often a customer visits the Dairy Bar * satisfaction level with the prices of the nondairy products	158	100.0%	0	0.0%	158	100.0%

How often a customer visits the Dairy Bar * the satisfaction level with the prices of the nondairy products crosstabs

			satisfaction level with the prices of the nondairy products		
			1.00	2.00	Total
How often a customer visits the Dairy Bar	1.00	Count	1	26	27
		Expected Count	7.0	20.0	27.0
	2.00	Count	22	46	68
		Expected Count	17.6	50.4	68.0
	3.00	Count	18	45	63
		Expected Count	16.3	46.7	63.0
Total		Count	41	117	158
		Expected Count	41.0	117.0	158.0

Note: (*How often a customer visits the Dairy Bar: 1= Once a week, 2= Twice/more a week, 3=Once a semester or never); (satisfaction level with the prices of the nondairy products**: 1= Satisfied, 2= Not Satisfied)*

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.630[a]	2	.013
Likelihood Ratio	11.370	2	.003
Linear-by-Linear Association	3.708	1	.054
N of Valid Cases	158		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 7.01.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.234	.013
	Cramer's V	.234	.013
N of Valid Cases		158	

What takes you to the Dairy Bar and satisfaction level about ice cream flavors

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
What takes you to the Dairy Bar * satisfaction level about ice cream flavors	158	100.0%	0	0.0%	158	100.0%

What takes you to the Dairy Bar * satisfaction level about ice cream flavors crosstab

			satisfaction level about ice cream flavors			
			1.00	2.00	3.00	Total
What takes you to the Dairy Bar	1.00	Count	44	64	19	127
		Expected Count	37.8	54.7	34.6	127.0
	2.00	Count	3	4	24	31
		Expected Count	9.2	13.3	8.4	31.0
Total		Count	47	68	43	158
		Expected Count	47.0	68.0	43.0	158.0

Note: (*What takes you to the Dairy Bar: 1-Dairy Products, 2=Non-dairy Products); (Satisfaction level about ice cream flavors: 1= Satisfied, 2= Neutral, 3= Not Satisfied)*

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	49.077[a]	2	.000
Likelihood Ratio	44.682	2	.000
Linear-by-Linear Association	33.262	1	.000
N of Valid Cases	158		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 8.44.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.557	.000
	Cramer's V	.557	.000
N of Valid Cases		158	

What takes you to the Dairy Bar and Satisfaction level with customer service

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
What takes you to the Dairy Bar * Satisfaction level with customer service	158	100.0%	0	0.0%	158	100.0%

What takes you to the Dairy Bar * Satisfaction level with customer service crosstab

			Satisfaction level with customer service			
			1.00	2.00	3.00	Total
What takes you to the Dairy Bar	1.00	Count	44	60	23	127
		Expected Count	41.8	55.5	29.7	127.0
	2.00	Count	8	9	14	31
		Expected Count	10.2	13.5	7.3	31.0
Total		Count	52	69	37	158
		Expected Count	52.0	69.0	37.0	158.0

Note: (*What takes you to the Dairy Bar: 1-Dairy Products, 2=Non-dairy Products); (Satisfaction level with customer service: 1= Satisfied, 2= Neutral, 3= Not Satisfied)*

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.270[a]	2	.006
Likelihood Ratio	9.283	2	.010
Linear-by-Linear Association	5.754	1	.016
N of Valid Cases	158		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 7.26.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.255	.006
	Cramer's V	.255	.006
N of Valid Cases		158	

Satisfaction level with nondairy prices and Do you purchase nondairy products

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Satisfaction level with nondairy prices * do you purchase nondairy products	158	100.0%	0	0.0%	158	100.0%

Satisfaction level with nondairy prices * Do you purchase nondairy products Crosstabulation

			Do you purchase nondairy products		
			.0	1.0	Total
Satisfaction level with nondairy prices	1.00	Count	23	18	41
		Expected Count	23.4	17.6	41.0
	2.00	Count	46	33	79
		Expected Count	45.0	34.0	79.0
	3.00	Count	8	14	22
		Expected Count	12.5	9.5	22.0
	4.00	Count	13	3	16
		Expected Count	9.1	6.9	16.0
Total		Count	90	68	158
		Expected Count	90.0	68.0	158.0

Note*: (Satisfaction level with nondairy prices: 1= Very Satisfied, 2= Satisfied, 3= Neutral, 4= Not Satisfied); (Do you purchase nondairy products: 0=No, 1= Yes)*

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.722[a]	3	.052
Likelihood Ratio	8.083	3	.044
Linear-by-Linear Association	.416	1	.519
N of Valid Cases	158		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.89.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.221	.052
	Cramer's V	.221	.052
N of Valid Cases		158	

Satisfaction level with the prices of ice cream and do you purchase ice cream?

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Satisfaction level with the prices of ice cream * Do you purchase ice cream?	158	100.0%	0	0.0%	158	100.0%

Satisfaction level with the prices of ice cream * do you purchase ice cream crosstabulation

			Do you purchase ice cream		
			.0	1.0	Total
Satisfaction level with the prices of ice cream	1.00	Count	9	3	12
		Expected Count	6.2	5.8	12.0
	2.00	Count	21	24	45
		Expected Count	23.4	21.6	45.0
	3.00	Count	26	33	59
		Expected Count	30.6	28.4	59.0
	4.00	Count	15	10	25
		Expected Count	13.0	12.0	25.0
	5.00	Count	11	6	17
		Expected Count	8.8	8.2	17.0
Total		Count	82	76	158
		Expected Count	82.0	76.0	158.0

***Note**: (Satisfaction level with the prices of ice cream: 1= Very Satisfied, 2= Satisfied, 3= Neutral, 4=Unsatisfied, 5= Not Satisfied); (Do you purchase ice cream: 0=No, 1= Yes)*

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.282[a]	4	.179
Likelihood Ratio	6.444	4	.168
Linear-by-Linear Association	.218	1	.640
N of Valid Cases	158		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.77.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.199	.179
	Cramer's V	.199	.179
N of Valid Cases		158	

Appendix C: Regression output

Regression

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.405[a]	.164	.137	.8271	.164	5.974	5	152	.000

a. Predictors: (Constant), internet, cust_sat, advert, a_friend, ice_price_sat

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	20.438	5	4.088	5.974	.000[b]
	Residual	103.993	152	.684		
	Total	124.430	157			

a. Dependent Variable: when likely are you to visit the Dairy within one month

b. Predictors: (Constant), internet, customer service, advert, through a friend, satisfaction level with ice cream prices

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	1.615	.204		7.921	.000	1.212	2.018
	ice_price_sat	.125	.066	.165	1.892	.060	-.006	.255
	cust_sat	.244	.070	.295	3.499	.001	.106	.382
	advert	.350	.249	.112	1.405	.162	-.142	.842
	a_friend	-.180	.146	-.101	-1.227	.222	-.469	.110
	internet	-.102	.299	-.027	-.343	.732	-.692	.487

a. Dependent Variable: when likely are you to visit the Dairy within one month

Note: (*ice_price_sat = How satisfied a customer is with the ice cream prices at the Dairy Bar, cust_sat = How satisfied a customer is with the customer services provided at Dairy Bar, advert= Advertisement = a_friend = Through a friend, internet = Internet)*