



# CALIFORNIA STATE SCIENCE FAIR 2011 PROJECT SUMMARY

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| <b>Name(s)</b><br><b>Clint Ellis; Jack Ellis</b>  | <b>Project Number</b><br><b>S0410</b> |
| <b>Project Title</b><br><b>Do Shoppers Overspend at Costco?</b>   |                                       |
| <p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b><br/>Our objective was to investigate whether or not anonymous shoppers overspend at Costco and by how much. Our hypothesis prior to conducting a brief survey was that the average anonymous shopper would overspend by \$50 on a typical visit caused by impulse/unplanned buying.</p> <p><b>Methods/Materials</b><br/>Informed consent was obtained from 102 randomly selected Costco shoppers on-site in San Luis Obispo, California over a five week period in January and February 2011. The shoppers were anonymous and were surveyed by the project team in order to determine their shopping behavior. The shoppers were asked if they came to Costco with a shopping list and what they thought they would spend relative what they actually spent. They were also asked if they had made any unplanned/impulse purchases.</p> <p><b>Results</b><br/>We found that 56 percent of the shoppers made a shopping list. We determined that the average (mean) of overspending was \$33 and the median was \$30 per shopper. We also found that 62 percent of the shoppers had made impulse purchases. The average (mean) spending per shopper was \$187. The standard deviation was \$104 which means that most of the shoppers probably spent between \$83 and \$291. The standard deviation of spending was 56 percent of the mean. Our sample size of 102 anonymous shoppers had a margin of error of 10 percent. We found that most anonymous shoppers were willing to participate in our survey.</p> <p><b>Conclusions/Discussion</b><br/>Our hypothesis turned out to be higher than our survey findings. Factors which may have affected the results were that the surveys were conducted one to two months after Christmas in a weak economy following the recession and that the primary employers in San Luis Obispo County are in the government, education and agricultural sectors. Our research focused on anonymous individuals where the researchers did not manipulate the subjects# behavior and the study did not involve more than minimal risk. Our survey did not involve gathering personal information, invasion of privacy or potential for emotional distress.</p> |                                       |
| <b>Summary Statement</b><br>Our project is about whether or not Costco shoppers overspend and if so by how much.  |                                       |
| <b>Help Received</b><br>Mom and dad for helping us get this project off the ground and driving us to Costco many times.   |                                       |