**STRATEGIC CONSUMER CHOICE: A COLLEGE STUDENT’S DILEMMA**

**Introduction**

Peter, an international t experienced a perplexing dilemma when he arrived in the United States. He came from China to earn a Master of Business Administration (MBA) degree at a Midwestern university. As a recent graduate student from another country, Peter had to adapt to many things such as different educational system, a new lifestyle, and managing his existence on a very limited budget.

At the beginning of the first semester, Peter paid his tuition and rent, bought textbooks, and purchased a car to get well-prepared for his new life in United States. However, Peter received a phone call from the bank shortly after making these expenditures and suddenly realized “Oh my god! I am running out of money!” This challenge was quite unexpected, and occurred shortly after he arrived on campus. He quickly learned that major challenges in life are not magically resolved! Large financial problems are not typically easy to fix.

Peter thought long and hard about his dilemma and came up with a way to reduce his living expenses. He believed he could cut costs by primarily saving money spent on groceries and gas for transportation. Nevertheless, having a busy class schedule required spending 12 to 14 hours on campus. Ultimately, Effective management of his time and budget became an “extra homework” question for the statistics class he was taking this semester.

**Background**

Peter’s university is located in a medium size city of approximately 100,000 residents. There are many different options for grocery shopping but only four of these stores have a prominent presence: Woodman’s, Walmart, Target, and Piggly Wiggly. Peter had visited all four stores but with thousands of products and prices to choose from it was difficult for him to make a choice. He learned through informal discussions that people in the United States typically have a preference for grocery shopping at one store over others. Their preferences seemed to stem from perceptions of various advertisements, deals and discounts, and word of mouth. However, after doing online research, he did not find any study or scientific data to support these preferences.

The question of where to shop for groceries given his limited budget, busy schedule, and shopping preferences was quite challenging. Peter wanted to complete all of his grocery shopping in one trip each week, but sometimes he ran out of something important and had to go to a grocery store more often. Fortunately, the major grocery stores had expansive hours that were convenient for Peter’s busy college schedule. Woodman’s was open 24 hours and had the largest ethnic and healthy food options. Cash, check or debit cards were accepted, but no credit cards. It was farthest from his residence; it is almost 10.5 miles away and 20 minutes driving time each way. Wal-Mart was also open 24 hours and had a large variety of products. In addition, Walmart advertised everyday low pricing on their products. One way distance to Walmart was 4.5 miles with approximately 10 minutes of driving time each way. Target was another option for grocery shopping with many weekly discounts. It was almost 9.5 miles from Peter’s home, 18 minutes driving each way and was open from 8 am to 10 pm Monday through Saturday with reduced hours on Sunday. The last option for Peter was Piggly Wiggly. It was located 1.3 miles from home, was only five minutes away, and was open 6 am to 10 pm every day.

Peter wanted to resolve his dilemma regarding where to shop for groceries as rationally as possible. He learned in his statistics class that the next step in grocery price analysis is to collect data. Peter went to grocery stores and collected data on the same 55 grocery products from various categories: Bulk Items, Poultry, Meat/Deli, Dairy, Cleaning Supplies, Frozen Goods, and Other. Bulk items consisted of produce obtained from various suppliers that is non-brand specific. Examples include white onions, broccoli, and peaches that can be purchased per pound in the desired quantity. Special care was taken to compare products of the same brand, quantity and flavor from all categories at the different stores. For example, price data for Silk Soy Milk Very Vanilla, 64 ounce size was collected from all the stores. The price data collected by Peter is provided in Table 1 below.

**Table 1. Grocery Price Data for Selected Items from Woodman’s, Wal-Mart, Target, and Piggly Wiggly**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Item Description** | **Unit** | **Woodman’s** | **Walmart** | **Target** | **Piggly Wiggly** |
| **Bulk Produce** | Limes | ea. | $0.10 | $0.18 | $0.49 | $0.39 |
| Lemons | ea. | $0.50 | $0.48 | $0.59 | $0.59 |
| Small oranges | ea. | $0.50 | $0.48 | $0.89 | $0.50 |
| Plums | lb. | $1.49 | $1.48 | $2.07 | $1.69 |
| Peaches | lb. | $1.49 | $1.48 | $1.77 | $2.29 |
| Driscolli's Strawbarries 16 oz pkg | pkg. | $2.99 | $1.98 | $2.39 | $3.49 |
| Driscolli's raspberries 6 oz pkg | pkg. | $2.00 | $2.48 | $2.49 | $3.99 |
| Driscolli's blueberries 6 oz pkg | pkg. | $2.99 | $3.48 | $3.49 | $3.99 |
| Driscolli's blackberries 6 oz pkg | pkg. | $2.99 | $3.98 | $4.79 | $3.49 |
| Roma tomatoes | lb. | $0.99 | $0.98 | $0.99 | $1.59 |
| Cucumbers | ea. | $0.50 | $0.46 | $0.79 | $0.79 |
| Broccoli | lb. | $1.29 | $0.98 | $2.49 | $1.69 |
| Bananas | lb. | $0.45 | $0.47 | $0.60 | $0.45 |
| Red peppers | ea. | $1.29 | $1.50 | $1.59 | $0.99 |
| Sweet potatoes | lb. | $0.79 | $0.78 | $1.29 | $0.99 |
| "bulk baking" potatoes | lb. | $0.59 | $0.58 | $0.99 | $0.59 |
| Bulk red potatoes | lb. | $0.79 | $0.68 | $0.99 | $0.59 |
| Red onions | lb. | $0.99 | $1.34 | $0.89 | $1.29 |
| Sweet onions | lb. | $0.99 | $0.88 | $0.89 | $1.29 |
| White onions | lb. | $0.99 | $0.88 | $0.99 | $1.19 |
| Small yellow onions | lb. | $0.49 | $0.56 | $0.76 | $0.59 |
| Eggplant | lb. | $1.29 | $1.78 | $1.29 | $1.19 |
| Golden delicious apples | lb. | $1.49 | $1.47 | $1.60 | $1.89 |
| Granny smith apples | lb. | $1.49 | $1.47 | $1.60 | $2.29 |
| Red delicious apples | lb. | $1.29 | $1.39 | $1.60 | $1.79 |
| Gala apples | lb. | $1.49 | $1.47 | $1.60 | $2.69 |
| Asparagus | lb. | $3.99 | $2.78 | $3.49 | $5.99 |
|  | **Item Description** | **Unit** | **Woodman’s** | **Wal-Mart** | **Target** | **Piggly Wiggly** |
| **Poultry** | Jennie-O Ground Turkey Breast 20 oz | pkg. | $5.99 | $5.96 | $3.50 | $6.49 |
| Jennie-O sweet italian turkey sausage 19.5 oz | pkg. | $3.99 | $4.38 | $2.79 | $4.69 |
| Jennie-O turkey burger patties (lean) 16 oz | pkg. | $3.99 | $3.68 | $3.99 | $3.99 |
| **Meat/Deli** | Johnsonville Brats Original Bratwurst 19 oz | pkg. | $3.49 | $3.78 | $2.89 | $3.89 |
| Ball Park Bun Size Franks 16 oz | pkg. | $1.59 | $2.78 | $2.65 | $3.69 |
| Oscar Mayer Bologna 16 oz | pkg. | $1.99 | $1.88 | $1.93 | $1.69 |
| Hormel Black Label Center Cut Bacon 12 oz | pkg. | $4.69 | $4.48 | $4.64 | $4.69 |
| Hillshire Farm Deli Select Smoked Ham 9 oz | pkg. | $2.99 | $2.98 | $2.99 | $3.99 |
| **Dairy** | Yoplait Original Yogurt 6 oz | pkg. | $0.55 | $0.58 | $0.59 | $0.75 |
| Chobani Greek Yogurt 6 oz | pkg. | $1.15 | $1.22 | $1.22 | $1.39 |
| Daisy Brand Light Sour Cream 24 oz | pkg. | $2.79 | $2.68 | $2.49 | $3.49 |
| Eggland's Best Large Eggs 12 ct | pkg. | $2.19 | $2.78 | $2.89 | $2.55 |
| Silk Soy Milk Very Vanilla 64 oz | pkg. | $2.89 | $2.98 | $2.99 | $3.59 |
| **Cleaning Supplies** | Tide Laundry Detergent 50 oz | pkg. | $7.99 | $7.54 | $7.54 | $8.69 |
| Dawn Antibacterial dish soap 24 oz | pkg. | $2.49 | $2.83 | $2.84 | $3.39 |
| Cascade Dishwasher gel 120 oz | pkg. | $6.49 | $5.97 | $7.69 | $5.19 |
| Scotch Brite heavy duty scrub sponges 6 pk | pkg. | $4.29 | $5.48 | $4.99 | $5.69 |
| Shout trigger bonus 30 oz | pkg. | $2.29 | $2.48 | $2.49 | $2.95 |
| **Frozen Goods** | Tombstone original extra cheese pizza 20.5 oz | pkg. | $3.89 | $3.33 | $3.69 | 5.5 |
| Marie callendars honey roasted turkey breast 13 oz | pkg. | $2.99 | $2.50 | $2.54 | 2.69 |
| Bertolli shrimp scampi and linguine | pkg. | $6.99 | $6.48 | $5.49 | 6.69 |
| Green giant sweet peas 9 oz | pkg. | $1.39 | $1.48 | $1.29 | 1.79 |
| Totino's pizza rolls triple cheese 19.9 oz | pkg. | $3.39 | $2.72 | $2.99 | 3.69 |
| **Other** | Cholula Hot Sauce | pkg. | $3.09 | $2.64 | $2.37 | $2.85 |
| Progressive Italian Style Wedding Soup 18.5 oz | pkg. | $1.89 | $1.48 | $1.49 | $2.15 |
| Ragu Meat Pasta Sauce 45 oz | pkg. | $2.69 | $2.88 | $2.99 | $3.39 |
| A1 steak sauce 10 oz | pkg. | $3.39 | $2.98 | $2.99 | $4.09 |
| Hidden valley ranch original 16 oz | pkg. | $2.89 | $2.98 | $2.99 | $3.25 |

**The Challenge**

As the semester progressed, Peter learned more quantitative methods that he thought could be used to compare prices at the four largest grocery stores. He was puzzled about which method would be appropriate for price comparison. Peter’s course load of five classes per semester limited his time to shop and combined with his limited budget made him think about other facts that might affect his decision about grocery store selection. He was confronted with many constraints including money, time, and personal shopping preferences. What would you recommend to help him make an appropriate decision?