MARKETING SURVEY PROJECT / PRESENTATION

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Economics F

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I. Abstract:

As you can see, our AIS High School campus has a small student store at the lobby. This store is managed by students and they sell foods and drinks that canteen doesn't have. The cost of the products there range from 500 to 24000VND. However, these prices are made up by the students without any logical reason. That is why we do this marketing survey project in order to help the student's government make right decisions about products and pricing in the student store. In this project, we apply the core concepts related to Demand (Demand Schedule, Demand Curve, Elasticity of demand) to gain accurate results. We hope that this project will not only help the students store to generate the best profit but pave way for students to experience how entrepreneurs use the lessons in making decisions and learn how to cooperate well in a group.

II. Methodology:

In this project, we choose Panda cookies as the main product for the survey. We are interested in the relation between price and quantity of demand in market places. We'll use price to estimate the quantity of demand throughout the survey of the panda cookies. According to statistic, we have to start checking out conditions whether they are satisfied or not before doing any calculation. Our population is all students at AIS and the population size is 40 students. The population size is less than 10% of all males and females students at AIS. We carried out the survey through the following steps: Firstly, we assigned each student in AIS High School a different ID number. Secondly, we used graphing calculator to randomly pick 10 students (5 males and 5 females) for each grade from 9 to 12. Then, we surveyed them independently and recorded the answers down.

The question that we used is: "For every price point below, how many packets of Panda cookies would you buy per week?" We listed out prices from 6000VND to 10000VND and quantity of demand from none to more than five.
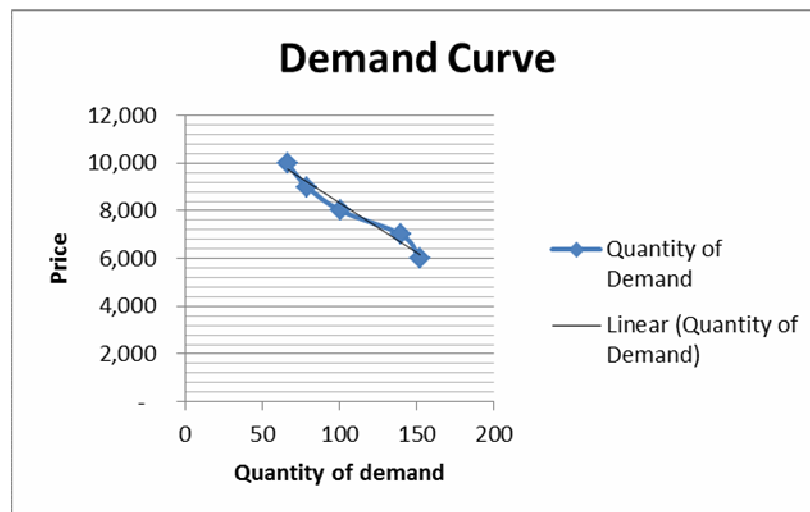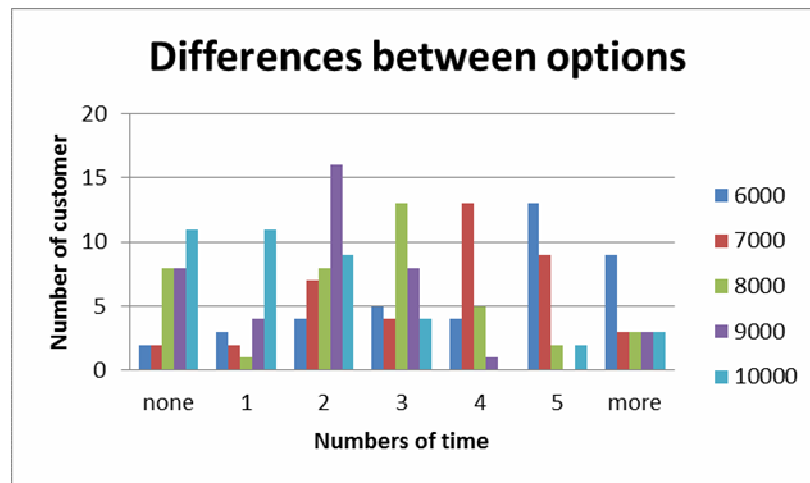
III. Data Analysis

A recorded responded table:

Numbers of time/ Price	None	1	2	3	4	5	>5
6,000	2	3	4	5	4	13	9
7,000	2	2	7	4	13	9	3
8,000	8	1	8	13	5	2	3
9,000	8	4	16	8	1	0	3
10,000	11	11	9	4	0	2	3
						Total	40

Demand schedule:

Price	Quantity of Demand
6,000vnd	152
7,000vnd	140
8,000vnd	101
9,000vnd	79
10,000nd	66

- Calculation and Graphs:

o Interpreting the graph: As you can see in the demand curve above, it shows negative linear relationship which means that the lower the price, the more quantity of demand will be. There are no scatter throughout, no shape, no bent and no extrapolation. An R^2 of 96.72% indicates that 96.72% of the variation in maximum price can be accounted for by the variation in the quantity of demand in the market places.

o <u>Calculation:</u> We have a mean of price ($\bar{y}$) is 8000 and standard deviation (S_y) of price is -1581.14; a mean of demand ($\bar{y}$) is 107.6 and a standard deviation (S_x) of demand is 37.4606. We have a correlation is 0.98 which means the relationship between prices and the quantity of demands is strong.

o <u>Slope:</u> $b_1 = \dfrac{rS_y}{S_x} = \dfrac{0.98*1581.14}{37.4606} = $ -41.363

By looking at the slope, you can know that when quantity of demand increases by 1 quantity, price will increase -41.363vnd.

o <u>Intercept:</u> $b_0 = \bar{y} - b_1 = 8000 + 41.363 = 8041.36$

The y intercept tells you that whenever the quantity of demand equals 0, the estimated price will be 8041.36. Finally, we have the regression equation for the price as the quantity of demand increases or decreases. People can use the equation to estimate the price in the future.

$$\overline{Price} = \text{-41.363x + 8048.36}$$

IV. Conclusions:

If we look at the result, we can see that the price affects the quantity of demand a lot and thus plays an important part in making profit. Since one of the purpose of this project is to make the most profit, we decide to use the demand schedule to estimate at which price will bring out best profit. After calculating, we realize that at 7000VND with quantity of demand at 140 makes 980000VND which is the most out of all price points. So we decide to choose price around 7000VND for each packet of Panda cookies.