
WEEK 1:

Omar has heard from some of his customers that they will probably cut back on order sizes in the next quarter. The company he works for has been reducing its sales force due to falling demand and he worries that he could be next if his sales begin to fall off. Believing that he may be able to convince his customers not to cut back on orders, he turns in an optimistic forecast of his next quarter sales to his manager. What are the pros and cons of doing this?

- On the one hand, with an optimistic forecast, Omar will have motivation to work hard, invest more time and effort in persuading customer do not cutting the order sizes for optimum performance. Another key advantage of sales forecasting is the opportunity to make adjustments based on expectations[CITATION Vic18 \l 1066]. If the Omar's forecasting is accurate, the company anticipates much more order sizes from customers, the sale forces will not cut off or even increase if the order sizes go up as well. Additionally, he can identify weaknesses and strengths before he set sales plans for the next quarter, allowing Omar to optimize the expansion plans. Therefore, by this way Omar can not only save his position but also may receive the reward by increasing the customer's orders.

- On the other hand, if Omar's forecast has some errors, it's difficult for the managers to decide how much supply or capacity will be needed to match expected demand, both within the organization and in the supply chain. Moreover, once he fails in forecasting, he would suffer a lot consequences. Inaccurate forecasting may lead to his negative performance, meanwhile the customer still cut back the order sizes. He may take time in developing his sales strategies to convince the customer and may be dismissed from the company.

References

Duff, V. (2018, April 16). *The Advantages of Sales Forecasting*. Retrieved from <https://yourbusiness.azcentral.com/advantages-sales-forecasting-10308.html>

Hi Thuy,

Nice to meet you in this week. I'm curious about your answer about some advantages and disadvantages of forecasting about this case.

To be honest, I totally agree with you that optimistic forecasting may be effective in motivating employees. They tend to make all efforts or work hard to achieve desire goals in the future. However, I think that pros of Omar's forecast may outweigh the cons of that. Because he has no conduct technique or method as basis to give his forecasting. Do you agree with me?

Great work, keep it up. Hope you have a good result and have a nice weekend.

Regard,

Thao Bui

Hi Chau,

Nice to meet you in this class. I'm very happy to work with you.

I strongly agree about your answer in this week. It's quite good and easy to understand. I think that company should focus on continually improve their product by adding innovation, introducing new products, and expanding markets to become more successful. How do you think about a company should use a Michael Porter model to create their competitive advantages and develop differentiate product campaign?

Great work. Keep it up. I hope that my attribution can support for your work. Have a nice week.

Best regard,

Thao Bui

WEEK 2:

There is no doubt that skin cancer trends are catching up quickly. More than 5.4 million cases of skin cancer have been treated in more than 3.3 million people in the US in 2015. The annual cost of treating skin cancer in the United States is estimated at 8.1 billion dollars: about 4, \$ 8 billion for skin cancer and \$ 3.3 billion for melanoma (Basagoitia, 2017). That's one reason why I want to see a modified product that is good for human skin, it's bio-washing powder. With the meaning of this product, I believe it will be environmentally friendly and chosen by many people around the world.

It is true that there are many different meanings related to the production of biological detergents related to legal, ethical, environmental, profitable, competitive, design or production issues in the market.

- Legal: The product should follow the rules and regulations set by the government for the manufacturing industry. Moreover, products need to be inspected and licensed by the Ministry of Industry and Trade before being released to the market.
- Ethics: Product must not harm citizens. The company should ensure that all necessary safety measures are followed while manufacturing the product.
- Environment: The product should be extracted from natural ingredients to reduce significantly adverse effects on human skin. Moreover, the production process must not be harmful to the environment and does not adversely affect environmental conditions.
- Profitability: The product will attract a large number of consumers in the market because the rate of skin cancer is increasing. Moreover, its price is even cheaper than non-biological washing powder. Therefore, this product will generate positive revenue foran organization and get a pretty good profit.

- Competition: Biological products completely create a high competitive advantage over similar products produced by a competitive company due to environmental friendliness.
- Design: Product should be designed to suit the purpose of users. May include large bottles and small extraction bottles attached.
- Production: Because the production process of washing powder is quite simple, it will not take much time. Manufacturers should pay attention to the main components and ensure this is a closed production process.

References

Basagoitia, R. (2017, 18 11). *Skin Cancer: Facts, Statistics, and You*. Retrieved from Health Life: <https://www.healthline.com/health/skin-cancer/facts-and-stats#1>

Hi Huyen,

Nice to meet you in this week. I'm curious about your new product you would like to see as a digital automotive accessories for digital car in the future.

To be honest, I think that your product is quite attractive to a lot of customers in modern society. With the detail in design, I could recognize that great benefits it bring to the profitability and competitiveness. However, you should separate each implications of the product and say clearly about the production and design process.

Great work, keep it up. Hope you have a good result and have a nice weekend.

Regards,

Thao Bui

WEEK 3:

What information does a decision maker need in order to perform an expected value analysis of a problem? What options are available to the decision maker if the probabilities of the states of nature are unknown? Can you think of a way you might use sensitivity analysis in such a case?

To perform an expected value analysis of an issue, a decision maker need to have the following information:

- 1) A list of possible alternatives
- 2) Number of states of nature for each of the alternatives

- 3) The expected payoff for each possible future state of nature
- 4) The probability or the likelihood of each possible future state of nature

With all the information above we can conduct an expected value analysis. To give an accurate analysis, it is very crucial to make an accurate estimation and sensitivity of the probabilities of each state of nature.

If the probabilities of the states of nature are unknown, there are four options available:

- Maximax is an optimistic approach in which the decision maker will isolate the maximum payoff under each decision alternative and select the one that produces the highest of these maximum payoffs.
- Maximin is a pessimistic approach in decision making process. the decision maker will select the worst or minimum payoff. Then, the decision maker will choose the best payoff of those minimum selected under each decision alternative.
- Minimax regret is based on lost opportunity. The decision maker will calculate the opportunity loss for each decision alternative by subtracting the decision alternative from optimal decision choice. Then they will select the maximum regret for consideration.
- Laplace: choose the alternative with the best average payoff of any of the alternative

Sensitivity analysis is the study of how the different values of a set of independent variables affect a specific dependent variable under certain specific conditions. In general, sensitivity analysis is used in a wide range of fields, ranging from biology and geography to economics and engineering[CITATION Wil18 \l 1033].

For example, we can use the sensitivity analysis tool to examine the effect on a company's net income (bottom line) when sales levels are increased or decreased 10%.

References

Kenton, W. (2018, 8 14). *Sensitivity Analysis*. Retrieved from Investopedia:
<https://www.investopedia.com/terms/s/sensitivityanalysis.asp>

Stevenson, W. (2011). *Operations Management*. Ohio: McGraw-Hill College.

Hi Thuy,

Nice to meet you in this week after a very happy Lunar New Year. I'm very happy to work with you.

To be honest, I totally have the same answer with you about what information that a decision maker need in order to perform an expected-value analysis. I also notice that you provided available options very detail and clearly, right? However, I have a little bit confuse about your example in the last part. I think that increasing material costs may reduce the potential profit level. What do you think?

Great work, keep it up. Hope you have a good result and have a nice weekend.

Regard,

Thao Bui

Hi Hieu Do,

Nice to meet you in this week after a very happy Lunar New Year. I'm very happy to receive your supporting about my work.

At first, I think your contribution is quite useful for me in performing an expected-value analysis of a problem. I will consider to add it for my answer. Secondly, about your question, I would like to explain that if the sales level increase about 10% (independent variable), the net income (dependent variable) will increase as well after deducting all cost and expenses. The sensitivity analysis will analyze exactly how sales affect the net income.

Best regard,

Thao Bui

Hi Hoa,

Nice to meet you in this week after a very happy Lunar New Year. I'm very happy to work with you.

To be honest, I can see that you did your work very well and clearly. With all information ypu provide in the first part, I agree that a decision maker can perform an expected value analysis of a problem accurately. However, in the second part, I would like to add one more option for you.

That is minimax regret, which is based on lost opportunity. Additionally, I really don't get your point about stock market example when applying sensitive analysis. Can you explain more about your ideas?

Great work, keep it up. Hope you have a good result and have a nice weekend.

Regards,

Thao Bui

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