## Unit 6 Discussion Example - First Response to a Classmate's Post

First response: Choose a classmate's post and review his or her decision analysis table. Add to this table by choosing a risk level for each state of nature (assign a probability value to each).

1. Calculate the EMV for each alternative.
2. Discuss which alternative is best based on the best (maximum) EMV.
3. Calculate the Expected Value with Perfect Information (EVwPI).
4. Calculate the EVPI.
5. Discuss how much money your classmate should pay for perfect information.

I will review "The New Green!" smoothie business. I will assume that the probability of an awesome nutritional demand is 50\%, Moderate nutritional demand is $30 \%$ and Poor nutritional demand is \%20.

| Profit | Awesome Nutritional Demand | Moderate Nutritional Demand | Poor Nutritional Demand |  | EMV | Minimum | Maximum |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Probability | 0.5 | 0.3 | 0.2 |  |  |  |  |  |
| 3 New Carts | 450 | 150 | -150 |  | 240 | -150 | 450 |  |
| 1 New Cart | 150 | 50 | -50 |  | 80 | -50 | 150 |  |
| O New Carts | 0 | 0 | 0 |  | 0 | 0 | 0 |  |
|  |  |  |  | Maximum | 240 | 0 | 450 |  |
| Expected Value of Perfect Information |  |  |  |  |  |  |  |  |
| Column best | 450 | 150 | 0 |  | 270 | <-Expected value WITH perfect informatic |  |  |
|  |  |  |  |  | 240 | <-Best exp | ected value |  |
|  |  |  |  |  | 30 | <-Expected | d value OF | formation |

1. The EMV for each alternative is:

|  | EMV |
| ---: | :---: |
| 3 New Carts | 240 |
| 1 New Cart | 80 |
| 0 New Carts | 0 |

2. The maximum EMV would be to build 3 new carts with an expected monetary value of $\$ 240$ per day.
3. The Expected Value with Perfect Information (EVwPI) = \$270.
4. The Expected value OF perfect information (EVPI) $=\$ 30$.
5. The above calculations then tell me that I should only spend about $\$ 30$ (a day!) to get additional information about the nutritional market. So, I guess if I wanted to pay someone to survey my clientele, I should only pay $\$ 30$ a day or about $\$ 210$ a week to get market information!
