

# [Operation analysis](https://assignbuster.com/operation-analysis/)

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Operation Analysis or Operation Analysis A. 2 (e) Expected Monetary Value (EMV) is an monetary figure calculated to assess the viability of a decision or the potential consequences of an occurrence (Riggs and Bonk, 2008, p. 33). Assuming every outcome is as likely as its alternatives, we can calculate the EMVs for all potential decisions that Susan could take; in the case of a
Small-sized station,
Annual returns if the market is: Good: $50, 000
Fair: $20, 000
Poor: -$10, 000
EMV = (1/3) \* (50000+20000-10000) = $20, 000
Medium-sized station,
Annual returns if the market is: Good: $80, 000
Fair: $30, 000
Poor: -$20, 000
EMV = (1/3) \* (80000+30000-20000) = $30, 000
Large-sized station,
Annual returns if the market is: Good: $100, 000
Fair: $30, 000
Poor: -$40, 000
EMV = (1/3) \* (100000+30000-40000) = $30, 000
Very-Large size station,
Annual returns if the market is: Good: $300, 000
Fair: $25, 000
Poor: -$160, 000
EMV = (1/3) \* (300000+25000-160000) = $55, 000
Therefore, as evident from a simple comparison of the four different EMV values, opening a Very-Large size gasoline station is the most feasible option available to Susan, on the basis of Expected Monetary Values.
A. 3 (a)
In the case of Clay Whybark’s choices, all the different states of nature have differing probabilities; therefore the calculation for the best choice from the perspective of EMV will not be very straightforward. The different EMVs are calculated as follows:
Large stock:
Big demand (30 percent probability):$22, 000
Average demand (50 percent probability):$12, 000
Small demand (20 percent probability):-$2, 000
EMV = (0. 3\*22000) + (0. 5\*12000) + (0. 2\*(-2000)) = $12, 200
Average Stock:
Big demand (30 percent probability):$14, 000
Average demand (50 percent probability):$10, 000
Small demand (20 percent probability):$6, 000
EMV = (0. 3\*14000) + (0. 5\*10000) + (0. 2\*6000) = $10, 400
Small Stock:
Big demand (30 percent probability):$9, 000
Average demand (50 percent probability):$8, 000
Small demand (20 percent probability):$4, 000
EMV = (0. 3\*9000) + (0. 5\*8000) + (0. 2\*4000) = $7, 500
Therefore, as shown, a Large stock would provide Clay Whybark the highest EMV value.
A3. (b)
The Expected Value of Perfect Information (EVPI), as indicated by the term itself, is the abstract monetary value of having certain knowledge of the best decision among two, or more, choices.
In the current case, first we calculate the monetary value of making the best decision in accordance with the prevailing state of nature,
EV| PI = (0. 3\*22000) + (0. 5\*12000) + (0. 2\*6000) = $13, 800
Then,
EVPI = EV| PI – EMVmax = 13800 – 12200 = $1, 600
References
Riggs, T., & Bonk, M. (2008). Everyday finance: Economics, personal money management, and entrepreneurship. Detroit: Gale Cengage Learning.