

Gas or Euro95?: that's the question.

For many years in the Dutch automotive sector built in gas-installations in cars were very popular. You are the marketing manager of an installer of gas installation in cars. For a specific car (Peugeot 506) the following data are available:

- Price of a new car (Euro95, without gas installation): €30.000,-; at the end of the lifetime this car can be sold for 15.000,-
- Price of a new car (with gas installation): €35.000,-; at the end of the lifetime this car can be sold for €15.000,-
- Lifetime: 5 years
- Fuel usage (Euro95): 1 litre for 15 kilometers
- Price Euro95: €1,80 per litre
- Fuel usage (gas): 1 litre for 10 kilometers
- Price gas: €0,80 per litre
- Number of kilometres per year: 60000

When having a built-in gas installation some extra maintenance is necessary: during the lifetime of the car, in year 3 the valves need to be repaired: this costs €1.500,-. (we assume that the repair of the valves is independent of the number of kilometres driven with the car). For a car with gas the yearly taxes are €1528,- while for a Euro95 car you only pay taxes of €760,- on a yearly basis. The differences in insurances is so small and therefore can be ignored. There are also some inconveniences associated with gas installations in cars. Due to the fact that the gas tank only contains 50 litres and the more inefficient fuel usage, a car driver has to stop much frequently to fill the tank. And in cases where the gas tank is installed in the trunk of the car, there is much less space. The big advantage of the gas installation is the green image.

Questions:

1. What's is your product and what's the NBA?
2. Construct a customer value model. Take into account the following:
 - a. Define word equations.
 - b. Construct a model in which you specify the different years.
 - c. Make use of NPV; $r = 10\%$
 - d. Use rounded numbers (no decimals)
 - e. Mention all possible placeholders.
3. Define at least two different value propositions (value proposition A, value proposition B). Describe in a few key words the characteristics of a segment where value proposition A is applicable. Also do this for value proposition B.

Answers: Gas or Euro95

1. My product is the car with the gas installation; the NBA is the car without the gas installation, fuel Euro95.
2. Customer Value Model

Word equations

Taxes: (taxes per year gas -/- taxes per year euro95)

Maintenance: (maintenance per year gas -/- maintenance per year euro95)

Fuel: ((#kilometers per year/fuel usage gas)*gas price) -/- ((#kilometers per year/fuel usage euro95)*euro95 price)

Price element: ((initial price gas -/- residual value gas)/lifetime gas) -/- ((initial price euro95 -/- residual value euro95)/lifetime euro95)

Value in use model

	1	2	3	4	5
Value elements:					
Cost savings					
Maintenance			-1500		
Taxes	-768	-768	-768	-768	-768
Fuel savings	2400	2400	2400	2400	2400
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Total savings	1632	1632	132	1632	1632
Price elements:	-1000	-1000	-1000	-1000	-1000
VIU per year	632	632	-868	632	632

$$NPV = -5000 + 1632/1,1 + 1632/1,1^2 + 132/1,1^3 + 1632/1,1^4 + 1632/1,1^5 = 60$$

Placeholders

- Green image (+)
 - Less ease of use because the car driver has to refuel more frequently (-)
 - Less luggage space in the trunk (if the car installation is in the trunk) (-)
3. Value proposition A: A car with a gas installation gives you a financial benefit if you drive more than 60000 kilometers a year.
Value proposition B: If you drive less than 60000 kilometers a year the car with the gas gives you a green image.