

Make a decision

Business



Introduction

For project 2 we were asked to analyse a set of data to ultimately make a decision between two options. More in to context, we are acting on behalf of "The Business" in the home decorating department. Our task was to produce a justified reason to either to refurbish the department or replace it all together. In doing this, the Net Present Value (NPV) figure will determine our reason to choose between the two options which will be calculated.

Methodology

We used Microsoft Excel (ME) templates to produce future forecasts for both the refurbishment and replacement option. We were initially faced with the template which consisting of twelve columns (appendix 1) and were required to use historic data from previous years to establish trends and seasonal variations for the Nottingham Home decorating Department. We then used these trends to work out future forecasts for the department. We decided to use the Additive Component Model $A = T + S + E$ (ACM) over the alternative; the Multiplicative Component Model (MCM) the reasons for this are that the size of the seasonal variation for the Nottingham Home Decorating Department is independent of the size of the actual values. Using the ACM we then able to illustrate our figures in a graph which outlined positive growth for the department (appendix graph 1). Conveniently, this provided us with forecasts up to 2012 (appendix 1) as long as there are not any unexpected significant changes that occur. (Appendix graph 2)

Refurbishment option

Initially making sure our forecasts are correct we move on the cash flow work sheet which would allow us to build the model for the two options, the <https://assignbuster.com/make-a-decision/>

The first option refers to refurbishment and the second to the replacement option. This model would allow us to develop a business development proposal for the Nottingham home decorating store outlining both NPVs which would help us make our decision (appendix 2) in order to develop the cash flow we firstly needed to look at the other cost required for the two alternatives which was provided to use based on previous experience and did not involve any formulas. We then started filling in the cash flow work sheet by putting in the data from the sheet given to use from previous experiences. We choose to firstly consider the refurbishment option. Then we took the forecasting quarterly revenue starting from quarter 2 in 2010 from the forecast template that we have filled at the start. We then used the same pressure for all the quarters up to Quarter 1, 2012 and multiplied each by a thousand. Now we have future forecast in quarters we moved to the % increase in quarterly revenue from the tables we have filled in at the beginning of the cash flow we know that the % increase for each quarter would be 15%. So we multiplied each quarter by 0.15. Then to find out the total future forecast revenue, for each quarter we added both the future forecast £/qtr on increase in quarterly revenue and used the same method for all quarters. Once this was done we looked at the overheads part of the refurbishment option. On the overheads part we then entered refurbishment cost £/sqft from the information given to us. We then moved to the total refurbishment cost. £ where we multiplied the cost of refurbishment by the shopping floorspace available sqft which gave us the initial investment of the company. We entered management cost which is fixed on all quarters, the other costs, and found the total other costs by multiplying other costs by floorspace available and using the same formula for all quarters, then to find

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out total staff costs we multiplied the staff costs by shopping floors pace available and used the outcome for all quarters. Then we multiplied the cost of sales % by future forecast to find out cost of sales per quarter. This will help us enter the total costs these are by adding all the costs and for each quarter. We can now work out Net cash flow £/qtr by deducing future cost from the total costs and follow the same pressure for all quarters. This could show positive or negative net cash flow on all quarters up to 2012. To find out the NPV we applied the discount factor for all quarters and then multiplied each quarter by the net cash flow to find out the present value of the cash flow and by summing the outcome for each quarter we were able to find out the NPV.

Replacement option

From the data given to us we found the maximum potential revenue. To find out the revenue from the new department £/qtr we multiplied the maximum potential revenue by the build up factor on each quarter. Then to find out the initial investment we multiplied the shop fitting cost by the shop floor space available. This gave use our initial investment. Following to that we use the same formula that we used on the refurbishment options cash flow on the management cost, total cost, total staff cost and cost of sales as the data was which I have not mentioned was provided from the business. To find out the Net cash flow we added all the cost similarly to refurbishment option now we were able to find out the PV of the cash flow by deducing the discount factor from the net cash flow value using the same pressure on all quarters. And then to find out the NPV we summed all the present values of all the quarters. We now have both NPVs and we are able to make a decision on

which is the best option. we then use these variations conveniently, this provided us with forecasts up to 2012 as long as there are not any unexpected significant changes that occur.