

# [Roxbury manufacturing company](https://assignbuster.com/roxbury-manufacturing-company/)

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Roxbury Manufacturing Company Calculating the DOL for and to explain the 20% decline in profit from a 10% decline in sales;   
The DOL is calculated as follows; Degree of Leverage (DOL) = Contribution Margin/ Operating Income   
Assume that the first year is (2011); The DOL for 2011 = Contribution Margin/ Operating Income = [1, 000, 000/500, 000] = 2   
In response to a 10% decline in sales, the operating income (profit) will decline by; 2\*10% = 20% in 2011.   
Assume that the first year is (2012); The DOL for 2012 = Contribution Margin/ Operating Income = [900, 000/ 400, 000] = 2. 25   
In response to a 10% decline in sales, the operating income (profit) will decline by; 2. 25\*10% = 22. 5% in 2012.   
Now, assuming the following changes happen;   
Sales decline again by 10%   
The sales for the year 2013 would be; [90/100\*$ 3, 600, 000] = $ 3, 240, 000   
By cutting wastage, costs can be reduced by $120, 000   
The variable expenses for the year 2013 would be; [$ 2, 700, 000 - $120, 000] = $2, 580, 000   
The Revised Income Statement, if the above changes are made will appear as shown below:   
Roxbury Manufacturing Company   
Income Statement, for the year ended 2013   
2013   
Percent   
Sales   
$ 3, 240, 000   
90   
Less Variable Expenses   
$ 2, 580, 000   
71. 7   
Total Contribution Margin   
$ 660, 000   
18. 3   
Less Fixed Expenses   
$ 500, 000   
Net Income before taxes   
$ 160, 000   
The DOL for 2013 will, therefore, be; ($660, 000/ $160, 000) = 4. 125 = 4. 1   
The degree of leverage (DOL) refers to the multiple by which a company’s operating income changes due to a certain percentage change in the level of its sales. In case the firm’s operating income exhibits a higher response to changes in its sales, then it has a high operating leverage (Hussey and Ong 2012). A higher operating profit margin means the company will have a high degree of leverage, and a lower operating profit margin means the company will have a low degree of leverage.   
Mr. Creighton’s company has experienced a greater percentage decline in profits despite maintaining efficiency in operations because the company’s operating income is so sensitive to changes in sales. The ten percent decline in sales, therefore, resulted in a twenty percent decline in profits.   
References   
Hussey, R., & Ong, A. (2012). Strategic cost analysis. New York, N. Y.] (222 East 46th Street, New York, NY 10017): Business Expert Press.