# Silven industries memo essay 

## ASSIGN BUSTER

Memo Our new product line, " Chap-Off", have total costs of $\$ 7.00$ per box if we plan to produce it internally. This total cost per unit consists of $\$ 3$.

60 for direct material, $\$ 2.00$ for direct labor, and $\$ 1.40$ for manufacturing overhead.

Moreover, a \$90, 000 charge for fixed manufacturing overhead will be absorbed by the product under the company's absorption costing system. However, if we decided to purchase the tube from the supplier at $\$ 1.35$ per box of 24 tubes then the direct labor and variable manufacturing overhead costs per box of Chap-Off would be reduced by $10 \%$ and direct material costs would be reduced by $25 \%$. Both alternatives have their own advantages, so we have to use a " make or buy decision" analysis to determine whether we should produce the tubes internally or to buy the tubes externally from the suppliers. Make or Buy Analysis for 100, 000 boxes of Chap-Off The total relevant cost of producing the tubes internally is $\$ 610,000$, which is $\$ 20$, 000 less than the total relevant cost of $\$ 630,000$ if we decide to purchase them externally from the supplier. Therefore, we should produce the tubes for the lip balm by ourselves since it would save us $\$ 20,000$ per 100, 000 boxes or $\$ 0.20$ per 1 box.

Please see Table 1 in the attachment for the calculation and comparison of both alternatives. Maximum Acceptable Purchase Price for Purchasing from Supplier The maximum purchase price that would be acceptable to us if we want to buy the tubes for the lip balm from the suppliers would be $\$ 20,000$ less than the original purchase price of $\$ 1.35$ per unit or $\$ 135,000$ per 100 units.

In other words, the maximum total cost when buying from the supplier should be \$115, 000 or \$1. 15 per box of 24 tubes. At this price point (\$1. 15 per box) from a purely financial standpoint the cost of producing the tubes and buying the tubes is equal for both alternatives, so we might want to consider other factors (that are maybe hard to estimate in dollar value) and possible benefits under one alternative over another to make a final decision. Make or Buy Analysis for 120, 000 boxes of Chap-OffOur vice president of sales has estimated that 120, 000 boxes of Chap -Off can be sold. This higher volume would require additional equipment at an annual rental of $\$ 40,000$. Now we have to decide whether it is still better to make the tubes internally or it is better to order them externally at $\$ 1$.

35 per box of 24 . Also we have to consider that the supplier will not accept an order for less than 100, 000 boxes of tubes. " Make or buy" analysis will be helpful in this decision. Please refer to Table 2 in attachment for computation details. As a result of our analysis we have decided it will be more beneficial to buy the lip balm tubes from the supplier the expenses when buying the tubes $(\$ 756,000)$ are lower $(\$ 16,000$ lower) than cost of producing the tubes $(\$ 772,000)$ The total cost is the sum of total relevant costs and fixed manufacturing overhead. Therefore, the total cost of producing 120, 000 boxes of Chap-Off assuming that the company makes the tubes is $\$ 862,000(\$ 772,000+\$ 90,000)$.

Likewise, the total cost of 120, 000 boxes of Chap-Off assuming that the company buys the tubes is $\$ 846,000(\$ 756,000+\$ 90,000)$. Therefore our company will save $\$ 16,000$ by buying the tubes rather than making them internally. Make or Buy Analysis for Different Supplier with No Minimum

Requirement Attachment Table 1: Silven Industries' Make or Buy Analysis for 100, 000 boxes $* \$ 0.5=\$ 1.40-(\$ 90,000 / 100,000) * \$ 2$.
$7=\$ 3.60-(\$ 3.600 .25) \$ 1.80=\$ 2.00-(\$ 2.000 .1) \$ 0$.
$45=\$ 0.5-\left(\$ 0.5^{*} 0.1\right)$ Table 2: Silven Industries' Make or Buy Analysis for 120,000 boxes $* \$ 0.5=\$ 1.40-(\$ 90,000 / 100,000) * \$ 2.70=\$ 3.60-(\$ 3$.
600. 25) $\$ 1.80=\$ 2.00-(\$ 2.000$.

1) $\$ 0.45=\$ 0.5-\left(\$ 0.5^{*} 0\right.$.
2) 
