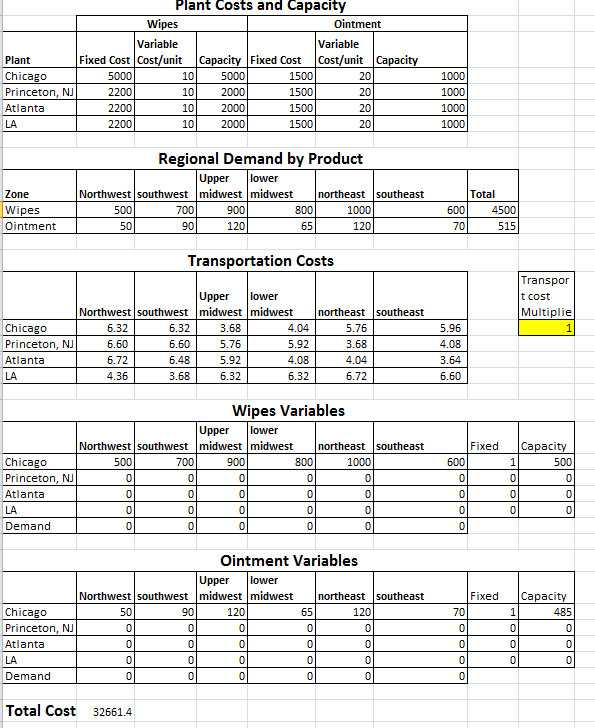
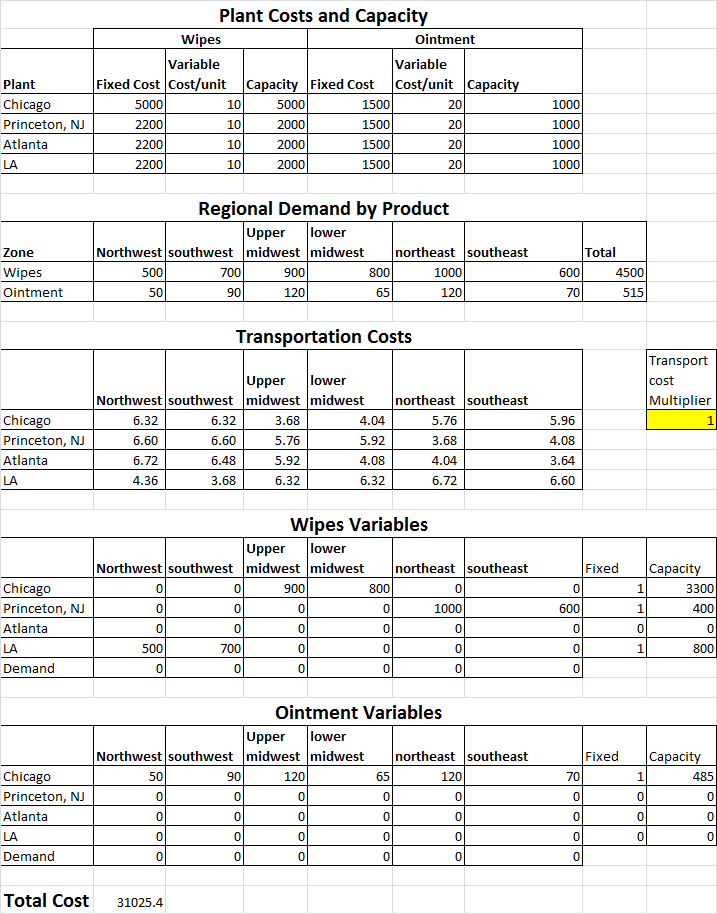
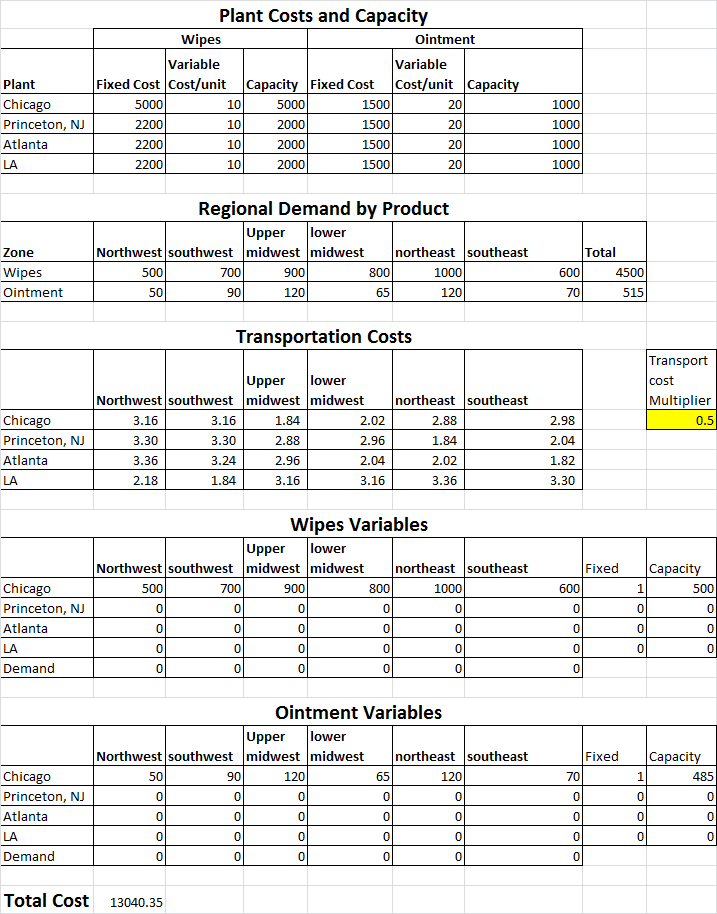
1. The total cost to serve the entire nation from Chicago is $32,661.40 as illustrated below:



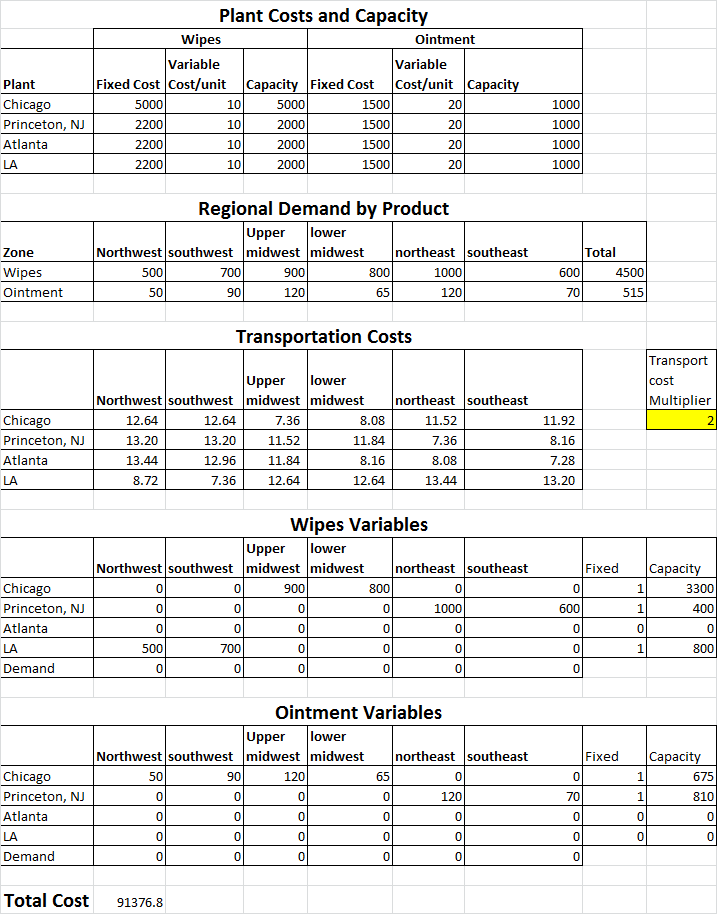
1. Based upon a reduction in total costs to $31,025, we would recommend building new plants in Princeton and LA for Wipes. All ointment would continue to be produced in Chicago. The production quantities at various plants are as outlined below:



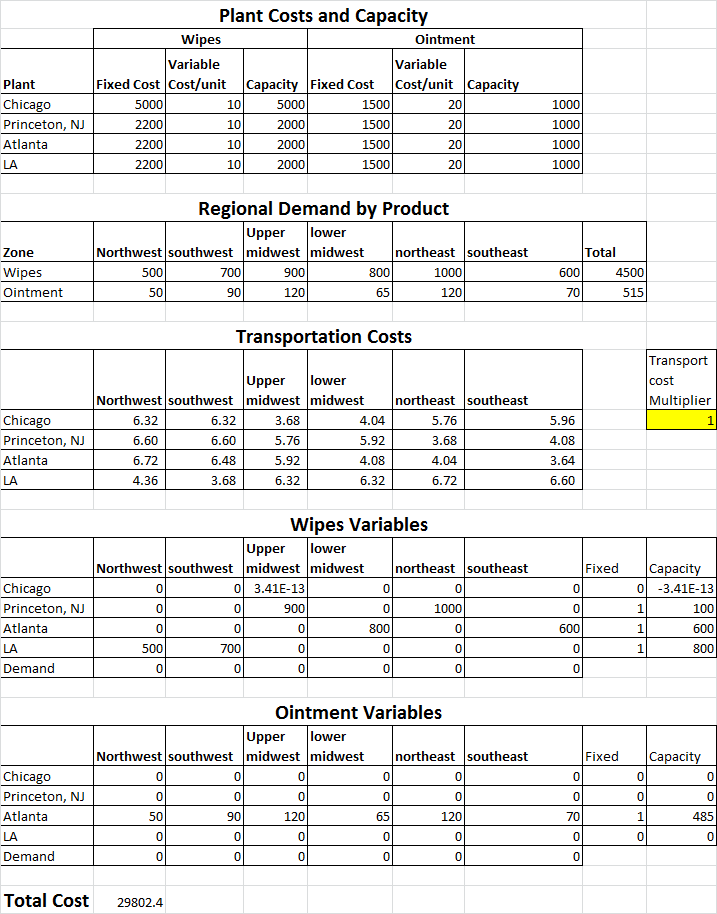
If the transportation costs were half their current amount, it would be optimal to maintain only the Chicago plant. The total cost of serving all markets from Chicago would decline to $13,040 as illustrated below:



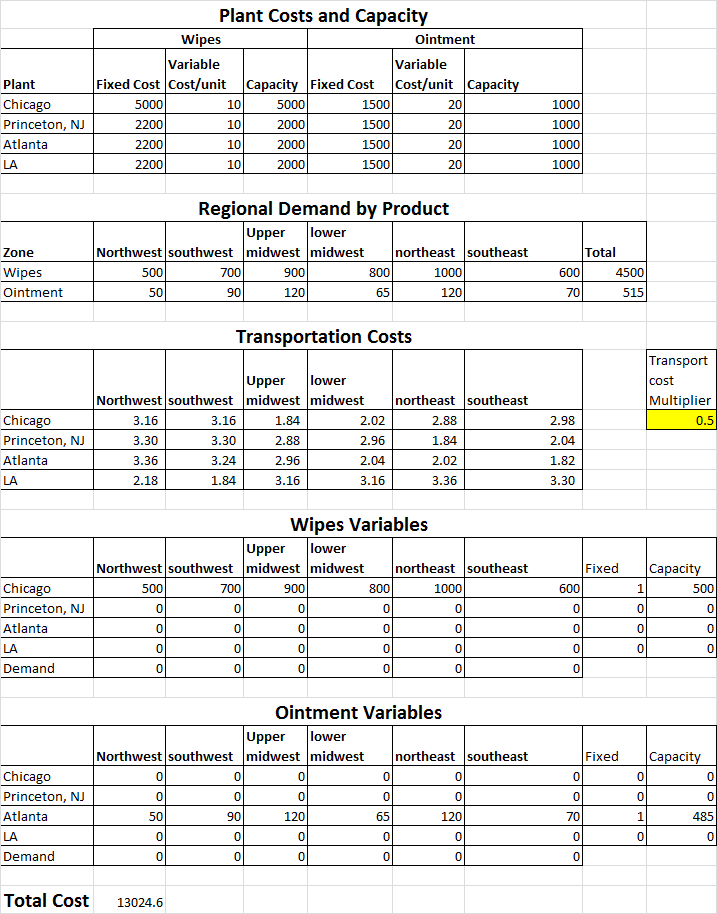
If transportation costs were double their current levels, the recommendation would be to build new plants for wipes at Princeton and LA and a new plant for ointment at Princeton. The total cost would rise to $91,377 and the markets served by various plants would be as shown below:



1. As illustrated below in the three spreadsheets, the recommendations change if we do not require that the Chicago plant stay open. If transportation cost is as stated in the case, it is optimal to have no plant in Chicago. The optimal network has wipes plants in Princeton, Atlanta, and LA and one ointment plant in Atlanta. The total cost of $29,802 is less than the cost when we require the Chicago plant to stay open.



If the transportation costs are half, it is optimal to serve the entire nation with wipes from the Chicago plant. For ointment, it is optimal to build a plant in Atlanta as shown below. The total cost of $13,025 is less than the cost when the Chicago plant must stay open.



If transportation costs were double their current level, the optimal network for Wipes would have plants in Chicago, Princeton, and LA. The optimal network for ointment, however, would have a plant only in Atlanta. The markets served are as shown below. The total cost of $91,150 is less than the total cost in the case where we require the Chicago plant to remain open.

