Guided Capstone Project Report

In response to Big Mountain's questions, this report will answer if the business has room to increase the ticket price based on its current facilities. It will also include the better option between increasing price and cutting operating costs to maximize the business return. The whole conclusion will base on our pricing model that relies on the underlying assumption of a free market, in which resorts set their price by how customers value their facilities. In the end, we believe that Big Mountain is underpricing given the estimated ticket price of $90. We would also suggest the company increase the ticket price by $1.99 by adding a run, increasing the vertical drop by 150 feet, and installing an additional chair lift.

Chart, line chart

Description automatically generated

Figure 1

Our pricing model found that the most important features accounting for the ticket price are total\_chairs, runs, snow marking\_ac, vertical drop, and FastQuads. Luckily, Big Mountain shows huge advantages in these facilities. Then we designed five different scenarios, each with a different combination of the above features. Changing the parameters of features of a combination, we could use our model to estimate how much the ticket price changed and so the revenue. In the first scenario, we tested closing up 10 of the least used runs and found that the estimated revenue per season dropped dramatically by closing more than three runs after closing, shown in figure 1. Thus, cutting cost by shutting down runs might not be feasible for a higher return. In scenario 2, the one we recommended for Big Mountain, we increased the vertical drop by adding a run to a point 150 feet lower down but requiring an additional chair lift to bring skiers back up. This scenario increased support for ticket price by $1.99 and raised the seasonal revenue by $3474638. In the rest scenarios, we repeated scenario 2 and increased the snow-making area and the longest run, but these changes did not make any difference. Thus, we would recommend scenario 2 for future consideration.

Again, the recommended setup is adding a run, increasing the vertical drop by 150 feet, and installing an additional chair lift, but the business could start with adding a run and increasing comparatively small amounts of vertical drop and without adding any chairs. For instance, the combination of 1 run,90 feet vertical drop, and 0 chairs would be a good start-up. This combination would prevent the business from taking greater risks and help to compare price and revenue when making subsequent changes in any of the selected features. Next, the business can gradually add more feet to the vertical drops until it reaches 150, to make sure this is the right way to go. If the total revenue decrease, it may indicate the scenario 2 is invalid. Otherwise, the business could add an additional chair for further testing.

Last but not the least, the business could put the factors of the operating cost and depreciated cost into our model. Our model only explains how the price and revenue are affected under certain changes in parameters of facilities while we should note that any increases in the ticket price and revenue do not guarantee the business to maximize its net profit.