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Springboard Career Track

Data Science

After thorough analysis, I have reached a conclusion on which scenario BMR should consider in order to properly offset the $1.6M increase to operating cost for this year. Any questions not addressed here can be emailed to me and I am more than happy to explain the process in further detail.

To start, I want to draw attention to Big Mountain Resort’s (BMR) current ticket price of $81. My model suggested that BMR should actually be charging ~$94.22. Now, the model has a variation of error equal to $10.39; meaning that BMR certainly has room to increase their price, but the $94.22 is just the model’s prediction of the ticket price and the price should be within +/- $10.39 of the predicted price. Overall, as BMR’s facilities currently stand, without factoring for any changes, an increase in ticket price is already justified.

Now, on to the answer for our initial test. By installing an additional chairlift, BMR stated they needed to offset ~$1.6M in overhead. Earlier in the process we discovered that the expected number of visitors over the season is 350,000 and, on average, visitors ski for five days per season at BMR. The model is only considering Adult Weekend Ticket prices since BMR’s weekday ticket prices are the same price. The model assumes that each of the 350,000 customers per year will buy 5 weekend tickets. After installing the additional chairlift, the model estimates that BMR should increase their ticket price by $0.29 per ticket. This equates to a yearly revenue increase of $507,246. So the chairlift itself is not enough to negate its own operational cost, but already pays off a third of its cost.

Of the proposed scenarios, there was only one with really any promising result. The first scenario of closing the 10 most unpopular runs would result in a yearly loss of ~$3.0M, or -$1.75/ticket. Closing 1 run would have no change in ticket price, and there is no change between closing 3, 4 or 5 runs, all of which result in ~$1.2M loss of yearly revenue. The second scenario proposed was adding 1 run, increasing the vertical drop of the mountain by 150ft., and adding the additional chair lift. Combined, these additions support a ticket price increase of $1.99. This equates to an annual revenue increase of ~$3.5M, easily offsetting the installation and operational cost of the new chairlift, as well as allowing BMR to close several runs while still remaining profitable. The third scenario proposed the same conditions as the second one, but in addition considered if an additional 2 acres of snow making changed the outcome. According to my model, such a small increase in snow making does not impact the ticket price. The fourth and final scenario asked us to consider the increase to ticket price by extending the longest run at BMR by 0.2 miles and increasing snow making by 4 acres to cover the increased length of the run. Surprisingly, this did not change the ticket price at all.

I suggest that BMR weigh the cost of closing runs against the benefit of adding other faculties to negate the annual loss of revenue. In addition, the amount of money saved from maintenance for closed runs should be calculated and incorporated into the data to better understand how closing a run may or may not benefit the ticket price. I recommend following Scenario 2, as it clearly offsets the cost of installing 1 new chair lift (~$1.6M).