**Summary and Recommendations**

Big Mountain Resort’s actual price is $81.00, and the modelled price was $95.87. The expected mean absolute error of $10.39, this suggests there is room for an increase in the ticket price. The validity of our model lies in the assumption that other resorts accurately set their prices according to what the market (the ticket-buying public) supports. The fact that Big Mountain Resort resort seems to be charging that much less that what's predicted suggests the resort might be undercharging. Histograms were plotted to analyze where Big Mountain Resort positions itself on key features compared to other resorts in the market segment. Following were some key observations deduced:

* Ticket prices for the resort sits on the higher end compared to prices within Montana.
* The resort does well for vertical drop, but there are still quite a few resorts with a greater drop.
* The resort is very high up the league table of snow making area.
* It has amongst the highest number of total chairs, resorts with more appear to be outliers.
* Most resorts have no fast quads. Big Mountain Resort has 3, which puts it high up that league table. There are some values much higher, but they are rare.
* Big Mountain Resort compares well for the number of runs. There are some resorts with more, but not many.
* The resort has one of the longest runs. Although it is just over half the length of the longest, the longer ones are rare.
* Big Mountain is amongst the resorts with the largest amount of skiable terrain.

To develop revenue and ticket price impacts, it was assumed that each of the 350,000-visitor to the resort skis for 5 days. Three scenarios were modelled and their impacts on ticket prices and revenue were accessed.

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**1. Model scenario 1:** Permanently shutting down up to 10 of the least used runs. Different scenarios were analyzed from closing 1 to maximum 10 runs. The model showed that closing one run makes no difference. Closing 2 and 3 successively reduces support for ticket price and so revenue down by $1.2M. If Big Mountain closes 3 runs, it seems they may as well close 4 or 5 as there's no further loss in ticket price or revenue. Increasing the closures down to 6 or more leads to a large drop in ticket price and revenue with as much as $3M by closing 10 runs.

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**2. Model scenario 2:** Increase the vertical drop by adding a run to a point 150 feet lower down but requiring the installation of an additional chair lift to bring skiers back up, without additional snow making coverage. This scenario increases support for ticket price by $1.99. Over the season, this could be expected to amount to $3,474,638 in revenue.

**3. Model scenario 3:** Same as scenario 2 but adding 2 acres of snow making cover. This scenario increases support for ticket price by $1.99. Over the season, this could be expected to amount to $3,474,638 in revenue. Increase in snow making area by 2 acres made no difference.

**4. Model scenario 4:** Increase the longest run by 0.2 mile to boast 3.5 miles length, requiring an additional snow making coverage of 4 acres. It did not have any difference in the ticket prices or revenue.

**Recommendation**

Based on the scenarios modelled, model scenario 2 would have the most positive impact in revenue by supplanting the $1.5M cost of the new chair lift and contributing to an additional $1.5M in revenue.