

## Universal Car Simulation #3 Analysis

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For this pricing simulation, I utilized all 12 attempts and achieved a personal high score of \$63.7 million in cumulative profit for Scenario C. To accumulate this profit, I implemented a few different strategies, but mainly stuck to my original pricing strategy of combining Premium, and penetration pricing which I have used in previous scenarios, which overall helped my success in this simulation. I attempted many forms of this tactic, including decreasing my fleet size more or less than others in certain locations, as well as changing how much I would increase my price over the months and off the start of the year according to capacity utilization during the simulation. I found that these strategies were most effective to stick and mess around with, especially with the option to adjust the fleet size every three months. This observation was based on past scenarios when this factor was introduced, along with the various tactics I experimented with previously. However, in the current simulation, a new variable was introduced: the addition of another location, Tampa, Florida. Now we had to distribute our fleet size across three cities in Florida, while adjusting prices. With this factor being implemented in the simulation, I had to experiment more with how much I should increase prices in each area, and how much I should put into fleet size to keep my capacity on the weekdays and weekends as close to 100 percent as possible. Overall, my initial strategy that scored my best attempt, involved implementing premium pricing from the outset. I then utilized the penetration pricing strategy, gradually raising prices by \$10 over time while maintaining a smaller fleet size (Smith 71). This approach effectively boosted demand for my cars, resulting in successful sales at elevated price points.

Whenever I initially start the simulation scenarios, I always take the first few attempts as a learning opportunity, to see what has changed, and what new strategies I can implement or focus more on to achieve the highest cumulative profit and become a top contender in the class. With this new scenario, a new location has been added to adjust prices and fleet size, Tampa, Florida. That said, this location from previous months when you begin the simulation starts with a lower fleet size

than all the others but sticks to a similar price. For my first attempt, I wanted to make sure my strategy that gained my overall success from the last scenario still worked, so I attempted to lower the fleet size in all areas and use the premium pricing strategy to increase prices off the start (Black, 2024). Then when the time came, I lowered the fleet size immediately, giving more of a demand for my products to go with its high price and lower fleet size (Black, 2024). With Tampa starting at a lower fleet size, I decided to lower it even further, in attempt to keep my strategy of keeping capacity as close to 100 percent as possible, while slowly increasing price every month or other month, using the penetration pricing strategy (Prater, 2023). This seemed to still work and resulted in some of my better attempts throughout the simulation, scoring around \$55-62 million in cumulative profit.

Given the introduction of the new variable, Tampa, Florida, I remained curious and eager to explore further possibilities. I decided to experiment by significantly reducing the fleet size to less than half of its initial capacity and then further decreasing it to slightly below its original level. What seemed to work best was just around half the fleet size, while keeping a high price, which helped me achieve my goal of keeping capacity utilization near 100 percent. The most effective approach appeared to be maintaining a fleet size of approximately half while implementing high pricing. This strategy proved instrumental in reaching my objective of maintaining capacity utilization close to 100 percent. I implemented this same strategy in the other areas, Orlando and Miami Florida, but did not decrease the initial fleet size nearly as much. With Orlando, I would initially decrease it from around 22,000 to 14,000 or 15,000 and Miami from 13,000 to around 9,000 units while keeping prices high. This strategy seemed to work the best with my goal of capacity utilization near 100 percent, but as the months went on, and prices continued to increase with my penetration pricing strategy, I would need to decrease fleet size even further to continue hitting my goal, but always decreased fleet size by a little bit to maintain profitability.

One recurring challenge I faced in achieving near 100 percent capacity was consistently encountered during weekends in Miami, and I never was able to fix this problem in the last scenario. I implemented many strategies trying to fix this, but nothing seemed to work. I attempted to increase the price higher but would often leave the price lower in hope for an increase in sales, but neither of these strategies seemed to work. I also tried these strategies, and several others beforehand in the previous simulation so I did not play with this factor too much. In the preceding simulation, I endeavored to lower prices periodically throughout the months, despite receiving advice against price reductions, still attempting to incorporate both penetration and premium pricing strategies simultaneously. Despite these efforts, I still struggled to maintain weekend capacity in Miami above 60-70 percent. By the end of the simulation, I was never able to figure it out but still achieved the success I was looking for, keeping a higher cumulative profit which helped me achieve my goal of placing higher in the class.

Penetration pricing, a marketing strategy utilized by many businesses, involves introducing a new product or service at a lower initial price (Smith 71). This discounted rate is intended to facilitate the product's entry into the market and enhance its appeal, thereby gaining an advantage over competitors (Paddle, 2024). An example of penetration pricing strategy is employed by the fast-food chain McDonald's with its Dollar Menu or usage of deals on the mobile app (RM911, 2023). McDonald's offers a selection of menu items priced at one dollar or slightly above, making them very affordable for customers (RM911, 2023). They also offer deals where after enough points you can get a free large fry (RM911, 2023). By providing these low-priced options, McDonald's aims to attract budget-conscious consumers and drive traffic to its restaurants (RM911, 2023). This pricing strategy not only helps McDonald's compete with other fast-food chains but also encourages customers to make additional purchases beyond the Dollar Menu items, thereby increasing overall sales and revenue (RM911, 2023). This personally applies to my life, as I only purchase items off the

McDonalds dollar menu when they had it, or Bogo deal where you get an item such as the McChicken sandwich and another one for one dollar. I am not one to go out and purchase large or expensive meals at fast food restaurants, so deals like these are what grab my attention when I am on the road, low on money, and in a hurry and do not feel like cooking.

In my situation, I didn't begin by setting the price at a very low level; rather, I opted to increase the price by \$5-10 from the outset, employing the premium pricing method (Black, 2024). Premium pricing is a strategic tactic employed by businesses to place their offerings at a higher price tier compared to competitors (Black, 2024). This approach capitalizes on consumers' perceptions of enhanced quality, exclusivity, and value associated with higher price points (Black, 2024). One example of a company employing a premium pricing strategy is Tesla Inc. Tesla positions its electric vehicles (EVs) at higher price points compared to many other automakers in the market (Wells, 2023). Despite the availability of lower-priced electric and conventional vehicles, Tesla maintains its premium pricing by emphasizing factors such as performance, range, and advanced technology features like Autopilot (Wells, 2023). This strategy has enabled Tesla to establish itself as a leader in the EV market and attract customers who are willing to pay a premium for the perceived quality, innovation, and environmental benefits associated with owning a Tesla vehicle (Wells, 2023).

Given these two examples and their pricing strategies, they both still had competition with other fast-food chains such as Wendy's, Burger King etc. that use penetration pricing to attract an audience that is on a budget but offers higher priced items as well (RM911, 2023). Meanwhile Tesla has competitors with companies like BMW and Audi who have also entered the electric vehicle market and use premium pricing tactics for their high-quality products, and loyal customer-based audience (Wells, 2023). Wendy's has deals such as the 4 for 4 which is \$4 for four items including a small sandwich of your choice, 4-piece chicken nuggets, small fries, and a drink (Brand Vision,

2024). Wendy's also has an app where you can get deals for specific days on certain items (Brand Vision, 2024). This compels McDonald's to remain vigilant in pricing their products and determining their offerings, given the competitive pricing of these rivals (RM911, 2023). On the other hand, Tesla's competitors, BMW has an electric model known as the BMW i3 which has several similarities to other Tesla vehicles, and priced similarly using the premium pricing strategy, but offers differences (Dorian, 2024). BMW i3 distinguishes itself with its range-extending option, sustainable materials, urban-centric design, and BMW ConnectedDrive technology (Dorian, 2024). Overall, Tesla vehicles offer longer range, access to a proprietary charging network, advanced driver-assistance features like Autopilot, over-the-air software updates, and high-performance capabilities that set them apart from the BMW i3 (Wells, 2023). Despite the initial high pricing, both companies aim to penetrate the market by appealing to early adopters and those willing to pay a premium for top-tier technology (Smith 71).

Nevertheless, both examples I mentioned with McDonalds and Tesla's pricing strategies can begin a price war which can have adverse effects on both companies and customer perceptions of value (Pratap, 2023). Customer perception plays a significant role in determining the prices they are willing to pay (Smith 94). In certain instances, companies may engage in competition by offering prices lower than the actual value of the product, which may provide customers with better deals but could ultimately diminish potential profits (Smith 94).

The array of strategies I employed throughout this paper reflects a blend of approaches that yielded both successes and setbacks, all aimed at optimizing my cumulative profit for this scenario. My use of all attempts and experiments with different strategies helped me achieve my goal of keeping capacity utilization near 100 percent, as well as beat my previous high score in past scenarios. Although I primarily utilized the same strategy throughout all three of the scenarios, I was pleased with my outcome and how I performed in the simulation. By combining penetration

and premium pricing strategies, along with thorough research on how other companies penetrated the market with pricing and drawing insights from past experiments conducted throughout the scenarios, I successfully achieved a final score of \$63.7 million in cumulative profit. This simulation served as a valuable learning process, and despite encountering numerous challenges along the way and only scoring \$23 million from scenario A, I persevered and successfully achieved my objectives, ultimately emerging with valuable insights and a sense of accomplishment.

## Citations

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