



Bigger Is Always Better, What About Heavier?

Analysis On Heavier Cars Creating Opportunities

And Benefits

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Introduction

The actual invention of the automobile first took place in 1886. Since then, locomotion has really evolved. Due to the evolution of cars, humans have really done their part to ensure that their automobile is best suitable for them, or more convenient. In addition, consumers want their monies worth and to feel as comfortable as possible. But that's the problem. There isn't that one perfect automobile. Everyone of them is crafted their own unique way. So how can a consumer consume the best car? Shouldn't someone know by some quick measurement OR stat on how beneficial the purchasing cars can be? Well, of course. Due to the data set from 1993, early consumers of automobiles tend to favor cars that are heavier rather than the lighter ones. Why?! Well, heavier cars creates more benefits and opportunities for its driver and the passengers inside.

Methods of Analysis

Sources for statistical data :
JMP 10

Variables used in this experiment:

- Luggage Capacity (cubic feet)
- Weight (Pounds)
- Standard Air Bags
- Vehicle Category
- Passenger Capacity
- Maximum Horsepower
- Rear Seat Space

Statistical Test performed:

- ANOVA
- Linear Regression
- Chi Square

Results

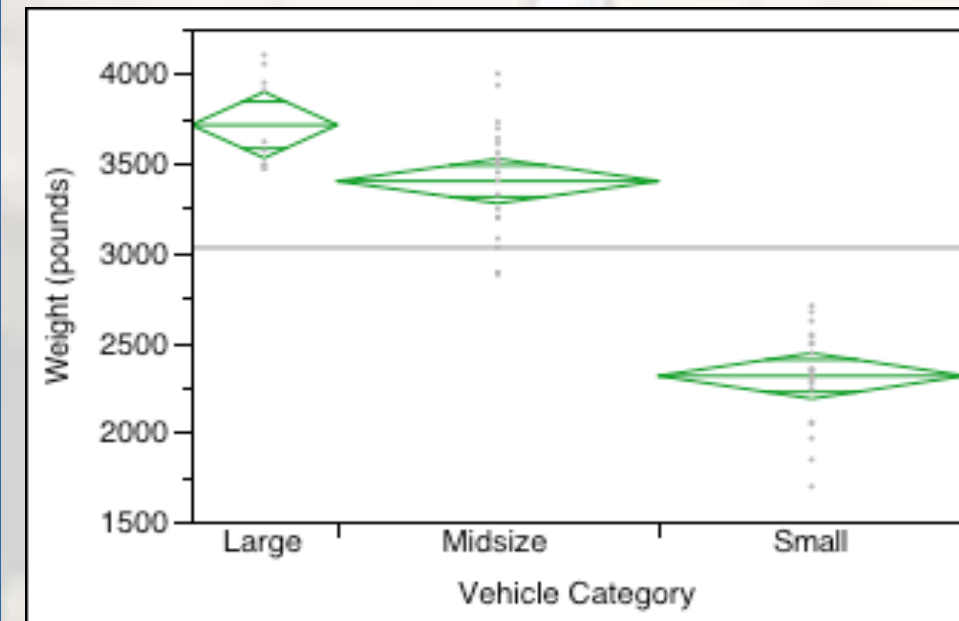


Figure 1 shows the direct relationship between vehicle category or size and weight. This test shows that larger vehicles are typically heavier than smaller cars. Being heavy can actually benefit. Cars that have higher masses are more stable at higher speeds and harsh weather conditions.

Rsquare: 0.814566 P-Value: <.0001*

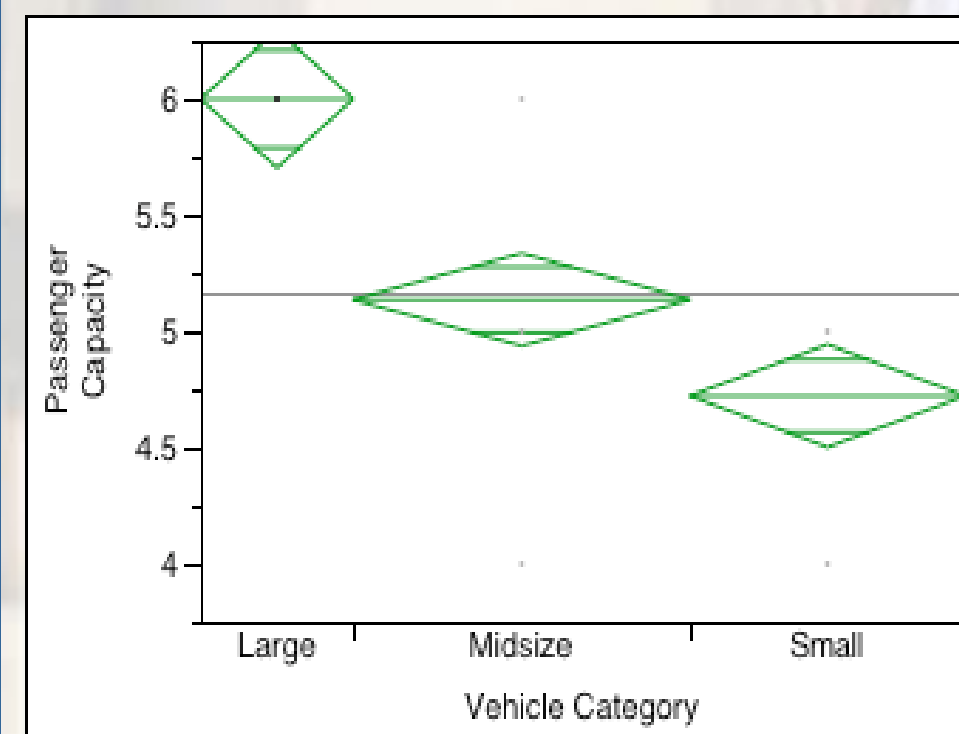
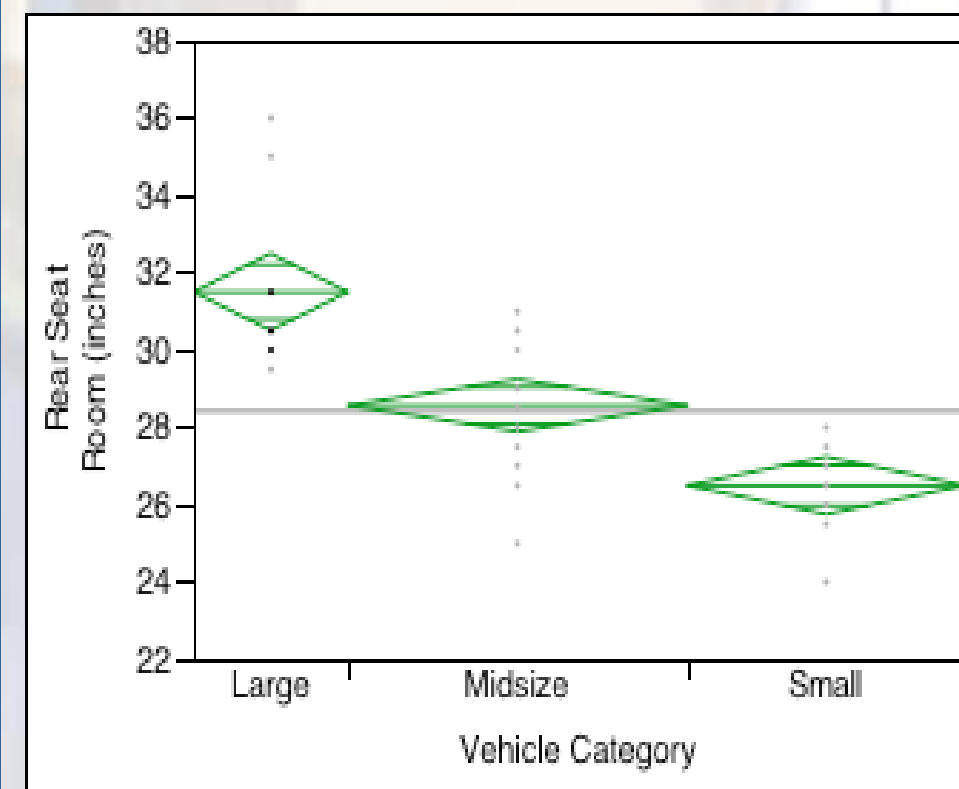


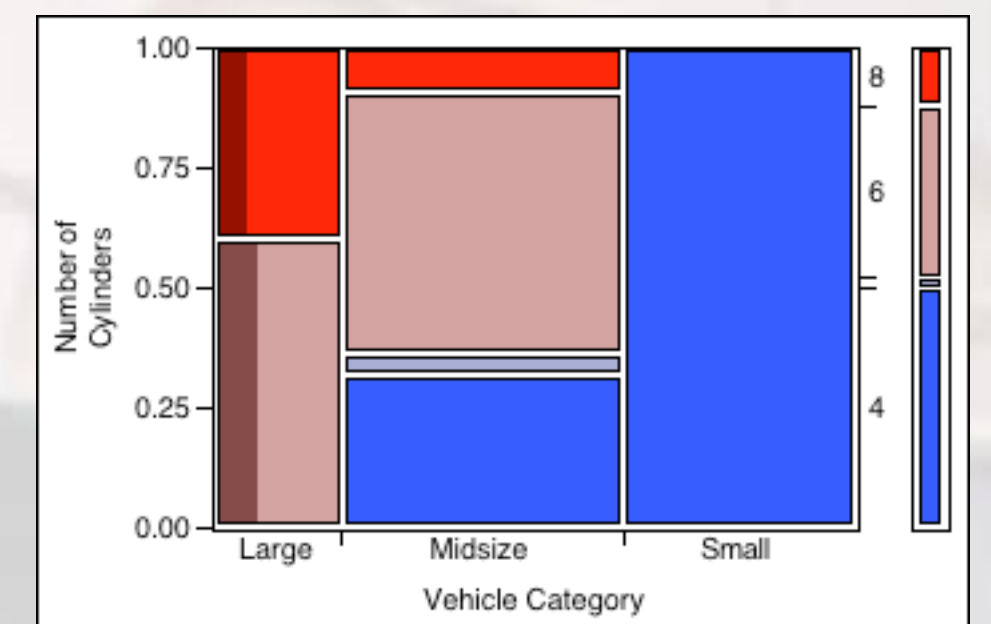
Figure 2 shows a comparison between vehicle category and passenger capacity. Wouldn't you like a car where you can roll with all your friends at once, and be comfortable? Larger cars creates an opportunity to include others who weren't included before into your daily plans or schedule. On average a large car can hold a minimum 5 and a half passengers.

Rsquare:0.507625 P-Value: <.0001*



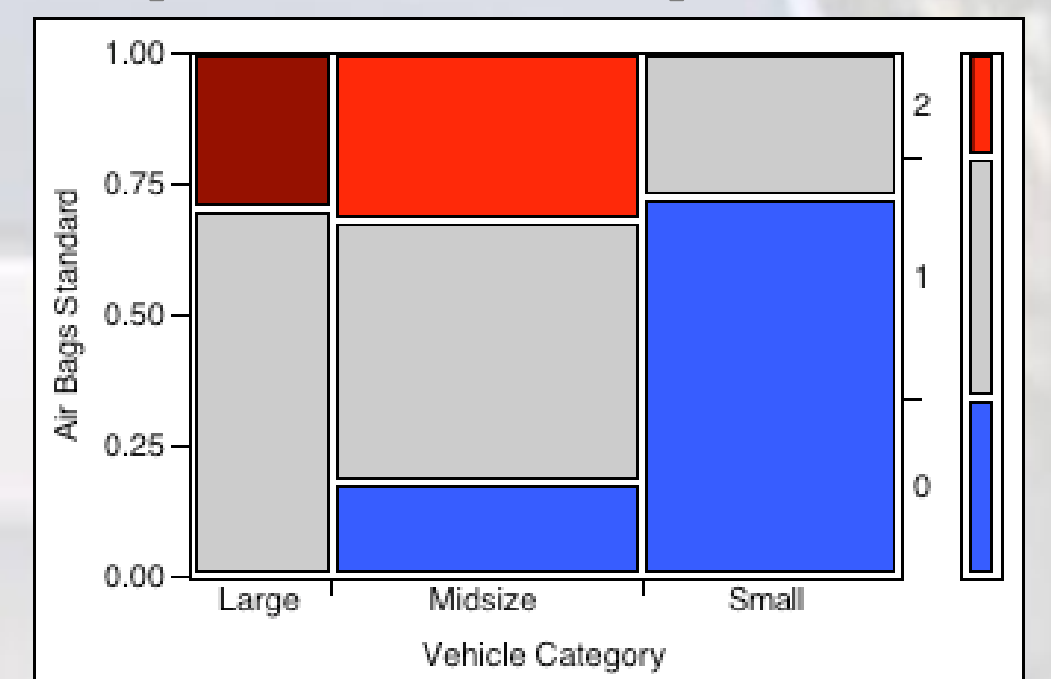
This last ANOVA test in Figure 3 tells us that the larger a car is, the more rear seat space provided. So in addition to good passenger space, large cars are also roomy, which promotes comfortable environment for the driver and the individuals driving with them and more opportunity for storage if the trunk is full.

Rsquare: 0.585128 P-Value: <.0001*



This chi square test examined in Figure 6 verifies that depending on the vehicle category, the car will have more cylinders. Cylinders give the car more power for steady driving and acceleration. They also give cars a boost going up hills and pumps gas at a faster rate. This always a car to move FASTER!

Rsquare: 0.4287 Prob>ChiSq: <.0001*



The last overall test done in Figure 7 refers to a comparison of air bags based on the size of the vehicle. What good is a big heavy car if it isn't well protected and safe for the drivers and the passengers. Larger cars in 1993 had only 2 air bags (which is terrible). But look at the bright side, 2 air bags are better than 1, or none!

Rsquare: 0.2503 Prob>ChiSq: <.0001*

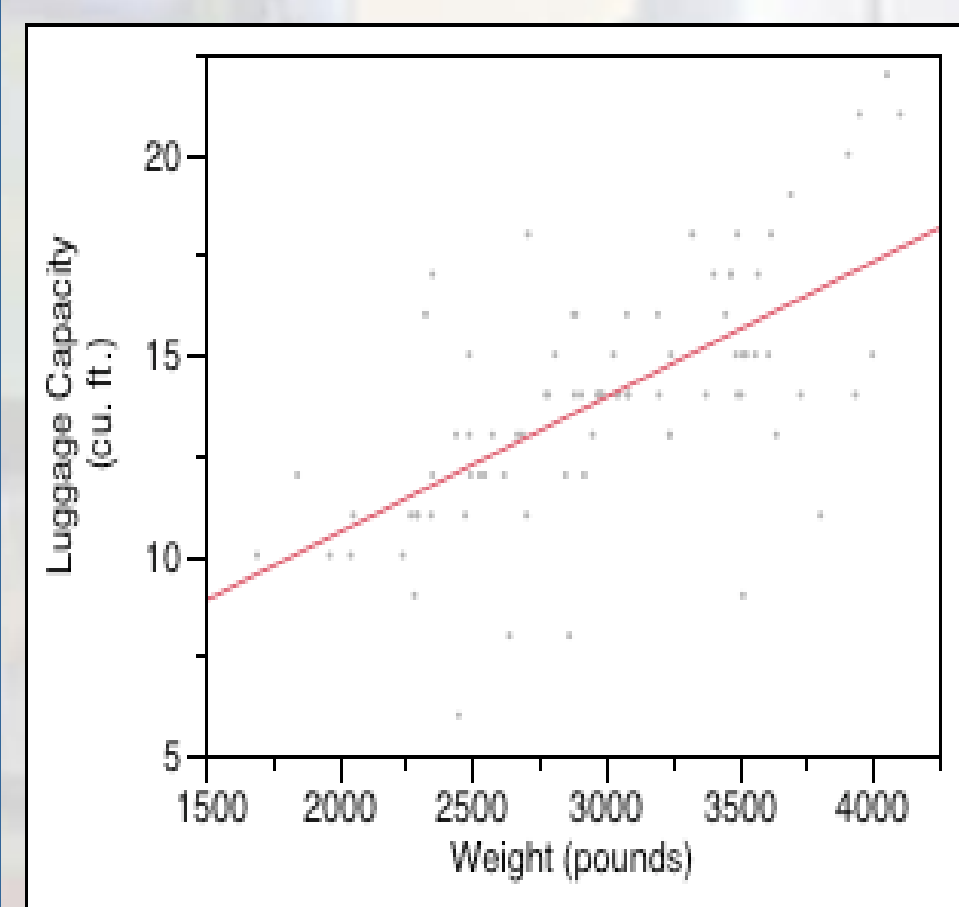


Figure 4 is represented by a liner regression. This linear regression is in relations to luggage capacity and the weight of a car. The more a car weights in pounds, the more cubic feet of luggage room that the owner will have. Very beneficial for consumers who make tons of groceries, go on family vacations, and want to effectively transport with excess objects. And if they don't already do so, this luggage capacity opens an opportunity to start.

P.S: Keep in mind, the larger the car, the more it weighs. The more it weighs, the more space offered.

Rsquare: 0.406057 P-Value <.0001*

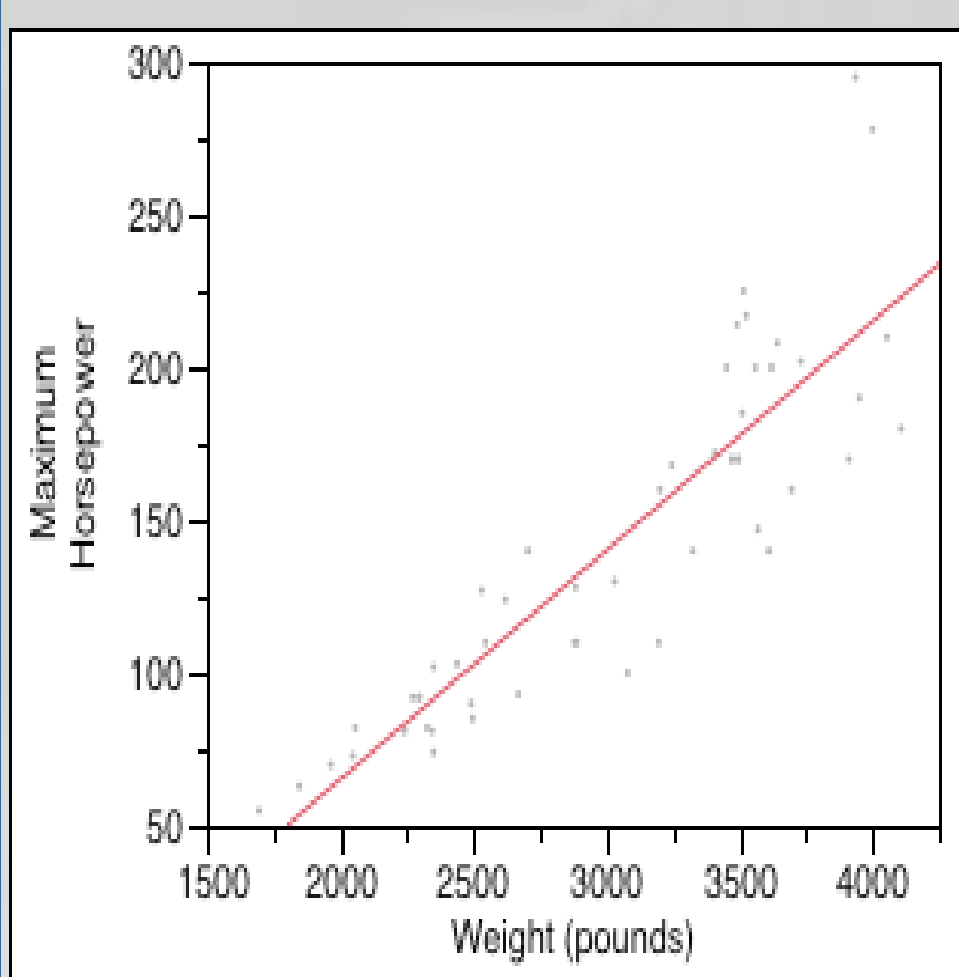


Figure 5's linear regression also dictated a great significance. This relationship between weight and maximum horsepower, or speed was rather surprising. Usually, the more heavier an object is, the slower it moves. Heavy objects don't perform fast functions, except for cars. How is something so big and heavy move so fast? With a little help from cylinders of course!

Rsquare: 0.782626 P-Value: 0.0299*

Conclusion

After the analysis, car data from 1993 supports the hypothesis that heavier cars have more benefits and provides more opportunities than smaller ones. The hypothesis was supported by the "*" mark behind the P-values for each test. That mini star represents significance and difference of each value in each test. Being that the hypothesis tested positive, the audience notices that smaller cars does complete the same tasks as larger ones, but doesn't quite open up the same opportunities and provides the same benefits larger vehicles. These benefits and opportunities range from more cylinders, more stability, more space, more horsepower, and most importantly more safety. Another benefit gone unnoticed is comfort ability, which allows the consumer to fully enjoy and experience their car to the fullest extent. It's reasonable to say that there might have been some adjustments to all cars within the last 10 years which does create the illusion that smaller cars are much more efficient and dependable. But in reality, larger cars will always bring more to the table!

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