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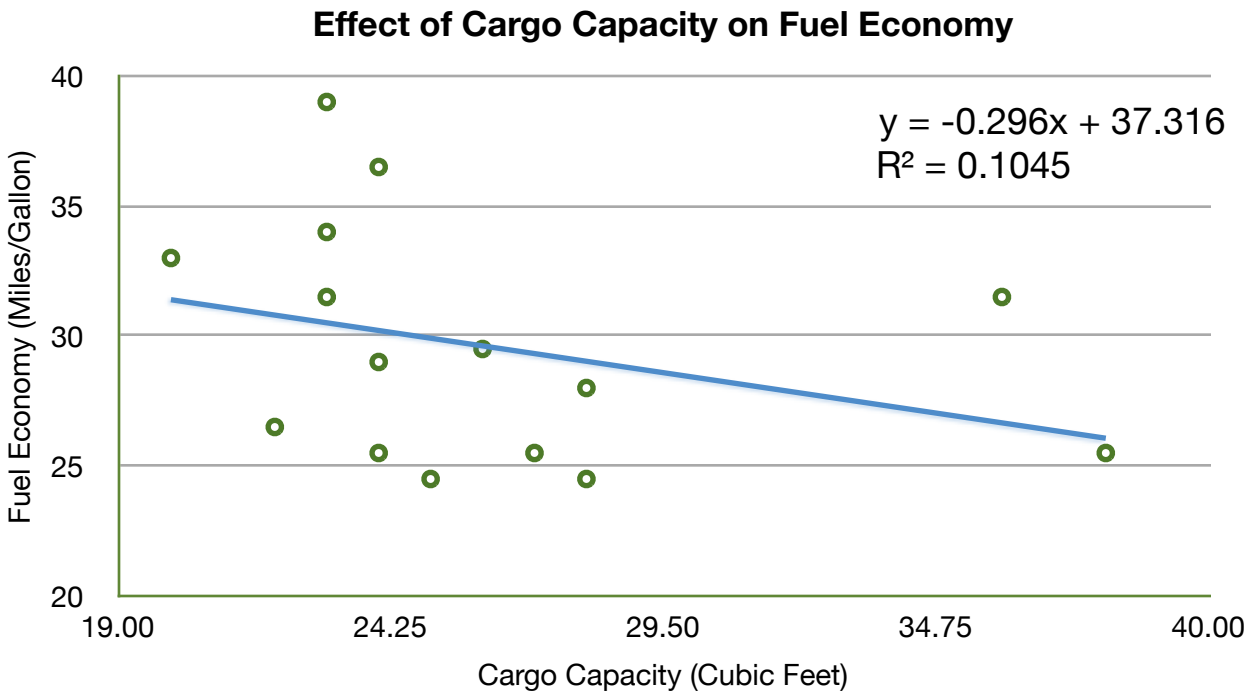
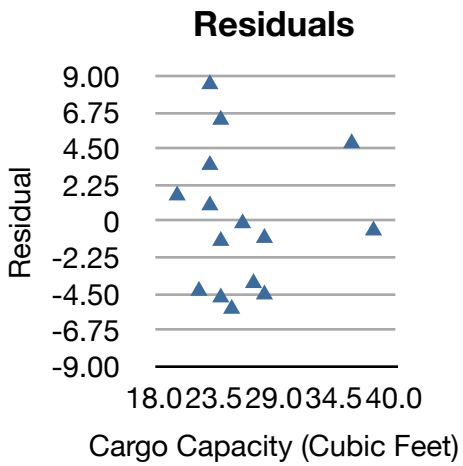
Comparing Cargo Capacity & Fuel Economy of Wagons/Hatchbacks



Wagons/Hatchbacks with >19 mpg and >23 cu. ft.

This data shows the association between cargo capacity and fuel economy in a variety of 2011-model wagons and hatchbacks. The scatter plot above depicts a relatively weak, linear, negative association between cargo capacity and fuel economy. There are no points that could be considered general outliers, but the Mazda 5 Touring (39 cu. ft,) and the Subaru Outback limited (36.5 cu. ft.) could be considered outliers for cargo space.

The strength of the association is represented by the correlation coefficient of 0.1. Looking at the plot of the residuals (right,) we notice that there is possibly a slight pattern, indicating that a linear plot for this data may not be completely trustworthy. The least squares regression line for this data can be modeled in the equation: *Predicted Fuel Economy* = -0.296(*Cargo Capacity*) + 37.32. So according to the model, for every additional cubic foot of cargo capacity gained in a wagon or hatchback, the car would lose 0.29 miles per gallon in fuel economy.



Using this information, we could predict that a wagon with 39 cubic feet of cargo space would average 25.8 miles per gallon, though this prediction is not necessarily trustworthy considering that only 10.5% of the variance in fuel economy is due to the amount of cargo capacity.

"Best in cargo capacity & fuel economy." *ConsumerReports.org*