Gas Prices and Buying Trends

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In my project, gas price fluctuations were compared with average consumer purchase prices at two gas stations/convenience stores to identify if there was a significant correlation between the two. To identify if any correlation was present, data was collected from two local gas stations/convenience stores in Grangeville, Idaho. The two stores were The Depot and The Depot Express which are located in different parts of Grangeville and which have different customer demographics. Data collected was determined by the stores registers which record various metrics about the store's activities. Data was recorded for a period of two months on every Friday. The data collected for this project was total sales, total fuel sales, total gallons of fuel sold, gas price, and average purchase price. Over the two months there was an eleven cent ($0.11) fluctuation in gas prices. I entered the data into an Excel spreadsheet and used that software to create a linear regression trend graph. The correlation value for The Depot was -0.384, and the correlation value for The Depot Express was 0.108. In analyzing the trends for both stores there appears to be no significant correlation between gas prices and average purchase price, but it is interesting to note that one store had a negative correlation while the other was slightly positive. I will be doing further analyses with my data to explore the relationships more closely.

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