

Socio-Historical Context and Impact Report:

Socio-Historical Context:

The Organization of the Petroleum Exporting Countries (OPEC) was established in 1960 by oil-rich countries, with the purpose of countering U.S. dominance in the oil markets and raising oil prices by limiting supply of oil (Sharma). Today, OPEC has less power, but still some power, over crude oil prices since OPEC produces 28% of all the crude oil in the world (Sharma). Our oil price data has shown that oil prices have recently been rising steadily. Another broader societal issue connected to our project is the issue of climate change. Climate change (the causes, effects, and actions needed) are currently being discussed by politicians and scientists around the world, and has been the focus of several agreements, such as the Paris Climate Agreement. According to the Intergovernmental Panel on Climate Change (IPCC), “falling costs for renewable energy and for electric vehicle batteries, in addition to policy changes, have slowed the growth of climate change in the past decade” (Jenn). In addition, our data, which shows increasing stock prices of EV companies, can partly be attributed to governmental incentives such as California’s Zero Emission Vehicle regulation (Jenn).

Another research finding about our project topic is that transportation accounts for 29% of all greenhouse gas emissions in the US (Jenn). The societal impact of this research is that EV companies can then use this research as proof that they are helping the environment, and thus receive more funding/customers. This research could encourage society to purchase more electric vehicles and thus raise EV stock prices. Three stakeholders in our project are oil companies, EV companies, and non-EV automobile companies. One of our research findings is that EV stock price is heavily correlated with oil prices, more so than lithium or gold prices. Thus, this could further hurt oil companies. EV companies could try to increase oil prices using whatever power they have. This would hurt non-EV automotive companies, and result in more people purchasing electric vehicles.

Ethical Considerations:

Our data for lithium, oil, and gold likely don’t contain any biases, since this is all official price data that is very straightforward. Our data on EV stocks comes from an ETF called the DRIV ETF, which is an ETF with the most important EV and autonomous vehicle companies. According to Mark Kennedy from thebalance.com, ETF managers are responsible for deciding which sector to track and which companies to include in the ETF (Kennedy). It is not publicly known who the ETF managers are for DRIV, but our data may contain bias against non-American companies, for example, if the ETF managers were mainly American. This bias can be mitigated by having a diverse team of ETF managers, although that is outside our control. Furthermore, one bias that might exist in our interpretation of the data is that we favor data sources that are familiar to us. For example, we chose to use investing.com to get the lithium data, since we probably subconsciously thought it was good since this website was used in a previous homework assignment.

Our identity and perspective as BrownU students means that compared with the average American, we are probably more well-versed in stock data and the financial markets and EVs in general. Our analysis is conducted within the context of what we already know, and, for example, we predicted that EV stock prices would be affected by lithium prices based partly on

our prior knowledge that lithium is an important input for electric vehicle manufacturing. Our data is being used in a manner that wasn't explicitly agreed to by the data providers, but also not disallowed by the data providers in any way. One possible misuse is for an EV company to take one of our project results, which is that oil prices are heavily correlated with EV stock prices, and subsequently build more data centers that result in more oil consumption and higher oil prices. To prevent this, we could tell companies that it would be more reliable for them to perform their own research and tests before changing company policies.

Works Cited

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