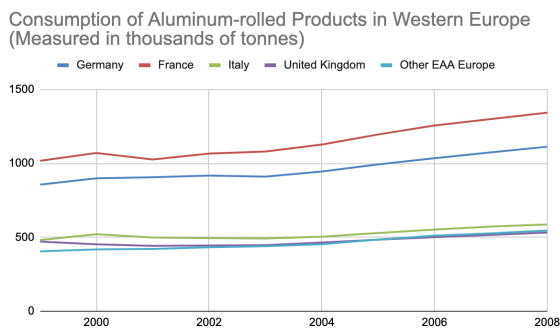


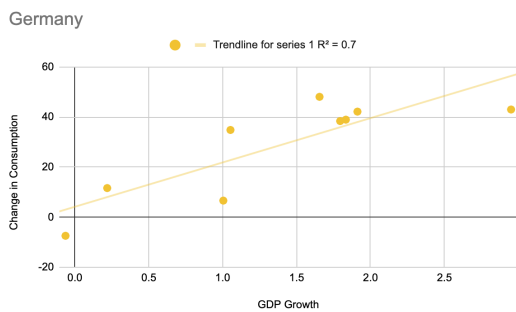
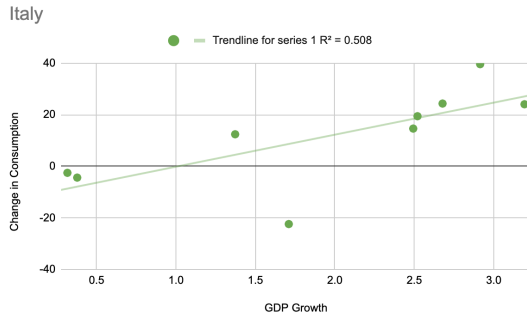
Comparisons in an Industry: European Consumptions of Aluminum Rolled Products

The consumption of aluminum-rolled products varies greatly across different regions of Europe for a variety of reasons. I will be examining this in a few different ways. Firstly, I will compare the annual consumption and the mean annual consumption across different nations. Then, I will compare the GDP changes to the consumption of aluminum-rolled products to explore any possible relationship between the two variables.

Germany and France are consistently the two top consumers of aluminum products within Western Europe. In the years included in this data set, Germany's consumption averaged 965,000 tonnes yearly, while France's averaged 1,148,000 tonnes yearly. This is remarkably high when compared to the United Kingdom's average of 475,000 tonnes yearly and Italy's average of 523,000 tonnes yearly. Other EAA nations averaged the lowest consumption with 464,000 tonnes of aluminum rolled products. The countries seemed to follow similar trends regarding the changes in their yearly consumption. The chart below demonstrates this phenomenon.



To examine the relationship between GDP growth and the consumption of aluminum-rolled products, I will examine the data specifically within the countries of Germany and Italy since they are one high producer and one moderate producer. I have combined data from different tables to create tables for both Germany and Italy, comparing GDP growth and change in consumption. Below, scatterplots display the relationship between GDP growth and the annual difference in consumption of aluminum-rolled products in both Germany and Italy.



Looking at these graphs, we can observe a positive correlation between GDP growth and an increase in the consumption of aluminum-rolled products. To confirm this trend, I've run two regressions. The R^2 value for the relationship shown for Germany is 0.7, and for Italy, it is 0.508. This shows a more explanatory relationship for Germany. The slope for Germany's line of regression is approximately 17.7, while Italy's is 12.4, also showing a stronger relationship in the data for Germany.

The relationship between GDP growth and consumption of aluminum-rolled products proved to be somewhat positive. This relationship implies that an increased consumption of aluminum-rolled products frequently coincides with GDP growth. Using GDP forecasts, this relationship can allow us to better predict the demand for aluminum-rolled products, granting producers enhanced information surrounding the optimal amount to produce. This can also help producers prepare for slower sales. Also, the differences between the R-squared values in Germany and Italy can help firms plan their operations differently between the two countries. This data provides valuable insights into the similarities and differences between the aluminum industry in different Western European nations.