Economic Indices: An Analysis of the Space Industry

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Overview

What is an index?
- A statistical measure of change that aggregates a large amount of information into a single quantity.
- Useful for analyzing changes in data collected on one or more variables over time, especially in macroeconomics.

How is it constructed?
- Establish a base period and base value.
- The value of each subsequent period is compared to that base value.

Select indices reviewed:
- ISM Manufacturing Index
- Federal Reserve Industrial Production Index
- Kensho New Economics Space Index

Select companies researched:
- Aerojet Rocketdyne
- Boeing
- Lockheed Martin
- Northrop Grumman

Objectives

- Research the methodology of existing indices and what is learned from them
- Collect data on a sample of space companies to determine what types of data are available on the space industry (employment, revenues, etc.)
- Determine how this information can be used to construct an index on the space industry

Key Findings

- Employment and revenue data was collected on a sample of four space companies: Aerojet Rocketdyne, Boeing, Lockheed Martin, and Northrop Grumman. The trends in the data are shown in the charts below. The first chart shows trends in employment from 2000 to 2016. A fall in employment can be seen following the 2008 recession.

Conclusions and Future Directions

- The ISM Manufacturing Index and the IP Index show how businesses perform over time. They both track employment, production inventories, new orders, and supplier deliveries in their industries.
- The Kensho Space Index is focused on space-related activities such as space exploration, satellites, launch vehicles, and companies that enable space travel. It tracks the price and number of shares on a given day.
- An index that tracks economic activity in space companies could be a useful tool since the space sector is showing signs of expanding.

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