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EXAMINING ECONOMIC MODELS FOR REMOTE SENSING SATELLITE DATA

Abstract

It is well accepted that satellite remote sensing data is a valuable asset, but what does this mean in terms of efficient economic models for its distribution? Data can be treated as a commodity and sold, or it can be treated as a public good and provided for free. Governments and companies can also choose to focus on sales or distribution of raw (or minimally processed data) or of value-added products developed using the data. This situation can be visualized as a two-by-two matrix, with each cell defined by the processing level of the data and the choice of economic model. In the current remote sensing satellite sector, examples can be found in all four sectors. A relatively small commercial remote sensing sector, as well as selected governments, focus on sales of minimally processed satellite data. Many civilian government agencies have adopted data sharing policies that make minimally processed data freely available to most or all users. There are a number of value-added products, such as weather forecasts and warnings or products designed to aid in disaster relief, that are provided freely by governments (and occasionally commercial entities). The United States and other countries are home to large commercial value-added sectors that transform remote sensing satellite data into products or services to be sold, including private weather forecasts, insurance plans, agricultural information, and a host of other options.

This paper examines the theoretical and practical arguments for and against each of these four models for the treatment of satellite data. How do these four models interact? Which seems to offer the greatest private or public benefits? How does the data collection method or type of data affect the ability or appropriateness of treating data in each of these four ways?