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ECONOMIC AND ETHICAL IMPLICATIONS OF OPEN DATA: LESSONS FROM THE LANDSAT
PROGRAM

Abstract

Over the past decade, the U.S. government has undertaken a number of initiatives to release government-collected data and information to the public for analysis and reuse. Some of the key questions regarding this practice relate to the economic and ethical issues associated with freely sharing data that requires significant government investment to collect, store, and distribute, particularly when some of the users may be very profitable firms. Do open data policies amount to the subsidization commercial entities by taxpayers? Or does free access to data ultimately provide greater benefit to citizens as it is used to increase scientific understanding, inform public policy, and provide better transparency? This paper investigates these issues by examining the case of the U.S. Land Remote Sensing Satellite (Landsat) Program, which offers a rare opportunity to leverage both historical experience and quantitative evidence to answer this question.

For more than 40 years, the Landsat Program has provided continuous monitoring of the Earth, collecting and making available medium resolution “scenes” for government activities, scientific research, and other uses. Although the data product has remained relatively consistent over this period, the policy for accessing the data has not. Landsat data policies at various times included data sales by the government, full commercialization and sales by a private entity, tiered policies that differentiated the cost and access based on the user or intended uses of the data, and, starting in 2008, a move to a completely free and open data access policy. This paper focuses on the relationship between the price of Landsat data and the distribution of that data to various key user groups from 1973 to 2018. This allows for a quantitative analysis of the impact of data sharing policy changes and provides insight into important contemporary policy debates.