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Global Data Economy: Formal and "Informal" Markets for Data

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The latest United States-Mexico-Canada Agreement on digital trade and Japan's announcement on Data Free Flow with Trust for the upcoming G20 meeting highlight the importance of the role of data in modern trade. Recent studies of online plastorms and interviews with top executives in relevant industries have shown that data have become a key asset for innovation and competition. Compared with traditional firms, online platform companies have a great advantage in data, creating a data gap as well as a new entry barrier. This gap arises not only at the firm level but also at the country level. In particular, the gap is growing wider for small, developing countries that are far behind in digital investments. Moreover, countries are forming different data protection and trade regimes, such as those formed by EU and Japan and by China and Vietnam. The differences between regimes can affect the data gap and the data distribution among market participants.

As the world is entering the era of 5G, the demand for data is rising rapidly, but most data transfers can happen in the shadows. As data companies, online platforms operate globally and in near real-time, and their seamless global supply chain operations allow them to allocate resources more efficiently than traditional multinational firms. Online platforms have caused creative destruction in the industries that they entered. The creative destruction has pushed existing firms at all sizes to digitally transform their organizations and business models, a digital transformation force that can drive the demand for data to grow fast. In addition, startups need data to test their algorithms and data-driven business models; hence, new competitors without access to data will inevitably struggle to compete. Even online platforms need to trade data for the purposes such as diversification. Firms can trade data in open markets through data brokers but most firms can exchange data without going through open markets, such as exchanging data within a data center in a third country.

Markets for data are mostly unregulated but have been growing dramatically, such as the data exchange markets in China. How big is the market size for data? How fast does the data market grow in terms of scale and scope? Does the growth vary by industry and by country? If yes, how? Answers to these questions are important because the international division of labor is limited by the extent of the market. Information on markets for data is crucial for market participants to make decisions such as investments in infrastructure and human capital. For

example, investments in data infrastructure can be expensive or even infeasible for small developing countries. However, accessing to global data markets can lower the entry barrier to small developing countries, and can provide them with incentives to invest in local talents and startups, a way that allowing them to participate in the global data economy.

Understanding the market size for data is critical, but the measurement of the markets is extremely challenging because most of them are unregulated and most data transfers can happen in the shadows. In this research, we develop a methodology for measuring the markets for data and the associated annual growth rates for key industries. Our initial estimates indicate that the market size for data is substantial and grows fast. For example, the preliminary and conservative estimate of the market size for data in the global hospitality industry is US $18 billion with a growth rate that doubles its size every three years. In addition, the size and growth of markets for data can differ across industries and across countries. Both industry-level and country-level information on the market size for data and the associated growth can impact the international division of labor. Given the increasing digitization of trade and the rapid pace of technological innovations in this area, the results from this paper can provide important policy implications for data sharing, digital trade, regulatory framework, innovation, investment, and growth.

The views expressed are those of the author and do not necessarily reflect those of the U.S. Bureau of Economic Analysis.