

Research Spotlight

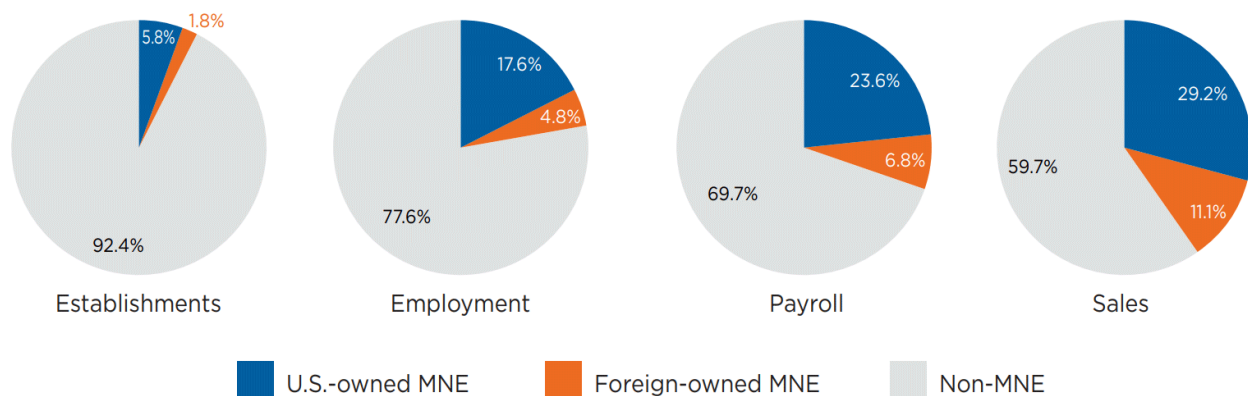
# Multinational Firms in the U.S. Economy

## Insights from Newly Integrated Microdata

November 22, 2022

Multinational enterprises (MNEs) are the most globally engaged firms in an economy. They operate in domestic and foreign markets and may trade in goods and services with affiliated and unaffiliated firms. In 2019, U.S. parent companies accounted for 22 percent of total U.S. private-sector employment and 23 percent of total private-sector value added in the United States, while exporting 50 percent and importing 39 percent of all goods. The economic significance of MNEs underlines the importance of understanding their impacts on domestic firms, workers, and local economies. This requires comprehensive and reliable information on the multinational status and activities of firms.

### Average Share of Economic Activity by Multinational Status



**Notes:** This figure displays the annual share of number of establishments, employment, sales, and payroll averaged over five Economic Census years (1997, 2002, 2007, 2012, 2017).

**Source:** Authors' calculations using Economic Census, BE10-BR, and BE12-BR.

This paper—authored by Fariha Kamal and Wei Ouyang of the U.S. Census Bureau and Jessica McCloskey of the U.S. Bureau of Economic Analysis (BEA)—focuses on identifying firms' multinational status. The authors describe the construction of two confidential crosswalks that permit a comprehensive identification of multinational firms operating in the United States. The paper identifies multinational firms in the Census Bureau's Business Register (BR) from 1997 through 2017 by linking to surveys on the activities of multinational enterprises (AMNE) conducted by the U.S. Bureau of Economic Analysis (BEA). First, the *parent* crosswalk combines U.S. parents from BEA surveys of U.S. Direct Investment Abroad (outward surveys) and

firms in the BR. Second, the *affiliate* crosswalk combines U.S. affiliates of foreign parents from BEA surveys of Foreign Direct Investment in the United States (inward surveys) and firms in the BR. The authors employ deterministic and probabilistic matching routines using numeric tax identifiers, business names, business addresses, and complementary firm attributes (such as primary industry, state, zip code, employment) in the BEA surveys. The paper matches an average of 94 percent of U.S. parent firms in the outward surveys to the BR between 1997 and 2017. Weighted by employment reported on the BEA surveys, the average match rate in the parent crosswalk is 98 percent. The paper matches an average of 84 percent of U.S. affiliates in the inward surveys to the BR between 1997 and 2017. Weighted by employment reported on the BEA surveys, the average match rate in the affiliate crosswalk is 97 percent. The authors document that most of the matches (about 94 percent on average) are obtained using numeric tax identifiers (Employer Identification Numbers), which increases confidence in the match quality.

These newly available crosswalks offer two main advantages over prior inter-agency linking efforts:

- First, the authors construct crosswalks for both outward and inward direct investment activities for all years from 1997 to 2017. This work builds on two early linking efforts: (1) links between BEA's inward surveys and the BR for 1987, 1992, 1997, 2002, and 2007 used to produce statistics on establishment level characteristics of U.S. affiliates of foreign parents; and (2) links between BEA's outward and inward surveys to the Business Enterprise Research and Development Survey conducted for National Center for Science and Engineering Statistics by the Census Bureau for 1997, 1999, 2004–2010. The first set of links only allowed the identification of U.S. affiliates of foreign parents and the second set of links only included firms that perform research and development. Therefore, collectively these links were not designed to allow identification of all multinational firms in the U.S. economy.
- Second, the authors develop and implement an algorithm to assign mutually exclusive MNE status—U.S.-owned or foreign-owned—to linked firms. Approximately 5 percent of linked firms report on both the outward and inward BEA surveys and hence are simultaneously identified as U.S. parents and U.S. affiliates of foreign parents. These firms are currently included in both the inward and outward AMNE statistics published by BEA. This paper's algorithm, based on guidance from BEA's foreign investment survey methodologists and consistent with the BEA definition of U.S.-headquartered MNEs, classifies firms linked to both a U.S. parent and a U.S. affiliate as either U.S.-owned or foreign-owned based on ultimate country of ownership, voting ownership share, and reported employment. Thus, the newly available links and classification enable the most comprehensive comparisons to date between U.S.-owned and foreign-owned MNEs and, more generally, between MNEs and non-MNEs. The crosswalks also offer two key advantages over using the BEA surveys alone. First, the BR collects information at the establishment level, and the BEA surveys collect information at the firm or enterprise level. The establishment is a single physical location at which business activity is performed and classified into six-digit North American Industrial Classification System designations based on its major activity. The ability to identify establishments under common firm ownership allows us to provide detailed industrial and geographic anatomy of multinational firms. Second, the BR contains the universe of non-farm, private-sector establishments, which enables the construction and comparison of establishment and firm characteristics between MNEs and non-MNEs.

Using production data from the Economic Census and administrative merchandise trade transactions, the paper documents that, on average from 1997 to 2017, although MNEs represent less than 1 percent of all firms in the U.S. economy, they account for disproportionate shares of U.S. economic activity: employment (22 percent), payroll (30 percent), sales (40 percent), goods exports (65 percent), and goods imports (60 percent). Within manufacturing, MNEs account for over 40 percent of total employment and payroll and over 60 percent of sales. MNEs' shares of employment, payroll, and sales are quite similar across the 50 states. The authors find that among multinational firms, U.S.-owned MNEs are significantly larger than foreign-owned

MNEs with respect to domestic U.S. operations: on average, they employ 8 times as many workers and have 5 times more sales. U.S.-owned MNEs own more establishments, operate in more broad sectors and detailed industries, have activities in more states and counties, and export and import higher number of products to a larger number of countries. Average pay per worker and sales per worker tend to be similar among both types of MNEs within broadly defined sectors and regions; however, there is a robust MNE premia compared to non-MNEs.

This *Research Spotlight* was prepared by *Survey of Current Business* staff. It uses language from the working paper “Multinational Firms in the U.S. Economy: Insights from Newly Integrated Microdata” by Fariha Kamal, Jessica McCloskey, and Wei Ouyang. [The working paper is available in full on the BEA website.](#)



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