The semiconductor industry has fundamentally transformed the world's industrial structure. By providing the "building blocks" of the microelectronic revolution, semiconductor technology fuels development and productivity in crucial industrial sectors, including consumer electronics, telecommunications, factory automation, and defense electronics. Advancements made possible by the semiconductor industry and related "downstream" electronics industries have visibly impacted the economic, social, and political structures of the United States and other countries throughout the world.

The importance of the semiconductor industry has generated widespread interest on the part of business, government, and the academic and financial communities in statistics that offer insight into the industry's performance. This report provides a series of critical indicators of the U.S. semiconductor industry's financial and operating performance since 1997.

The 2018 Semiconductor Industry Association Databook (hereafter, The Databook) comprises more than 50 historical data series that document key trends in the U.S.-based semiconductor industry. Included in this report are measures of operating performance, employment, cost structure, productivity, and profitability. The Databook is intended to provide industry observers with insights into its historical evolution. The impact of the "Silicon Cycle" is examined, as well as long-term industry trends.

DESCRIPTION OF DATA SOURCES


The Databook accounts for over 95 percent of total U.S.-based semiconductor sales revenues. Because of this high rate, total U.S. industry performance trends may be readily inferred from WSTS and 10K/10Q data except where noted (such as in the discussion of capital expenditures).
ORGANIZATION OF REPORT

The following is a brief outline of the trends covered in the SIA Databook.

Section 1: Global Industry Overview
Section 2: U.S. Industry Overview
Section 3: Global Market
Section 4: U.S. Industry Business Profile
Section 5: Capital and R&D Investment
Section 6: Jobs
Section 7: Productivity & Profitability

DESCRIPTION OF RESULTS

The majority of charts and tables present historical trends in a ratio format, and include "mean" and "median" data. Mean values are determined by first totaling both the ratio numerator and denominator for firms, and dividing these totals to determine the "average" industry result. Computed in this manner, the result is weighted by the relative size of each firm: large firms impact the ratio in greater proportion than small firms. However, the median value is not weighted by firm size because one-half of the respondents report a higher ratio, and one-half report a lower ratio.

In some cases total sales, market shares, or investments levels are presented. Sales and market share data are derived from the WSTS. Total industry outlays for investment and research and development (R&D) are inferred from the expenditure rates of survey respondents, the respondents’ share of the U.S.-based industry, and the 10k/10q filings of U.S. semiconductor companies to the SEC.
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