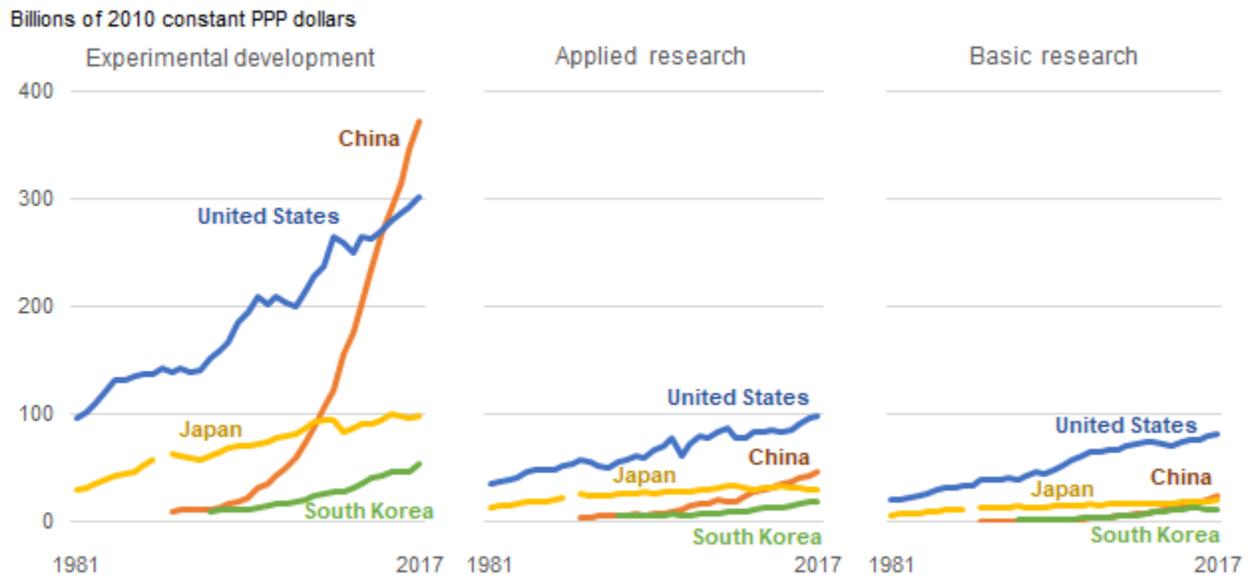


The United States Invests More in Applied and Basic Research than Any Other Country but Invests Less in Experimental Development than China

FIGURE 1

China leads the world in experimental development spending



PPP = purchasing power parity.

Note(s)

Data not available for China before 1991, South Korea before 1995, and Japan in 1990.

Source(s)

OECD Research and Development Statistics, Gross domestic expenditure on R&D by sector of performance and source of funds (https://stats.oecd.org/Index.aspx?DataSetCode=GERD_TORD, accessed 23 August 2019) and NCSES, National Patterns of R&D Resources (annual series).

Although total R&D spending in 2017 by the United States (\$483 billion, enumerated in constant 2010 purchasing power parity dollars) exceeds China's R&D expenditures (\$443 billion), China's annual investment in experimental development surpasses that of the United States. China's spending on experimental development has grown rapidly in recent years to over \$370 billion in 2017, nearly \$70 billion greater than the United States.

U.S. spending on applied research has grown steadily since the early 1980s, rising to nearly \$100 billion in 2017. U.S. expenditures on basic research have shown a similar trend and were just below \$85 billion in 2017.

Experimental development is systematic work that draws on knowledge gained from research and practical experience and is directed toward producing new or improving existing products or processes. Applied research is original investigation undertaken to acquire new knowledge that is directed primarily toward a specific, practical aim or objective. Basic research is experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundations of phenomena and observable facts without any particular application or use in view. Like basic and applied research, experimental development generates additional knowledge. Total R&D expenditures are the sum of spending on experimental development, applied research, and basic research.

Data are from the National Center for Science and Engineering Statistics (NCSES), **National Patterns of R&D Resources**, and from the **Organization for Economic Cooperation and Development (OECD)**.

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