

GAO Highlights

Highlights of [GAO-13-365](#), a report to the Chairman, Committee on Commerce, Science, and Transportation, U.S. Senate

Why GAO Did This Study

Over the last decade, the United States lost about one-third of its manufacturing jobs, raising concerns about U.S. manufacturing competitiveness. There may be insights to glean from government policies of similarly-situated countries, which are facing some of the same challenges of increased competition in manufacturing from developing countries.

GAO was asked to identify innovative foreign programs that support manufacturing that may help inform U.S. policy. Specifically, GAO examined (1) government strategies and programs other advanced economies have implemented to approach issues similar to those facing U.S. manufacturing, and (2) the key distinctions between government approaches to support manufacturing in other advanced economies and those in the United States. Based on input from experts and federal officials, and an analysis of manufacturing programs in other advanced countries, GAO selected Canada, Germany, Japan, and South Korea for study. In each country, GAO interviewed program officials and reviewed documents describing their programs. To identify distinctions between foreign and U.S. approaches to supporting manufacturing, GAO researched comparable programs in the United States, and interviewed staff administering those programs.

GAO is not making any recommendations in this report. GAO received only technical comments on this report from federal agencies.

View [GAO-13-365](#). For more information, contact Andrew Sherrill at (202) 512-7215 or SherrillA@gao.gov or Lawrence Evans at (202) 512-4802 or EvansL@gao.gov.

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GLOBAL MANUFACTURING

Foreign Government Programs Differ in Some Key Respects from Those in the United States

What GAO Found

The four countries GAO analyzed—Canada, Germany, Japan, and South Korea—offer a varied mix of programs to support their manufacturing sectors. For example, Canada is shifting emphasis from its primary research and development (R&D) tax credit toward direct support to manufacturers to encourage innovation, particularly small- and medium-sized enterprises (SMEs). Germany has established applied institutes and clusters of researchers and manufacturers to conduct R&D in priority areas, as well as a national dual training system that combines classroom study with workplace training, and develops national vocational skills standards and credentials in 350 occupations. Japan has implemented science and technology programs—with a major focus on alternative energy projects—as part of a comprehensive manufacturing strategy. South Korea has substantially expanded investments in R&D, including the development of a network of technoparks—regional innovation centers that provide R&D facilities, business incubation, and education and production assistance to industry.

When compared to the United States, the countries in GAO's study offer some key distinctions in government programs to support the manufacturing sector in the areas of innovation, trade, and training.

- While the United States and the other four countries all provide support for innovation and R&D, the foreign programs place greater emphasis on commercialization to help manufacturers bridge the gap between innovative ideas and sales. These include programs that support infrastructure as well as hands-on technical and product development services to firms, and that foster collaboration between manufacturers and researchers. In contrast, the United States relies heavily on competitive funding for R&D projects with commercial potential.
- Within trade policy, the United States and the four countries in GAO's study provide similar services, but there are several differences in how they are delivered. For example, the United States is an acknowledged leader in intellectual property protection, but the U.S. government plays a less prominent role than the Japanese government in developing technological standards on industrial products.
- A key difference related to training programs pertains to the sustained role of government in coordinating stakeholder input into a national system of vocational skills training and credentialing, which helps provide a supply of skilled workers for manufacturers. This was particularly evident in Germany. In contrast, the United States largely devolves vocational training to states and localities and does not have a national system to issue industry-recognized credentials. However, the U.S. manufacturing industry, with participation from the federal government, has recently launched an effort to establish nationally portable, industry-recognized credentials for the manufacturing sector.

Overall, GAO's analysis shows the broad extent to which four countries who are U.S. competitors are leveraging the public sector to help their manufacturing industries maintain competitiveness in a rapidly changing global economy.