The Bipartisan Innovation Bills in Congress Invest in Critical Supply Chains, Support Manufacturing Jobs and Maintain America's Competitive Edge

The bipartisan innovation bills in Congress— the America COMPETES Act *originally passed by the House and the* United States Innovation and Competition Act (USICA*) passed by the Senate—make critical investments for America's future economic growth. They address problems that have long hindered American innovation, research and manufacturing. The bills invest in supply chains for critical technologies such as semi-conductors and support production in the U.S. from start to finish, beginning with cutting-edge research through to domestic manufacturing. The bills would improve America's competitive edge internationally by spurring innovation and harnessing it to create new jobs, companies and industries.*

Research and innovation are key to economic growth and maintaining America's competitive edge

Research and technological innovation, especially in areas such as advanced manufacturing, are the foundations of future economic growth. From basic research to technological development to entrepreneurship, new products, processes and approaches can support new businesses or entire industries, leading to improved living standards and economic development in the United States and worldwide.

The bipartisan innovation bills would help keep the U.S. on the cutting edge of technological development, including artificial intelligence, quantum computing, biotechnology and advanced energy. The bills expand the innovation pipeline for new technologies that will be vital to the 21st century economy, supporting a range of new efforts and strengthening existing advanced technology programs at the National Institute of Standards and Technology and the Department of Energy's Office of Science, as well as creating a new Directorate at the National Science Foundation.

The bipartisan innovation bills invest in regional technology hubs to ensure that the high-paying jobs in research and innovation benefit communities across the country. These regional hubs would provide grants and strategic assistance to help ensure that the local benefits of new research and innovation reach local communities.

Investment in manufacturing will power long-term economic growth and support high-quality jobs

Decades of outsourcing have eroded domestic manufacturing jobs and made the U.S. reliant on imports for many manufactured goods. Manufacturing has long been a core strength of the American economy but increasing global competition has threatened many of these high-quality jobs. While the U.S. has added 423,000 manufacturing jobs under President Biden, between 2000 and 2019 the U.S. lost over a quarter of all domestic manufacturing jobs, a loss of nearly 4.5 million. Increased competition from China cost the U.S. approximately 985,000 manufacturing jobs between 1999 and 2011.

The bipartisan innovation bills would strengthen domestic innovation and advanced manufacturing via the Hollings Manufacturing Extension Partnership (MEP) and the Manufacturing USA program. These investments would help domestic manufacturers remain competitive by directly working with companies across the country. MEP provides manufacturing, business and process technical assistance to small- and medium-sized manufacturers in order to help them grow and

thrive. Manufacturing USA establishes private-public partnerships to solve industry-relevant advanced manufacturing challenges and increase American competitiveness. These programs bolster regional innovation, as they work with manufacturers in all 50 states and Puerto Rico. The bipartisan innovation bills would also strengthen the Registered Apprenticeship Program, which provides paid on-the-job training, to fill the training gap created by increasing automation and corporate disinvestment. The bills would also invest in STEM education nationwide, with a focus on racial, gender and geographic diversity. Together, these programs support high-quality manufacturing jobs across the country.

The bipartisan innovation bills would help create a pipeline from advanced research to domestic manufacturing in the U.S., ensuring that the U.S. reaps more of the economic gains from innovation

The U.S. is a leader in advanced research, but manufacturing and production often wind up overseas. The United States has a strong innovation ecosystem, ranging from cutting-edge university research to federal technology development agencies to vibrant entrepreneurship and commercialization of new technologies. However, competition from China and other countries has threatened American growth in this space. This is especially visible in advanced manufacturing, where other countries have built new manufacturing sectors based on American research discoveries. For example, though U.S. scientists initially developed photovoltaic technology for solar panels, subsidies from the Chinese government later enabled Chinese manufacturers to dominate solar panel production.

The bipartisan innovation bills bolster a research pipeline that begins with innovation and leads to manufacturing jobs here in the U.S. By investing in research, supply chain stability and manufacturing partnerships, the bipartisan innovation bills encourage advanced technology and manufacturing from start to finish. Together, this suite of policies represents a vital down-payment on the future of the U.S. economy.

The bipartisan innovation bills would address vulnerabilities in the U.S. supply chain that were highlighted by the coronavirus pandemic

The coronavirus pandemic has shown the perils of relying on global supply chains for critical components after shutdowns abroad caused shortages that pushed up prices for American consumers. For example, pandemic-induced factory shutdowns abroad led to a global shortage on semiconductors, which are necessary to produce electronics and automobiles. Price increases in the automobile sector played an outsized role in driving up 2021 headline inflation. While the pandemic was a particularly extreme disruption, supply chain shocks are common, making long-term solutions essential. The America COMPETES Act passed by the House, for example, invests $45 billion to strengthen critical supply chains.

To encourage domestic production of semi-conductors, the bipartisan innovation bills invest $52 billion in domestic chip manufacturing. This investment would bolster advanced research, design and manufacturing of semi-conductors, keeping the U.S. on the cutting edge of semi-conductor production and creating high-quality manufacturing jobs. Increasing the domestic production of semi-conductors will also reduce American dependence on fragile global supply chains. These investments seek to even the playing field for American companies, as many other countries have provided similar support for advanced semi-conductor manufacturing.