

Technology To the Rescue: The Benefits of the CHIPS and Science Acts  
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Back in 2020, when advancements in technology and science weren’t the most pressing issue that faced the United States. The Biden-Harris Administration implemented an industrial strategy to revitalize domestic manufacturing.<sup>1</sup> This strategy was projected to create good-paying American jobs, strengthen American supply chains, and accelerate future industries.<sup>2</sup> Fast forward to August 2022, this plan is set to come into effect with President Biden signing into law the bipartisan CHIPS and Science Acts of 2022.<sup>3</sup>

The CHIPS and Science Acts of 2022 plan to build on the progress of the implementation of the industrial strategies that were set forth during that tumultuous time back in 2020. Those policies spurred a historical recovery in manufacturing, adding 642,000 jobs since 2021.<sup>4</sup> In addition to that fantastic progress, the CHIPS and Science Acts will make historic investments that will poise U.S workers, communities, and businesses to continue to be at the apex of those industries.<sup>5</sup> The CHIPS and Science Acts will bolster U.S leadership in semiconductors.<sup>6</sup> More specifically, the Acts will provide \$52.7 billion for American semiconductor research, development, manufacturing, and workforce development.<sup>7</sup> President Biden issued an Executive Order that set forth these goals to be reached through collaboration between the White House, State, local, tribal, and territorial governments; the private sector; research universities; labor unions; and our allied countries.<sup>8</sup>

Of course, like anything passed on a massive scale, there will be some controversies. One controversial aspect of the CHIPS Act is the claw-back provision in the tax credit incentive.<sup>9</sup> The Act creates a 25 percent tax credit for investments in semiconductors manufacturing, including manufacturing specialized tooling required for chip production.<sup>10</sup> The claw-back provisions prevent recipients of these incentives funds from expanding or building new manufacturing capacity; or making ‘other transactions’ that support semiconductor industries in “countries of concern” for ten years, lest they face enforcement action by Commerce to recover all incentives provided.<sup>11</sup>

While that is always something to keep in mind, the CHIPS and Science Acts’ projected benefits are substantial. For instance, because of the passage of the CHIPS and Science Acts of 2022, companies have announced nearly \$50 billion in additional investments in American

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<sup>1</sup> *Fact Sheet: CHIPS and Science Act Will Lower Cost, Create Jobs, Strength Supply Chains, and Counter China*, Briefing Room, THE WHITE HOUSE (August 09, 2022), <https://www.whitehouse.gov/briefing-room/statements-releases/2022/08/09/fact-sheet-chips-and-science-act-will-lower-costs-create-jobs-strengthen-supply-chains-and-counter-china/>.

<sup>2</sup> *Id.*

<sup>3</sup> *Id.*

<sup>4</sup> *Id.*

<sup>5</sup> *Id.*

<sup>6</sup> *Id.*

<sup>7</sup> *Id.*

<sup>8</sup> Tina Reynolds & Markus Gerhard Speidel, *CHIPS and Science Act Makes Available Billions of Dollars for the United States Science and Technology Sectors*, JD SUPRA (August 30, 2022), <https://www.jdsupra.com/legalnews/chips-and-science-act-makes-available-3298039/>.

<sup>9</sup> *Id.*

<sup>10</sup> *Id.*

<sup>11</sup> *Id.*

semiconductor manufacturing, bringing total business investments to nearly \$150 billion since President Biden took office.<sup>12</sup>

These funds also come with solid guardrails, ensuring recipients do not build certain facilities in countries of concern and preventing companies from using taxpayer funds for stock buybacks and shareholder dividends.<sup>13</sup> It will also support good-paying, union construction jobs by requiring Davis- Bacon prevailing wage rates for facilities built with CHIPS funding.<sup>14</sup>

A major point of the CHIPS Act is that it will promote U.S innovation in wireless supply chains.<sup>15</sup> The CHIPS and Science Acts include \$1.5 billion for promoting and deploying wireless technologies that use open and interoperable radio access networks.<sup>16</sup> It will also establish a technology, innovation, and partnerships directorate at the National Science Foundation ( NSF ) to focus on fields like semiconductors and advanced computing, advanced communications technology, advanced energy technologies, quantum information technologies, and biotechnology.<sup>17</sup>

Arguably most important is that the CHIPS Act will drive opportunity and equity for all of America in STEM and innovation.<sup>18</sup> The legislation authorizes the investments to expand the geographic and institutional diversity of research institutions and the students and researchers they serve, including new initiatives to support Historically Black Colleges and other minority-serving institutions and other academic institutions providing opportunities to historically underserved students and communities, primarily through the National Science Foundation (NSF).<sup>19</sup>

As we look back to the tumultuous time that was 2020, let's give a little smile for implementing what was to become the CHIPS and Science Acts.

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<sup>12</sup> *Id.*

<sup>13</sup> *Id.*

<sup>14</sup> *Id.*

<sup>15</sup> *Fact Sheet: CHIPS and Science Act Will Lower Cost, Create Jobs, Strength Supply Chains, and Counter China*, Briefing Room, THE WHITE HOUSE (August 09, 2022), <https://www.whitehouse.gov/briefing-room/statements-releases/2022/08/09/fact-sheet-chips-and-science-act-will-lower-costs-create-jobs-strengthen-supply-chains-and-counter-china/>.

<sup>16</sup> *Id.*

<sup>17</sup> *Id.*

<sup>18</sup> *Id.*

<sup>19</sup> *Id.*