Balancing technological sovereignty and regional revitalization: What the EU Chips Act 2.0 can learn from the US Rust Belt

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Summary

The forthcoming EU Chips Act 2.0 seeks to balance two ambitious goals: fostering European technological sovereignty while strengthening regional long-term competitiveness through targeted investments. This challenge has become increasingly important as innovation policy is expected not only to enhance European competitiveness, but also to address widening regional inequalities and strengthen social cohesion amid growing public distrust in democratic institutions. Experience from the US CHIPS Act in the Rust Belt suggests that achieving this dual objective is more difficult than policymakers often assume. Large-scale innovation investments alone do not automatically generate public trust or convince communities that the envisioned transformations will be beneficial for them. To serve as a credible strategy for regional renewal, innovation policy must be tailored to local concerns and identities, complemented by visible social investment, and developed through meaningful engagement with local communities rather than promises of future prosperity or appeals to national technological priorities.

Background

Across Europe and North America, policymakers increasingly turn to innovation policy as a response to the challenges facing so-called "left-behind" regions—places marked by industrial decline, demographic change, and associated social and political dislocation. These initiatives are often linked to broader national priorities, including technological sovereignty, competitiveness, and security. The expectation is that innovation policy can achieve both objectives simultaneously: strengthening national technological capabilities while revitalizing regions that have struggled to benefit from, or even been directly harmed by, previous waves of technological and economic change.

The US CHIPS and Science Act represents one of the clearest examples of this approach. Passed in 2022, it committed more than $50 billion to rebuilding domestic semiconductor manufacturing capacity and strengthening strategic independence while explicitly aiming to revitalize former industrial regions such as Upstate New York and Central Ohio, often subsumed under the label „Rust Belt."[1] The forthcoming EU Chips Act 2.0 follows a similar logic. While primarily framed around strengthening Europe's technological sovereignty and reducing strategic dependencies, its regional dimension emerges when decisions are made about where new manufacturing capacity, investment, and jobs should be located, including through the pro-

1 The White House. (2022, August 9). FACT SHEET: CHIPS and Science Act will lower costs, create jobs, strengthen supply chains, and counter China. Briefing Room. whitehouse.gov

posed "Semiconductor Regions of Excellence."[2] This reflects a broader pattern in EU innovation policy: Policies need to reconcile logics of concentration of capacity and excellence with inclusive regional development and European cohesion. Yet questions of regional transformation often arise only once technological priorities have already been established, turning regions into sites of implementation rather than partners co-shaping innovation policy from the outset.

Regional innovation initiatives are also a political bet. The regions targeted for innovation-led revitalization often represent electorally important constituencies in increasingly polarized democracies. At the groundbreaking of a semiconductor facility in Ohio in 2022, President Biden promised residents thousands of jobs and a chance to "bury the label 'Rust Belt'" by becoming the new "Silicon Heartland."[3] A similar narrative emerged in Germany. Just weeks before the 2024 Saxony state election, European Commission President Ursula von der Leyen, former Chancellor Olaf Scholz, and Saxony's Prime Minister Michael Kretschmer joined the groundbreaking ceremony for the new ESMC semiconductor plant in Dresden — the first major manufacturing investment approved under the European Chips Act — presenting "Silicon Saxony" as a model of innovation-led regional renewal.[4]

Yet these bets to secure regional futures through innovation rarely pay off politically. In the US, most counties in Upstate New York and Central Ohio voted decisively Republican in 2024, despite receiving some of the most significant high-tech investments of the Biden administration.[5] In the 2024 Saxony elections, the governing party achieved its historically lowest result[6], despite what analysts consider a highly successful decades-long semiconductor investment strategy. In the neighboring Saxony-Anhalt, the recent collapse of a planned semiconductor investment by Intel disappointed expectations of economic renewal and reinforced doubts about the credibility of innovation-led development.[7]

Together, these contrasting outcomes suggest that reconciling technological sovereignty with regional innovation policy is not straightforward. What is more, neither successful semiconductor investment nor promises of future investment automatically translate into greater political trust or public support. With the EU Chips Act 2.0 in the making, policymakers face a broader question: how can European technological and innovation goals become a credible strategy for regional futures that also pay off politically?

Semiconductor sovereignty and regional revitalization: evidence from two US regions

Semiconductors have become a central focus of innovation policy because they are necessary components of all digital technologies, ranging from artificial intelligence to automotive manufacturing. Following the COVID-19 pandemic, supply chain disruptions, and growing geopolitical tensions, governments in both Europe and the US have sought to rebuild domestic semiconductor capacity through unprecedented public investment.

2 European Commission. (2026). Proposal for a Regulation of the European Parliament and of the Council amending Regulation (EU) 2023/1781 establishing a framework of measures for strengthening Europe's semiconductor ecosystem (Chips Act 2.0) (COM(2026) 504 final). https://digital-strategy.ec.europa.eu/en/policies/chips-act-2
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4 European Commission. (2024, August 20). Speech by President von der Leyen at the groundbreaking ceremony for the European Semiconductor Manufacturing Company (ESMC) semiconductor plant [Speech transcript]. Press Corner. https://ec.europa.eu/commission/presscorner/detail/en/speech_24_4304
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6 Chazan, Guy. 2024. 'Far-Right Alternative for Germany Wins First Regional Election'. German Politics. Financial Times, September 1. https://www.ft.com/content/217b4179-6fda-418b-8517-10fb7c1aae27?syn-25a6b1a6=1.
7 Investieren in Sachsen-Anhalt. 2025. 'Haseloff on the Intel Decision'. Investieren in Sachsen-Anhalt, July 25. https://www.invest-in-saxony-anhalt.com/press-dates/detail/haseloff-on-the-intel-decision?utm_source=chatgpt.com.

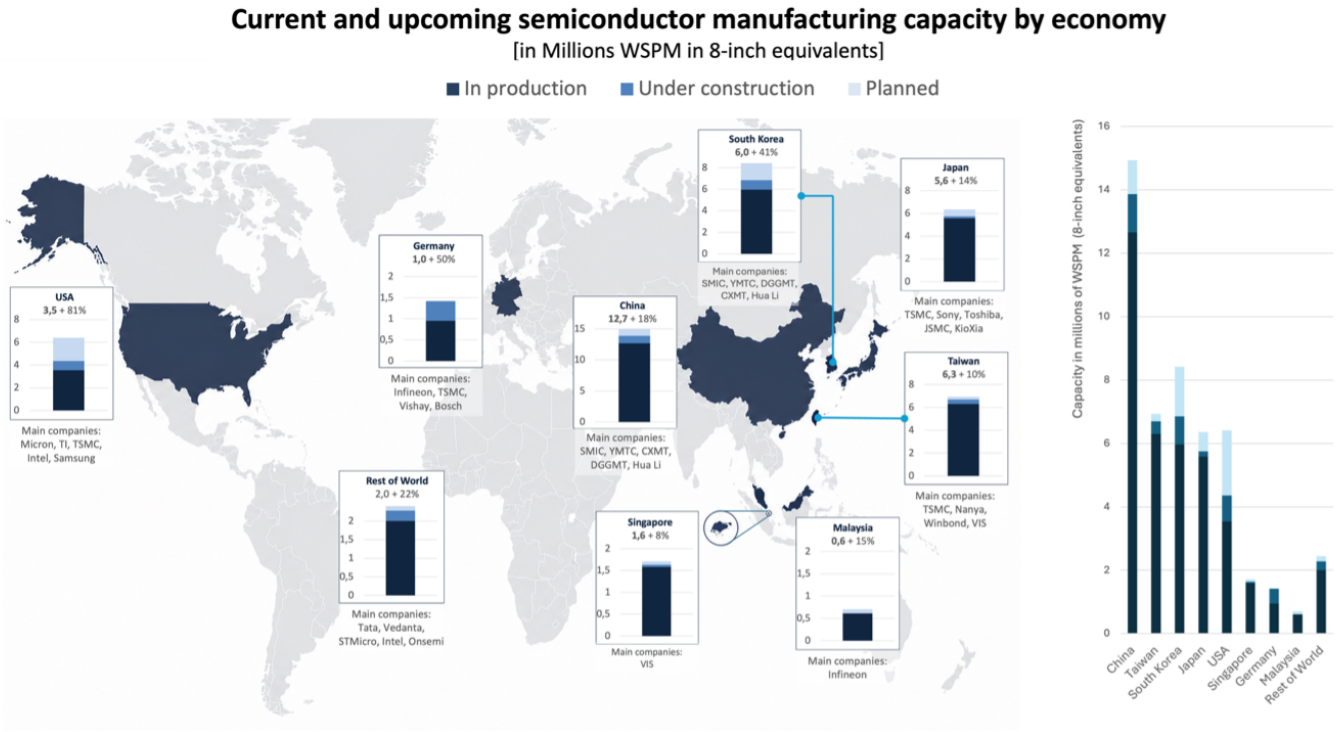


Fig1: Total in-production and upcoming capacity for the economies with largest production capacity, measured in Million wafer starts per month (WSPM) in 8-inch equivalents and as a percentage of the planned increase based on the current absolute, respectively. Rest of World (RoW) aggregates all economies in the dataset not otherwise listed in the chart. The companies that account for the increase in capacity due to under construction and planned semiconductor fabrication plants (fabs) are included in light grey under the country statistics. Source: All data extracted and re-arranged by the authors from "The chip landscape: Geographical distribution of wafer fabrication capacity." OECD Science, Technology, and Industry Policy Papers, December 2025 No. 188.

The US CHIPS and Science Act deliberately linked semiconductor manufacturing to regional revitalization. In Upstate New York, Micron announced a major manufacturing facility in a region with a long history of microelectronics production. In Central Ohio, Intel committed to a large fabrication plant intended to anchor a new center of advanced manufacturing. Both projects were presented not only as industrial investments but as symbols of renewed regional prosperity.

Yet, the promise of innovation-led revitalization met considerable public skepticism. In Upstate New York, a region with a significant microelectronics legacy as the home of IBM and GE, many residents interpreted new semiconductor investments by companies and the government through decades of earlier broken promises that had failed to reverse economic decline. Rather than viewing high-tech investment as evidence of a better future, many questioned why longstanding concerns—including public services, infrastructure, and community life—continued to receive less attention than globally competitive industries.

Central Ohio presented a different dynamic. Residents generally welcomed new high-tech investment surrounding Intel's planned fabrication plant but rejected political narratives portraying the region as a declining "Rust Belt" awaiting rescue. Instead, many pointed to the success of the "Columbus Way"—a regional development strategy built on collaboration between public institutions, universities, and industry that had historically emphasized broad-based economic development rather than high-tech innovation alone. Many therefore viewed the new investment as a continuation of an already successful diversified development trajectory as opposed to a regional transformation. The national CHIPS Act narrative failed to resonate with how communities understood their own history and future.[8]

The subsequent disruption of several CHIPS Act-related projects following the change of

8 this entire section is based on: Schneider, Marlise Horvath. 2025. 'From Rust Belts to Silicon Heartlands: Microchip Futures and Innovation's Others in New York, Ohio, and Flanders'. Technische Universität München. https://mediatum.ub.tum.de/1783692.

administration in the US reinforced concerns that innovation policy can be vulnerable to shifting political priorities. Across both cases, semiconductor investment neither resolved existing social challenges nor automatically generated public confidence in government strategies. In some instances, it intensified pressures through rising housing costs, competition over public subsidies, and uneven access to new opportunities.

These findings are particularly relevant as the EU prepares the Chips Act 2.0. While the original European Chips Act focused primarily on strengthening Europe's semiconductor research and innovation ecosystem and mobilizing investment, the new proposal shifts attention towards industrial scale-up, strategic projects, faster permitting, and the creation of "Semiconductor Regions of Excellence" to attract manufacturing capacity. Yet the proposal continues to treat regional development and socio-political dimensions largely as an afterthought to technology sovereignty, looking mainly at where investment should be concentrated and how regions can compete for strategic projects. Compared with the US, however, Europe must balance these objectives across even more diverse regional economies, existing industrial clusters, and heterogeneous national innovation systems. As implementation of the Chips Act 2.0 begins, the challenge is therefore not only where semiconductor capacity should be built, but how regional perspectives can shape innovation policy before those decisions are made.

Recommendations

01 Do not treat technological sovereignty and regional development as an automatic win-win

Current policy rhetoric around semiconductor investments presents technological sovereignty and regional development as mutually reinforcing objectives. This framing is overly simplistic and creates unrealistic expectations. National and European priorities around competitiveness and security do not automatically resonate with local concerns. Moreover, decisions about where to locate semiconductor facilities, including whether to concentrate investment in existing clusters or spread it across regions, inevitably create winners and losers—as illustrated by competition between Upstate New York and Central Ohio and by many prior EU innovation investments. Policymakers should acknowledge these trade-offs openly rather than presenting innovation policy as a universal win-win.

02 Integrate regional development into innovation policy from the outset

The EU Chips Act 2.0 proposal significantly strengthens the industrial dimension of EU semiconductor policy, but it still tends to treat regions primarily as locations for implementing strategic investments rather than as actors shaping regional innovation strategies. If the revitalization of "left-behind" regions is to be taken seriously, regional development should not become a downstream implementation challenge addressed only after technological priorities have been established. Too often, regional considerations enter innovation policy only when deciding where to allocate investment, manufacturing capacity, jobs, or funding across competing regions. By then, many of the most important political and social choices have already been made, including the design of funding instruments. Instead, regional priorities should shape the EU Chips Act 2.0 from the outset. Policymakers should avoid top-down, one-size-fits-all approaches and engage local communities before major investments are announced to understand regional priorities, concerns, and sources of disaffection. Communities should be treated as partners in shaping regional transformation rather than passive recipients of promised economic benefits.

03 Complement innovation policy with social policy to make regional benefits tangible early

The benefits of the EU Chips Act 2.0 will be neither self-evident nor experienced equally across communities. What is more, innovation policy and the urgencies of socio-economic hardship operate on different timescales. Investments in semiconductor manufacturing may take years to generate employment and economic spillovers, while many communities face immediate challenges related to housing, mobility, education, healthcare, and demographic change. Policymakers should not assume that innovation investments will automatically be perceived as addressing pressing social needs. Instead, investments in strategic industries should be accompanied by visible investments in social infrastructure, including affordable education and training, accessible public transport, affordable housing, community spaces, and services that improve communities and everyday quality of life. Strengthening social infrastructure should form an integral part of innovation policy from the outset, contributing to its credibility and legitimacy rather than appearing as an afterthought once industrial investments are secured.

04 Build on local identities and narratives

Innovation policy is always embedded in local history and culture. Regional identities shape how communities interpret new opportunities and threats, what they see as credible futures, and whether they recognize themselves in policymakers' visions of transformation. Policymakers should not assume that every former industrial region aspires to become the next "Silicon Valley." They should also avoid relying exclusively on national narratives of competitiveness or security that often fail to gain local traction. Communities with long histories of semiconductor manufacturing may interpret new investments through the lens of earlier cycles of industrial expansion, decline, and political disappointment. Successful innovation policy builds on local identities and shared histories rather than asking communities to adopt externally defined visions of progress.

05 Plan for economic resilience, not dependency

Communities in both the American Rust Belt and Eastern Germany have experienced the consequences of dependence on dominant industries and employers that disappeared amid globalization and political transformation. Innovation policy should avoid replacing one form of dependency with another by tying regional futures to a single flagship investment or technology. Instead, semiconductor investments should be embedded within broader regional development strategies that promote economic diversification, complementary industries, skills development, and local entrepreneurship. Demonstrating that governments are planning for long-term resilience—rather than placing all their bets on one company or one sector—can make innovation policy more credible.

06 Plan now for how innovation policy may shape elections in three years, not three months

Innovation initiatives launched today are unlikely to deliver immediate political benefits in upcoming national or state elections. There is even the potential for medium-term negative political impacts because of mismanaged expectations, triggered memories of broken promises and perceptions that the communities' immediate concerns are left unmet. While these effects may influence political attitudes well beyond the current electoral cycle, the economic benefits of successful investments will emerge over much longer time horizons. Innovation policy should therefore be treated as part of a long-term commitment to regional development and democratic resilience, not as a short-term electoral signal or an occasion for political photo-ops. As further investments are planned under the EU Chips Act 2.0, policymakers should consider how these initiatives may shape trust in government over several electoral cycles.

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