



EU Chips Act: priorities, geopolitics, resources – the debate goes on

Article 1- Priorities: finding the balance

The EU Chips Act and the EU's ambition to achieve 'sovereignty' in critical technologies have been driven by geopolitical, economic and societal shocks – from Covid and the war in Ukraine and to tensions over Taiwan. Even before these recent triggers, there was a widely-held [opinion](#) that Europe faces major industrial challenges and needs to increase its industrial capacity.

In September 2022, McKinsey published a [report](#) on Europe's technology gap in setting out the technological imperative. *"Unless Europe catches up with other major regions on key technologies, it will be vulnerable across all sectors on growth and competitiveness—compromising the region's relatively robust record on sustainability and inclusion—as well as security and strategic strength, hindering long-term resilience."*

MEPs echoed these views in the European Parliament's ITRE committee draft [report](#) on the EU Chips Act, October 2022: *"Pushing forward innovation is at the heart of long-term EU strategic autonomy; and innovation is at the heart of European industry."*

Building production capacity for industrial resilience ...

Yet, how do ambitions for European 'strategic autonomy' and its 'Digital Decade' translate into priorities for Europe's semiconductor industry? One of the central discussions is around the aim to increase production capacity. Should the EU focus on developing manufacturing facilities for cutting-edge nodes or for mature technologies, or both?

Industry organisation, Orgalim, has been among those stressing the importance of mature technologies to address the needs of European industry as a whole. In a position [paper](#) in September 2022, it stated: *"Orgalim acknowledges the importance for Europe of investing in design, development, and production of "next generation" chips. We nevertheless underline that the shortage of semiconductors which has been impacting manufacturers across Europe and the rest of the world also affects more "mature" technologies. If the Chips Act indeed intends to increase the resilience of the European industry by enhancing the security of its supply chains, the legislation should apply the principle of technology neutrality, serving the needs of the European key industrial verticals."*

In healthcare, Medtech issued a [call](#) for *"... prioritized allocation of mature and advanced semiconductors to the healthcare sector."*



Meanwhile, speaking in an [article](#) in the Frankfurter Allgemeine Zeitung, in September 2022, Wolfgang Weber, CEO German Electro and Digital Industry Association (ZVEI) noted. *“There are technologies of all chip sizes that are worthy of funding, for example when it comes to optimizing processes, manufacturing semiconductors in a more resource-efficient manner or using new materials.”* Adding: *“Right now the EU needs to be more bold than small: We need the combined strengths of industry and politics if we don’t want to fall behind. We now need a wow effect for Europe.”*¹

The European Economic & Social Committee (EESC) [opinion](#) on the EU Chips Act took a similar stance. European industries that rely on chips must be helped to be “crisis-resilient”. *“...the EU’s chips strategy should not be limited to processors, but should deal with **all types of integrated circuits**, including passive components and packaging materials, as well as the manufacture of machines. The “**from the lab to the fab**” principle put forward by the Commission does not go far enough, as the value chain does not end with manufacturing.”*

... strengthening design and R&D

At the same time, other industry specialists question whether the EU’s goal of boosting Europe’s production capacity to 20% of the global market by 2030 is the best way forward. Many suggest that the EU would gain more from developing design capabilities and building on its existing strengths in R&D, rather than prioritizing production capacity.

For instance, a [paper](#) published in the Briefings of French Institute of International Relations states: *“As companies and governments around the world are investing hundreds of billions of dollars in reaction to the current shortage, there is a real overcapacity risk for some types of chips and hoped returns on these investments might not materialize.*

The global subsidy race to build foundries carries the risks of channeling billions in public funds into unprofitable investments.”

It continues: *“Beyond coordinating with partners, the EU’s interests would be better served with a chips strategy better adapted to the EU’s strengths and needs. Given low domestic demand especially in the cutting-edge segment, a focus on upstream parts of the value chain such as chip design and R&D would be more fitting.”*

Likewise, think-tank Bruegel, says in an [analysis](#) of the EU Chips Act: *“While meeting Europe’s chips needs is important in a new geopolitical context, design of an EU-level industrial policy for chips should focus on the highest end of the semiconductor value chain, and especially on R&D instead of production subsidies.”*

An [article](#) in the leading German public affairs magazine, Internationale Politik, puts the issues even more strongly: *“Political leaders in Europe continue to talk about “digital sovereignty” and “supply chain security” as interlinked topics. However, there’s no evidence that cross-border supply chains*

¹ Original in German, our translation



contributed to the chip shortage. Threatening to meddle in supply chains creates problems, rather than solving them.”

Getting the policy right for the future

Other analysts point to opportunities in emerging areas such as quantum – if the policy and implementation are right. For instance, François Candelon, a managing director and senior partner, Boston Consulting Group (BCG), commented on a BCG [report](#) on Europe’s position in quantum computing, saying:

“Europe’s history when dealing with tech revolutions has too often been characterized by early promise, failure to scale at critical moments, and then an expensive attempt to catch up. Policymakers need to learn those lessons fast. The good news is that the window is still open to create and execute a European strategy, building public and private capital powerhouses to invest in and scale European universities’ ability to train the next generation of quantum experts.”

Meanwhile, Thierry Breton, the EU’s Commissioner for the Internal Market, has [said](#) Europe does not need to choose. *“Some will tell us that we should focus on research or produce well-established technology, and leave the commercialisation of ground-breaking advanced technology to others. Well, I say we have the vision and the means to lead on the markets of the future!”*