

Report

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IDEAS LEADERSHIP HOPE

Keeping Europe Competitive

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“These three challenges—labor, inflation and business environment—come at a time when we are also asking industry to lead on the clean transition. So we need to look further ahead and set out **how** we remain competitive as we do that. ... Because Europe will do whatever it takes to keep its competitive edge.”

– EU Commission President Ursula von der Leyen, 2023 State of the Union address

Executive Summary

Europe finds itself in a less secure and more competitive world while it attempts to steer a green transition and adapt to disruptive technological innovation. The scale of the challenges has pushed the EU Commission to look for answers, to identify what it will take for the bloc to keep “its competitive edge”. The sense of urgency is not limited to Europe. It is shared and spurred on by a suite of sweeping US policies to meet the triple challenge of digital innovation, the green transformation, and the contest with the People’s Republic of China (PRC). US and, increasingly, European leaders argue that prioritizing and safeguarding democratic values will require novel approaches to trade and global investment.

Between November 2023 and January 2024, the German Marshall Fund of the United States (GMF) and its partners, convened stakeholders—representatives from small to large enterprises and startups, as well as investors, policymakers, and researchers—in seven European cities (Berlin, Copenhagen, Düsseldorf, Madrid, Paris, Rome, and Warsaw) for frank conversations on maintaining Europe’s future as a global economic leader.

One sentiment echoed across the gatherings: Complacency is a major threat.

Europe’s choices today “are crucial for the future”. It cannot boast one company in the top tier of Big Tech, and it lost some early pole positions in, for example harnessing solar energy. But there is still room for Europe to take a strong position in green technology, industrial artificial intelligence (AI) applications, and

quantum. To stay vibrant and premier, policymakers, business, and technology leaders realize that they need to work with more agility and coordination. The leaders who participated in GMF’s pan-European discussions identified four key elements to European competitiveness:

Cost and Resilience: A narrow focus on low prices can prevent the growth of European champions, but overly expensive and inefficient resiliency measures could make climate goals unaffordable. Policy needs to incentivize a balance.

Capital: The lack of a capital markets union is one of the biggest challenges to EU firms. It makes the bloc’s financing instruments, such as the NextGenerationEU Fund, or research and development (R&D) pots, such as the Strategic Technologies for Europe Platform (STEP) or Horizon Europe, even more important. More pooling of efforts might be even better. Reforms to unlock private capital should be considered.

Talent: To stay at the forefront of ideas, European firms will need to keep the continent’s best talent, attract global knowledge workers, and retrain existing workforces for new industries, particularly for the green transition. Brussels, too, needs to attract Europe’s best tech-savvy talent to keep up on the governance side.

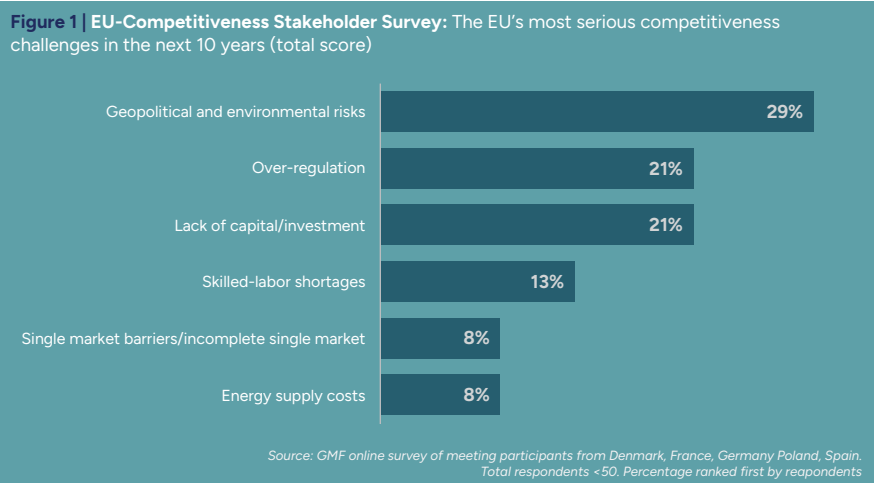
Regulation: Brussels’ commitment to sustainability can force EU firms to be ahead of the curve and set global standards, but stakeholders across the continent are concerned about the heavy regulatory burden, especially for smaller enterprises, and uneven enforcement.

Europe has a competitiveness problem, or at least it worries that it does. In her September 2023 State of the Union address, EU Commission President Ursula von der Leyen mentioned the EU's competitive challenges at least nine times and announced that former European Central Bank President Mario Draghi had been tasked to deliver "a report on the future of European competitiveness" in mid-2024.¹ Von der Leyen is not the only one concerned. In December 2022, the European Council [invited the Commission](#) to make proposals to ensure the EU's "resilience and competitiveness by mobilizing all relevant national and EU tools and improving framework conditions for investment".²

Europe's Green Deal Industrial Plan, presented by the Commission on February 1, 2023, was the first response to that call. It was followed one month later by two communications outlining a more supportive environment for scaling the EU's manufacturing capacity of net-zero technologies and products and critical raw materials, thereby bolstering Europe's competitiveness in the transition to a net-zero economy.

A few months before von der Leyen's address, the authors of this report were devising a project to gather insights from business leaders, policymakers, and experts across Europe on the bloc's competitive challenges and advantages, and the policies to help create an environment for growth and resilience for EU industries and firms. Between November 2023 and January 2024, GMF and its partners convened stakeholders—representatives from small to large enterprises and startups, as well as investors, policymakers, and researchers—in seven European cities (Berlin, Copenhagen, Düsseldorf, Madrid, Paris, Rome, and Warsaw) for frank conversations on measures needed to maintain Europe's position as a global economic leader. A common sentiment echoed across the gatherings, which von der Leyen has also voiced: The world is in a "time of transition", and Europe's choices today "are crucial for the future".

The sense of urgency is not limited to Europe. It is shared and spurred on by a suite of sweeping US policies to meet the triple challenges of digital innovation, the green transformation, and the contest with the PRC. US and, increasingly, European leaders argue that prioritizing and safeguarding democratic values requires novel approaches to trade and global investment, and new investments in, and, perhaps, new understandings of competitiveness. GMF is deeply engaged in



the question of allied competitiveness, which refers to the new strategies, diplomacy, and partnerships that will be needed to ensure that supply chains are resilient and that the twin digital and energy transitions work for democratic societies. The European part of the competitiveness conjuncture—looking at what is changing, why it matters, and how to adapt—is an essential part of the overall picture and the focus of this report. Europe's business environment has long been complicated, with its multi-layered, multi-language, and incompletely integrated market. **But now the EU must contend with more global competition and fast-paced disruptive innovation and unstable geopolitical conditions.**

Editor's Note: These speech bubbles feature quotes from EU business leaders, taken from our stakeholder discussions across Europe

I. What is Competitiveness?

Despite all the talk of European competitiveness, it is not necessarily obvious what makes a state or a region such as the EU “competitive”. A company is competitive if it operates profitably and sees growing revenue, but how does this translate for countries? National (or, in the EU’s case, regional) competitiveness is the ability to adapt and provide ever higher living standards. **Today’s demands to adapt are especially—perhaps unprecedentedly—intense, as green and technology transformations meet global instabilities and a more competitive landscape.** The [stats](#) are well known: The EU’s 27 countries accounted

for 23% of global GDP in 1990 and now just 14%. Asia-Pacific economies in this time frame climbed from 27% of global GDP to 46%.³

To stay competitive, Europe must foster in the short run a degree of domestic political and economic predictability while addressing long-term structural challenges such as demography and the green transition. Governments must create dynamic economies to ensure that entrepreneurs want to start new businesses and existing firms can expand operations, and attract talent in their country/region.

National competitiveness in the European context is consequently embodied in a multifaceted set of domestic and EU-level government policies. These include ensuring that EU member states have the workforce required to continue growing their advanced economies; that the bloc has access to competitively priced and reliably supplied energy sector inputs for a green economy; and, crucially, that Brussels maintains a flexible and innovative regulatory environment that enables new technologies and entrepreneurs to thrive.

This report will consequently focus on these three important topics, which also dominated our stakeholder discussions: people, power supply, and paperwork—or skilled labor, energy and green transition, and regulation. The report also features quotes⁴ from the seven stakeholder meetings that capture key elements of the mood among European business representatives.

The biggest threat to continued prosperity is complacency and rigidity. Europe cannot boast one company in the top tier of Big Tech, and it lost some early pole positions in, for example in solar energy. But there is still room for Europe to compete in green technology and industrial AI applications, or quantum. To keep industries vibrant, growing, and at the forefront of global markets, policymakers, business leaders, and technology leaders should learn and innovate together. Participants in our stakeholder discussions identified four key challenges:

“80% of our businesses say they will face disruption due to geopolitics.”
Düsseldorf

Cost and Resilience: A narrow focus on low prices can prevent the growth of future European champions, but overly expensive and inefficient resiliency measures could make climate goals unaffordable. Policy needs to incentivize a balance.

Capital: The lack of a capital markets union is one of the biggest challenges to EU firms. It makes the bloc’s financing instruments, such as the NextGenerationEU Fund, or R&D pots, such as STEP or Horizon Europe, even more important. More pooling of efforts might be even better. Reforms to unlock private capital should be considered.

Talent: To stay at the forefront of ideas, European firms will need to keep their best talent, attract global knowledge workers, and retrain existing workforces for new industries. Brussels, too, needs to attract Europe’s best tech-savvy talent to keep up on the governance side.

Regulation: Brussels’ commitment to sustainability can force EU firms to be ahead of the curve and set global standards, but stakeholders across the continent are concerned about the heavy regulatory burden, especially for smaller enterprises, and uneven enforcement.

This report, divided into five subsequent sections, examines these challenges in detail and offers recommendations for confronting them. Section II provides

an overview of the EU's position on traditional national competitiveness parameters. Section III analyzes the bloc's ability to continue to provide the required human skills to propel a diverse and technologically innovative economy. Section IV delves into the EU's challenge with energy costs and its

prospects in a rapidly decarbonizing global economy. Section V highlights the ongoing challenges in regu-

lating a highly diverse entity, such as the EU, which aspires to create a single, integrated marketplace in a period of rapid technological innovation. Section VI provides key takeaways.

“This is an important moment for Europe. The next five years are crucial.”

Rome

II. How does the EU measure up?

The EU's competitive position in the international economy is hardly in an abyss. According to the standard economic parameters for trade, current-account balances, and productivity, the EU's position is solid, though the aggregate figures obscure significant regional differences. The bloc's 27 member states have shifted since the global financial crisis and, more importantly the euro crisis of 2010-2013, to consistently running surpluses of 2.5%-3% of GDP. For an economy the size of the EU's, this is a substantial external surplus, on average more than twice that of the PRC.⁵ The latest available data shows the EU surplus after the COVID shock back up to 2% of GDP, with the International Monetary Fund (IMF) projecting that figure to climb to around 2.5% by 2028 (Figure 2).⁵

The bloc also runs sizable trade surpluses in major sectors, including manufactured goods (approx. €100 billion in 2022)⁷ and services (€175 billion in 2022).⁸ Only the fossil fuel sector shows a major, and chronic, trade deficit.

Productivity is more of a problem (Figure 3). Aggregate EU productivity is roughly 80% of US GDP per hour worked⁹ (about 82% when subtracting values produced by foreign-owned companies, or gross national income (GNI) per hour worked).¹⁰ **While the bloc as a whole**

Figure 2 | EU Current Account Balance Dec 2008 - Dec 2023/Projected 2023-2028, 12months Rolling Sums, % of GDP

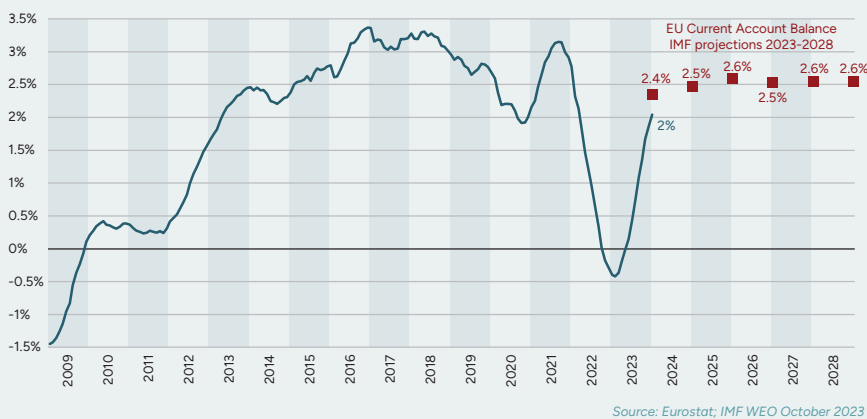


Figure 3 | GDP and GNI per Hour Worked 2022 (or latest available), Current USD/Current PPP

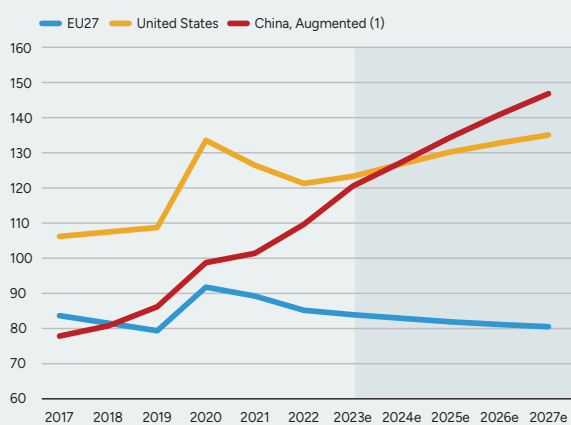


lags US productivity levels, Germany and France come close, and some smaller EU member states exceed American performance.¹¹ At the same time, the EU outperforms other G7 members, such as Canada and Japan, and export powerhouse South Korea. Several of the EU's smaller member states, including Belgium, Denmark, Luxembourg, and Austria, highlight how some

versions of the European economic and social model are fully compatible with high-productivity societies.

On debt levels, the EU brightly outshines its two main rivals, the United States and the PRC, by having significantly less general debt, or debt accrued at all levels of government (Figure 4). However, in a future crisis, the EU, unlike the United States and the PRC, cannot rely on a central government for decisive fiscal decision-making. **The EU's incomplete political integration and its inability to act together forcefully and expeditiously to pursue common long-term goals is arguably its formative weakness vis-à-vis Washington and Beijing.** Draghi has already indicated the need for the EU to acquire more *"state-like characteristics"* to remain competitive,¹² and Enrico Letta, another former Italian prime minister and author of a forthcoming EU report, is exploring ways the bloc can reinvigorate and complete its internal market to reap the benefits of greater economies of scale.

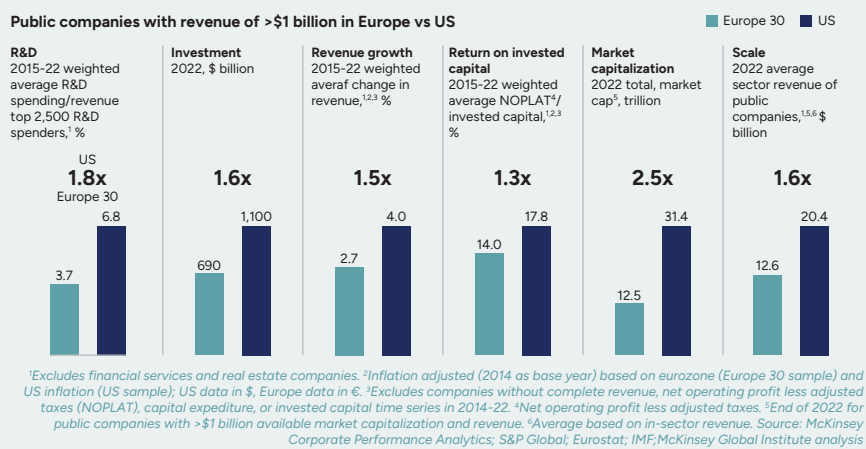
Figure 4 | General Government Gross Debt, % of GDP



(1) Augmented balance expands the perimeter of government to include government-guided funds and the activity of local government financing vehicles (LGFVs). Source: IMF WEO Database October 2023; IMF China Article IV 2022 (Published Feb 2023)

How European companies are competing versus their peers is also worth examining. It is, alongside produc-

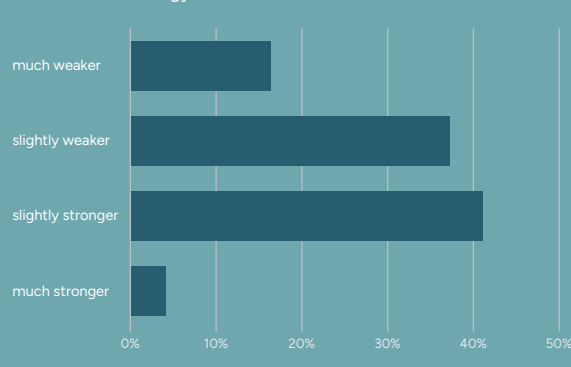
Figure 5 | European corporations lag on scale and performance.



¹Excludes financial services and real estate companies. ²Inflation adjusted (2014 as base year) based on eurozone (Europe 30 sample) and US inflation (US sample); US data in \$, Europe data in €. ³Excludes companies without complete revenue, net operating profit less adjusted taxes (NOPLAT), capital expenditure, or invested capital time series in 2014-22. ⁴Net operating profit less adjusted taxes. ⁵End of 2022 for public companies with >\$1 billion available market capitalization and revenue. ⁶Average based on in-sector revenue. Source: McKinsey Corporate Performance Analytics; S&P Global; Eurostat; IMF; McKinsey Global Institute analysis

tivity, perhaps the most worrisome issue for the European business sector. A recent [McKinsey report](#) has European firms (EU and non-EU) underperforming their US counterparts on multiple metrics (Figure 5).¹³ **European firms' lower level of spending on R&D and on investment point to the risk of structurally low corporate competitiveness.**

Figure 6 | EU-Competitiveness Stakeholder Survey: 10 years from now with the EU economies be relatively stronger or weaker when it comes to technology and innovation?



Source: GMF online survey of meeting participants from Denmark, France, Germany Poland, Spain. Total respondents <50

The picture is also not bright for the technology sector. Eight of Forbes' top 10 digital companies¹⁴ are US firms, and none are in Europe. Among the top 100, 39 are US firms while only 13 are EU-based. (The PRC minus Hong Kong boasts nine.) Many interlocutors across Europe noted that Brussels has penchant for regulating rather than creating technology. In the process, in recent years Europe also lost early market leadership of the solar energy industry and 5G. Yet, most business and technology leaders participating in our roundtables agreed that opportunity to stake out positions in growing critical sectors still exists. **A survey of our roundtable participants reveals**

moderate levels of optimism about the EU's tech competitiveness, with a slim majority expecting the EU to be slightly more competitive in 10 years (Figure 6).¹⁵

Overall, the EU's position is solid but not stellar. There is room to improve productivity levels and enhance integrated political decision-making capacity. But there

is, crucially, no guarantee that the current position can be maintained.

The next sections highlight the key policy areas on which the bloc needs to focus if it is to bolster its competitiveness.

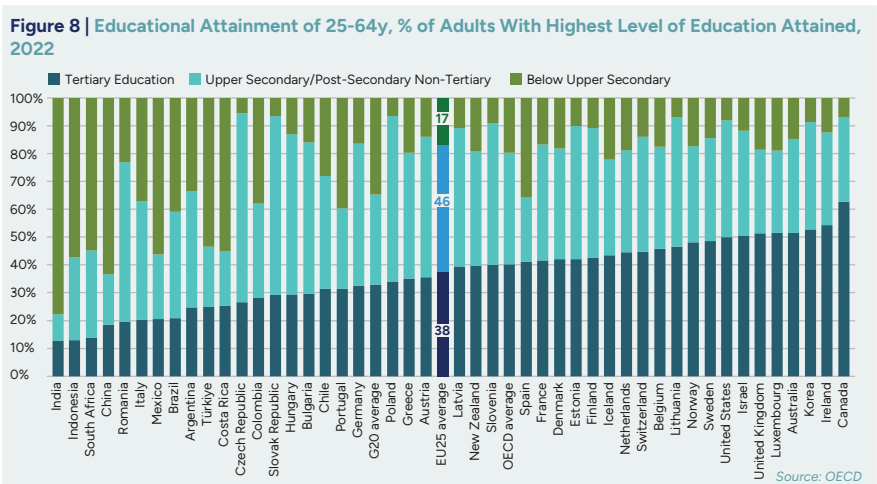
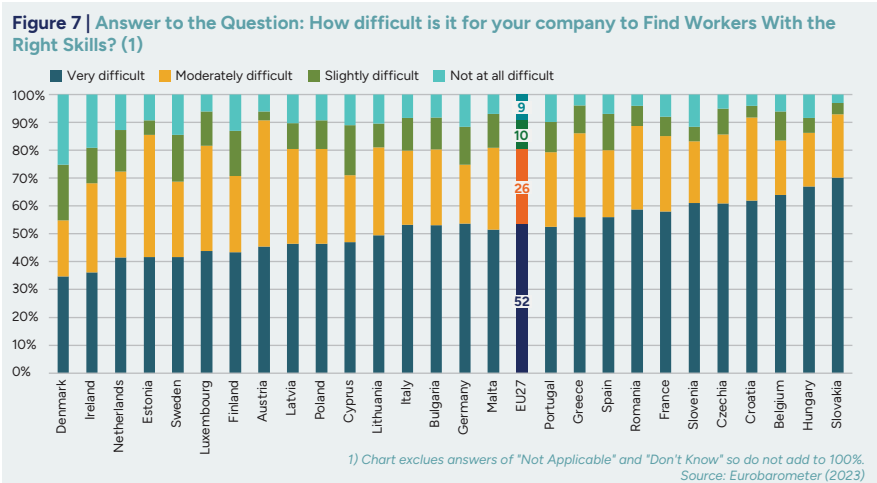
III. People: Securing a Skilled Workforce

Talent is already an acute problem. Almost 80% of EU businesses in 2023 found it "very" or "moderately" difficult to find workers with the right skills. And more than half of employers in every EU member states said they lacked skilled workers, although specific talent shortages are not uniform across the union (Figure 7).

In terms of workforce educational levels, the EU ranks almost exactly in the middle of advanced economies.

Almost 40% of the total EU working age population has attained a tertiary education and more than 80% received at least upper secondary education (Figure 8; the EU25 excludes Cyprus and Malta). However, only about 20% of Italy's workforce has obtained a tertiary education, a level similar to the PRC's and below that of middle-income countries such as Argentina, Brazil, Mexico, and Türkiye. The high proportion of unskilled workers (about 40%) in Italy, Portugal, and Spain underlines how widespread skills challenges are in several EU member states. Robust training and re-skilling plans will be paramount for meeting the demands of a growing green and data-intensive economy, especially in those countries whose workforces have lower skill levels.

Furthermore, though Europe's university and research institutes are a source for groundbreaking R&D and talent, the conduit to taking new products to market is underdeveloped. European R&D spending falls well short of US and Chinese levels. In 2022, it was ca. €460 billion lower than US spending and approximately €46 billion lower than PRC's expenditures.¹⁶ At the same time, stakeholders are concerned that too many of Europe's top technology talents are still being drawn



to US firms, though this momentum may be slowly decreasing as some European capitals become dynamic technology hubs. Europe could make a more concerted effort to link science, technology, engineering, and mathematics (STEM) university graduates with businesses to nurture talent and spur innovation.

“The educational system needs more optimism. We also need more interaction between business and politics because we don’t understand Brussels, and more collaboration among companies with regard to R&D.”

📍 Berlin

Immigration, given Europe’s aging population, also plays a particularly important part in the search for talent. That regularized immigration to the EU has been stable at a level exceeding 1 million since 2015 (Figure 9) is good news. It reflects the EU’s attractiveness and the legal avenues available to those who want to relocate there, despite anti-immigration political sentiments expressed by some European politicians.

“We need to transform our engineering assets and keep talent at home by helping them grow and making them visible.”

📍 Paris

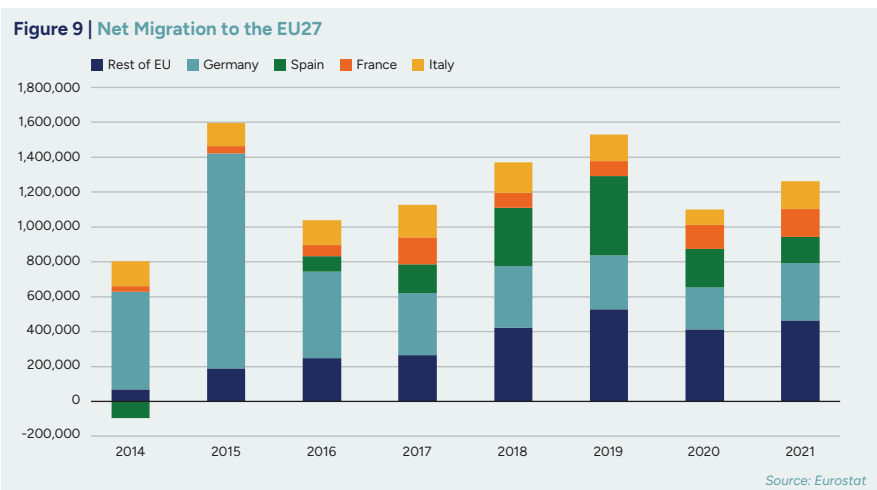
Germany and Spain remain the principal EU destinations for immigrants, well ahead of France and Italy. But the rest of the EU now welcomes more than 400,000 new migrants per year. That is substantial, but net permanent legal migration still does not reflect the importance of migrant labor in the EU if temporary work permits are considered. At the end of 2021, the EU had issued more than 4 million employment-based temporary residence permits, the vast majority in Italy and Poland.

New Zealand, and 34% in the United States. All far exceed the 27% in France, 24% in Spain, 22% in Germany, and 12% in Italy.

The EU’s permanent migration rules and strategies should focus on emphasizing skills-based migration and wooing global talent. Europe has much to offer, especially for those interested in work-life balance. In the [OECD work-life balance index](#), nine of the top 10 countries are in the EU whereas the United States places in the bottom third. Europeans work nearly 300 fewer hours annually than their US peers.¹⁷

Nonetheless, language barriers and often burdensome administration can be obstacles for non-EU nationals. Policies matter. In the OECD’s [Indicators of Talent Attractiveness](#), France’s rating has climbed due to lower visa refusal rates in recent years. The US’s ranking, meanwhile, dropped from 2nd to 7th place due to high refusal rates and the introduction of a quota on visas for highly skilled workers.¹⁸ Still, only two EU countries, Sweden and Luxembourg, rank above the United States, although the bloc claims eight of the top 15 spots.¹⁹ Initiatives such as the EU Blue Card and the Single Permit Directive to create a simplified and unified application procedure for non-EU citizens to apply to live and work in the bloc are having an effect. Fully 82,000 highly qualified workers received an [EU Blue Card in](#)

While overall immigration numbers look good, the relatively low share of highly skilled workers among migrants is an issue. Organization for Economic Co-operation and Development (OECD) data from 2020 shows that 60% of migrants 15 years of age and older in Canada in 2015-2016 had a tertiary degree. It was 47% in Australia, 42% in the United Kingdom, 39% in



2022.²⁰ In Germany, Blue Card permits have [increased by roughly one-third](#) since 2018.²¹ Such policies, however, need to be continually reviewed and improved to remain effective.

Perceptions matter, too. Anti-immigrant political rhetoric can dissuade highly-skilled foreigners. Policymakers and business leaders need to work against significant political headwinds in many EU countries.

“The PRC spends massively on R&D and will soon be number one. But it doesn’t attract the best and the brightest. Europe underplays what it has to offer.”

Warsaw

“Europe has a sustainability advantage in terms of livability, a good social system, and a good quality of life to offer.”

Berlin

These **leaders need to explain the business case for attracting skilled migrants to help ensure that Europe remains welcoming and attractive to global talent.**

IV. Power Supply: The EU’s Energy Cost Challenge and Securing the Green Transition

Europe pays a surplus for its energy. European natural gas and electricity prices have dropped dramatically since [peaking in August 2022](#),²² but they remain well above [levels in the United States and the PRC](#).²³ This is a competitive disadvantage, especially for traditional energy-intensive businesses.

But European carbon prices are perhaps an even more significant factor in competitiveness, even if they [dropped below €55/ton in early 2024](#).²⁴ They are still likely in the foreseeable future to remain far higher than in the United States, where some states price carbon, and in the PRC, where the [price hovers around \\$6-8/ton](#).²⁵ In addition, the recent [reform of the EU Emissions Trading System \(ETS\)](#),²⁶ which introduced a significant decrease in the future supply of auctionable emissions credits, has caused EU carbon futures prices to rise.

They are currently expected to reach around [€70/ton by 2030](#).²⁷

In late 2023, the EU introduced its carbon border adjustment mechanism (CBAM). The regulation aims to “level the carbon playing

field” by subjecting (initially only some) EU imported goods after 2026 to a “border adjustment fee” that reflects their carbon content and the EU Emission Trading System carbon prices. Crucially, however, CBAM applies only to EU imports and offers the bloc’s exporters no “level carbon playing field” although they will continuously face a cost-disadvantage when selling their products outside the EU.

Europe has chosen an approach to decarbonization that differs from the United States’ and the PRC’s.

Europe’s cost-imposing carbon pricing decarbonization strategy (i.e., increasing the cost of production that relies on fossil fuels), stands in axiomatic contrast to cost-reducing industrial subsidy climate strategies (i.e., using taxpayer funding to lower the cost of producing decarbonized products) implemented in the United

States and the PRC. Chinese production of virtually all parts of the green supply chain can consequently be expected to climb. **The EU will face the greatest competitive challenge from rising Chinese supply since it will be the main global**

“The main thing to counter is the energy trilemma—making energy sustainable, secure, and affordable.”

Madrid

destination. Existing US tariffs and trade restrictions mean the country will avoid a similar fate.

The EU, unlike the United States, remains a major fossil fuel importer. This leaves the bloc with only one way to overcome the twin competitive challenges of higher fossil fuel prices and carbon pricing: to complete the green transition as fast as possible. The EU, which, unlike the United States and the PRC, has no common central budget, can never hope to match their green subsidy levels, and its competition policy will prevent individual member states from doing so. Instead, the EU focuses on simplifying and accelerating regulatory procedures (including though new legal means to overcome entrenched local, special interest NIMBYist obstruction) required for private investors to build infrastructure for solar, wind, and other renewable electricity sources. The bloc is also investing heavily in grid infrastructure to ensure that increased variable-load renewables electricity production can be accommodated. **This EU grid expansion should be Brussels' principal public investment item in the coming years**, and it should, given its long-term economic benefits, be largely debt-financed. At the same time, politicians in Brussels and across the continent must contend with the fact that most of the public would prefer prioritizing lower energy bills over reducing emissions.²⁸

“Energy pricing is key to supporting existing industry.”

Paris

Resilience and Critical Dependencies

The transition to carbon-free energy is a clear win in terms of EU competitiveness and resilience, but disagreements exist about balancing efficiency and resilience in the process. As one Berlin meeting participant noted, “What are we to optimize for, resilience or efficiency? We cannot do both.”

The EU's continued near-total reliance on imported Chinese solar panels is often highlighted as a key and dangerous EU vulnerability. The European Commission's [Net Zero Industry Act](#) (NZIA) proposal deemed the situation sufficiently perilous to warrant a goal of achieving a 40% market share for domestically produced solar panels by 2030.²⁹ Yet, the EU could manage a sudden halt to Chinese solar panel exports. Such a move would significantly slow Europe's rollout

of solar energy and, possibly, jeopardize the bloc's 2030 climate goals, but its economic or political impact would be a shadow of that in the case of a fossil fuel supply disruption.

Many economists argue that, in terms of global cost competitiveness, the EU's goal should be decarbonizing the entire economy as fast as possible rather than fostering EU green production. Decarbonization

savings are significant: The [International Energy Agency](#) estimated in 2023 that additional electricity generation from newly installed solar photovoltaics (PV) and wind capacity saved the EU's electricity consumers €100 billion

between 2021 and 2023.³⁰ Moreover, it is impossible for Europe to compete in solar PV on price terms: [Chinese solar panel prices](#) declined almost 50% in 2023 alone,³¹ reaching a level that no plausible amount of EU public subsidies for the sector could hope to match. This is likely to hold true even if Chinese PV are included in the CBAM. US and European solar panel producers would argue that coal-powered production and concerns about forced labor are additional factors that should be considered in the calculation of Chinese solar PV costs.

Policies to ensure that the EU remains a major production location for all green industries will be too costly. They are seen as overvaluing a limited number of EU-based manufacturing jobs with uncertain spillover effects at the expense of achieving EU decarbonization goals and restoring the energy input competitiveness of EU industry as quickly as possible.

Yet, as one stakeholder put it during the discussion in Paris, “The production of green tech should be seen a business opportunity, not only a matter of climate and security.” **Many stakeholders viewed advanced green manufacturing capacity as part of Europe's future competitiveness and resilience**, and new innovations in high-tech manufacturing can indeed best occur when a strong base already exists. A narrow focus on price competitiveness and a lack of political support already cost Europe its early lead in solar energy and 5G technology. There are concerns that Europeans firms will see their current dominance in wind energy also fall victim to Chinese competition unless protective measures are put in place.

There are other dependencies of concern in key EU markets. Fully 85-90% of EU pharmaceutical supplies, for example, come from the PRC.³² More recently, European policymakers have become worried about a new critical raw materials dependence on the PRC that is said to be more dangerous than was the continent's reliance on Russian natural gas.³³ Such comparisons, however, overestimate the degree of dependence. The EU should not seek to replicate the accelerated exit from Chinese critical minerals stipulated in the US's Inflation Reduction Act. Instead, Brussels should pursue gradual market-led diversification of supply, innovative import substitution, and incentivized or mandatory recycling and stockpiling.

Several policies are available to promote critical raw materials supply security. The first is "diversification subsidies". The PRC's current dominant position in many critical raw materials markets is not due to its being the sole source of such materials but to its far cheaper extraction and processing made possible by laxer environmental rules, large domestic economies of scale, and, likely, government subsidies. In other words, **the PRC wins on production costs, not by controlling the extraction location of most critical raw materials.** EU governments can therefore diversify their supply of critical minerals and subsidize their purchase from non-Chinese sources. EU governments could do this by directly funding relevant transactions or by offering tax credits to firms that strive for a more diverse supplier base. Europe and the United States could also cooperate on securing critical minerals, which they have so far failed to do, in part due to disagreements over compliance with World Trade Organization provisions.

Second, the EU should pursue "substitution through innovation". Unlike fossil fuels, which have proved difficult and expensive to replace, demand for a given critical raw material is subject to innovative substitution as scientists discover new and cheaper materials that can serve the same purpose. The price of cobalt, for instance, much sought after for use in car batteries, has **dropped more than 60%** since early 2022³⁴ as new

cobalt-free, **iron-phosphate-based battery technologies emerged.**³⁵ Similarly, competition from sodium-based batteries has led to a drop of **more than 75%** in lithium prices since late 2022.³⁶ Future innovative breakthroughs will see new, cheaper, and more available materials replace expensive critical raw materials. **Brussels can promote substitution innovation by funding basic materials science at universities and/or private research institutes.**

"Europe can be a pioneer in green tech, just like it was forward thinking on privacy and tech."

📍 Berlin

"[We] need to conceive and design a new industrial policy, not to compete with the US but to accompany the [Inflation Reduction Act]."

📍 Paris

Third, the EU should incentivize or mandate widespread critical raw materials recycling. Fossil fuels are consumed in energy production, but **critical raw materials can be recycled** for safe reuse.³⁷ An EU regulation from July 2023 sets the recycling efficiency target by the end of 2025 for nickel-cadmium batteries at 80% and at 50% for other batteries. More than half of all materials in today's EV batteries could still be in use in 2150 if proper incentives to reach these goals, and even raise them to a 95%

recycling target, were in place. This is the true promise of a "circular green economy". However, it is today a distant dream. Current recycling levels for many crucial raw materials for which the EU set a 15% target are at or below 1%.³⁸ This is clearly an area for EU investment, for competitiveness and environmental reasons.

The **EU Critical Minerals Act (CRMA)**, adopted in March 2024, **in line with the discussion above**, seeks to increase and diversify the EU's critical minerals supply, expand critical minerals recycling, and strengthen R&D into resource efficiency and substitution. The act identifies 34 critical minerals, introduces clear deadlines for permit procedures for new extractive projects in the EU, and mandates supply-chain risk assessments. It also sets a number of benchmarks for EU critical minerals supply: 10% from local extraction, 40% locally processed, and 25% from recycled materials. It also seeks to stop any non-EU country from being the sole source of more than 65% of the annual EU supply of any strategic material. Crucially, however, neither additional funding nor trade measures are envisioned to support these goals. **The CRMA benchmarks are likely**

to remain aspirational in nature, rather than helping shape EU firms' critical minerals supply chains.

The EU has practical policy options to ensure that it quickly fulfills its decarbonization plans and solves its

"In this geopolitical world, we need more cooperation, especially with the United States, in order to build more value chains."

Rome

energy cost competitiveness problem while mitigating the risk of critical raw materials shortages through strategic policy choices.

V. Paperwork: Regulating in an Age of Innovation

While the EU Commission initiates new regulation and depends on member states to implement, it is also charged with monitoring and enforcing against uneven execution. The most common problems arise from improper or slow rollout in some member states. Only 12% of infringement cases launched against member states in 2022 were for active rule-breaking.³⁹ Nonetheless, the Commission must balance the roles of rule creator and implementation enforcer.

Disruptive and rapid changes often call for new rules. The twin shocks of the pandemic and Russia's war against Ukraine required EU regulation to break important new ground on health, energy, and defense. Rapidly developing digital services also call for new rules.

Economic advantages may also be gained if rules for new products apply globally. Many in Brussels have faith in EU market power to sway producers worldwide to align their products with the bloc's highest standards, the so-called "Brussels effect". **However, it is not yet obvious that the EU's early rulemaking brings competitive advantages for European firms.** The competitive disadvantages of EU regulations for data privacy and AI, for example, are well known.

Numerous stakeholders in our discussions voiced concern

about the risks of early over-regulation, and one C-suite representative in Copenhagen argued that regulation is costing the EU the advantage in digital and sustainability innovation that it should have. **If the EU's eagerness to be the first to regulate comes at the expense of enforcing its rules across the union, the problems compound.**

The [Commission in 2022](#) launched 551 infringement cases against member states, the lowest number for over a decade, but it had the highest number of outstanding infringement cases, 1,991, over the same period (Figure 10).

It is unlikely that this reflects generally improved member-state adherence to the recently rising number of EU regulations. Given the fundamental importance to the bloc's internal market of uniformly applying

EU rules, and the [greatly increased level of state aid recently approved](#),⁴⁰ especially by Germany and France, which puts pressure on that market, the Commission must urgently return to focusing on enforcing the existing (and growing) EU rule book rather than adding to it. Stakeholders in Berlin and Copenhagen, in particular, stressed the enforcement problem.

The risk is not only regulating too quickly. It is also regulating too slowly and

"Leading in regulation and reporting and transparency cannot be the lone strategy for the EU."

Copenhagen

"We need regulation but the correct one—adaptive regulation because we cannot see the future."

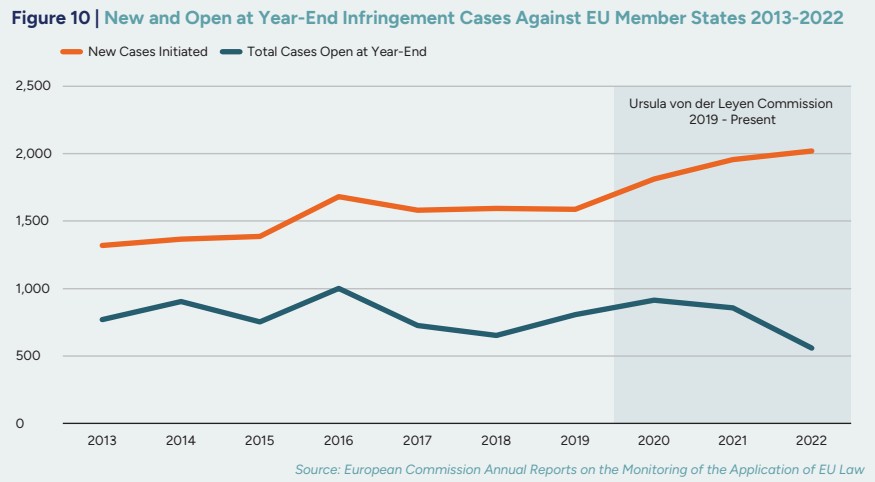
Berlin

elaborately. The complicated legislation trialogue among the Commission, which proposes regulation, and the Parliament and Council, both of which must approve regulation, risks dragging out legislative processes, causing regulation of especially rapidly developing sectors to be outdated by the time of its adoption.

Three key considerations could streamline the EU regulatory process.

First, sector regulations should ensure that regulatory and reporting requirements do not pose an undue burden for European small- and medium-sized enterprises (SMEs), especially in the technology sector with its strong network effects and the presence of a few, large dominating firms. **Smaller firms will often lack the resources to adhere in a timely manner to new, complex reporting requirements.** Stakeholders in all seven countries in which our meetings occurred were nearly unanimous in their concern about a heavy regulatory burden, especially for SMEs. A majority of stakeholders also argued for more “agile” or “adaptive” EU regulation and expressed skepticism about discretionary enforcement, as irregular implementation would certainly follow.

Second, EU sector regulation must consider its effect on entrepreneurship. Will the regulation make it more or less likely that a new firm can enter the market? Will it make it easier for companies to operate across Europe? The challenges for growing startups to expand throughout the EU were mentioned in every stakeholder meeting.



“The government needs to set the tone—more optimism. It should not just focus on harms of tech but also benefits.”

Berlin

“With our belief in the rule of law and support of innovation, Europe has every reason to win the competition against China, and we should not be shy about it. But we have to take our citizens along and reestablish trust.”

Warsaw

Third, EU regulation must always consider whether it will succeed in shaping the behavior of businesses operating in the EU in the desired direction, rather than simply cause the business to relocate to avoid regulation.

The EU often prides itself on being the first to enact regulation with the highest standards. This may reflect the “European way” that supports EU citizens’ high standard of living. But regulation can pose competitiveness challenges for businesses and, in the EU, uniform enforcement of rules is paramount.

Figure 11 | EU-Competitiveness Stakeholder Survey: We asked our meeting participants to name the EU's key competitive advantage



Source: GMF online survey of meeting participants from Denmark, France, Germany Poland, Spain. Total respondents <50

VI. Ten Takeaways

The EU's competitive position remains resilient, especially considering the immense challenges of the past few years. EU competitiveness is buoyed by a diverse and stable economy with a predictable business environment and healthy infrastructure. Nonetheless, most stakeholders share the Commission's sense of urgency about maintaining that competitiveness, especially in light of high energy costs and regulatory burdens. Europe lags in growth and productivity while likely facing increasing geopolitical insecurity.

Our discussions across Europe on this issue elicit ten takeaways to deal with this challenge:

01 | Do Not Miss the Next Big Thing

It is not too late for Europe to establish itself as a pioneer in burgeoning fields ranging from sustainability to space exploration. Europe could not retain its early market leadership in the solar industry and is not the base for any Big Tech company, but it can still become a leader in other critical sectors. Green energy and quantum technologies or AI industrial applications are just three of them.

02 | Harness AI

The United States and the PRC lead AI investment and research, but Europe can still innovate in applications, such as those for industrial AI, and leverage new technologies to increase efficiency. AI needs regulation, and the EU's values-driven approach is well respected. But the regulation needs to be flexible so that it does not preclude the benefits of AI. Public policy can set an optimistic tone that lays out practical guardrails for a pro-growth mindset. With re-skilling, and depending on adoption rates, [McKinsey](#) estimates that generative AI could spur 0.1%-0.6% annual labor productivity growth through 2040.⁴¹ European firms that integrate AI and other technologies into their workplace can certainly offer [productivity gains](#).⁴² During times of rapid transformation, Europe is also well positioned to help reduce societal anxiety through its stable social safety net and processes such as codetermination.

03 | Balance Price Criteria and Resilience

European competitiveness should be viewed through the prism of resilience, not just price. PV and 5G are examples of how cost-focused strategies can undermine the potential to create European champions. Europe must ensure that it does not create new vulnerabilities regarding supplies of rare earth minerals and pharmaceuticals. Resilience must consider safety, sustainability, innovation, and diversification, though lower prices brought by a speedy transition to renewables remain paramount concerns for core green technologies given the urgent need to accelerate the green

transition to reach the EU's 2030 goals. Expanding supply chain partnerships will help Europe be agile and avoid future vulnerabilities.

04 | Tap Capital

In the absence of a capital markets union, the EU should strengthen mechanisms to mobilize investment. The NextGenerationEU Fund reflects Brussels' capability to muster necessary financing, which can be used as venture capital rather than for propping up existing business. Public and private R&D funding must remain robust, and the EU cannot afford to trim spending on innovation-boosting instruments such as STEP or Horizon Europe. Moreover, concentrating investment at select universities that collaborate across the continent in innovation clusters may better foster the next breakthrough and for offering the scalability that Europe lacks. Outside of public spending, the EU could also [unleash capital](#) for investment through reforming risk premiums on pension funds and insurers.

05 | Reeducate and Retain

There are concerns across Europe about a lack of skilled workers amid a global race for talent, especially as the pace of technology transforms the workplace. Most stakeholders acknowledge that Europe can still hold its own. Engineers in Germany, game developers in Poland, and AI researchers in France were three of the groups highlighted in this regard. But keeping and growing a labor force fit for the future is a priority. Plans for re-skilling workers should be underway so that they can fill jobs in a growing green and data-intensive economy. Europe's university system is a source for ground-breaking R&D and talent. Suggestions for a concerted effort to link STEM university graduates with businesses, nurture talent, and spur innovation were repeatedly made in our discussions. Income incentives and creating better conditions for entrepreneurship could help Europe retain knowledge workers. Europe should also not be shy about flexing its soft power. Democratic values coupled with diversity and social benefits, such as affordable higher education and health care access, make Europe an appealing place to live.

06 | Resist Right-Wing Populism for Skilled Migration

Europe's demographic trajectory demands immigration to offset an aging population. Although the current environment does not lend itself to campaigning for skilled migration, policymakers and business leaders need to make the economic case for attracting workers from non-EU countries such as India or Egypt. The EU is aware of the coming labor shortages. Dubravka Šuica, European Commission vice-president for democracy and demography, has often remarked that the bloc needs migrants to stay competitive. The demand ranges from forklift drivers and health care workers to quantum engineers. Enforcing border security and clamping down on irregular migration are necessary, as is pushing back against the far right so that Europe can attract skilled migrants and investment. Christian Kullmann, CEO of the German chemical company Evonik, publicly appealed to other managers and entrepreneurs to act more decisively against the right-wing and populist Alternative for Germany (AfD) party.

07 | Reduce Red Tape

A plea for streamlining reporting requirements and eradicating red tape was made in most roundtable discussions. Small and large companies feel burdened with time-consuming, tedious, and complex forms. Simplifying and focusing on efficient regulation to affect behavior and achieve goals would allow companies to be more agile and concentrate on core competencies. The regulatory environment must offer a sense of certainty yet be flexible to keep pace with the speed of technology. The initiatives von der Leyen announced in her 2023 State of the Union address—to "hear directly from small and medium sized businesses", to conduct "competitiveness checks" on new legislation, and to reduce reporting obligations at the European level "by 25%"—move in a direction that stakeholders will welcome.

08 | Gain Technology Knowledge for Brussels

The rapid pace of transformation calls for policymakers in Brussels who are well versed in technology and geoeconomics. The EU should try to recruit the best

and the brightest to contribute to positive outcomes and share information, rather than add layers of bureaucracy. Broadening the knowledge of public servants while inspiring them to invest in the long term is a priority for ensuring Europe's future competitiveness. Knowledge exchanges among Brussels' regulators and European innovators will also contribute to nimble and forward-looking policymaking.

09 | Promote Multiple Growth Engines in Europe

Current debates about Germany being the sick man of Europe due mainly to domestic policy challenges mask the positive outlook for other EU member states. Europe's largest market fears deindustrialization due to high energy costs for heavy industry, rigid labor rules, and bureaucratic bottlenecks. Germany is undoubtedly a motor within the EU, and it struggles while other partners are feeling more bullish. Although the war against Ukraine is on its doorstep, Poland is seeing an increase in business activity. Central and Eastern Europe as a whole has become a location for service centers and supply chain investment. On the other side of the continent, Spain views itself as an open-minded country that profits from tourism, a creative food sector, and the blue economy. Denmark, buoyed by its strong pharmaceutical and engineering industries, is pleased with how its government works closely with businesses to promote competitiveness.

10 | Think Shared Prosperity

The United States' IRA initially caused much consternation in Europe, but there is a growing realization that the legislation is a false threat. The act can instead help push Europe to join the United States in a drive toward spurring growth and reducing carbon emissions. Crafting tax incentives and deploying funds faster to boost green investment while keeping energy secure and affordable will help maintain European competitiveness. But in a fracturing world, Europe, the United States, and their partners should remain aligned in their efforts to reinforce innovation undergirded by values such as freedom and the rule of law, economic security, and continued prosperity.

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