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# EUROPEAN ECONOMIC GROWTH IN THE AGE OF AI

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# ABSTRACT

Europe faces a litany of economic headwinds. The bloc's key lever to deliver higher economic growth is to boost productivity through better use of technologies like AI.

This paper explores the challenges of improving take-up of technologies like AI in Europe while safeguarding the bloc's values like equality, inclusiveness and environmental protection and respecting the European social contract. That requires innovations like AI, if they are to be used as widely as possible, to be developed, adapted and deployed in ways which reflect both European economic needs and its social priorities. The paper recommends boosting take-up of AI, even if that means increasing the bloc's dependencies in the short term. However, the EU must simultaneously develop its technological lead in important inputs into AI value chains, like cutting-edge photolithography and chip design, and develop leadership in industrial uses of AI, where other countries will have dependencies on the EU. Increasing smart interdependencies offers a more realistic path to protecting the bloc's values than seeking autarchy. The paper then offers policy proposals in three areas where the EU's economic environment can be adapted incrementally to make progress without undermining European values: boosting investment in R&D; allowing more tolerance of economic disruption within and between economic sectors; and ensuring a more innovation-friendly regulatory environment.

1 The paper **first** examines the low levels of private sector business investment in the ICT sector, which are significantly behind the US, particularly in R&D. While a fully functioning capital markets union remains an important goal to unlock investment, in the meantime modest changes to national pension laws could make a huge difference by unlocking new sums for AI development and deployment. In the longer run, policy-makers must also prioritise increasing private pension contributions, creating a

trustworthy EU-wide savings product, unifying capital markets, and educating consumer investors about sensible risk-taking to provide greater financing for European firms that want to adopt or innovate in AI.

- 2 The paper **next** examines economic disruption: a necessary corollary of innovation-led growth. AI will disrupt firms and entire industries, changing the make-up of the European economy. Currently, restrictive labour and corporate laws in many parts of Europe restrict business dynamism: limiting both the willingness of firms to experiment with AI and their rewards for converting AI to productivity gains. However, some European countries make it easier for firms to fail while providing high levels of social security protection for affected workers. This offers a pathway for Europe to achieve America's dynamism without its levels of inequality. This will require governments to closely monitor labour markets, support impacted workers, and consider redistributive policies to avoid excessive wealth being held by providers of capital rather than labour.
- 3 **Finally**, the paper turns to Europe's regulatory environment for AI deployment. In comparison to the US and China, the EU has the opportunity to demonstrate that sensible, enduring, well-designed AI regulation can be pro-investment and pro-innovation—helping deliver AI innovations which conform to EU values and meet Europe's economic and social needs. Rather than deregulate—which could encourage further fragmentation in the laws which apply to AI deployment across Europe—the paper proposes that policy-makers focus on simplifying regulation, providing guidance to firms seeking to deployment of AI.



## I. INTRODUCTION

Europe faces a litany of economic headwinds. China and the US, two of the EU's major trading partners, are complicating access to their markets with increased tariffs and non-tariff barriers—putting the EU's traditional export-oriented growth strategy under enormous stress. China is increasing its prowess in many mid-tech sectors where the EU has until recently been able to maintain its edge (Tordoir and Setser, 2025, p. 3). At the same time, the EU is increasingly nervous about its import dependencies, and the apparent willingness of other countries to weaponise trade and supply chains and to abandon long-standing norms of international trade (European Commission, 2023). This uncertainty is a fundamental concern for an economy as trade intensive as the EU's, and one which requires fundamental changes so the bloc can better cope with a world driven by interests and not values.

As the recent EU-US trade deal illustrates, the EU has little hope of forcing its trading partners to change course, and to respect both the letter and the spirit of international trade norms. Instead, as Mario Draghi (2024) has noted in a recent influential report on European competitiveness, the bloc should focus on one thing European policy-makers can hope to influence: the bloc's stalling productivity growth. Productivity means the efficiency with which an economy creates outputs using the same inputs (Bank of Canada, 2021). Given Europe's aging workforce and opposition to higher levels of immigration (the EU's unemployment rate in 2024 reached a low of 4.5%: European Labour Authority, 2025), this will have to be achieved through greater business investment in, and improved use, of technologies like AI (Gordon and Sayedi, 2020).

This paper explores how the EU could better unlock economic growth through artificial intelligence (AI) while safeguarding values like equality, inclusiveness and environmental protection.

The paper offers policy proposals in three areas where the EU's economic policies can be adapted incrementally to make progress without undermining European values: boosting investment in R&D; allowing more tolerance of economic disruption within and between economic sectors; and ensuring a more innovation-friendly regulatory environment.

Much of the EU-US productivity gap since 2008 has related to 'total factor productivity' (TFP)—which is strongly correlated with the way businesses use technologies to boost their efficiency (Turner et. al., 2025). The lack of TFP growth in Europe compared to the US is closely correlated to the size and success of the US tech sector. The ECB attributes two-thirds of the EU-US productivity gap to high-tech sectors, for example (Lagard, 2025). The US tech sector admittedly has astonishing levels of productivity: productivity of US listed tech firms increased by about 40% in the last 20 years while productivity of EU listed tech firms was almost stagnant (Adilbish et. al., 2025, p. 2). However, productivity growth of non-tech firms has also been significantly higher in the US than in Europe since 2014 (Turner et. al., 2025). Broad swathes of the US economy have been enjoying high productivity growth than their European equivalents, thanks to all US firms' greater use of technology and their willingness to invest more in R&D and adoption of ICT than their European equivalents (Turner et. al., 2025; van Ark et. al., 2003). European companies have historically tended to adopt new technology about 10-15 years later than American ones do (Philippon, 2019). Greater ability of US firms to adopt and gain efficiency outcomes from the software boom of the 1990s may well explain why, over the



period 1995-2005, US productivity growth in services averaged 3.2% per year, compared to 0.9% in Europe (Schnabel, 2024).

While Europe missed out on the ICT productivity boom of the late 1990s and early 2000s, the advent of AI offers Europe a second chance. Both Mario Draghi (2024) and Enrico Letta (2024) in recent seminal reports warn that Europe must reform to benefit from and lead in the development of technologies like AI. There is still vast uncertainty about the scale of the productivity increases AI can offer (Brynjolfsson, 2023; Acemoglu, 2024).<sup>1</sup> Currently, only a minority of uses of generative AI models deliver meaningful value for firms that use them (Challapally et al, 2025, p. 3).<sup>2</sup> However, that is not unusual: general purpose technologies generally take many years before businesses learn how to harness them effectively, and only a minority of firms succeed. The success of this minority of firms drives the economy forward. The risk for Europe is that AI turns out to offer significant growth opportunities for firms which can harness it, and that Europe again misses out: too few firms convert AI into meaningful productivity gains, and those that do fail to grow and displace the laggards.

This will require a step-change in approach. Europe's technology leadership has fallen far behind the US and China. It lags its global rivals in seven of the eight most critical technologies (Digital Europe, 2024). Only 6% of AI start-up funding is going to European firms and only four of the world's 50 largest tech companies are

European. A 2024 study found that, in 2023, US firms had nearly 50,000 advanced digital world-class patents (related to the 90 most important application technologies and 21 advanced digitalisation technologies), China had 28,000, Japan 13,000; South Korea 6,300; the highest-ranked European country was Germany in fifth place with 4,400 world-class patents (vbW, 2024, p. 13). The EU's global share of the information and communications technology (ICT) market fell from 21.8% in 2013 to 11.3% in 2022 (Garcia Arenas, 2024).

However, the US techno-libertarian approach to boosting AI investment and adoption—illustrated in US President Trump's deregulation drive—seems difficult to reconcile with Europe's social values and priorities. Even for the US, the consequences of economic disruption have been debatable: while the country's GDP and productivity have soared, levels of inequality have increased, the country's democratic traditions and institutions have been undermined, and a combination of political populism and an emphasis on 'deals' with big business rather than stable, predictable, evidence-based rules seems unlikely to promote innovation in the long term. Europe should find a different way. Economists typically assess productivity solely in terms of monetary value—such as by examining GDP per hour worked. But that does not necessarily mean European leaders should focus solely on narrow and short-term indicators of growth. Economic growth is, of course, important in an era of great power competition.

In that context, Europe's consistent low productivity growth will erode Europeans' living standards, threatening the bloc's geopolitical heft and its ability to assert its values, even within the EU.

However, a broader view of Europe's economic well-being might take into account the deliberate policy choices by different European governments to ensure growth is socially and politically sustainable: such as protecting workers from some types of disruption, limiting immigration beyond what is economically optimal, constraining employees' working hours and retirement ages, addressing excessive economic inequality, making fiscal decisions which sometimes aim at minimising debt over stimulating growth, or declining to use cheap energy sources for environmental or geopolitical reasons (Berg, 2023). We may debate the value of some of these decisions—but some, at least, are based on important and enduring European values which have widespread support, and others are likely to be intractable. In any event, there is little political appetite across Europe to change many of these policy decisions, which can reflect deeply embedded cultural expectations and reflect the 'social contract' in Europe. However, it is important to recognise that not all of these factors are necessarily drags on productivity growth. If other policy levers are used effectively, Europe's inclusive social democratic model may even offer significant advantages. For example, a strong social safety net could encourage Europeans to take entrepreneurial risks and allow faster reskilling. And an approach which avoids the excessive inequality seen in the US (where wages are not keeping pace with productivity (Turner et. al., 2025, p 13) might help Europe maintain a more stable, predictable policy environment than seen in America—which could in the end prove more conducive for long-term investors. Too radical a shift towards deregulation might therefore be both unrealistic—and fail to play to Europe's strengths.



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II.

## ALIGNING INVESTMENT IN TECHNOLOGY WITH EUROPEAN VALUES

Boosting productivity using AI will require increasing its use and diffusion across European businesses. However, for now, the EU is not a global leader in producing AI foundation models or in the provision of much of the underlying infrastructure supporting AI, like cloud computing and AI accelerator chips used to train AI models or the chips used by AI systems to respond to user requests. This raises concerns about whether, to secure alignment of AI with European values, Europe must develop its own ‘sovereign’ infrastructure and models instead of simply fine-tuning foundation models created by foreign firms (Meyers, 2025). This desire is illustrated in recent initiatives such as the European Commission’s AI Continent action Plan, which allocates €20 billion for the construction of ‘AI Factories’ and ‘AI Gigafactories’.

**While well intentioned, this effort at industrial policy must grapple with several challenges.**



**First**, the EU’s recent efforts at digital industrial policy, for example to boost the bloc’s chip-making capacity and create a federated interoperable cloud computing system had little success, largely because they tried to enable European firms to enter markets where global scale and first-mover advantages were essential. Similar risks exist in trying to compete head-to-head with the largest foundation models, the providers of which can rely on much larger amounts of capital than those available to European AI firms. China’s policies provide some examples of how this model can go wrong: for example, Beijing has focused on channelling vast public funding into local investments in order to pursue technological independence from the West. While this has worked in some sectors, particularly those where China has a comparative advantage, the impact in others

has been represented poor value for money. For example, while China is advancing rapidly in developing uses of AI, Chinese chip-making champion SMIC is still unable to reliably produce world-leading chips, with its capabilities being more limited than believed (Chang et. al., 2025). With its much more limited fiscal capacity, and its inability to complicate access to its market in the same way Beijing can, Europe can hardly afford similarly poor bets. The impact of China’s autarky-based and state- rather than market-driven approach has also been negative for growth: TFP growth fell from above 4% in the 2000s to below 2% after the pandemic (Poitiers, et. al, 2025, p. 5). It would also be a very difficult strategy for the EU given its trade intensity and dependency on other countries, including China, further up the supply chain, for example in the rare earths necessary for many European industrial processes.

**Second**, the direction of the AI sector remains highly unpredictable: investments to support the production of supercomputers and very large foundation models may prove unnecessary if the market moves in a different direction, for example towards smaller and more tailored AI models, towards alternative forms of AI which do not rely on foundation models, or the use of AI “on device” in edge computing (Meyers and Bourreau, 2025). The barriers to providing tailored AI models, fine-tuned from larger ones, is relatively low, meaning that European firms can provide such services without as much need for public investment compared to building new foundation models: fine-tuning alone may at least help to ensure European AI models are aligned with European values. Third, efforts to artificially support European AI firms—for example, through ‘buy European’ mandates’—imply a shift away from promoting the lowest cost and highest quality AI models available on the market today, which implies deliberately slowing take-up of the technology with adverse effects on economic growth.



### In the long run, the EU should therefore focus on two areas:

- 1 The **first** would be to double down on the EU's existing strengths in the AI value chain. These include supporting and increasing the bloc's technological lead in areas like lithography, where Dutch firm ASML has an enduring lead, and in other manufacturing sectors where the EU has an edge on innovation and efficiency, such as advanced testing and packaging (OSAT). Ensuring the use of AI to support innovation in areas where incremental efficiency gains make a large difference to export competitiveness would work to the EU's strengths. In turn this would increase other countries' dependencies on the EU. Increasing interdependencies offers a more realistic path to protecting the bloc's values than seeking autarchy.
- 2 This will require the **second** step of promoting the take-up of AI technologies wherever they come from, while taking further steps to increase the availability and incentives on firms to share European data which can be used to fine-tune AI models. In the short term, this will admittedly involve Europe innovating over the top of foreign technologies, increasing the bloc's dependencies. However, laws like the AI Act can ensure that models which are provided on the market in Europe conform to European values. The larger the take-up of such models in Europe, the more important the European market will be for foreign companies, and the less willing they will be to risk non-compliance. Moreover, as China's emphasis on manufacturing in strategic digital sectors rather than digital services illustrates, Europe's existing strengths—such as its focus on high-end manufacturing in areas like lithography which are essential for AI—can be 'chokepoints' which are just as strategically important as dominating innovative services.

Boosting demand for AI in the EU will help promote the business case for European tech firms to build their own AI services, in niches where Europe may have an enduring comparative advantage over the US and China. The recent investment by lithography firm ASML in France's AI champion, Mistral, may well indicate that successful European AI firms' comparative advantage will be in industrial uses of AI (a context where social values are less important) than competing to provide mass-market generative AI products (where values such as social bias and discrimination may be more important). The EU currently has more than half the global market in industrial automation solutions, for example (Draghi, 2025). Promoting take-up of AI in these niches, even if it is predominantly of foreign services in the short run, will help ensure that EU AI firms have a willing customer base in Europe. It is therefore a necessary step to improving Europe's position as an innovator in AI.





### III. BOOSTING BUSINESS INVESTMENT IN R&D

The EU spends 2.13% of its annual GDP on R&D, less than both the US (3.45%) and China (2.58%) (OECD, 2025). Since EU public spending on R&D is broadly similar to that of the US (Draghi, 2024), policy-makers need to boost investment in tech adoption and innovation in Europe through increasing private sector R&D, particularly in Europe's manufacturing sector where efficiency gains from AI could be essential to preserve the bloc's competitiveness as an exporter.

From the end of the pandemic until the end of 2024, business investment grew twice as much in the US as in the Eurozone, with intellectual property contributing the most to the gap (Andersson et. al., 2005). Furthermore, while most investment in Europe has been to replace existing assets (EIB, 2024, p. 5), and R&D is focused on 'mid-tech' industries, US and Chinese investment is increasingly focused on innovation in high-tech sectors like ICT—in particular investment in AI and its supporting infrastructure such as data centres. As noted below, the US is likely to continue to dominate in some of the most investment-heavy parts of the AI sector. However, the EU will still need to invest in R&D to explore how best to deploy AI technology across the economy, and to innovate in niches like industrial AI which can complement the manufacturing sector which is much larger in Europe than in the US.

As explained by both Letta and Draghi, boosting R&D in Europe will require changing the underlying funding options for European businesses, and addressing the lack of funding available for high-risk, high-potential business ideas. Today, given the lack of developed capital markets, European firms cite access to finance as a major barrier to investment (EIB, 2024) and often have little choice but to rely on debt for financing. Non-financial corporations rely on loans for 89% of their financing, compared to 25% in the US (SIFMA, 2023). This leads to a bias towards investments in mature companies which

will result in fairly certain short-term returns: lenders want to see the business case demonstrating their loan will be repaid, which rules out funding for early-stage or high-risk ventures. Evidence from the development and deployment of past digital technologies shows that firms take time—sometimes a long time—to monetise innovations, and to convert innovations (or rework business practices to incorporate innovations) into productivity-boosting practices. This requires experimentation, risk-taking, and scale. Alternatives to debt—such as from angel investors and venture capitalists—are therefore essential: otherwise many promising innovators will have no choice but to seek funding from the US. Excessive reliance on bank loans also discourages investment in intangible assets (which cannot be easily pledged as collateral for loans) and poses particular problems for innovative start-ups that lack an established earnings history. Both of these factors make investment in AI—which at this stage will be investment by businesses to experiment and find out how to use the technology to boost productivity—extremely difficult.

The EU stock of household financial assets, at 2.3 times EU GDP, is far less than in the US (where these assets are five times US GDP) (EIB, 2024, p. 22). Nevertheless, as a first step, the EU has significant money which could be used to support long-term risky investment, such as for AI-related innovation and experimentation, but which is currently poorly deployed. 31% of the EU's household savings are kept in lower-risk cash or bank deposits, compared to 12% in the US (Marcus and Allesandra, 2024, p. 37). European pension funds invest just 0.01% of their capital into venture, compared to around 10% of U.S. pension capital (Halborg, 2025). Consequently, US listed firms have issued about twice as much equity as European listed firms. Achieving the potential of technology-driven productivity growth in Europe therefore urgently requires both developing equity and venture capital markets, and better

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integration of these markets across Europe to help funding get to the most promising business ideas.

While much of the political focus has been on the need for a capital markets union, in fact the more urgent task is to develop deeper capital markets at national level. In turn, this requires changes to increase risk tolerance from investors. Take pensions, for example. In the US, the Employee Retirement Income Security Act of 1974 allowed pension funds to invest in some higher-risk, higher-potential investments. EU pension funds' total assets stand at €2.7 trillion or approximately 25 % of EU GDP<sup>3</sup>, and insurance firms manage assets of even greater value. Yet only 18% of pension fund allocations are directly in equities (with a proportion of equity also held via investment funds: Thomadakis, 2024) and only 0.024% of EU pension fund assets were invested in European venture capital (EIB, 2024, p. 38). Allowing even a small proportion of pension fund assets to be invested in higher-risk investments could be a game-changer for Europe, as the UK has explored post-Brexit through reforms of Solvency II for insurance firms (Bank

of England, 2024). National-level constraints on pension investment should also be removed (Letta, 2024, p. 28). This should be combined with increasing private pension contributions: Sweden, Denmark and the Netherlands despite being relatively small European economies hold 60% per cent of all European pension assets, while also punching well above their weight in terms of innovation.

Enrico Letta's suggestion of a trustworthy EU-wide savings product (potentially a pension product) might be one path forward to unlock institutional investors' appetite for a modest amount of additional higher-risk investment which could help EU businesses unlock AI investment. In the longer-term, a move towards private pension systems, based around defined contributions, will be both necessary in many EU member-states where this system is not yet widespread to preserve the sustainability of pension systems in the context of an aging population—but should also provide significant new funding for high-tech investment (Foueijieu et. al., 2021).



Once capital markets are better developed, their unification will have bigger impacts on productivity by enabling funds to flow to the most promising opportunities across Europe, combatting ‘home country bias’ (about 75% of European bank loans are invested in the bank’s home markets for example<sup>4</sup>). Yet the Association for Financial Markets in Europe considers that EU integration in capital markets has been in reverse since 2019 (AFME, 2023). The Letta and Draghi reports offer helpful suggestions to address the problem. One option is harmonisation of financial services regulations. However, given member-state resistance to handing over more powers to Brussels, an intriguing idea is the creation of a “28th regime” for corporate law. If the idea of a “28th regime” was applied to capital markets and the financial sector, it could help encourage the development of larger funds. It would not require countries to drop their own national codes, and it could, at the same time, provide a European-level alternative which multinational capital market investors could rely on to reduce legal complexity (Berg and Meyers, 2024).

Boosting R&D to help support European firms to adopt and master productivity-enhancing technologies like AI will therefore require allowing and encouraging institutional investors to make modest additional high-risk investments.

Policy-makers should also improve consumer education about financial risk. A further important step will be to encourage households to better understand the benefits of taking a more risk-tolerant approach to savings and investment—including illustrating its macroeconomic benefits, and the potential returns to investors who take a diversified and long-term approach. Finally, policy-makers must adopt reforms to further the vision of a single capital market. This may require new thinking about how to avoid member-state resistance, including Letta’s suggestion of a “28th regime” applied to capital markets.



IV. A EUROPEAN  
APPROACH TO  
MANAGING ECONOMIC  
DISRUPTION

Shifts in productivity through better use of technologies like AI generally comes from strong competitive dynamics. But this is not an immediate or straightforward process. In some ways it is no surprise that so few firms are achieving any productivity gains from AI (Challapally et. al., 2025). Achieving productivity growth from the use of technology requires a willingness to change and experiment, which takes time<sup>5</sup> and which few firms will successfully pull off. But competitive dynamics should mean that companies which find ways to exploit technology to boost their efficiency can increase their market share—pushing laggards out of the sector, or forcing those laggard firms to catch up to those at the frontier. Consequently, US markets tend to have an ‘up or out’ dynamic: firms in the US cannot afford to stay still (Haltiwanger, 2012). They are either successful and, therefore, growing and squeezing out less successful firms—or, having failed, they lose market share and exit the market. This dynamic appears to be a significant factor contributing to firms’ willingness to experiment with and take up new technology in the US.

In Europe, in comparison, traditional metrics like market shares suggest that competition is more intense than in the US (Chen et. al., 2021)—but many firms remain stagnant both in size and in their adoption and creation of new technologies (Schnabel, 2024). In many sectors in Europe, only a few “superstar” firms are at the technological frontier and use technology effectively. Their competitors do not tend to adopt the same productivity-enhancing practices very quickly—which is illustrated in the large productivity gap between national productivity leaders and other firms in their industry—but nor are they forced to leave the market, implying that these “superstar” firms struggle to scale and dislodge less productive firms (ECB, 2021). Low-growth, low-productivity firms in Europe find it much easier to survive than their US equivalents. This poses a real risk for European growth: since only a minority of firms will likely unlock productivity-enhancing gains, if they cannot grow and dislodge their competitors, the benefits of AI will not be widely enjoyed.

At the same time, productivity increases in the US can also be attributed to changes across sectors. The US has seen a huge reallocation of inputs towards higher-productivity sectors like ICT (Samuels and Ho, 2021, p. 25). In comparison, lower-productivity sectors like manufacturing have decreased in importance: manufacturing accounts for 16% of GDP in Europe but only 11% in the US. This process has undoubtedly been painful, which poses lessons for Europe. Many of most productive sectors of the US economy (such as ICT and finance) are not as labour-intensive as the industries they are replacing (Atkins et. al., 2023), and high levels of inequality are likely to be a significant factor contributing to political populism in the US and its retreat from open markets and evidence-based policy-making. However, the US has nevertheless emerged from deindustrialisation much richer overall than Europe (albeit with much more inequality) and with an ICT sector which is both leading overall economic growth



and delivering the US significant digital sovereignty. As noted above, the EU should not assume that AI will cause greater deindustrialisation, since fast deployment of the technology could boost these sectors' export competitiveness. Even if it does, increasing the use of AI should at least slow that process and allow governments time to ensure workers can transition to new jobs, and at best AI could lead to a sort of re-industrialisation. However, if reallocation between sectors is necessary, there are headwinds to such reallocation in the EU, with a continued focus—and much policy attention—on protecting the continent's largest and most employment-rich industries and their workers.<sup>6</sup> This is reflected not only in employment levels and in general business investment levels, but also in R&D specifically. A recent study illustrated that much of the EU's public R&D is spent not on high-potential companies but on low-growth mid-tech incumbents (Fuest et. al., 2024).

What is common to both in-market competition and cross-sectoral macroeconomic shifts is that the US economy is far more dynamic and able to embrace change: in particular, the changes that global technologies like AI can bring. This is illustrated, for example, in how the US has been able to take advantage of economically disruptive events. As illustrated in the chart below, much of the EU-US gap in GDP per hour worked, for example, was the result of America's much better productivity performance in the aftermath of economic shocks like the dot-com bubble of 2001, the GFC of 2007/08, and Covid in 2020. While the EU had 'catchup' periods years later (for example, EU productivity growth was higher than US growth in 2006, 2010-12 and 2022) these catchup periods were neither as long nor as significant as the better US performance in the immediate aftermath of crises. In the US, crises allow labour and capital to leave underperforming firms and sectors. This reflects greater overall churn in the US labour market: approximately 1% of the US workforce is laid off every month, which is nearly ten times the figure in Germany (Schoefer, 2025).

**Figure 1.**  
Annual change in GDP per hour worked

EU annual  
US annual



Covid provides an example of how EU and US policy approaches can differ in how they approach crises and disruption. The US gave employees one-off payments. These encouraged many employees to leave their jobs and move to (often better-paid) positions in more productive firms or sectors. Unemployment spiked to 14.8%, yet it dropped much more quickly than in Europe. EU-style furlough schemes instead rewarded firms for keeping people in their jobs—even if they had no productive work to perform—while giving these employees strong disincentives to change jobs (Turner et. al., 2025, pp. 5-6). Similarly, after the GFC and the dot-com boom, the US recovered more quickly thanks to its bankruptcy and insolvency laws, which enabled individual and small businesses to extinguish their debt much more quickly than in Europe (Gros, 2014).

Europe needs to avoid a similar outcome with the changes that AI will bring, by dedicating too many resources to ensuring ‘digital sovereignty’ or by discouraging AI where it might have disruptive effects, rather than on promoting experimentation and diffusion. There are early but growing signs of the technology’s impact on labour markets. According to one estimate, approximately 60% of jobs in advanced economies will be impacted by AI (Cazzaniga et. al., 2024). However, the EU ought not jump to the conclusion that these impacts will be invariably negative: AI is impacting tasks more than jobs at this stage, even if the impact on youth unemployment may be particularly pronounced (Feijóo et. al., 2026). Taking full advantage of the economic opportunities of AI will require accepting more disruption—both by allowing the firms who use AI to scale quickly and benefit from their risk-taking, while letting laggards fall behind, and by allowing faster shifts in resources between sectors. The trick will be to allow this disruption, while at the same time ensuring economic growth remains inclusive and that those which lose out from technological changes are protected.



Encouraging European firms to use AI to boost productivity growth will therefore require European governments to allow—and should result in—much broader disruption in the economy.

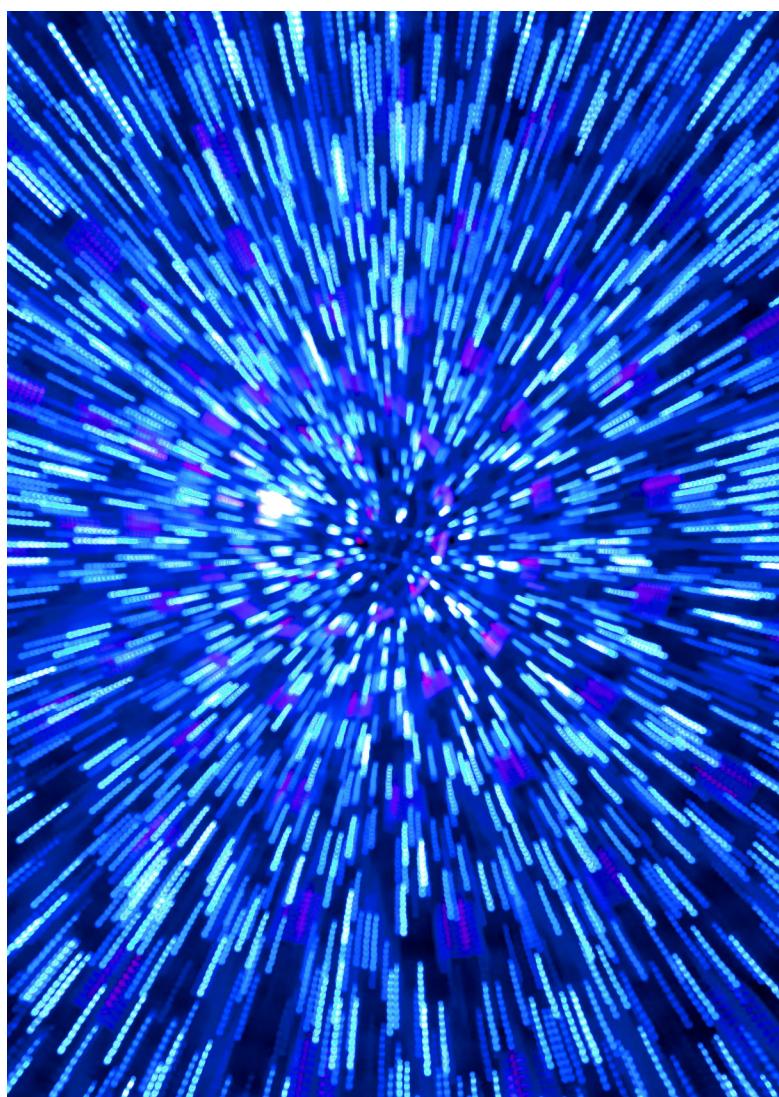
## 4.1 HOW TO EMBRACE DISRUPTION

Much policy-making in the EU tends to protect the interests of incumbent firms, sectors and countries. This model is reflected in growing pressure to adjust EU competition policy in order to enable large incumbent firms in Europe to get even bigger so they can compete globally, rather than facilitating the growth of innovators (Draghi, 2024, p. 75; Letta, 2024, p. 55). It is also reflected in the EU's industrial policy which—despite Mario Draghi's call to rethink public innovation funding in Europe—has continued to provide the most support to incumbent sectors rather than those which have the most productivity-enhancing potential. For example, Germany has spent large sums protecting energy-intensive industries from the impacts of higher energy prices, essentially requiring households and other parts of the economy to subsidise energy-intensive industries.

In his 2024 report, Draghi argues that boosting the use of technology would help some of Europe's incumbent and successful companies. However, game-changing innovations and uses of technology more often emerge from challenger companies or sectors, rather than incumbents which tend to have incentives to protect the status quo (Schnabel, 2024). Encouraging European firms to use AI to boost productivity growth will therefore require European governments to allow—and should result in—much broader disruption in the economy. The EU must do more to facilitate the growth of innovative firms, which can convert AI into popular products or productivity-enhancing deployments, and the quick exit of firms which fall behind.

In some cases, this simply requires the EU and national governments to stop providing support to firms or sectors that lack a viable path to sustainability. For example, the Commission repeated extended its 'emergency' state aid rules—after exceptions were allowed for Covid, then to combat higher energy prices

as a result of the Ukraine war—to protect existing firms (Julien-Vauzelle and Négrin, 2025). State aid from EU member-states has tripled from 0.5% of GDP in 2012 to about 1.5% in 2022 (Hodge et. al., 2024). Public subsidy may play an important role in helping avoid unnecessary disruption, for example when firms face time-limited crises. It can also help reshape an economy, such as by providing support to 'infant industries'. However, repeated extensions, and the use of state aid to support firms' ongoing operational costs, suggest public funding is being used to shield companies from long-term and systemic economic factors (like higher energy prices) instead—preserving the status quo rather than helping economies evolve and adapt.



In other cases, enabling a more dynamic and adaptable European economy will require active reform of regulation to help successful firms scale up, and to help unsuccessful firms leave the market more quickly.

Helping firms scale up largely requires drastic development of the EU's single market so that firms which work out how to use AI effectively can bring those innovations to all of Europe, rather than remaining bound to one or two member-states. With a true single market, successful firms which use technology effectively can grow and 'squeeze out' less productive firms across Europe or acquire them and improve their practices. In much of the EU, national markets are too small to generate sufficient levels of competition to drive better management practices and exploitation of technology (Springford, 2015)—particularly in markets where economies of scale matter or where a high level of upfront ICT investment is necessary. In turn, the prospects of becoming a 'superstar' firm, rather than a large fish in a small national pond, should make small and innovative investors more willing to enter markets in the first place. Developing the single market for services will be particularly important, since this sector is responsible for about 70% of the EU's employment and output, and it is primed to take the most advantage of AI. However, barriers to intra-EU trade in services remain severe and EU leaders have made very little progress in addressing the problem.<sup>7</sup> Enrico Letta's report on the single market provides many helpful suggestions to address these problems, many of which have been adopted in the Commission's recent Single Market Strategy (European Commission, 2025), but have not yet been translated into concrete action.

Improving market exit will require harmonisation of insolvency laws, for example, so that firms can leave the market quickly if they fail. It will also require steps to help firms restructure more swiftly and cost-effectively, so that they can leave business lines and units where they have not been able to become competitive. Today, the EU has high levels of labour hoarding—where companies retain more workers than needed due to concerns they will struggle to hire them back later (Arnold et. al., 2024). The cost of restructuring in some large EU member-states is estimated at ten times higher than in the US and there is significant evidence that improving firms' flexibility can help boost productivity and that employment protection laws play a largely underestimated role in impacting innovation and the technological frontier (Coatanlem and Coste, 2024, p. 6). In particular, the Commission proposes in its Competitiveness Compass a '28<sup>th</sup> regime' to streamline labour, tax and insolvency rules for certain types of innovative firms. If member-states finally back this idea, it could significantly improve the ability of innovative firms to grow across Europe and displace less-innovative incumbents. However, member-states have frequently prevented progress in harmonising laws around insolvency and market regulation in services—and enabling faster restructuring is highly controversial, given its consequences for workers' rights and touching at the heart of the European social contract.

**Helping firms scale up largely requires drastic development of the EU's single market so that firms which work out how to use AI effectively can bring those innovations to all of Europe, rather than remaining bound to one or two member-states**

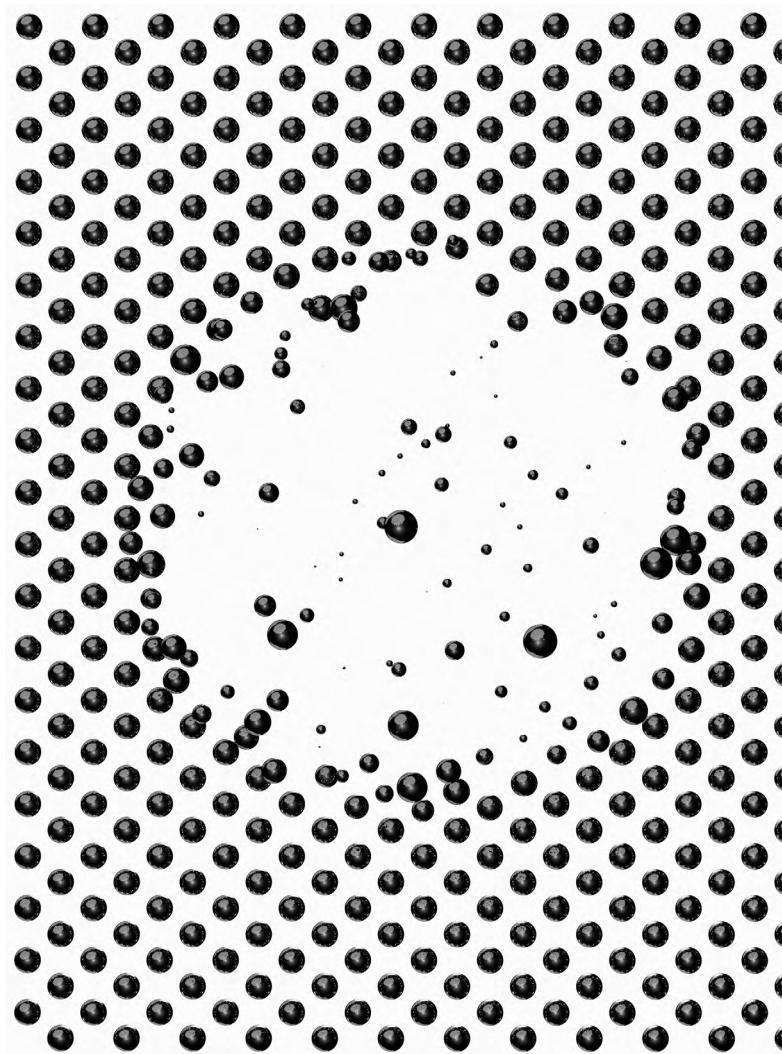
## 4.2 RECONCILING DISRUPTION WITH THE EUROPEAN SOCIAL MODEL

Despite this concern, encouraging more innovation and use of technology like AI will have overall social and economic benefits (Gmyrek, et. al., 2023). If the impact of AI follows that of past technologies, then it is unlikely to lead to large net job losses: rather, past experience suggests that while some jobs will be lost to AI, many others will be created, and many more jobs will change in nature. Some research already suggests that Europe is seeing an increase in employment in occupations more exposed to AI, contrary to fears that AI would cause mass unemployment (Andrés et. al., 2021). AI also appears to be impacting tasks more than jobs at this stage (Feijóo et. al., 2026). However, while technologies tend to increase the economic pie, the economic benefits from the use and invention of technologies tend to be tightly concentrated, with potentially highly negative impacts on equality (Turner et. al., 2025, p. 13). Furthermore, AI may well exacerbate disparities in economic growth within the EU, since AI has a stronger positive productivity impact on high-wage economies than lower-wage ones.

This suggests the need for policies across Europe which can acknowledge and learn from successful approaches, rather than abandonment of its social model in order to emulate the US or China. A lack of transitional support would lead to social and economic impacts which would be intolerable in Europe. For example, while deindustrialisation in the US led to many workers finding new jobs, this often required significant dislocation—and others never re-entered the labour market, with huge impacts on many communities (Autor et. al., 2016). Governments need to ensure that the losers from economic disruption are supported and helped to transition into new roles—rather than adopting policies that avoid there being any losers in the first place. That

will require addressing problems like the low mobility of labour across the EU.<sup>8</sup>

In some cases, successful lessons can be learned from within Europe—ensuring that successful policies in one member-state can be used across Europe. Models like Denmark’s “flexicurity”—which combines a strong “social safety net” for the unemployed with considerable flexibility for firms to hire and fire.



## Encouraging more innovation and use of technology like AI will have overall social and economic benefits.

Similarly, governments need to ensure that the economic benefits of technologies are felt by society as a whole rather than increasing inequality. This is especially important for disruption caused by AI, which risks exacerbating inequality. On its current trajectory, the benefits of AI are likely to be concentrated among certain sectors, companies, and workers, while others are likely to suffer disproportionately from the disruptive costs (Dewan et. al., 2025). For example, AI seems likely to benefit higher-skilled workers more than lower-skilled ones (Lagard, 2025; Dell'Acqua et. al., 2023), and there is a risk that only a few firms will be sustainable providers of AI models (Meyers and Bourreau, 2025). Inequality has been a key consequence of the US economy's high levels of dynamism, and an important reason why the 'laissez faire' libertarian model adopted in the US would not be accepted in Europe.

The EU has an important advantage over the US. Europe's social welfare model means we can tolerate disruption, and support those who suffer from such disruption, without generating the same high levels of inequality that exists in the US. In other words, Europe can make it easier for firms to restructure and retrench staff without necessarily resulting in extreme inequality seen in the US.

### **In practice this will require that policymakers, at the same time as they allow more economic disruption take the following steps:**

 **First**, policy-makers should improve their capabilities to understand how AI will affect labour markets. Currently, we are in an early stage of its deployment, with significant experimentation between business models, firms, and technological solutions. The scale and nature of the impact on labour markets is only just beginning—but given AI's broad use

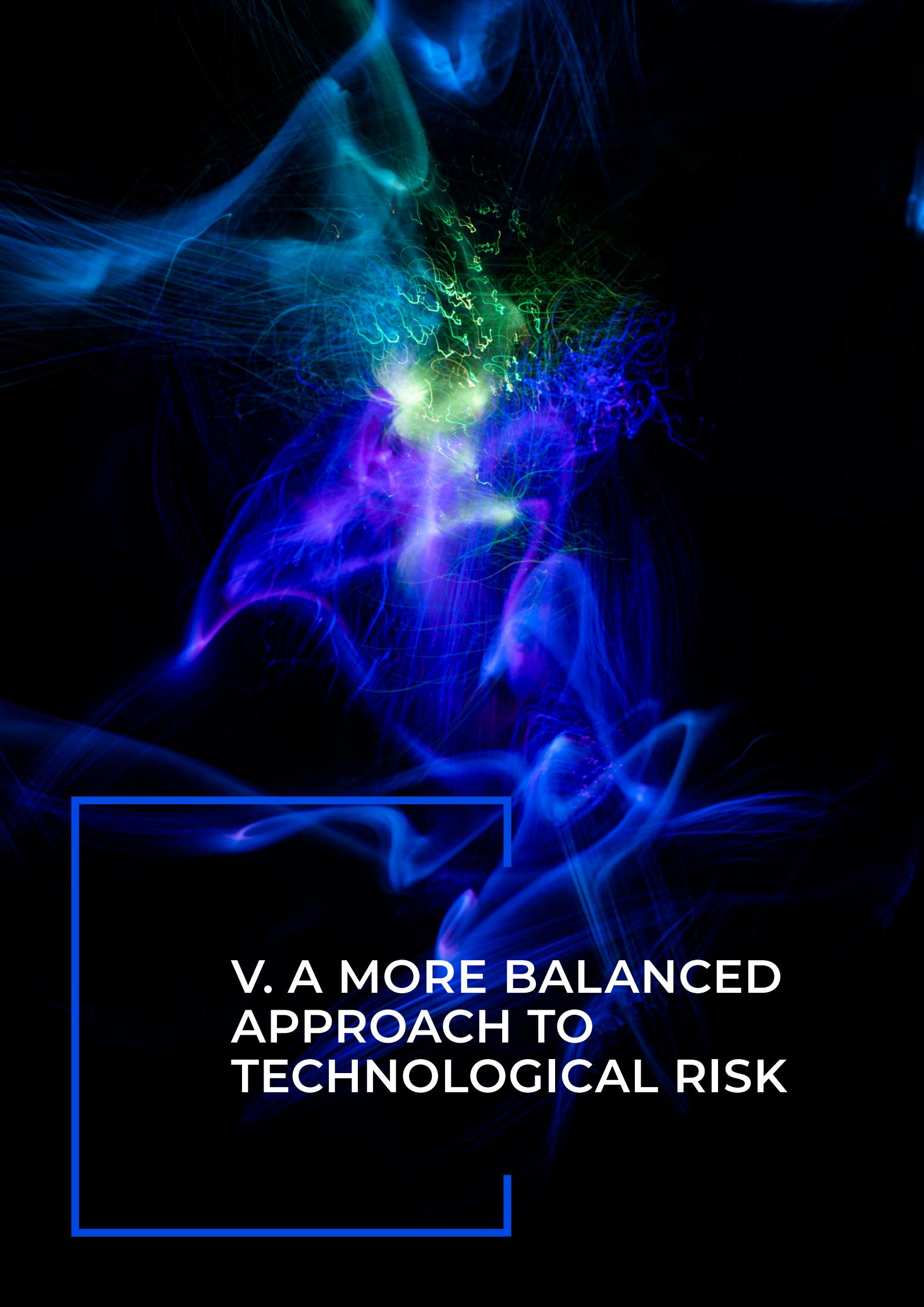
cases, impacts at scale could happen relatively quickly, challenging governments' ability to cope.



**Secondly**, they should use those capabilities to prepare tailored measures to help support impacted workers. AI is likely to change the skills in demand in labour markets, in particular by increasing demand for cognitive skills involved in complex problem-solving and creativity (World Bank, 2019). The EU already currently suffers from both labour shortages and a misallocation of skills (European Labour Authority, 2025), suggesting that although high-productivity sectors are less employment-intensive, the EU should be more worried about increasing labour mobility and reskilling rather than reductions in the absolute measures of employment.



**Finally**, policy-makers should consider the adoption of new redistributive policies, such as through tax reform and ideas like a universal basic income, which—along with effective competition policy to avoid market power—may help avoid seeing an ever-increasing proportion of economic gains being enjoyed by providers of capital rather than labour (Acemoglu and Restrepo, 2018). This can be part of a policy package showing that the EU can adopt AI while avoiding the highly unequal and politically polarization seen in the US. Such a European approach to growth may be both necessary to secure AI take-up, and potentially more economically and politically sustainable than the US approach.



**V. A MORE BALANCED  
APPROACH TO  
TECHNOLOGICAL RISK**

Tolerating more economic disruption is one necessary step to boosting technology-driven productivity growth. A second step is to ensure EU regulation takes a sufficiently balanced and tolerant approach to the more direct risks posed by new technologies. For some years, businesses have raised the alarm about the pace of new digital laws in Europe and that the overall regulatory environment poses too many barriers to innovation (see, e.g. Digital Europe, 2025). Those concerns reached fever pitch in the context of Europe's Artificial Intelligence Act.

There is overwhelming consensus that Europe's approach to technology regulation has taken a wrong turn and is at least part of the problem hindering AI innovation and take-up—reflected in the expectation that the Commission will soon propose a 'digital Omnibus' law to simplify and reduce red tape arising

from the existing digital rulebook. However, there is less consensus about the importance of regulation to the EU's overall innovation woes, compared to other barriers and constraints on innovation and technology adoption. It is also unclear what, specifically, is wrong with the EU's regulatory approach—that is, whether the problem is the complexity and administrative costs of regulation, which can be mitigated through simplification and 'cutting red tape', or a more profound problem with the underlying principles of European regulation and their supposedly precautionary approach to regulatory risk.

If regulation was a primary barrier to innovation and technology take-up, and the problem was the values that EU regulation tried to protect, this would suggest a profound challenge in reconciling technology take-up with the European social model. Is there evidence this is the case?



## 5.1 HOW BIG A CONSTRAINT IS REGULATION?

There are a confluence of factors limiting innovation and technology take-up in Europe—in particular, a lack of economic dynamism (described in the section above) and the lack of capital markets able to support the type of innovative and risky business models which succeed in the ICT sector. Concerns about regulation therefore need to be kept in perspective.

For one thing, the EU's poor performance in both creating globally competitive technology companies, and adopting technologies in other sectors of the economy, is long-standing—and predates many of the most recent laws including the AI Act (EIT Health, 2025). Similarly, its productivity decline vis-à-vis the US started in the 2000s—long before even the first major digital laws like the General Data Protection Regulation (Kammer, 2024). Secondly, the EU's productivity performance is largely in line with many developed countries, many of which are perceived—or are trying to—adopt a ‘lighter touch’ approach to regulation than the EU. Thirdly, a study found that US subsidiaries in the UK (when it was a member of the EU) use ICT better than local British firms (Reenen et. al., 2010). This suggests that regulation is not the main barrier to better competitiveness: after all, US firms in Europe have to comply with European rules, just like local firms. Instead, factors like management practices, firm culture, and the availability of capital are probably more important. Finally, US firms are actually more likely to cite regulation as an obstacle to investment—although European businesses are more likely to cite regulation as a major obstacle (EIB, 2024, p. 25).

Furthermore, EU regulation serves a valuable purpose if it helps lower barriers to intra-EU trade: one of the stated aims of the AI Act. The IMF has estimated that barriers constraining intra-EU trade are equivalent to a 45% tariff rate for manufacturing sector and 110% for services (Kammer, 2024; Comerford and Mora, 2019). And analysis by the IMF shows that Europe's stubborn national markets are part of the reason why European businesses cannot scale up and spend more on innovation.<sup>9</sup>

This implies that there is a need for more EU regulation rather than less—so long as it is well-designed. As Anu Bradford explained in her seminal book ‘The Brussels Effect’, many of the EU's laws have historically been well-designed—they have been aimed at protecting fundamental rights which are widely respected around the world; they are the result of and adapted to 27 different member-states with their own legal traditions; and they reflect reasonable compromises (Bradford, 2019).

**The EU's productivity performance is largely in line with many developed countries, many of which are perceived—or are trying to—adopt a ‘lighter touch’ approach to regulation than the EU.**

The first problem can be addressed through adopting principles of better regulation in the design of laws

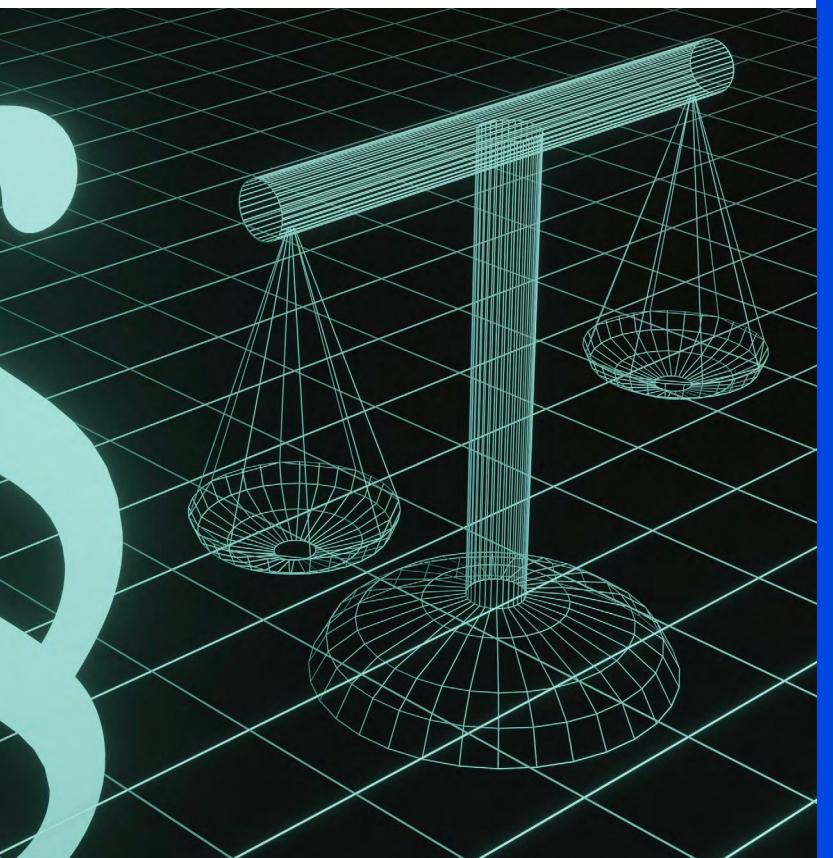
## 5.2 IS THE PROBLEM THE DESIGN OF EU REGULATION—OR ITS OBJECTIVES?

Assuming that regulation plays some role in Europe's lack of economic growth, there is debate about whether the problem is limited to regulatory design—such as regulatory complexity, overlaps and inconsistencies, and the administrative costs of regulation—or whether the very goal and principles of EU regulation pose excessive barriers to adoption and innovation of technologies like AI. Enrico Letta, for example, has sensibly recommended a two-step process by which the Commission would firstly aim to tackle 'redundant, obsolete, and inconsistent regulations'—on the basis that this first task would be less politically controversial—followed by a more profound assessment and debate about the fundamentals of EU regulation (Letta, 2024, p. 130).



The **first** problem can be addressed through adopting principles of better regulation in the design of laws—for example, by ensuring they are properly targeted, principles-based, technology-neutral and as simple to comply with as possible (Meyers, 2024, p. 4). There has been a growing perception that the process of law-making has become more frenetic and less proportionate. Over 100 EU laws relevant to digitalisation were proposed or enacted over the previous Commission's mandate in 2019–2024 (Marucs, Sekut and Zenner, 2023) and the AI Act is one among many which has been criticised for imposing excessive and unnecessary burdens.

More principles-based regulation—to ensure the law can accommodate a range of different business models and technologies, and keep barriers to entry and exit in markets low—is essential to minimise impacts on competition and dynamism. That is particularly true in the AI sector. Law-makers passing the AI Act agreed to radical changes to the proposal, including a new regime for regulating 'general purpose AI models', halfway through the legislative process as a result of the launch of ChatGPT. The need for such sudden changes is concerning: EU law-makers would be better off aiming for simpler, more principles-based laws which can stand the test of time and can give investors long-term confidence. Already, the law's assumption of a linear value chain (encompassing AI models, AI systems which incorporate models, and then 'deployers' being businesses which deploy these systems) has already become redundant given the increasing



interdependencies and mutual learning taking place between all these players (Meyers and Bourreau, 2025). AI also points to the need for more ‘adaptive’ regulation, which can be updated automatically and incorporate learning over time. This may require greater use of AI and machine learning by regulators, and the use of tools like regulatory sandboxes—to allow both AI innovators to trial products, and regulators to refine and adapt their rules.

A **second** problem is that EU regulation often fails to create a single ‘rulebook’ across Europe—thereby lowering barriers to innovative firms growing across the EU, boosting competition, and in turn contributing to pressure on EU firms to adopt innovations like AI to survive and thrive. This is a sound goal: the International Monetary Fund estimates that if internal barriers to trade in the EU were at the same level of those in the US, then labour productivity could increase by 7% over seven years (IMF, 2024). Yet the AI Act is an example of a law with highly localised implementation and enforcement, involving supervisory authorities in each member-state (and often many authorities even in the one member-state). Too often, this results in member-states or national or sub-national authorities adopting their own inconsistent applications of EU laws particularly when applying the law to new technologies like AI (Meyers, 2024).

To address these issues, the EU’s upcoming digital simplification package should look beyond reporting requirements and instead minimise the ability of member-states to diverge from EU standards. One important step would be to adopt a single centralised European enforcement authority for the EU’s range of

related digital laws—such as the Digital Markets Act, Digital Services Act, and the AI Act—to ensure greater consistency and predictability in how these laws are interpreted and enforced (Zenner et. al., 2025). More broadly, the European Commission needs to ensure faithful and effective adoption and implementation of EU laws across the bloc.

Development of a genuine single market should help address a key problem for innovative AI-ready firms in Europe: their inability to scale up. Much of the EU competition policy discussion in recent years—including in the EU’s Competitiveness Compass—has focused on the merits of allowing very large firms to merge into ‘European champions’ (European Commission, 2025). But the problem of scale comes from the opposite direction. Europe has impressive levels of start-ups. But 99% of the EU’s enterprises employ less than 49 people.<sup>10</sup> The EU therefore has a significantly larger proportion of ‘micro-firms’ and ‘small enterprises’: which lack the scale and management expertise to effectively use technologies like AI. These firms comprise nearly half of total employment in the EU, while representing only 31% of total turnover of EU enterprises. The Commission is taking tentative steps to ensure that regulation does not encourage firms to ‘stay small’, and its Competitiveness Compass and Single Market Strategy aim to reinvigorate the single market by reducing barriers to cross-border business, which will help innovative small firms scale across Europe more easily (European Commission, 2025). This will likely require more (EU-level) regulation rather than less.

Is a more profound change to the EU’s regulatory values necessary to tolerate more risk? This is the view of the current US administration, which has relentlessly criticised the AI Act as anti-innovation, and perceives references to ‘AI safety’ as a barrier to US leadership. Yet European regulation can have three possible impacts on innovation.

Negative impacts on innovation may be an unintended side-effect of Europe being perceived as a more difficult place to do business than other parts of the world.



**First**, it can catalyse innovation—for example, by solving market coordination problems (as when regulation dictates a standard which industry has been unable to agree on), or by addressing issues of market power or structure (like the Digital Markets Act or Europe's Open Finance initiative). In theory, regulation can also stoke innovation if it creates trust in a technology and, thus, helps build demand. It can also redirect innovation efforts in ways that reflect public policy goals. This is the case of much of the AI Act, which takes a risk-based approach with more obligations imposed only in use cases which have a high risk to users' fundamental rights. While some higher-risk use cases may have been defined in an inappropriately broad way, the Act overall ensures that the vast majority of uses of AI in Europe will be subject to no, or only very minimal, regulatory obligations—thus 'steering' innovation towards these safer uses of AI. Furthermore, more regulation is likely to be needed as AI agents become a mainstream technology—capable of learning from experience, interacting with their environment, entering into contracts, and 'steering' users—posing new challenges to laws from consumer protection to competition.



**Second**, regulation could also help steer technologies like AI towards uses that supplement, rather than replace, human labour for example, in order to further (or minimise adverse effects on) inclusivity and equality (Dewan et. al., 2025).



**Thirdly**, regulation can stymie innovation or encourage that innovation to take place outside Europe. In some cases, this is a deliberate policy objective: for example, the AI Act prohibits certain uses of AI such as for 'social scoring'.<sup>11</sup> In other cases, negative impacts on innovation may be an unintended side-effect of Europe being perceived as a more difficult place to do business than other parts of the world.



## Negative impacts on innovation may be an unintended side-effect of Europe being perceived as a more difficult place to do business than other parts of the world.

Concerns about the principles of regulation should, therefore, focus on unintended negative impacts on innovation. In part, that will be addressed by minimising compliance costs and ensuring laws do not pose disproportionate barriers to market entry and exit. It will also require policy-makers to fully consider the potential impacts of proposed laws. The existing better regulation toolkit will clearly help achieve this—but there are important deficiencies in the process today. The use of “competitiveness” analyses in impact assessments, for example, ought to help ensure that the impact of proposed regulations on investment decisions is properly understood by the Commission, MEPs, and member-states. Stronger use of co-regulation and self-regulation might also better promote “responsible innovation”—which tries to require firms to internalise important values, while avoiding prescriptive or onerous burdens on businesses (Larouche, 2025, p. 30)—so long as there are strong incentives (either by way of market discipline or regulatory enforcement) for firms to act responsibly.

In light of the less predictable and evidence-based approach to policy-making seen in the US today, the EU has an opportunity to demonstrate that sensible, enduring, well-designed regulation can be pro-investment and pro-innovation in the AI sector. This will require that policymakers avoid radical deregulation or shifts in the EU’s regulatory standards. If the EU wants to incentivize investment in long-term, high-risk, high-potential sectors like AI, maintaining regulatory consistency will be important. That militates against radical changes to the regulatory landscape, which would disadvantage firms which have invested to meet the EU’s standards, and provoke uncertainty about how enduring future EU regulation will be.

Instead, policy-makers should focus first on simplification. As recommended by Enrico Letta, there is a vast swathe of technical problems with EU digital regulations, including inconsistencies, overlaps, and redundancy. In principle, these problems should be addressable without triggering significant political controversy—while significantly lowering costs for businesses that want to adopt technology.

Rather than de-regulate, policy-makers must instead ensure regulation delivers the vision of a single market. This may require the Commission to get tough on member-states, by seeking to challenge concessions to member-states which undermine the single European rulebook. It may also require more fundamental changes to the way laws are implemented and enforced, for example with more centralized and politically independent enforcement to ensure EU-wide consistency.

These policies will be essential to counteract the growing narrative that EU regulation is inherently anti-innovation and will unnecessarily stymie AI rollout and adoption. Optimising the EU’s digital rulebook would be more consistent with EU values and more politically realistic. Emasculating its laws would undermine the EU’s promise of a predictable and rules-based order. Currently, that is one significant advantage the EU has over the US, where policy-making is currently much less stable, predictable and evidence-based.

# VI. CONCLUSION

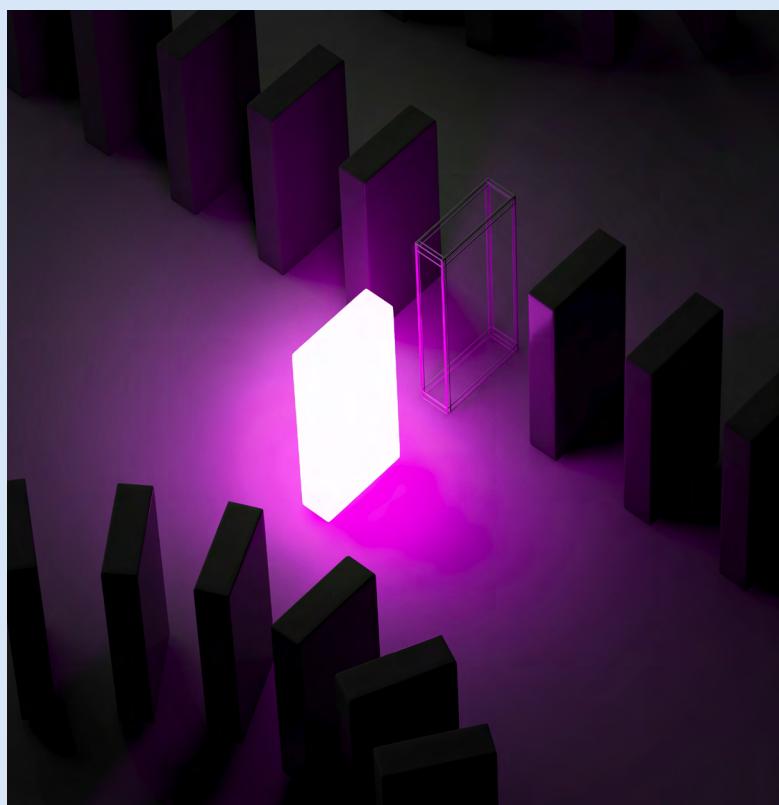
Europe's economic situation will not get less challenging, given the policies being pursued by the US and China. As a general-purpose technology, improving take-up of AI will boost productivity across the European economy. Europe needs to embrace potentially efficiency-enhancing technologies like AI. That involves a challenge of finding ways to incorporate the technology, and change business practices, so as to realise its potential in ways that are consistent with Europe's political and social values. In several areas like industrial AI, this poses fewer challenges and will complement the EU's strengths. The final step will be to master and lead in the technology—or at least in the provision of key inputs or uses of the technology.

Given Europe's stuttering productivity and poor track record in commercialising innovation at scale, the continent must change course. That will inevitably involve taking a somewhat different approach to managing risk—but abandoning the EU's values wholesale is not an option. Many aspects of the US growth model are either socially unacceptable in Europe, face insurmountable political roadblocks, or may not necessarily lead to sustainable growth. Working longer, tolerating more inequality, and significantly closing the EU market to trade are non-starters. To have confidence in technologies like AI, European customers will require trust in the technology and policy-makers should steer its use in socially acceptable ways.

But hoping to build an end-to-end AI stack that avoids dependencies on the rest of the world is also unrealistic given Europe's political and economic realities. All of that means the EU must foster its own 'third way' approach to fostering technology diffusion and innovation in Europe. That will mean a modestly more risk-tolerant approach to investment in the AI value

chain. It will also mean refocusing on protecting workers, not jobs; and competitive markets, rather than firms and sectors. It will mean continuing to use regulation to help successful firms developing or using AI to scale, while minimising unnecessary burdens on businesses.

The EU cannot—and, in light of the recent US political and policy trajectory, should not—following Washington's model of zealous deregulation. It should take a more nuanced approach. Maintaining social democratic guardrails on AI will be important. It will encourage investment in industrial AI, which is Europe's existing strength and carries less risk of impacting Europe's social fabric. It will encourage confidence and boost take-up, in the short term, but also ensure AI's long-term impacts do not stoke inequality or undermine Europeans' quality of life in ways that policy-makers cannot satisfactorily address. Europe's inclusive social democratic model and its values can still be a significant advantage—giving AI entrepreneurs confidence to take big bets on ambitious business ideas and helping the European economy ensure sustainable growth.



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## ENDNOTES

- 1 Brynjolfsson et al estimate that a generative AI tool increased productivity by 14% on average, in particular by 34% for novice and low-skilled workers; in comparison Acemoglu estimates AI could lead to a much more modest increase in TFP of 0.53-0.66% over ten years.
- 2 Challapally, et. al. (2025) notoriously found that only 5% of integrated generative AI pilots were delivering value for the firms which rolled them out.
- 3 EIOPA, Occupational pensions statistics, available at [https://www.eiopa.europa.eu/tools-and-data/occupational-pensions-statistics\\_en](https://www.eiopa.europa.eu/tools-and-data/occupational-pensions-statistics_en).
- 4 Claudia Buch, 'European banking integration: harnessing the benefits, containing the risks', speech at Warsaw School of Economics, 10 April 2025, available at <https://www.bankingsupervision.europa.eu/press/speeches/date/2025/html/ssm.sp250410~e443914b0a.en.html>.
- 5 Business computing and software did not discernibly raise US productivity growth until 1995, for example (van Ark et al, 2008).
- 6 In relation to labour markets, see Joaquin Garcia-Cabo, 2023, p. 3.
- 7 Intra-EU trade barriers may be potentially as high as 44% for the average manufacturing sector, and 110% for the average service sector—severely hampering the ability of large firms to scale up: Adilbish et. al., 2025.
- 8 Labor mobility is much lower than in the US, while the estimated cost of moving between EU countries is significantly higher than moving between US states: see Head and Mayer, 2021.
- 9 The IMF has said that “Firm-data analysis ... shows that Europe’s segmented good and services markets are keeping businesses from becoming larger, spending more on R&D, and exploiting economies of scale.” See IMF, 2024, p 18.
- 10 Eurostat, ‘Micro & small businesses make up 99% of enterprises in the EU’, 25 October 2024.
- 11 Regulation (EU) 2024/1689 laying down harmonised rules on artificial intelligence (AI Act), recital 31.

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