An EPICENTER report EU WIN Reviving Europe's

Reviving Europe's competitive edge

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Summary

The EU's share in the world economy has shrunk from 25.8% in 2004 to 17.6% in 2024 (IMF 2024). The EU economy is trailing behind the US and will soon be overtaken by China. The EU's shrinking share in the global economy is a consequence of sustained low economic growth as well as demographic changes in Europe. Economic growth in the EU has remained weak for the past twenty years; the union has witnessed episodes of economic downturn undercut moderate growth in the 'good' years. Growth has been led primarily by the new member states (NMS), with the 2005-based index of the GDP reaching 140–200 in virtually all Central and East European (CEE) countries and stagnating in some of the southern economies (Eurostat 2024a).

The future of European competitiveness lies at the heart of the political focus of the new European Commission (EC). Former European Central Bank (ECB) president Mario Draghi's report (Draghi et al. 2024) on competitiveness, and former Italian Prime Minister Enrico Letta's report (2024) on the Single Market will be shaping the EC's overall framework of thinking and potential strategic policies to boost competitiveness and growth. Epicenter's Blueprint provides a novel perspective and an in-depth look at the EU's competitiveness, focusing on economic freedom and growth, the environment for innovation and excessive bureaucratic obstacles, fiscal challenges and excessive levels of public debt, as well as the burden of ageing and unfunded pension promises.

Why is the EU losing competitiveness?

- The EU is lagging in economic freedom compared with the US, mainly in terms of the scale of government intervention and stringency of regulations. The EU is competitive to the US vis-à-vis the legal system, stability of money, and freedom to trade and invest. However, high taxes, excessive government intervention, high debt, and strict regulations undermine the EU's competitive advantages.
- The SM in the EU is a globally unique success story. However, the SM has not lived to its full potential. It has stalled at the halfway point, with the initial enthusiasm to integrate markets being replaced by fatigue. Nonetheless, strengthening the SM would add €713 billion in value over a decade (European Commission 2020). Imperfections of the SM have contributed to weaker growth in the EU.
- Over the past three decades, the EU has witnessed a decline in competitiveness, with rising labour costs and stagnant output. Borrowed funds have frequently been used to boost domestic consumption and increase labour costs rather than being directed toward productive investments. The rise in public debt is a consequence of the expansion of government spending, mainly in times of crisis. Debt levels across EU member states show significant variance, impacting both economic freedom and fiscal flexibility (Eurostat 2024c).
- The EU's loss of competitiveness is partly due to poor anticipation of population ageing and the underdevelopment of pension funds in half of the EU countries. These factors have led to increases in labour costs, which is detrimental to the price competitiveness of European companies. The hike in labour costs has also reduced the amount of capital available to finance growth and innovation, which explains why the EU has fallen behind the US and other more attractive regions.

On revitalising the Single Market

 Make the SM a priority again. The original goal of removing regulatory and administrative barriers to cross-border exchange should be prioritised. The EU should establish and advocate for ambitious goals for the SM. Progress against these goals must be regularly evaluated using quantitative key performance indicators. Any new EU legislation should be accompanied by an evaluation of its implications for the SM. Legislation must be periodically assessed and reviewed to avoid over-regulation.

- The SM should not end at the borders of the EU. Efforts should be made to dismantle tariff and non-tariff barriers to facilitate increased trade with non-EU countries. More trade agreements are needed. There are still significant barriers and regulations limiting the extent of intra-EU trade in services which should be lifted.
- EU capital markets lag behind the US. The EU should turn its focus away from nationalism and towards mergers, acquisitions, and cooperation. The competition rules should be adjusted to the scale of the SM.
- State aid, mainly driven by green subsidies, has been on the rise. State aid distorts market relations and often favours a select few. State aid rules should return to their original setup where Article 107 of the Treaty on the Functioning of the EU dictated the conditions of aid provision and allowed state aid to be dispensed only in case of market failure.
- National authorisation and permitting schemes must be reevaluated across the industrial and infrastructure ecosystem to ease entrepreneurship in the SM. Mutual recognition of regulations in designated sectors should be fostered. The EU's Better regulation toolbox (European Commission 2023) should be strengthened and enforced more effectively.
- Occupational regulations and the labour market should be liberalised. If an occupation remains unlicensed in a member state without significant adverse effects, other member states should be directed to abolish licensing requirements for that occupation. The digital Platform Work Directive should be redesigned such that EU citizens can reap the benefits of flexibility intrinsic to them, and the SM can once again become a region where new digital platforms can evolve and thrive.
- The EU should avoid adopting further redundant regulations that limit the attractiveness of the SM as a place for innovation. This is especially necessary for the digital sector.
- The Digital Markets Act and AI Act should be re-evaluated, and the Digital Services Act should be improved. The EU should abandon the model of static competition and market share planning and instead move towards market dynamics and creating an environment that is fertile for innovation.
- At the same time, legislative efforts must be accompanied by better enforcement of SM principles in member states. Statistics show that the number of infringement cases open at year-end has been increasing in period 2019 – 2022 with a consequent decline in 2023, but the backlog remains high (European Commission 2024b). Streamlining the

infringement procedure by removing the reasoned opinion phase would improve the situation. Further, scaling back the EU pilot programme will help curb the rise in new and unresolved cases.

On debt, taxes, and competitiveness

- The competitiveness of the EU's economy is undermined by high public debt and high taxation. The EU must strive to maintain sound finances, control government spending, and reduce debt levels through stricter fiscal rules.
- The rapid execution of Council Directive 2022/2523 on minimum corporate income tax (CIT), coupled with late adoption by certain member states and flawed provisions, has serious ramifications for the EU's competitiveness. The shift from tax competition to subsidy competition, and the legal uncertainties arising from the delayed transposition of the Directive, compound the challenges ahead. The EU has been observing slower growth than the rest of the world for quite some time now, and tax harmonisation policies threaten this modest growth further.
- Indexing the minimum tax liability threshold to inflation and providing for automatic indexation can mitigate the disproportionate growth of the tax burden for companies and protect multinational enterprise groups (MNEs) that are close to the threshold. Additionally, a thorough ex-post impact assessment is advised. The year 2025 should be a preparatory phase, with a focus on streamlining the compliance process and simplifying the minimum CIT regime to reduce the burden on businesses while sustaining the EU's competitiveness.
- The revised fiscal governance framework is far more complex and, in a way, less transparent, which leads to considerable uncertainty. The practicalities of having a technical dialogue with individual member states are not entirely clear, as the EC will have the power to decide ad hoc on various expenditure paths and corrective measures on a case-by-case basis.
- One-size-fits-all is not an effective approach for the EU, given its diversity. The EU legislation on fiscal rules should set clear and comprehensible binding goals applicable unanimously to all countries. Rather than micromanaging the enforcement of fiscal rules, the EC should support the existence, capacity, and relevance of independent national-level fiscal councils.

- The revised framework should contain clear rules for identifying violations and fines to enhance the transparency of the framework.
- A relatively short-term evaluation period, i.e., ten years, decreases the motivation of governments to adopt long-term reforms, especially in the case of the pension system.

On innovation and bureaucracy

- First and foremost, the EU needs a moratorium on new regulations, a review of all existing regulations, and further institutionalisation of bureaucracy reduction. To understand the costs of regulation a critical first step toward better regulation a framework beyond the standard cost model and currently established methods is necessary. Neither the member states nor the EU has a tool that quantifies regulatory costs by sector. The uncritical reliance on the standard cost model leads to the systematic underestimation of regulatory costs. The EC should implement and institutionalise a tool that highlights the regulatory costs impacting innovation and economic growth, drawing on models such as the RegData and QuantGov in the US.
- Reducing bureaucracy to foster innovation should be a political priority.
- Private investments must not be steered through prohibitions and discrimination against specific technologies, e.g., the EU taxonomy for sustainable activities. The Green Deal's Taxonomy Regulation must be revised to support technology openness and innovation, as should any other legislation that violates this principle.
- The use of price signals and market-compatible policy instruments should be adopted. Prices, unlike prohibitions, are drivers of innovation. They reveal the costs of regulation, allow consumers and producers to adjust their behaviours efficiently, and generate fiscal revenue.
- Price stability is essential for a well-functioning price system, and the ECB's mandate should remain focused on this crucial task and should not include the green transition.
- It is advisable to review the institutional framework of Horizon Europe, particularly that of the European Innovation Council (EIC). Regarding Horizon Europe and future regulatory initiatives, the EU must prioritise technology openness and academic freedom. Public financing and support for basic research must remain a priority in the innovation policy of the EU.

- The EU should leverage the innovation-driving effects of competition while strengthening basic research, for example, through the Horizon Europe programme. This will allow new market entrants to quickly deploy cutting-edge technologies. Competition should be as free as possible within and beyond the SM, to the extent allowed by the geopolitical context. The EU should pursue extensive trade agreements, reduce barriers to market entry, and further integrate the market for services.
- The EU should promote capital market integration and initiate the first steps towards establishing a capital union. This requires a '28th regime' with a new legal structure that can facilitate business formation and start-up financing. It should be noted that the 28th regime will face challenges, particularly in terms of insolvency and tax regulations. Combining these measures promises to improve innovation financing substantially and could enable small investors and retirees to benefit from future growth. The synergy of these measures would provide the necessary investment volumes to facilitate the EU's transformation.
- The EU should consider more flexible employment protection laws, especially appropriate dismissal protection and probationary period regulations for highly skilled workers. A different 'hire and fire' culture is needed, especially in light of the demographic changes in the region, which necessitate the creation of more flexible labour markets. This will allow for the productive deployment of the workforce.
- The EU should advance the integration of the internal labour market and establish agreements with other countries to recruit skilled workers. Recognition of qualifications is essential. High-growth countries such as India produce skilled professionals who are urgently needed and should be offered new prospects in the EU.

On pensions and wealth creation

- The underdevelopment of pension funding has proved to be a sword of Damocles for the EU, especially with the decline in the working population following demographic change.
- On average, the annual shortfall associated with the underdevelopment of retirement savings in the EU, in comparison to the OECD average, represents 2.4% of the GDP in the EU-27, or more than €350 billion/year.
- Price competitiveness is closely linked to the design of the pension system. When the pension system is at least partially based on market capitalisation, retired citizens are financed by pension contributions, supplemented by returns on savings, such as dividends and capital gains. When, in contrast, pensions are financed on a pay-as-you-go (PAYG) basis – the system in operation in the EU – there is no wealth creation inherent to savings, and all benefits are paid out of taxation. This either increases the cost of labour by mandating social contributions or adds to all the other forms of taxation.
- In the absence of demographic dynamism, capitalisation appears to be the most economical way of financing pensions. It benefits from the performance of financial markets and finances higher pensions than PAYG. Part of the pension is self-financed by investment gains – dividends, capital gains, etc. – which reduces pension contributions for the same level of pensions.
- The EU remains heavily dependent on PAYG schemes to finance pensions. Retirement savings generate wealth of less than 1% of the GDP per year in more than half of the EU member states, particularly in France, Germany, Greece, Italy, Lithuania, Poland, Slovakia, and Spain. In contrast, in the Netherlands and Denmark, retirement savings generate annual wealth equivalent to 10 percentage points of the GDP per year.
- Pensions have been the main source of growth in public spending over the last twenty years in the EU. In a few years, only a few countries with significantly capitalised pension systems will be able to self-finance a significant proportion of pensions without having to resort to taxes or mandatory contributions, as only they would have access to the gains generated by retirement savings.
- Capitalisation not only preserves competitiveness and purchasing power but also public finances by making it possible to save on taxes and reallocate them to finance other collective expenditures. It is no

coincidence that the most advanced European countries in terms of pension funding – Iceland, Denmark, the Netherlands, Switzerland, etc. – also have the best-balanced public finances.

 Generalising the use of pension funds should be a priority for the EU, in conjunction with the EU plan on establishing a capital markets union and financial markets. This is key for maintaining competitiveness and also for making up for lost time in financing innovation, as the underdevelopment of retirement savings is detrimental to the financing of the economy and innovation, as the recent competitiveness report published under the leadership of Draghi (Draghi et al. 2024) underscores.

1.1. Competitiveness, economic freedom, and growth

The EU's share of the world economy shrunk from 25.8% in 2004 to 17.6% in 2024 (**Figure 1**). In nominal terms, the EU economy is falling behind the US and is being overtaken by China. The EU's share in the global economy has declined due to a prolonged period of slow economic growth and demographic challenges in Europe. While the US and Chinese populations have been steadily increasing over the last two decades, the EU's population has stagnated. In recent years, the US has surpassed the total population of the old member states, that is, the EU-15, excluding the UK¹.

Much of this decline is due to the comparatively lower growth of the old member states, which has reduced their share in the world GDP from 24.1% to 15.4% over twenty years (**Figure 1**). This trend has been observed in every major European economy². At the same time, the new member states (NMS³) – those that joined the EU after 2004 – are growing faster. Their contribution to the global economy has increased from 1.7% in 2004 to 2.2% in 2024 (**Figure 1**). The outperformance of the NMS is also evident in the convergence data: almost all these countries are steadily converging with the major EU economies. NMS are currently in the 75-90% range of the EU average vis-à-vis GDP per capita in purchasing parity standards (PPS).

¹ The EU-15, excluding the UK, includes the old member states: Belgium Denmark, Germany, Finland, France, Greece, Ireland, Italy, Luxembourg, Netherlands, Austria, Portugal, Spain, and Sweden.

² International Monetary Fund (2024) World Economic Outlook (October 2024) (https://www.imf.org/external/datamapper/NGDPD@WEO/OEMDC/ADVEC/ WEOWORLD/)

³ Includes 13 NMS from the fifth (2004), sixth (2007), and seventh (2013) enlargements: Czechia, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Slovakia, and Slovenia (2004), Bulgaria and Romania (2007), and Croatia (2013)



Figure 1. EU share of world GDP (%, 2004–24)

Source: IMF (2024).

*Includes 14 old member states from EU-15 (excluding the UK). **Includes 13 NMS from the fifth (2004), sixth (2007), and seventh (2013) enlargements.

Economic growth has remained weak in Europe over the past two decades (**Figure 2**). The EU-27 economy grew at an average rate lower than 1% per year between 2005–09 and 2010–14⁴. The 2015–19 period saw slightly higher growth, averaging 2.2%, after which came the pandemic. In 2020–24, growth averaged 1.1%, with forecasts suggesting that weak growth will persist until 2026⁵. Each of these phases was marked by the onset of various crises. In some years, growth in the EU reached 2-3%, but periods of economic downturn have ultimately led to weak average growth in the medium term.

⁴ Eurostat (2024) GDP at Market Prices (Chain Linked Volumes, Percentage Change on Previous Period) (<u>https://ec.europa.eu/eurostat/databrowser/view/nama_10_gdp_custom_9994154/default/table</u>)

⁵ Projections based on European Commission (2024) European Economic Forecast – Autumn 2024



Figure 2. GDP growth in the EU (%, quarterly data, 2004–24)

Source: Eurostat (2024) GDP at Market Prices (Chain Linked Volumes, PercentageChange on Previous Period) https://ec.europa.eu/eurostat/ databrowser/view/namq_10_gdp__custom_14815572/default/table

Growth in the Central and Eastern European (CEE) region has been markedly higher, with the GDP 2005-based index reaching 140–200 in virtually all CEE countries (**Figure 3**); the greatest progress was recorded in Poland, Romania, Slovakia, Lithuania, and Bulgaria⁶. New member states from the CEE region recorded higher growth, as they benefited from access to the wide EU market and real labour productivity growth. At the opposite pole are the southern countries, with Greece reporting a real decline, Italy stagnating, and Portugal, Spain, and France at around 115–120 on the index. Germany is at 125, indicating that even the largest economy in the EU has recorded weak growth in the last two decades.

⁶ Eurostat (2024) GDP at Market Prices (Chain linked volumes, Index 2005=100) (https://ec.europa.eu/eurostat/databrowser/view/nama_10_gdp__custom_14815592/ default/table)



Figure 3. GDP at market prices in various EU countries (Index 2005 = 100)

Source: Eurostat (2024) GDP at Market Prices (Chain linked volumes, Index 2005=100) <u>https://ec.europa.eu/eurostat/databrowser/view/nama_10_gdp_custom_14815592/default/table</u>

1.1.1. Trade and competitiveness

The European economy continues to play a strong role in global trade, still far ahead of the US but gradually giving way to China in the last decade (**Figure 4**). The EU's share in world trade has reduced from 18.9% in 2004 to 14.8% in 2024⁷. In comparison, the US' exports represent 10.8% of global trade, while China handles 18,1% of global exports. By far, the most significant trade group for exports from the EU to countries outside the bloc is 'machinery and vehicles', with exports reaching \in 1,028 billion in 2023⁸. In addition, extra-EU exports of 'other manufactured goods' were

⁷ Eurostat (2024) Share of national exports in world exports (all products) (https://ec.europa.eu/eurostat/databrowser/view/ext_lt_introeu27_2020___ custom_14815714/default/table)

⁸ Eurostat (2024) Share of national exports in world exports (machinery and transport equipment) (https://ec.europa.eu/eurostat/databrowser/view/ext_lt_introeu27_2020_ custom_14815704/default/table)

valued at €553 billion in 2023⁹. These two categories represent 62% of total extra-EU exports. Despite China's significant exports across various manufactured goods, machinery, and transport equipment, the EU's economy has remained competitive and holds a positive trade balance across these sectors.



Figure 4. Share in world exports (%, 2004-23)

Source: Eurostat (2024) Share of national exports in world exports (All products) https://ec.europa.eu/eurostat/databrowser/view/ext_lt_introeu27_2020___ custom_14815714/default/table

In addition to the EU's performance in global trade, the enlargement of the EU and the functioning of the Single Market (SM) have given a strong boost to intra-EU trade (**Figure 5**). While extra-EU exports reached €2,558 billion, intra-EU exports were valued at €4,113 billion in 2023¹⁰, comprising

⁹ Eurostat (2024) Share of national exports in world exports (other manufactured goods) (https://ec.europa.eu/eurostat/databrowser/view/ext_lt_introeu27_2020_ custom_14815708/default/table)

¹⁰ Eurostat (2024) Intra-EU trade (Exports in million of ECU/EURO – all products) (https://ec.europa.eu/eurostat/databrowser/view/ext_lt_intratrd_custom_14815758/ default/table)

various manufactured goods, machinery, and transport equipment amounting to €2,545 billion (62% of intra-EU exports). The share of the NMS in intra-EU trade increased from 10% in 2003 to 20,2% in 2023 (**Figure 5**), highlighting the industrial transformation that has occurred in the CEE region since NMS joined the SM. The share of the NMS in extra-EU exports has also doubled in the past twenty years, from 4,9% in 2023 to 11,4% in 2023. The higher share of NMS in intra-EU trade compared with their share in extra-EU trade demonstrates the integration of CEE economies into EU supply chains over the past two decades, with 60–80% of most CEE countries' exports going to countries within the EU¹¹.



Figure 5. Intra and Extra-EU trade (billion EUR and % of NMS*)

Source: Eurostat (2024) Intra and Extra-EU trade (Exports in million of ECU/EURO – all products) <u>https://ec.europa.eu/eurostat/databrowser/view/ext_lt_intratrd_custom_14815758/default/table</u>

*Includes 13 NMS from the fifth (2004), sixth (2007), and seventh (2013) enlargements.

¹¹ Eurostat (2024) Share of exports by partner in total exports (all products) (https://ec.europa.eu/eurostat/databrowser/view/ext_lt_intratrd_custom_14815833/ default/table)

1.1.2. Economic freedom in the EU

The dynamic of global economic freedom over the last thirty years explains why the EU is losing its position in the global market, especially versus the US (**Figure 6**). While the major European economies are among the freest in the world, they are still less free when compared to the US¹². None of the five largest economies in the EU¹³ has been in top 10 freest economies in the world, while the US is still among the top 5. The expansion of economic freedom in Europe in recent decades is primarily due to the increase in economic freedom in the countries of the CEE region: the new member states are catching up with the major EU economies¹⁴.

The largest economies in the EU are lagging in economic freedom mainly due to government intervention in the economy and regulations (**Figure 7**). Europe performs well in terms of the rule of law, free trade, and stability of money – despite the recent episode of high inflation. Free trade is a major achievement of the EU, especially in regard to intra-EU trade, with the SM playing a major role in the free movement of goods, services, capital, and people. It is precisely this feature of the SM that has allowed the new member states to catch up with the biggest economies in the EU in terms of economic freedom in the first years of joining the EU. Here, however, it must be recognised that trade within the US is considerably freer than trade within the EU, as there are still numerous imperfections in the functioning of the SM.

¹² Fraser Institute (2024) Economic Freedom of the World: 2024 Annual Report (<u>https://www.fraserinstitute.org/sites/default/files/2024-10/economic-freedom-of-the-world-2024.pdf</u>)

¹³ These are Germany, France, Italy, Spain, and the Netherlands

¹⁴ Here we focus on Czechia, Poland, Hungary, Estonia, Latvia, Lithuania, Slovakia, and Slovenia from EU's 'fifth' enlargement in 2004 (Cyprus and Malta are not included) and Bulgaria and Romania from EU's 'sixth' enlargement in 2007.



Figure 6. Economic freedom* in the world (2024)

Source: IME calculations based on Economic Freedom of the World 2024, Fraser Institute.*On a scale of 0 to 10, 10 being the maximum value of economic freedom.

Figure 7. Economic freedom* by category in the EU's biggest economies** and the US (2024)



Source: IME calculations based on Economic Freedom of the World 2024, Fraser Institute.*On a scale of 0 to 10, 10 being the maximum value of economic freedom. **Germany (DE), France (FR), Italy (IT), Spain (ES), and the Netherlands (NL)

Europe's economic potential is constrained by the excessive size of the government – high taxes on labour and capital, distinctly higher government spending, and high levels of public debt, especially in the southern economies. Government redistribution is significantly higher within the EU than in the US. In the EU, government revenues have consistently accounted for 45–46% of the GDP for the past twenty years¹⁵, while in the US, total government revenues form 32-33% of the GDP¹⁶. This is a difference of over 10 percentage points, which implies a significantly larger role of the state and higher burden on individuals and businesses in the EU. CEE countries that have more prudent fiscal policies – with relatively low taxes on labour and capital and lower levels of redistribution – are racing ahead and increasing their share in the EU's economy and trade.

Regulations within the EU are also more likely to hinder economic freedom and competitiveness in the region in comparison to the US. The EU member states have stricter labour market regulations, including working hours regulations, hiring and firing regulations and high cost of dismissal. Companies within the EU also have less freedom to enter markets and compete in comparison to the US. In recent years, the regulatory burden in the EU has risen, which is also visible in services sector, as restrictiveness in both old and new member states is increasing. The distortion of the business environment, due to stricter business and labour regulations in the EU, undermines innovation and economic growth. This is reflected in the significantly lower private investment flows into high-tech sectors in the EU compared to the larger capital flows into similar industries and services in the US.

While trade in goods within the internal market is quite extensive and in line with the fundamental idea of the SM, the service sector remains a 'work in progress', as 'the cross-border provision of services is still largely underdeveloped' (Saulnier 2022). This is due to the numerous barriers – such as complex administrative procedures, high cost of entry and varying national rules, and lack of access to information regarding rules and requirements – obstructing the evolution of a proper services sector in the SM.

¹⁵ Eurostat (2024) Government revenue, expenditure and main aggregates (<u>Percentage</u> of gross domestic product) (https://ec.europa.eu/eurostat/databrowser/view/gov_10a_ main_custom_14819910/default/table)

¹⁶ International Monetary Fund (2024) Government revenue (% of GDP)(<u>https://www.imf.org/external/datamapper/rev@FPP/USA/FRA/JPN/GBR/SWE/ESP/ITA/ZAF/IND</u>)

Data on economic freedom, growth, and convergence show that the countries that have benefitted the most from the SM over the last twenty years are the new CEE member states. These economies benefit from the competitive advantages of lower costs for companies, a better environment for doing business, prudent fiscal policies, and a much lower public debt burden, which allows them to take advantage of the broad EU market. In this respect, the SM does not guarantee convergence, but it allows countries to leverage their competitive advantages, integrate more deeply with Europe's largest economies, and pursue policies that support economic growth. However, the recent episode of stagnation and even retreat of economic freedom in the EU, and continuous imperfections in the SM pose risks to competitiveness in not only the CEE region but also the EU.

1.1.3. The vital role of the Single Market

The SM is undoubtedly one of the EU's most significant achievements. Just recently, the SM celebrated its thirtieth birthday, while many of the CEE countries celebrated their twentieth accession anniversaries. In light of these events, Epicenter published two reports (2024a, 2024b) exploring the evolution of the SM, the benefits it provides, and the deficiencies that undermine the economic potential of the EU. In the last two decades, while the CEE countries have benefitted greatly from joining the wider EU market, a gap has emerged between the EU's political statements on the significance of the SM, the enforcement of its principles by member states, and the EU policies that can make the SM more open and competitive, thereby moving the EU economy forward.

The EU SM is a globally unique success story. There is no other economic union of independent countries with such a level of economic integration and removal of barriers to trade, investments, and free movement of people. Some of the main achievements and features of the SM are as follows:

- Intra-EU trade has almost doubled in the last two decades, with CEE countries doubling their share to 20% of intra-EU trade.
- The SM enabled the economic convergence of the CEE countries with the EU average. Integration into the SM allowed these countries to attract significant capital investments from western EU countries. More than 50% of the foreign direct investment (FDI) inflows in these countries originate in other EU member states.

- SM membership enables the free movement of labour. Workers from the eastern part of the EU move mainly to western bloc countries in search of higher wages and better living standards. The SM also facilitates cross-border employment, and diasporas contribute to their home countries through remittances.
- The SM has multiple economic advantages thanks to strong competition, which has led to higher effectiveness. EU member states' economies would be 5.9% to 20.5% smaller without the functioning of the SM (Veld 2019).
- The SM is a massive economic and legislative project. At the end of 2023, 1,001 directives and 6,492 regulations were in force to ensure the functioning of the SM¹⁷.

Unfortunately, these achievements do not mean that the people of the EU enjoy the full potential of the SM. The SM has stalled at a halfway point: the initial enthusiasm to integrate markets has since been replaced by SM fatigue (Epicenter 2024b). According to the European Commission's calculations, strengthening the SM would add €713 billion in value over a decade (European Commission 2020). This represents how much member states' economies are currently losing by impeding the free movement of people, goods, services, and capital through their regulations.

1.1.4. What are the main reasons for Single Market fatigue?

As Ramūnas Vilpišauskas (Epicenter 2024b) notes, 'the single market has become a victim of its own success. The EU has already deepened and widened the single market to a significant extent. It has become politically more difficult to remove discriminatory norms that touch upon long-established domestic policies or threaten particular interests'. There is a lack of courage and political support from member states. This is evident in the limited liberalisation of intra-EU services trade as well as in the presence of an underdeveloped capital market. At the same time, the EU has slowly switched its focus from dismantling trade barriers to designing comprehensive sectoral policies.

The philosophy of economic policy has changed from 'how to make trade happen' to 'what should trade look like so that everyone is protected'. The EU should take a step back and prioritise the development of the SM over harmonising social and tax policies. The areas with the greatest potential for improvement are the services sector, capital market, and labour market.

1.1.5. How can the Single Market be improved?

- Make the SM a priority again. The original goal of removing regulatory and administrative barriers to cross-border exchange should be made a core priority again. The EU should establish and advocate for ambitious goals for the SM. These goals must be accompanied by quantitative key performance indicators to enable implementation assessment. Any new EU legislation should be accompanied by an evaluation of its implications for the SM. Legislation must be periodically assessed and reviewed to avoid over-regulation.
- The SM should not end at the borders of the EU. Efforts should be made to dismantle tariff and non-tariff barriers to facilitate increased trade with non-EU countries. More trade agreements must be sought.
- Restrictiveness in services trade within the SM, which is measured by the Services Trade Restrictiveness Index (STRI), has increased in the last eight years (Epicenter 2024a). This indicates that there are still significant barriers and regulations limiting the extent of intra-EU trade in services which should be lifted.
- The EU capital markets lags behind the US. The EU should focus away from nationalism and towards mergers, acquisitions, and cooperation. The competition rules should be adjusted to the scale of the SM.
- State aid, mainly driven by green subsidies, has been on the rise (Epicenter 2024a). State aid distorts market relations, often leading to a selection of winners. State aid rules should return to their original setup: as defined by Article 107 of the Treaty on the Functioning of the EU, which specifies that aid should be dispensed only in cases of market failure.
- National authorisation and permitting schemes must be re-evaluated across the industrial and infrastructure ecosystems to ease entrepreneurship in the SM. Mutual recognition of regulations in designated sectors should be fostered. The EU's Better regulation toolbox (European Commission 2023) should be strengthened and enforced more effectively.
- Liberalise occupational regulations and the labour market. If an
 occupation remains unlicensed in a member state, without significant
 adverse effects, other member states should be directed to abolish
 their licensing requirements for that occupation. The digital Platform

Work Directive should be redesigned such that citizens of the EU can reap the benefits of the flexibility intrinsic to them. This will further ensure that the SM once again becomes a place where new digital platforms can evolve.

- Virtue signalling should be a prerogative of market actors. The burden imposed on firms by various environmental, social, and governance (ESG) requirements increases their costs, disproportionately affecting small and medium enterprises (SMEs) and undermining overall competitiveness.
- The EU should avoid adopting further redundant regulations that would limit the attractiveness of the SM as a place for innovation. This is especially essential for the digital sector.
- The Digital Markets Act and Al Act should be re-evaluated, and the Digital Services Act should be improved. The EU should abandon the model of static competition and market share planning and move towards the concepts of market dynamics and creating an environment fertile for innovation.

At the same time, **legislative efforts must be accompanied by better enforcement of SM principles in member states**. The number of infringement cases open at year-end has been increasing (Epicenter 2024a), leading to the creation of a backlog. For instance, streamlining the infringement procedure by removing the reasoned opinion phase would help. Moreover, scaling back the EU Pilot¹⁸ mechanism will help curb the rise in new and unresolved cases.

¹⁸ EU Pilot is a mechanism for informal dialogue between the Commission and the Member State concerned on issues relating to potential non-compliance with EU law. It can be used before launching a formal infringement procedure. The mechanism lacks punitive measures and solely precedes infringement procedures.

1.2. **Revitalising European innovation:** A call for bureaucracy reduction and market-compatible policy

As described in the Draghi (2024) and Letta (2024) reports, the EU currently lags behind the US and China in terms of growth and competitiveness. Innovation is the main driver of productivity growth. Fundamentally poor conditions for innovation – particularly, excessive regulation – are a primary reason for the EU's economic stagnancy. Stringent regulations stifle local innovation dynamics as well as productivity. Bureaucracy – one of the many location factors impacting every economic actor – hinders the rapid expansion and development of other crucial factors important for business decisions. Reducing bureaucracy to foster innovation should be a political priority for several reasons:

- Innovation catalyses change and enables the simultaneous transformations needed in the economy and society (Baumol 2004; McCloskey 2013). Decarbonisation, digitisation, demographic change, and pressures on democracy will be the drivers of the coming transformations.
- The ability to innovate, or 'innovativeness' of individuals, institutions and societies contributes to the resilience of the politico-economic system and prevents all kinds of shocks from escalating into severe crises (Brunnermeier 2022: 60).
- Innovation tends to broaden individual agency and individual freedom.
- Without innovation-driven growth, public spending, including social welfare systems, will become even more difficult to finance from

tax revenues alone. Demographic change, in particular, is altering the public revenue and cost structure such that some traditional financing methods no longer work as efficiently as they once did, for instance, pensions. There is a need for synergy between marketbased wealth generation and member states' social systems, that is, for the harmonious interplay of individual risk-taking and collective insurance (Schöb 2020). When individual risk-taking is no longer rewarded, financing the social security systems of member states will increasingly rely on debt and distribution conflicts.

- Stagnant individual prosperity can lead to a loss of confidence in the politico-economic system and foster the rise of radicalism (Adam 2024).
- Without an innovation-friendly climate, the EU's competitiveness is at risk in the long term. This is especially concerning given the tendency of autocracies to leverage economic power for political purposes, which poses a threat to European democracies (Wolf 2023).

In light of these arguments, EU legislators must recognise that their innovation-constricting policies put far more at risk than just a few percentage points of economic growth. Reducing bureaucracy to foster innovation should be a top priority.

1.2.1. Which principles should the innovation policy follow?

Despite the largely accurate analysis in the Draghi report (2024), EU legislators must be careful not to apply Chinese or US standards to the European innovation system. Institutional recommendations should be tailored to the EU's unique institutional characteristics – which also vary depending on the country – rather than perceived technological gaps.

Diagnosing technological gaps is difficult given the lack of a suitable reference framework. It would require a theoretically sound allocationbased identification of these gaps and hypotheses about where the EU member states' strengths and weaknesses. Locating technological gaps and market opportunities is the role of businesses, and there is no reason to believe that individual technocrats could perform this task better than European companies. When European companies relocate, e.g. to US, it is a clear sign that general framework conditions must be improved.

1.2.1.1. Technology openness

The EU should reject a technocratic approach to innovation. In the past, this approach quickly found its way into the EU's legislative acts, as demonstrated by the Green Deal which prescribes in considerable detail how the targets are to be achieved. Such an approach is at play whenever certain purpose–means combinations are deemed solutions to collective problems. However, the value of these combinations is not determined in meeting rooms but by consumers who reward innovations in the marketplace. This is the only route to a more innovative and productive economy, where the right framework conditions can help realise the better results in achieving EU objectives. In this sense, innovation only truly occurs when a novel purpose–means combination – that is, invention – is increasingly disseminated through application – that is, diffusion. It matters greatly whether diffusion is driven by prohibitions and orders from politicians or by free consumer choice in markets.

Unlike consumer choice driven diffusion, bureaucratic decisions suffer from a lack of and delayed feedback from their regulations with negative consequences for their efficiency. In the case of a collective problem, such as human-induced climate change, policymakers' role is to internalise this externality through an appropriate market design and consistent pricing rather than by prescribing or prohibiting specific technologies or solutions. Similarly, the EU should adhere to the principle of technology openness and use market-compatible policy instruments where possible. **The EU should avoid steering private investments through prohibitions and restrictions on specific technologies. The Green Deal's Taxonomy Regulation must be revised to support technology openness and innovation, as should other legislation that violates these principles.**

1.2.1.2. Using price signals and market-compatible policy instruments

Market-compatible policy instruments do not disrupt the functioning of price mechanisms. **Price signals are critical for innovation, as they shape investment behaviour. Prices, unlike prohibitions, are fundamental drivers of innovation.** They also transparently reveal the costs of regulation, allow consumers and producers to adjust their behaviours efficiently, and generate fiscal revenue.

Price stability is essential for a functioning price system, and the European Central Bank (ECB) should remain focused on this crucial task. Therefore, the ECB should not incorporate climate change into its monetary policy.

The justification that climate change affects price stability is a highly contentious assertion (ECB 2022). Extreme weather events, such as droughts or floods, which occur more frequently now due to climate change, primarily affect relative prices. However, it is not the mandate of the central bank to influence relative prices. Furthermore, the ECB's argument opens the door to extending the mandate to preventing other events that could indeed threaten price stability, such as war.

The recent developments in ECB mandate undermine the credibility and core function of the ECB, as it risks becoming either an adjunct of the European Commission or making politically charged decisions that are not democratically legitimised, extending far beyond its original mandate of price stability.

1.2.2. Which innovation policy for Europe?

While there is currently a broad consensus that Europe faces an innovation problem, the true debate centres on which policies can generate the innovation dynamics necessary for continued growth. While the Draghi report (2024) envisions a coordinated industrial policy agenda with substantial EU-level investments as the only alternative to numerous uncoordinated national industrial policies, a third proposal is put forward here: a so-called 'bottom-up innovation policy'.

The bottom-up innovation policy will aim to improve the general regulatory environment for innovation and stimulate private investment. Private investments are crucial for meeting the EU's enormous investment needs. **Thus, the EU should shift focus to the regulatory environment and reduce bureaucracy to ignite a bottom-up innovation dynamic**. Such a policy would offer benefits greater than the industry- and technologyspecific economic support typically provided by industrial policies and the mission-oriented 'entrepreneurial state': it can launch an EU-wide 'freemarket innovation machine' (Baumol 2004).

In contrast, industrial policies lead to stagnation by preserving outdated structures and distorting markets and price signals. Industrial policies and visions of the 'entrepreneurial state' (Mazzucato 2014, 2016, 2017, 2018) exemplify top-down dirigiste tendencies that cannot succeed in the current European environment. They represent 'more of the same' and, as such, are part of the problem as they will further bureaucratise innovation support. This can be attributed to the fact that such politically expedient attempts

to find solutions pursue local optima within the bureaucratic rigidity of the status quo. The result is more bureaucracy, contradictions, redundancies, and unintentional layering of policies. Simultaneous regulatory 'braking' and 'accelerating' stifle potential innovation dynamics.

Critics of approaches in which the state plays an active economic role in fostering innovation highlight failures, inefficiencies, and distorted incentives (Grafström 2022; Larsson 2022; Sandström and Alm 2022; Karlson et al. 2021). Larsson explains:

The state entrepreneur is not subject to real risk, often faces no market, and cannot be properly evaluated. It pays no price for being wrong and it struggles in assigning responsibility. Missions are motivated by a false dichotomy: that there is a difference in principle between fixing and creating markets. This premise is splitting hairs at best. Instead, what sets missions apart, other than sheer ambition, is a shift from bottom-up to top-down approaches to knowledge creation. (Larsson 2022: 77)

Thus, the problem lies not only in the EU's failure to set the right objectives (directionality) and evaluation criteria. The efficiency of state-led innovation is questionable as well, even for large-scale projects such as Mazzucato's preferred example of the moon landing (Kantor and Whalley 2023; Gross and Kolev 2024).

1.2.3. Areas in need of reform

The EU should focus on a bottom-up innovation policy, which will improve framework conditions for all actors and reduce bureaucracy. Despite the ambitious goals of the Lisbon Strategy in 2000¹⁹ and efforts to make the EU the most advanced economic area in the world, no corresponding improvement in labour productivity has been observed in the region. On the contrary, it has fallen in comparison to the US since then (EFTA 2006).

In light of the significant bureaucratic burden, and the EU's overall economic policy direction, European innovation policy in the narrower sense – for example, the Horizon Europe programme – remains negligible. The Horizon

¹⁹ The **Lisbon Strategy**, launched in 2000, aimed to transform the European Union into "the most competitive and dynamic knowledge-based economy in the world" by 2010 (European Parliament 2000).

Europe programme and the work of the European Innovation Council (EIC) should continue with slight adjustments, while regulatory efforts should focus on reducing bureaucracy and aligning with overall economic policy. In the current scenario, simply spending more public funds on a narrowly defined innovation policy will not suffice. We believe that an economic policy focused on the framework conditions for innovation would be the most effective policy for the EU.

1.2.3.1. Research and development

Beyond education, the university and research environment, especially in basic research, plays a crucial role in fostering applied innovation (Hotz-Hart and Rohner 2014: 204–22; Yin et al. 2022). The rate of innovation of the European university and research sector, and the integration of multinational companies into the international research landscape, are becoming increasingly important in the face of globalised science and research. Innovation is increasingly becoming a team effort – it does not emerge only from companies any more (Wuchty et al. 2007). As innovative products and processes become more complex, a broader range of skills and a higher level of general education are required (Leiponen 2005; Anger and Plünnecke 2022), especially in the STEM fields (Haag et al. 2023).

A key driver of productivity is knowledge-driven technological innovation, for which research and development (R&D) is crucial. The goal of the Lisbon Strategy – of allocating 3% of the GDP to R&D – has not yet been achieved. The EU diverts approximately 2% of its GDP to this end, lagging behind other leading industrial nations like US (3,46%), South Korea (4,93%), Japan (3,3%) (World bank 2024). While public R&D spending (around 0.7% of the GDP) and tax incentives for R&D (approximately 0.11% of the GDP) are comparable to levels in the US, there is a stark difference in terms of private investments. The level and composition of private R&D expenditures differ significantly between the EU and the US (Figure 8). In the US, private R&D spending amounts to 2.3% of the GDP, whereas in the EU, it is only 1.2% of the GDP (Fuest et al. 2024: 7). The scale of the public expenditure on R&D does not appear to be the central issue, nor, to an even lesser extent, the EU's efforts under the Horizon Europe project.



Figure 8. Comparison of R&D spending in the EU and the US (% of GDP, 2020)

Nevertheless, it is advisable to review the institutional framework of Horizon Europe, and particularly that of the EIC, as Fuest et al. (2024) recommend:

- Leading scientists must be given a more central role on the EIC board and in the selection of projects.
- Decision-making powers must be shifted from the European Commission to a larger number of independent project managers.
- Resources must be diverted away from underperforming programmes in the EU innovation ecosystem and to programmes that aim to conduct breakthrough research, in line with the existing Multiannual Financial Framework (Fuest et al. 2024).

Regarding Horizon Europe and future regulatory initiatives, the EU must prioritise technology openness and academic freedom. Since basic research faces an uncertain future, investment in this domain has declined. Public financing and support for basic research must therefore remain a priority for the EU.

Source: Fuest et al. (2024).

Nevertheless, countless innovation support measures cannot make a significant impact if bureaucracy and poor framework conditions constrain innovation dynamics. Without these improvements, private investments cannot be mobilised, founders will leave, and companies will scale their operations abroad. Private investment and successful business creation are essential to the EU's transformation and competitiveness.

Improving the framework conditions for innovation should focus on the drivers of innovation. These are the specific conditions that allow people to be innovative and take risks. The EU should focus on the following innovation drivers to activate the necessary synergy effects.

1.2.3.2. Competition

Competition is essential for innovation. Competition and the emergence of new market players drive the innovativeness (Aghion et al. 2005) and productivity growth (Aghion et al. 2009) of established companies, especially those that are at the technological frontier or compete directly with their rivals – a phenomenon known as the escape competition effect. This principle applies less to companies that are further behind the technological frontier, as additional competition may cause them to fall further behind, which is called the Schumpeter effect.

The EU should leverage the innovation-driving effect of competition while strengthening basic research, for example, through the Horizon Europe programme. This will allow new entrants to produce cuttingedge technologies, ramping up competition at the technological frontier. Competition should be as free as possible within and beyond the SM, to the extent allowed by geopolitical circumstances. The EU should pursue extensive trade agreements, reduce barriers to market entry, and enable greater integration of the service sector across the SM.

EU actors are currently unable to compete with US investments in hightech R&D. However, it is debatable whether the EU should even attempt to do so, as this would be cost intensive. What is crucial for productivity is the rapid adoption of new inventions, that is, their integration into the value chains of businesses and administrations. Competition plays a key role in this process, as it can help identify prices that are acceptable to consumers. While invention may be a necessary condition for innovation, it is not a sufficient one. In this regard, the EU policy should facilitate the diffusion of new technologies rather than complicating it further through stricter regulation.

1.2.3.3. Financing innovation

Each country's financing system varies and thereby creates different incentive structures for innovation (Hall and Soskice 2001). Traditional, conservative bank financing is limited when it comes to financing innovation, which often leads to the underfunding of innovative projects that would have otherwise had market potential (Zhang, Sheng and Guo 2019). For founders, risk capital is often the only accessible source of funding. The extent to which such financing is available from the state, (hedge) funds, venture capital and private equity firms, or individuals (business angels) is critical in determining whether potentially innovative ventures targeting more radical innovations will be pursued (Morck and Yeung 2000). Further, the EU also needs to strengthen its crisis resilience, as innovation financing problems worsen during crises, when investors shift to safer assets (Giebel and Kraft 2019).

The combined market capitalisation of the listed companies on the two largest stock exchanges in the US was approximately \$59 trillion as of September 2024 (NYSE with \$30.15 trillion and NASDAQ with \$28.9 trillion). Meanwhile, the two largest stock exchanges in the EU are Euronext – with a \$5.66 trillion market cap – and Deutsche Börse AG – with a \$1.91 trillion market cap (Statista 2024). Euronext, Deutsche Börse AG, Nasdaq Nordic, and Baltics together – amounting to \$9.42 trillion – are six times smaller than the NYSE and NASDAQ combined. Additionally, the capital markets within the EU are overly fragmented.





Source: Statista (2024).

The EU should promote capital market integration and initiate the first steps towards establishing a capital union. This requires a '28th regime' with a new legal structure that can facilitate business formation and start-up financing alongside coordinated efforts among member states to transition from pay-as-you-go (PAYG) pension systems to funded pension systems modelled after the Dutch system. Stronger capital markets will not only bring more resources for new investment in the productive economy, but also present an opportunity for the appreciation of retirement savings. The 28th regime will face challenges, particularly in terms of insolvency and tax regulations.²⁰ Though transitioning to funded pensions involves high initial costs, it is ultimately indispensable because PAYG pension systems will lead to rising tax burdens following demographic change, thus creating disincentives for employees to work and resulting in high labour costs for companies (see Section 1.4). Combining these measures should substantially improve innovation financing and could enable small investors and retirees to benefit from future growth. The synergy of these measures would provide the necessary investment volumes for Europe's transformation.

²⁰ ECIPE (2024) 'ECIPE Webinar: Competitive Harmonisation and the 28th Regime', YouTube, 30 October 2024 (https://www.youtube.com/watch?app=desktop&v=qXkcMNRkme0).
It is, however, crucial to simultaneously improve the profitability of European companies to mobilise capital and ensure it is invested within the EU. Currently, European companies are not particularly attractive. For instance, the average profit margin of European companies is 5.5% lower than that of their US counterparts and approximately 4% lower when excluding the software industry (Fuest et al. 2024: 13). Assuming this disparity cannot solely be attributed to better management practices in US companies, it must be due to the economic and regulatory framework conditions. In addition to access to capital or the share of R&D expenditure, there are other factors relevant to the profitability of firms, which we describe below.

1.2.3.4. Employment protection laws

An important cost factor that is higher in the EU than in the US is the restructuring of companies, partly due to employment protection laws. This particularly affects companies developing new innovative business models or technologies, as they require significant flexibility. It would, therefore, be sensible to consider more appropriate dismissal protection and probationary period regulations for highly skilled workers. A different 'hire and fire' culture is needed, more flexible labour markets to deploy the workforce where they are most productive.

Various scholars had commented on the relationship between innovation and labour marker regulations. 'Employment Protection Laws (EPL) [...] are a first order determinant of the innovation taking place at the technology frontier (we will often call it "radical innovation" or "disruptive innovation") and can explain a major part of the gap between the US and Europe in tech, which has been at the center of most disruptive innovations over the last 4 decades'. (Coatanlem and Coste 2024: 4)

1.2.3.5. Demographic change and skilled workforce

The impacts of Europe's ageing population are already being felt in numerous areas. Demographic change is partially responsible for the skilled labour shortage, which, unsurprisingly, affects innovation (Horbach and Rammer 2020). Further, innovative companies suffer more from skilled labour shortages than non-innovative companies. The shelving or downsizing of innovative projects can often be traced to the lack of skilled workers. It has been observed that vocational qualifications have greater significance than academic skills (Horbach and Rammer 2020:). Vocational

training also plays a crucial role in the diffusion of technologies and technological knowledge, reduces error and rework rates, places focus toward direct vs. indirect work, and improves capacity utilisation (Toner 2010). It has been noted that migrants often exhibit a higher entrepreneurial spirit (Azoulay et al. 2022), and diverse teams enhance the innovativeness of companies and research institutions (Johansson 2018).

The EU should further integrate the internal labour market and establish agreements with other countries to recruit skilled workers. Recognition of professional qualifications is essential. High-growth countries such as India produce many skilled professionals who are urgently needed and could be offered new prospects in the EU.

1.2.3.6. Taxation

Although taxation, like pensions, does not fall within the EU's competencies, the European Commission needs to address the impact of excessive taxes and the increasing tax burden of the PAYG pension system. By setting taxes, member state governments influence the innovative activities of companies: higher taxes can hinder innovation, as they reduce expected returns significantly (Mukherjee et al. 2017; Atanassov and Liu 2020). This is even more relevant if investment opportunities outside the EU are fiscally more advantageous. The average tax wedge, mainly driven by high costs of financing the PAYG was the highest in Belgium (52.7%), Germany (47.9%), Austria (47.2%), France (46.8%) and Italy (45.1%), compared to United states with (29,9%) or Korea (24.6%) (OECD 2024).

1.2.3.7. Bureaucracy

A fundamental problem in the EU is the bureaucratic blockade of bottomup market innovations. While the aforementioned framework can be implemented to improve conditions that facilitate innovation, reducing the overall bureaucratic burden should be a key priority. Bureaucracy hinders founders, entrepreneurs, and established innovators, restricts opportunities, and hampers innovation dynamics. EU legislation contributes significantly to the compliance burden on companies, citizens, and authorities. According to the Letta (2024) approximately 80% of legislation originates from decisions in Brussels. This legislation gives rise to all three phenomena that are the pillars of the criticism levelled against bureaucracy: more regulation, larger public administrations, and an increasing range of state responsibilities.

Therefore, both the scope and guality of EU regulations must undergo a fundamental review given its impact on innovation. The already implemented regulatory impact assessment and the standard cost model are insufficient for this. Here, regulation refers to the material standards - commands and prohibitions – as well as information and documentation requirements stemming from EU legal acts. Material standards that impact future technologies, such as those in the AI Act, make innovation challenging and pose considerable legal uncertainties for entrepreneurs. Even specialised lawyers sometimes fail to understand the interaction of different regulations, such as the interaction between the General Data Protection Regulation and the AI Act. Information and documentation requirements drive up costs. For example, the EU directive on Corporate Sustainability Reporting (Corporate Sustainability Reporting Directive or CSRD) significantly increased the compliance burden for member states in 2023. The German National Regulatory Control Council (Nationaler Normenkontrollrat or NKR) has estimated that the law implementing the CSRD accounted for 39% of the increase in bureaucracy costs within the reporting period (Goebel 2024).

While the compliance burden continues to rise in EU member states, it is important to note that the aggregate assessment of compliance costs – introduced with the EU's one-in-one-out rule²¹ in 2021 based on the standard cost model – does not reveal the true costs of regulation. The opportunity costs of foregone innovation due to blocked opportunities are likely to be significantly higher. Opportunities create further opportunities. Therefore, a paradigm shift in calculating bureaucracy costs is proposed.

Second, a vast majority of long-term bureaucracy costs are not captured by the standard cost model. For instance, there are unrecorded immediate costs, such as the costs associated with new employees to handle reporting requirements such as the CSRD. Furthermore, it does not consider the broader psychological costs stemming from bureaucracy, such as demotivation and fear. Economic policy uncertainty caused by constant new regulations impacts innovation. Ambiguous or ever-changing regulations, and the lack of a principled economic policy, undermine planning security, which deters investors and founders. Founders are highly sensitive to economic policy uncertainty. Bisset et al. show that

²¹ The **One-in-One-Out (OIOO)** rule in the European Union is a regulatory principle aimed at controlling the overall regulatory burden on businesses by ensuring that any new regulatory costs introduced are offset by the removal of existing regulations with equivalent costs.

relative economic policy uncertainty significantly influenced the migration of inventors from 12 European countries between 1997 and 2012 (Bisset et al. 2024). Above all, the accumulation and interaction of regulations greatly increase costs. The standard cost model treats regulations in isolation and thus fails to account for these compounded costs.

All these unrecorded cost categories, in addition to recorded compliance costs, carry opportunity costs –foregone innovation, weak economic growth, and lost prosperity (Dawson and Seater 2004). These complex costs calculations for the US show that, over time, the costs of regulation are substantial. Coffey et al. (2016) estimate that if the US economy had maintained the same level of regulations it had in 1980, the economy would have been 25% larger by 2012 – an amount exceeding Germany's GDP at that time (Coffey et al. 2016).

What is needed first and foremost is a moratorium on new regulations, a review of all existing regulations, and further institutionalisation of bureaucracy reduction. Reducing bureaucracy must be a political priority. To understand the costs of regulation – a critical first step toward better regulation – a framework beyond the standard cost model and currently established methods is necessary. Neither the member states nor the EU has a tool that can quantify regulatory costs by sector. The uncritical reliance on the standard cost model leads to a systematic underestimation of regulatory costs. The European Commission should urgently implement and institutionalise such a tool, drawing on models such as the RegData²² and QuantGov (QuantGov n.d.) in the US.

1.2.4. Policy recommendations to ignite a bottom-up innovation dynamic

- Reducing bureaucracy to foster innovation should be a political priority.
- Avoid steering private investments through prohibitions and discrimination against specific technologies, for example, through the EU taxonomy for sustainable activities. The Green Deal's Taxonomy Regulation must be revised to support technology openness and innovation, as should other legislation that violates these principles.

²² Mercatus Center (2015) 'Using RegData to Answer Questions About Regulation', YouTube, 2 May 2015 (<u>https://www.youtube.com/watch?v=ydEQH0VsoOU&t=1s</u>).

- Price signals and market-compatible policy instruments should be adopted. Prices, unlike prohibitions, are absolute drivers of innovation. They also reveal the costs of regulation, allow consumers and producers to adjust their behaviours efficiently, and generate fiscal revenue.
- **Price stability is essential** for a functioning price system, and the ECB's mandate should remain focused on this crucial task, forgoing the green transition.
- The institutional framework of Horizon Europe should be reviewed, particularly that of the EIC. With regard to Horizon Europe and future regulatory initiatives, the EU must prioritise technology openness and academic freedom. Public financing and support for basic research must be prioritised in the long term.
- The innovation-driving effect of competition should be leveraged in addition to boosting basic research – for example, through the Horizon Europe programme – so that new market entrants can quickly deploy cutting-edge technologies. Competition should be as free as possible within and beyond the SM to the degree allowed by geopolitical conditions. The EU should pursue extensive trade agreements, reduce barriers to market entry, and further integrate the market for services.
- The EU should promote capital market integration and initiate the first steps towards establishing a capital union. This requires a 28th regime, with a new legal structure that facilitates business formation and startup financing, alongside coordinated efforts among member states to transition from PAYG pension systems to funded pension systems. The 28th regime will face challenges, particularly in terms of insolvency and tax regulations. Though transitioning to funded pensions involves high initial costs, it is ultimately indispensable. Combining these three measures promises to substantially improve innovation financing, which would also enable small investors and retirees to benefit from future growth. The synergy of these measures would provide the necessary investment volumes for Europe's transformation.
- The EU should consider drafting more flexible employment protection laws, especially appropriate dismissal protection and probationary period regulations for highly skilled workers. A different hire and fire culture is needed in the region, especially in light of demographic changes, which require the development of more flexible labour markets so that the workforce can be deployed where it is most productive.

- The EU should advance the integration of the internal labour market and establish agreements with other countries to recruit skilled workers. Recognition of qualifications is essential. High-growth countries such as India produce many skilled professionals who are urgently needed and could be offered new prospects in the EU.
- The EU needs a moratorium on new regulations, a review of regulations, and further institutionalisation of bureaucracy reduction. To understand the costs of regulation a critical first step towards better regulation a framework beyond the standard cost model and currently applied methodology is necessary. At present, neither the member states nor the EU has a tool that reveals the true regulatory costs by sector. The uncritical reliance on the standard cost model has led to a systematic underestimation of regulatory costs. The European Commission should urgently implement and institutionalise a tool that transparently highlights how regulatory costs impact innovation and economic growth, drawing on models such as RegData and QuantGov, which are in use in the US.

1.3. Borrowing for growth: Can deficit and debt boost competitiveness?

The recent EU competitiveness report by Draghi et al. (2024) highlights, among others, the need for significant public and private investments amounting to €750–800 billion annually to foster EU competitiveness. However, this funding requirement raises a crucial concern about Europe's capacity to gather such vast resources. Draghi et al.'s (2024) report suggests that the EU could finance these investments through borrowing. but this approach overlooks fiscal challenges inherent to the EU. Historically, government-managed funds have prioritised political agendas over sound economic rationale (Shi and Svensson 2008; Klomp and De Haan 2013; Alt and Chrystal 1981). While some national governments in the EU have adhered to the principle of fiscal prudence and free market policies, others notably within the Mediterranean region – have demonstrated significant mismanagement in handling borrowed funds (Strobl et al. 2019). This mismanagement contributed to the sovereign debt crisis from 2009 to 2018 (Kalemli-Özcan et al. 2016), during which period Greece lost a quarter of its GDP.

Moreover, substantial funds allocated to Mediterranean countries in the 1980s and 1990s for economic and institutional alignment with northern EU countries often resulted in unproductive expenditures. In addition, the Mediterranean countries' fiscal history is characterised by persistent fiscal deficits, reflecting a long-standing reliance on borrowing. For the last two decades the EU has seen nothing but fiscal deficits, with two rather long periods of excessive deficits (**Figure 10**). Given this backdrop, the pressing need for investments to increase competitiveness across the EU should not overshadow the need for stricter fiscal regulations and stringent

monitoring of borrowed funds, which will help ensure that they are directed towards genuine economic advancement rather than serving political or electoral agendas.



Figure 10. General government fiscal deficit in the EU-27 (% of GDP, 2004–23)

Source: Eurostat (2024) General government deficit (Percentage of gross domestic product) https://ec.europa.eu/eurostat/databrowser/view/gov_10dd_edpt1___ custom_14264318/default/table

1.3.1. What is the role of fiscal deficits?

Deficits, while a cause for concern if they persist, are sometimes inevitable in case of unexpected economic shocks or during structural economic downturns. Thus, borrowing money for a short period can address immediate economic issues and potentially enhance competitiveness if funds are allocated to high-return economic activities. This strategy was deployed during the 1980s and 1990s, when the EU's convergence policy aimed at reducing regional disparities (Archontas and Saravakos 2023) by channelling substantial resources to peripheral countries (Bruegel 2023). However, the shift towards the 'third way' economic policies in the mid-1990s and 2000s has led to reduced competitiveness. Over the past three decades, the EU has, on average, witnessed a decline in competitiveness, reflected in rising labour costs and stagnant output. Increases in gross wages have outpaced gross value added growth in many instances, especially in the indebted countries in the Mediterranean region. Since 2010, real labour productivity has been dormant in Italy and France and decreased in Greece²³. Countries with strong growth in real labour productivity (40–60% growth since 2010) are mostly NMS from the CEE region, such as Romania, Poland, Bulgaria, and Lithuania (**Figure 11**). Most of these countries exhibit greater fiscal prudence, and their debt levels are within the 60% limit.

Figure 11. Real labour productivity per person in various EU countries (quarterly data, Index 2010=100)





Borrowed funds, especially in southern countries, have frequently been used to boost domestic consumption and increase labour costs rather than being directed towards profitable investments. This trend highlights the deep-rooted inefficiencies of the economies of this region, wherein they have failed to leverage financial resources for growth-enhancing

²³ Eurostat (2024) Real labour productivity per person (Index 2010=100, Seasonally and calendar adjusted data) (<u>https://ec.europa.eu/eurostat/databrowser/view/</u> <u>namq_10_lp_ulc_custom_14816066/default/table</u>)

purposes such as capital investment, innovation, or infrastructure upgrades and instead have used funds to cover current spending or fund wage increases. Such a policy expands economies without real funding gains, which leads to increased debt levels without a corresponding rise in economic output. This approach has left these economies structurally weakened and less competitive on the global stage.

While initial imbalances in labour markets, manifested by lower wage levels in some countries, may justify a rapid increase in compensation – as happened in southern European countries – the gross value added did not substantially rise during the same period. Spain, for example, exceeded the EU average gross value added growth before the global financial crisis but began to lag between 2007 and 2009. In contrast, Greece experienced significant fluctuations even before the crisis and only began to recover around 2019. Italy remained close to the EU average, with a declining trend starting in 2009.

These marginal increases in the gross value added during the pre-crisis period (1995–2009) suggest that despite the significant amount of structural funds that were allocated to these countries – such as the community support frameworks, the Dellor and Santer packages, and the common agricultural policy funds – they failed to transition to a more productive and competitive economic model. These initiatives were aimed at fostering cohesion and development; yet, the expected shift towards more robust economic performance did not materialise as anticipated.

1.3.2. Should we embrace fiscal discipline?

The efficiency of government management in allocating borrowed resources for economic growth is a complex issue that is influenced by both political and economic factors. It has been widely observed that governments may increase spending before elections to gain public support, often using borrowed funds. This practice, coupled with the significant fiscal and competitive disparities across EU countries, suggests that a one-size-fitsall approach to fiscal policy is impractical in the EU. Currently, the EU needs to implement more stringent and comprehensive fiscal regulations. Once these robust rules are established, member countries should work to align their fiscal policies accordingly. This coordinated approach will enable member states to create more effective strategies, tailored to their unique contexts, while maintaining a unified framework that can promote overall economic stability and growth. By enforcing stricter fiscal discipline and by ensuring that borrowed funds are invested in profitable and competitive sectors, the EU can mitigate the risks associated with electoral spending cycles and improve the economic performance of these investments. This strategy not only addresses short-term electoral incentives but also lays the groundwork for long-term economic resilience across the union. For economies seeking to recover from poor fiscal management or build and diversify their economic model, it is critical to shift focus from financing consumption to investing in sectors that yield long-term returns by raising productivity. This strategic shift can facilitate sustainable development, create more jobs in productive sectors, and achieve a healthier fiscal balance.

1.3.3. The new fiscal rules in the EU

Over the past two decades, there have been two periods of significant public debt increases within the EU (**Figure 12**). The first was after the 2008 global financial crisis and the subsequent European debt crisis, when debt in the EU rose from 65–70% of GDP (before 2008) to nearly 87% in 2013–14²⁴. Within the euro area, government debt reached over 90% of the GDP. A period of consolidation followed, with debt returning to around 77% of GDP by 2019. The pandemic brought another period of sharp increase in public debt, with public debt reaching close to 90% in the EU and 97% in the euro area in 2020. After the initial shock of the pandemic, by 2023, government debt in the EU had decreased to around 80% in the EU and 87% in the euro area.

²⁴ Eurostat (2024) General government consolidated gross debt (Percentage of gross domestic product) (<u>https://ec.europa.eu/eurostat/databrowser/view/gov_10dd_edpt1_custom_14816093/default/table</u>)



Figure 12. General government debt in the EU and debt reduction episodes (% of GDP)

Source: Eurostat (2024) General government consolidated gross debt (Percentage of gross domestic product) https://ec.europa.eu/eurostat/databrowser/view/gov_10dd_edpt1__custom_14816093/default/table

The rise in public debt within the EU results from increased government spending, mainly in times of crisis. The main driver of expenditure growth in the EU is the welfare state – a long-term increase in social spending – as well as an increase in direct governmental interventions in the economy and spending on economic affairs. While government spending in the EU has reached above 50% of the GDP in times of crisis, revenues tend to remain steady at 46–47% of the GDP²⁵. Government spending on social protection reached 22% of GDP in the EU during the pandemic (2020), which is above 40% of total government spending²⁶. In addition to the large welfare state, there has been a steady increase in spending on economic affairs in the EU since the pandemic. The combination of a large welfare state, an ageing population, a sharp increase in social spending in times of crisis, and a surge in public intervention in economic affairs in the aftermath of an economic downturn has contributed to an increase in public debt.

²⁵ Eurostat (2024) Government revenue, expenditure and main aggregates (Percentage of gross domestic product) (https://ec.europa.eu/eurostat/databrowser/ view/gov_10a_main_custom_14819910/default/table)

²⁶ Eurostat (2024) General government expenditure by function (Percentage of gross domestic product / percentage of total) (<u>https://ec.europa.eu/eurostat/databrowser/</u><u>view/gov_10a_exp__custom_14819970/default/table</u>)</u>

Fiscal rules in the EU seem to have succeeded in putting a public finances framework that is effective in 'good' times. Efforts have been made to decrease the deficit and public debt following the European debt crisis and the pandemic. These efforts have also been supported by economic growth and high inflation, especially in the post-pandemic period. However, during periods of economic crisis, there were sharp increases in the deficit and public debt, indicating that the EU's fiscal framework is failing to deliver the intended results during times of crisis.

Due to COVID-19, the EU suspended its budgetary rules for all member states between 2020 and 2023 by activating the **general escape clause**. As of 2024, the general escape clause is no longer in effect. The EU fiscal rules framework faces two major challenges. The first is **the very high level of public debt, mainly in the southern countries**, i.e., Greece, Italy, France, Spain, Portugal, and Belgium. These are the countries with debt above – or close to – 100% of their GDP, while all other members are below 80% of their GDP. The critical question here is how to formulate fiscal rules that work simultaneously for both a country with debt above 100% of the GDP and a country with debt below 30% of the GDP. The second challenge is how to ensure that the **fiscal rules are sustainable in the long term and do not allow episodes of economic crisis to lead to huge increases in government spending and, consequently, public debt**. In the case of the EU, fiscal consolidation in 'good' times has fallen short of the magnitude of the rise in debt in 'bad' times over the last two decades.

The new fiscal rules in the EU takes these challenges into account, but it is questionable whether it can counter them fully. EU countries are required to keep their budget deficits below 3% of the GDP – unless the deviation is small and temporary – while ensuring that the gross government debt remains below 60% of the GDP unless the debt is 'sufficiently diminishing and approaching the reference value at a satisfactory pace'.²⁷ As half of the EU member states have a public debt above the 60% target, one of the biggest challenges in enforcing these fiscal rules is how to ensure that the debt is 'sufficiently diminishing' and that the country will achieve the relevant medium-term target.

While the old framework involved medium-term objectives based on the overall structural balance, the new framework is based on net expenditure. In the new framework, a single operational indicator, based on the nationally

²⁷ Article 126 of the Treaty on the Functioning of the European Union.

financed net primary expenditure, serves as the basis for setting the fiscal path for each member state as well as performing annual fiscal surveillance. The reference trajectory aims to ensure that by the end of the adjustment period, assuming that there are no further budgetary measures, the projected general government debt ratio either is put, or remains, on a plausibly downward path or stays at prudent levels below 60% of the GDP over the medium term.

1.3.4. What can go wrong in the new framework?

Over the years, the deficit rule has proven to be more effective, as it forces member states to consolidate their budgets. In contrast, the debt rule has been far less effective, as demonstrated by the rise in debt within the EU in the last two decades. As of 2024, the EU has **relaunched the deficit-based excessive deficit procedure (EDP)** under the new rules of the revised economic governance framework. On 26 July 2024, following the European Commission's (EC) proposal, the Council of the EU adopted decisions establishing the existence of excessive deficits for **Belgium**, **France**, **Hungary**, **Italy**, **Malta**, **Poland**, **and Slovakia**.²⁸ It also established that the EDP for **Romania** should remain open, as the country had been under the EDP since 2020 and had not yet taken effective action to correct its deficit. **No debt-based EDPs have been opened in 2024**. This is because compliance with the revised economic governance framework, in force since 30 April 2024, cannot yet be properly assessed.

The revised economic governance framework is far more complex and, in a way, less transparent, which leads to considerable uncertainty about the potential effects of implementing the new rules. The practicalities of technical dialogue with individual countries are not entirely clear as of now, as the EC will have the power to decide ad hoc on various expenditure paths and corrective measures depending on the case. While the new rules are focused mainly on heavily indebted countries, there is still a significant risk of a sharp reversal in economic activity and a one-off negative adjustment of the long-term debt reduction trajectory. National fiscal authorities and national fiscal rules may lose their strengths, as the complexity of the newly introduced EU-level approach may undermine simpler and, in some cases, more ambitious rules at the national level.

28 Council of the EU (2024) Excessive deficit procedure (<u>https://www.consilium.europa.eu/en/policies/excessive-deficit-procedure/</u>) The revised economic governance framework seems to have been designed with a focus on countries with high government debt and, thus, is less restrictive for countries with low debt, mainly those in the CEE region. These member states can request technical information from the EC regarding their structural primary balance. As this is optional, the only binding rules in the framework are the simple deficit and debt rules. This means that NMS can accumulate debt by increasing spending and having a long-term deficit close to the 3% limit. This scenario may 'pose a serious risk to the sustainability of the country's public finances with potential negative effects on economic activity' and 'would limit the available fiscal space for meeting future structural budgetary risks, such as population ageing risks, rising defence and security expenses, etc.' (Bulgarian National Bank 2024: 9).

1.3.5. How to strengthen fiscal rules in the EU?

While we are aware that fiscal responsibility is difficult to enforce, the revised economic governance framework should be properly evaluated to determine whether (a) it is effective for countries with high levels of debt and (b) it creates more opportunities for debt accumulation in countries with debt levels below the 60% mark. Nevertheless, some systemic shortcomings allow us to discuss a possible future trajectory for the fiscal framework within the EU:

- New fiscal rules are complicated, difficult to understand for even professionals, and incomprehensible to the ordinary taxpayer. Even experts struggle with their answers to the question, 'What will the EC do if...?' More transparency and simplicity in applying the new rules are needed.
- A one-size-fits-all approach will be ineffective in the EU given its diversity. The EU fiscal framework should set clear and comprehensible binding goals applicable unanimously to all countries. Instead of micromanaging the process of enforcing fiscal rules, the EC should support the existence, capacity, and relevance of independent national fiscal councils. These councils have expertise on local level that the EC cannot furnish alone. Increasing the responsibilities of national-level fiscal councils would increase their ownership (and enforcement) of the fiscal rules, which will improve compliance.
- The revised economic governance framework should contain clear rules for identifying violations and fines to increase its transparency.

 A relatively short-term evaluation period, i.e., ten years, decreases the motivation of governments to adopt long-term reforms, especially in the case of the pension system. Adjusted fiscal rules should consider that some reforms deliver benefits in the form of lower public expenditures in a period longer than fifty years.

1.3.6. Tax competitiveness in the EU

In 2024, the average statutory corporate income tax rate in the EU was 21%.²⁹ This is a lower rate compared with the average state corporate tax in the US, which is 25.8%.³⁰ However, when we look at the countries with the highest share in the EU's GDP, the average tax rate of the six countries³¹ responsible for nearly 60% of the GDP is 26.55% (Eurostat 2024a).

The EU has long been known for its high taxation of corporate profits. It is only in the recent period of relatively intense global tax competition that several economies – in particular, smaller ones – have lowered tax rates significantly. One example is Scandinavia, where tax rates have fallen to an average of 21%. However, the larger EU economies have resisted this trend and continue to maintain a relatively high burden, which is accompanied by all the negative consequences associated with high corporate taxation. These include the gradual flight of capital to lower-burden countries, lower rates of technological innovation, and slower growth of new firms. In an attempt to mitigate these negative impacts, governments have been trying to attract private capital by providing state aid, which grew steadily between 2014 and 2019. However, no government has the magic tools to identify promising and competitive companies. On the contrary, state aid often goes to businesses that have managed to get on the list of politicians' favourite sectors. This situation is also at the root of the significant economic underperformance of the EU economy compared to its rivals.

From the perspective of the reputation of a 'high tax region', it is not surprising that the EU is one of the leaders in implementing the global minimum corporate tax rules developed at the OECD level. The EU's Council Directive 2022/2523 (hereinafter Directive) aims to establish a

^{29 &#}x27;Corporate Income Tax Rates in Europe, 2024', *Tax Foundation*, 16 January 2024 (<u>https://taxfoundation.org/data/all/eu/corporate-tax-rates-europe-2024/</u>).

^{30 &#}x27;How do US corporate income tax rates and revenues compare with other countries'?' *The Tax Policy Briefing Book*, 2023 (<u>https://taxpolicycenter.org/briefing-book/how-do-us-corporate-income-tax-rates-and-revenues-compare-other-countries</u>).

³¹ Germany, France, Italy, Spain, Netherlands, and Belgium.

global minimum corporate income tax (CIT) of 15% for multinational enterprise groups (MNEs) with more than €750 million in revenue. This legislation is a pivotal point in international taxation towards limiting crossborder competition. Instead of moving towards more efficient forms of taxation – such as value-added or environmental taxes – the EU will now prioritise CIT revenues to fund high government expenditures, ignoring the fact that four member states currently apply tax rates lower than 15%.³²

A critical examination reveals inherent flaws in the adopted minimum CIT model that may undermine the European economy, its competitiveness, and value creation. These concerns relate to the current revenue threshold, ambiguity over the use of preferential CIT regimes, and legal uncertainty surrounding a rushed transposition of the Directive by some member states and late implementation by others. The CIT is known to have serious adverse effects on economic growth and well-being, which makes its harmonisation undesirable (Epicenter 2024c).

Further, tax competition plays a vital role in maintaining the efficiency of state expenditure by incentivising governments to exercise fiscal discipline and prioritise essential spending. By incentivising governments to keep tax rates low and, thereby, attract investment and retain businesses, tax competition sustains sound fiscal policy, promotes efficient allocation of resources, and minimises government waste. Abolishing tax competition will necessitate other ways to attract investment. Instead of the tax race to the bottom, we might see an escalating race for subsidies dictated by political rather than market preferences, which will ultimately result in overproduction, overconsumption, and misallocation of resources.

1.3.7. Recommendations related to global minimum tax

As the EC has no direct power over member states' tax rates, its options are limited to creating a favourable environment for tax competition and making changes to the regime of global minimum level of taxation. For the former, the EC can be more rigorous in its assessment of the conditions for granting state aid that distorts competition. This will prevent the growth of subsidies and encourage governments to reduce tax rates. In the case of the CIT, the most effective step would be to repeal the Directive, but this is difficult to imagine in the current political context. We therefore put forth other recommendations³³ that can mitigate its negative effects at least partially.

• Indexing to inflation

The OECD member countries have agreed to apply a global minimum tax to MNEs with an annual turnover above \in 750 million and a branch in a given country, that has a turnover of at least \in 10 million and earned a profit of \in 1 million in 2021. This proposal originated from the Council of the EU's directive on a common consolidated corporate tax base (CCCTB) adopted in 2016. **Given that the threshold was first proposed eight years ago, accounting for inflation means that this threshold should be higher by at least €200 million, i.e., €950 million.**³⁴ **If not, the number of in-scope companies in the EU will continue to grow. On top of this one-off increase, automatic indexation should be built into the regime**. Indexation is particularly relevant for the CEE countries, where inflation reached double digits in 2022.

• Legal uncertainty

Rushed enforcement of the Directive by some member states and late implementation by others add to the legal uncertainty. The scale of the problem is even more evident in light of the Directive's provision that stipulates penalties for companies that 'do not comply with their obligations to file a top-up tax information return and pay their share of top-up tax' (Council of the European Union 2022). **Penalties for non-compliance, with the requirements of a backdated law, violate legislative principles and should not be applied**.

• Ex-post evaluation

Given that an ex-ante impact assessment of the Directive was not conducted, ex-post evaluation should be performed to ascertain any weaknesses in the current model. To ensure operational efficiency, a comprehensive simplification plan should be put in place as soon as possible so that existing inadequacies can be addressed.

³³ Recommendations were published in Epicenter (2024c).

³⁴ Calculations based on Eurostat (2004) Harmonised index of consumer prices (HICP) (https://ec.europa.eu/eurostat/databrowser/view/prc_hicp_midx/default/table)

1.4. Pension system reform and capitalisation

One of the characteristics of price competitiveness is that it allows business owners to pay employees well. This characteristic is closely linked to the design of the pension system. Depending on how it is financed, the pension system plays a somewhat important role in a market, which, in turn, either penalises or favours competitiveness. When the pension system is based on a high level of capitalisation, citizens who retire are financed by pension contributions, which are supplemented by the returns on savings, such as dividends and capital gains. In contrast, when pensions are financed only on a PAYG basis, savings do not result in wealth creation, and all benefits are paid out of taxation. This either increases the cost of labour by increasing social contributions or adds to other forms of taxation, such as income tax and VAT, put in place to finance the PAYG pensions. Some taxes are less harmful than others, but a consistent increase in tax rates to, for instance, cope with the falling birth rate and rising life expectancy is a major hindrance to wealth creation.

This aspect is often overlooked in European economic debates as is the indirect effect of pension capitalisation underdevelopment on innovation. In addition to handicapping competitiveness and purchasing power, the underdevelopment of funded pensions and the lack of retirement savings contribute to the undercapitalisation of the European economy, which can potentially contribute to the EU lagging in terms of innovation.

1.4.1. In an ageing world, pay-as-you-go pensions mean a loss of competitiveness

The underdevelopment of pension funding is a real sword of Damocles for the EU. Pensions have been the main source of growth in public spending over the last twenty years in the EU (**Figure 13**). In the next few years, thanks to the gains generated by retirement savings, only a few member states will remain capable of self-financing a significant proportion of pensions without having to resort to taxes or contributions. Other member states will have to increase taxes or mandatory contributions even further, which will create an inextricable economic and social situation. The tax burden is likely to increase significantly, either directly, by targeting individuals, or indirectly, by targeting businesses, which will eventually penalise wealth creation and household purchasing power.

For historical reasons, pension schemes in continental Europe have largely relied on PAYG techniques. Pensions are financed either by social contributions from working citizens or capitalisation, wherein contributions are invested to finance future pensions. Retirement savings – which were developed in Europe in the second half of the nineteenth century with the advent of profit-making and non-profit-making institutions, such as friendly societies, savings banks, and insurance companies – were deeply affected by the two extremely costly World Wars. Since then, assets invested for financing pensions have been squandered by inflation and, in some countries, have been partly confiscated by governments to meet their immediate financial needs.

Europe is far from being prepared for an ageing population. It remains heavily dependent on PAYG schemes to finance pensions. Only four countries have retirement savings levels in line with or higher than the OECD average (**Figure 14**). This is a direct consequence of the underdevelopment of retirement savings.



Figure 13. Pensions account for half of the increase in public spending in Europe (2022 versus 2001)

Source: Eurostat (2023a), calculations by Institute Économique Molinari





Source: OECD, calculations by Institute Économique Molinari

In many continental European countries, social protection systems were rebuilt in 1945 almost entirely on a PAYG basis. At a time of population and wage growth, this may have seemed a pragmatic choice. American economist Paul Samuelson shows that PAYG can offer a significant positive return when the population grows. In a 1958 article, he pointed out that the revenues of PAYG schemes naturally increase when the growth rate of wages is positive. This allows the state to redistribute a greater amount each year despite the absence of wealth creation linked to the absence of savings (Samuelson 1958).

The man who went on to win the 1970 Nobel Prize in Economics laid the foundations of the theory of equivalence between distribution and capitalisation. However, with the decline in the birth rate and the increase in life expectancy at retirement, the possibility of equivalence between PAYG and capitalisation has disappeared, and European pension systems have failed to adapt accordingly.

PAYG, which has become an under-competitive method of financing pensions (Kifman and Schindler 2001), is now an 'implicit tax' (Feldstein and Samwick 1992, p 5). With payments two to three times lower than that in the PAYG model, an individual investing his retirement funds in capital markets could build up a pension identical to the one he would receive as PAYG (Davanne and Pujol 1997). A large number of studies emphasise that the profitability of financial investments will be higher than the rate of growth in the long term. This is one of the reasons why French economist Thomas Piketty forecasted that inequality will increase in the twenty-first century (Piketty 2013). In his 2013 bestseller, he considers that the growth rate of the economy (g) will be around 1.5% and that of capital (r) will be 4.25% a year over the long term. Under these conditions, the non-generalisation of funded pensions becomes a source of inequality (Milanovic 2016).

In the absence of demographic dynamism, capitalisation appears to be the most economical way of financing pensions. It benefits from the performance of financial markets and finances higher pensions than PAYG. Part of the pension is self-financed by investment gains – dividends, capital gains, etc. – which reduces pension contributions for the same level of pension. This has already been seen in the US, where capitalisation has reached maturity. Retirement savings schemes paid out benefits representing an average of 7.9% of the GDP over 2012–21, while the pension contributions that funded them represented just 5.2% of the GDP. The US, therefore, redistributes 2.8% more GDP than it collects. Similar results have been achieved in Canada and the UK but with smaller differences due to differences in the maturity and/or operation of retirement savings schemes (**Figure 15**).

Figure 15. Inflows and outflows in mature retirement savings schemes (as a % of GDP over 2012–21)



Source: OECD (2022), calculations by Institute Économique Molinari

It should be added that capitalisation not only preserves competitiveness and purchasing power but also public finances by making it possible to reduce taxation and finance other collective expenditures. It is no coincidence that the most advanced European countries in terms of pension funding – Iceland, Denmark, the Netherlands, Switzerland, etc. – all have the best-balanced public finances.

1.4.2. The underdevelopment of retirement savings in the EU

The World Bank (World Bank 1994) made recommendations to finance pensions through three pillars: compulsory collective schemes operating on a PAYG basis; compulsory funded schemes, which may take a collective form; and voluntary individual-funded schemes. In practice, this mix is rarely achieved in the EU. With a few exceptions – Denmark, the Netherlands, and Sweden – funded schemes have otherwise underdeveloped in the EU. The countries that make significant use of funded pensions in Europe are often outside the EU, such as Iceland, Switzerland, and the UK.

In a recent study, the Institut économique Molinari estimated the cost associated with the underdevelopment of retirement savings in the EU by

comparing it with the average OECD retirement savings (Marques 2023). The annual shortfall represents an average of 2.4% of the GDP in the EU-27, i.e., more than €350 billion. The calculations were made for the period 2012–21, which includes both upward and downward periods. Over this period, the real return on retirement savings averaged 4.3% in the OECD, after accounting for inflation. Retirement savings represented an average of 29% of GDP in the EU – 55 GDP points behind the OECD average (84% of the capitalised GDP). This explains the annual shortfall of 2.4 GDP points (4.3% x 55%) or €350 billion (Marques 2023). This shortfall represents, above all, the retirement capital that should be accumulating, year after year, for future European retirees if they benefited from retirement savings on the same scale as in the rest of the advanced economies.

A country-by-country analysis, taking into account the capital invested for retirement and its annual return, shows the formidable wealth-creating power of retirement savings as well as its uneven distribution (**Figure 16**). In two EU countries – the Netherlands and Denmark – retirement savings generate an annual wealth creation equivalent to 10 points of GDP per year (Marques 2023). The wealth generated by the accumulation of dividends and capital gains increases the capital held by retirement savings schemes on behalf of working citizens. In contrast, retirement savings generate wealth creation of less than one point of GDP per year in more than half of EU countries, particularly in France, Germany, Greece, Italy, Lithuania, Poland, Slovakia, and Spain.

Figure 16. Wealth creation linked to retirement savings (% of GDP, average 2012–21, excluding inflation)



Source: OECD (2022), calculations by Institute Économique Molinari

1.4.3. The EU should push for the generalisation of pension funds

The EU adopts a wait-and-see approach to ageing. It recognises the challenge posed by the underdevelopment of retirement savings and has made general recommendations aimed at increasing the proportion of funded pensions (Commission of the European Communities 2001). However, it has not been proactive and thus underestimated the challenge of reengineering social protection systems in an ageing world. The EU's budgetary and accounting approach, far from raising awareness, has encouraged complacency. The Maastricht debt criterion, enforced to secure fiscal sustainability, calculated as the ratio of gross debt to the GDP, does not include the debts implicit in the pension promises made to employees in both the private and public sectors (Figure 17). While it is common practice not to account for debts linked to the PAYG systems open to all working citizens because they are revisable, in international practice. pension promises made by governments to their employees are taken into account on the assumption that they constitute a commitment that is difficult to revoke. However, when drawing up the European accounting system, the EU authorities decided to depart from international standards (IAS 19) by not considering pension promises made to public employees as a debt (Lequiller 2005). Consequently, European public debt figures exclude the pensions of public employees and are not comparable with those of other developed countries, notably the US, Canada, and Australia. This makes it difficult to understand the challenge of financing pensions in relation to European competitiveness.



Figure 17. Unfunded pension promises not considered in public deficits (as a % of GDP, 2021)

Source: OECD (2022), calculations by Institute Économique Molinari

However, the EU has done little to facilitate an increase in pension funding in member states where it is insufficient. This kind of exercise is necessarily slow since capitalisation takes time to build up. It is also costly during the transition phase since PAYG pensions must be paid out regularly, and, at the same time, investments in social contributions to finance future pensions must also be made consistently.

In the public sector, one solution, therefore, is to finance the catch-up by borrowing, as the Quebec government did between 1993 and 2000 (**Deslauriers et al. 2023**). This type of borrowing is an investment that creates value in two ways. First, from an asset point of view, it is immediately profitable since it enriches the government to the extent of the difference between the return on long-term savings when largely invested in stocks and the cost of public debt, which is significantly lower than the returns on stocks, except in specific cases wherein counterproductive prudential

regulations reduce equity investments. Second, it reduces the cost of government off-balance sheet commitments since an increasing proportion of promised pensions are provisioned.

However, the way in which the Maastricht debt criterion is defined complicates pension provisioning in the EU. It is expressed in terms of gross debt without accounting for pension promises. As a result, the borrowing required for provisioning is included in the increase in debt without the provisioning being considered as reducing the government's off-balance sheet debt.

It will be prudent for the next term of the EC to take up this issue, as it is key to competitiveness and purchasing power. It will also make up for lost time in financing innovation, as the underdevelopment of retirement savings is detrimental to the financing of the economy and, thereby, innovation, as the recent report on competitiveness rightly points out (Draghi 2024). Generalising the use of pension funds should be a priority for the EU, in conjunction with the EU plan on establishing a capital markets union and financial markets (European Commission n.d.).

References

Adam, S. (2024) Die politische Ökonomie des Parteiensystems. *Wirtschaftsdienst Zeitschrift für Wirtschaftspolitik* 104(9): 618–25.

Aghion, P., Bloom, N., Blundell, R., Griffith, R., and Howitt, P. (2005) Competition and innovation: An inverted-U relationship. *Quarterly Journal of Economics* 120(2): 701–28.

Aghion, P., Blundell, R., Griffith, R., Howitt, P., and Prantl, S. (2009) The effects of entry on incumbent innovation and productivity. *Review of Economics and Statistics* 91(1): 20–32.

Akcigit, U., Caicedo, S., Miguelez, E., Stantcheva, S., and Sterzi, V. (2018) Dancing with the stars: Innovation through interactions. NBER Working Paper 24466. Cambridge, M. A.: National Bureau of Economic Research.

Alogoskoufis, G. (2019) Greece and the euro: A Mundellian tragedy. GreeSE Papers: Hellenic Observatory Discussion Papers on Greece and Southeast Europe 136. London: Hellenic Observatory, London School of Economics.

Alt, J. and Chrystal, K. A. (1981) Electoral cycles, budget controls and public expenditure. *Journal of Public Policy* 1(1): 37–59.

Anger, C. and Plünnecke, A. (2022) INSM-Bildungsmonitor 2022. Bildungschancen sichern, Herausforderungen der Digitalisierung meistern. Köln: German Economic Institute.

Archontas, G. and Saravakos, C. (2023) Economic freedom in EU periphery: Recent developments of disparities in economic freedom areas between center and periphery countries. *Region & Periphery* 15(15). Atanassov, J. and Liu, X. (2020) Can corporate income tax cuts stimulate innovation? *Journal of Financial and Quantitative Analysis* 55(5): 1415–65.

Azoulay, P., Jones, B., Daniel Kim, J. D., and Miranda, J. (2022) Immigration and entrepreneurship in the United States. *American Economic Review*, *Insights* 4(1): 71–88.

Bárta, M. and Ďurana, R. (2024) Market force revitalising the single market for the next 30 years. Brussels: Epicenter.

Baumol, W. J. (2004) *The Free-Market Innovation Machine: Analyzing the Growth Miracle of Capitalism*. Princeton: Princeton University Press.

Bisset, A., Czarnitzki, D. and Doherr, T. (2024) Inventor mobility under uncertainty. *Research Policy* 53(1): 1–13.

Bruegel (2023) *Effectiveness of EU Convergence Funds*. Retrieved from https://www.bruegel.org/.

Brunnermeier, M. K. (2022) *The Resilient Society Economics After Covid*. New York: Harper Business.

Bulgarian National Bank (2024) EU's revised economic governance framework and its potential implications for Bulgaria's fiscal policy. Economic Review 3/2024. Sofia: Bulgarian National Bank.

Coatanlem, Y. and Coste, O. (2024) Cost of failure and competitiveness in disruptive innovation. Milan: Institute for European Policymaking, Bocconi University.

Coffey, B., McLaughlin, P. A., and Paretto, P. (2016) The cumulative cost of regulations in the United States: A quantitative analysis. Mercatus Working Paper. Arlington: Mercatus Center George Mason University.

Commission of the European Communities (2001) An integrated approach to support national strategies for safe and sustainable pensions. COM (2001) 362 final. Brussels: Commission to the Council, the European Parliament and the Economic and Social Committee. Council of the European Union (2022) Council Directive (EU) 2022/2523 of 14 December 2022 on ensuring a global minimum level of taxation for multinational enterprise groups and large-scale domestic groups in the Union. Brussels: Directorate-General for Taxation and Customs Union.

Davanne, O. and Pujol, T. (1997) Analyse économique de la retraite par répartition. *Revue française d*'économie 12(1): 33–56.

Dawson, J. W. and Seater, J. J. (2004) Regulation and the macroeconomy. *Kyklos* 60(1): 15–36.

Deslauriers, J., Gagné, R., Laurin, C., and Paré, J. (2023) *Productivité du secteur public québécois: La Caisse de dépôt et placement du Québec.* Québec: Centre on Productivity and Prosperity.

Draghi, M.; et al. (2024) The future of European competitiveness. Brussels: European Commission.

Epicenter (2024a) Market force: Revitalising the single market for the next 30 years. Brussels: Epicenter.

Epicenter (2024b) The EU's single market: More than a market, less than single. Brussels: Epicenter.

Epicenter (2024c) Minimum corporate income tax: Implementation challenges and a way forward for the EU. Brussels: Epicenter.

European Free Trade Association (2006) Growth and jobs: The Lisbon strategy and the European economic area. Brussels: European Free Trade Association https://www.efta.int/sites/default/files/publications/bulletins/ lisbon.pdf

Eurostat (2023a) General government expenditure by function. Luxembourg: Eurostat https://ec.europa.eu/eurostat/databrowser/view/gov_10a_exp/ default/table?lang=en

Eurostat (2024a) Gross domestic product (GDP) at market prices - annual data (https://ec.europa.eu/eurostat/databrowser/view/tipsau10/default/ table?lang=en).

urostat (2024b) Harmonised consumer price index. Luxembourg: Eurostat (last accessed on 5 May 2024 at https://ec.europa.eu/eurostat/databrowser/ view/prc_hicp_midx/default/table).

Eurostat (2024c) General government gross debt - annual data. Luxembourg: Eurostat https://ec.europa.eu/eurostat/databrowser/view/teina225/default/ table?lang=en).

European Commission (2016) Proposal for a COUNCIL DIRECTIVE on a Common Consolidated Corporate Tax Base (CCCTB) Brussels: European Commission (https://eur-lex.europa.eu/legal-content/EN/ TXT/?uri=CELEX%3A52016PC0683).

European Commission (2020) A single market that delivers for businesses and consumers (March 2020)

European Commission (2023) Better regulation toolbox. Brussels: European Commission

European Commission (2024) The future of European competitiveness – A competitiveness strategy for Europe. Brussels: European Commission.

European Commission (2024) European Economic Forecast – Autumn 2024. Brussels: European Commission.

European Commission (2024b) 2023 Annual Report on monitoring the application of EU law. Brussels: European Commission.

European Commission (n.d.) Capital markets union and financial markets (https://finance.ec.europa.eu/capital-markets-union-and-financial-markets_en).

European Central Bank (2022): Why does the climate change matter to ECB. Frankfurt am Mein: European Central Bank at https://www.ecb. europa.eu/ecb-and-you/explainers/html/why_climate_change_matters. en.html

European Parliament (2000): Lisbon European Council 23 and 24 March 2000

Presidency conclusions. Brussels: European parliament. https://www.europarl.europa.eu/summits/lis1_en.htm

Feldstein, M. and Samwick, A. (1992) Social security rules and marginal tax rates. NBER Working Paper 3962. Cambridge, M. A.: National Bureau of Economic Research.

Fraser Institute (2024) Economic Freedom of the World: 2024 Annual Report (October 2024)

Fuest, C., Gros, D., Mengel P.-L., Presidente G., and Tirole J. (2024) EU innovation policy how to escape the middle technology trap. Milan: Institute for European Policymaking, Bocconi University.

Giebel, M. and Kraft, K. (2015) The impact of the financial crisis on investments in innovative firms. Discussion Paper 15-069. Mannheim: ZEW Mannheim.

Goebel, L. (2024) Gute Gesetze. Digitale Verwaltung Weniger Bürokratie Momentum nutzen, Wirkung steigern. Jahresbericht 2024. Berlin: Nationaler Normenkontrollrat.

Grafström, J. (2022) Less from more: China built wind power, but gained little electricity. In *Questioning the Entrepreneurial State* (ed. K. Wennberg; C. Sandström). Cham: Springer International Publishing.

Gross, F. and Kolev, S. (2024) Innovationskultur und Innovationsordner: Erste theoretische Bausteine hin zu einem ordoliberalen Innovationsframework. LEF Papers on Economy and Society. Berlin: Ludwig-Erhard-Forum für Wirtschaft und Gesellschaft.

Haag, T., Kempermann, H., Kohlisch, E., and Koppel, O. (2023) Innovationsatlas 2023. Die Innovationskraft der deutschen Regionen. IW Analysen. Köln: German Economic Institute.

Hall, P. and Soskice, D. (2001) *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*. Oxford: Oxford University Press.

Horbach, J. and Rammer, C. (2020) Labor shortage and innovation. Discussion-Paper 20-009. Mannheim: ZEW Mannheim.

Hotz-Hart, B. and Rohner, L. (2014) *Nationen im Innovationswettlauf*. Wiesbaden: Springer Gabler.

International Monetary Fund (2024) World Economic Outlook (October 2024) https://www.imf.org/external/datamapper/NGDPD@WEO/OEMDC/ ADVEC/WEOWORLD/

Johansson, F. (2018) Der Medici Effekt. Wie Innovation entsteht. Kulmbach: Plassen.

Kalemli-Özcan, Ş., Reinhart, C., and Rogoff, K. (2016) Sovereign debt and financial crises: Theory and historical evidence. *Journal of the European Economic Association* 14(1): 1–6.

Kantor, S. and Whalley, A. (2023) Moonshot: Public R&D and growth. NBER Working Paper 31471. Cambridge, M. A.: National Bureau of Economic Research.

Karlson, N., Sandström, C., and Wennberg, K. (2021) Bureaucrats or markets in innovation policy? A critique of the entrepreneurial state. *The Review of Austrian Economics* 34(1): 81–95

Kifman, M. and Schindler, D. (2001) Smoothing the implicit tax rate in a pay-as-you-go pension system. *FinanzArchiv:* Public Finance Analysis *57*(3): 261–83.

Klomp, J. and De Haan, J. (2013) The electoral budget cycle in new democracies. *Public Choice* 157(1-2): 245–67.

Larsson, J. (2022) Innovation without entrepreneurship: The Pipe dream of mission-oriented innovation policy. In *Questioning the Entrepreneurial State* (ed. K. Wennberg; C. Sandström). Cham: Springer International Publishing.

Leiponen, A. (2005) Skills and innovation. *International Journal of Industrial Organization* 23(5-6): 303–23.

Lequiller, F. (2005) Contribution to the task force on pension schemes towards a compromise for the new SNA. Paris: Organisation for Economic Co-operation and Development.

Letta, E. (2024) Much more than a market. Brussels: European Commission.

Marques, N. (2023) Le manque-à-gagner lié au sous-développement de l'épargne retraite. Paris-Bruxelles: Institut économique Molinari.

Mazzucato, M. (2014) *The Entrepreneurial State: debunking public vs. private sector myths.* London: Penguin.

Mazzucato, M. (2016) From market fixing to market-creating: A new framework for innovation policy. *Industry and Innovation* 23(2): 140–56.

Mazzucato, M. (2018) Mission-oriented innovation policies: Challenges and opportunities. *Industrial and Corporate Change* 27(5): 803–15.

Mazzucato, M. and Semieniuk, G. (2017) Public financing of innovation: New questions. *Oxford Review of Economic Policy* 33(1): 24–48.

McCloskey, D. N. (2013) Tunzelmann, Schumpeter, and the hockey stick. *Research Policy* 42(10): 1706–15.

Milanovic, B. (2016) Increasing capital income share and its effect on personal income inequality. LIS Working Paper 663. Luxembourg: LIS Cross-National Data Center.

Morck, R. and Yeung, B. (2000) The economic determinants of innovation. Paper 25 Industry Canada Occasional Series. Ottawa: Micro-Economic Analysis Directorate.

Mukherjee, A., Singh, M., and Žaldokas, A. (2017) Do corporate taxes hinder innovation? *Journal of Financial Economics* 124: 195–221.

OECD (2024) Pension Markets in Focus 2022. Paris: OECD https://www. oecd.org/en/publications/pensions-market-in-focus-2022_b8fd9171-en. html

OECD (2024) Taxing Wages. Paris: OECD. https://www.oecd.org/en/publications/taxing-wages-2024_dbcbac85-en.html

OECD (2024) OECD Data Explorer. Paris: OECD https://data-explorer. oecd.org/?lc=en

Piketty, T. (2013) Le Capital au XXIème siècle. Paris: Seuil.

QuantGov. (n.d.) 'What is QuantGov' (https://www.quantgov.org/about).

Royo, S. (2023) The European Union and economic reforms: The case of Spain. Working Paper 8/2006. Spain: Real Instituto Elcano.

Samuelson, P. (1958) An exact consumption-loan model of interest with or without the social contrivance of money. *Journal of Political Economy* 66: 467–82.

Sandström, C. and Alm, K. (2022) Directionality in innovation policy and the ongoing failure of green deals: Evidence from biogas, bio-ethanol, and fossil-free steel. In *Questioning the Entrepreneurial State* (ed. K. Wennberg; C. Sandström). Cham: Springer International Publishing.

Saulnier, J. (2022) Completing the single market for services. European Parliament Research Service.

Schöb, R. (2020) *Der starke Sozialstaat Weniger ist mehr.* Frankfurt: Campus.

Shi, M. and Svensson, J. (2008) The political budget cycle: Theory and evidence. *Public Choice* 137(1-2): 245–69.

Statista (2024): Largest stock exchange operators worldwide as of September 2024, by market capitalization of listed companies https://www.statista.com/statistics/270126/largest-stock-exchangeoperators-by-market-capitalization-of-listed-companies/

Strobl, D., Calca, P., and Kamkhaji, J. C. (2019) Electoral cycles in government policy-making: Strategic timing of austerity reform measures in Western Europe. *British Journal of Political Science* 49(2): 331–52.

Toner, P. (2010) Innovation and vocational education. *The Economic and Labour Relations Review* 21(2): 75–98.

Veld, J. (2019) The economic benefits of the EU Single Market in goods and services. Journal of Policy Modeling 41(5): 803–18.

Wolf, M. (2023) *The Crisis of Democratic Capitalism*. New York: Penguin Press.

World Bank (1994) Pension Systems and Reform Conceptual Framework. Washington: World Bank.

https://documents1.worldbank.org/curated/ru/716871468156888545/ pdf/461750NWP0Box334081B01PUBLIC10SP00824.pdf

World Bank (2024) Research and development expenditure (% of GDP). Washington: World Bank. https://data.worldbank.org/indicator/gb.xpd.rsdv. gd.zs?most_recent_value_desc=true

Wuchty, S., Jones, B. F. and Uzzi, B. (2007) The increasing dominance of teams in production of knowledge. *Science* (316): 1036–9.

Yin, Y., Dong, Y., Wang, K., Wang, D., and Jones, B. F. (2022) Public use and public funding of science. *Nature human behaviour* 6(10): 1344–50.

Zhang, L., Sheng, Z., and Guo, Y. (2019) The effects of equity financing and debt financing on technological innovation: Evidence from developed countries. *Baltic Journal of Management* 14(4): 698–715.


