IDEAS AND AMBITIONS TO SHAPE EUROPE'S NEXT CHAPTER

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Europe has what it takes. But we have stopped believing it, with many arguing that to win economically, we need to lower quality, labour and environmental standards.

WinWin exists to prove that, for Europe, a quality-driven economic strategy generates international competitiveness, resilience, future-ready jobs and a healthier environment.

Europe has aura. It is the continent of quality – in manufacturing, research, our nature, our cities, aesthetics, music, literature, food, etc. So, what if, today, on 3 November 2026, we recognise that quality is our strength and our future?

Europe can't win on natural resources. That is not a constraint, it's a reason to innovate.

The future will reward those who are best at doing more with less and we are quickly becoming the world champion of resource efficiency, guided by a conducive, stable regulatory framework and vibrant innovation.

But, the downbeat narrative in Brussels doesn't match reality. Negative stories are self-fulfilling prophecies, so it's time to change that and shape Europe's next chapter. One marked by a sense of belief; ambitious policy; forward-looking investments; a sense of unity, and a focus on excellence.

1 CHANGE MINDSETS.

- **Rebuild self-confidence.** Celebrate builders, incentivise risk-taking, prioritise quality, embrace AI, be proud and resilient. Maximise upsides instead of minimising downsides.
- Spread the vision of Europe as **the Continent of Quality**.

2 INITIATE A RACE TO THE TOP.

- Set **ambitious quality, labour and environmental standards** based on the performance of the frontrunners of the new economy and let the market pick the winners.
- Make Europe the world's **first circular continent**, the world's **first Electro Union**, and the global leader in **responsible AI**.

3 UNLEASH INNOVATIVE INVESTMENTS.

- Target public funding and spending to the pioneers and allow for creative destruction. Move to a **de-risking model**, crowding in private capital to support future European champions. Co-ordinate industrial policies. Launch a full-scale European innovation policy, including an independent **European ARPA-style agency** for bold R&D.
- **Speed up permitting processes.** Europe is building for the future, so we need to support it.
- Europe needs an ambitious, well-resourced regulator that sets ambitious long-term goals that reward frontrunners and their funders. Once the goals are set and incentive plans are in place, **stick to them**.

4 SUPERCHARGE THE SINGLE MARKET.

- Bring the world's **middle powers** that share many of our values into the European project.
- **End market fragmentation.** Build a front end *and* back end for EU Inc.
- Build a European equity culture and a **Capital Markets Union** that rewards ambition, ownership and risk. Issue **permanent Eurobonds** at scale, cementing the euro's position as the world's second global reserve currency.
- Protect the single market with **non-naive trade policy**.

5 REWARD EXCELLENCE.

- Europe is bursting with talent. **Nurture talent** by making it easier to compete Europe-wide and by supporting high achievers. Make it easier to reward hard work and risk taking.
- **Back universities** and remove obstacles for top researchers and innovators to move to Europe.

Europe does not need to copy anyone. It needs to compound what already makes it strong and focus on qualitative growth. Europe's regulatory framework was built for this so let's stay the course, trust the compass and move through.

By Paul Schenderling, with contributions from the WinWin organising team

INTRODUCTION

Europe's economic, social and ecological challenges cannot be met with incremental improvements; they can only be met with transformative action. European Commission President Von der Leyen has built the foundations of a regulatory framework capable of delivering such action. This vision paper outlines a positive, self-confident vision for Europe's economic future and the actions required to bring it home.

At the core of this vision is **a quality-driven economic strategy for Europe**. Competing on quality fosters a focus on continuous improvement. This requires setting the most ambitious quality standards and empowering people to meet these standards.

This strategy can set in motion two virtuous cycles. The first cycle is **the standards-innovation cycle**. When companies are pushed to meet ambitious goals, they start rethinking their product designs, technologies and production processes. This generates innovation that gives these companies a competitive advantage. That advantage, in turn, generates the resources to invest in meeting even higher quality standards.

The second cycle is **the wage-productivity cycle**. When real wages[1] rise, companies have an incentive to make labour more productive. This results in labour-saving innovations, for example, by equipping employees to work with the latest human-centric AI tools.[2] This productivity boost generates the means to raise wages and pursue further productivity improvements.

There is solid evidence that a quality-driven economic strategy delivers international competitiveness, future-ready jobs and a healthier environment.[3] This will benefit our firms, our workers, our public services and future generations.

Adopting and defending higher quality, labour and environmental standards will also benefit our trading partners,[4] positioning the EU as the leader of a global coalition of forward-looking, democratic countries across both the Global North and the Global South—including the middle powers that are indispensable for the future world order. It is a win-win vision for the entire continent, and beyond.

Once in motion, these virtuous cycles are very strong. From the 1950s to 1970s they propelled three golden decades of European prosperity. However, once the cycles are broken, they are difficult to restart, because they involve a chicken-and-egg problem. When innovation and productivity growth are sluggish, it may not seem rational to raise standards or wages, even though that is a central part of the long-term remedy.

Today, the virtuous cycles in Europe's economy have largely collapsed and many business and political leaders have fallen into the chicken-and-egg trap. A crucial error of judgment in Europe today is *the misdiagnosis of the EU's competitiveness problem as primarily the result of (EU) regulation*. There are other critical errors in mainstream thinking about a future-proof European economy as well.

The Action Points therefore build on mainstream thinking where possible, including the Draghi and Letta reports. They have proven to be great foundations but suffer from misinterpretation. This vision paper aims to restore that and complete it.

Broadly speaking, our analysis of Europe's economic challenges converges with mainstream thinking on three points. One major underlying problem is the lack of private investment and the excessive share directed towards middle-tech rather than high-tech. The fragmentation of economic policy within Europe, particularly industrial and innovation policy, is another major factor. And for too long, insufficient attention has been paid to the demand side of the economy, specifically to creating demand for high-quality, innovative and clean European products.

There are, however, also major differences in both the analysis and the proposed solutions. The lack of private investment is too readily attributed to inadequate public-sector conditions, including public investment, public infrastructure and regulation. Yet in many European countries, *private investment, including private innovative investment, has lagged that of our geo-economic competitors for decades, while profits have remained consistently high over the same period*.[5] Moreover, neither European public investment in research and development nor Europe's public infrastructure is demonstrably inferior to that of other trading blocs.[6] We have what it takes.[7]

And although regulation can be problematic, particularly when it is fragmented across Europe, it is not the root cause of our economic woes. Indeed, sensible goal-setting regulation is part of the solution.[8] Yet many business and political leaders take a one-sidedly negative view of (EU) regulation. However, *they misrepresent strong EU regulation as a brake on economic and technological development, whereas it is better understood as a steering wheel for such development.*[9] Indeed, while deregulation may generate some short-term cost savings, lowering quality, labour and environmental standards will weaken the virtuous cycles further, exacerbating Europe's competitiveness problem in the long run. That is not sustainable.

The reason why raising quality, labour and environmental standards has not worked well enough in the past is that we have applied these standards only to Europe-based businesses, but not, or inadequately, to imported products. In other words, *we have woefully failed to defend our European standards at the border*, for example through border levies, and through coherent implementation and enforcement of pan-European rules.

The greatest underlying European weakness is our addiction to cheap consumer goods. To import vast quantities of cheap goods from outside the EU, we are willing to sacrifice safety standards, working conditions and environmental protection. For decades, this has eroded the competitive strength of small and medium-sized enterprises (SMEs), which form the backbone of the European economy. While these businesses must comply with all European legislation, they face unfair competition from Chinese companies and industries that receive substantial state support and from large European corporations that circumvent European laws and taxes by moving their production facilities outside the EU.

If the lack of private investment in innovation is not primarily due to a weak or incompetent public sector, it also follows that greater public investment is not necessarily the solution, particularly if the public sector attaches weak conditions to that investment. Yet this is precisely what business and political leaders are now loudly calling for. What they overlook is that a large share of public funding and spending flows to established companies. We believe that a more obvious, daring solution would be a stronger focus on pioneers, stricter conditions and greater competition to jolt established companies into action. Make first movers the norm.

The productivity puzzle reveals yet another important but overlooked cause of the problem: wage stagnation. Wage stagnation is widespread across Europe, and there is a strong relationship between stagnant wages and stagnant productivity.[10] Research has also demonstrated a positive relationship between productivity and other employment conditions, including employment security and training budgets for employees.[11]

Finally, mainstream analyses and solutions fail to emphasise the need to do more with less. A crucial underlying error of judgment is that *restoring competitiveness is important but not enough*. It is important, because competitiveness is a cornerstone of our economic, technological and political sovereignty. But it is not enough, because **the economy should serve the good life**: meaningful jobs, decent living standards for all, thriving communities and flourishing non-human life. This is no longer automatically the case. In the past decades, an excessively narrow economic focus has contributed to levels of inequality not seen in over a century and unprecedented levels of ecological breakdown.[12]

Therefore, *improving wellbeing within planetary boundaries while safeguarding economic prosperity is the defining challenge of this century*. A term that encapsulates this is broad prosperity. If we fail, all benefits—economic, social and ecological—will be lost, because only an economy embedded in a strong society, itself embedded in a healthy biosphere, can flourish.

Fortunately, the two virtuous cycles strengthen all three pillars of broad prosperity. However, the solution is not as simple as 'just' strengthening European standards instead of weakening them. Restarting the cycles requires an interplay of five key conditions.

The first condition is **changing our mindset**. Businesses, workers and EU governments must fully commit to building a future-proof economy. Only a shared vision providing benefits for all can bolster this commitment. Our win-win narrative provides this vision. It shows that, with the right conditions in place, a stronger economy, better jobs and a healthier environment can go hand in hand.

The second condition is **initiating a race to the top**. This requires a strong partnership between the EU and European businesses, in which the EU sets ambitious goals and lets markets pick the winners. In this way, political and business leadership can kickstart the virtuous cycles.

The third is **unleashing innovative investment**. All economic analysis points in the same direction: if Europe wants to secure a future-proof economy, investment needs to go up massively. Especially private innovative investment needs to increase substantially and rapidly.[13] The EU can help create the right conditions by targeting public funding and spending to the pioneers, by speeding up permitting processes and by providing regulatory stability.

The fourth is **supercharging the single market**. Ending market fragmentation is essential for scaling up pioneering European firms, so that they can eventually compete globally. Crucially, strengthening the single market also means *defending* European standards. European businesses cannot be expected to meet higher standards while competing with imports that do not. This requires non-naïve trade policy that guarantees a fair international playing field.

The fifth is **rewarding excellence**. Europe leads in scientific publications, in many fields, including AI. Europe also generates many patents and start-ups. However, we do not lead in terms of top-quality publications. And we do not turn scientific findings into large business ventures as successfully.[14] So, Europe is bursting with talent, but we need to manage it differently, by providing exceptionally talented people with more capital and greater freedom to pursue their own ideas.

It is important to realise that, for Europe, adopting and defending higher standards is *the only viable strategic route*. Europe does not have abundant fossil energy, nor abundant natural resources, nor much population growth. Therefore, *doing more with less is not a luxury but a strategic necessity*. Later this century, the rest of the world will face the same predicament. So, if we become the global pioneers of the doing-more-with-less strategy, we will gain a huge first-mover advantage. It will also bring major environmental benefits. A win-win strategy.

Of course, this will not be an easy path. But it will be our own path. And there is joy and pride in charting your own path.

The Action Points are presented below and further substantiated in the endnotes. The Actions emphasise **boldness** throughout.

1 CHANGE OUR MINDSET

Europe's leading businesses already recognise the win-win vision underpinning this vision paper[15] and act on it[16]. Unfortunately, too many business and political leaders describe Europe's future in a minor key: too slow, too regulated, too fragmented. We disagree. This downbeat narrative is wrong and dangerous, and it plays into the hands of our geopolitical rivals.

It is wrong, because Europe possesses all the strengths for a future-proof economy: the talent, the frontier firms, the science, the industrial depth, the capital, the climate leadership and the policies. And we have so much more to build upon and be proud of: cultural pull, walkable cities, universal healthcare, strong democratic institutions and excellent food.

It is dangerous because a negative narrative can turn into a self-fulfilling prophecy.[17] We need a positive vision for the future to inspire cooperation, compromise and sacrifices.

And it is a sign of geopolitical weakness. What Europe needs is economic and geopolitical self-determination, and for this, **we urgently need narrative emancipation**.[18] We must be bold enough to define the terms on which we compete with other blocs rather than seek to become more American or more Chinese in our economic approach.[19]

The weaknesses of the downbeat narrative show that the power of narratives should not be underestimated. Indeed, as geopolitical analysts argue, **it is the power of a grand narrative that shapes the future of a polity**.[20] This narrative must be grounded in a polity's core values, address today's challenges, and focus on the future. It is such a narrative that is at the heart of a strong civic mindset, which, in turn, is the essential prerequisite of economic, cultural and military strength.[21]

Psychologically, a strong mindset has two foundations. First, the ability to focus our attention on a common purpose, until this purpose fills our minds.[22] Second, the ability to cling to this purpose in the face of resistance, doubt and distraction, so that the sense of purpose is strengthened rather than weakened by adversity.[23]

Both are exclusively mental efforts.[24] If these efforts are sustained long enough, the entire mindset of a person or polity changes, and that person or polity can undertake extraordinary physical efforts *with joy*, and without failing in their duties.[25]

Europe has a strong civic tradition.[26] We believe that the good of the individual and the good of society are inextricably linked. And we believe that both individual lives and society as a whole can always be improved.[27] We expect each citizen to contribute meaningfully to a good society and a better future—through their craft, care work, entrepreneurship, public duty, volunteer work, democratic participation, scientific and cultural endeavours, and other acts of virtue. This determined pursuit of self-improvement has been central to our way of life for centuries.[28]

The quest for self-improvement requires wisdom and humility. Without these qualities, self-improvement becomes backward-looking rather than forward-looking, arrogant rather than self-critical. The failure to foster this attitude has resulted in the darkest chapters of European history. Thus, in his book *The*

European Spirit the philosopher Karl Jaspers stressed that Europe should not be defined by *what it is* but by its awareness of human and social imperfection that drives *its relentless search for freedom, knowledge and community*. Europe is therefore a union of values.

These ceaseless movements towards freedom, knowledge and community constitute our joy and pride.[29] The words of Schiller's poem *An die Freude* (*Ode to Joy*), upon which the European anthem is based, express the joy of suffering for a better world strongly and beautifully.[30]

Today, Europeans' urge for self-improvement is not something that is nice to have but something we need to have. For prosperity in the future, Europeans need to set higher standards, invest more, take more risks, and manage for results.[31] **These priorities are all primarily a matter of mindset.**

Europe must find new strengths in the AI race and industrial race, in a global competition that is not rule-bound anymore. To maximise our chances, we need assertiveness. We need to think bigger and act more opportunistically. This is also a matter of mindset.

At the same time, we must make our economy more inclusive and sustainable. This may seem a daunting task, but if we persevere, it is achievable.

Therefore, Europe needs a new grand narrative that inspires self-confidence and builds on Europe's strengths. **That vision is Europe as the Continent of Quality.**[32] The good news is that this win-win vision is already deeply embedded in our societies. Europe should not try to compete by imitating other blocs but by playing to our strengths and values. A focus on quality in its broadest sense—quality of products and services, quality of jobs, quality of life and environmental quality—is the core of our strengths and values.

The European Commission can make history, again, by placing this vision at the heart of our endeavours.

2 INITIATE A RACE TO THE TOP

Economic development is driven by powerful feedback loops that are often self-reinforcing. For example, when businesses and governments invest to compete in higher-value markets and the investments pay off, they can reinvest the profits to create even more value. This mechanism works even better when the private and public sector co-ordinate their investments.[33]

In the Introduction we highlighted two virtuous cycles that, if combined, create substantial win-wins for Europe: **the standards-innovation cycle** and **the wage-productivity cycle**. Both cycles are backed by scientific evidence.

It has been documented for decades that quality standards are fundamental to innovation and productivity growth.[34] Environmental standards are relatively new, but the mechanism is essentially the same. They generate significantly more innovation and patents and can improve countries' international competitiveness.[35] They stimulate innovation because they incentivise firms to develop new technologies, processes and products that reduce environmental impacts. Innovation stimulated by green regulation can, in turn, strengthen international competitiveness by helping firms move up the value chain, differentiate their products more effectively, and develop technological advantages that are difficult for competitors to replicate.

The same mechanism applies to labour standards. There is robust evidence that high wages[36] can induce a virtuous cycle of innovation, productivity growth and rising incomes.[37] The mechanism is as follows: higher wages incentivise employers to invest in better ways of working and in technologies that help workers become more productive. For example, they can equip employees to work with human-centric AI. Higher productivity, in turn, creates room for further wage increases, kickstarting the next wage-productivity cycle.

There is also ample evidence that providing workers with security and opportunities for development—a 'high-road' employment strategy—stimulates innovation and productivity.[38] In the long run, high-road employers outperform low-road employers.[39]

The reason is that companies pursuing a low-road strategy compete primarily on cost but are more vulnerable in the long term because they are less able to adapt to changing circumstances. Companies pursuing a high-road strategy, by contrast, compete primarily on quality rather than cost. Because their employees are more motivated and productive, and because their teams function more effectively, they can offset their cost disadvantage. They are also better able to adapt to changing conditions, which enables them to achieve better long-term performance. Moreover, their competitive advantage is more difficult for competitors to imitate, as they have developed new skills, capabilities and forms of tacit knowledge through teamwork.

What these studies effectively show is that higher quality, labour and environmental standards stimulate investment in better production methods, creating benefits for firms, workers and the environment alike. This is paramount, because innovation and productivity growth are not ends in themselves. As stated in the introduction, the ultimate goal is to reconcile economic prosperity with greater wellbeing for all citizens and a healthy environment for future generations—in short, **broad prosperity**.[40]

Therefore, there are two main reasons for pursuing a race to the top. First, it is the only way to realign economic development with social and ecological progress, which, in turn, is our only chance for a better future. Second, it is a proven way to stimulate innovation, which, in turn, is essential for solving the EU's competitiveness problem.

WIN-WIN OPPORTUNITIES FOR EUROPE

So, set in motion the two virtuous cycles. **This win-win dynamic presents enormous opportunities for Europe.** We highlight three areas of economic opportunity.

First, **make Europe the world's first circular continent**. The economic, technological, social, and environmental potential of the circular economy is massive.[41] The European Chemical Society (ECS) has shown that the global economy depends on just ninety natural elements, which we extract from various locations and then use to manufacture products. The ECS estimates that if extraction continues to rise, the security of supply for half of these elements will be at risk.[42] For many of these materials, this will already occur in the current century.

This means that if Europe becomes the world's first circular continent, it will be able to export to the rest of the world its circular products and technologies. This will also create new industrial jobs and greatly reduce the environmental impact of industrial products. It will also strengthen the resilience of a continent with relatively few natural resources in a world that competes ever harder for those resources. Achieving this win-win in the future requires setting the most ambitious circular standards *now*.

Second, **make Europe the world's first Electro Union**. The transition to clean energy is also a win-win: it will provide abundant affordable energy *and* resilience *and* climate gains. Moreover, countries that decarbonise their industries first will be rewarded with first-mover advantages.

Decarbonised, energy-efficient industry is the future. The Energy Return on Investment (EROI)[43] of fossil fuel systems has been declining for decades, while the EROI on clean-energy systems has risen exponentially and is projected to rise much further.[44] Currently, clean-energy systems are already more competitive than fossil-fuel systems in electricity generation. At some point in the future, the same will happen in industrial production.

Technically, it is already feasible to electrify 90 percent of industrial processes that are not yet electrified.[45] Economically, electrifying large parts of European industry will be feasible around 2035, provided that the EU remains fully committed to ETS and CBAM.[46] The main challenge—not to be underestimated, though—is to bridge the gap between now and the future. Again, policy is decisive: the best results are achieved if we set a very ambitious goal and co-ordinate the necessary investments better. Policy is especially important, because the current transition path is probably not fast enough to limit global warming to well below 1.8°C.[47]

Third, **make Europe the global leader in responsible AI**. As previous technological revolutions have shown, a technological revolution benefits broad segments of the population only if it is accompanied by new standards that guide the use of that technology.[48] For AI, these standards should encompass both social and environmental aspects. Granted, Europe is behind on some aspects of developing AI; but let us leapfrog our competitors, like we did with GSM technology, nuclear reactors and industrial robotics.[49]

Responsible AI is not just a policy objective; it increasingly reflects customer demand. By setting the global benchmark for responsible AI, Europe can position its firms at the forefront of a fast-growing market for trustworthy, socially beneficial AI applications. Prompt what matters!

POLICY ACTIONS

Therefore, **set Europe-wide quality, labour and environmental standards based on the current performance of the frontrunners of the new economy**.[50] Challenge the rest of the field to meet these standards within the next few years and support the scaling-up of investment required to achieve them. Then raise the bar again, and again.

Regarding environmental standards: **the most effective way to reduce environmental damage and stimulate green innovations is through quotas**.[51] A quota is a government-imposed maximum on certain environmental impacts.[52] The reason that they are so effective is that quotas allow precise control to achieve a desired maximum, with a predetermined path ensuring gradual reduction. This long-term predictability gives companies time to anticipate and invest in innovations. The reason that they are so efficient is that quotas set goals rather than means.

There is already a proven and effective quota system at the EU level for greenhouse gases: ETS.[53] However, no such system exists for four other big environmental impact factors, namely the use of materials, water, land, and toxic substances. Implementing such systems for all the five major environmental pressures will make *all* types of sustainable business models viable at once, with a far smaller administrative burden than the current accumulation of product standards, tax incentives, and subsidy schemes.[54]

Regarding the Electro Union: **competitive and predictable electricity prices are a central EU industrial policy objective**.[55] Use policy instruments such as Contracts for Difference (CfDs) and Power Purchase Agreements (PPAs) to provide long-term price certainty for producers and industrial consumers.[56] Fast-track the expansion of renewable energy infrastructure. Create markets for low-carbon products through quotas, standards, public procurement and other lead-market instruments.[57] And increase the annual rate of energy efficiency improvements, in line with the targets set by the IEA and at COP28.[58]

These policies together will determine the overall system costs, which will translate into future electricity prices. Those prices, in turn, will be an important determinant of the future competitiveness of Europe's industries. If done at a sufficiently large scale, the marginal costs of electricity will fall to near-zero levels, enabling new industries, for example circular industries and e-fuel synthesis for aviation and shipping. As the authors of a recent study note: "Countries that build surplus clean capacity first will capture these industries; those that do not will import their products."[59]

Regarding social standards: the most pressing problem is that primary real wages (i.e. wages before taxes, corrected for inflation) have lagged labour-productivity growth in most European countries since the 1980s.[60] Firms in those countries thus have very little incentive to invest in boosting labour productivity, which is key for the future of European competitiveness. This has derailed the wage-productivity cycle. That said, real-wage growth should not be structurally higher than productivity growth; the optimum is that both workers and entrepreneurs receive a fair share of the benefits generated by productivity growth.

Therefore, **direct member states to link primary real wages much more closely to productivity growth**.[61] Let governments and social partners in member states decide how they meet this ambitious goal. This will make clear to working people that a quality-driven economic strategy benefits them. Higher-quality, better-paying jobs help them make ends meet, while higher-quality products with a longer lifespan increase their prosperity. Better-designed products are more functional and easier to customise, upgrade and repair.

Higher-quality products also prevent low-income citizens from being trapped in a vicious cycle. As the saying goes, "cheap is dear": those who cannot afford better products often buy cheaper alternatives that wear out quickly and need frequent replacement, making them more costly than buying a high-quality product in the first place. By enforcing European quality standards more strictly, for imported goods as well, high-quality goods can become the norm rather than the exception. While this would benefit all citizens in the long run, low-income households may struggle with higher upfront costs. A quality dividend scheme—an allowance for low-income citizens—would help make durable products affordable for these citizens, enabling them to escape the cheap-is-dear cycle. It means channelling part of the proceeds from quotas to low-income citizens.

3 UNLEASH INNOVATIVE INVESTMENTS

Boosting Europe's productivity and technological capabilities is both rocket science and not.

It *is not* rocket science, because it is well known that productivity gains and technological progress largely depend on investments in R&D. Like all investments, however, the law of diminishing returns applies: Additional investments tend to generate slightly smaller returns over time. On average, an extra euro invested in private R&D increases economic output by around €4.60.[62] Yet if the same amount is invested year after year, the return from each extra euro gradually declines.[63]

It *is* rocket science in the sense that investment in more radical, high-tech innovation is more productive than investment in incremental innovation.[64]

We can draw two lessons from this. First, unleashing private innovative investment is a *conditio sine qua non* for Europe's economic future.[65] Second, a larger share of this investment should go into high-tech innovation.

At present, **the European economy suffers from a severe shortage of private innovative investment**. This lack of investment is not caused by a lack of corporate resources. Europe faces an investment paradox: since 2000, profits (as a share of gross value added) of European non-financial corporations have remained consistently high.[66] In the same period European corporate investment (as a share of gross value added) has lagged. In short: although corporations have ever *more* resources to invest, they invest *less*, instead focusing on generating profit rather than reinventing themselves.[67] Meanwhile European governments hand out billions in tax incentives and subsidies every year.[68]

At the same time, **Europe also faces the risk of getting stuck in a middle-technology trap**.[69] Middle technology means advanced technology but not technology at the technological frontier. Examples of technologies at the technological frontier are photonics, quantum technologies, AI and other advanced digital technologies, biotechnology, chemical/circular technologies, nanotechnology, advanced materials, and robotics and other advanced engineering technologies.[70]

Current public funding and spending perpetuate the risk of a low-investment, middle-technology Europe rather than solving it, for three reasons.

First, public funding and spending are often used to subsidise risk-averse legacy industries,[71] or, in the case of procurement, even foreign competitors.

Second, tax incentives for R&D are often granted without meaningful conditions on either the amount of private investment required or the type of innovation supported, such as middle-tech or high-tech innovation.

Third, EU innovation policy is not ambitious enough, leaving much of the initiative to member states. This approach squanders the positive spillovers of a more co-ordinated approach, hindering the rise of new European tech champions.

We propose three types of actions to get European private innovative investment back on track: targeting public funding and spending to the pioneers, speeding up permitting processes and providing regulatory stability.

TARGET PUBLIC FUNDING AND SPENDING TO THE PIONEERS

A considerable amount of public investment in innovation is indispensable because it leverages private investment. However, this leverage could be made much stronger. Public funding and spending aimed at stimulating private innovation should be radically more targeted[72] and co-ordinated[73].

Targeting public support requires bold action. Ditch the old R&D tax breaks and R&D subsidies that have lavished public support on established firms, even though they have invested too little in R&D for decades. Instead, create special, larger tax breaks for high-tech R&D investment.

And **make all tax breaks and subsidies for private R&D progressive**: the more a firm invests (as a share of gross profits), the higher the tax deduction or subsidy should be. This implies that firms that invest little in innovation should receive little public support, while those that invest heavily should receive more. This new approach will catalyse the growth of Europe's cutting-edge ventures and will force established firms to reassess their investment strategies.

Co-ordinating public support also requires unorthodox measures. It is good that industrial policies are no longer taboo in Europe, but it is necessary to take the next step, namely to co-ordinate industrial and innovation policies at the European level.[74] This also applies to green industrial policies.[75] Co-ordinated (clean) industrial policies and innovation policies generate economies of scale and the synergies that are needed to face global competition.

Furthermore, make access to public procurement and industrial-policy support conditional on investment in Europe's strategic sectors and on social and environmental performance.[76]

And reorient European competition policy, so that it focuses more on tackling anti-competitive firm behaviour that hinders the diffusion of knowledge, technology and talent across the Union.[77]

Last but not least: **launch a European innovation policy, including an independent European ARPA-style agency for bold R&D**.[78] The European Innovation Council could play a role, here. Make sure that this agency has structural financial resources for high-risk, high-return projects and the mandate to co-ordinate national innovation policies.[79] Also ensure that fund managers have deep knowledge of the technologies and markets they are investing in. The Scaleup Europe Fund is a great start.

SPEED UP PERMITTING PROCESSES

Private investment can also be leveraged by high-quality public infrastructure. Building and maintaining this infrastructure has been a European strength for a long time. We currently need that strength, especially for the purposes of state-of-the-art electricity grids and AI infrastructure. In both fields, we must aim for next-generation infrastructure, to leapfrog our competitors.

For electricity grids that means building decentralised, smart grids with strong grid interconnectors across the EU, to deliver lower carbon emissions, lower energy costs and greater resilience. For AI infrastructure that means building hybrid data centres with quantum hardware accelerators, to provide greater computing power and higher energy efficiency in the future.

Therefore, **speed up permitting processes** by radically choosing substance over form:

Write single market rules that fast-track permitting and planning approval for advanced AI infrastructure, renewable-energy projects, energy-storage projects, electricity grids and grid interconnectors across the EU.[80]

Specifically, rebuild the expertise of staff in national infrastructure agencies and restore their discretionary powers. If senior civil servants can substantiate the case for granting planning permission, then the shovel should hit the ground, regardless of whether the paperwork is finished or not. The Dutch Delta Works, protecting the land from the sea, perhaps Europe's largest construction project in history, were built this way.

EMPOWER THE EU REGULATOR

We often talk about excellence in Europe, but we forget that quality in private sector is useless if we do not also have quality in the public sector. Europe needs sensible regulation and a strong referee to enforce this regulation. Unfortunately, the debate about EU regulation has become polarised: some unconditionally favour more regulation, others unconditionally favour less. But these extremes do not make sense.

Adding more regulation often results in more focus on compliance to the rules and less focus on the objectives. But deregulation is no panacea either: it often reduces the incentive to invest in higher standards, and higher standards are key for long-term competitiveness.[81]

It is more sensible to distinguish between rules that set goals and rules that set means.[82] Goal-setting regulation gives businesses the freedom to choose and develop their own means to achieve these goals, stimulating innovation. Means-setting regulation, on the other hand, is often too detailed, stifling innovation. What Europe needs is sensible, goal-setting regulation. Good examples of goal-setting regulation are quality, labour and environmental standards, as outlined in section 2.[83]

Europe needs an ambitious, well-resourced regulator that sets ambitious goals that reward frontrunners and their funders. Setting the right goals and steering economic players towards these goals requires strategic capabilities. Governments of the future are therefore strategic governments.[84] Strategic governments need more people with top-level economic experience and policymakers who know how to intervene effectively in the economy without curbing the innovative potential of companies.

Recruit more people with these capabilities. Enable them to operate more independently from vested economic interests. Offer them better, competitive salaries. And let them collaborate more effectively with lawmakers, stakeholders and each other by having English as the lingua franca. Serving the *res publica* should be regarded as an honour and a desirable calling.

The EU regulator should also be autonomous. When regulators are captured by powerful business lobbies, the businesses of the future, the first movers, suffer. Historically, that has been a recipe for failure, resulting both in unsustainable levels of social inequality and economic stagnation.[85]

Therefore, regulate for the long-term. And, importantly, **once the goals are set and incentive schemes are in place, stick to them**. The credibility of the rules is vital for current and future investment decisions. There is a strong negative relationship between policy uncertainty and investment, both investment by domestic firms and foreign direct investment.[86] Climate and environmental policy uncertainty also negatively affects corporate green investment.[87]

Credible long-term carbon pricing via ETS is a case in point.[88] Keep climate mitigation as the absolute priority, while stepping up climate adaptation efforts that have become more urgent sooner than many had expected.[89] Reduce uncertainty about the next phase of ETS and about the implementation of CBAM. In addition, use the revenues from ETS and CBAM to help European firms, especially industrial firms, decarbonise.[90]

Regulatory stability goes way beyond policy documents. It depends on the EU's overall credibility and consistency. Speculation about policy changes, or accommodating the wishes of Member states to do away with them in the media, can be just as damaging to the bankability of European ventures as policy changes themselves.

4 STRENGTHEN THE SINGLE MARKET

The ability to scale products and services rapidly has become increasingly important in the global economy. This has made access to large consumer markets and deep pools of talent and financial resources more important as well.[91] Europe needs to enlarge, perfect and protect its single market. A European capital market and equity culture also need to be part of the single market project.

ENLARGE THE SINGLE MARKET

Bring the world's middle powers, that share many of our values, into the European project. This would strengthen Europe not only economically but also geopolitically.[92] The UK needs to return to a full membership and candidate memberships should go, next to Canada, to Switzerland, Norway, Ukraine, but also Australia, Japan, South Korea and Taiwan. When smaller countries are also included, the list is even longer.

PERFECT THE SINGLE MARKET

Perfecting the single market means ending market fragmentation. Given the broad recognition of this part of Draghi's and Letta's work, it is not necessary to repeat their recommendations.[93] The 28th regime corporate legal framework - EU Inc. - is particularly important.[94] Again, be bold: **build both a front end and back end of EU Inc.**, including a common corporate registry, harmonised taxation and insolvency rules, and an EU-wide digital administrative infrastructure.

Mainstream economic thought is heavily based on the view that public policy should focus on fostering a good business climate. This is not wrong, but neither is it sufficient.[95] There is increasing evidence that markets, left to themselves, generate insufficient innovation.[96]

There are two main issues. First, entrepreneurs often discover new business opportunities through trial and error.[97] However, when one firm succeeds, others can learn from it and copy its approach. As a result, the pioneering firm captures only part of the benefits of its investment, making companies less willing to experiment.[98]

A second issue arises when an investment depends on complementary investments elsewhere in the value chain. For example, a new technology may require suppliers, infrastructure or specialised skills to develop at the same time.[99] However, if these complementary investments are not co-ordinated, investment is delayed or may not take place at all.[100]

Both mechanisms further emphasise the need for **a more ambitious European innovation policy**, as outlined in section 3, stimulating both experimentation and co-ordination in high-tech value chains.

BUILD A EUROPEAN CAPITAL MARKET & EQUITY CULTURE

Older firms can finance higher investments largely by reinvesting their profits, incentivised by more ambitious standards and bolstered by a better functioning single market. Young ventures, however, need external capital.

Finance in Europe is dominated by the banking sector. Bank finance, however, is relatively risk averse. This particularly hinders disruptive innovators.[101] Moreover, Europe's banking sector is fragmented. In the current situation, disruptors (high-tech firms that disrupt existing markets) either stay small, or are forced to attract non-European capital (which means non-European ownership), launch an IPO outside Europe, or are taken over by non-European firms. All these outcomes are equally undesirable.[102]

Citizens in Europe save money, but our financial institutions invest much of it in the US. Therefore, **build a European equity culture and Capital Markets Union**. Launch a flagship Europe 500 benchmark, harmonise listing rules across European stock exchanges, and equip the European Securities and Markets Authority (ESMA) to take over certain tasks from national market authorities. Incentivise European financial institutions, including pension funds, to invest more in Europe.

Sweden shows how building an equity culture can work in practice: Its households routinely invest in shares, its pension savings are strongly linked to capital markets, its ventures, including smaller ventures, rely more heavily on equity financing than in other European countries, and its tax policies encourage stock ownership. This results in one of Europe's deepest and most active stock markets and an impressive number of scale-ups.[103]

Furthermore, expand the mandate and firepower of the European Investment Bank (EIB), allowing it to finance higher-risk innovative investment and to speed up the transition to the Electro Union.[104]

And **strengthen the international role of the euro** by creating a highly liquid European safe asset—for instance, permanent Eurobonds—to support the emerging European capital market.[105] A digital euro is part of this endeavour. The euro is already the world's second global reserve currency.[106] If issued at sufficient scale, a highly liquid euro-denominated safe asset would deepen capital markets, lower borrowing costs, and improve financial stability, thereby enhancing Europe's economic and financial resilience.

PROTECT THE SINGLE MARKET

Protecting the single market means ending Europe's era of hyperglobalisation (a term coined by the economist Dani Rodrik for excessive trade liberalisation). There is no denying that hyperglobalisation has benefited European consumers. However, economic success depends on more than just happy consumers. Thriving businesses with thriving workers in a thriving living environment are also hugely important. And that requires initiating a race to the top.

It has become clear that if Europe wants to initiate a race to the top, a new trade policy capable of defending the single market and its high standards is indispensable. The reason is that hyperglobalisation is not compatible with ambitious quality, labour and environmental standards *and* the preservation of European industry. This is a new European version of Rodrik's famous policy trilemma.[107] Europe can combine no more than two of these three policy choices, which leads to three possible outcomes:

(1) If Europe opts for hyperglobalisation and wishes to preserve its industry, it must drastically dilute its standards to remain competitive.

(2) If Europe opts for hyperglobalisation and ambitious standards, cheap imports will jeopardise the future of European industry.

(3) If Europe opts to preserve its industry and ambitious standards, it must pursue a fundamentally different trade policy.

The third option is by far the best, because it is most compatible with a win-win vision for Europe. So, reform EU trade policy. On the one hand, **apply European standards much more rigorously to imported goods**. On the other hand, **prevent economic, social and environmental dumping**, meaning unfair cost advantages based on state subsidies or lower social and environmental standards. This can be done by offsetting these unfair cost advantages through a far more comprehensive border adjustment mechanism—in other words, by extending CBAM to many more strategic product groups and other types of standards.[108]

This is a win-win for producers, workers and the environment, in Europe and in other countries, because it helps transforming the global race to the bottom into a race to the top.

5 REWARD EXCELLENCE

Europe attracts talent with theoretical and practical skills from all over the world. Its strong democratic institutions make it even more attractive. Moreover, Europe offers excellent education and many opportunities to pursue research careers, hosting more than 2 million researchers.[109]

Thus, Europe has an exceptionally deep talent pool. Despite that, Europe faces skills challenges, such as low retention of talented researchers, and a skills imbalance due to overqualification.[110]

Both challenges are the result of an overemphasis on quantity rather than quality. It is not the number of researchers or the number of research articles that matters most, but the excellence of that research. Similarly, it is not the number of highly skilled workers that matters most, but the match between the skills developed and the skills that Europe needs for the future.

Rewarding excellence is part of the answer. Attracting talent is not Europe's main problem; retaining it is.[111] This requires the courage to treat strong and exceptional performers differently.

So, provide excellent researchers and excellent innovators with top-quality jobs and allow them greater freedom to pursue their own ideas. And give them easier access to European capital, via the mechanisms outlined above.

Furthermore, strengthen the link between vocational training systems and the needs of a future-proof economy, so that people with practical skills can more easily find rewarding jobs that match their qualifications. At the same time, improve the career prospects of workers with vocational and technical training, recognising their indispensable role in Europe's success.

Another part of the answer is greater labour market mobility.[112] Make it easier for talented researchers and innovators to compete Europe-wide for the best job opportunities and research grants.[113] And **remove obstacles that prevent top researchers and innovators from the US and China from moving to Europe**, by streamlining visa and immigration rules for skilled professionals from these countries.

Europe offers the best of both worlds: an excellent innovation climate *and* the European way of life, with an excellent quality of life, a vibrant culture and good governance.

CONCLUSION

Europe today faces a fundamental choice that every generation must make: What kind of progress do we seek? **This vision paper advocates making a radical choice for qualitative growth**: for higher-quality goods and services, higher-quality jobs, a higher quality of life, and a healthier, more biodiverse environment.[114]

Focusing on quantity is essentially a focus on means, whereas qualitative growth is ultimately about ends: not what we have, but who we are.

Seen from this new perspective, Europe's situation is far from bleak. We have been dealt a good hand. The challenge now is to play it better, rather than trying to imitate other players.

Europe is strongly positioned to achieve qualitative growth. Europe as the Continent of Quality is already vibrant in many ways and in many places.

European countries *already* deliver some of the world's highest levels of quality of life, quality of jobs and environmental quality. European firms are globally renowned for the quality of their products and services and their ingenuity and are leading the way in sustainability. European governments provide healthcare, education, public infrastructure and other public services that are among the most comprehensive and accessible in the world.

Thus, **Europe has all it takes to double down on our win-win strategy and to persevere, come what may**.

This vision paper offers concrete and practical solutions for accelerating the transition to this new and better economy. We hope it has inspired you to embrace this vision with joy and determination.

NOTES

1 Wages corrected for inflation.

2 Aldasoro, I. et al. (2025), 'AI adoption, productivity and employment: Evidence from European firms', EIB Working Paper 2026/02.

3 See the detailed discussion of the Action Points.

4 Many countries in the Global South have been condemned to exporting goods and services based on cheap labour and cheap raw materials because of a global race to the bottom. If wages in one country rise, multinationals simply move production to another—cheaper—country. European enforcement of minimum social and ecological standards for imported goods and services will enable these countries to export while maintaining higher wage levels and building social and ecological protection systems at their own discretion. See: Schenderling, P.J. (2026), *Quality, Made in Europe: A Roadmap to a Future-Proof Economy,* Leiden: Bot Media Group, Chapter 4.

5 See the investment rate statistics (investment as a percentage of gross value added) and profit share statistics (profits as a percentage of gross value added) of non-financial corporations in the EU from Eurostat. Unfortunately, Eurostat statistics are only available from 2014. However, a case study of the Netherlands based on data from Statistics Netherlands shows that the underlying trends of a stagnant investment rate in combination with a high profit share were in this case present long before 2014. Another case study shows an interesting exception to the rule: in Belgium the investment rate is significantly higher than in most of Europe and the R&D intensity (gross domestic expenditure on R&D, both public and private, as a percentage of GDP) rose by 0.89 percentage points between 2014 and 2024 to a respectable level of 3.25% of GDP. Currently, only Sweden and Austria have a higher R&D intensity. A notable exception to the generally high profit share is France, with a profit share of 32%, well below the European average of 40%. Source: Eurostat. For a detailed analysis of profits and investments of European corporations, see: Mazzucato, M., Fleischman, S., Emerson, A.H. and Merling, L. (2026), 'Labour Squeezed, Investment Stalled: The Hidden Cost of Financialisation in Europe's Corporate Sector', UCL Institute for Innovation and Public Purpose.

6 Veugelers, R. (2024), 'An Innovation-Based Industrial Policy for the EU', *Intereconomics*, 2024, 59(5), 254-261. Quote: "Although progress on the public part of R&D expenditure in the EU-27 is too slow to reach its stated 1% [of GDP] target, the EU deficit relative to the US on the publicly funded part of R&D is almost on a par. However, it is not the public sector, but the business sector that is responsible for the persistent and growing EU R&D deficit relative to the US."

7 Cleantech for Europe has demonstrated this in their reports.

8 See section 3.

9 Schenderling, P.J. (2026), *Quality, Made in Europe: A Roadmap to a Future-Proof Economy,* Leiden: Bot Media Group. Quote: "Over the past four decades, European leaders have chosen to transform the economy from a system designed to serve society to an autonomous system. During that period, our economy has come to resemble a self-driving car without a steering wheel."

10 See section 2.

11 See section 2.

12 See Piketty, T. (2014), *Capital in the Twenty-First Century*. And: Rockström, J. et al. (2023), 'Safe and just Earth system boundaries', in: *Nature* 619, 102–111 (2023).

13 E.g. Veugelers, R. (2024), 'An Innovation-Based Industrial Policy for the EU', *Intereconomics*, 2024, 59(5), 254-261. And: Herzog-Stein, A. & G.A. Horn (2018), 'The Productivity Puzzle: It's the Lack of Investment, Stupid!', *Intereconomics*.

14 The so-called 'European paradox'. See: Veugelers, R. (2024), 'An Innovation-Based Industrial Policy for the EU', *Intereconomics*, 2024, 59(5), 254-261. And: Bergeaud, A. (2024), 'The Past, Present and Future of European Productivity'.

15 See: Buttkereit, S., Pfitzner, R., Giannelli, F., Rochet, A. & K. Zálnoky (2024), 'The Green Deal and Beyond: A Business Agenda for a Sustainable, Competitive and Resilient Europe', Corporate Leaders Group Europe, University of Cambridge Institute for Sustainability Leadership and We Mean Business Coalition.

16 A recent survey of the world's leading businesses, including many European businesses, found that almost nine in ten surveyed companies maintained or increased their climate-related investments over the past year. Confidence in sustainability as a source of long-term competitive advantage is even stronger. Almost 40% of these companies strengthened their climate targets in 2025 and only 4% scaled them back. See: World Business Council for Sustainable Development, 'Business Breakthrough Barometer 2026'.

17 This also applies to economics, where collective hopes, fears, expectations and other psychological phenomena can be self-fulfilling. E.g. Akerlof, G. & R. Shiller (2009), *Animal Spirits: How Human Psychology Drives the Economy, and Why It Matters for Global Capitalism,* Princeton University Press.

18 Middelaar, L. van (2026), 'Europa is een machtsblok in wording – alleen moeten we dat zelf nog gaan inzien [Europe is a power bloc in the making, but we have yet to realise it]', *NRC*, 16 januari 2026.

19 With thanks to Martin Porter of the Corporate Leaders Group for this formulation.

20 Middelaar, L. van (2026), 'Europa is een machtsblok in wording – alleen moeten we dat zelf nog gaan inzien [Europe is a power bloc in the making, but we have yet to realise it]', *NRC*, 16 januari 2026.

21 For a general analysis of the importance of a strong civic mindset for the power of a society, see: Holslag, J. (2023), *The Citadel State: Of Statecraft, Power, and Ideals*. For an analysis of the significance of morale from a military perspective: O'Brien, P. P. (2025). *War and Power: Who Wins Wars – and Why*. London: Viking.

22 James, W. (1890), *The Principles of Psychology Vol. II*, New York: Henry Holt and Company, pp. 563-567.

23 James, W. (1890), *The Principles of Psychology Vol. II*, New York: Henry Holt and Company, pp. 568-579.

24 "The whole drama is a mental drama. The whole difficulty is a mental difficulty, a difficulty with an object of our thought." James, ibidem, p. 564.

25 "Sustained in this way by a resolute effort of attention, the difficult object erelong begins to call up its own congeners and associates and ends by changing the disposition of the man's consciousness altogether. And with his consciousness, his action changes, for the new object, once stably in possession of the field of his thoughts, infallibly produces its own motor effects" James, ibidem, p. 564.

26 Arguably, civil society and civic engagement were *invented* in Europe. See: Black, A. (1984), *Guild and State: European Political Thought from the Twelfth Century to the Present*, London: Methuen and Co. For a definition of civil society Black refers to Marsilius of Padua (1275–1343), a great political philosopher of the Middle Ages: "Marsilius defines the *civitas* as the community in which men live *civiliter*, well, with leisure to pursue *opera liberalia*, liberal tasks, and to exercise the practical and speculative virtues of the soul." (p. 88)

27 See the Introduction to: Schenderling, P.J. (2026), *Quality, Made in Europe: A Roadmap to a Future-Proof Economy,* Leiden: Bot Media Group.

28 Taylor, C. (1989), *Sources of the Self: The Making of the Modern Identity*, p. 26.

29 Quote: "The greatness of our history consists of the movements towards freedom which arise *in discussion* in Athens, in republican Rome, in the early history of Iceland, in the towns of the late Middle Ages, in the constitutions of Switzerland and the Netherlands, in the idea of the French Revolution despite its degeneration and transition to dictatorship, in the classical political history of England and America. Where an abstract freedom is made the goal, it becomes a phrase on the way to some new tyranny. Where honest self-compulsion of all who work together takes place in freedom, you find a concrete advance towards the realisation of freedom of circumstances." Another quote: "Europe's character

described as the impulse to freedom, as real history, as the source of universal knowledge, signifies Europe's fundamental imperfectibility. For freedom, history and knowledge never reach their goal. Thus, Europe is not complete, and thus it is still to appear what we from our basic life can be. Those characteristics of our being, just because they cannot be possessed, must always offer us new chances." From: Jaspers, K. (1948), *The European Spirit*, London: SCM Press, p. 41 and p. 43.

30 Quote:

Freude heißt die starke Feder
In der ewigen Natur.
Freude, Freude treibt die Räder
In der großen Weltenuhr.

(…)

Aus der Wahrheit Feuerspiegel
Lächelt sie [die Freude] den Forscher an.
Zu der Tugend steilem Hügel
Leitet sie des Dulders Bahn.

(…)

Duldet mutig Millionen!
Duldet für die beßre Welt!
Droben überm Sternenzelt
Wird ein großer Gott belohnen.

31 See: Herzog-Stein, A. & G.A. Horn (2018), 'The Productivity Puzzle: It's the Lack of Investment, Stupid!', Intereconomics. And: Bergeaud, A. (2024), 'The Past, Present and Future of European Productivity'.

32 Schenderling, P.J. (2026), *Quality, Made in Europe: A Roadmap to a Future-Proof Economy,* Leiden: Bot Media Group.

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34 Guasch, J.L., Racine, J.L., Sánchez, I. & M. Diop (2007), 'Quality Systems and Standards for a Competitive Edge', World Bank.

35 E.g. Fabrizi, A., Gentile, M. Guarini, G. & V. Meliciani (2024), 'The impact of environmental regulation on innovation and international competitiveness', *Journal of Evolutionary Economics* 34:169–204. And: Munari, F. (2019), 'Do Environmental Rules and Standards Affect Firms' Competitive Ability?', *European Papers*, 4:1, pp. 207-224. And: Vollebergh, H. & E. van der Werf, 'The Role of Standards in Eco-innovation: Lessons for Policymakers', CESifo Working Paper Series No. 4266. And: Rozendaal, R. & H. Vollebergh (2024), 'Policy-induced Innovation in Clean Technologies: Evidence from the Car Market', Tilburg University, School of Economics and Management. And: Rubashkina, Y, Galeotti, M. & E. Verdolini (2014), 'Environmental Regulation and Competitiveness: Empirical Evidence on the Porter Hypothesis from European Manufacturing Sectors'. And: Wang, Y., Sun, X. & X. Guo (2019), 'Environmental regulation and green productivity growth: Empirical evidence on the Porter Hypothesis from OECD industrial sectors', *Energy Policy* 132, 611–619. And: Ambec, S., Cohen, M., Elgie, S. & P. Lanoie (2011), 'The Porter Hypothesis at 20: Can Environmental Regulation Enhance Innovation and Competitiveness?', Resources for the Future Discussion Paper No. 11-01. And: Marelli, L., Gastaldi, C., Trane, M., Guerreiro Miguel, M., Delgado Callicó, L. et al. (2026,' A pathway to Europe's Competitiveness: the clean transition', Joint Research Centre.

36 Technically, this refers to a higher wage share (wages as a share of gross value added).

37 E.g. Amendola, M. & F. Ruggeri (2025), 'Wage share and labor productivity: empirical evidence from OECD countries', Department of Economics University of Siena 935. And: Storm, S. & C.W.M. Naastepad, 'Wage-led or Profit-led Supply: Wages, Productivity and Investment', International Labour Organization Conditions of Work and Employment Series No. 26. And: Fontanari, C. & A. Palumbo (2022), 'Permanent Scars: The Effects of Wages on Productivity', Institute for New Economic Thinking Working Paper No. 187. And: Zamparelli, L. (2024), 'On the positive relation between the wage share and labor productivity growth with endogenous size and direction of technical change', Economic Modelling 131, 106622. And: Meager, N. & S. Speckesser (2011), 'Wages, productivity and employment: A review of theory and international data', European Employment Observatory. For a more general discussion of labour standards and prosperity see: Sandbu, M. (2022), *The Economics of Belonging: A Radical Plan to Win Back the Left Behind and Achieve Prosperity for All*.

38 E.g. Kleinknecht, A. (2020), 'The (negative) impact of supply-side labour market reforms on productivity: an overview of the evidence', *Cambridge Journal of Economics*. And: Ketels, C. (2015), 'Competitiveness and Clusters: Implications for a New European Growth Strategy', WWWforEurope Working Paper, No. 84.

39 Koster, F. (2020), 'Arbeidsrelaties in beweging. Een overzicht van de literatuur naar de inzet van de factor arbeid' [Employment Relationships in Motion: A Review of the Literature on Labour Utilisation], WRR Working Paper 40. The Hague: Netherlands Scientific Council for Government Policy (WRR). See also: Rohman, J. (2016), 'The Business Case for a High-Trust Culture'.

40 In other words, an integrated socio-ecological vision. For an in-depth reflection on integral ecology, see: Pope Francis (2015), *Laudato si': On care for our common home*, Chapter 4.

41 Aguilar-Hernandez, G.A., Dias Rodrigues, J.F. & A. Arnold Tukker (2020), 'Macroeconomic, social and environmental impacts of a circular economy up to 2050: A meta-analysis of prospective studies', *Journal of Cleaner Production* 278 (123421). And: Circle Economy & Deloitte (2026), 'The Circular Gap Report 2026'. Paul Schenderling was part of the expert panel. Europe's leading businesses recognise this potential, see: Ritthoff, M., Proff, S., Götz, T., Wilts, H., Cembrero, D., Chowdhury, T., Markkanen, S. & K. Zálnoky (2023), 'Embracing circularity: A pathway for strengthening the Critical Raw Materials Act', Corporate Leaders Group Europe, University of Cambridge Institute for Sustainability Leadership, Wuppertal Institut and We Mean Business Coalition.

42 European Chemical Society (2023). See: https://www.euchems.eu/euchems-periodic-table/

43 How much energy you get out of an energy source compared with how much energy you need to invest to obtain it.

44 Ahmed, N., Desai, D., Dixson-Decleve, S., Lopez Mayor, V.I. & G. Reid (2026), 'Electrified Sovereignty as Solution to Iran War Energy Shock: Why UK and EU Energy Security Now Depends on Rapid Digitalisation, Grid Reform and Clean Power Scale-Up', Earth4All Report.

45 Fraunhofer ISI (2024), 'Direct electrification of industrial process heat. An assessment of technologies, potentials and future prospects for the EU'.

46 Agora Energiewende, Agora Industry and IDDRI (2026), 'Powering Europe's industry: Competitiveness, electrification and the role of electricity prices'.

47 As Michael Le Page from the *New Scientist* recently noted: "Official projections for how much the world will warm are already catastrophic—and now it appears the world may warm by 25 per cent more than they suggest." He refers to this recent study that showed that we have underestimated global warming: Gyuleva, G., Fischer, E., Knutti, R. & S. Sippel (2026), 'Recent Temperature and Energy Imbalance Trends Point to Higher Estimates of Future Warming', *Earth's Future* 14:8.

48 Acemoglu, D. & S. Johnson (2023), *Power and Progress: Our Thousand-Year Struggle over Technology and Prosperity*.

49 Rodrik, D. (2026). *Europe must look beyond the US and China to solve its productivity problem. Project Syndicate*.

50 Inspired by the Japanese top runner approach. Similar schemes were adopted by the EU, for example ESPR/Ecodesign and emission standards, which ripple through the world economy. See: Kimura, O. (2010), 'Japanese Top Runner Approach for Energy Efficiency Standards', SERC Discussion Paper 9035. And: Crippa, M., Janssens-Maenhout, G., Guizzardi, D. & S. Galmarini (2016), 'EU effect: Exporting emission standards for vehicles through the global market economy', *Journal of Environmental Management* 183:3, pp. 959-971.

51 Contemporary and historical examples of quotas have shown that they are highly effective. The reason is that quotas allow precise control to achieve a desired maximum, with a predetermined path ensuring gradual reduction. Consider the ozone layer issue that scientists identified in the 1980s. The hole in the ozone layer was caused by emissions of CFC gases, which had countless applications (e.g., as coolants in refrigerators). The scientists' concern then drew political attention. Consequently, under the Montreal Protocol (1987), a global quota on CFC gases was implemented, which was gradually reduced over several decades along a prespecified path. This long-term predictability gave companies time to anticipate the ban and adopt innovations to replace CFC gases with less harmful alternatives. Scientists regard this quota as the most effective environmental treaty ever: vast amounts of CFC gases have now been phased out; the ozone layer is recovering and is expected

to be fully restored by 2050. So far, this has been the only planetary boundary that humanity exceeded and then restored. Quotas are also highly efficient, just as efficient as environmental taxation. For a detailed discussion of the efficiency aspect of quotas, see Perman, R. et al. (2011), *Natural Resource and Environmental Economics*, Pearson, Chapter 7. And: Rosen, H.S. & T. Gayer (2008), *Public Finance*, McGraw-Hill, Chapter 5.

52 Perman, R. et al. (2011), *Natural Resource and Environmental Economics*, Pearson. For a policy discussion, see also: Schenderling, P.J. (2026), *Quality, Made in Europe: A Roadmap to a Future-Proof Economy,* Leiden: Bot Media Group, Chapter 7.

53 Vollebergh, H. & C. Brink (2020), 'What Can We Learn from EU ETS?', ifo DICE Report, Vol. 18. (Note: Prof. Vollebergh was among the relatively small group of economists who, during the formative phase of the European emissions trading system, were engaged in addressing fundamental design questions surrounding emissions trading systems.)

54 For a more detailed elaboration, see: Schenderling, P.J. (2026), *Quality, Made in Europe: A Roadmap to a Future-Proof Economy,* Leiden: Bot Media Group, Chapter 7.

55 Cornillie, J. et al. (2024), 'A Clean Industrial Deal Delivering Decarbonisation and Competitiveness'. See also Agora Energiewende, Agora Industry and IDDRI (2026), 'Powering Europe's industry: Competitiveness, electrification and the role of electricity prices'.

56 Ahmed, N., Desai, D., Dixson-Decleve, S., Lopez Mayor, V.I. & G. Reid (2026), 'Electrified Sovereignty as Solution to Iran War Energy Shock: Why UK and EU Energy Security Now Depends on Rapid Digitalisation, Grid Reform and Clean Power Scale-Up', Earth4All Report.

57 Ibidem.

58 The IEA advocates doubling the average annual rate of improvement in global primary energy intensity, from just over 2% in 2022 to just over 4% per year by 2030. This target was incorporated into the formal outcome of the first Global Stocktake at COP28. See: International Energy Agency (2023), *Net Zero Roadmap: A Global Pathway to Keep the 1.5 °C Goal in Reach – 2023 Update*. And: United Nations Framework Convention on Climate Change (2023), *Outcome of the First Global Stocktake*, Decision 1/CMA.5, paragraph 28.

59 Ahmed, N., Desai, D., Dixson-Decleve, S., Lopez Mayor, V.I. & G. Reid (2026), 'Electrified Sovereignty as Solution to Iran War Energy Shock: Why UK and EU Energy Security Now Depends on Rapid Digitalisation, Grid Reform and Clean Power Scale-Up', Earth4All Report.

60 Schneemelcher, P. & P. Ständer (2018), 'Wage-Productivity Gap – Four Tales from the Eurozone'. Jacques Delors Centre. France is an exception, because in France the bargaining power of workers has remained relatively strong.

61 This recommendation complements the 2022 directive requiring member states to increase collective-bargaining coverage as well as the level and accessibility of minimum wages. There is an important nuance to this recommendation: if real-wage growth is higher than productivity growth, employment falls, which negatively affects the people involved. If real-wage growth is structurally higher than productivity growth, competitiveness is negatively affected and wage moderation may be necessary to restore competitiveness. Therefore, the aim should be to link real-wage growth proportionately to productivity growth, ensuring a fair share of the benefits of productivity growth for both employees and employers. See: Storm, S. & C.W.M. Naastepad, 'Wage-led or Profit-led Supply: Wages, Productivity and Investment', International Labour Organization Conditions of Work and Employment Series No. 26. And: Meager, N. & S. Speckesser (2011), 'Wages, productivity and employment: A review of theory and international data', European Employment Observatory.

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