

# WORLD COMMERCE REVIEW

SUMMER 2024

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DISCUSS EU DE-RISKING

CHRISTINE LAGARDE  
CONSIDERS HOW IDEAS CAN  
BE UNLOCKED TO BENEFIT  
THE EUROPEAN ECONOMY

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EXPLORE THE WTO  
E-COMMERCE MORATORIUM

THE GLOBAL TRADE AND FINANCE PLATFORM

# FOREWORD

## A waning of trust

It seems that political campaigns are controlled by focus groups, PR and marketing, ensuring that minority views are amplified to become the dominant policy. This applies to all political factions, be they left, liberal or conservative. If you believe in one aspect then you have to accept all other views on whatever spectrum you are, whether they are correct or not.

We have seen this in the European elections and are seeing in the forthcoming elections in the UK and the United States. We have seen this in all recent elections. There are now only two conflicting views on most topics, COVID, Brexit, Israel, Ukraine, biological sex...

Nothing can be debated (science is settled), and this lack of debate weakens trust in the society and its institutions. What happens when citizens no longer trust governments and institutions? Democracy, scientific freedom and freedom of speech are constantly under attack because of financial, political, religious and other special interests. These essential values get eroded if we do not constantly work on preserving them.

What is really odd is a changing perspective which has led to those of us who hold what you might describe as traditional views finding themselves being denounced as being far-right. It is a curious situation, and it should give

us pause for thought. Are people really any different than they were a generation ago? Left-wing views of the last century are now considered extreme right-wing. Who would have thought caring about your community, law and order and your religion would be so bad?

The institutions seem to be suffering from an institutional Stockholm Syndrome, where executives are trained from intake to conform and just do the job. Take no risks. Just do what the board, executive team and stakeholders ask. Take no risks. It becomes a zero-risk institution.

This might explain the desire for new policy initiatives such as the Green Deal. Thoughts about the national champion strategies of the 1970s are invoked. These ended in total failure at a huge cost to the economy. Are the politicians of today better than those of the past? It seems unlikely.

You do not get progress with a zero-risk institution, you get stagnation. Some would say you can't control and rule by consensus. Some might say that the Enlightenment broke a 1,300-year economic stagnation in Europe, and the vast majority of the population in Europe and the World benefitted from freedom of thought and the use of science to better mankind. We seem to be in a new age where the Luddites are holding sway, whilst claiming that they are progressive.

To regain trust institutions (not just in Europe, but all global bodies) they must purvey the truth and not some idea that has gone through the PR machine. As George Orwell once wrote: *"Journalism is printing what someone else does not want printed; anything else is public relations."* ■

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# How the Ukraine war changed the global sanctions landscape

The sanctions imposed have created significant uncertainty and complex compliance challenges. Brent Connor, John Pearson, Henrietta Worthington and Jaime Rosenberg write that compliance processes need to be in order

**T**he sanctions measures introduced in response to Russia's invasion of Ukraine have been unprecedented. Since the invasion on 24 February 2022, nations and regions including the EU, UK, US, Australia, Canada, Japan, New Zealand and others have worked together to develop a [complex toolbox of measures](#) with the aim of *"cutting off funding for Putin's illegal war from every angle."*

The global response is notable for many reasons, including the speed of implementation, the aligned approach and the novel sanctions introduced. The coordinated actions have also had a significant impact on businesses that are affected by the measures.

Indeed, the speed and expansive nature of the sanctions regimes imposed in response to the Russian invasion, whilst lauded by many, has created significant uncertainty and complex compliance challenges for businesses.

### **Compliance challenges and effects – speed and breadth of sanctions**

To date, the EU has introduced thirteen packages of sanctions against Russia. The bloc was able to act extremely quickly in spite of the number of member states required to agree on measures, which has slowed down the implementation of such regimes in the past.

The nature of the situation meant that the sanctioning jurisdictions introduced wave after wave of sanctions, in addition to amendments and derogations to the existing sanctions. Consequently, many companies were left rushing to understand and adopt the measures within the tight timeframes imposed for implementation.

Similarly, the US has implemented an extensive array of sanctions and export controls. These measures have included 'primary sanctions' that require compliance by US persons, and secondary sanctions that bar entities regardless of location from doing business with individuals and entities designated on the US lists.

Unlike many regulatory requirements which provide extended grace periods for companies to implement necessary amendments to their internal processes, many of the sanctions restrictions came into immediate effect or provided expedited grace periods.

A consequence of the swift way the regimes have been introduced is companies failing to understand their obligations and of certain measures having unintended consequences. As a result, regulators have seemingly

*It is clear that we have entered a new era of sanctions: the global response to the Russian invasion of Ukraine prompted the G7 and its allies to apply significant pressure on Russia via sanctions and to develop previously untested measures*

found themselves on the backfoot publishing clarifications, derogations and extended guidance to help companies navigate through the requirements.

For instance, the UK's publication of its [legal services restrictions](#) caused a stir in the legal community prompting the UK's Law Society to [issue a briefing](#) to Parliament stating that the restrictions imposed by the regulation would actually "*negatively impact the ability of solicitors to support businesses to comply with the complex web of sanctions legislation and enable them to cut ties effectively with Russia*" (emphasis added). Ultimately, a general licence was issued to permit the provision of legal services in relation to sanctions imposed by any jurisdiction.

However, the perceived 'trial and error' approach has also had positive effects and has led to an increased information flow between the private sector and regulators. This approach has allowed regulators to better understand how regulations impact specific industry sectors and to work more collaboratively in their development of new measures.

Sanctioning jurisdictions continue to publish guidance, and expanded guidance by sector, with FAQ sections in a way that has not been seen previously, particularly in the EU and the UK. The US has issued 100 new FAQ documents including defining terms, and has processed hundreds of requests for licences and interpretive guidance.

The aim of the guidance is to help businesses avoid compliance pitfalls. In practice, transactions parties are placing significantly more weight on the guidance than they did prior to 2022.

In addition to expanding guidance tools, the [US has issued a business advisory](#) "*to help ensure that businesses, individuals, and organisations have the information necessary to inform their considerations regarding the range of*

*heightened risks associated with doing business in or engaging in transactions involving the Russian Federation or Russia-occupied territories of Ukraine.”*

This includes activities that involve the Russian military-industrial base that were not explicitly addressed by sanctions, export controls or other trade restrictions providing clarity for US entities to comply with the extensive new sanctions.

### **Why new measures pose fresh challenges**

Over two years on from the invasion, it is clear that despite the wide-ranging measures introduced, there is still significant leakage or diversion of goods to Russia. This has led to a focus on anti-circumvention and the introduction of novel sanctions measures. In particular, the UK and EU are concerned with monitoring how high priority items are still able to reach Russia.

From a US perspective, although comprehensive sanctions are not a new concept to US regulators (considering the US sanctions programmes including Cuba, Iran, and North Korea), the US government has not issued a comprehensive sanctions programme against Russia to date because of its concern of entangling Western allies that are still purchasing Russian oil and gas.

The US Russia sanctions programme is consequently extremely complex because it is not comprehensive, with the US's fragmented approach targeting some sectors of the Russian economy, but not others.

It has become clear that sanctions restrictions have forced companies and individuals to seek alternative routes to transfer goods to Russia, thereby undermining the impact of the restrictive measures. Indeed, exports of high priority items to Russia's neighbours **have increased enormously**, and have an increased risk of re-export to Russia.

Recent waves of sanctions have therefore focused on anti-circumvention measures to try and identify how circumvention is taking place, including increased notification obligations on parties. For example, the EU's recent introduction of a 'No Russia' clause requiring for EU exporters to contractually prohibit the re-export of certain sensitive goods to Russia.

This requirement was specifically introduced *"to combat the circumvention of EU export bans"* and the EU hopes that the notification of any breaches will assist in identifying how high priority items continue to be channelled to Russia.

### **Alignment between sanctioning jurisdictions**

Whilst the G7 nations have moved together on their approach to sanctions for some time now, the Russian sanctions were significant in the unified global approach: nations are increasingly moving in lockstep to implement regimes, multiplying the impact of economic measures.

Despite the overall cohesive approach adopted by the G7 countries in response to the Russian invasion, the surfeit of new sanctions has created significant compliance challenges for international companies and companies that do business overseas as there are inherent underlying differences between the aligned regimes.

### **Enforcement**

When navigating the fragmented sanctions landscape, in practice many companies facing multiple regimes have made the commercial decision to prioritise the US requirements, usually on the basis of perceived appetite for enforcement.



Historically, the US has been the most aggressive in implementing and enforcing economic sanctions and export controls. In 2023 alone, the Office of Foreign Assets Control (OFAC) enforced 17 penalties against entities who violated US sanctions totalling USD 1,541,380,594.08 in fines.

It enforced four penalties totalling USD 8,085,195.86 in fines under its Russian sanctions regime in 2023. OFAC's continued enforcement demonstrates the US commitment to compliance and protecting the US financial system from bad actors. With the release of numerous compliance guidance, OFAC is committed to working with the private sector to further promote the understanding of, and compliance with, sanctions requirements.

In contrast to the US, in the UK, no fines have been issued to date as a result of breaches of the Russian sanctions regime, which has led the Chair of the Foreign Affairs Committee [to query](#) whether it's *time "to ask difficult questions about the efficacy of [the Office of the Superintendent of Financial Institutions (OSFI)]'s enforcement capacity."*

Since it was given the right to impose monetary penalties in 2017, OSFI has issued 10 fines totalling £22 million. However, it is coming under increasing pressure to use its fining powers. In May 2024, OSFI updated its sanctions enforcement and monetary penalties guidance, summarising how it deals with breaches.

In the EU, enforcement is the responsibility of each member state and has therefore been patchy. However, the EU, like the UK, has shown its appetite to increase enforcement across the bloc. In March 2024, the [EU approved rules](#) aimed at harmonising enforcement through a new EU Directive that entered into force on 19 May 2024.

The new rules criminalise sanctions violations and introduce a common definition of, and minimum penalties for, sanctions violations. The EU has also emphasised the importance of ensuring that judges are *"able to issue dissuasive fines"* signalling that the bloc may be moving towards a US style enforcement approach.

## Increasing use of thematic sanctions

The scope of thematic sanctions has evolved hugely since the US enacted the Global Magnitsky Human Rights Accountability Act in 2016. Thematic sanctions regimes now encompass chemical weapons and non-proliferation, corruption, cyber-attacks, human rights, narcotics and terrorism.

Thematic sanctions regimes give the sanctioning jurisdiction the authority to impose targeted sanctions on individuals or companies anywhere in the world who have been involved in the specified act (eg. human rights abuses or drug trafficking). Globally, there were [1,044 thematic sanctions designations made in 2023](#), which is nearly double the previous year.

The increase in the use of thematic sanctions creates compliance issues similar to those addressed previously in the context of Russian sanctions, including, for example, issues of breadth, novel measures and coordination in approach. A recent example of a novel thematic sanctions measure is the US's proposed [Fentanyl Eradication and Narcotics Deterrence Off Fentanyl Act](#) (or the FEND Off Fentanyl Act).

If signed into law, the FEND Off Fentanyl Act will provide a framework for the US to sanction individuals and entities responsible for trafficking fentanyl and other illicit opioids.

Recently, OFAC and OFSI coordinated to implement sanctions under a thematic sanctions regime (namely the cyber-attacks framework). The [US and UK's aligned actions](#) targeted a company and individuals tied to the China state-affiliated hacking group named Advanced Persistent Threat Group 31 (APT31) as a result of its *"malicious cyber campaigns targeting democratic institutions and parliamentarians."*

The UK revealed that it is highly likely that the group hacked the UK Electoral Commission between 2021 and 2022, and that they attempted reconnaissance activity against UK parliamentarians in 2021. The [US identified malicious cyber activity](#) by the group targeting certain critical infrastructure sectors over a period from 2010 to 2020.

The sheer breadth of the sanctions has increased hugely, and the number of designations has grown exponentially as a result. The nature of thematic sanctions provides that any bad actor across the globe can become subject to sanctions. Consequently, companies can no longer afford to just avoid dealing with high-risk jurisdictions, but rather must ensure that they heighten their due diligence practices.

It is clear that we have entered a new era of sanctions: the global response to the Russian invasion of Ukraine prompted the G7 and its allies to apply significant pressure on Russia via sanctions and to develop previously untested measures.

More information is flowing to sanctioning authorities that will allow them to develop their regimes further. Businesses will need to stay vigilant, ensure their compliance processes are in order and adapt to any further changes. ■

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# Heat stress at work

There are significant consequences of climate change for public health. Aude Cefaliello argues that intense heat is not just a hot topic but a political emergency

**C**limate change is creating new risks to which workers are exposed in unequal fashion. The first sectors to feel the impact of extreme temperatures, such as agriculture or construction, are also those with extremely precarious workforces. This impact will be complex, adversely affecting physical and mental health in both direct and indirect ways.

Applying the general principles of prevention to heat stress is possible but it will require a thorough overhaul of how work is organised and the adoption of European legislation that lays down a minimum protective threshold for all workers in Europe.

In 2022, 62,000 deaths in Europe were attributed to the summer heat. This figure, likely an underestimate, is only one among the many examples illustrating a growing challenge that we must address, namely the significant consequences of climate change for public health and the world of work.

Year after year, we have 'record temperatures', pushing us to the realisation that the 'historic' heatwaves of 20 years past have now become the new normal. The European Environment Agency forecasts a steady rise in average temperatures as well as increasingly frequent and intense heatwaves.

Each summer, workers die because of the intense heat, but they are also at risk from other aspects of climate change and ever more extreme weather conditions (flooding, storms, wildfires, etc.). The time for 'crisis management' is over; we must rethink how work is organised to ensure that workers do not lose their lives while they earn their living.

The change in our means of production and organisation is all the more important and urgent because climate change will not impact workers equally. If we do nothing, then the working conditions in sectors where workers are

already exposed to physical danger, such as agriculture, construction or the emergency services, will deteriorate further.

According to Eurofound, 23% of workers in the European Union are exposed to high temperatures for at least a quarter of their working hours; that proportion climbs to 36% in agriculture and industry, and to 38% in construction. These sectors are also known for having precarious working conditions and recruiting more vulnerable workers (temporary work and employment of foreign nationals).

*In the absence of specific legislation on heat stress, there is no guarantee that employers will abide by the recommendations*

If (legal) safeguards are not sufficiently robust, these workers are likely to be the next victims of the heatwaves which, in the words of Eric Klinenberg, are 'silent, invisible killers of silent, invisible people'.

### **The multi-faceted impact of global warming on workers' health**

Climate change will affect all workers in all sectors in all countries, but its impact will not necessarily be the same or have the same intensity across the board. First, there are key differences in people's working environments.

The European Agency for Safety and Health at Work (EU-OSHA) stresses that outside workers are most vulnerable to climate change, although its repercussions will extend to all sectors, in particular the emergency services, water supply, energy, transport and construction. The frequency and nature of climate risks will also not be the same for everyone.

Outside workers (including those working in construction, agriculture or maintenance of public spaces) are most exposed to extreme climate conditions (intense heat, but also UV radiation), whereas those working in the emergency, rescue and cleaning/maintenance services often find themselves in high-risk situations because of climate crises such as floods, landslides, storms, droughts and wildfires. Here, a lack of structural resources could aggravate the situation given that climate emergencies will increase the need for this kind of assistance.

When it comes to heat, indoor workers whose jobs require physical effort (eg. in warehouses or on production lines) will also be affected. Rises in temperature and humidity increase the risks involved in these kinds of jobs. The impact on health can be immediate, ranging from cramp and oedema to loss of consciousness and even death.

However, studies also point to the long-term risk of exposure to intense heat and its potential to cause heart, kidney or liver damage. The negative consequences of heat exposure may also have more long-term effects in the form of chronic tiredness, sleep disturbances and temporary infertility (especially for men).

Where workers' mental health is concerned, the INRS (the French National Scientific Research Institute) and ANSES (the French Agency for Food, Environmental and Occupational Health and Safety) note the greater psychosocial risks associated with global warming. The mere fact that heat is tiring and poses an additional cognitive strain (that can cause irritability or even violence) is a risk to workers (tension and conflict) when interacting with colleagues and non-colleagues alike.

Cognitive fatigue also increases the risk of accidents at work, especially because it reduces concentration and can lead to woolly decision-making in the work environment (posing extreme danger when driving or operating machinery).

As EU-OSHA has stressed in its guidance on heat stress, published in 2023, heat has not only direct (short-term and long-term) but also indirect effects on workers, through the exacerbation of existing risks such as air pollution, self-heating materials, the occurrence of biological agents, and exposure to chemical substances<sup>1</sup>.

Heat can also affect the application of certain OSH prevention measures, most notably the wearing of PPE, potentially even turning it into a risk itself.

### **OSH principles applied to heat stress prevention**

Incorporating climate hazards into occupational risk assessments is emerging as a key issue in workers' safety in Europe. The need to adopt sector-appropriate preventive measures, which acknowledge that the impact of climate conditions depends on the type of work concerned, underlines the importance social partner involvement in this issue.



Where heat-related risks are concerned, EU-OSHA's recent guide shows that it is perfectly possible to implement a collective system of technical and organisational preventive measures within an individual organisation.

The principles already set down in the 1989 Framework Directive (Directive 89/391/EEC) on health and safety at work can also be applied to heat stress, for example the obligation of the employer to evaluate all workplace risks and to adopt (first collective then individual) preventive measures following an information and consultation process with the workers and/or their representatives.

Employers should evaluate the risks created by climate change, taking various factors into account, including a worker's protective clothing, age and health. For heat exposure, biological differences should also be taken into account, given that some studies note that women may be less heat-tolerant than men.

According to EU-OSHA, the application of the existing obligation to develop a comprehensive, consistent policy to prevent heat stress should lead to the implementation of heat action plans, an early warning system and the implementation of safe working practices.

Risk assessment should be followed by the introduction of a hierarchy of controls, perhaps including emergency procedures and a 'buddy' system. Working in isolation poses a considerable risk in itself given that it is very difficult for someone to assess their own heat tolerance and that, if an incident occurs, assistance from a third party is vital for administering first aid and raising the alarm with the emergency medical services.

Additionally, the information that workers should receive on the dangers of heat stress should include descriptions to help them recognise the symptoms of heat-related injuries and illnesses, measures to reduce the risk,

acclimatisation procedures and procedures to follow in the event of heat-related illness. However, in the absence of specific legislation on heat stress, there is no guarantee that employers will abide by the recommendations.

### **A legislative void**

The other issue is that the measures recommended by EU-OSHA require the option for workers to adjust their time schedules and a needs-based reduction in labour intensity, regardless of economic pressures, which may require a larger workforce.

Currently, and especially in sectors with a vulnerable workforce, the reality of power differentials is obviously unlikely to lead workers to behave in a way that prioritises their health.

Consequently, in France, the sociologist Annie Thébaud-Mony, a specialist in occupational health, is advocating express reference to heat-related risks in the Labour Code, including changes to working schedules during periods of high temperatures. Nonetheless, no express provisions have yet been adopted, despite evidence of many heat-related health risks.

Despite this, some countries, such as Spain, have taken measures to reorganise work schedules during intense heat. In Greece, the guards working in the Acropolis have secured an adjustment to their time schedules that avoids their working in the afternoon during heatwaves. This flexibility is vital to protect workers' health but should apply across the board so that all sectors can benefit.

Legislation varies considerably from one country to another in Europe. In Spain, measures based on weather alerts are in place to prohibit outdoor working in periods of extreme heat. In Portugal, the temperature of a workplace must by law be between 18 and 22 degrees Celsius and have a specific humidity management system.

In the Belgian 'law on thermal environmental factors', targeted at both heat and cold, action is mandatory when the legal occupational exposure temperature limit is exceeded (according to the Wet Bulb Globe Temperature index, which strictly speaking considers not just temperature but also other elements like humidity and wind).

Although there are recommendations in Germany, there is no legal occupational exposure limit value on heat stress. The problem is that today's Berlin is tomorrow's Madrid. Legislation needs to be harmonised to provide a minimum protective threshold for all workers in Europe.

In this 'legislative void', national case law has begun to provide some answers regarding ad hoc protection for workers. In 2015 in France, roofers exercised their 'right to withdraw' in the event of serious, imminent heat-related danger and stopped working during a heatwave.

In Italy, a 2015 ruling found that where working conditions were unsafe or temperatures were 'prohibitive', workers have the right to stop working with no loss of earnings or danger of dismissal.

### **True worker protection requires a paradigm shift**

Today, we face a political emergency. From a European legislative standpoint, there is a genuine difference between indoor jobs and outside jobs, with outdoor workers excluded from the protective scope of some directives.

The sectors most affected are also those where precariousness is highest; we are once again in danger of sweeping the risks these workers face under the carpet. We must resist the discourse and fatalistic narrative that says, in effect, that nothing can be done, that it's an 'occupational hazard', or all part of the job.

The fact that conditions will become increasingly extreme is unfortunately a reality for the coming years, but we have a choice as to how we are going to respond collectively and how we decide to protect (or let down) the workers concerned.

But ensuring that workers are genuinely protected means revising economic needs and objectives downwards. We must restore human beings to the heart of how work is organised. The current neoliberal momentum means that we cannot maintain production and also ensure workers' health.

In other words, workplaces must see either an increase in available resources or a reduction in the pressures of work. All the recommendations point in one direction: the best preventive measures require workers to be able to regulate their own hours and tasks so that they can alternate rest periods with work.

This means giving some autonomy back to workers; but that autonomy will only be genuine if it is exercised in an environment where economic pressures and power are controlled and attenuated.

It would be naïve to assume that workers will behave in a way that prioritises their own health and their colleagues' if doing so puts their jobs at risk. In view of climate change, we need to adopt measures that will enable workers to be heard, empowered, recognised and protected. ■

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*This article is part of a comprehensive dossier published by the European Trade Union Institute (ETUI) in HesaMag #28 on Workers and the climate challenge.*

# Seizing leadership in the net zero economy

The EU is at a crossroads. Linda Kalcher and Neil Makaroff discuss if the European Union will lead the charge in the green economy or trail behind its global competitors in the US and China

**T**he European Union stands at a pivotal juncture in its industrial history. As the continent prepares to advance its economic trajectory through the next phase of the European Green Deal, it faces a critical question: Will it lead the charge in the green economy or trail behind its global competitors in the US and China?

### **The European Green Deal as a basis for modernisation**

The initial phase of the Green Deal helped Europe navigate through the aftermath of COVID-19 and the energy insecurities following Russia's war on Ukraine. The policies adopted in the last five years are delivering results: renewable deployment is booming at an unprecedented scale.

In 2023, a total of 56 gigawatts (GW) of solar and 17 GW of wind capacity were added, marking an unprecedented pace of renewable deployment. For the first time, wind power generation surpassed gas power, significantly enhancing energy security and reducing reliance on imported fuels.

Progress is also evident with electric vehicles (EVs) and heat pumps, leading to the emergence of new industries and jobs. The Hauts-de-France region, for example, is becoming a significant battery manufacturing hub, generating 20,000 jobs and contributing to the EU's goal of producing 90% of its batteries domestically by 2030.

Similarly, the regions of Silesia, northern Czechia and Slovakia are emerging as significant centres for heat pump manufacturing, which is crucial for reducing dependency on imported heat pumps and revitalising local economies. These regions are witnessing job creation and investment inflows that are setting a template for others to follow.

The European Green Deal is not just an environmental or energy initiative; it is a comprehensive modernisation agenda with concrete results: it has laid a robust foundation for Europe's energy transition, cutting imports of oil and gas by one third by 2030 and making [electricity more affordable](#).

The 27 EU countries are achieving significant milestones in renewable energy deployment, enhancing energy security by cutting fossil fuel imports, and delivering socio-economic benefits. These early successes are setting the stage for a prosperous and competitive future for the EU - but the job is not done yet.

*The time for decisive action is now; Europe must not hesitate. Investment cycles of companies are 10-15 years, so decisions taken in the next five years are vital for competitiveness and the path to climate neutrality*



## EU risks falling behind in the global race to net zero

As the world moves faster towards a climate neutral future, Europe finds itself at risk of falling behind. China's dominance in the production of key net zero technologies is evident, with 60% of mass production in strategic areas like solar photovoltaics and EV batteries controlled by China. 25% of electric vehicles and batteries and more than 90% of solar panels sold in Europe are [imported from China](#).

China pursues this out of economic and security interests, aiming to supply global markets. The United States is trying to catch up by rapidly scaling up its EV production through the Inflation Reduction Act (IRA). Meanwhile, energy prices in Europe are twice as high compared with China and the US, another impact on the competitiveness of the EU's industry.

## The need for a holistic industrial strategy

To remain competitive, Europe needs a modern, holistic industrial strategy that combines decarbonisation goals with reindustrialisation. Such a strategy would ensure that Europe does not remain a passive consumer of imported zero-carbon technologies but rather, becomes a powerhouse of industrial innovation. Key components of this European industrial strategy should include:

**Investing in a manufacturing base and creating jobs:** building a robust manufacturing base is essential to ensuring the production of key net zero technologies within Europe. This investment will create millions of new jobs in the net zero industry, providing economic security and fostering regional development.

**Using the single market with standards and creating lead markets:** the next few years are key to leveraging the power of the single market through the implementation of stringent standards and lead markets for green products. This will encourage the use of domestically-produced clean technologies and materials, driving demand and investment in European-made products.

**Decarbonising the existing industry:** transforming the current industrial base to adopt low-carbon technologies is crucial. This involves producing green steel, chemical and glass, increasing energy efficiency and promoting the use of renewable energy sources. Decarbonising existing industries will reduce reliance on fossil fuels, enhance resilience to energy price volatility and ensure long-term competitiveness in the global market.

Such a comprehensive industrial strategy will not only help Europe catch up in the global race for zero-carbon technologies but also establish it as a leader in clean industrial practices.

### **Long-term vision as the compass for action**

Defining the direction starts with the 90% climate target as proposed by the European Commission. This target is the cornerstone of a European Industrial Strategy, planning the decarbonisation of the economic base and identifying necessary net zero industries.

Strategic Perspectives' latest report, *Forging Economic Security and Cohesion in the EU* (2024), shows that cutting net greenhouse gas emissions by 90% by 2040 addresses environmental concerns and drives economic and industrial transformation. Key to this goal is shifting to renewable energy, with plans to electrify half of the EU economy, decarbonise the electricity sector by 2037, phase-out coal by 2030 and achieve 80% renewable electricity by 2040, requiring 70 GW of new renewable capacity annually.

The economic and security benefits of reaching the 2040 climate target are substantial. By 2035, decarbonising the power sector is expected to reduce electricity prices by 12% and household energy bills by two-thirds, potentially saving European households approximately €449 billion by 2040.

This transition will enhance the competitiveness of European industries while also strengthening the EU's energy independence and reducing its exposure to fossil fuel price volatility and geopolitical risks. The projected savings of up to €856 billion in fossil fuel imports between 2025 and 2040 underscore the economic advantages of this shift.

A comprehensive European Industrial Strategy is essential to complement the Green Deal. It can integrate political commitment, adequate funding and targeted investments to modernise the industrial base. This strategy can create a unified European value chain, support reindustrialisation in transitioning regions and generate new jobs in net zero industries by 2040. This approach can ensure the EU's competitiveness globally and enhance economic resilience and cohesion across member states.

### **Investing in building net zero industries and value chains**

Europe has maintained a strong share in wind power manufacturing and heat pumps, with domestic production covering 85% and 73% of market demand, respectively.

However, the European wind industry faces challenges due to value chain disruptions and inflation, leading to job losses and a weakened business case.

A European Industrial Strategy is an opportunity to also create net zero value chains. For example, currently, lithium extracted in Portugal is exported to China to be refined and then imported back in Europe in the form of a battery.

A pan-European Industrial Strategy would enable strategic partnerships across the continent, such as linking France's burgeoning battery industry with lithium resources in Portugal and manufacturing capabilities in Spain. These alliances are crucial for developing a resilient and integrated European supply chain, from the material to the technology and recycling.

This has the potential to reindustrialise regions and create additional jobs. Our latest report shows that, with a European Industrial Strategy, 1.6 million additional green jobs can be created in manufacturing by 2035, with a total of 2.1 million by 2040.

This reindustrialisation can help regions in transition, such as those affected by the decline of traditional industries, by providing new economic opportunities and employment security.

### **A single market fitted to net zero to support the demand**

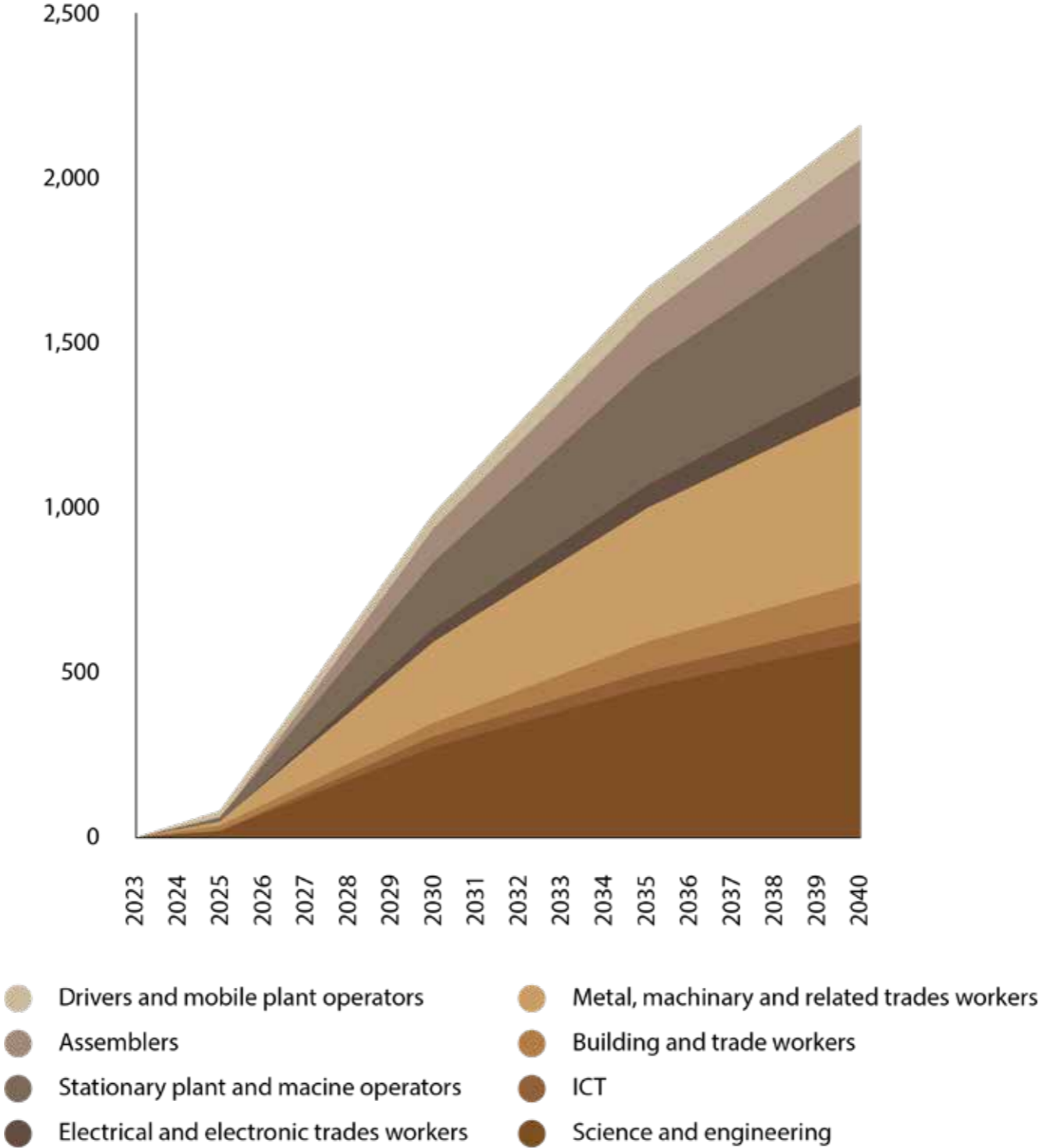
To support the demand for net zero technologies and materials, the EU could adapt its single market by setting high standards, creating lead markets and leveraging public procurement. These measures aim to reduce dependence on technology and fossil fuel imports, ensuring a resilient supply chain and fostering economic security.

Establishing rigorous standards and creating lead markets is crucial for competitiveness. By defining 'green' materials and setting quotas, ie. for green steel in key industries such as automotive and wind power, the EU can enhance innovation and predictability for manufacturers. This approach supports early adoption of green practices and drives the transition to a net zero economy.

Public procurement plays a pivotal role in boosting the market for EU-made green products. Including sustainability criteria in public tenders can drive demand for innovative technologies. With over 14% of gross domestic product (GDP), public procurement helps industries adopt new standards early, supporting local manufacturers and aligning public spending with environmental goals. Enhancing domestic manufacturing and the circular economy could save the EU billions annually in technology and material imports by 2040.

**Figure 1. New jobs created in the net zero industry under an industrial strategy (in thousands of jobs)**

www.worldcommercereview.com



## **Abundant and affordable zero-emissions electricity to strengthen competitiveness**

The ongoing energy crisis exacerbated by geopolitical tensions underscores the importance of energy security. The EU imported €640 billion in fossil fuels in 2022, and approximately €375 billion in 2023, even with reduced prices. Energy prices remain a critical issue, being significantly higher in Europe compared to China and the US, which pressures businesses alike.

Achieving abundant and affordable zero-emission electricity is crucial for strengthening Europe's competitiveness. The EU's current dependence on fossil fuels makes its economy vulnerable to price shocks. Electrifying the industry is essential to make it less vulnerable to international energy markets and restore competitiveness with China and the US.

## **Investments to make Europe's industry thrive**

To prevent deepening economic disparities and a fragmented single market, it is crucial to avoid a two-speed Europe where some countries advance faster than others due to differing fiscal capacities.

A new financial architecture should incorporate better coordination of national investments and the establishment of a European Green Deal Investment Fund that also strengthens cohesion. This fund would facilitate common investments into the transition, particularly in countries with more fiscal constraints.

This approach is especially important as the end of the NextGenerationEU program will reduce European investments in climate action by €35 billion per year from 2026.

By fostering a unified approach and ensuring all regions can remain prosperous and competitive, the EU can maintain cohesion and economic security while achieving its climate goals. To help Europe's industry thrive, substantial investments are necessary.

Our report highlights that cumulative investments of €668 billion between 2023 and 2040 could generate €233 billion of new economic activity in industrial sectors, boosting the productivity of the economy by 10%. This new financial architecture should include better coordination of national investments and the establishment of a European Green Deal Investment Fund to support common investments into the transition, especially in countries with more fiscal constraints.

By ensuring a unified and pragmatic investment strategy, the EU can prevent a fragmented market, promote balanced economic growth and achieve its ambitious climate targets.

### **Europe's path forward**

Europe has the resources, the expertise and the economic framework to lead the world in zero-carbon technology and industrial innovation. By investing in a strategic, continent-wide industrial overhaul, Europe can secure a prosperous future and establish itself as a leader in the global zero-carbon economy.

The time for decisive action is now; Europe must not hesitate. Investment cycles of companies are 10-15 years, so decisions taken in the next five years are vital for competitiveness and the path to climate neutrality. The upcoming EU elections and strategic decisions from EU institutions will determine whether Europe leads or lags in the global shift towards a zero-carbon future. ■

**Linda Kalcher and Neil Makaroff are respectively Executive Director and Director of Strategic Perspectives**

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# “Know thyself”

Failure to meet the Paris climate goals impact on central banks' work, argues Frank Elderson. To avoid long-term policy mistakes, policymakers must address the resulting structural changes

**F**or centuries the oracle of Delphi guided those seeking advice on what the future might hold<sup>1</sup>. Perhaps the most famous prophecy originating here from the Temple of Apollo is the one delivered during the Ancient Greek era to Croesus, the King of Lydia. When he consulted the oracle about going to war with Persia, he was told that if he were to attack, *“a great empire would fall.”*

Emboldened by this apparent foresight, King Croesus went to war. And an empire did indeed fall. But it was the Lydians, not the Persians, who were defeated. The oracle was right. Yet King Croesus had overlooked the considerable room for interpretation that the prophecy allowed, with significant implications for his assessment of the outlook and the consequences of his decisions.

Today, policymakers count not on prophecies and oracles but on facts and science when assessing the outlook so they can make informed decisions. But while facts and science leave far less room for interpretation and uncertainty than ancient prophecies, they cannot eliminate it entirely.

The scientific method requires established knowledge to be scrutinised and reviewed, especially – though certainly not exclusively – knowledge that pushes the boundaries of modern science. So science-based models that are used to describe what happens in the real world need to be updated regularly, in terms of both their structure and their parameters.

And we have to acknowledge that these models are subject to uncertainty, including statistical, measurement and policy uncertainty. These caveats are relevant whenever we use these models to describe what has happened in the past, and they are especially relevant when assessing how present day knowledge is used to project an outlook for the future.

At the same time, policy must remain robust in the face of this uncertainty and build on what is scientifically established. Policymakers need to identify and spell out those questions that, if resolved, would reduce uncertainty and increase the level of confidence with which decisions are taken.

*Analysis by the ECB and other central banks and supervisors repeatedly shows that, from an economic perspective, an orderly transition is by far preferable to alternative scenarios of doing nothing or doing too little too late*

I will discuss how the prevailing evidence from climate and nature science can inform the actions of public authorities, even those that are not responsible for climate and nature policy, such as central banks and supervisors<sup>2</sup>. These public authorities – just like companies and individuals – are increasingly taking decisions whose outcomes will be subject to the tangible consequences of the ongoing climate and nature crises.

In fact, in a ground-breaking ruling earlier this week, the European Court of Human Rights, explicitly referring to *“the compelling scientific advice provided, in particular, by the Intergovernmental Panel on Climate Change”*, established that States *“need to put in place the necessary regulations and measures aimed at preventing an increase in greenhouse gas concentrations in the Earth’s atmosphere and a rise in global average temperature beyond levels capable of producing serious and irreversible adverse effects on human rights.”*<sup>3</sup>

So how can we ensure that decisions taken today reflect what we know about climate science while remaining robust in the face of uncertainty?

### **Fundamental challenges of failing to meet the goals of the Paris Agreement**

Currently, the best assessment by climate scientists tells us that the world is not on a path to limit the increase in the average global temperature to 1.5 degrees Celsius above pre-industrial levels – the overarching goal of the Paris Agreement. We are not even on course to limit the increase to 2 degrees.

In fact, last November the UN Emissions Gap Report concluded that the world is on track for an average increase of 2.9 degrees, and even that will only be achieved if all government commitments to mitigation measures are implemented<sup>4</sup>.

In other words, without a full and prompt implementation of these commitments, we will see an increase of even more than 2.9 degrees. In any case – acknowledging the uncertainty – the world is currently heading for a temperature rise far above the Paris Agreement goals.

This raises a number of critical challenges for maintaining wellbeing as we know it. These go far beyond the economic challenges that may emerge and will be particularly relevant for central banks and supervisors.

In a recent report, the European Environment Agency sent a dire message about climate risks, pointing out that *“several climate risks have already reached critical levels”* and observing that *“[i]f decisive action is not taken now, most climate risks could reach critical or catastrophic levels by the end of this century.”*<sup>5</sup>

Global heating will have an impact on food, water and energy security and the health of the general population, and these effects will be aggravated by ecosystem degradation, which is itself worsened by global heating. Moreover, increasing climate and natural hazards can disrupt critical infrastructure, putting people’s livelihoods and even their basic needs at risk.

There may also be second-round effects that compound the direct impact of an increase in climate and natural hazards. One example of this would be changes in migration flows, which like other such second-round effects are generally not yet accounted for in models of the impact of climate change and nature degradation. But the more severe the climate scenario, the more likely it is that these flows will increase, and the greater the impact these increasing flows will have<sup>6</sup>.

In addition, the Intergovernmental Panel on Climate Change (IPCC) has been increasingly emphasising the risks of various tipping points. These are critical thresholds that, when breached, will lead to large, accelerating and irreversible changes to our climate system.

According to the most recent IPCC assessment report from 2021, the risk of reaching these tipping points is already assessed as being high if the average global temperature increase amounts to between 1.5 and 2.5 degrees. And it is assessed as very high if global temperatures increase by 2.5 to 4 degrees<sup>7</sup>.

Climate science can provide indications of potential tipping points and what their consequences might be, like the melting of the Greenland ice sheet and the impact it would have on global sea levels. There is, however, no scientific consensus yet on the systemic changes that might occur after these tipping points are reached.

Further research is therefore urgently required here, especially in light of the current trajectory for global heating<sup>8</sup>. Over the last 12 months, the global average temperature was already 1.5 degrees above pre-industrial levels.

### **Structural economic challenges**

Let me now turn to the implications for the global economy if temperatures increase by significantly more than 2 degrees. The structural economic consequences will be profound, with impacts on both the supply and demand sides of the economy.

First, resources will have to be dedicated to protecting citizens and society from increased climate and natural hazards like wildfires, droughts and floods.

Second, to the extent that the increase in hazards can no longer be avoided, the economy will need to cater for the critical needs that the European Environment Agency identifies as being at risk. Specifically, maintaining adequate food production, water availability and health care will require substantially more resources than those sectors currently receive.

Third, beyond catering for these critical needs, the economy will undergo further structural transformation as both preferences and production possibilities change. Tourism is a case in point, with destinations that are currently popular no longer being similarly in demand or even accessible in the future.

Another example is international trade, which may be forced to redevelop as existing routes and ports become unavailable and others open up. And there will also be a reallocation between sectors, with some losing out while others benefit, much like we have seen following the pandemic and the energy crisis.

Fourth, the economy needs to be made resilient to the increase in climate and natural hazards. The existing capital stock – including people's homes – will need to be upgraded and adapted, with all the increases in structural costs this entails. Achieving such resilience may even require physically relocating part of the capital stock to avoid proximity to areas that will be heavily exposed to hazards.

Any capital stock that is not made resilient to hazards will most likely see its economic lifespan shorten significantly. This will take the form of higher depreciation rates, which imply greater financial risks for anyone with exposures to the capital stock.

It is particularly noteworthy that investments that are currently being made to green the capital stock may not be immune to this effect. For example, a hydroelectric power plant may become obsolete prematurely if a river runs dry or changes course.

Resilience to the more disastrous climate and nature outcomes that are the consequence of failing to meet the Paris Agreement goals should, therefore, feature prominently in any decisions related to mitigation investment that are being taken today.

A key challenge for economic policymakers will be to ensure that the economy is suitably prepared to undergo these structural transformations. If it is not, there is a significant risk that economic and financial factors will actually exacerbate the critical challenges we will face in a world that overshoots the goals of the Paris Agreement.

Against this backdrop, it will be crucial for economic policymakers to identify potential barriers to effective and efficient adaptation. First, a failure to coordinate may lead to investment being misallocated. Some investments may not materialise at all if the private sector fails to consider the benefits for society.

And others may materialise but only inefficiently, for example if investment in cooling homes and offices takes place at the level of individual households and firms.

Second, structural adjustment in an economy requires the right combination of flexibility, education and social safety nets to navigate an inclusive and effective adaptation process.

Third, financial bottlenecks may emerge. Increased uncertainty due to potential climate and natural hazards may lead to an increase in risk premia, which in turn could hold back investment. And this situation could be exacerbated if it is no longer possible to obtain insurance against certain risks – or if it is only possible at a prohibitive cost<sup>9</sup>.

Besides the greater frequency and impact of hazards, uninsurable risks occur when hazards become systemic – in other words, when a hazard would affect the entire population at once if it were to materialise. And when such risks are uninsurable, individuals and firms – as well as the financial institutions that finance them – need greater loss-absorbing capacity themselves. This self-insurance will mean that – all other things being equal – the aggregate propensity to invest decreases further.



Bottlenecks in the flow of finance that reduce investment or that lead to misallocation can be mitigated with a sound banking system and well-developed capital markets that bolster transparency and ensures climate- and nature-related risks are properly priced.

Against this backdrop, there is an urgent need to complete the banking union and the capital markets union – as the ECB has previously called for – irrespective of the climate and nature scenario that ultimately materialises.

In areas where private investment bottlenecks cannot be resolved, governments may need to step in with increased public investment and safety nets. This would give rise to significant government contingent liabilities that are not yet appropriately reflected in credit ratings or in institutional economic governance frameworks.

### **The relevance for central banks and supervisors**

Many of the challenges I have mentioned – both the critical and the structural economic challenges – fall to policymakers in other areas, rather than central banks and supervisors. But the challenges presented and the policy choices that are taken in response will have a bearing on the environment in which central banks and supervisors pursue their mandates to maintain price stability and ensure the safety and soundness of banks.

First, our objectives are even more important in a world that is facing increased climate and natural hazards. Price stability and sound banks provide an anchor that makes an economy – and therefore a society – more resilient to shocks. The more frequent and intensive the shocks, the more important it becomes that the anchor doesn't break.

Second, while our tasks become more important when the world around us becomes more daunting, maintaining price stability and a sound banking sector becomes more complicated. And this is not just because shocks are more frequent and more intense. It also becomes more complicated to assess the type of shock that is hitting the

economy, yet this is crucial to gauging the potential risk to price stability or to the soundness of banks, as well as the appropriate policy response.

It could raise questions about whether climate and natural hazards can be fully captured in the traditional categorisation of demand, supply and financial shocks that are inherent in most macroeconomic models. For example, my fellow ECB Executive Board member Isabel Schnabel has suggested thinking about the impact of climate change on inflation using concepts that she has referred to as 'climateflation', 'fossilflation' and 'greenflation'<sup>10</sup>.

The Basel Committee on Banking Supervision, meanwhile, has already established that climate-related risks translate into the traditional types of risk that banks consider<sup>11</sup>. This covers credit risk, liquidity risk, market risk and operational risk, including litigation risk<sup>12</sup>.

However, the exact mechanisms of mapping actual hazards to risks still need to be analysed further to fully capture climate-related factors in quantifiable regulatory and supervisory requirements.

Third, climate and natural hazards limit the productive capacity of the economy. Some of the consequences may eventually fade – although they may well persist for quite some time – for example if supply chains are disrupted as a result of hazards materialising. Others may be permanent, for example if nature providing critical services – including land use and fisheries – becomes degraded.

In both cases, the risk of the economy running into capacity constraints would be greater. Therefore, to properly assess the state of the economy and identify risks, central banks and supervisors need to further deepen their understanding of the supply side of the economy, just as we had to do after the pandemic and the energy crisis.

This also means that we need to extend the horizon of our analyses well beyond the typical horizon considered today. Climate science gives us a window into the rest of this century. What we can see through this window should be taken seriously, including by central banks and supervisors as we identify and assess risks in the pursuit of our mandates. The time to think seriously about the long term is now.

Fourth, the combination of heightened uncertainty and a greater need for self-insurance could lead to an increase in the propensity to save in the private sector. This could create space for the investment that is so urgently needed and – in the absence of increased savings – would lead to an increase in the equilibrium real interest rate<sup>13</sup>.

At the same time, if owing to coordination failures the increased savings are not channelled towards providing the investment needed, the equilibrium real rate of interest would instead be depressed. As this equilibrium rate is the interest rate that prevails when all shocks to the economy have dissipated and monetary policy is neither accommodative nor restrictive, it is an important yardstick for central banks. Thus, for monetary policy, understanding which of these effects ultimately dominates will be key.

Fifth, increasing financial risks arising from the climate and nature crises can impair the soundness of financial institutions and the stability of the financial system as a whole. Should these risks materialise – despite all our efforts to mitigate them – the transmission of our monetary policy could be affected.

Monetary policy decisions would be transmitted through the financial system and the economy in a less orderly and less predictable manner, potentially making it more difficult for us to achieve our price stability objective.

More generally, the effectiveness and efficiency of our policies benefit from well-functioning markets. This holds true in terms of both our ability to maintain price stability and the need to avoid the risk of our monetary policy impulses unduly contributing to a misallocation of resources.

## Concluding remarks

The Temple of Apollo in Delphi famously bore the inscription “*Know thyself*” – a maxim that is often understood to mean “*know your limits.*”

Know what you know and know what you don’t know – this is what I have sought to convey to you.

And act upon that knowledge in a way that is robust in the face of known and unknown uncertainties, to avoid making avoidable mistakes like that of King Croesus after he consulted the oracle of Delphi. This includes identifying and seeking answers to questions that reduce uncertainty and increase the scope of ‘no-regret’ policy actions.

This will require policymakers to engage with stakeholders beyond their own fields of expertise – just like the Bank of Greece is doing through the interdisciplinary Climate Change Impacts Study Committee, which recently announced the preliminary results of analytical work on the economic, social and environmental impacts of climate change in Greece<sup>14</sup>.

Experts from all disciplines – including climate and nature scientists, biologists, economists, legal experts and sociologists, to name just a few – will need to work closely together in responding to the multifaceted challenges ahead. If ever there was an urgent need to pool knowledge and draw on different fields of expertise, it is now.

Let me be clear: my remarks are by no means a signal that we should throw in the towel on mitigation. Quite the opposite. I hope that I have been able to show you why, in light of the prevailing climate science, no effort should be spared in working towards the goals of the Paris Agreement.

The European Climate Law requires it, and the European Court of Human Rights has ruled that governments that fail to meet their climate commitments are violating human rights. Analysis by the ECB and other central banks and supervisors repeatedly shows that, from an economic perspective, an orderly transition is by far preferable to alternative scenarios of doing nothing or doing too little too late<sup>15</sup>.

That said, even though climate and nature policymakers are under a legal obligation to deliver on the goals of the Paris Agreement and even if they have committed to achieving these objectives, they still have a duty to prepare for risks that lie ahead as the entire world needs to live up to its obligations – and it is not a given that it will – and critical thresholds may have already been surpassed.

The duty to prepare for these risks also holds for central banks and supervisors in the pursuit of their mandates. We must both unwaveringly strive for the best and diligently prepare for what climate science tells us lies in store.

It is not a Delphic prophecy that is calling for action. It is facts and science. ■

**Frank Elderson is a Member of the Executive Board and Vice-Chair of the Supervisory Board of the European Central Bank**

## Endnotes

1. To my knowledge, there are at least three instances of central banks and supervisory authorities paying tribute to the ancient oracle. The semi-structural macroeconomic model of the Dutch economy that De Nederlandsche Bank uses for its projections is named DELFI. In ECB Banking Supervision we have developed a tool named Delphi that integrates market indicators and information from the media to better understand risk developments affecting banks in real time. And central banks have been described as giving “Delphic” forward guidance when communicating about how they intend to adjust policy in relation to incoming data.
2. I have emphasised in other speeches that central banks are not climate and nature policymakers, but climate and nature policy takers. See, for example, Elderson, F (2023), [“Policymakers as policy takers – accounting for climate-related and environmental factors in banking supervision and monetary policy”](#), speech at the Peterson Institute for International Economics, 21 April.
3. European Court of Human Rights (2024), [“Judgment Verein KlimaSeniorinnen Schweiz and Others v. Switzerland – Violations of the European Convention for failing to implement sufficient measures to combat climate change”](#), press release, 9 April.
4. United Nations Environment Programme (2023), [Emissions Gap Report 2023: Broken Record – Temperatures hit new highs, yet world fails to cut emissions \(again\)](#).
5. European Environment Agency (2024), [European climate risk assessment](#).
6. According to the World Bank, climate change could contribute to the movement of 216 million people within their own countries by 2050, unless concrete climate and inclusive development actions are taken. See Clement, V et al (2021), [Groundswell Part 2: Acting on Internal Climate Migration](#), World Bank Group, Washington, D.C.
7. Intergovernmental Panel on Climate Change (2021), [Climate Change 2021 – The Physical Science Basis](#).
8. The Central Banks and Supervisors Network for Greening the Financial System has previously developed scenarios to assess how economies might look on different climate policy paths. In future work it will prioritise the inclusion of non-linear elements – like climate tipping points – in its models (see Aerts, S, Spaggiari, M and Stracca, L (2023), [“Climate](#)

*scenarios: procrastination comes at high cost*, The ECB Blog, 4 December). For it to achieve this, climate and nature science will be crucial in advancing its understanding of tipping points.

9. Together with EIOPA the ECB has issued a discussion paper that outlines policy options to promote climate catastrophe insurance that could mitigate the effect of reduced insurability, see ECB and EIOPA (2023), *“Policy options to reduce the climate insurance protection gap”*, Discussion Paper, April.

10. Schnabel, I (2022), *“A new age of energy inflation: climateflation, fossilflation and greenflation”*, speech at a panel on *“Monetary Policy and Climate Change”* at The ECB and its Watchers XXII Conference, 17 March.

11. Basel Committee on Banking Supervision (2021), *Climate-related risk drivers and their transmission channels*, April.

12. On litigation risk, see Elderson, F (2023), *““Come hell or high water”: addressing the risks of climate and environment-related litigation for the banking sector”*, speech at the ECB Legal Conference, 4 September.

13. See, for example, Schnabel, I (2024), *“R(ising) star?”*, speech at The ECB and its Watchers XXIV Conference session on *Geopolitics and Structural Change: Implications for Real Activity, Inflation and Monetary Policy*, 20 March.

14. Bank of Greece (2023), *“Preliminary results of the studies on the vulnerability assessment and the impact of climate change in Greece”*, 15 December.

15. Emambakhsh, T et al (2023), *“The Road to Paris: stress testing the transition towards a net-zero economy”*, Occasional Paper Series, No 328, ECB

This article is based on a *keynote speech* delivered at the Delphi Economic Forum IX, Delphi, 12 April 2024.

# Rippling out

Biden's tariffs on Chinese electric vehicles will impact Europe. Uri Dadush on how the US approach diverges from that of the EU, which is building a case for countervailing duties under WTO rules



**O**n 14 May, United States President Joe Biden announced new tariffs on China under Section 301 of the Trade Act of 1974 (unfair trade)<sup>1</sup>. The additional tariffs – on top of earlier tariffs, including those imposed by President Trump – cover imports from China in several sectors, including semiconductors (tariff rises from 25 percent to 50 percent), solar cells (from 25 percent to 50 percent), electric vehicle batteries (from 7.5 percent to 25 percent) and electric vehicles (EVs; from 25 percent to 100 percent).

Most of these products are already subject to high duties or extensive trade-remedy measures, so the amount of imports from China covered by the new tariffs, including EVs, is small at \$18 billion. In fact, the US imports essentially no EVs from China.

However, it is a sector of great concern to the European Union, which in October 2023 opened an anti-subsidy investigation into Chinese EVs, which may trigger countervailing duties<sup>2</sup>. The US move may therefore have implications for the pending EU decision on countervailing duties on China.

### **An extraordinary decision, driven by domestic politics**

The US decision on Chinese EVs is extraordinary in four respects:

- First, the 100 percent tariff is prohibitive. Ostensibly justified by China's own subsidies, it would imply that half of the cost of Chinese EVs is paid for by government funds, far beyond the range of other estimates (Transport & Environment, 2024).
- Second, unlike previous protection episodes, such as when the US was responding to the threat of Japanese car manufacturers<sup>3</sup>, there are virtually no Chinese car imports today, and US manufacturers, especially General Motors, already have large footprints in China, whereas they were marginal in Japan. Though GM

sales in China have declined recently, for more than a decade until 2023, China was a profit engine and the company's top sales market<sup>4</sup>.

- Third, the EV tariffs depart from the US emphasis on national security to adopt anti-China measures (unless one believes that EVs are meandering Chinese spies), suggesting that all sectors are now in play.

*The tariffs also quash any notion that the US intends to abide by World Trade Organization rules. These two considerations, by themselves, increase policy uncertainty globally and are bound to have a dampening effect on international trade and investment*

- Fourth, the measure runs counter to the Biden Administration's green transition goals, which include large tax breaks for EVs, intended to lower the cost for consumers of green alternatives.

The decision on EVs and its timing are strictly political and reflect the extraordinary power of the United Auto Workers union in swing states in the run-up to the US presidential election. The decision is nevertheless a surprise in the light of recent efforts at China-US rapprochement, including exchanges at senior military level, and talks on AI and climate change.

China will be affronted and many China-dependent US firms, which had hoped for tariff reductions, will be disappointed. The decision is, however, consistent with US Trade Representative Katherine Tai's 'Worker Centric' trade policy which claims to place workers' interests ahead of those of firms<sup>5</sup>.

### **Global impact**

The immediate economic impact of the tariffs will be minimal at the macro level, whether on quantities, prices, or exchange rates; \$18 billion is tiny relative to the size of the two economies, and even the \$500 billion that China exported to the US in 2023. Even so, they will hurt some Chinese companies and US importers. The effect on US consumers and prices will be minimal and take the form of lost future opportunities rather than immediate cost, especially in relation to EVs.

China's retaliation (it always retaliates) will be proportionate and limited. If the past is a guide, retaliation will affect mainly some US agricultural exports, which can be sourced easily elsewhere, and US exporters will be compensated for their losses in China.

But even if the Chinese government does not retaliate against US car exports and investments in China (which it continues to court), the Chinese consumer is unlikely to respond well to America's extreme measure on EVs when he or she chooses the next car to buy.

Perhaps more worrying is the further escalation of tensions with China that the tariffs represent – a dangerous trend with many repercussions. It may undermine any Chinese willingness to play a moderating influence on the war in Ukraine.

The tariffs also quash any notion that the US intends to abide by World Trade Organization rules. These two considerations, by themselves, increase policy uncertainty globally and are bound to have a dampening effect on international trade and investment (Al-Thaqeb and Algharabali, 2019).

The US approach diverges from that of the EU, which is building a case for countervailing duties under WTO rules. Although the outcome may also be new tariffs, in the EU there will have been due process based on evidence. But politically, prohibitive US tariffs place enormous pressure on the EU to apply its own.

Even though there is no immediate threat of trade diversion, EU firms such as Stellantis, and unions that lobby for tariffs, will argue that Chinese EV exporters, cut off from the US market, will focus on the huge EU market instead. Though EU firms are still the largest exporters of EVs from China to the EU by a wide margin, the share of Chinese indigenous manufacturers is rising rapidly.

The adverse effect on trade relations of the new tariffs will extend beyond trade under the WTO to encompass trade under regional agreements. This is because US politicians are determined to avoid China-sourced products coming

in through the back door – strict rules of origin are already there to prevent that – and to prevent the products of Chinese-invested companies from entering.

In their view, even if batteries, EVs and semiconductors are manufactured by a Chinese-invested company in a US trading partner, and are entitled to tariff-free treatment under a regional agreement, they should be discouraged.

This also applies to Chinese companies producing in the US<sup>6</sup>. Mexico and Morocco are two examples of US regional trade agreement (RTA) partners that host Chinese manufacturers of batteries and soon of EVs, where frictions are bound to rise.

Even though the EU remains more open to Chinese producers on its territory than the US (eg. BYD in Hungary, CATL in Germany and Hungary), it will face a similar challenge with its RTA partners if, as expected, it applies its own tariffs on Chinese EVs.

These tensions among parties to RTAs, together with China's retaliation against EU and US EV tariffs, is likely to mark this episode as a classic example of protectionist contagion.

### **A separation of Chinese and US value chains?**

The EV value chain is destined to increase greatly in importance to mitigate climate change. From the standpoint of US industrial policy, a big question raised by the prohibitive tariffs on Chinese EVs and by the accompanying resistance against hosting Chinese producers is whether a US EV/battery value chain entirely separate from China is sustainable and realistic.

The US is undoubtedly capable of developing such a chain, but can it do so at reasonable cost and without falling behind in quality and efficiency? On the answer to this question rests the calculation of long-term consumer losses from the tariffs against the counterfactual, the speed of the US green transition, the burden on government finance from the possibility of more subsidies, and even the solvency of US car companies.

Even a cursory examination of China's current competitive advantage in EVs suggests that the answer to the question is no. China produces almost twice as many EVs as the EU and US combined, the share of EVs in new car registrations is rising rapidly, and it has reportedly moved ahead at the combined quality/price/technology frontier<sup>7</sup>.

The latest BYD Model, the Seagull, sells in China at slightly less than \$10,000, and has been highlighted as an illustration of China's competitiveness<sup>8</sup>. Tesla founder Elon Musk has been openly pessimistic about the West's ability to compete with Chinese cars<sup>9</sup>.

China's cost advantage arises from a combination of scale, advanced and lower-cost battery technology, availability of IT and AI expertise, lower labour costs, and intense competition in the Chinese market, with dozens of domestic and foreign producers active.

Central and provincial government subsidies still play a role, and their extent is what the EU investigation will evaluate. The only available and presumably reliable numbers on subsidies received are those declared by Chinese publicly traded companies such as BYD, and are small relative to turnover or value added<sup>10</sup>.

China's EV exports increased by over 60 percent in 2023 to reach 1.2 million units, directed mainly at Europe, Mexico and several emerging markets in Asia. Since the biggest Chinese EV manufacturers and their battery suppliers

have developed distinctive assets (brand, technology and design), they are now able to set up manufacturing and distribution channels overseas, in markets including Thailand, Indonesia, Australia, Morocco, Mexico and Hungary. Chinese EV manufacturers are also rapidly gaining market share in China, where competitors are increasingly struggling.

As EVs become even more established worldwide, the scale advantage of the most successful Chinese producers over US-based producers will only increase, as will their capacity to target individual markets with customized products on a common platform.

Finally, it is important to note that the largest US car companies, Ford and General Motors, are not in the best shape to compete in the intensifying EV market. Standard and Poor's rates Ford's and GM's long-term debt at BB+ and BBB respectively, just below and just above investment-grade.

The market capitalisations of BYD and Xiaomi, the two largest Chinese EV producers, are \$86 billion and \$62 billion respectively, while those of GM and Ford are both around \$50 billion.

### **The EU's strategy**

Should the EU adjust its policies in the light of the new Biden tariffs, and if so, how? Note that since there will be no surge of Chinese EVs diverted from the US market, it is not a given that the EU needs to alter its course.

The EU's trade strategy on EVs must pursue six main objectives: 1) a fair deal for EU manufacturers insofar as they are affected by China's subsidies in excess of subsidies they receive at home, and one that is in line with WTO rules; 2) stand up for the interests of EU car exporters and manufacturers in China, which are also recipients of various subsidies; 3) the long-run health and competitiveness of the EU car industry; 4) protect the interests of consumers,

especially those with low incomes, who would benefit greatly from cheaper cars; 5) ensure the speed of the green transition; 6) maintain a cooperative and constructive relationship with China for both economic and geopolitical reasons. To progress towards all six objectives simultaneously is a challenge, but can be done:

- The EU's stated objective should be to arrive at competitive neutrality in the EV sector, enhancing and not preventing fair competition that will promote productivity growth and innovation.

Accordingly, the countervailing duty margin on Chinese EVs should be computed objectively and realistically; it should be defined and documented in a way that is entirely robust to legal challenge at the WTO.

It should also take account of subsidies at home to reduce the EU's vulnerability to a Chinese counter: if the net subsidy is found to be zero, the countervailing duty margin should be zero, and the countervailing duty, if any, should be set at the minimum level consistent with the findings.

The duty should be accompanied by a proposal to set up a China-EU working party with a mission to identify and monitor EV subsidies, and to reduce them with a view to eliminating the duty margin over a defined period.

- To ensure the long-term vibrancy and competitiveness of its car industry, to safeguard the interests of its consumers, to sustain the green transition, and to maintain good relations with China, the EU should adopt an open-door policy on Chinese inward investment in its EV and battery sectors<sup>11</sup>, while insisting on continued fair treatment of its firms that have already established footholds in the Chinese market. The EU may need to prepare, ultimately, to confront US restrictions on China-invested cars produced in Europe, such as Geely-owned Volvos.



- It is possible that, once embarked on this course, the EU may nevertheless face an excessively rapid penetration of imported Chinese EVs sometime in the future. Should that happen, the EU may resort to a WTO-compatible safeguard measure.

The advantage of the safeguard course is that the increase in tariffs would be time bound (three years). Safeguard tariffs must, however, apply to all imports, not only those from China. ■

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5. Contrary to research done by Autor et al (2024).
6. An example is the fight over Ford.
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This article was originally published on [Bruegel](#).

# Understanding the the WTO e-commerce moratorium

The WTO e-commerce moratorium has been renewed.  
Andrea Andrenelli and Javier López González explore  
the different issues around the moratorium debate

**T**he last two decades have seen momentous shifts in globalisation as a result of digital transformation (Baldwin 2019, Winters and Borchert 2021, Savona 2020). During this time, the WTO moratorium on applying customs duties on electronic transmissions, the only WTO provision that applies explicitly to digital trade, has underpinned a stable, predictable, and duty-free environment for digital trade to thrive (IMF *et al* 2023).

At the last WTO Ministerial Conference, after difficult negotiations, the moratorium was renewed, and WTO members agreed to continue discussions on its *scope, definition, and impact*.

### **What is the e-commerce moratorium and why is it controversial?**

The WTO e-commerce moratorium is a commitment to continue the current practice of not applying customs duties (ie. tariffs) on electronic transmissions. However, since ‘electronic transmissions’ were never defined, there is room for interpretation about the precise scope of the commitment.

Recently, several WTO members have raised questions about the opportunity costs of the moratorium<sup>1</sup>. Chief among their concerns is the potential loss of ‘policy space’ in the context of rapid technological change and potential losses in customs revenue due to the ‘dematerialisation’ of goods trade. For these WTO members, the lack of clarity on issues of scope and definition makes it difficult to understand the potential value, or opportunity cost of the moratorium.

In a recent paper (Andrenelli and López-González 2023), we review regional trade agreement provisions related to the electronic transmissions, provide new estimates of the potential foregone revenue implications of the moratorium, and explore some of the potential impacts of not renewing the moratorium on trade and competitiveness.

What can we learn from regional trade agreements about the scope and definition of the moratorium? Some WTO members question whether the moratorium applies to the 'content' of the transmission (that is, the actual movies or e-books downloaded) or its 'carrier medium' (the bits and bytes that carry the content)<sup>2</sup>. Questions have also been raised about whether the Moratorium affects the ability of countries to apply other, internal, taxes beyond customs duties, or if the Moratorium erodes other commitments made in the WTO.

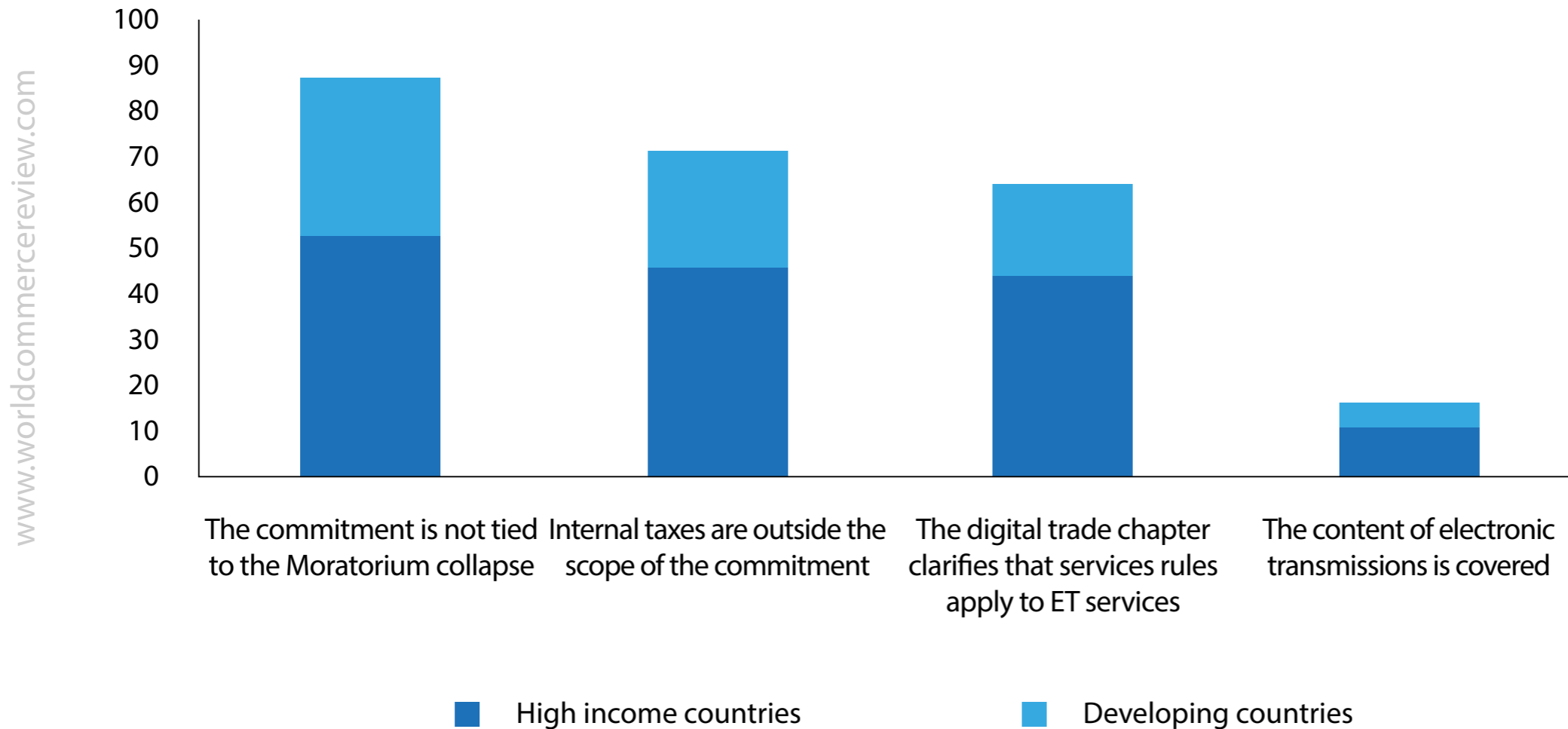
*Our analysis suggests that the potential foregone revenue costs of the Moratorium are small and that its lapse would come at the expense of wider gains in the economy*

Much can be learnt about the potential scope of the moratorium by looking at how countries have approached customs duties on electronic transmissions in their trade agreements. Analysis using the Trade Agreement Provisions on Electronic Commerce and Data (TAPED) database (Burri *et al* 2022) shows that, of the 105 regional trade agreements (RTAs) with an e-commerce chapter (by end of 2022), 100 included a provision on the non-imposition of customs duties on electronic transmissions (NICDET provision for short). More detailed analysis of these provisions reveals that (Figure 1):

- The majority of NICDET commitments, 88%, are not tied to the e-commerce moratorium. Specifically, 54 high income and 33 developing countries would continue not imposing customs duties on electronic transmissions, at least on a reciprocal basis, even if the moratorium were to lapse.
- The majority of NICDET provisions clarify that internal taxation is outside the scope of commitments. Most countries do not see the commitment as having implications for applying other forms of taxation, including value added taxes (VAT) or goods and services taxes (GST).
- Digital trade chapters generally reaffirm that measures related to electronic delivery fall within the scope of obligations and exceptions related to services (eg. the General Agreement on Trade in Services (GATS) or regional trade agreement commitments and flexibilities remain). This suggests that the moratorium is unlikely to restrict 'policy space' beyond the non-imposition of tariffs.
- Since 2015, members have started to clarify that NICDET commitments apply to the content of electronic transmissions. There are no trade agreements clarifying that NICDET provisions apply to the 'carrier medium'.

## Figure 1. Non-imposition of customs duties on electronic transmissions (NICDET) commitments in regional trade agreements can provide useful guidance on the interpretation of the potential scope and definition of the moratorium

Number of countries adopting a particular addition or clarification in at least one of their trade agreements



Note: Income group classification based on the 2022-2023 World Bank classification, where developing countries refers to lower-middle-income and upper-middle-income countries.  
Source: Andrenelli and López-González (2023).



Some countries define electronic transmissions as 'digital products' which include computer programmes, text, video, images, sound recordings, and other products that are digitally encoded. Others clarify that 'deliveries by electronic means shall be considered as the provision of services'. Others just use the term 'electronic transmissions', without any further clarifications.

However, differences in definitions have not prevented the conclusion of NICDET provisions between countries with different definitions<sup>3</sup>. While for some the lack of a precise definition might be considered a challenge, for others it is a way of enabling a variety of views to coexist.

### **What are the potential fiscal implications of the moratorium?**

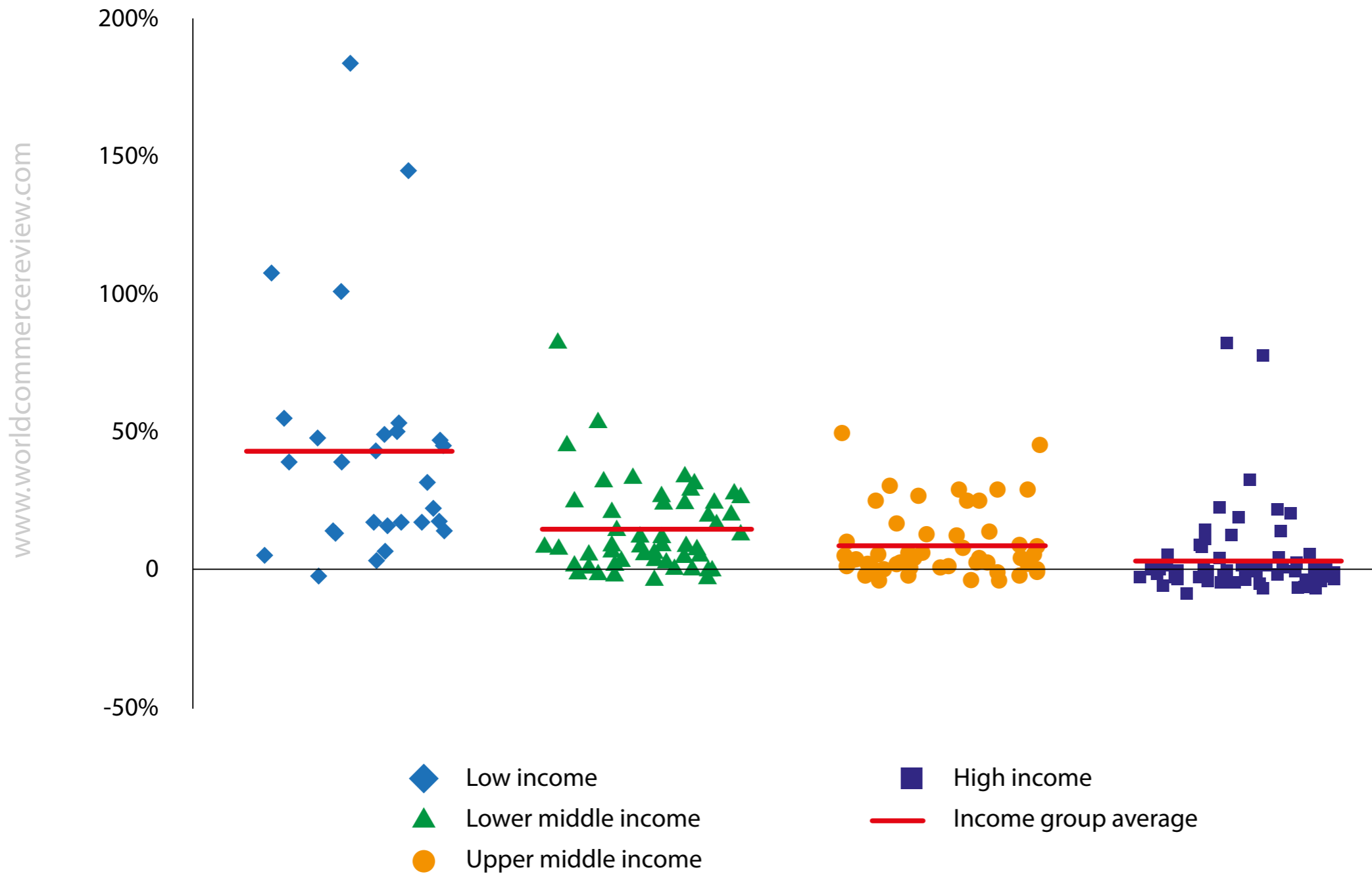
Some WTO members worry that not imposing customs duties on electronic transmissions may lead to foregone customs revenue. That is, a country importing a movie via an electronic transmission foregoes the tariff revenue associated with its import via a physical carrier medium, such as through a DVD. They argue that the rapid pace of digitalisation increases the scale of the problem, especially for developing countries, which tend to charge higher tariffs on these items.

However, imports of 'digitisable goods', which are physical goods that can be digitised and subsequently sent across borders digitally (e.g. CDs, books, calendars, videotapes), have generally been growing over the last decade, especially in developing countries (Figure 2), continuing to generate tariff revenue.

Accurately assessing the potential foregone revenue implications of the moratorium is not easy given uncertainties about scope and definition. However, we argue that existing empirical studies (Banga 2022, 2019) have not addressed three important issues that bias current estimates upwards.

## Figure 2. Imports of digitisable goods have been growing, particularly in low-income countries

Average yearly change in physical imports of digitisable goods in 2008-2019, by income group



Note: Markers represent individual countries. Based on 206 countries and territories. Red lines show the income group average. The horizontal axis line indicates 0% average growth. Calculations based on BACI data.

Source: Andrenelli and López-González (2023).

The first is that existing commitments and practices, such as NICDET provisions or other preferences granted in regional trade agreements, limit the ability of countries to raise tariffs on digitisable goods and electronic transmissions, even in the absence of the e-commerce moratorium.

The second is that not all trade that can be electronically transmitted will be (as seen above, imports of digitisable goods have actually been increasing for many countries). The third is that assessments need to consider the potential offsetting effects of VATs/GSTs applied on growing digital imports.

We find that the foregone customs revenue that can be attributed to the moratorium is small – on average 0.68% of total customs revenue or 0.1% of overall government revenue. Given higher tariffs and lower levels of commitments, impacts are on average higher for low-income countries (0.33% of government revenue), and lower for high income country (0.01%).

That said, for 77 of 106 countries analysed, standard VAT/GST taxes applied on digital services imports which are ‘born digital’ completely offset the customs revenue effects of the moratorium<sup>4</sup>.

These findings underscore the potential to find fiscal solutions, based on consumption taxes, to collect revenue on immaterial imports based on widely adopted and internationally accepted standards (OECD 2017). These taxes are efficient and have a demonstrated capacity of increasing tax revenues (Hanappi *et al* 2024).

In addition, since single rates tend to apply, there is no need to spend resources identifying how to classify products into detailed nomenclatures or to determine their origin. These taxes also target final, instead of intermediate consumption, which, as we will show below, is important.

## What benefits are at stake with the potential lapse of the e-commerce moratorium?

We find that tariffs on electronic transmissions have the potential to hit low-income country trade most. If existing tariffs on digitisable goods were to be applied to digital services (which is where electronic transmissions are measured in existing trade statistics) imports of low-income countries would fall by 32% and exports would fall by 2.5%.

This is because more than 80% of digital services exports of low-income countries are to middle income countries which have more scope to increase tariffs. For middle-income countries, losses would be of 6% and 0.4% and for high-income countries of 0.04% and 0.5%, respectively.

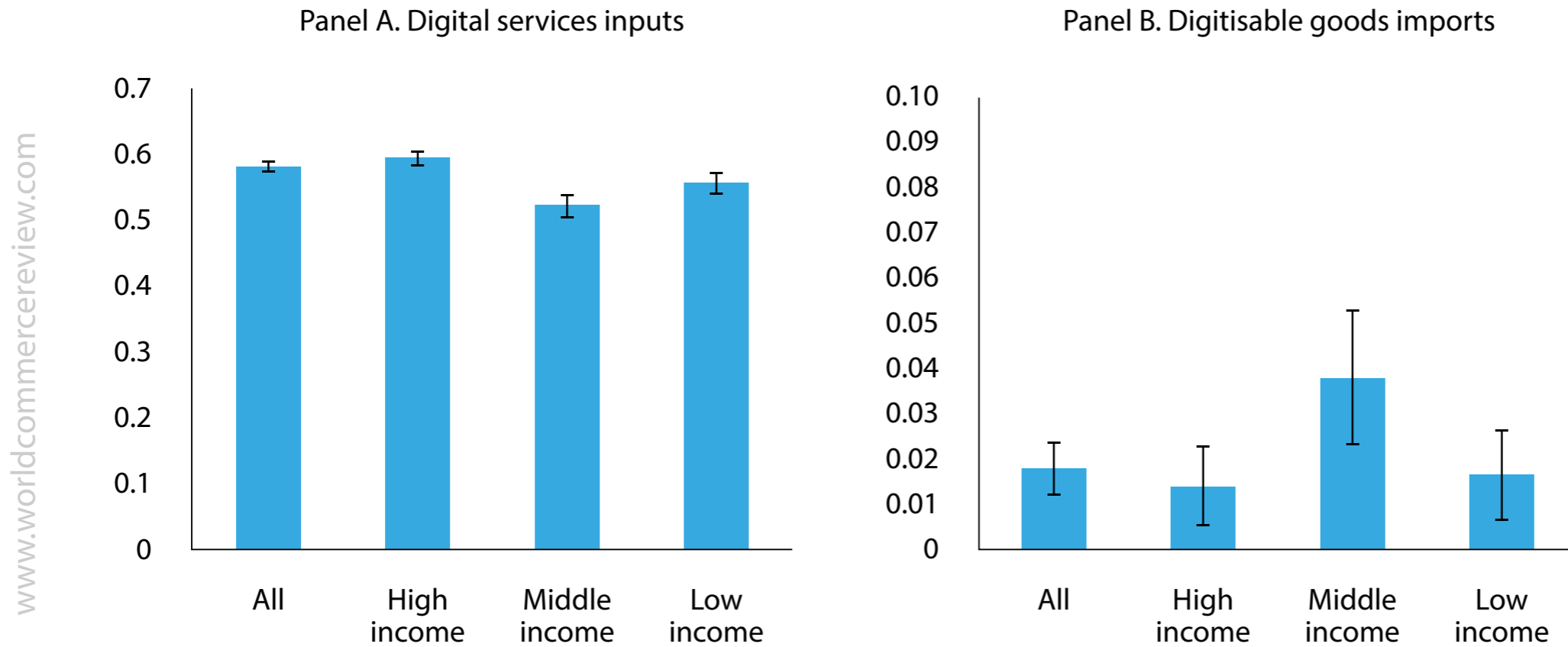
Evidence also shows that the use of foreign digital inputs and digitisable goods contributes to domestic competitiveness, measured as changes in the domestic value added in final consumption (Figure 3). This suggests that trade cost increases arising from the termination of the Moratorium would lead to losses in domestic competitiveness. Therefore, there is a self-interest argument for maintaining a duty-free environment for electronic transmissions.

The impact of greater barriers on electronic transmissions is also likely to be asymmetric, affecting small and medium-sized enterprises (SMEs) most. Analysis using the World Bank Enterprise Survey (WBES) suggests that being able to deliver trade digitally is associated with higher propensities to export of smaller firms and not larger ones.

Since SMEs generally have a lower propensity to export than larger firms, the ability to deliver products digitally may be an important mechanism to reach foreign markets, and this channel may be affected by the Moratorium lapse.

### Figure 3. Digital inputs are key determinants of domestic competitiveness

Figures show the impact of increasing use of foreign digital inputs by one standard deviation on domestic value added



Note: Standardised regression coefficients capturing impact of increasing digital services inputs and digitisable goods imports on domestic value added with confidence intervals (95%). Calculations based on data from TRAINS and ITPDE.  
Source: Andrenelli and López-González (2023).

## **There is a strong economic case for keeping electronic transmissions free from tariffs**

Overall, our analysis suggests that the potential foregone revenue costs of the Moratorium are small and that its lapse would come at the expense of wider gains in the economy. ■

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## Endnotes

1. See WTO Communications WT/GC/W/747, WT/GC/W/798 and WT/GC/W/833.
2. See WTO Communication WT/GC/W/859
3. For example, the EU-Canada agreement relies on flexible language, calling these “a delivery transmitted by electronic means”, to bridge existing differences.
4. ‘Born digital’ trade is proxied using data on trade in computer, audio-visual, and information services imports. The intuition is that this captures growth in trade that might not have been previously delivered via physical carrier media. For instance, there is no physical goods equivalent of cloud computing services.

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*Authors' note: The opinions expressed and arguments employed are those of the authors and do not represent the official views of the OECD or of its member countries. This article was originally published on [VoxEU.org](https://voxeu.org).*





# ATA Carnets as a game-changer for Paris 2024

International Chamber of Commerce discuss the role of the ATA Carnet at 60 years old, as it continues to go from strength to strength to serving business communities worldwide and adapting to the digital era

**W**ith just a few weeks to go until the 2024 Paris Olympic and Paralympic Games, thousands of athletes, media representatives, sponsors, exhibitors, delegations and more are gearing up for their journey to France this summer. What is the best way to clear customs for equipment and goods for use during the Games? The answer is the ATA Carnet, a vital tool that has widely been used by companies and individuals since 1963.

The ATA Carnet is an international customs document that permits duty-free and tax-free temporary import of goods for up to one year. It streamlines the customs process by unifying declaration forms and eliminating bond/ deposit for Customs duties and taxes at each border. Its efficiency was highlighted during the Beijing 2022 Winter Olympics and Paralympics, when over 118,000 pieces of equipment valued at US\$ 94 million were imported using ATA Carnets.

The initials 'ATA' are an acronym of the French and English words *Admission Temporaire/Temporary Admission*. The entire ATA Carnet system is managed by the International Chamber of Commerce's (ICC) World Chambers Federation (WCF) in partnership with the World Customs Organization (WCO), ensuring smooth operations and expanding the ATA Carnet's reach globally. ATA Carnets are currently available in over 80 countries with the Philippines set to become the 81<sup>st</sup> member of the guaranteeing chain in July this year.

### **Keeping the games moving**

In a nutshell, the ATA Carnet enables countries, businesses and border agencies to expedite the customs process by utilising unified, ready-to-use declaration forms and eliminating the lodging of a guarantee, bond or cash deposit in the country of temporary importation. It can also be used for temporary export and may be issued for multiple destinations and trips throughout its one-year validity so that goods can pass through customs around the world with advanced customs arrangements at predetermined costs.

Thanks to these merits, the ATA Carnet has been used to facilitate seamless and cost-effective clearance of Olympic materials since its inception in 1963. Now, as thousands of athletes, media representatives, exhibitors and others prepare their journeys to France for the 2024 Olympic and Paralympic Games, the ATA Carnet is enabling the duty- and tax-free temporary import of a wide range of equipment and items to keep trade and the 2024 games moving.

Covering almost any type of items – from sports gear for athletes, to professional equipment for broadcasters – the ATA Carnet works like a passport for goods, allowing smooth customs clearance without the need for a guarantee, bond, or cash deposit. Applications for ATA Carnets are lodged in the export country, with a directory available on the ICC website.

*The ATA Carnet works like a passport for goods, allowing smooth customs clearance without the need for a guarantee, bond, or cash deposit*

## **Risk management mechanism**

Under the ATA Carnet procedure, duties and taxes temporarily exempted are guaranteed by National Guaranteeing Associations (NGAs) appointed by customs authorities, and affiliated to the ATA Carnet international guaranteeing chain, a risk management mechanism administered by ICC through its special working body, the World ATA Carnet Council (WATAC) of the WCF. The Chain is used to ensure reimbursement of customs duties and taxes by the NGA in the country of issue to the NGA in the country of temporary admission who has made prior payment to its Customs.

At the international level, the management and promotion of ATA Carnet procedure and the guaranteeing chain are ensured by ICC in close collaboration with the WCO.

ICC's objectives regarding the management and promotion of the ATA Carnet scheme can be summarised as follows: ensuring, in collaboration with the WCO, the smooth and safe functioning of the ATA Carnet scheme by providing legal and practical assistance, as well as advice, to the NGAs (members of the international guaranteeing chain) responsible for its daily operations in their respective countries and customs territories.

ICC also considers legal and practical problems related to the application and interpretation of the ATA and/or Istanbul Convention, proposing the adoption of opinions and comments by the WCO to ensure uniformity in the daily application of the ATA scheme, thereby offering useful guidance to customs administrations, issuing and guaranteeing associations, and ATA Carnet users.

Additionally, ICC promotes the expansion of the ATA Carnet in other countries in conjunction with the WCO, ATA experts from NGAs, chambers of commerce, ICC national committees, and other business organizations. Consultations, when appropriate, are also held with the European Commission (TAXUD) to facilitate the application of new European Commission rules governing the operation of the ATA Carnet scheme within the European Union.

To drive the expansion of the ATA Carnet worldwide, ICC cooperates with the WCO to hold regional seminars to familiarise chamber of commerce executives, staff, and customs authorities with the Carnet's benefits and operations.

### **The future is digital**

The ATA Carnet continues to be a trade tool frontrunner, with a global transition underway to digitise the ATA Carnet process. The creation of an electronic ATA Carnet (eATA) solution was first piloted in 2019.

Following continued enhancement from 2019 to 2023, the pilot version of the digital ATA Carnet System was upgraded to production standard in July 2023. The upgrade marked a shift from the eATA project pilot phase to the global transition preparation phase, during which stakeholders can start preparing the official acceptance of digital ATA Carnet via the ATA Carnet System, as deployed by ICC. The global transition kick-off is scheduled to start in 2025 and the ATA Carnet procedure is expected to go fully digital by 2027.

At 60 years old the ATA Carnet continues to go from strength to strength to serving business communities worldwide and adapting to the digital era.

*More information about the ATA Carnet and a directory for contacting guaranteeing associations can be found on the [ICC Website](#).*

### **International Chamber of Commerce**



# Why do financial crises happen so often?

Crisis

Jon Danielsson argues that failures in regulation are a key reason for financial crises, and proposes that the authorities adopt diversification to build a more resilient financial system

One of my favourite exam questions is: 'Given our extensive knowledge about the causes of financial crises and the measures needed to prevent them, why do they happen so frequently?' We have had a deep understanding of financial crises for over 200 years. A 19<sup>th</sup>-century central banker dealing with the severe crisis of 1866 would find few surprises in the more recent ones. All crises share the same fundamental causes. Excessive leverage renders financial institutions vulnerable to even small shocks. Self-preservation in times of stress drives market participants to prefer the most liquid assets.

System opacity, complexity, and asymmetric information make market participants mistrust one another. These three fundamental vulnerabilities have been behind almost every financial crisis in the past 260 years, ever since the first modern one in 1763 (Danielsson 2022).

If we know why crises happen, preventing them should be straightforward. But given their alarming frequency, it does not appear to be so. When looking at the various alternative explanations and ignoring the political ones, we find two different narratives: consensus and diversification. Let's start with the consensus one.

### **The consensus narrative**

We find the consensus narrative in financial stability and 'lessons learned' reports published by the financial authorities. These reports have become very common ever since the authorities re-started taking the financial system seriously after the crisis in 2008.

At the risk of oversimplification, the consensus narrative is as follows: some financial institutions bypass the spirit of regulations – deliberately or inadvertently – amassing large, illiquid, and risky positions that are increasingly vulnerable to stress. One of the best manifestations of this view is the Financial Stability Board's 2020 holistic review of the COVID March 2020 market turmoil.

The consensus narrative drives the recommended responses. Most parts of the system are safe because of regulations implemented after 2008. However, some undesirable activities have slipped through the cracks, necessitating tighter supervision, expanded regulatory coverage, and stronger capital and liquidity buffers.

### **The problem with the consensus narrative**

I fear that the consensus narrative and its ever-increasing regulatory intensity will not protect us. Finance is crucial and requires risk to deliver on its promises to society. Unfortunately, the private sector's incentives are not fully aligned with society, giving rise to crises that have cost Europe and the US trillions of dollars.

*Use the authorities' powers to push for a more diversified financial system – one that absorbs shocks and increases efficiency – instead of the current set-up, which drives homogeneity, procyclicality and deadweight loss*



To mitigate that very high cost, after-the-fact public bailouts of private risk are unavoidable, further misaligning incentives for private risk-taking. This problem is the rationale for before-the-event regulation.

This then begs the question: why not regulate finance heavily? Well, we already do, and it has become very hard to do even more, as it appears that we are getting close to the upper limits of regulatory intensity.

The reason it is so difficult to regulate finance is that the financial system is one of the most complicated of all human constructs. In effect, it is infinitely complex. And when a system is infinitely complex, there are infinite areas where excessive risk and misbehaviour can emerge.

When market participants optimise, they are actively searching for overlooked areas in which to take risk, so it is almost axiomatic that crises happen where nobody is looking. How can we regulate something we have yet to see?

If crises are to be prevented, the architects of regulations have to foresee all the areas where vulnerability can emerge, and the supervisors must patrol all of them. That is not enough. They also need to identify all the latent links between the disparate areas of the system, channels that only emerge in times of stress.

Meanwhile, the authorities have to contend with political forces that benefit from the pre-crisis bubble and do not want regulations that threaten the perceived benefits to society. Add to this the dismissive attitude of the monetary policy and supervision authorities to the macroprudential agenda.

The objectives of the consensus-founded macroprudential narrative are impossible to achieve, in part because effectiveness demands much higher resources – human capital, politics, data, compute – than those available to the authorities. Even worse, it requires far more resources than the private sector needs.

The consequence is a cat-and-mouse game where the mice have the advantage.

Of course, this is well understood, and there is a consensus solution: build tall buffers to protect financial institutions against bad outcomes. Unfortunately, that will not prevent crises. There are several reasons why.

The first is how consensus narrative regulations harmonise beliefs and action. The practical implementation of the regulations not only favours market concentration because of high fixed costs but also compels financial institutions to measure risk and respond to it in the same way. This makes them behave like a herd.

While that is fine if we are regulating visible conduct, such as traffic police measuring speeding and issuing tickets, it is different with finance since the risk is latent (Danielsson 2024). The consequence is procyclical amplification of the financial cycle, increasing booms and deepening busts.

Regulations based on the consensus narrative also amplify the complacency channel of financial instability. If we believe that the authorities understand the system, have everything under control, and are confident that they will step in with bailouts if needed, it leads to overconfidence and excessive risk-taking, particularly in the parts of the system that the supervisors are not patrolling, which is most of it.

The resulting complacency and short-termism are key factors in most crises, such as the one in 2008. Such Minsky-type responses make crises more rather than less likely, as empirically shown in Danielsson *et al* (2018).

The consensus narrative further amplifies the political channel for instability. When the government takes increasing responsibility for financial activities, controlling risk and protecting us from the adverse consequences of that risk, it makes the state, rather than the private sector, responsible for finance.

That, in turn, has two consequences. The first, as argued by Chwieroth and Walter (2019), is that bailouts become a middle-class good that cannot be politically forsworn. The more the state gets involved with finance, the higher the chance of bailouts, which makes crises more likely.

Furthermore, when the state regulates risk-taking and underwrites losses, how can one respond to political extremists who question why we have a private-sector financial system in the first place?

Meanwhile, the fiscal and monetary resources to fight crises have mostly been exhausted by fighting minor stress. We could marshal very significant fiscal and monetary resources in 2008. If the same event happened today, that would not be possible. Knowing this undermines the credibility of financial policy, making crises more frequent and severe.

In addition, the consensus approach to regulations neglects efficiency while stressing stability. The aim of regulations is not financial stability. It is to support prosperous and stable economic activity. Not recognising that makes regulations subject to increasingly vicious political attacks. If the cost of regulating increases faster than the economy grows, the authorities will be forced to change direction.

Finally, the consensus narrative has led to rapid concentration and ever larger too-big-to-fail financial institutions, exacerbating systemic risk and inducing the further raising of protective buffers.

### **A different way forward**

There are three related reasons why a financial system composed of a large number of relatively small and diverse financial institutions is more stable and prosperous than one with few large and similar institutions.

First, when financial institutions differ from one another, excessive systemwide risk-taking is less likely because, at any given time, the actions of some institutions inflate bubbles while others do the opposite.

Second, when faced with shocks, relatively homogeneous institutions will respond similarly, buying and selling the same assets at the same time. This leads to disastrous selling spirals. In contrast, when they are diverse, some institutions will buy and others will sell, dissipating shocks. In other words, a system with relatively homogeneous institutions acts as a shock amplifier, whereas a more diversified system absorbs and dissipates shocks and, hence, is more stable.

Finally, a system with many small and diverse institutions will be more prosperous. It allows better tailoring of financial services to the needs of the economy while also requiring lower buffers against systemic risk. This means it offers the cheaper provision of financial services.

### **The benefit of diversification**

The consensus approach to regulating reduces institutional diversity since it is a partial equilibrium approach subject to a fallacy of composition: if every individual part of the system is made safe, the system is safe.

The problem is that the consensus approach makes financial institutions increasingly homogeneous, leading to herd behaviour that causes booms and busts. These financial institutions amplify shocks when stress occurs because they are compelled to seek safety in the same way.

It is better to borrow a basic principle from finance: diversification. Just as we should not put all our savings into one investment, a system composed of diverse institutions is more stable and prosperous.

This suggests learning from how competition authorities use their powers to increase competition. In practice, we can actively use the licensing regime to facilitate start-ups with diverse business models and tailor regulatory regimes to suit different types of institutions, including reducing the fixed cost of compliance.

### **Why does diversification not happen?**

A competitive financial system simultaneously promotes and opposes diversification. Start-ups compete against incumbents by having better business models, diversifying the system. The profit motive drives incumbents towards the short-term selection of successful business models and, hence, homogeneity.

Since financial institutions are highly regulated, the authorities wield powerful tools that can either help or hinder the forces of positive diversification.

The incumbents' incentives are clear: keep entrants out. That means lobbying for regulations with high fixed costs and uniform licensing regimes and regulations, using arguments of 'fair play' and 'level playing fields'.

The consensus narrative for financial regulations also pushes for homogeneity. There are three reasons for this:

- first, regulatory capture, which is driven by the two-way traffic between banks and the authorities and political pressure;
- second, the mistaken belief that there is no trade-off between stability and efficiency;
- finally, the erroneous impression that a system composed of a few large players is easier to understand and to control than one that is more complex and diverse.

## Conclusion

There are two acceptable answers to my favourite exam question: 'Given our extensive knowledge about the causes of financial crises and the measures needed to prevent them, why do they happen so frequently?' A coherent answer based on the consensus approach to regulations will earn the student an A.

But there is a better answer. Use the authorities' powers to push for a more diversified financial system – one that absorbs shocks and increases efficiency – instead of the current set-up, which drives homogeneity, procyclicality and deadweight loss.

We can easily achieve this by leveraging the licensing regime to actively permit start-ups that use innovative business models, and by tailoring regulations to the type of institution.

Such a diversified financial system will be more efficient, robust and stable – a win-win-win. ■

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*This article was originally published on [VoxEU.org](https://www.voxeu.org).*



# A virtuous circle

Trust is essential for the success of public policies. Agustín Carstens argues that policymakers' success in dealing with recent crises was due to the trust they had built over the years, which allowed them to take decisive action when required



will use my time to share some lessons learned during my career as a policymaker, which has now spanned more than four decades. At various times, I have had a front row seat during episodes of economic and financial crisis. Early in my career at the Bank of Mexico, I witnessed the debt crisis that hit many Latin American countries in the early 1980s and the 1994 'Tequila crisis' in Mexico.

The Great Financial Crisis (GFC), which exploded in 2008, coincided with my tenure first as Mexican Finance Minister, and then as Governor of the central bank. The COVID-19 pandemic and its aftermath took place while I was in my current role at the BIS.

The crises of the 1980s and 1990s were felt most keenly in emerging market economies. Some considered advanced economies immune from such events. But the more recent crises have hit advanced economies as hard as emerging markets, if not harder. Indeed, in many respects the GFC had its epicentre in the most mature and largest advanced economies.

Crises often prompted important changes in policy frameworks. In many emerging markets, the crises of the 1980s and 1990s led to the adoption of more flexible exchange rate regimes, greater central bank independence from governments, a heightened focus on low inflation as the main monetary policy objective, fiscal discipline and a remarkable improvement in banking sector supervision and regulation.

Some jurisdictions also saw major structural reforms, including the liberalisation of product and labour markets and privatisation of public enterprises. The GFC and the subsequent period of low inflation led to a broadening of central bank policy instruments, particularly in advanced economies, including the introduction of quantitative easing and forward guidance. Needless to say, the recent inflation surge has prompted further reassessments in many policy dimensions.

A key development that has taken place over the course of my career is that economies have become significantly more integrated. They trade more with each other. And, due to the emergence of global value chains, they trade more intensively. We felt this intensely in Mexico, particularly after the introduction of the North American Free Trade Agreement (NAFTA) in 1994.

Today, I see this international trade integration from the vantage point of a resident of Basel, which lies at the intersection of Switzerland, France and Germany. And it is very evident here in Frankfurt, at the heart of the manufacturing powerhouse of Europe.

*Building resilient and robust economies and financial systems is the best way to ensure that policies remain effective, so that they can be deployed when they are needed the most*

More generally, the global economy has become extremely dynamic. Information flows are unfettered, and firms and consumers very sophisticated. Even more importantly, as compared with when I began my career, financial markets have become much larger, more integrated and more fast-paced.

A side effect of all this is that the scope to sustain fundamentally flawed policy frameworks has diminished. In particular, global financial markets' immense size and speed discipline policymakers and, at times, force policies to be realigned.

To be sure, financial markets do not get everything right. They can miss important signals and remain calm in the face of rising vulnerabilities. This can be a serious problem. The years leading up to the GFC were a case in point. It is precisely in tranquil times that the seeds of future distress are often sowed.

But when financial markets smell weakness, they can move very quickly. To quote another highly influential German economist, the late Rudiger Dornbusch: *"Financial crises take much, much longer to come than you think and then they happen much faster than you would have thought."* When that happens, policymakers need to react very quickly, often amidst great uncertainty and with their credibility dented. Unsustainable policies disappear swiftly.

What are the key lessons that I take from my experience?

The first is that crises are costly and best avoided, and while adopting sensible policy frameworks can make them less likely, some crises, sooner or later, will occur.

The second is that as economies and financial markets continue to evolve rapidly over time, policy settings and even frameworks that seem appropriate today will need to change, at times very quickly.

Thus, it is critical that policymakers have the nimbleness and flexibility to adapt both to crises and to evolving economic and financial circumstances – it is a perennial challenge to adjust and recalibrate policy.

This takes me to the core issue that I would like to focus on today: the value of trust in policymaking. It is much easier to make the necessary changes if the public trusts policymakers and their policies. But the importance of trust goes beyond enabling change. In my view, only when trust is present can public policies succeed.

### **Trust in public policies**

What does 'trust' refer to? Essentially, it refers to society's expectation that public authorities will act predictably in the pursuit of predefined objectives and that they will succeed in their task.

Why is trust so important? If the public trusts authorities' actions, they will incorporate those actions in their own behaviour. This makes it more likely that the authorities will achieve their objectives. In addition, if the public has trust in public policies, they will be more willing to accept measures that impose short-term costs but deliver long-term benefits. In sum, trust underpins the effectiveness and legitimacy of policies.

Policymakers acquire trust by achieving their objectives over time. Hence the importance of setting clear policy goals, which provide a benchmark against which to evaluate policy actions and assess their success or failure. But setting targets alone is not enough. Policymakers must also pursue them decisively, particularly when the environment changes.

There is a positive feedback loop in the dynamics of trust. Effective and legitimate policies make it easier for the authorities to achieve their objectives. This, in turn, feeds back onto trust, producing a virtuous circle. However, this dynamic can also work in the other direction and, at times, very quickly.

In the extreme, if trust evaporates, the capacity to make effective public policies disappears. Preserving credibility is therefore a constant challenge, and it requires consistency in public policies over time. Institutional arrangements, like independent central banks, can be very valuable for this purpose.

To establish, enhance and preserve macro-financial stability, it is essential that the public retain trust in all of the key macro policy dimensions – monetary, financial and fiscal policies – individually and as a group. This requires coherence between them.

Let me elaborate. I will begin with the most fundamental aspect of central banking: the nature of money. The social convention of money, as we know it today, is based on the trust placed in it by the public. And as money is the basis for the entire financial system, the system's stability depends also on trust.

Fiat money is an asset that has no intrinsic value. Its worth derives from the social convention that underpins it, and from the institution that enables it to function: the central bank. Money only has value if the public believes that others will honour that value, today and in the future. This ensures that when a person wants to use it, they know that there will be finality in the payment.

Thus, the value of money clearly comes from trust. That is why the issuer of money is so powerful. This power carries with it great responsibility. Those who abuse their ability to issue currency deprive money of its value and forfeit the trust of the public. Germany knows this all too well.

The consequences of the state abusing the privilege of issuing money can be disastrous. These can range from high inflation and sharp exchange rate depreciations to the substitution of the national currency in favour of a foreign one. In the extreme, for example in hyperinflationary episodes, there could even be a return to barter. Such events

typically go hand in hand with financial instability, sharply lower economic growth, widespread job losses and soaring inequality.

The consequences of losing trust in money were a key reason for the emergence of central bank autonomy. After all, autonomous central banks are nothing more than institutions within the state with a mandate to preserve the purchasing power of the national currency. Their autonomy is the social engineering that solidifies society's trust in money.

Germany's experience in the 20<sup>th</sup> century illustrates vividly why trust in money matters. The contrast between the hyperinflation of the 1920s and the monetary stability that followed the foundation of the Deutsche Bundesbank could not be starker. And it is fair to say that the success of the Bundesbank inspired the emergence of central bank independence worldwide.

In recent decades, many central banks have followed the Bundesbank's lead and adopted monetary arrangements that allow them to anchor expectations and preserve money's purchasing power. Inflation targeting regimes are the most common framework to ensure this. The Bank of Mexico and the European Central Bank apply their own versions. But what does inflation targeting consist of?

Central banks do not control inflation directly. But their policy tools can influence it. When a central bank adopts an inflation target, it commits to use its tools to achieve that target. If the public trusts the central bank, then the inflation target, rather than current inflation, becomes a key reference point for price and wage decisions.

This contributes to low and stable inflation. Inflationary episodes are usually short-lived, reflecting changes in relative prices. Inflation becomes self-equilibrating and ceases to have a material influence on the behaviour of households or businesses.

That is why the inflation outbreak that followed the COVID pandemic and the onset of the Ukraine war was so concerning. The trust central banks had gained over many years could have been lost if society had started to doubt their commitment to price stability. Some generations experienced for the first time the risk of the economy transitioning to a high-inflation regime.

Once that transition starts, it can become increasingly difficult to stop. Therefore, it was necessary and appropriate for central banks to tighten policy forcefully and decisively through higher interest rates to restore price stability. The tighter stance may need to be maintained for a long time, for only through resolve, perseverance and success can trust in money be preserved.

Commercial bank money also needs to command trust. It is well known that the money issued by the central bank, known as primary money, is not the only money that circulates in a modern economy. Commercial bank money, in the form of bank deposits and credits, is what most households and businesses use for the bulk of their day-to-day transactions. It is thus fundamental to the monetary system. At the same time, for most people primary and commercial bank money are indistinguishable. That is by design.

Over time, institutional arrangements have evolved to extend society's trust in primary money to commercial bank money in a two-tiered monetary system. The central bank lays the foundation, and on the first floor are commercial banks.

The key is that interbank payments ultimately settle on the central bank's balance sheet, through the exchange of primary money between commercial banks. This guarantees the finality of payments and the singleness of commercial bank money.

The ultimate settlement of the banking system at the central bank is made possible by the central bank's ability to create liquidity by lending to the banking system. At times of great instability, the central bank can also provide additional liquidity through its well-known function of lender of last resort. In doing so, it safeguards the public's trust in the entire monetary system.

To put into perspective the enormous value of the framework I have just described which supports trust in primary and bank money, it is useful to consider recent failed attempts to issue private money through technologies that allow transactions based on decentralised ledgers.

These alleged forms of money function without central bank intervention, a lender of last resort or a reliable regulatory and supervisory framework. They have led to the proliferation of so-called cryptocurrencies, which cannot guarantee finality of payments nor a stable value, and so clearly lack the fundamental attributes of money.

These developments reinforce the point that what sustains fiat money over alternatives based on novel technologies is the institutional framework and the social convention that support it, which are precisely what makes it reliable for the public.

However, the mere existence of a two-tier monetary system is not enough to guarantee trust. The banking system must also remain solvent. Because banking crises have large social costs, the system should be extensively regulated and supervised.

A complement is deposit insurance, which exists to forestall potential bank runs. These layers of protection aim to safeguard the public's savings and are manifested in trust in both primary and commercial bank money.



Banks' resilience has increased markedly since the GFC. We reaped the benefits of the comprehensive regulatory and supervisory response to that crisis in the COVID pandemic, as banks were able to play a vital role in keeping economies afloat. Even when banking stress emerged in 2023, the post-GFC reforms and authorities' rapid deployment of crisis management tools limited the fallout to only a handful of institutions.

Nonetheless, there is still work to do to bolster the banking sector's resilience. Make no mistake, the core responsibility lies with banks themselves. There is no substitute for sound business models, adequate risk management and effective governance. But banking supervision needs to up its game to identify and remedy problems at banks proactively<sup>2</sup>. And we need timely, full and consistent implementation of banking reforms and regulations, including Basel III.

Recent decades have also seen rapid growth in the non-bank financial system. This sector comprises mainly activities involving securities, including debt instruments and broader forms of intermediation performed by insurance companies, private credit, investment service companies and hedge and pension funds, among others. In many countries, non-bank financial intermediation has for some time now accounted for over half of the financial system.

The need for greater supervision and regulation of the non-bank sector has become more pressing in the light of recent episodes of extreme instability. One reason is to prevent nefarious arbitrage between regulated and unregulated financial activities.

In addition, the sector's interconnectedness with the traditional banking system and the tendency of non-bank intermediation to generate opaque and excessive leverage and substantial liquidity mismatches create systemic risks. Unforeseen events in this sector can trigger systemic financial crises.

In recent years, some central banks have had to act as 'market-makers of last resort' to defuse crises and preserve trust in the broader financial system. Because such actions may conflict with central banks' measures to preserve price stability, greater regulation and supervision of the non-bank financial sector are indispensable.

Within the universe of debt instruments, public debt is of particular importance. If used appropriately, public debt allows governments to successfully function. But, from a macro-financial point of view, it is important that any public debt is, and is seen to be, sustainable. Investors must trust the government to meet its financial obligations, without resort to central bank financing.

Public debt plays a strategic role. It is considered the instrument with the lowest credit risk, making it essential for grounding the risk of asset portfolios, particularly those of banks. In addition, public debt serves as the main reference for valuing other forms of debt, for example corporate debt.

Hence, defaults on public debt compromise the stability of the whole financial system. They also threaten monetary stability since the central bank, even if it is formally autonomous, could find it necessary to finance debt service with primary issuance, leading to fiscal dominance of monetary policy. Under these circumstances, economies would cease to have a nominal anchor and would be cast adrift.

The result would be rising inflation and sharp exchange rate depreciations. We can thus appreciate the vulnerabilities that can be triggered if trust in public finances is lost.

In the light of these considerations, it is imperative for fiscal authorities to curb the relentless rise in public debt. The post-GFC low interest rate environment flattered fiscal accounts. Large deficits and high debt seemed sustainable, allowing fiscal authorities to avoid hard choices. But the days of ultra-low rates are over.

Fiscal authorities have a narrow window in which to get their house in order before the public's trust in their commitments starts to fray. As I pointed out earlier, financial markets can remain calm in the face of large imbalances until suddenly, one day, they no longer are.

That is why fiscal consolidation in many economies needs to start now. Muddling through is not enough. In many countries, current policies imply steadily rising public debt in the coming decades. Demands for more public spending will only increase, not least due to population ageing, climate change and, in many jurisdictions, higher defence spending.

Fiscal authorities must provide a transparent and credible path to safeguard fiscal solvency, ideally supported by stronger fiscal frameworks. And they must follow through on their commitments.

Fiscal health is not only about avoiding crises. It also brings material benefits. The lower long-term interest rates and debt service burdens enjoyed by Germany, compared with some of its advanced economy counterparts, are a prime illustration. Greater trust in public finances also increases fiscal space. This allows fiscal authorities to maintain trust even in the face of adverse events that require expansionary policy responses as, once again, Germany's recent experience has illustrated<sup>3</sup>.

It is clear from what I have discussed that trust in the various aspects of macroeconomic policy – monetary, financial stability and fiscal – is closely interrelated. Monetary instability imperils financial stability, erodes the willingness of investors to hold public debt and hammers public confidence. Financial crises have large fiscal costs. And loss of confidence in public finances compromises the stability of the whole financial system and can undermine price stability.

This could happen because of political pressure to keep interest rates low to maintain fiscal space. But it can also occur if central banks perceive that raising interest rates risks triggering a sovereign debt crisis. Either way, monetary and financial stability are seriously undermined.

Thus it is essential to preserve trust in all pillars of a country's macro-financial frameworks, and for there to be consistency between them. In practice, this represents a great challenge due to the multiple authorities involved and the existence of unavoidable political motivations, especially with regard to fiscal policy. This is not an insurmountable problem, but it highlights the need for consistency and coordination of public policies.

In this context, I think it is unavoidable to mention the need for consistent policy frameworks in the euro area. While the institutional environment features a single monetary policy, there is no fiscal authority, and movement towards a fuller banking and capital union has been slow.

This hinders coherence and can make the euro area more vulnerable, as we witnessed during the sovereign debt crisis. The best institutional framework to deliver policy coherence is open for debate, but the value of coherence itself seems self-evident.

Let me add a final reflection on the credibility of fiscal and monetary policy today. Recent experiences should prompt a reassessment of the appropriate role of monetary and fiscal policy and greater realism about what they can deliver. Fostering unattainable expectations about policymakers' ability to smooth out every economic pothole will ultimately lower trust in public policies.

For monetary policy, a prudent approach would be to avoid excessive 'fine-tuning'. Central banks should not be called upon to stabilise inflation at very short horizons and within narrow ranges.

This is particularly important because, as recent events have shown, inflation will partly depend on factors that are not under central banks' control.

For fiscal policy, prudence requires allocating scarce fiscal resources to measures that can raise future growth. In addition to the green transition, this includes improving healthcare systems, spending on education and improving infrastructure.

Above all, we must remember that structural reforms are the best tool to sustainably increase a country's growth potential.

### **Towards a soft landing?**

Let me start wrapping up by highlighting the recent positive developments in the fight against inflation. It seems that we are on route to a soft landing, thanks to the forceful, opportune and decisive monetary policy response.

Lower inflation, combined with surprisingly resilient activity and labour markets, suggests that we are on the right course. Financial markets seem to agree – the prices of shares and other risky asset classes have reached new highs in recent months.

In the light of the enormous strains placed on the global economy in recent years, a soft landing would be an impressive outcome. It would surely bolster trust in macroeconomic policymaking. So, where do we stand?

On the inflation front, the news is good. The monetary medicine is working. A year ago, inflation averaged 7% in advanced economies. Today it is 3%. In emerging market economies, excluding a few outliers, inflation averages 4%.

Admittedly, central banks cannot claim all of the credit. As the blue bars in Graph 1 show, lower commodity prices and the easing of pandemic-related supply disruptions also played a role. I am showing here estimates for the United States, although the story for the euro area would be similar.

Central bank actions were felt in other ways, however. Tighter monetary policy restrained demand. Just as importantly, central banks' accumulated trust allowed them to bring inflation down without the need for a large recession.

This was a stark contrast to the end of the most recent global inflationary outbreak in the late 1970s, which occurred at a time when many central banks lacked credibility as inflation fighters. Central banks' public commitment to restore price stability, and decisive actions in pursuit of this objective, prevented changes in 'inflation psychology' from taking hold and kept second-round effects at bay.

As the red bars in Graph 1 show, measures of inflation expectations, which rose concerningly at the start of the inflation outbreak, began to fall shortly after central banks started to raise rates.

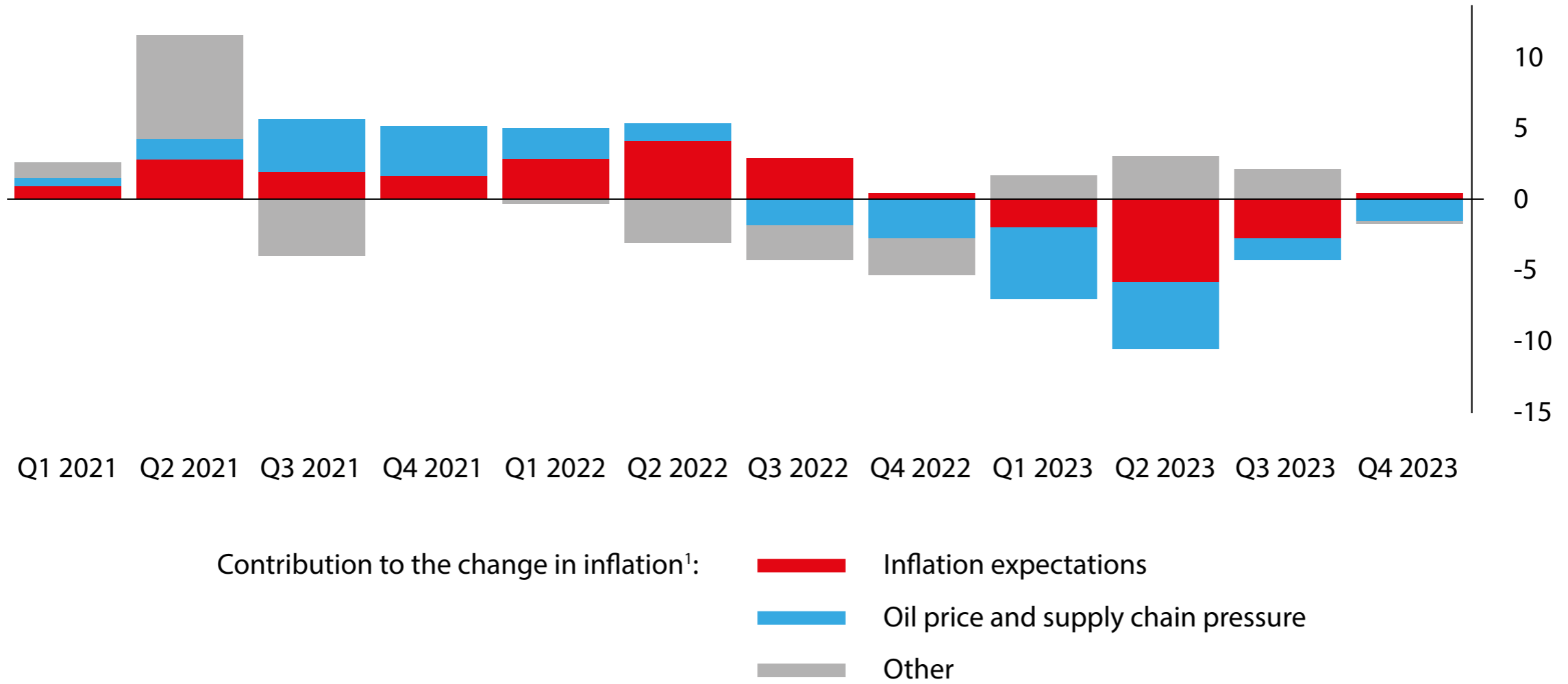
Simulations by some of my BIS colleagues, shown in Graph 2, illustrate that, if central banks had not tightened policy, inflation would have stayed high, even as the pandemic-related supply shocks faded<sup>4</sup>. Through their actions, central banks showed their firm commitment to achieving their mandates.

Lower inflation has come at a remarkably small cost to the real economy. To be sure, global growth has slowed. Here in Europe, we narrowly avoided a recession last year. But labour market conditions remain firm and, at a global level, the growth slowdown is shallow. Against a backdrop of the largest and most synchronised monetary policy tightening in decades, this is an impressive achievement.

# Graph 1. Contributors to disinflation: decomposition

In percentage points

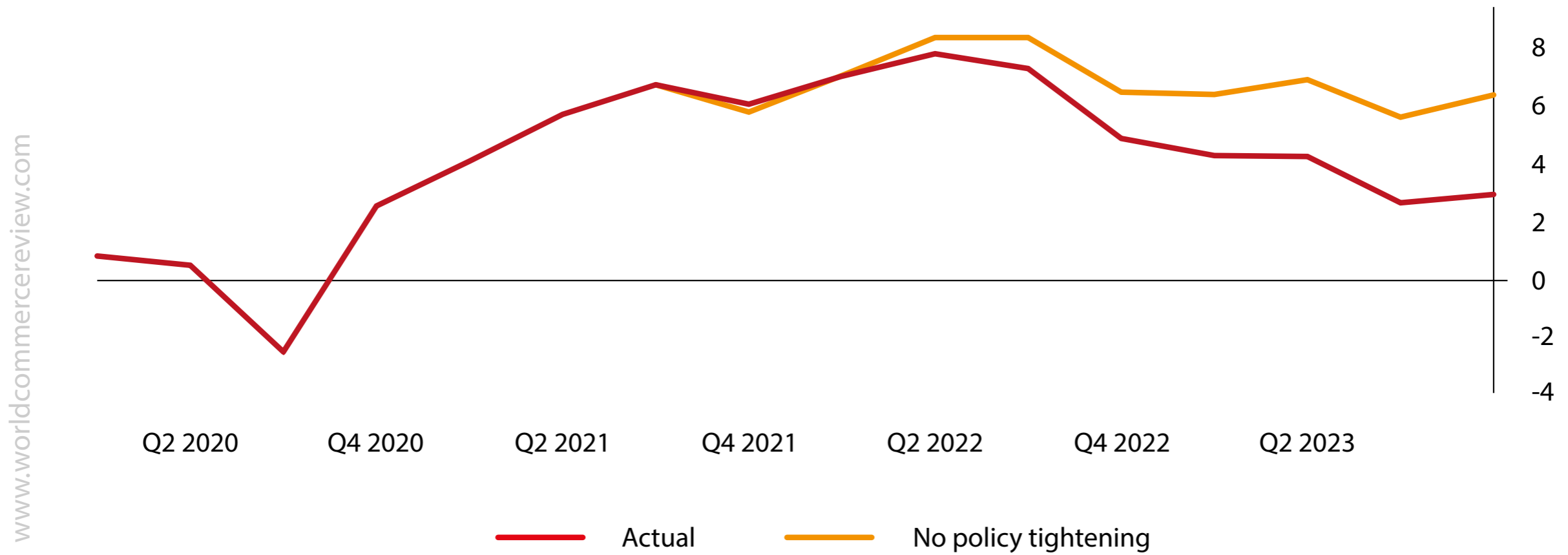
www.worldcommercereview.com



*1 Contributions to the change in quarter-on-quarter inflation over past year based on a linear regression model using data for the United States. Sources: Federal Reserve Bank of New York; Federal Reserve Bank of St Louis, FRED; Bloomberg; BIS.*

## Graph 2. Inflation would have remained much higher without central bank actions

In per cent



Based on simulations from a medium-scale macroeconomic model of the United States.  
Sources: Federal Reserve Bank of St Louis, FRED; BIS.



A strong recovery in aggregate supply was an important contributor. It helped support output while lowering inflation. Without the supply recovery, disinflation would have been harder. But we should not forget that, without tighter monetary policy, there would have been no disinflation.

A soft landing is not guaranteed, however. Central banks' job is not done. While inflation is lower, it is still above central banks' targets. And there will surely be more bumps in the road. The medium-run risks to inflation – such as deglobalisation, economic fragmentation, adverse demographic trends and the need to fight climate change – reinforce the need for central banks to stay the course. It is only in this way that the public's trust in money can be preserved.

### **Conclusion**

The events of the past decades presented policymakers with frequent and intense challenges. Facing extraordinary strains, policymakers strived to preserve the value of money, and keep their economies and the financial system functioning. These challenges showed the importance of the public's trust in policymakers, which allowed for decisive action. And policies worked better when they were each part of a coherent whole.

As Goethe wrote in Faust: *"Es irrt der Mensch, solang er strebt"* – man errs as long as he strives. Policymakers did not get everything right. Nonetheless, their attempts to make good choices were noticed by society.

If the events of the 21<sup>st</sup> century so far are a guide, we should not expect plain sailing in the coming decades. Building resilience will require policymakers to apply an appropriate policy mix and communicate it effectively. Monetary policy will need to prioritise the inflation fight, until it is decisively won and price stability is restored.

Financial stability policy needs to ensure a resilient banking sector and address remaining regulatory gaps. Fiscal policy will need to rationalise expenditure while making room for vital investments in our future. But these policies are unlikely to be sufficient even if applied jointly.

Ultimately, to improve economic resilience and enhance sustainable growth, governments must rediscover the appetite for structural reforms that has been absent for far too long.

I would like to leave you with this last thought. Part of preserving trust is to know the limits of what policies can deliver. Expecting policymakers to deploy extraordinary macroeconomic policies to respond to every challenge is a sure way to erode the public trust.

Building resilient and robust economies and financial systems is the best way to ensure that policies remain effective, so that they can be deployed when they are needed the most. ■

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## Endnotes

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This article is based on a [lecture](#) by delivered at the Center for Financial Studies and the House of Finance at Goethe University, Frankfurt, 18 March 2024.

# Innovation, integration and independence

As payments transition into the digital era, Piero Cipollone argues we need to take SEPA to the next level through the digital euro and private pan-European payment solutions

**T**he Single Euro Payments Area (SEPA) was launched in 2002, aiming to address the fragmentation in non-cash payments that prevailed at the time. Payments between euro area countries were slower, more cumbersome and more expensive than domestic payments. And yet, many market participants questioned the merits of the project: will SEPA make payment services more efficient? Will it make the economy more competitive? And will it deliver real benefits to customers?

Fast-forward to today and it is clear that the initial scepticism was unfounded. We no longer differentiate between national and crossborder payments in euro for credit transfers and direct debits<sup>1</sup>. And people really appreciate the benefits of these two payment services for seamless money transfers across Europe.

However, SEPA has fallen short when it comes to digital payments that are even more central to our daily lives: there is no SEPA at the point of interaction, namely for in-store, mobile or e-commerce payments. Person-to-person (P2P) solutions also remain fragmented.

Most European retail payment solutions are focused on national markets, covering only some use cases and lacking pan-European reach. Because of this fragmentation, crossborder transactions within the euro area have become dependent on a very small number of non-European market players. This hampers competition, innovation and resilience.

Moreover, the digitalisation of payments is undermining the crucial role cash plays in financial inclusion. After all, it is the only means of payment that has legal tender status and can be used by anyone, anywhere in the euro area, free of charge.

As a result, we are once again at a crossroads. And just like in the past, the added value of taking SEPA to the next level is now being questioned: do we *really* need a Single Euro Payments Area at the point of interaction? Do we *really* need a digital euro?

The answer, much like two decades ago, is an unequivocal yes. We cannot afford to settle for the status quo. And we should ask ourselves some hard questions: why aren't European retail payment solutions and platforms able to compete at the global level?

*We now stand at a crossroads as payments transition into the digital era, with the risk of crowding out public money, and European providers fail to be competitive on a pan-European, let alone global, scale*

Today, the market capitalisation of the largest European bank is several times lower than that of the dominant international card schemes. European payment solutions struggle to compete with these non-European payment providers even within Europe, while in the United States new retail payments companies succeed in scaling up rapidly<sup>2</sup>.

In my remarks I will argue that this has to do with the difficulty European payment service providers (PSPs) have in reaching pan-European scale. And I will advocate a comprehensive vision encompassing both public and private retail payments.

Our goal is clear: to further integrate European payments with a view to supporting competition and innovation, while reducing excessive dependencies. Payments offer significant scope to deepen the Single Market in the interest of users and to enhance the competitiveness of European financial services<sup>3</sup>.

To emulate the success we had with the launch of the SEPA project, we need to resist the temptation to preserve the status quo. Instead, we must act, relying on the combined knowledge, expertise and efforts of both public authorities and private intermediaries to achieve a single area for retail payments in euro. The benefits in the medium and long run will be much greater than the initial investment costs. The ECB is calling on the payments industry to redouble its efforts.

### **Retail payments remain fragmented and dominated by a few non-European players**

Despite the integration of the euro retail payments market over the past 15 years<sup>4</sup>, today's ecosystem is facing three major challenges.

### Fragmentation along national lines

First, European payment solutions remain fragmented along national lines. Currently, European solutions for payments at the point of interaction, whether in physical shops, mobile or e-commerce, are scarce and mostly confined within national borders<sup>5</sup>.

And we do not have a European digital solution for P2P payments covering the entire euro area. Instead of joining forces and sharing resources to develop pan-European solutions, national communities have often preferred to preserve the legacy of investments made in the past.

Consequently, citizens who live, work, travel or shop online in another euro area country find themselves reliant on very few, non-European solutions. And small companies that consider expanding their business across borders or online may be more reluctant to do so given the need to rely on those solutions and bear the associated costs.

We are thus in a paradoxical situation: the fragmentation of European payment solutions along national lines stands in the way of deepening the Single Market and further digitalising the economy. But efforts to reduce barriers to trade and accelerate digitalisation within the EU generate additional revenue for the few non-European players that currently make it possible to pay in shops and online across Europe, entrenching their dominant position.

Some of the benefits of digitalisation and market integration are thus at risk of not reaching European consumers and instead growing the rents of non-European players.

### Limited competition at the point of interaction

Second, the failure of European payment solutions to achieve pan-European scale, and often to even go beyond their domestic market, has resulted in limited competition at the point of interaction. This issue is particularly



pronounced for card payments, which, in terms of value, now account for the majority of retail payment transactions<sup>6</sup>.

Their share in the total number of digital transactions has also been increasing, while that of credit transfers and direct debits has receded (Chart 1).

According to the most recent data, international card schemes account for close to two-thirds (64%) of all electronically initiated transactions with cards issued in the euro area<sup>7</sup>. And 13 out of the twenty euro area countries rely on them entirely due to the absence of a national card scheme (Figure 1).

The share of international card schemes is likely to grow further<sup>8</sup>, as even the largest domestic card schemes are losing market share<sup>9</sup>. The latter should be wary of this development: while for the time being they maintain a steady revenue stream as card transaction values and volumes increase, this may well change once the market matures.

Competition is also hampered by barriers to entry, which hinder the emergence of new competitors. For instance, in the case of contactless transactions, which are rapidly becoming the new norm in card payments, potential new entrants face the challenge of costly and time-consuming terminal updates.

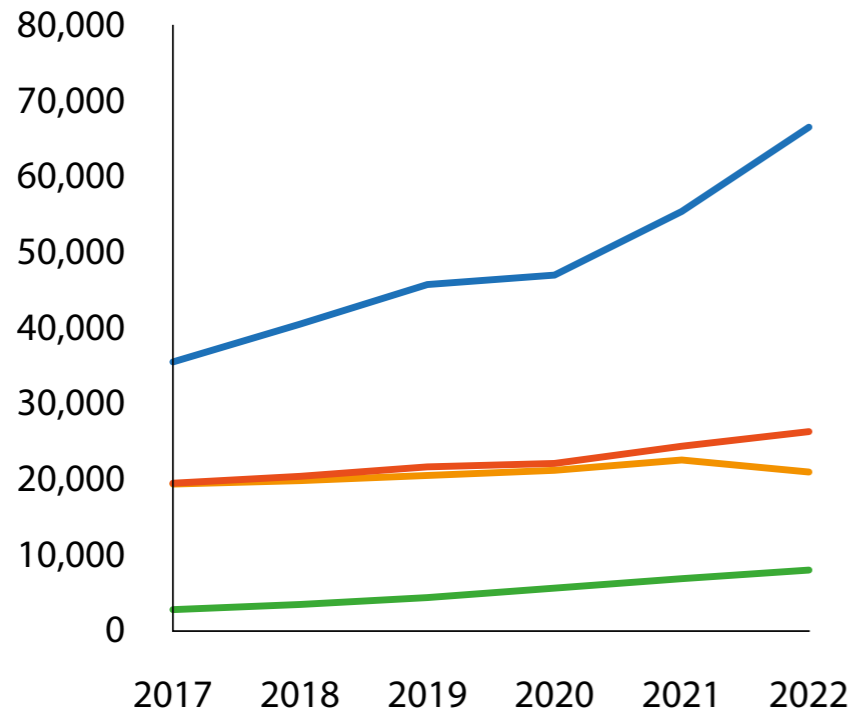
The lack of a widely available European open near-field communication (NFC) kernel further compounds this issue, forcing new entrants who want to offer contactless payments with mobile devices in stores to either abandon their efforts or depend on existing kernels provided by competitors.

Limited competition in card payments translates into higher fees. According to a recent study by the European Commission, the average net merchant service charges applied by card schemes in the EU almost doubled between 2018 and 2022 (from 0.27% to 0.44%)<sup>10</sup>, resulting in significant additional costs for merchants<sup>11</sup>.

# Chart 1. Payments per digital transaction type in the euro area

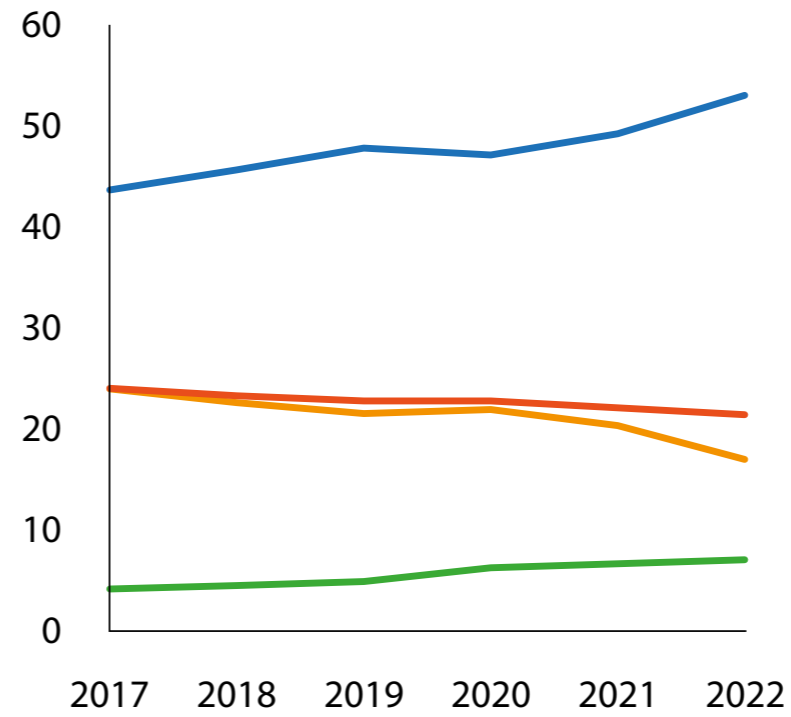
Number of payments per digital transaction type, per year

(millions)



Share of total number of digital transactions

(percentages)

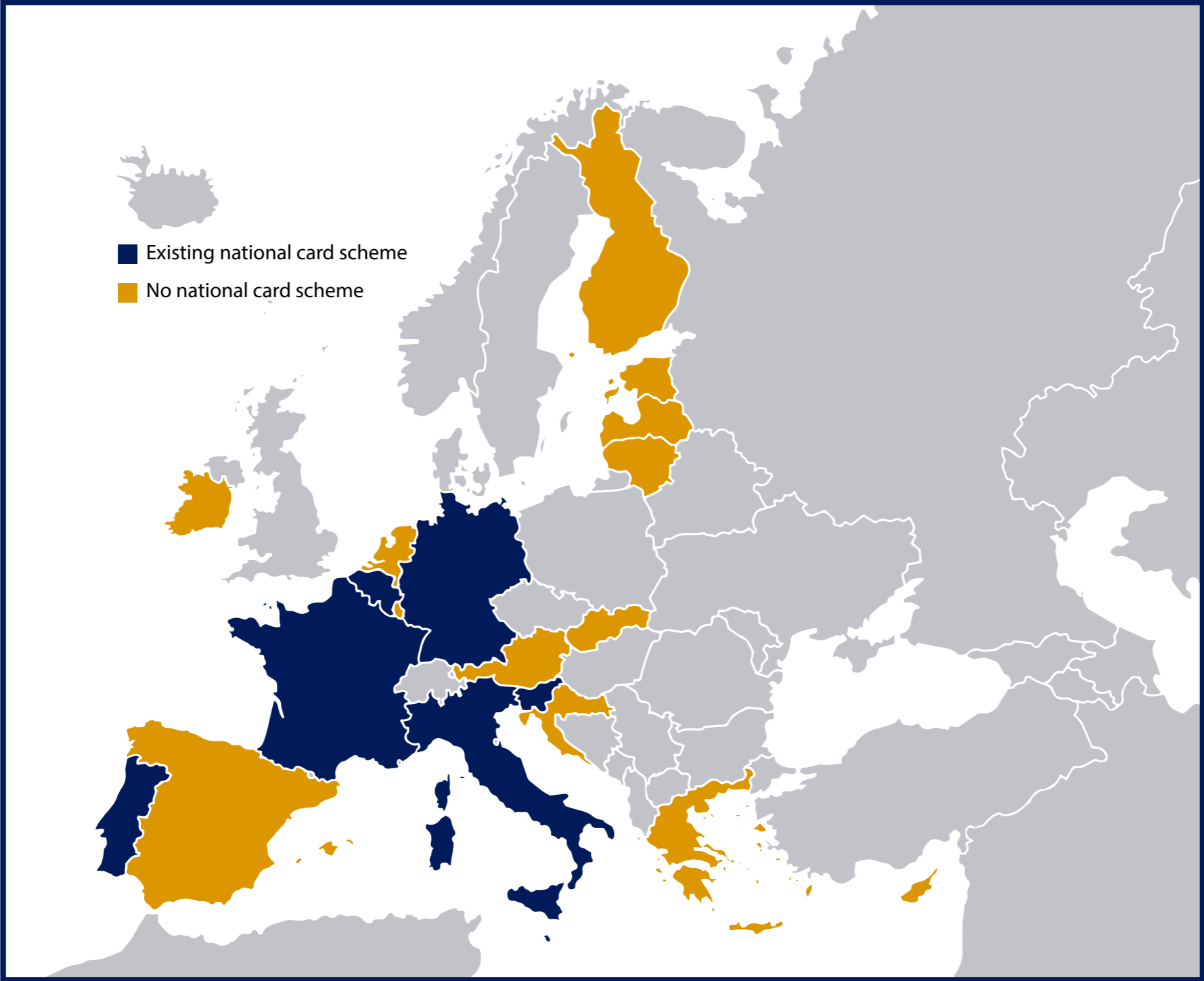


- Card payment
- Credit transfer
- Direct debit
- E-money payment

Source: ECB statistics.

Figure 1. National card schemes

www.worldcommercereview.com



Source: ECB data.

When those are passed on to consumers, the effect is similar to a consumption tax, albeit one that does not benefit European governments. Furthermore, European merchants criticise the complexity and opacity of card scheme fees, which make it difficult to understand why they are charged so much.

The lack of competition is a problem in other segments, too, such as e-commerce, mobile and P2P payments. While some national initiatives have seen success in specific use cases<sup>12</sup>, they fall short when competing with global players on a pan-European scale.

Moreover, big techs entering payments creates further risks, as they could leverage their dominant positions in neighbouring markets and their closed ecosystems. For instance, Apple's significant market power in smart mobile devices and its dominant position in mobile wallet markets on the iOS operating system have raised concerns about anticompetitive behaviour<sup>13</sup>.

It led to the opening of a formal antitrust investigation in connection with Apple Pay, the only mobile wallet solution that Apple allows to access the NFC antenna on iOS devices<sup>14</sup>.

### Dependence on non-European payment providers

The dependence on non-European players is the third major challenge for euro area retail payments. Openness to global competition is essential for fostering innovation. But without a genuine pan-European alternative to international card schemes, payments are more expensive for consumers and merchants. And an overreliance on non-European providers makes our payments and financial system more vulnerable to external disruptions.

European alternatives would improve the resilience of the euro area and the Single Market to such disruptions. And it would increase Europe's ability to set its own standards, rather than depending on standards established elsewhere. Europeans should have more control over an asset as crucial to our economy and society as payments.

## **The Eurosystem's response: our retail payments strategy and digital euro project**

To tackle these challenges effectively, we must take decisive action to move away from the status quo. And I would like to thank Commissioner McGuinness and the European Commission as a whole for their continuous support and legislative ambition in this regard.

At the ECB we envisage a future where retail payments are faster, cheaper, easier and more resilient, thanks to a diversity of pan-European means of payment using European infrastructure. And we do not want this to happen ten years from now, but much sooner.

An old proverb says: *"the best time to plant a tree is 20 years ago, the second-best time is now."* Digitalisation and geopolitics are not standing still. This is why our strategy aims at fostering integration, innovation and independence, all for the benefit of users.

Our proposal encompasses two complementary transformation policies, mirroring the dual pillars of the financial system: public money and private money. These policies are not contradictory by nature; rather, they complement each other and enhance the overall functioning of the European retail payment system.

### **Our policy on public money**

On the public money side, the Eurosystem maintains a steadfast commitment to issuing cash. Our pledge<sup>15</sup> is to ensure that cash remains widely available and accepted as both a means of payment and a store of value. Therefore, the ECB strongly supports<sup>16</sup> the establishment of rules on the legal tender status of euro banknotes and coins across the euro area.

Banknotes have played a crucial role in integrating payments within the euro area for over two decades, by providing a simple and universally accepted payment method. As we transition into the digital age, it is imperative that we preserve the same level of integration and ensure that our currency remains future proof.

There is no reason why public money should not go digital in keeping with all the other forms of payment. We need to adapt to evolving consumer preferences, which are increasingly digital. So the status quo is no longer a viable option. This is why we have launched the digital euro project, currently in its preparatory phase<sup>17</sup>. A digital form of cash holds the promise of preserving the pivotal role of central bank money (Figure 2).

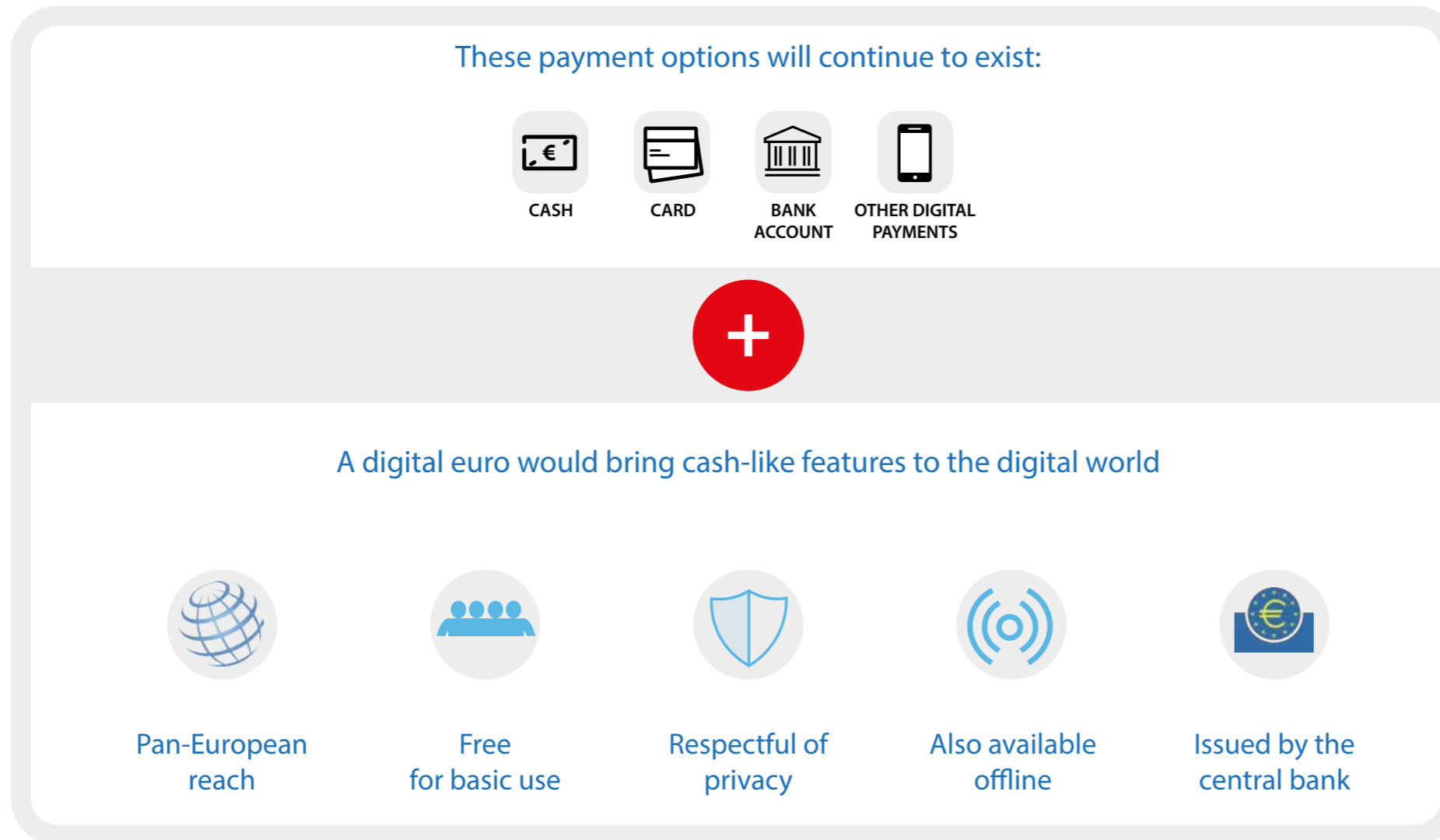
First and foremost, a digital euro would provide unparalleled pan-European reach, ensuring that payments can be conducted seamlessly anytime, anywhere within the euro area, for all types of digital payments (Table 1).

Moreover, as a public good, a digital euro would be provided to citizens free of charge for basic use. Crucially, a digital euro would uphold stringent privacy and inclusion standards, safeguarding user data and rights in the digital age.

Furthermore, a digital euro caters to a diverse range of payment scenarios, covering everything from online transactions to in-store purchases and P2P payments, both online and offline. The offline digital euro will provide a level of privacy very close to cash, while also contributing to resilience and inclusion.

Unlike existing payment methods, a digital euro would offer a comprehensive solution that aims to meet all – rather than just a few – of the evolving needs of modern consumers. Besides covering point-of-sale, e-commerce and P2P payments across the euro area, it would offer seamlessly integrated online and offline functionalities, ensuring that transactions would not be interrupted - even in a situation of limited network coverage or a power outage. No existing payment method offers all these benefits at once.

**Figure 2. Digital euro, a digital form of cash**



Source: ECB.

## Table 1. Availability of the digital euro in all retail payment scenarios in the euro area

Comparison of the availability of the main retail payment methods across retail payment scenarios

	Cash		National schemes (card or account-based)		International schemes (card or account-based)		Digital euro	
	Domestic	Euro area	Domestic	Euro area	Domestic	Euro area	Domestic	Euro area
<b>P2P payments</b>	Yes*	Yes*	Some	No	No	No	Yes	Yes
<b>POS payments</b>	Yes	Yes	Yes**	No***	Yes**	Yes**	Yes	Yes
<b>E-commerce payments</b>	No	No	Some	No***	Yes**	Yes**	Yes	Yes

Notes: \*Only proximity transactions, unless mailing cash. \*\*Where accepted. \*\*\*Only through co-branding with international schemes.

Source: ECB.

Finally, the digital euro will leave no one behind. Promoting digital financial inclusion is a fundamental principle underlying the concept of a digital euro, as also reflected in the relevant draft regulation<sup>18</sup>. The Eurosystem is thus committed to offering a digital euro app in an inclusive and accessible way for people with low digital and financial skills and resources, as well as those with disabilities or functional limitations and the elderly.

While private intermediaries will be able to integrate digital euro services into their own banking apps and wallets, a digital euro app offered by the Eurosystem would not only support accessibility – a feature that is important to consumers<sup>19</sup> – but also ensure that public money remains tangible for people by ensuring a harmonised, baseline user experience across the euro area.



It would be made available in at least all official languages of the EU and be designed such that everybody will immediately recognise the digital euro, just as everybody can recognise euro banknotes today. And smaller PSPs that lack the resources to develop their own front-end solutions would be able to distribute digital euro services through the digital euro app. This app is thus essential for achieving the objectives of the digital euro.

At the same time, the app offered by the Eurosystem would not impinge on the relationship between PSPs and their customers: it would merely provide a uniform point of entry allowing users to interact with their PSP via a smartphone, for example to display information or initiate payments<sup>20</sup>.

Moreover, PSPs will be free to provide customised value-added services in their own apps and wallets, going beyond the basic payment functionalities supported by the digital euro app.

### Our policy on private money: the retail payments strategy

While the digital euro complements private solutions by giving citizens an additional option for digital payments, it alone cannot resolve all the challenges facing European payments today and in the future.

That's why our vision on payments entails a strategy<sup>21</sup> centred on fostering the development of *privately* operated, European-governed, pan-European payment solutions at the point of interaction.

The Eurosystem supports market-led initiatives that meet a set of requirements it has defined for a European solution at the point of interaction<sup>22</sup>. The ECB therefore welcomed the European Payments Initiative (EPI), which has recently made further significant progress towards a European-grown instant payment solution, including the establishment of EPI Company, development of its brand, completion of acquisitions<sup>23</sup>, and the pilot of instant P2P

transactions. The ECB encourages EPI to continue its progress and to expand its geographical coverage to achieve pan-European reach.

Furthermore, the ECB views initiatives by mobile payment solutions and third-party providers favourably, recognising that they may enhance competition at the point of interaction. For instance, a recent collaboration involving three national mobile payment solutions<sup>24</sup> seeks to achieve interoperability in P2P transactions as a first step - and potentially also interoperability at the point of interaction in the coming years. Interoperability could be viewed as an intermediate step towards merging into a single payment solution.

While these European initiatives demonstrate market vitality, we need to avoid fragmentation. The division of consumers and merchants along geographical lines – with national communities joining solutions that cover only parts of the euro area – runs counter to the Eurosystem's vision of *pan-European* reach. This fragmentation would also prevent payment solutions from taking advantage of the sheer scale of the Single Market.

So how can we avoid this undesired outcome and move towards a win-win situation for all payment providers? One solution is to further develop the interoperability between conceptually different solutions. But we would need to see that this approach generates sufficient resources to sustain a common governance, shared functions and product innovation. Furthermore, some countries have national solutions with low market shares while others have none at all.

Therefore, while working to make progress on their current plans, private initiatives and national communities could consider joining forces to create strong integrated solutions and aim for pan-European reach within a reasonably short time horizon.

Although this has not materialised so far, it could be short-sighted to stick to positions taken in the past rather than grasp the opportunities offered by a landscape in transformation.

### Our policy on the complementarity of public and private money

The public sector can facilitate such initiatives to reach pan-European scale. In particular, the digital euro could play a key role in shaping open standards. This could allow intermediaries to optimise their implementation strategies and unlock both technological and monetary benefits.

To ensure a seamless implementation of the digital euro and a consistent payment experience across the euro area, the Eurosystem is actively working on a digital euro rulebook. This rulebook will implement common standards in the EU acceptance network. It will be designed to leverage existing standards while also preserving ample flexibility for the market to innovate and develop additional solutions<sup>25</sup>.

The digital euro rulebook, along with a robust infrastructure provided by the Eurosystem, would allow private providers to reach pan-European scale with their own payment solutions, achieving cost efficiencies and contributing to an integrated European payment market.

This infrastructure would serve as a catalyst for innovation, enabling the development of new value-added services tailored to customers' needs emerging in the digital age. We envision the digital euro infrastructure as being like a unified European railway network, where various companies can operate their own trains delivering additional services to their customers.

Imagine the following possibilities: innovative front-end solutions designed for conditional payments, functionalities enabling effortless bill-splitting among friends and family, or micropayment applications making it easier to buy online content and services.

These innovations could enhance the overall user experience, enable new business models and drive greater convenience in our day-to-day transactions. Some of these innovative and value-added services are already present in some countries, but it is very expensive for the providers to expand their services across the entire euro area.

On the one hand, the possibility to leverage the open digital euro infrastructure would ensure the necessary standardisation, the lack of which currently hinders innovation; on the other, it would enable private retail payment solutions to launch new products and functionalities immediately on a broader scale. This would give users access to a wider array of services and result in greater competition and innovation on a continental scale. It would also mitigate our current dependence on a few non-European providers.

For example, an open digital euro infrastructure would allow a Belgian citizen to open an account with a payment service provider in Spain that may offer services not yet available on the Belgian market. And new services could be developed such as automatic refunds when rail journeys or flights are delayed.

In addition, private sector players could also review and enrich the portfolio of their payments products in private money, providing customers with new options like rewards, bonuses and subscriptions. Or they could explore the cross-selling of core business products. Also, the competitive rush towards the use of friendly and secure technologies could improve customer experience.

### **Beyond the point of interaction: strengthening the 'classic SEPA'**

But our retail payments strategy extends beyond the point of interaction. The second major goal of the Eurosystem's strategy is to strengthen the 'classic SEPA' framework, which provides the backbone for innovative European payments. SEPA has been a joint undertaking since the beginning. Both private and public clearing and settlement mechanisms have contributed to pan-European reach and resilience.

A key priority within this framework is the full deployment of instant payments. However, their roll-out has so far not enabled users to take full advantage of the important benefits that instant payments could generate. For instance, instant payments give consumers a clearer picture of their finances.

And for businesses, they reduce the amount of money locked in processing, allowing for better cash and liquidity management and reducing the need for overdraft facilities. Instant payments can also trigger faster deliveries and real-time reconciliation of payments, as well as increasing the digitalisation of corporate supply chains.

The ECB welcomes the recent regulation on instant payments<sup>26</sup>, which aims to address obstacles such as the fragmented adherence of PSPs to the scheme and limiting transaction fees for payers.

Additionally, ongoing initiatives such as the SEPA Payment Account Access (SPAA) scheme contribute to enhancing independence and innovation. The scheme leverages 'open banking' principles in payments. For a fee, participants can exchange data related to payment accounts and initiate payment transactions with premium features.

SPAA-based payment solutions can provide a variety of account-to-account payment options as an alternative to cards at the point of interaction. The ECB welcomes this innovative European road to 'open banking' and encourages market players to join the scheme.

However, the effectiveness of new schemes can sometimes fall short of expectations. For instance, PSPs implement proprietary solutions instead of using the newly designed SEPA schemes. Or key users discard core features of the instant payments scheme intended to offer functionalities equal to or better than those of traditional cards.

Beyond these particular cases, clarifying the reasons for such shortcomings may be worthwhile. The Eurosystem stands ready to help reflect on how to improve payment-related schemes.

### **Preparing for the transformation**

Addressing these challenges and fulfilling our common vision for the future of retail payments requires industry readiness. The oft-voiced argument that resources are constrained points to the need for a shift in perspective. While past resource allocations may seem entrenched, we are entering a new phase in payments that demands additional efforts, re-allocation of resources and proper planning from industry stakeholders.

Moreover, confining these investments to national level is neither efficient nor sustainable, especially in the light of the significant influence wielded by non-EU players in the digital landscape. Opting for joint EU investments and leveraging economies of scale would enhance the efficiency and effectiveness of our common efforts. And aligning these investments with the introduction of the digital euro would further maximise outcomes.

But it is crucial to recognise that this is not solely about costs. Just as SEPA facilitated the adoption of new standards and honed skills in the payments sector, the integration of private and public solutions at the point of interaction can foster innovation and resilience and benefit the economy.

### **Conclusion**

Innovative, integrated and independent retail payments are crucial components of our monetary system. Indeed, as Tommaso Padoa-Schioppa cautioned over two decades ago, *“Public confidence in the currency could be endangered if retail payment [instruments and] systems were inefficient, impractical for users or unsafe.”*<sup>27</sup>

The efforts made since then including the establishment of SEPA and the widespread acceptance of cash as a universally accepted payment method, were crucial for achieving a higher level of integration and efficiency in European retail payments.

However, we now stand at a crossroads as payments transition into the digital era, with the risk of crowding out public money, and European providers fail to be competitive on a pan-European, let alone global, scale.

To address these challenges, we have set up two transformation strategies: the digital euro and the retail payments strategy, the latter focusing on private pan-European payment solutions at the point of interaction.

The digital euro will not only give European citizens more freedom of choice and the ability to pay with a secure solution that is widely accepted throughout the entire euro area. It will also establish a common infrastructure with pan-European reach, on which private intermediaries can build to offer competitive and innovative private payment solutions across Europe.

Today we need to take SEPA to the next level, at the point of interaction, through the digital euro and private pan-European payment solutions. Public-private cooperation can achieve greater integration, innovation and independence in payments, to the benefit of consumers and payment service providers. Together we can recapture the original spirit of SEPA. ■

**Piero Cipollone is a Member of the Executive Board of the European Central Bank**

## Endnotes

1. Direct debits allow customers to authorise companies or organisations to take money directly from their payment accounts to pay their bills.
2. For instance, Stripe – which was established by Irish entrepreneurs – scaled up rapidly in the United States and is currently valued at USD 65 billion.
3. Letta, E (2024), *“Much More than a Market – Speed, Security, Solidarity: Empowering the Single Market to deliver a sustainable future and prosperity for all EU Citizens”*, high-level report on the future of the Single Market.
4. The *Payment Services Directive 2007/64/EC* entered into force in 2009, creating a harmonised legal framework for the provision of payment services in the European Union.
5. There are notable exceptions of European providers going beyond the country of origin, such as Bluecode, Satispay and a few others.
6. The *SPACE 2022 study* shows that in terms of value of payments, cards (46%) accounted for a higher share of transactions than cash payments (42%). Card payments were used in 34% of point-of-sale transactions, up from 19% in 2016 and 25% in 2019. For payments over €50, cards were the most frequently used method.
7. Volume share of international card schemes in total electronically initiated card payments with cards issued in the euro area and transactions acquired worldwide for the first half of 2023. Based on data collected under Regulation (EU) No 1409/2013 of the European Central Bank on payments statistics (ECB/2013/43), as amended.
8. *Börsen-Zeitung* (2024), “Visa is investing billions to increase acceptance”, 14 February.
9. *Le Parisien* (2024), “CB, Visa et Mastercard: la guerre des cartes bancaires fait peur aux commerçants”, 22 March.
10. European Commission (2024), *Study on new developments in card-based payment markets, including as regards relevant aspects of the application of the Interchange Fee Regulation - Final Report*, February.
11. A rough estimate suggests that card schemes’ revenues from merchant services charges in the euro area may have increased by more than €7 billion between 2018 and 2022, reflecting both the increase in fees per transaction and the increase in the value of card transactions. In 2022, card payments amounted to €2.74 trillion in the euro area, compared with €1.8 trillion in 2018 (source: ECB Payments Statistics).



12. For instance, Bizum in P2P payments, iDEAL in e-commerce.
13. European Commission (2024), [“Antitrust: Commission seeks feedback on commitments offered by Apple over practices related to Apple Pay”](#), press release, 19 January.
14. For details on the investigation, see the [Commission’s website](#). See also the [letter](#) sent by Piero Cipollone to Commission Executive Vice-President Margrethe Vestager and his [letter](#) to Commissioner Thierry Breton regarding the commitments offered by Apple over access restrictions to NFC technology.
15. Further details on the Eurosystem cash strategy can be found on the [ECB’s website](#).
16. [Opinion of the European Central Bank of 13 October 2023 on a proposal for a regulation on the legal tender of euro banknotes and coins \(CON/2023/31\)](#).
17. Further details on the digital euro project can be found on the [ECB’s website](#).
18. [Proposal for a Regulation of the European Parliament and of the Council on the establishment of the digital euro](#).
19. BEUC (2023), [“Digital euro: BEUC’s recommendation on the legislative framework for the digital euro”](#), Position paper, September.
20. See ECB (2023), [“A stocktake on the digital euro”](#), 18 October.
21. ECB (2023), [“The Eurosystem’s retail payments strategy - priorities for 2024 and beyond”](#).
22. (1) Pan-European reach and customer experience; (2) convenience and cost-efficiency; (3) safety and security; (4) European brand and governance; (5) global acceptance (in the long run).
23. ECB (2023) [“ECB welcomes the EPI’s progress on building a European payment solution”](#), MIP news, 25 April.
24. SIBS, BANCORMAT and BIZUM (2023) [“Leading European mobile payment solutions MB WAY, BANCORMAT Pay, and BIZUM establish a partnership for interoperability”](#), 14 December.
25. For details on governance and stakeholders, see the [ECB’s website](#).
26. [Regulation \(EU\) 2024/886 of the European Parliament and of the Council of 13 March 2024 amending Regulations \(EU\) No 260/2012 and \(EU\) 2021/1230 and Directives 98/26/EC and \(EU\) 2015/2366 as regards instant credit transfers in euro](#).

27. BIS (2003), [Policy issues for central banks in retail payments](#), March.

*This article is based on a [speech](#) delivered at the ECB conference on 'An innovative and integrated European retail payments market', Frankfurt, 24 April 2024.*

# Maintaining the UK's leading global position in FinTech

The UK's fintech sector remains resilient. Roberto Napolitano discusses how this leadership in financial innovation can be continued

In 2023, despite economic challenges, the UK's FinTech sector remained resilient, securing over \$5 billion in [investment](#), second only to the US and more than all European countries [combined](#)<sup>1</sup>. This solidifies the UK's position as the second-highest recipient of global capital in FinTech, underscoring its leadership in financial innovation. Looking ahead, as technology advances, maintaining this leadership is crucial and collaboration among industry players, regulators, and government is key.

There are many initiatives Innovate Finance spearheads in supporting the growth of the FinTech sector, whether it is attracting capital, ensuring smarter regulation, or driving further diversity of talent.

An example is the recent launch of the [Unicorn Council for UK FinTech \(UCFT\)](#)<sup>TM</sup>, a coalition of 'unicorns' aimed at accelerating growth in the sector. Co-chaired by Innovate Finance and industry leaders like [Zilch](#), [Revolut](#), and [Clearbank](#), the UCFT wants to provide [key policy recommendations](#) to the government on UK regulatory environment, capital markets, R&D, investment schemes, VAT and other matters that are crucial to maintain the global leadership of UK FinTech.

Looking at the months ahead, we have worked with our members to produce a [General Election Fintech Manifesto](#) that outlines the strategy we need to implement to ensure the UK remains the best place for FinTech businesses to scale and prosper. The three areas of focus of the Manifesto are:

1. To become the world's first smart data economy by leveraging technologies like open data, AI, and blockchain, and pioneering smart data initiatives. Recent advancements in legislation, such as The Data Protection and Digital Information Bill, support this evolution.

2. To secure the UK's digital finance sector by combating **payment fraud**, which accounts for 40% of all UK crime and whose majority originate from social media platforms. Smarter regulations and collaboration among stakeholders are vital to ensuring consumer and business safety in the digital finance sector.

3. To embrace new technology and regulations: as AI continues to drive innovation, updating regulatory frameworks is necessary. Investments in growth capital and enhancing IPO markets are essential for ongoing innovation.

*Innovate Finance continues to play a pivotal role in shaping the UK's FinTech landscape, ensuring it remains dynamic and inclusive, benefiting both consumers and businesses*

Moreover, to strengthen the UK's FinTech ecosystem, Innovate Finance spearheads various initiatives that aim to drive further diversity and inclusivity of talent, essential for the UK FinTech sector to continue to prosper.

One example is our annual [Women in FinTech Powerlist](#) shining a spotlight on +250 women and 45 standout leaders across 8 categories that are making significant and impactful contributions to the FinTech ecosystem. In addition to this and given the success of last year, we had the privilege to launch our second [Pride in FinTech™](#) to champion the incredible LGBTQIA+ community making an impact in UK FinTech with the support of leading organisations such as Google, Zopa Bank and Alloy.

This year, we are also collaborating with Zopa Bank on the first *Pride in FinTech Barometer 2024* that wants to evaluate the current state of affairs for the LGBTQIA+ community working in FinTech and provide actionable recommendations to FinTech companies to assess what more can be done to make a tangible difference.

In summary, sustained collaboration and innovation are vital for maintaining the UK's leadership in FinTech. Through initiatives like the UCFT, the *General Election Fintech Manifesto*, our leading initiatives in diversity and inclusion, we want to play a pivotal role in shaping the UK's FinTech landscape, ensuring it remains dynamic and inclusive, and benefiting both consumers and businesses with more transparent and more democratic financial services for all. ■

**Roberto Napolitano is CMO at Innovate Finance**

## Endnote

1. Please see Innovate Finance's 'FinTech Investment Landscape 2023'.

*Innovate Finance is the independent industry body for UK FinTech. Its mission is to accelerate the UK's leading role in the financial services sector by directly supporting the next generation of technology-led innovators to create a more inclusive, more democratic and more effective financial services sector that works better for everyone. Innovate Finance's membership and partnership community ranges from seed stage startups to scale up and high growth FinTechs; from multinational financial institutions to big tech firms; and from investors to global FinTech hubs. Innovate Finance supports our members and the wider financial innovation ecosystem by promoting policy and regulation that allows innovation to thrive, encouraging talent, diversity and skills into the sector, facilitating the scaling journey, fostering business opportunity, partnerships and domestic and international growth, and driving capital into UK FinTech. By bringing together and connecting the most forward-thinking participants in financial services, Innovate Finance is helping create a financial services sector that is more transparent, more sustainable and more inclusive.*

More information at [www.innovatefinance.com](http://www.innovatefinance.com).

# AI to rescue the lost generation

The UK has nearly 9 million people who are economically inactive. Jonathan Sharp discusses how AI technology can play a pivotal role in providing innovative solutions to help get people back into the workplace



**T**he UK is facing a significant problem of nearly 9 million people (age 16-64) who are 'economically inactive' meaning that they do not currently have a job and are not looking for work. Those who are employed are taking more sick days in the last decade than ever before. The CIPD revealed that staff are taking on average 7.8 sick days in the past year compared to 5.8 before the pandemic.

This is an urgent problem that the government, education, and businesses need to address by devising and reforming strategies and policies to tackle it head on not just for the benefit of the economy but also for peoples' welfare. AI technology can assist in playing a pivotal role in providing innovative solutions to help get people back into the workplace, reduce sick days and make a difference.

### **The cost**

Sick leave costs the economy £32.7 billion last year, according to Zurich and the Centre for Economics and Business Research (CEBR) and is forecasted to double to £66.3 billion by 2030.

The UK's inactivity rates before the pandemic were the second lowest in the G7 but now the increase in inactivity results in the UK residing in fourth place out of the seven. Along with the skills shortage crisis in STEM (science, technology, engineering and mathematics) the UK will suffer with detrimental consequences with significant levels of inactivity from the emerging younger demographic.

### **The rise of mental health problems**

The decline in mental health is one of the major contributing factors to these statistics which has accelerated particularly with the younger generation over the last few years. There are 2.7 million under 25 students who are 'inactive' (Office of National Statistics) and the Resolution Foundation revealed that people in their early twenties are more likely to be not working due to ill health than those in their forties.

## Other contributing factors

For those who are 'economically inactive' there are a myriad of reasons why they don't want a job ranging from the cost of childcare, caring responsibilities for someone who is sick or elderly, they themselves are mentally or physically sick, or they have lost or don't have the confidence to get a job because they feel they are not qualified for anything or don't have any skills.

It is imperative that we get these people into the workplace particularly the younger generation otherwise the UK will suffer in terms of productivity and economic growth if action is not taken. The government, education and businesses need to collaborate on devising strategies and policies to solve this pressing issue.

*Managing the welfare of employees is an ongoing evolutionary process that requires time, commitment, and evaluation*

## **Joining forces**

The government has started an initiative called Work Well to support 60,000 long term sick or disabled people to start and succeed in the workplace. The scheme will support workers with counselling services, stress management workshops and mental health awareness programmes.

Promoting work life balance with flexible working and focusing on upskilling. However, it is still in pilot stage and has been criticised for its one size fits all approach and is only for one segment of the 'economically inactive'.

The Chancellor Jeremy Hunt recently announced in budget he will reduce the starting rate of NI contributions from 10%-8% for 27 million workers from 6<sup>th</sup> April along with an extension of free childcare services for working parents.

There is a whole host of initiatives that the government need to address from the cost of transport, lengthy NHS waiting lists and the potential need to devise new policies such as offering financial incentives to businesses and organisations to hire economic inactive people which may include grants, tax breaks or subsidies. This could also be offered to the people to make returning to work more financially attractive than being on benefits which will be reduced as income increases.

## **Make change now**

Government bodies should use the tremendous processing and analysing capabilities of AI to identify trends and patterns among the economic inactive to garner insights in why they aren't working, what challenges they face, what demographic groups they are in etc to devise appropriate policies and strategies to help get them back into work.

Businesses should devise their own recruitment and employee wellbeing strategies and use AI to augment them to reduce sick days and get the 'economically inactive' back into the workplace.

## **Skills training and education**

AI can help by assessing the skills and capabilities of 'economically inactive' individuals guiding them to appropriate jobs for their skill sets or where they need to skill up. Assisting them by delivering personalised programmes to fit with their training requirements and their pace of learning making it available 24/7 so people can access it when it's convenient for them from their own homes.

The AI algorithm can also analyse job seekers CVs to not only to identify their skills, experiences and preferences but also match them with suitable jobs and to suggest other jobs that they may not have considered.

The advantage of AI and tech-based platforms are that it maybe the preference of these individuals as many may lack confidence and be hesitant to speak over the phone or face to face with a person so the automated tech route maybe a more successful route.

## **A virtual careers guide**

A good starting point for people who are economically inactive are AI chatbots who can provide career guidance and support helping people navigate the job market, assist with CVs, prepare for interviews etc. This online virtual support is critical for people who find it difficult to get out of the house, fit in with their demanding hours of caring or being ill and again for those who are not so confident speaking over the phone or face to face with someone making it accessible for all.

## **A non-biased approach**

AI has the capability to ensure that businesses screen potential employees by removing the biases from the recruitment processes ensuring that everyone is treated the same and has the same opportunities. So, in this case AI can identify which individuals are sick, who are carers etc by presenting them with roles to suit them such as flexible hours and working from home.

AI can assess what skills and qualifications a candidate has identifying if they are suitable for a role and if not suggest alternative roles or training plans, or different options. Presenting an array of different options is reassuring for individuals who are nervous that they are not qualified or skilled enough for the workplace. Resulting in an inclusive talent pool for businesses and reducing employment barriers individuals usually face.

### **Remote working**

It is imperative that people are aware that gone are the days where you must go out to work full time and remote working and flexible hours are an option. Working from home and flexible hours enables people to work when it suits them to fit in within their caring responsibilities or their health needs. Promoting part time work, flexible hours, job sharing and the ability to work from home is imperative to getting the 'economically inactive' back to work.

Unified communications solutions enable people to work from home having the same features and functionality that they would have in an office providing the ability to make calls, send instant messages, perform video conference calls, share documents, the list goes on. Now contact centre agents can also work from home making this job very flexible for all.

### **Wellness support**

Businesses need to provide health and wellness support to reduce sick days and encourage the 'economically inactive' back to work to ensure that both mental and physical health of employees is supported. AI can assist with monitoring and managing wellbeing, such as virtual counselling, meditation, and stress management. These tools are particularly useful for those who are reluctant to seek face to face help or to assist as a stop gap before someone gets an appointment for face-to-face assistance.

## **An evolving process**

Managing the welfare of employees is an ongoing evolutionary process that requires time, commitment, and evaluation. AI can help gather feedback and analyse it to improve support programmes and workplace practices to ensure that initiatives are current and effective.

## **Well-rounded**

By combining these strategies together, the UK government, education and businesses can help the 'economically inactive' get back into the workplace and reduce sick days for the wellbeing of the economy and the individuals.

By devising personalised strategies that address individuals' specific needs, the challenges they face, the skills and qualifications they require businesses will be able to find individuals that most suited to a job where they can grow, develop and thrive with confidence. ■

## **Jonathan Sharp is CEO of Britannic**

# How to unlock the AI productivity promise

The financial services sector is undergoing a significant transformation with the rapid adoption of AI. Martijn Groot examines the latest research on the challenges and opportunities in harnessing the AI productivity promise

**T**he financial services sector is undergoing a significant transformation with the rapid adoption of artificial intelligence (AI). Recent studies indicate that AI is becoming an integral part of business operations across the industry. Alveo recently conducted a survey to poll the industry about the state of adoption, opportunities and challenges in adopting gen AI in enterprise data management.

Statista research from 2023 found that only 8% of financial businesses considered AI critical to their business in 2022 but by 2025, the expectation is that 43% will consider this to be so. Currently, nearly all financial services organisations are using AI in some capacity but there is a clear split between individual or departmental level experimentation versus more systemic adoption. 41% of firms have extensively deployed AI across different business operations, according to Alveo's research, indicating a growing trend towards more comprehensive adoption and embedding into workflows.

### **Benefits of AI in financial services**

AI's implementation in the financial services sector offers numerous benefits, enhancing operational efficiencies, risk management, customer service, and product development. By automating routine tasks, AI allows financial institutions to process large volumes of data rapidly and accurately, reducing human errors and freeing up human resources for more complex tasks. This capability is particularly beneficial in areas such as operations but also in finance and risk management.

For example, AI-driven systems can handle vast amounts of transactional data, identifying discrepancies and potential fraud or money-laundering in real-time. This not only improves operational efficiency but also enhances security and compliance. Additionally, AI's ability to analyse customer data enables personalised customer interactions, improving customer satisfaction and loyalty. Financial institutions can offer tailored financial products and services, enhancing the overall customer experience.



AI also plays a crucial role in risk management by analysing vast datasets to identify patterns and potential risks that might be overlooked by human analysts. This predictive capability helps in proactive risk management and helping firms cope with increasing regulatory reporting requirements: in many banks a large portion of staff is needed to KYC and compliance and change budgets have necessarily been skewed towards regulatory compliance. AI adoption could help with more effectively KYC and reporting. Moreover, AI's ability to provide insights into market trends and customer behaviours can guide strategic decision-making, offering a competitive edge to financial institutions and increasing productivity by tailoring information collection and curation to specific user roles.

*By taking a strategic, informed approach, financial institutions can harness the power of AI to drive efficiency, innovation, and growth*

Furthermore, AI can enhance portfolio management by analysing market conditions and predicting asset performance, helping institutions optimise their investment strategies. By leveraging AI, financial firms can improve their decision-making processes, reduce operational costs, and increase their overall efficiency. The transformative power of AI lies in its ability to convert large amounts of raw data – both traditional market and reference data, as well as an increasing number of 'alternative' data sets - into actionable insights that drive business growth and innovation.

However, integrating AI into financial data management is not without its challenges. One clear impact seems to be an increasing premium on good quality data and data provisioning capabilities to feed the models. This will lead to increased data and technology cost which is only partially offset by a decrease of expected operations cost base; in Alveo's research sample, 63% of senior decision-makers in financial services anticipate an increase in data costs due to AI. Furthermore, 40% expect a rise in operational headcount, while 81% foresee increased IT spending in data management.

### **Challenges and barriers to AI adoption in enterprise data management**

Despite the promising benefits, several barriers impede AI adoption in financial services data management. Technological limitations are identified by 50% of decision-makers as a significant barrier. Financial institutions often struggle with legacy systems that are incompatible with modern AI technologies. These outdated systems require substantial upgrades or replacements, which can be costly and time-consuming. Ensuring a seamless integration of AI into these systems necessitates a strategic overhaul, involving significant investment in new technologies and infrastructure.

Another major challenge is the ongoing lack of skilled personnel. Implementing and managing AI systems demands expertise in both new technology and the financial services domain. This combination of skills is scarce,

with 46% of respondents highlighting a shortage of skilled professionals as a critical obstacle to implementing AI in financial data management. Financial institutions need professionals who understand the deployment and integration into existing workflows of AI algorithms and can apply them to the financial services domain. Addressing this skills gap requires targeted training and recruitment strategies.

Data quality and licensing issues also loom large. Ensuring high-quality data is vital for effective AI implementation, as AI systems rely heavily on accurate, consistent, and timely data. Poor-quality data can lead to incorrect predictions and decisions, undermining the effectiveness of AI applications. Additionally, licensing and compliance issues further complicate data management, especially with the advent of generative AI and the evolving legal frameworks around data usage. Financial institutions must navigate these complex legal landscapes to ensure they are using data ethically and legally.

Furthermore, the potential for AI bias and discrimination presents another significant challenge. AI systems learn from historical data, which can contain biases that are inadvertently incorporated into the models. This can lead to unfair outcomes, particularly in areas such as credit scoring and loan approvals. Regulatory frameworks on the use of AI in financial services are coming with the EU's AI Act and its risk-based classification of risk levels for AI systems as the most salient example. Financial institutions must implement robust fairness and bias mitigation strategies to ensure their AI systems produce equitable and non-discriminatory results.

### **Addressing interoperability and data governance**

To achieve the productivity increase that AI promises, financial institutions need to focus on interoperability between AI models and their existing workflows. This involves improving the way they provision models and broadening the traditional notions of data quality and data governance.

Traditional machine learning involved feature engineering, or preparing and tuning the data to “*give the models a hand.*” The new models make for a very different, natural language-based interaction with business users which calls for training in prompt engineering or the natural language patterns to interact with models, as well as a good understanding of model limitations and risks.

A proactive approach to AI adoption emphasises the importance of improved data quality, provisioning, and governance. Financial institutions should invest in advanced data management technologies to support AI requirements. This includes data aggregation, cleansing, and validation systems to ensure data accuracy and relevance. Developing a skilled workforce is also essential. Targeted training and recruitment strategies are needed to bridge the skills gap, with institutions investing in upskilling existing employees and attracting new talent proficient in AI technologies and financial data management.

### **Enhancing data quality and management**

A proactive approach to AI adoption emphasises the importance of improved data quality, provisioning, and governance. To optimise their use of AI, financial institutions should first of all, invest in data management technologies: Enhancing data management infrastructure to support AI requirements is crucial. This includes advanced data aggregation, cleansing, and validation systems to ensure data accuracy and relevance.

It is also important that financial services decision-makers collaborate with experts. Partnering with AI and data management experts can provide the necessary guidance and support to navigate the complexities of AI integration, ensuring a smoother transition to AI-driven operations.

The shift towards AI results in increased costs in data management and technology. Alveo’s research indicates that 81% of firms expect a rise in IT spending due to AI. However, these costs can be offset by the long-term operational efficiencies and productivity gains AI brings.

Financial institutions should maintain transparency by clearly documenting the sources and training data for AI models to ensure accountability. Regularly reviewing and updating content licensing agreements to align with evolving legal landscapes and ensure compliance with data usage regulations is also crucial.

Additionally, financial institutions should implement continuous monitoring and auditing of AI systems to ensure they operate as intended and comply with regulatory standards. This involves establishing clear performance metrics and regularly evaluating AI models against these benchmarks. By maintaining rigorous oversight, financial institutions can detect and address any issues promptly, ensuring the reliability and effectiveness of their AI systems.

Furthermore, AI can enhance portfolio management by analysing market conditions and predicting asset performance, helping institutions optimise their investment strategies. By leveraging AI, financial firms can improve their decision-making processes, reduce operational costs, and increase their overall efficiency. The transformative power of AI lies in its ability to convert vast amounts of raw data into actionable insights that drive business growth and innovation.

### **The role of generative AI**

Generative AI is set to revolutionise financial data management by producing synthetic data for various use cases, including model testing and scenario management. This capability allows financial institutions to test their AI models under a wide range of scenarios without risking real data. However, this requires clear guidelines on data usage and compliance to avoid legal and ethical pitfalls.

Financial institutions should maintain transparency by clearly documenting the sources and training data for AI models to ensure accountability. They should also regularly review and update content licensing agreements to align with the evolving legal landscape and ensure compliance with data usage regulations.

Generative AI also presents opportunities for creating new financial products and services. By leveraging synthetic data, financial institutions can explore innovative solutions that were previously not possible due to data constraints. This opens up new avenues for growth and competitive differentiation. However, the ethical use of generative AI must be prioritised to avoid potential biases and ensure fair and equitable outcomes.

To maximise AI's benefits, financial institutions need a strategic approach that combines investment in technology with a focus on human capital. This involves continuous learning and adaptation, establishing feedback loops for continuous improvement in data quality and model performance. Combining high-level strategic oversight with grassroots-level adjustments based on real-time data and user feedback ensures a comprehensive and effective AI integration.

Moreover, financial institutions should foster a culture of innovation and experimentation, encouraging employees to explore new ways of leveraging AI. By promoting a mindset of continuous improvement and adaptation, organisations can stay ahead of the curve and capitalise on the latest advancements in AI technology. This proactive approach will enable financial institutions to drive sustainable growth and remain competitive in a rapidly-evolving industry.

### **Embracing the AI-driven future**

The journey towards AI integration in financial data management is challenging but essential for future competitiveness. By addressing the key barriers, enhancing data quality and governance, and adopting a strategic approach, financial institutions can unlock the full potential of AI. This transformation promises increased efficiency, innovation, and growth, positioning firms at the forefront of the digital age in finance.

The future of financial data management is intertwined with AI, and those who navigate this transition wisely will emerge as leaders in the industry. As AI continues to evolve, financial institutions must remain agile and proactive, continuously refining their strategies to harness the transformative power of AI effectively.

In conclusion, while the path to AI adoption in financial data management is fraught with challenges, the potential rewards are immense. By taking a strategic, informed approach, financial institutions can overcome these hurdles and harness the power of AI to drive efficiency, innovation, and growth. The future of financial data management is undeniably intertwined with AI, and those who navigate this transition wisely will emerge as leaders in the new era of finance. ■

**Martijn Groot is VP Marketing and Strategy at Alveo**

# Should AI stay or should AI go?

There is considerable disagreement about the growth potential of AI. Francesco Filippucci, Peter Gal, Cecilia Jonas-Lasinio, Alvaro Leandro and Giuseppe Nicoletti argue that this is dependent on domestic and global governance issues



Income and wellbeing gains in advanced economies have been held back by weak productivity performance. The growth rate of labour productivity declined in OECD economies from about 2% annual growth rate between the 1970s and 1990s, to 1% in the 2000s (Goldin *et al* 2024, Andre and Gal 2024). This poses a dramatic challenge for ageing societies and makes it harder to allocate resources for the green transition.

There is widespread enthusiasm about the growth potential of rapidly developing artificial intelligence (AI). Some analysts argue that, under reasonable conditions, AI could lead to large and persistent gains, on the order of adding 1–1.5 percentage points to annual growth rates over the next 10–20 years (Baily *et al* 2023, Artificial Intelligence Commission of France 2024, McKinsey 2023, Briggs and Kodnani 2023).

On the other hand, Acemoglu (2024) contends that the available evidence combined with the economic theory of aggregation supports only moderate total factor productivity and GDP growth impacts, on the order of about 0.1% per year. Recent work from the OECD provides a broad overview of AI's impact on productivity and discusses the conditions under which it is expected to deliver strong benefits, with a focus on the role of policies (Filippucci *et al* 2024).

### **AI as a new general-purpose technology**

Given its transformative potential in a wide range of economic activities, AI can be seen as the latest general-purpose technology (Agrawal *et al* 2019, Varian 2019) – similar to previous digital technologies such as computers and the internet or, going back further, to the steam engine and electricity.

From an economic perspective, AI can be seen as a production technology combining intangible inputs (skills, software, and data) with tangible ones (computing power and other hardware), to produce three broad types of outputs:

- Content, such as texts or images (generative AI)
- Predictions, optimisations, and other advanced analytics, which can be used to assist with or fully automate human decisions (non-generative AI)
- Physical tasks when combined with robotics (including autonomous vehicles).

*Further uncertainties surrounding AI include broader societal concerns. More immediate concerns relate to privacy, misinformation, and bias (possibly leading to exclusion in areas such as labour and financial markets), while longer-term concerns include mass unemployment or even existential risks*

Additionally, AI has some peculiar features, even compared to previous digital technologies. These include the potential for being autonomous (less dependent on human inputs) and the capacity for self-improvement, by learning from patterns in unstructured data or leveraging feedback data about its own performance.

Altogether, these features imply that AI can boost not only the production of goods and services but also the generation of ideas, speeding up research and innovation (Aghion *et al* 2018).

### **Initial micro-level evidence shows large productivity and performance gains**

According to our overview of the fast-growing literature, initial micro-level evidence covering firms, workers, and researchers is indicative of several positive effects from using AI. First, micro-econometric studies find that the size of the gains from non-generative AI on firms' productivity is comparable to previous digital technologies (up to 10%; see panel a of Figure 1).

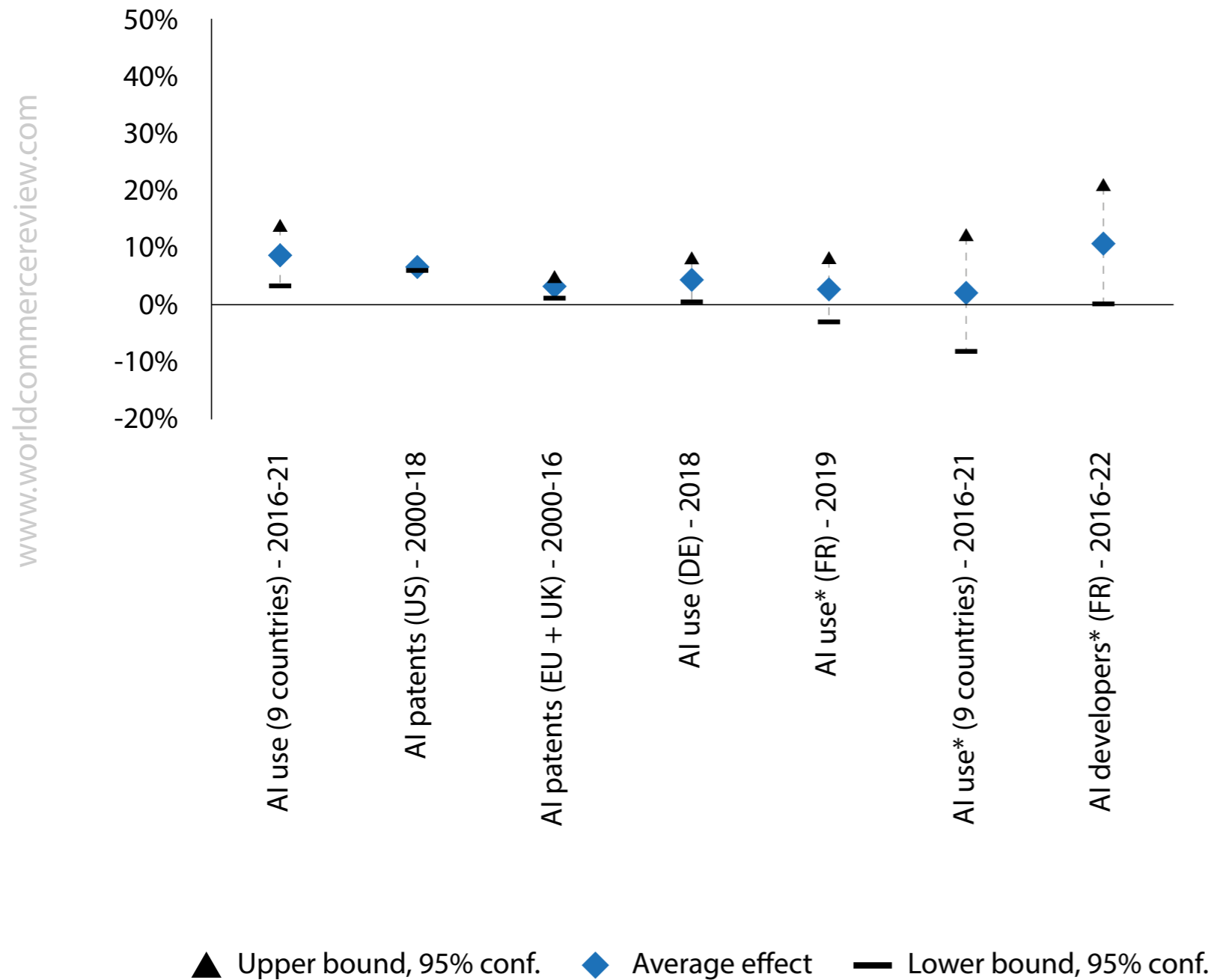
Second, when using more recent generative AI in various tasks – assisting in writing, computer programming, or customer service requests – the estimated performance benefits are substantially larger but vary widely (between 15 and 56%; see panel b of Figure 1) depending on the context.

In particular, Brynjolfsson *et al* (2023) found that AI has a much stronger impact on the performance of workers with less experience in their job. These estimates focus on specific tasks and individual-level gains. Hence, they are narrower in scope than previous firm-level studies but tend to rely more on more causal identification in experimental settings.

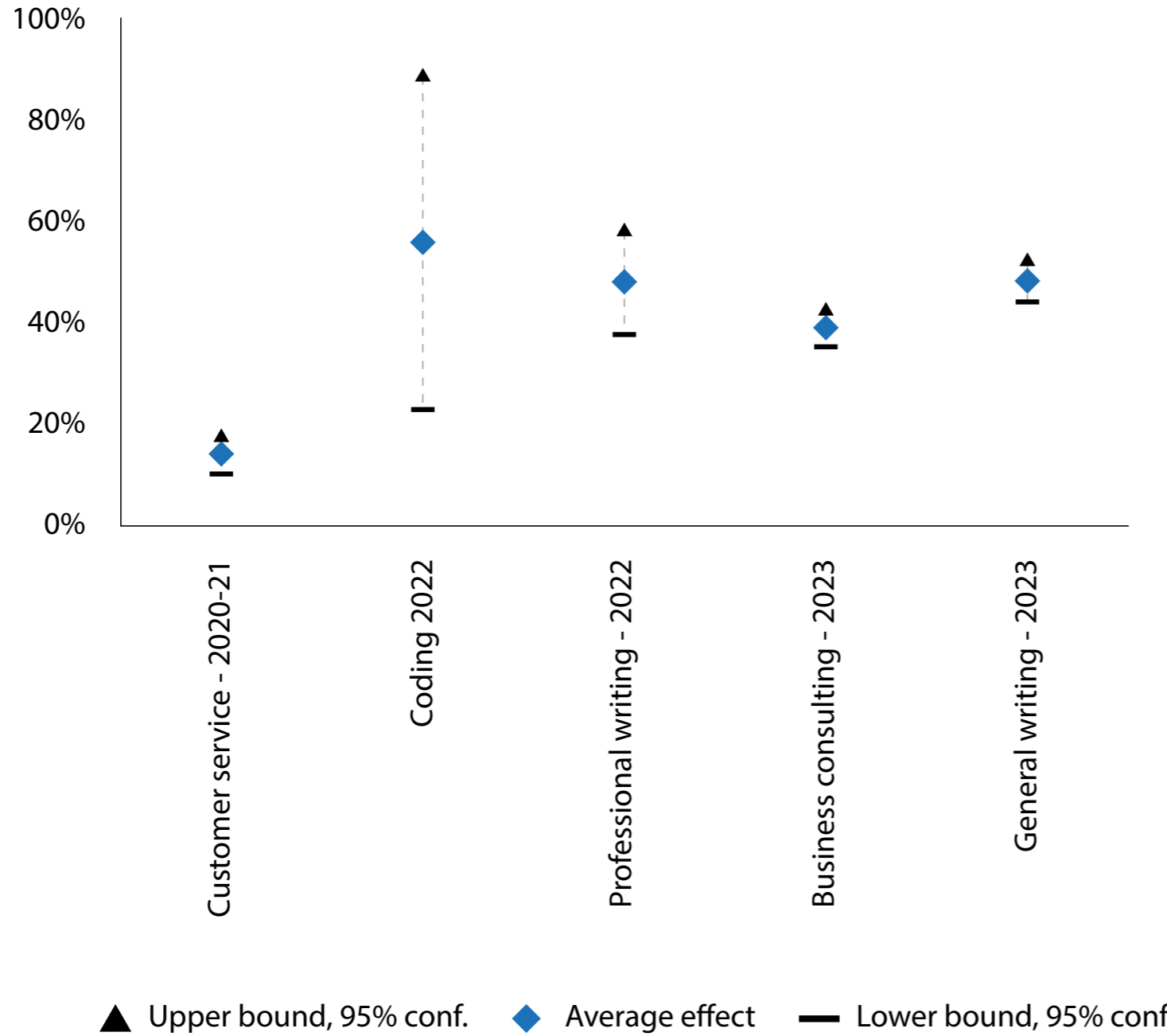
Third, researchers believe that AI allows for faster processing of data – speeding up computations and decreasing the cost of research – and may also make new data sources and methods available, as documented by a recent survey in Nature (Van Noorden and Perkel 2023).

**Figure 1. The positive relationship between AI use and productivity or worker performance: selected estimates from the literature**

a) Non-generative AI, firm-level studies on labour productivity



b) Generative AI worker-level studies on performance in specific tasks



Note: In panel a, 'AI use' is a 0-1 dummy obtained by firm surveys, while 'AI patents' refers either to a 0-1 dummy for having at least one patent (US study) or to the number of patents in firms. The sample of countries underlying the studies are shown in parentheses. The year(s) of measurement is also indicated. \*Controlling for other ICT technologies. For more details, see Filippucci et al (2024).

Fourth, AI-related inventions are cited in a broader set of technological domains than non-AI inventions (Calvino *et al* 2023). Finally, there are promising individual cases from specific industries: AI-predicted protein-folding gives new insights in biomedical applications; AI-assisted discoveries of new drugs help with pharmaceutical R&D; and research on designing new materials can be broadly used in manufacturing (OECD 2023).

### **Long-run aggregate gains are uncertain**

As generative AI's technological advances and its use are very recent, findings at the micro or industry level mainly capture the impacts on early adopters and very specific tasks, and likely indicate short-term effects. The long-run impact of AI on macro-level productivity growth will depend on the extent of its use and successful integration into business processes.

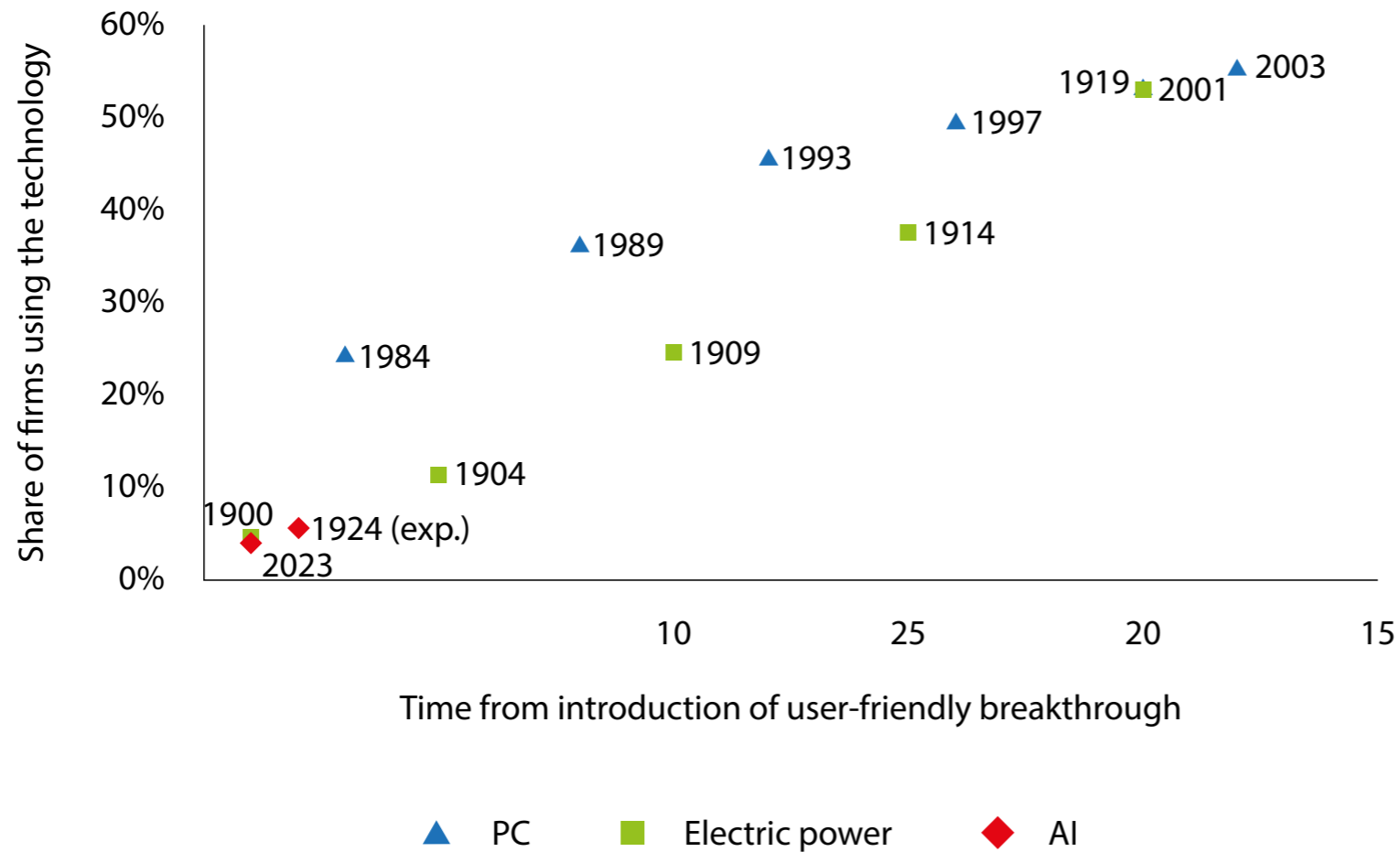
According to official representative data, the adoption of AI is still very low, with less than 5% of firms reporting the use of this technology in the US (Census Bureau 2024; see Figure 2). When put in perspective with the adoption path of previous general-purpose technologies (eg. computers and electricity), AI has a long way to go before reaching the high adoption rates that are necessary to detect macroeconomic gains.

While user-friendly AI may spread faster through the economy, the successful integration of AI systems and exploiting their full potential may still require significant complementary investments (in data, skills, reorganisations) which take time and necessitate managerial talent.

Moreover, future advances in AI development – and its successful integration within business processes – will require specialised technical skills that are often concentrated within a few firms (Borgonovi *et al* 2023).

## Figure 2. AI adoption is still limited compared to the spread of previous general-purpose technologies

The evolution of technology adoption in the US (as % of firms)



Note: The 2024 value for AI is the expectation (exp.) as reported by firms in the US Census Bureau survey. For more details, see the sources.

Source: For PC and electricity, Briggs and Kodnani (2023); for AI, US Census Bureau, Business Trends and Outlook Survey, updated 28 March 2024.

It is also an open question whether AI-driven automation will displace (reallocate) workers from heavily impacted sectors to less AI-affected activities or the human-augmenting capabilities of AI will prevail, underpinning labour demand.

Currently, AI exposure varies greatly across sectors: knowledge-intensive, high-productivity activities are generally much more affected (Figure 2), with significant potential for automation in some cases (Cazzaniga *et al* 2024, WEF 2023). Hence, an eventual fall in the employment shares of these sectors would act as a drag on aggregate productivity growth, resembling a new form of 'Baumol disease' (Aghion *et al* 2019).

Historically, the automation of high-productivity activities, combined with saturating demand for their output, has pushed employment from manufacturing to services (Bessen 2018). This structural change also played a role – though a moderate one – in the ongoing slowdown in aggregate productivity growth (Sorbe *et al* 2018).

Similarly, if AI enhances productivity only in selected activities, aggregate growth will be limited by the slower productivity growth and higher employment share in sectors that are less exposed to AI (such as labour-intensive personal services like leisure and health care).

This may occur more quickly with AI compared to past technologies given the rapid and wide-ranging advances in its capabilities. However, in the extreme case of AI impacting (nearly) all tasks and boosting productivity in (nearly) all economic activities, this negative effect may be muted (Trammel and Korinek 2023).

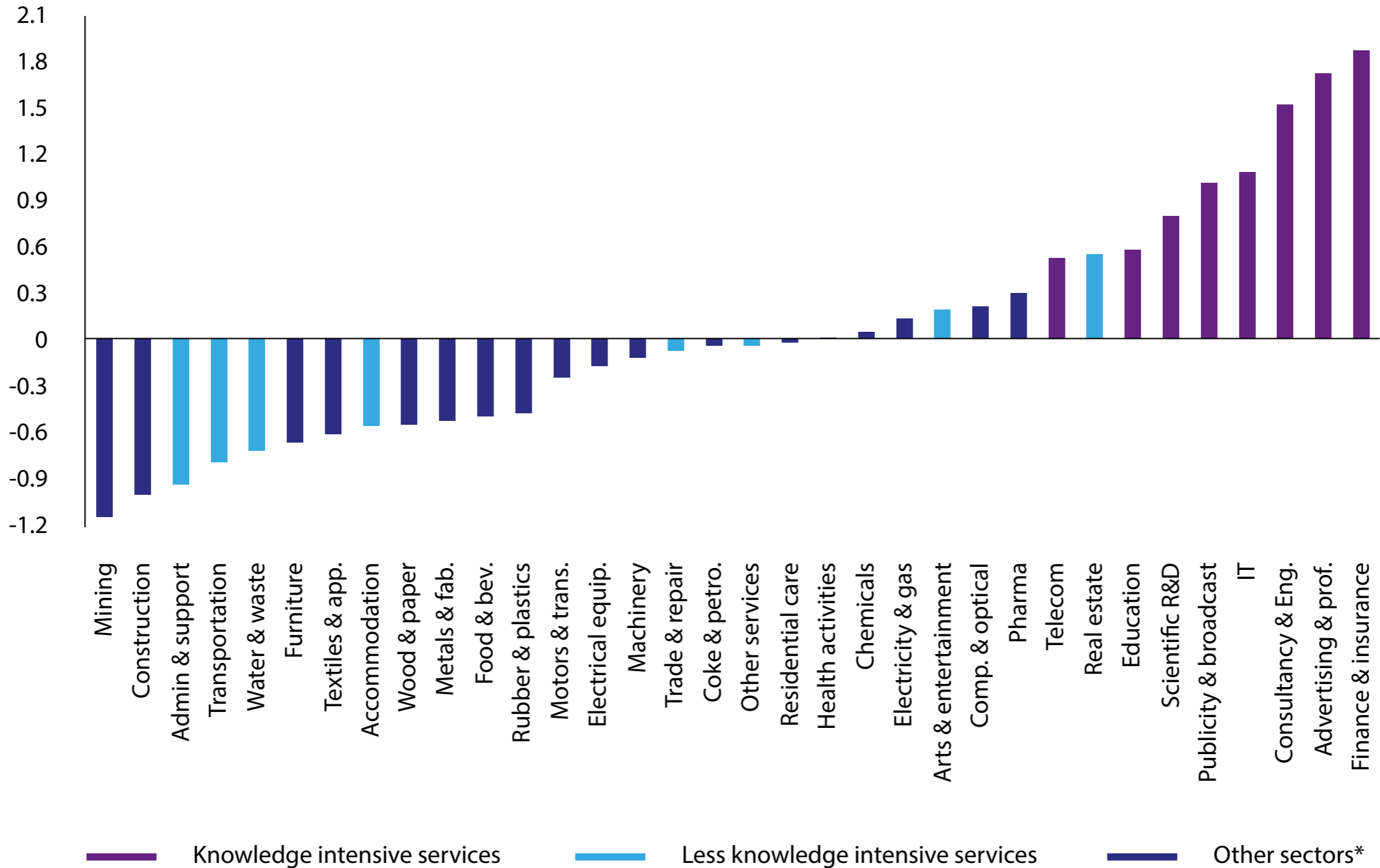
### **AI poses policy challenges related to competition, inequality, and broader societal risks**

AI poses significant threats to market competition and inequality that may weigh on its potential benefits, either directly or indirectly, by prompting preventive policy measures to limit its development and adoption.



**Figure 3. High-productivity and knowledge-intensive services are most affected by AI**

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Note: The index measures the extent to which worker abilities are related to important AI applications. The measure is standardised with mean zero and standard deviation one at the occupation level and then matched to sectors. Figure does not yet include recent Generative AI models. \*Including non-market services, manufacturing, utilities, etc.  
 Source: Filippucci et al (2024) and OECD (2024) based on Felten et al (2021).

First, the high fixed costs and returns to scale related to data and computing power may lead to excessive concentration of AI *development*. Second, AI *use* in downstream applications may lead to market distortions, especially if it allows first movers to build up a substantial lead in market share and market power.

Moreover, AI-powered pricing algorithms have a tendency to charge supra-competitive prices (Calvano *et al* 2020) and could eventually enhance harmful price discrimination (OECD 2018).

The impact of AI on inequality remains ambiguous. The technology can potentially substitute for high-skilled labour and narrow wage gaps with low-skilled workers, thereby reducing inequalities (Autor 2024) at least within occupations (Georgieff 2024).

Though there are indications that AI can be associated with higher unemployment (OECD 2024), AI could also lead to more inclusion and stronger economic mobility by improving education quality and access, expanding credit availability, and lowering skill barriers (eg. foreign languages).

Further uncertainties surrounding AI include broader societal concerns. More immediate concerns relate to privacy, misinformation, and bias (possibly leading to exclusion in areas such as labour and financial markets), while longer-term concerns include mass unemployment or even existential risks (Nordhaus 2021, Jones 2023).

A comprehensive policy approach is needed to effectively manage these risks and harness AI's full potential. Immediate priorities include promoting market competition and widespread access to AI technologies while preserving innovation incentives (eg. via adapting intellectual property rights protection) and addressing issues of reliability and bias, which require adequate auditing and accountability mechanisms.

Job displacement, reallocation and inequality impacts might emerge over longer periods, but they require preventive policy action through training, education, and redistribution measures to ensure human skills remain complementary to AI. Policymakers should also devise national and international governance mechanisms to cope with rapid and unpredictable developments in AI. ■

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*Authors' note: The main paper underlying this column (Filippucci et al. 2024) was developed within the Joint OECD-Italy's Department of Treasury Project for Multilateral Policy Support. This article was originally published on [VoxEU.org](https://voxeu.org).*


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# How to de-risk



How should the EU 'de-risk' its external economic relationships without foregoing the benefits of trade? Jean Pisani-Ferry, Beatrice Weder di Mauro and Jeromin Zettelmeyer discuss



## Executive summary

Pandemic-related supply disruptions, the energy crisis provoked by Russia's invasion of Ukraine and economic coercion by China have put economic security high on the European Union policy agenda. The question is how exactly the EU should 'de-risk' its external economic relationships without foregoing the benefits of trade. The standard answer is that it should identify product-level trade dependencies, mainly on the import side, and reduce them, mainly through diversification of suppliers, while otherwise maintaining maximum trade integration.

This Policy Brief argues that this answer falls short. First, product-level dependencies cannot be identified reliably even with sophisticated analysis and data. As a result, both 'missed dependencies' and 'false positives' are inevitable. Second, external shocks and coercion could be propagated through exports, productive assets held abroad and financial channels as much as through imports.

The analysis has five main implications:

1. Import de-risking should focus on a few product categories for which the costs of supply interruptions would be unquestionably large. This reduces false positives.
2. De-risking and/or buffers to deal with exports and financial coercion require more attention.
3. De-risking must be complemented by raising resilience against all shocks, whatever their origin. This requires a deeper and broader European single market.
4. De-risking and resilience must be complemented by deterrence.

5. A sufficiently high probability of chronic trade conflict – or one very large conflict – may justify reducing overall integration with a large trading partner, on both the export and import sides.

EU economic security policies have been right to emphasise the reduction of import dependence on chips and critical raw materials, and the creation of a powerful legal instrument to deter coercion (the Anti-Coercion Instrument). In most other respects, there is room for improvement.

*Economic risks relate increasingly not just to crises or shocks, but to deliberate economic coercion by foreign governments*

## 1 Introduction

Over a period of just fifteen years, Europe has been confronted with a financial shock that originated in the United States, a pandemic shock that originated in China but could have come from anywhere, and an energy shock provoked by Russia's invasion of Ukraine. These events have prompted a re-examination of efficiency/security trade-offs that arise as a result of international integration, and particularly as a result of specialisation in international trade and the vulnerabilities of global supply chains.

Economists and policymakers have long worried about similar trade-offs. At the most fundamental level, such trade-offs arise from the standard tension between growth and economic crises: higher growth is often accompanied by greater instability. For example, regulation of financial and product markets may prevent or mitigate financial or environmental hazards at the cost of dampening entry and growth of firms. Similarly, in open economies, trade and financial integration may be good for growth, but can expose economies to imported shocks.

The most recent set of concerns – as exemplified, for example, by a series of European Commission (2021, 2022) papers and an associated legislative agenda (see section 4, and McCaffrey and Poitiers, 2024) – differs from these standard preoccupations in two respects.

First, economic risks relate increasingly not just to crises or shocks, but to deliberate economic coercion by foreign governments or even non-governmental entities (such as criminal groups). This is probably the reason why the term 'security' – as opposed to 'stability' or 'resilience' – has become popular to describe the mitigation of economic, rather than just national security threats (we discuss the difference in section 2).

One reason to be concerned with economic coercion is that China, an increasingly powerful and authoritarian country, has been applying coercion regularly in response to political actions by trade partners (for example,

Australia's call for investigations into the origin of the COVID-19 pandemic and Lithuania's decision to let Taiwan open a representative office in Vilnius<sup>1</sup>).

But the concern is not just about China: the policies of President Trump between 2017 and 2020 showed that even one's closest ally can be tempted to leverage its market power and its control of the technical and financial infrastructures of globalisation. The possibility of a second Trump term is now prompting a reflection on the need for Europe to prepare for such a risk (Gonzales Laya *et al* 2024).

Second, recent concerns have focused mostly on trade-related rather than financial vulnerabilities. This reflects the fact that trade-related vulnerabilities have become more prominent as a result of specialisation and the vulnerability of global supply chains that maximise efficiency, but at the cost of creating hidden fragilities.

But the prominence of trade concerns may also reflect a rather myopic reasoning, as the last two or three external shocks that Europe (and, to a lesser extent, the US) has suffered have been trade-related: supply chain disruptions related to COVID-19 and energy price shocks following the Russian invasion of Ukraine.

In line with this concern, we focus mostly on trade-related external economic security. This should not be taken to imply that Europe does not need to worry about financial security. But unlike trade-related security, financial risks continue to be mostly of the financial-stability variety, linked to shocks and financial vulnerabilities rather than coercion. To the extent that financial coercion is a serious concern, it is linked to one main potential source: the United States if President Trump returns (see section 2). In contrast, trade-related external security risks are ubiquitous.

In this Policy Brief we seek to answer two critical questions. First, how should trade-related vulnerabilities be identified, and what trade relationships make Europe particularly vulnerable to shocks and coercion? Second,

how can these vulnerabilities be reduced while minimising the costs of 'de-risking' and reducing the chances of unintended consequences? Four such potential costs come to mind:

- Foregoing some of the gains from trade specialisation and trade openness. This could weigh on European growth and competitiveness, which depend on export specialisation and on importing raw materials and intermediate inputs more cheaply than they could be produced at home (if at all). It could also make it harder to attain emission reduction objectives, by raising the cost of the transition to renewable energy sources. In turn, this could exacerbate social and political divisions related to climate action.
- Becoming more vulnerable to domestic shocks including natural disasters, epidemics and home-grown financial crises – and more generally, to any shock whose consequences would be mitigated by international trade and/or capital flows.
- Damaging international cooperation. This could include European Union cooperation with China on vital matters of common interest, such as climate-change mitigation, as well as respect for the rules of the multilateral trading system. Notwithstanding the damage that the World Trade Organization has suffered over the last decade, these rules continue to be largely respected (Mavroidis and Sapir, 2024).

An aggressive 'de-risking' of European trade relationships through trade policy tools and subsidies could trigger protectionist reactions from trading partners, particularly if measures violate WTO rules. It could also become an excuse for protectionists in the EU, who might use economic-security arguments to further special interests.

- Damaging cohesion within the EU. EU countries differ in their trade structures and their dependence on specific export and import markets. As a result, attempts to de-risk trade may have net benefits for some

and net costs for others. If de-risking becomes a source of division, it may be counterproductive, as internal divisions in the EU are partly what an adversary – whether China, Russia or President Trump – might try to exploit (and indeed, divisions are what these three powers have tried to exploit in the past).

The remainder of this paper summarises as best we can the answers to these questions, drawing on a set of papers collected in Pisani-Ferry *et al* (2024). Section 2 defines what we mean by economic security, and what risks we should be worrying about. Section 3 discusses how these risks should be addressed in principle. What trade relationships require de-risking? Section 4 discusses the instruments. How can protection be built that preserves the benefits of trade? A concluding section summarises the main lessons.

## **2 Defining risks to economic security**

As noted by Bown (2024), economic security remains an emerging concept. At its most abstract level, it can be defined as both preventing bad economic outcomes and making sure that should risks materialise, the damage they cause is minimised. Societies care both about raising expected welfare and about reducing its volatility. Economic security is concerned with the latter.

Defined in this broad way, economic security has been a standard concern of policy-makers for centuries – and not just of economic policymakers, since economic harm can be inflicted by ‘non-economic’ shocks, including political disruption and wars. The use of state intervention to address these concerns, including industrial policy and trade policy, is similarly nothing new (Kelly and O’Rourke, 2024).

The question, then, is how the concept of ‘economic security’ differs from those of ‘economic crisis prevention’ or ‘national security’. To the extent that the perceived nature of the risk and risk propagation has changed, it is important to understand how it has changed, to avoid duplication, and to prevent overreaction to perceived new risks when the old risks and risk propagation channels might still be there.

Economists concerned with crisis prevention and mitigation typically focus on risks and vulnerabilities related to the financial system or the structure of production. For example, credit cycles can expose countries to financial crises, which are propagated internationally. Dependence on commodity exports or imports exposes economies to swings in international prices and to disruption to domestic production that relies on commodity imports.

Military and security experts worry about a different type of threat: harm that is inflicted purposely by outside actors, normally nation states, but also terrorist or criminal organisations. Murphy and Topel (2013) widened the definition of national security to include all 'substantial threats' to the safety and welfare of a nation's citizens, eg. including national catastrophes and public health threats.

Defined this broadly, national security would include preparedness and mitigation against any harmful acts conducted by foreign governments or non-governmental organisations with military or non-military means, including economic sanctions, and threats related to physical and information infrastructure.

The recent usage of the term 'economic security' is at the intersection of non-financial economic crises and national security in the broad sense defined by Murphy and Topel<sup>2</sup>. Specifically, it focuses on harm inflicted through international economic relationships – and particularly trade relationships – whether these reflect exogenous shocks (such as COVID-19-related trade disruption) or deliberate actions by foreign governments or non-governmental organisations (Bown, 2024; McCaffrey and Poitiers, 2024; European Commission, 2021, 2022).

These risks are particularly relevant today because of the combination of economic integration through trade and FDI, specialisation, long supply chains and actors willing to engage in coercion through these channels.

It is in this sense that the term 'economic security' will be used in the remainder of this paper. In this definition, achieving economic security involves the prevention and mitigation of:

- Disruption to critical imports, whether accidental or deliberate;
- Economic coercion through restrictions or boycotts on specific exports, along the lines of actions taken by China against Australia; or through pressures on foreign companies even when they produce locally (for example, threats of depriving them from access to the domestic market, restrictions on profit repatriation, or expropriation);
- A broad disruption of global trade at a scale with macroeconomic impact, for example, as a result of geopolitical conflict leading to economic sanctions or a protracted tariff war with a major trading partner. Events that could trigger such scenarios include a Chinese attack on Taiwan, or the re-election of President Trump triggering a sharp deterioration of the political relationship between the US and the EU.

It is important to emphasise that this a narrow – perhaps inappropriately narrow – definition of economic security, for two reasons. First, it disregards the possibility of economic disruptions as a result of domestic shocks, which historically have been a major source of economic crises (Table 1).

Hence, a better term for the type of economic-security risks we discuss would be 'external economic security'. This terminology reminds us that there could be trade-offs not just between economic security and economic growth, but also between external economic security and security from domestic shocks. International integration may increase exposure to the former but offers protection against the latter.



**Table 1. Varieties of welfare threats and propagation mechanisms**

		Origin		
		Domestic shock	External shock	Deliberate action
Propagation	Trade and investment	Economic	External economic	security risks
	Financial		crises	National
	Disease	Epidemics/pandemics		security risks
	Military			
	Other			

*Note: The columns in Table 1 define the origin of a bad event – an exogenous shock originating at home or abroad (production disruption, natural catastrophe, transportation or infrastructure disruption, confidence shock) or a deliberate action by a foreign government or a non-governmental entity. The rows define the propagation channel: economic activity related to trade or finance, disease, military action or other (for example, through IT infrastructure).*

*Source: Bruegel.*

Second, the narrow definition largely ignores external economic security risks through financial channels. However, international finance – including the international payments system and the confiscation of financial assets located in foreign jurisdictions – is an obvious instrument of economic coercion and economic sanctions, as shown by G7 sanctions against Russia since its full-scale invasion of Ukraine.

The main reason why financial risks do not feature prominently in the recent literature on European economic security is that Europe is much less likely to be on the receiving end of such sanctions, given the control exerted by the US and its allies over international finance.

But this could rapidly change if President Trump is re-elected in the United States and decides to use financial coercion against Europe for whatever reason (for example, to force Europe to align its foreign or commercial policies with those of the United States, as was the case when the US threatened EU firms with 'secondary sanctions' for violating US-imposed sanctions on Iran).

A broader analysis of European economic security should take into account such financial economic risks and how to mitigate them. For now, the remainder of this paper focuses on trade and investment-related risks.

These are particularly relevant for the relationship with China, but could also become relevant in the event of a return of President Trump and a revival of US tariffs against Europe, whether imposed for mercantilist or political reasons.

### **3 What to de-risk**

Firms have incentives to avoid becoming dependent on one or a small number of suppliers or customers, particularly when those suppliers or customers are vulnerable to high risks outside their control, including politically motivated interference.

Yet, as Mejean and Rousseaux (2024) have pointed out, the firms' private interest in security may not be enough to take care of the collective EU security interest. Firms often fail to realise the extent to which suppliers or customers are themselves subject to risks, simply because they do not know the entire value chain.

Firms also do not internalise the potential costs of supplier or customer dependency on the entire value chain, and ultimately the welfare of citizens. If a supplier relationship represents a critical link in that chain, the social costs of that link failing may far exceed the private costs to the firm. This argument, which is broadly consistent with the evidence presented by Bown (2024), can justify policy-led de-risking.

But what areas of trade require de-risking? How can policymakers tell when trade dependencies are excessive, in the sense that the economic security risks of trade outweigh its benefits, both for efficiency and growth and as protection against domestic disruption? The ideal way to answer this question would be through a firm-level model of trade and supply relationships, both across borders and within the EU.

The model would 'know' who trades with whom, how specific inputs enter each stage of production, and to whom firms sell. It would also have information about the ease of switching suppliers if a supplier fails or sharply raises its prices. Such a model could be used to stress test European economies in relation to specific supply chain or customer risks.

Where large effects are found, it would be used to identify trading relationships worth de-risking. Unfortunately, such a model does not exist and may never exist because of data limitations. We are therefore constrained by the available information and should make the best of it.

### 3.1 Critical goods and the risk of import disruption

Suppose we were mainly interested in risks related to import disruption. This would be the case if exports are either well diversified or go mainly to countries that one would not consider to be major sources of shocks.

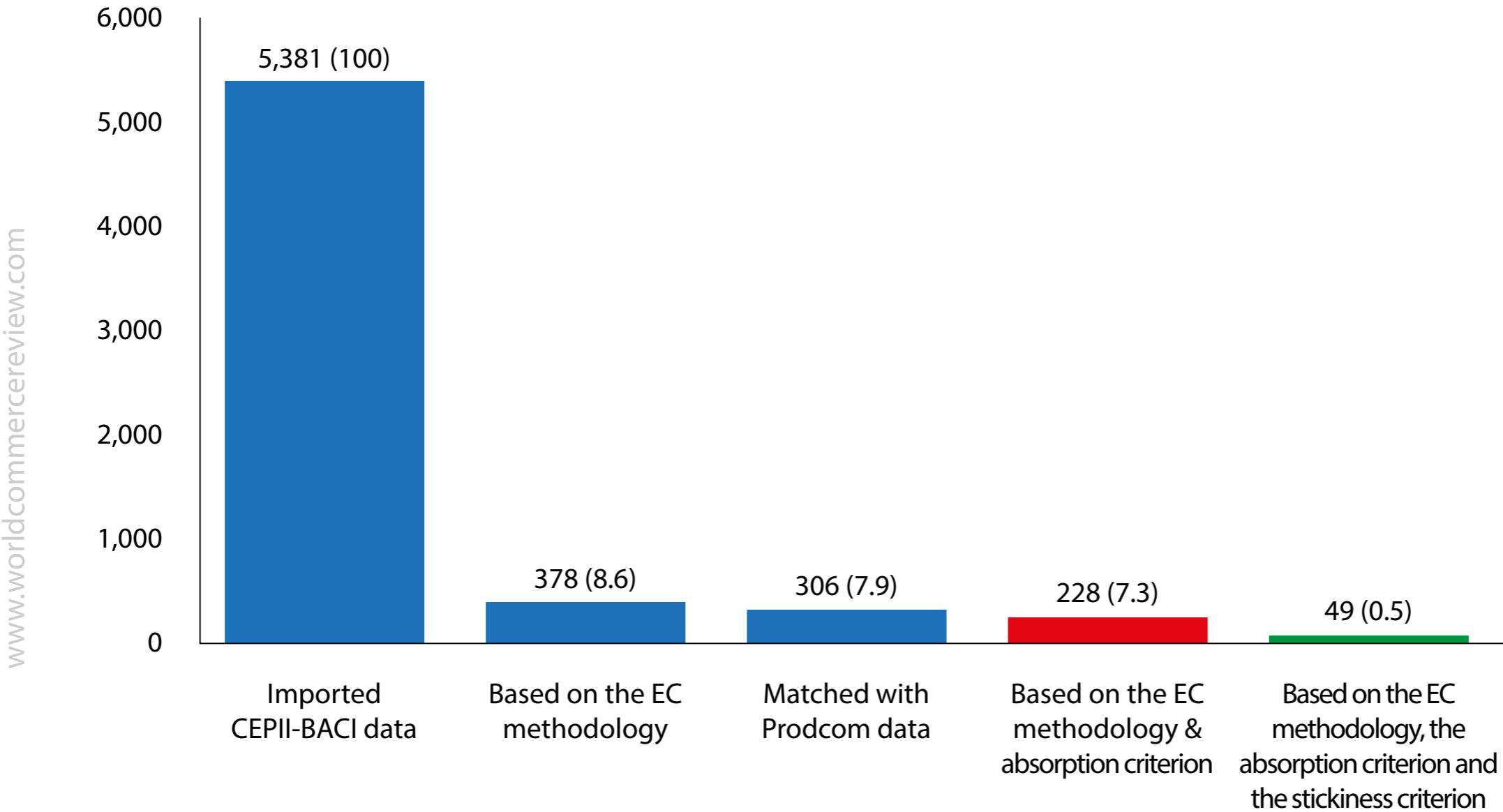
In that case, the following approach might be a close substitute for the perfect model. Using the most disaggregated data possible, one should identify products for which:

1. A large share of EU consumption relies on imported inputs;
2. Foreign supply of these goods is highly concentrated;
3. Finding alternative suppliers in the event of a disruption is difficult, and
4. Disruption to supply would have high economic costs. Unlike criterion 3, this criterion reflects the substitutability of products in either consumption or production, as opposed to the substitutability of supplier relationships.

Products that meet all four criteria would be prime candidates for de-risking. This approach, which builds on work undertaken by the European Commission (2021), approximately describes the approach taken in Mejean and Rousseaux (2024). Their main innovation relative to the work of the Commission and other authors is step 3, which they implement by eliminating products for which 'relationship stickiness' – the typical duration of firm-supplier relationships – drops below a specific threshold.

For example, if the stickiness threshold is set at the sample median, the number of products for which the EU should consider itself import-dependent drops from 378 to just 105, and to just 49 if the 75 percent least relationship-sticky products are eliminated (Figure 1). Focusing only on upstream intermediate products – for which an export ban would affect many supply chains and hence have high economic costs – would reduce the list further, to just 21 products. For 12 of these, the main supplier is China.

**Figure 1. Number of products for which the EU is import dependent**



*Note: The figure shows the numbers of products for which the EU is import-dependent according to various methodologies, starting with that of the European Commission (2021) (second blue bar) and adding the criteria proposed by Mejean and Rousseaux, based on the ratio of imports over domestic absorption (red bar) and the degree of product stickiness (green bar). Numbers in brackets refer to percentage of value of EU imports. Source: Mejean and Rousseaux (2024).*

To these, Mejean and Rousseaux (2024) suggested adding a small number of ‘critical goods’ that, if insufficiently supplied, ‘can result in human losses and other severe non-economic consequences’. These would include between two and 19 pharmaceutical products, depending on where the substitutability cut-off is set, as well as inputs to the green transition.

Interestingly, most of these inputs – including most critical raw materials, which have been among the main justifications for the drive to de-risk imports, particularly from China – currently fail one or several of Mejean’s and Rousseaux’s dependency tests.

While highly relationship-sticky, batteries and their components, hydrogen technologies, rare earth metals and solar panels fail the concentration test, and most components of solar panels fail both the concentration test and the relationship-stickiness test.

Yet, Mejean and Rousseaux urged caution with respect to these products, on the grounds that demand for them is developing so fast that the structure of EU imports during 2015-2019, on which concentration indices and import needs are based, may be a poor proxy for trade dependencies in the future.

Mejean and Rousseaux’s work represents the most exhaustive analysis so far to identify dependencies on the basis of ranking critical imports with respect to concentration and relationship substitutability, and deciding on thresholds above or below which concentration is deemed too high or substitutability too low. Precisely because it is more thorough and comprehensive than previous attempts in this literature, Mejean and Rousseaux (2024) illustrates the intrinsic limitations of this approach.

- We have so far no systematic way of telling which imports are genuinely critical. Focusing on upstream products and pharmaceuticals may miss other products (such as computer chips), the accidental scarcity

of which would cause large economic or non-economic losses. Meanwhile, some upstream products and pharmaceuticals might not be critical if they can be substituted by other products.

The European Commission's (2021) approach of designating whole 'ecosystems' (sectors, such as health, energy, digital, electronics and aerospace) as critical, seems even more problematic, both because many products in these sectors are not in fact critical and because products outside these sectors that may well be critical could be missed (for example, most of Mejean and Rousseaux's upstream products).

- As both Mejean and Rousseaux (2024) and Bown (2024) emphasised, data limitations imply that import dependence measures do not reflect indirect exposure. If the EU has an import exposure to a country that is itself import dependent on China for this product (or an important intermediate input), then direct import dependence on China might significantly understate total import dependence.
- The final lists can be very sensitive to how the cut-offs are set, which is somewhat arbitrary. For example, whether relationship substitutability thresholds are set at the twenty-fifth, fiftieth or seventy-fifth percentile adds or subtracts large shares of products from the sample.
- Supplier relationships in normal times tend to be relatively long (25 and 19 months, respectively, for the seventy-fifth and fiftieth percentiles in Mejean and Rousseaux's sample). This implies that unless replacement duration is significantly shorter in a crisis, an import interruption could be very damaging even for products that are relatively non-relationship-sticky in normal times.

But the impact of a forced interruption on the replacement period could go both ways. Firms seeking to replace suppliers under duress would have incentives to do so much faster than in normal times. However,

finding new suppliers when many other firms are trying to do so could take longer and/or result in price jumps for scarce supplies, which could be very damaging.

### 3.2 Risk from export disruptions and from decoupling

Another problem is that an approach focused on reducing dependence on critical imports does not consider disruptions to exports, which could equally have a macroeconomic impact if they were highly concentrated in any one destination country.

For example, 20 percent of EU exports got to the US, 13 percent to the United Kingdom and 9 percent to China; while 41 percent of UK exports go to the EU, 21 percent to the US and 5 percent to China. Furthermore, just as import dependency numbers ignore indirect exposures, so do export shares. For example, direct UK export dependency to China is only 5 percent, but the UK's indirect exposure via the EU alone could be larger if UK products are part of the value chains of goods ultimately destined for the Chinese market.

While demand shocks via exports are a standard risk of trade integration, geopolitical conflict can take this risk to an entirely new level. First, hitting the exports of specific industries through import bans, high tariffs or social-media campaigns can be a form of geopolitical coercion. As reported by Bown (2024) and McCaffrey and Poitiers (2024), there are numerous examples of Chinese coercion of this type.

This type of coercion is typically not macroeconomically critical, but may seek to exploit the lobbying power of groups that are hurt, as well as internal divisions (in the case of the EU, this may include divisions across member states). Second, deliberate economic sanctions can of course have a much greater impact than swings in export demand triggered by normal economic fluctuations, or even than an economic crisis in a trading partner.



Baqae *et al* (2024) simulated the impact of a decoupling from China in a trade model with 43 countries and 56 sectors, in the form of a complete stop in trade between a 'Friends' bloc comprising the G7 countries, Spain, the Netherlands and an artificial country comprising the rest of the EU, and a 'Rivals' bloc including China and Russia, on the assumption that trade continues both within these blocs and with the rest of the world.

As might be expected, the short-term effects are substantial, with German output calculated to decline by 3-5 percent of GDP. At the same time, the simulations suggest that the cost of a complete decoupling from China would be relatively low if done slowly over time: around 1.25 percent of GDP for Germany and Japan, while the US and the remaining European countries would suffer in the range of 0.47 percent to 0.69 percent of GDP.

The intuition behind this result is that the welfare costs of an end to trade integration between China and the 'Friends' group are mitigated by the fact that the Friends continue to trade with each other and with the 'Neutrals', and that these groups are sufficiently large and diverse to preserve most of the gains from trade.

### 3.3 Putting it all together

Combining the insights of Baqae *et al* (2024) and Mejean and Rousseaux (2024) with the assumption that external economic risks include not only exogenous shocks to trade but also coercion, and possibly a wider trade disruption involving China, leads to the following conclusions.

First, there is a strong case for de-risking concentrated exposures to critical imports, by either diversifying supply or making preparations to mitigate disruption. However, identifying such products turns out to be very difficult, mainly because it is hard to assess the criticality of products, ie. the welfare losses inflicted by a shortage or price spike. While we know that some products are critical – chips, energy, some pharmaceuticals, some minerals and some upstream inputs – we do not know what other products are critical.

A good way to start is by de-risking the products known to be critical. Because we don't know how long it would take to find new suppliers in a crisis, or how price sensitive these imports might be to a loss of the main supply source, products known to be critical should be de-risked even if their relationship stickiness in normal times is fairly low.

The identification of such products obviously needs to take into account the costs as well as the benefits of de-risking. Take the example of solar panels and their components, often cited as a prime de-risking candidate because of their importance in the green transition and China's overwhelming global market share (63 percent, according to Mejean and Rousseaux, 2024).

However, the short-term economic costs to the EU of a complete stop in solar panel imports from China would be tiny (hitting mostly installation services, while leaving the solar capacity unchanged). Unlike imported gas from Russia, disruption to solar panel imports from China would have no direct impact on the energy supply, although it would affect the increase in installed energy capacity and would raise the cost of replacing panels that become obsolete.

Hence, the main benefit of de-risking Chinese solar panel imports would be insuring against a (possible) disruption to the energy transition to renewables, which could sharply raise solar-panel prices. This needs to be weighed against the certain price impact of a decision to diversify away from Chinese solar imports and purchase panels from more expensive sources, which will slow the green transition.

Second, the de-risking of trade dependencies cannot be the only layer of protection against import disruption, because it will never be possible to identify and de-risk all critical products. Beyond trade de-risking, it is hence essential to strengthen the resilience of European economies against import shocks, whatever their source. This is

an argument for a better-functioning and more flexible single market, and for the broadening of international trade relationships through free-trade agreements with friendly countries.

Third, it is important to de-risk export dependencies as well as import dependencies. For specific products, this could be done in three ways: by deterring coercion (as the EU's new anti-coercion instrument, discussed in the next section, attempts to do); by offering EU producers incentives to diversify export destinations, particularly to reduce concentrated exposures to China; and through insurance mechanisms that reduce ex post the impact of export disruptions to specific products.

The latter must of be designed in a way that avoids moral hazard, ie. does not encourage concentrated exposures ex ante. We return to possible instruments for export diversification and ex-post protection in the next section.

Fourth, there is a role for deterring coercion, rather than just reducing vulnerability to it. This is because de-risking of export and import dependencies will never be complete – and should not be complete, given that de-risking needs to be weighed against the benefits of trade specialisation and continuation of trade with China and other countries that may use coercion.

Fifth, there is the question of whether the EU should reduce its overall trade integration with China to soften the blow of sudden trade disruption triggered by a geopolitical confrontation. According to Baqaee *et al* (2024), the cost of a gradual reduction in trade integration with China would be small for most EU countries, even if trade integration is reduced all the way to zero.

Even for Germany, where the cost of complete decoupling from China would not be small, the cost of a partial reduction of trade integration – for example, reducing export and import shares by one third – would be small if

pursued gradually. On this basis, policy measures to encourage a pre-emptive reduction in trade integration would be justified if all three of the following conditions are met:

1. The probability of a very costly sudden trade disruption is considered to be sufficiently high, and
2. Firm-level diversification of trade is not, by itself, sufficient to engineer this pre-emptive de-risking;
3. Targeted (ie. firm- or sector-level) export diversification efforts do not have a substantial impact in terms of reducing aggregate import dependency.

There is significant uncertainty around each of these points. With regard to points two and three, Bown (2024) found that trade diversion triggered by US tariffs on China and Chinese retaliation has further increased EU trade integration with China. With fresh US legislation directed against Chinese imports, such as the Inflation Reduction Act, this effect might continue.

At the same time, the combination of a heightened sense of the risks created by concentrated exposure to China and the structural slowing of the Chinese economy might push in the other direction. Furthermore, targeted de-risking efforts may have an aggregate impact, particularly if they reduce concentrated exposures to China in major sectors for the EU economy, such as the car industry.

Finally, it is important to highlight two trade-related economic-security concerns that are the intellectual cousins of the risks identified and quantified by Baqaee *et al* (2024) and Mejean and Rousseaux (2024), but are not directly discussed in those papers.

The first is the obvious risk, already mentioned in section 2, of a broad disruption to European trade with the United States in the event of a return of Donald Trump to the US presidency<sup>3</sup>. Given the much larger share of US imports and exports in European trade, this could hit Europe even harder than a disruption to trade with China.

While Baqaee *et al* (2024) did not directly simulate such a shock, this is suggested by their 'EU autarky' scenario, which has substantial costs even in the long run, ie. even when phased-in slowly (a permanent consumption loss of 9 percent of GDP). It follows that de-risking the trade relationship with the US by reducing trade integration might make sense only if an even more catastrophic sudden decoupling from the US is viewed as likely.

However, a disruption to trade with the US would likely take the form of a (limited) tariff war rather than a trade embargo. This argues against a pre-emptive reduction in trade with the US. Instead, the EU must be politically prepared to fight a trade war with the US, if and when a returning President Trump decides to start such a war.

A second related concern is that exposures to China and other countries that might engage in coercion against EU firms could take the form of asset expropriation – in particular, expropriation of production sites. By removing an important source of foreign revenue and profits, this could impact EU firms in much the same way as an import prohibition.

However, the risk would show up *ex ante* in the form of a concentration of profit sources, rather than concentrated exports, and the remedy could involve diversification of production sites and profit centres, rather than diversification of exports, as along with increases in capital buffers.

Summing up, our analysis results in five main calls for European policy action:

1. Reduce import dependency for critical products;
2. Diversify foreign revenue sources and/or strengthen firm resilience against potential disruption to foreign demand, asset expropriations or payment controls impeding profit repatriation;
3. Deepen the EU single market and make it more flexible;
4. Deter economic coercion of any kind, whether through imports or exports, or through other means such as expropriation;
5. Possibly, limit overall trade dependency (and particularly export dependency) on China, at the aggregate level.

Achieving these objectives requires policies that are effective, that balance costs and benefits, and that minimise risks of unintended consequences. We next examine what such policy might look like concretely, starting with those the European Commission has already started implementing.

#### **4 How to de-risk**

As the outbreak of COVID-19 revealed dangerous vulnerabilities and called for a reassessment of the EU's international economic relations, rising pressure from the US under the Trump presidency and the increasingly aggressive behaviour of the Chinese government focused the attention of European policymakers on the threat of economic coercion and prompted a redefinition of the toolkit with which they could respond.

The EU took a series of major initiatives to strengthen its economic resilience and to equip itself to better counter malicious behaviour by economic partners (Box 1).

## Box 1. Additions to the European external economic security policy toolkit

The EU has adopted or is discussing a series of new initiatives, which complement standard trade defence instruments<sup>4</sup> (anti-dumping or anti-subsidy duties consistent with the World Trade Organisation Agreement on Subsidies and Countervailing Measures, for which the EU has developed procedures that are in the process of being strengthened):

The Foreign Subsidies Regulation<sup>5</sup> (FSR, in force since July 2023) introduced new tools to tackle foreign subsidies that cause distortions and undermine the level playing field in the areas of mergers and acquisitions and procurement (see Anderson, 2020).

The European Chips Act<sup>6</sup> (in force since September 2023) is intended to bolster Europe's competitiveness and resilience in the semiconductor sector by supporting large-scale manufacturing projects via somewhat more permissible subsidy rules compared to a conventional Important Projects of Common European Interest (IPCEIs, investment projects involving crossborder collaboration and state aid from several EU countries). It also entails measures aimed at mapping and monitoring the semiconductor supply chain to assess ex-ante risks of potential import disruption but also envisions broader powers for the Commission to act in a crisis, including as common purchasing body (see Poitiers and Weil, 2022).

The Net Zero Industry Act (NZIA)<sup>7</sup> and related parts of the Temporary Crisis and Transition Framework<sup>8</sup> (TCTF) are intended to strengthen the European ecosystem of clean-tech manufacturing. The NZIA includes measures intended to accelerate permitting, while the TCTF allows member states to provide subsidies to clean tech manufacturing projects which can match subsidies of third countries under certain conditions (see Tagliapietra *et al* 2023).

The Critical Raw Materials Act<sup>9</sup> (CRMA) aims to tackle the issue of highly concentrated imports of certain raw materials that are of strategic importance. It seeks to boost domestic mining, refining and recycling of such raw materials through accelerated permitting procedures as well as measures related supply chain monitoring, stockpiling and improving the recyclability of CRMs (see Le Mouel and Poitiers, 2023).

The Health Emergency Preparedness and Response Authority (HERA)<sup>10</sup> that was launched in September 2021 has as part of its mission to improve the resilience and availability of medical supplies. It aims to achieve this mission by identifying key supply chain bottlenecks and addressing them through measures such as coordinated stockpiling and joint procurement.

The Anti-Coercion Instrument (ACI, in force since December 2023) is intended to provide to the EU a wide range of possible countermeasures when a third country exercises coercion. It gives the EU extensive powers to deploy countermeasures in response to an act of foreign coercion, including the imposition of tariffs, restrictions on trade, services and intellectual property rights, and restrictions on access to foreign direct investment and public procurement.

The Internal Market Emergency and Resilience Act<sup>11</sup> (IMERA, formerly Single Market Emergency Instrument, on which agreement was reached between the Parliament and the Council in February 2024) aims at ensuring continued access to critical goods and services. Although primarily intended to respond to COVID-type emergencies, it also covers disruptions to the single market triggered by conflicts, such as the war in Ukraine.

Commission initiatives on inward and outward investment screening and the coordination of export controls were proposed in January 2024. The coordination mechanism for inbound investment screening is in place since 2020, but it mainly commits member states to put an investment screening into place. The 2024 economic security package includes an update of this scheme, but remains vague on the prospect of outbound investment screening.



Limitations notwithstanding, the EU has assembled an impressive package that expresses a change of attitude. Considerable effort has gone into addressing critical import dependencies, giving the European Commission powers to deter coercion (the Anti-Coercion Instrument, application of which must be triggered by a majority in the Council), and preventing a breakdown of the single market in an emergency (Internal Market Emergency and Resilience Act, IMERA). However, these efforts fall well short of meeting the policy objectives listed at the end of section 3.

First, and most obviously, export dependencies have been largely neglected. Aside from the intention to negotiate additional trade agreements with friendly nations, there is no instrument to encourage export diversification and/or reduce concentrated export dependence on China.

Second, instruments to address import dependencies remain imperfect and incomplete:

- While the European Chips Act, Critical Raw Materials Act (CRMA) and Health Emergency Preparedness and Response Authority have plausible economic-security justifications, the Net Zero Industry Act covers a broad swathe of goods that mostly fail to meet the definition of critical good proposed in section 3<sup>12</sup>.

Many other goods that might be critical, such as the upstream products with high import concentration identified by Mejean and Rousseaux (2024), remain outside the scope of any of these acts. There is no framework for identifying goods that may be genuinely critical, but are not part of any of the four identified product categories.

- EU-level instruments to reduce dependency on these goods are for the most part weak. EU-level funding for industrial policy directed at expanding EU capacity is small (Chips Act) or non-existent (CRMA). Trade policy

instruments rely mainly on increasing market or investment access for EU companies via new or expanded trade agreements.

The main channel through which these acts operate is by giving EU countries greater leeway to subsidise investment in the areas covered by these acts. While this may lead to occasional successes (investment in a critical area that would otherwise not have happened), there is no governance structure to ensure that critical dependencies are reduced in a timely way.

Furthermore, the approach mostly benefits EU countries that have the fiscal resources to provide large subsidies, and large incumbents, which have the clout and scale to lobby for subsidies and participate in IPCEI consortia.

Third, the Commission has so far missed the opportunity to rally members states behind the push to increase resilience by deepening the single market. This would help the EU resist external shocks and coercion – whatever the source and the channel – by allowing faster re-direction of trade and supply.

Banking and capital markets union would raise economic security both by funding new productive capacity and by improving automatic risk-sharing, better risk sharing across intra-EU borders would in turn make the EU more cohesive, and would make it harder to exploit internal divisions.

A more systematic attempt to strengthen economic security could involve the following elements.

1. A process for identifying and regularly reviewing critical import dependencies, based on the criteria developed in section 2, and better data (Mejean and Rousseaux, 2024; Bown, 2024). Better data may require

**Table 2. Economic security objectives and available instruments**

Objective	Available Instruments	Problems
Reduce import dependency for critical products	Important Projects of European Interest (IPCEIs) European Chips Act Critical Raw Materials Act Net Zero Industry Act and related sections of the Temporary Crisis and Transition Framework for State Aid Health Emergency Preparedness and Response Authority (HERA)	Imperfect match between critical products and targeted products. Lack of cost-benefit analysis Weak EU-level instruments Weak governance - actions and funding rely mostly on member states and lobbying by large firms
Diversify concentrated export exposures at the firm level	None, except for intention to negotiate additional free trade agreements with 'friends'	Lack of instruments leaves EU vulnerable to coercion
Deepen the single market and make it more flexible	Internal Market Emergency and Resilience ACT (IMERA)	No economic security-motivated deepening agenda
Deter economic coercion	Anti-Coercion Instrument	Council majority required to allow the Commission to deploy ACI powers
Limit overall trade dependency on China's market	None, except for intention to negotiate additional free trade agreements with 'friends'	Economic cost of sudden decoupling may deter appropriate action by the EU

Source: Bruegel.

more systematic due diligence on the part of European firms in relation to their supply chains, from an economic-security perspective.

2. Stronger governance and better funding for a competition-friendly EU-level industrial policy. This could involve:

- i. An institution similar to the US Advanced Research Projects Agencies (ARPA) to develop technology in areas that are identified as critical (Tagliapietra et al, 2023; Pinkus *et al* 2024).
- ii. Where the technology exists already, allocation of production or investment subsidies through auctions (along the lines of auction mechanisms that are currently used to tender renewable energy capacity).

These mechanisms would not necessarily require large funding. US ARPA budgets are relatively modest (in the single digit billion range), while the auction process could be co-funded by EU countries, along the lines of the 'Auctions as a Service' concept proposed by the European Commission in relation to climate goals (European Commission, 2023).

3. The use of WTO-consistent trade instruments to incentivise import and export diversification. These could include:

- i. On the import side: countervailing duties, justified by the presence of a foreign subsidy, that are focused on an area in which there is a critical import dependency on the country that is responsible for the subsidy;

ii. On the export side, a duty levied on EU exports to countries for which export exposure is considered excessive. The latter could be politically difficult, but would be fully consistent with WTO rules<sup>13</sup>.

4. As an alternative to export taxes, requiring exporters that are highly dependent on a specific export destination to buy publicly provided political risk insurance that would defray the costs of ex-post public support in the event of coercion (and would discourage exports to the destination in question).

5. Incentivising European firms that are highly dependent on production and profits in foreign jurisdictions to diversify production, structure their operations or hold capital to enable them to survive an expropriation (or controls that impede profit repatriation).

6. To further increase the deterrence value of the ACI, allowing the Commission to trigger retaliation under the ACI without requiring confirmation by a majority of member states.

7. Preparing for economic coercion through financial channels rather than just trade channels. While European firms have not recently been at the receiving end of such coercion, this may change if Donald Trump returns to the White House.

8. Invigorating the single market for economic security rather than just for efficiency reasons. ■

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## Endnotes

1. See, for example, *The Economist*, '[China punishes Australia for promoting an inquiry into covid-19](#)', 21 May 2020; and Andy Bounds, '[Lithuania complains of trade 'sanctions' by China after Taiwan dispute](#)', *Financial Times*, 3 December 2021.
2. The European Commission (2023) uses a definition which also includes "risks related to physical and cyber security of critical infrastructure" and "risks related to technology security and technology leakage". We would classify this as part of national security (within the 'other' category in Table 1) rather than economic security.
3. Trump has announced that he would implement a 10 percent across-the-board tariff. This would affect EU exports significantly, in addition to US importers. See Charlie Savage, Jonathan Swan and Maggie Haberman, '[A New Tax on Imports and a Split From China: Trump's 2025 Trade Agenda](#)', *New York Times*, 26 December 2023.
4. See European Commission, '[Trade defence](#)', undated.
5. See European Commission, '[The Foreign Subsidies Regulation in a nutshell](#)', undated.
6. See European Commission, '[European Chips Act](#)', undated.
7. See European Commission, '[Net-Zero Industry Act](#)', undated.
8. See European Commission, '[Temporary Crisis and Transition Framework](#)', undated.
9. See European Commission, '[Critical Raw Materials Act](#)', undated.
10. See European Commission, '[Health Emergency Preparedness and Response \(HERA\)](#)', undated.
11. Final compromise text agreed in February 2024 available at <https://data.consilium.europa.eu/doc/document/ST-6336-2024-INIT/en/pdf>.
12. Namely, photovoltaic and solar thermal, onshore wind and offshore renewables, batteries and storage, heat pumps and geothermal energy, electrolysers and fuel cells, sustainable biogas and biomethane, carbon capture and storage (CCS) and grid technologies.
13. Article XI of the 1994 General Agreement on Tariffs and Trade prohibits quantitative export restrictions (with certain exceptions) but permits "duties, taxes or other charges". See [https://www.wto.org/english/res\\_e/publications\\_e/ai17\\_e/gatt1994\\_art11\\_oth.pdf](https://www.wto.org/english/res_e/publications_e/ai17_e/gatt1994_art11_oth.pdf).

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*This Policy Brief is based on chapter 1 of Pisani-Ferry et al (2024). We thank Chad Bown, Julian Hinz, Morgan Kelly, Conor McCaffrey, Isabelle Mejean, Kevin O'Rourke, Pierre Rousseaux and Moritz Schularick, as well as Shekar Aiyar, Alicia García-Herrero, Petros Mavroidis, Francesco Papadia, André Sapir, Fiona Scott Morton, Nicolas Véron, Lennard Welslau and Guntram Wolff for helpful discussions and comments. We are particularly grateful to Niclas Poitiers for his contribution to the survey of EU economic security instruments that appears in section 4 of this paper. This article is based on a [Bruegel Policy Brief Issue n°07/24](#) | May 2024.*



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# Global economic fracturing and shifting investment patterns

There is a risk of economic deglobalisation. Bruno Casella, Richard Bolwijn and Francesco Casalena highlight ten FDI trends and their development implications

**T**he trends stemming from technological advances, policy shifts, and the sustainability imperative, along with the effects of the trade tensions starting in late 2017 and the shock of the COVID pandemic, have sparked a debate on the risk of a reversal of economic globalisation (Fajgelbaum *et al* 2020, Antràs 2020, Zhan *et al* 2020, Kukharskyy *et al* 2021, Baldwin 2022a, 2022b, 2022c, 2022d).

The subsequent shocks of conflicts and political fragmentation have brought to the fore the heightened pressure towards global economic fracturing and the decoupling of global value chain (GVC) links between the US and other developed economies and the Chinese economy, with implications for many other countries and regions (Campos *et al* 2023, Aiyar *et al* 2023, Javorcik *et al* 2023).

So far, this debate has mainly focused on the trade perspective (Aiyar *et al* 2023 is an exception). The objective of this study is to explore the investment angle, offering a comprehensive reference for policymakers and analysts on the main trends reshaping the global FDI landscape amidst global economic fracturing. Given the intertwined nature of trade and FDI in the global production landscape dominated by GVCs, it also aims to build a much-needed bridge between connected narratives in the FDI and trade areas.

The underlying analysis owes credit to, and is directionally consistent with, previous studies investigating specific aspects of the FDI trends, particularly various recent editions of UNCTAD's World Investment Reports (eg. UNCTAD 2017, 2020, 2021). However, to date, a fully integrated diagnostic covering both short- and long-term perspectives, as well as the sectoral, geographical, and bilateral dimensions of FDI patterns, has been lacking.

This column highlights ten empirical FDI trends, grouped into three overarching themes: the triple divergence, the rise of economic fracturing and the implications for sustainability and development (UNCTAD 2024). These trends

fundamentally alter the development paradigm based on promoting investment in manufacturing and export-led growth, as will be discussed in the concluding part.

### **Triple divergence**

Over the past two decades, FDI patterns have adapted to the transformative shifts reshaping economic globalisation in three key aspects.

*Since the escalation of the trade war – with an acceleration after the outbreak of the pandemic and the recent geopolitical crisis – escalating international tensions are turning divergence into fracturing*

1. Divergence between trends in FDI and GVCs and trends in GDP and trade. Historically closely intertwined under the common shaping force of GVCs, global trends in FDI and GVCs and in GDP and trade have been growing apart since the 2010s. While global GDP and trade have continued to grow steadily, crossborder investment and GVCs are coping with a long-term stagnation (FDI trend #1).

2. Divergence in FDI trends between services and manufacturing. FDI's long-term stagnation is characterised by starkly divergent trajectories between rapidly growing investment in services (FDI trend #2) and shrinking investment in manufacturing activities (FDI trend #3) (Figure 1).

The transition from manufacturing to services is part of a broader change in the role of FDI in global value creation, whereas crossborder investment is moving from the centre to the two ends of the smile curve (FDI trend #4). This major shift is involving developed and developing economies alike, blurring the traditional boundaries in terms of their FDI sectoral footprints (FDI trend #5).

3. Divergence in FDI trends between China and the rest of the world. Chinese share in crossborder greenfield projects has been consistently declining for two decades, with an acceleration after the pandemic.

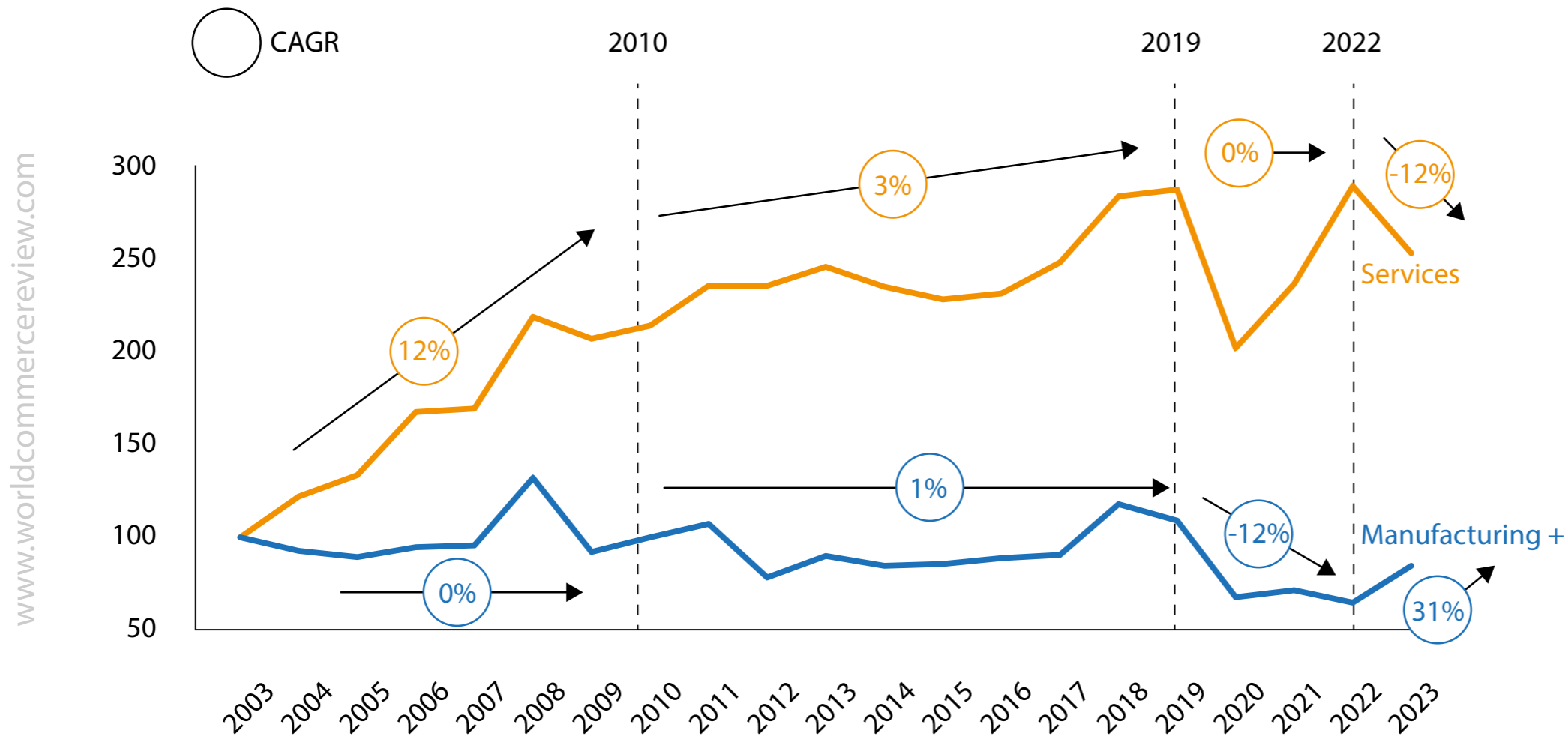
Despite a waning interest from multinational corporations in initiating new investment projects in China, the country continues to maintain a dominant position in global manufacturing and trade. Far from downsizing, 'Global Factory China' is changing its operational model from globally integrated to more domestically focused production networks, while still maintaining its leadership in global trade (FDI trend #6).

### **From divergence to fracturing**

Since the escalation of the trade war – with an acceleration after the outbreak of the pandemic and the recent geopolitical crisis – escalating international tensions are turning divergence into fracturing, leading

**Figure 1. Diverging FDI trends in manufacturing and services**

Number of crossborder greenfield projects, indexed 2003 = 100



Note: CAGR: Compound Annual Growth Rate. The sectoral analysis is based on the variable 'Business Activity' from fDi Markets. 'Manufacturing+' includes 'Manufacturing' and 'Other non-services' activities. The latter group comprises the following categories: construction, electricity, extraction and infrastructure.

Source: UNCTAD, based on information from the Financial Times Ltd, fDi Markets ([www.fDimarkets.com](http://www.fDimarkets.com)).

to the disruption of historical investment patterns. Fracturing is associated with heightened uncertainty and unpredictability in the FDI landscape, and limited possibilities for countries to strategically benefit from diversification (FDI trend #7).

The fracturing process is characterised by the rising importance of geopolitics. Overall, between 2013 and 2022, the share of FDI projects between geopolitically distant countries decreased by 10 percentage points, from 23% to 13% (figure 2). Geopolitical motivations are thus emerging as primary drivers of investment decisions, at times overriding traditional FDI determinants (FDI trend #8).

### **Sustainability push, but marginalisation of developing countries**

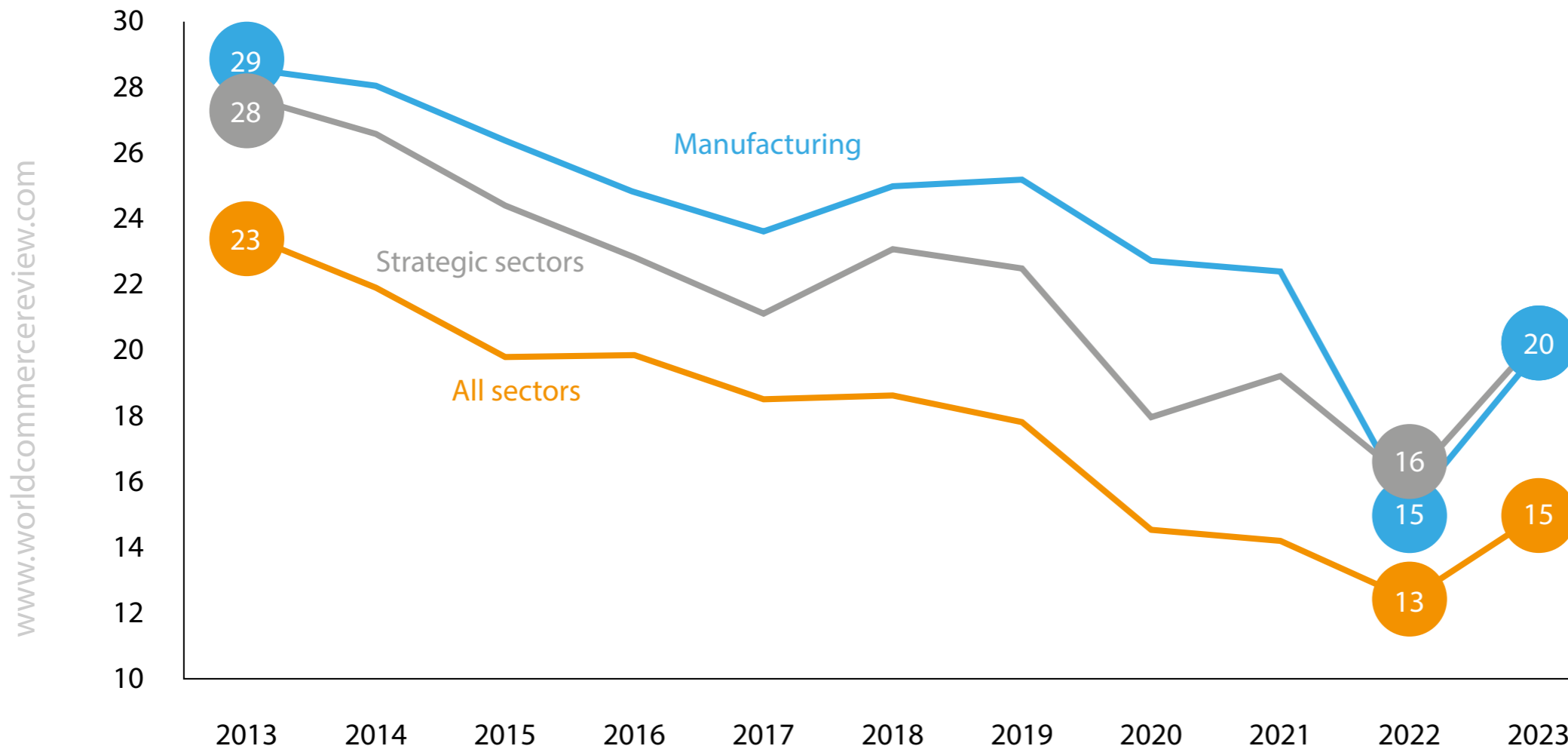
Amid long-term stagnation of manufacturing investment across all industries, the number of crossborder greenfield projects in renewable energy generation (environmental technologies) as well as in the manufacturing of batteries and electric vehicles (EVs) has steadily increased (Figure 3).

The sustainability imperative and the drive to stimulate investment in the Sustainable Development Goals (SDGs) have opened new opportunities for investment in industrial development (FDI trend #9). However, these new opportunities can only compensate in part for the lack of FDI growth in other industrial sectors that are critical for GVC development strategies.

Historical shifts and economic fracturing are leading to a decrease in the share of FDI in smaller developing countries and least developed countries. This trend exacerbates their marginalisation and vulnerability, as FDI becomes increasingly concentrated in developed and emerging economies (FDI trend #10).

## Figure 2. Declining share of FDI between geopolitically distant countries

Crossborder greenfield projects between geopolitically distant countries as a share of total, per cent



Note: The classification 'Strategic sectors' follows IMF (2023). Assessment of geopolitical alignment is based on United Nations voting patterns (Bailey et al 2017). The findings remain robust under alternative definitions of geopolitical groupings.

Source: UNCTAD, based on information from the Financial Times Ltd, fDi Markets ([www.fDimarkets.com](http://www.fDimarkets.com)).

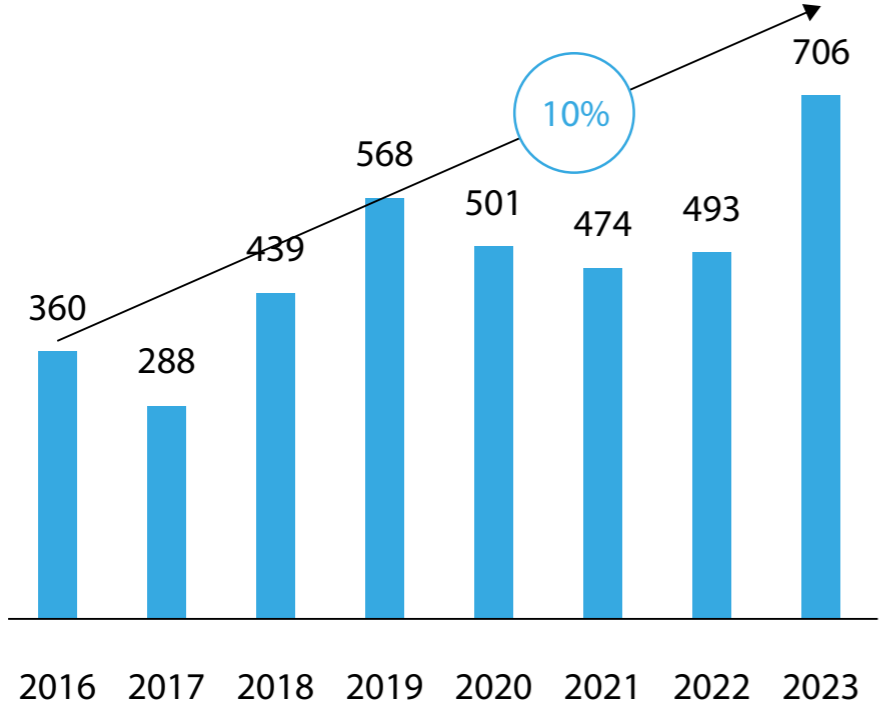


### Figure 3. Growth of green FDI

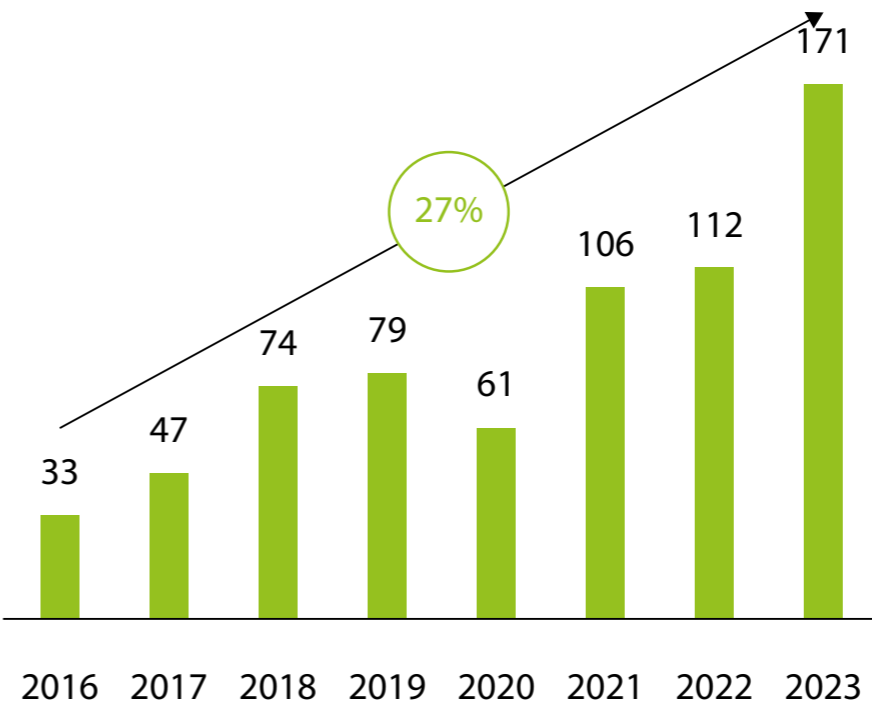
Number of crossborder greenfield projects in environmental technologies

○ CAGR

www.worldcommercereview.com



Number of crossborder greenfield projects in manufacturing of batteries and electric vehicles



Note: CAGR: Compound Annual Growth Rate.  
 Source: UNCTAD, based on information from the Financial Times Ltd, fDi Markets ([www.fDimarkets.com](http://www.fDimarkets.com)).

## Conclusions: rethinking the FDI-GVC-development nexus

Based on a diagnostic of ten trends in foreign direct investment, in this column we put forward three major implications for developing countries and their development and industrialisation strategies.

First, the long-term stagnation of investment in GVCs and the sectoral shifts in investment patterns fundamentally alter the development paradigm based on promoting investment in manufacturing and export-led growth. These shifts affect the prospects for developing countries to increase their GVC participation and to gradually upgrade to higher value-added industrial activities.

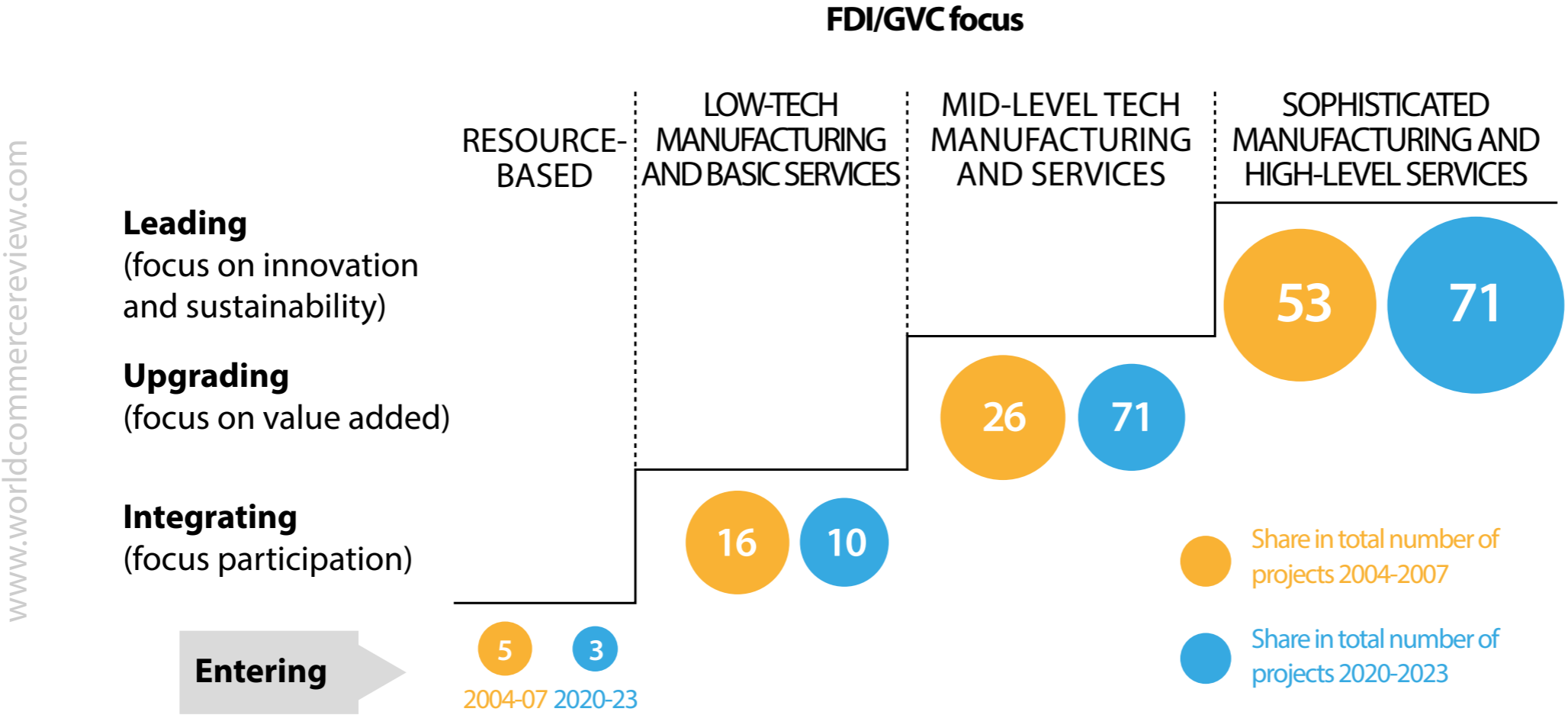
The GVC development ladder – a concept developed in UNCTAD's *World Investment Report 2013* (UNCTAD 2013) – is becoming harder to climb as the least developed countries face declining manufacturing investment and a shrinking pool of efficiency-seeking, lower value-added projects to leverage for GVC participation (Figure 4).

Second, changes in the patterns of sources and destinations of investment due to global economic fracturing, de-risking, and resilience trends can bring opportunities for some countries, but are a challenge for most. They not only reinforce the effects of the long-term trends but also introduce new complexity into international production and increased uncertainty for both investors and investment policymakers as geopolitical considerations become more important FDI determinants.

Third, the ongoing marginalisation of countries at the lower levels of the GVC development ladder, combined with diminishing opportunities in traditional GVC-intensive industries, requires investment policymakers in these countries to intensify their search for investment promotion opportunities in sectors that are less reliant on GVCs.

### Figure 4. The GVC development ladder: Shifting FDI weights

Distribution of crossborder greenfield projects across stages of the GVC-development ladder, per cent



Note: The classification of projects along the ladder is based on fDi Markets variables 'Business Activity' and 'Cluster' and Lall's technological classification (Lall 2000, Sturgeon and Gereffi 2009).

Source: UNCTAD, building on the concept developed in UNCTAD World Investment Report 2013 (pages 179-181); project shares based on information from the Financial Times Ltd, fDi Markets ([www.fDimarkets.com](http://www.fDimarkets.com)).

This includes industries where growth is driven by policy factors other than those influencing the general trend in GVCs. Notably, the promotion of investment in environmental technologies and sustainable energy serves as a notable example, albeit not the only one (UNCTAD 2023). ■

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This article was originally published on [VoxEU.org](https://voxeu.org).

A world map with a network overlay of red and yellow lines and dots, representing trade flows and geopolitical tensions. The map is set against a dark background. The text is overlaid on the map.

# How geopolitics is changing trade

There has been a rise in trade restrictions. Costanza Bosone, Ernest Dautović, Michael Fidora and Giovanni Stamato explore the impact of geopolitical tensions on trade flows

Since the global financial crisis, trade has been growing more slowly than GDP, ushering in an era of 'slowbalisation' (Antràs 2021). As suggested by Baldwin (2022) and Goldberg and Reed (2023), among others, such a slowdown could be read as a natural development in global trade following its earlier fast growth.

Yet, a surge in trade restriction measures has been evident since the tariff war between the US and China (see Fajgelbaum and Khandelwal 2022) and geopolitical concerns have been heightened in the wake of Russia's invasion of Ukraine, with growing debate about the need for protectionism, near-shoring, or friend-shoring.

### **The impact of geopolitical distance on international trade**

Rising trade tensions amid heightened uncertainty have sparked a growing literature on the implications of fragmentation of trade across geopolitical lines (Aiyar *et al* 2023, Attinasi *et al* 2023, Campos *et al* 2023, Goes and Bekker 2022).

In Bosone *et al* (2024), we present new evidence and quantify the timing and impact of geopolitical tensions in shaping trade flows over the last decade. To do so, we use the latest developments in trade gravity models. We find that geopolitics starts to significantly affect global trade only after 2018, which, timewise, is in line with the tariff war between the US and China, followed by the Russian invasion of Ukraine.

Furthermore, the analysis sheds light on the heterogeneity of the effect of geopolitical distance by groups of countries: we find compelling evidence of friend-shoring, while our estimates do not reveal the presence of near-shoring. Finally, we show that geopolitical considerations are shaping European Union trade, with a particular focus on strategic goods.



In this study, geopolitics is proxied by the geopolitical distance between country pairs (Bailey *et al* 2017). As an illustration, Figure 1 (Panel A) plots the evolution over time of the geopolitical distance between four country pairs: US-China, US-France, Germany-China, and Germany-France. This chart shows a consistently higher distance from China for both the US and Germany, as well as a further increase in that distance over recent years.

*Our findings point to a redistribution of global trade flows driven by geopolitical forces, reflected in the increasing importance of geopolitical distance as a barrier to trade*

Geopolitical distance is then included in a standard gravity model with a full set of fixed effects, which allow us to control for unobservable factors affecting trade. We also control for international border effects and bilateral time-varying trade cost variables, such as tariffs and a trade agreement indicator.

This approach minimises the possibility that the index of geopolitical distance captures the role of other factors that could drive trade flows. We then estimate a set of time-varying elasticities of trade flows with respect to geopolitical distance to track the evolution of the role of geopolitics from 2012 to 2022.

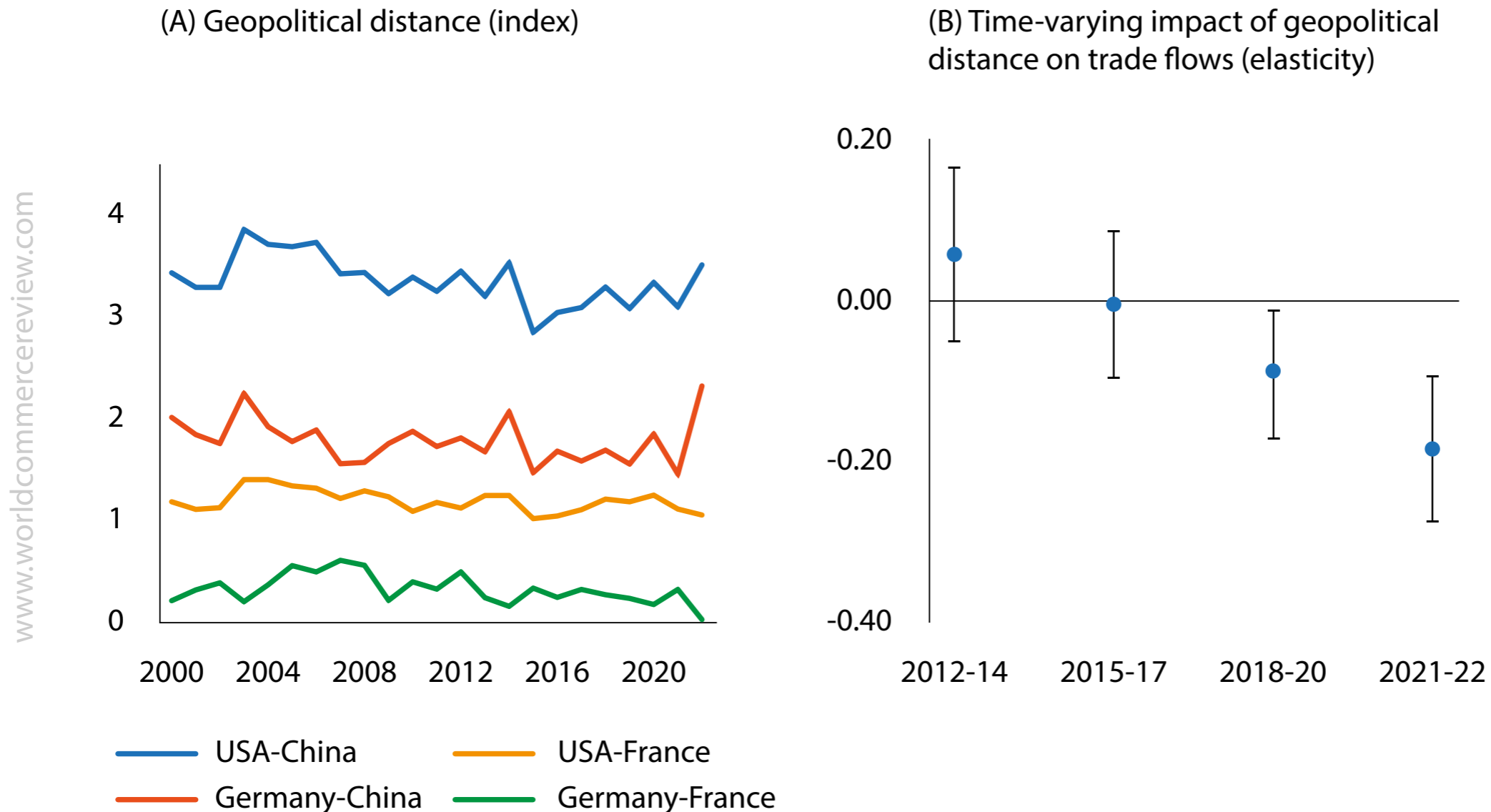
To the best of our knowledge, we cover the latest horizon on similar studies on geopolitical tensions and trade. To rule out the potential bias deriving from the use of energy flows as political leverage by opposing countries, we use manufacturing goods excluding energy as the dependent variable. We present our results based on three-year averages of data.

Our estimates reveal that geopolitical distance became a significant driver of trade flows only since 2018, and its impact has steadily increased over time (Figure 1, Panel B). The fall in the elasticity of geopolitical distance is mostly driven by deteriorating geopolitical relations, most notably between the US and China and more generally between the West and the East.

These reflect the effect of increased trade restrictions in key strategic sectors associated to the COVID-19 pandemic crisis, economic sanctions imposed to Russia, and the rise of import substituting industrial policies.

The impact of geopolitical distance is also economically significant: a 10% increase in geopolitical distance (like the observed increase in the USA-China distance since 2018, in Figure 1) is found to decrease bilateral trade flows by about 2%. In Bosone and Stamato (forthcoming), we show that these results are robust to several specifications and to an instrumental variable approach.

**Figure 1. Evolution of geopolitical distance between selected country pairs and its estimated impact on bilateral trade flows**



Notes: Panel A: geopolitical distance is based on the ideal point distance proposed by Bailey et al (2017), which measures countries' disagreements in their voting behaviour in the UN General Assembly. Higher values mean higher geopolitical distance. Panel B: Dots are the coefficient of geopolitical distance, represented by the logarithm of the ideal point distance interacted with a time dummy, using 3-year averages of data and based on a gravity model estimated for 67 countries from 2012 to 2022. Whiskers represent 95% confidence bands. The dependent variable is nominal trade in manufacturing goods, excluding energy. Estimation performed using the PPML estimator. The estimation accounts for bilateral time-varying controls, exporter/importer-year fixed effects, and pair fixed effects.

Sources: TDM, IMF, Bailey et al (2017), Egger and Larch (2008), WITS, Eurostat, and ECB calculations.

### **Friend-shoring or near-shoring?**

Recent narratives surrounding trade and economic interdependence increasingly argue for localisation of supply chains through near-shoring and strengthening production networks with like-minded countries through friend-shoring (Yellen 2022).

To offer quantitative evidence on these trends, we first regress bilateral trade flows on a set of four dummy variables that identify the four quartiles of the distribution of geopolitical distance across country pairs. To capture the effect of growing geopolitical tensions on trade, each dummy is equal to 1 for trade within the same quartile from 2018 and zero otherwise.

We find compelling evidence of friend-shoring. Trade between geopolitically aligned countries increased by 6% since 2018 compared to the 2012–2017 period. Meanwhile, trade between rivals decreased by 4% (Figure 2, Panel A). In contrast, our estimates do not reveal the presence of near-shoring trends (Figure 2, Panel B).

Instead, we find a significant increase in trade between *far*-country pairs, offset by a relatively similar decline in trade between the *farthest*-country pairs. Overall, shifts toward geographically close partners are less pronounced than toward geopolitically aligned partners.

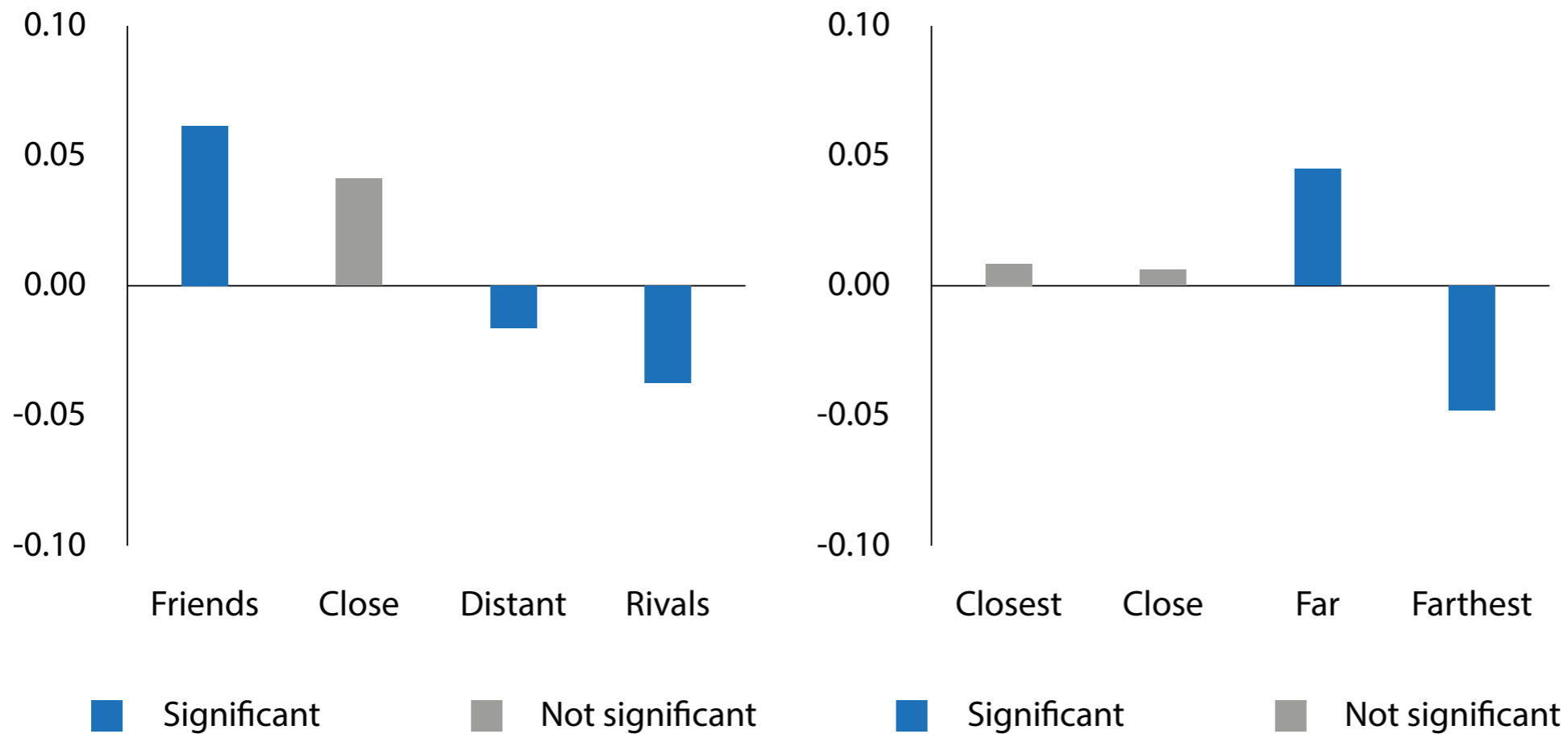
### **Evidence of de-risking in EU trade**

The trade impact of geopolitical distance on the EU is isolated by interacting geopolitical distance with a dummy for EU imports. We find that EU aggregate imports are not significantly affected by geopolitical considerations (Figure 3, Panel A).

**Figure 2. Impact of trading within groups since 2018 (semi-elasticities)**

(A) Quartiles by geopolitical distance

(B) Quartiles by geographical distance



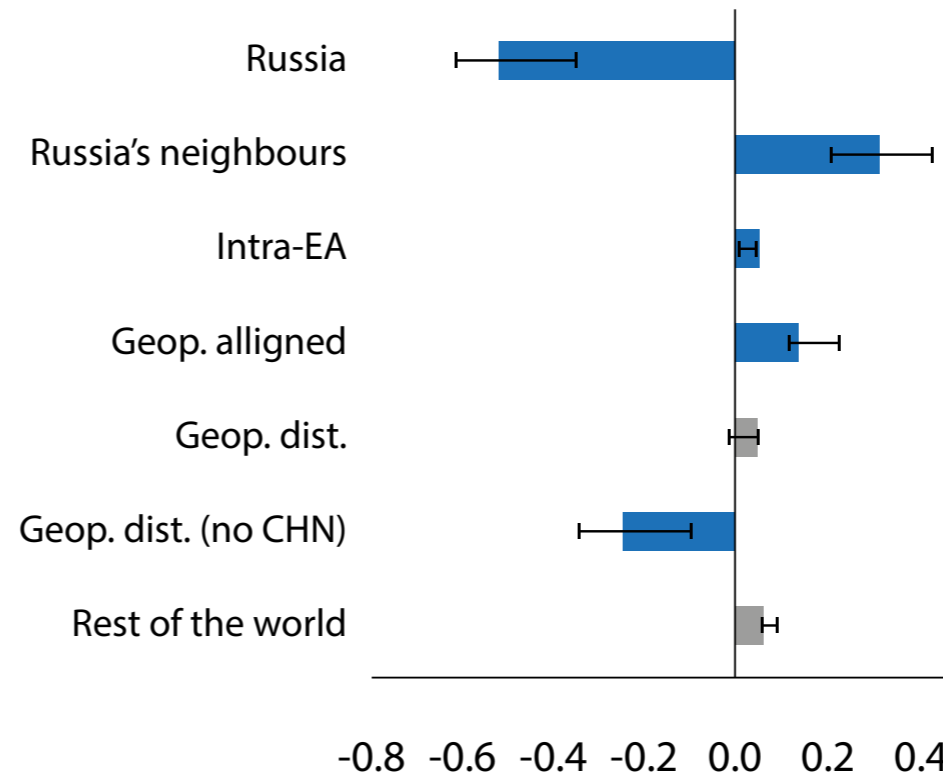
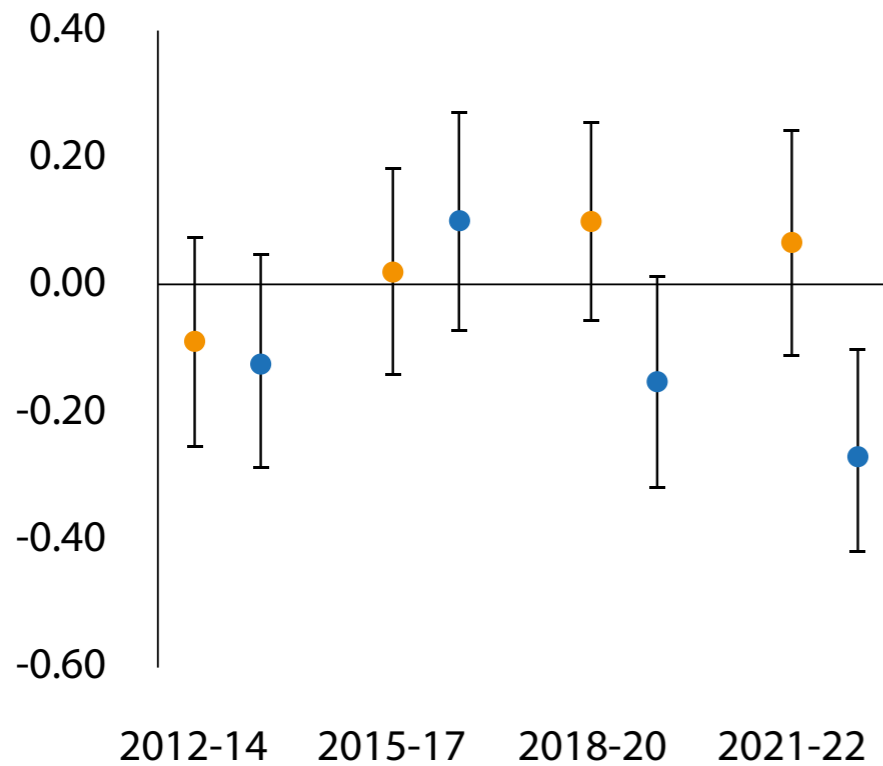
Notes: Estimates in both panels are obtained by PPML on the sample period 2012–2022 using consecutive years. Please refer to Figure 1 for details on estimation. The effects on each group are identified based on a dummy for quartiles of the distribution of geopolitical distance (panel A) and on a dummy for quartiles of the distribution of geographic distance (panel B) across country pairs. The dummy becomes 1 in case of trade between country pairs belonging to the same quartile since 2018.

Sources: TDM, IMF, Bailey et al (2017), Egger and Larch (2008), WITS, Eurostat, CEPII, and ECB calculations.

**Figure 3. Impact of geopolitical distance on EU imports and of the Ukraine war on euro area exports**

(A) Time-varying impact of geopolitical distance on EU imports (elasticity)

(B) Impact of the Ukraine war on euro area exports (semi-elasticity)



● Strategic products  
● Aggregate imports

■ Significant  
■ Not significant

Notes: Estimates in both panels are obtained by PPML on the sample period 2012–2022. Panel A: Dots represent the coefficient of geopolitical distance interacted with a time dummy and with a dummy for EU imports, using 3-year averages of data. Lines represent 95% confidence bands. Panel B: The sample includes quarterly data over 2012–2022 for 67 exporters and 118 importers. Effects on the level of euro area exports are identified by a dummy variable for dates after Russia's invasion of Ukraine. Trading partners are Russia; Russia's neighbours Armenia, Kazakhstan, the Kyrgyz Republic, and Georgia; geopolitical friends, distant, and neutral countries are respectively those countries that voted against or in favour of Russia or abstained on both fundamental UN resolutions on 7 April and 11 October 2022. The whiskers represent minimum and maximum coefficients estimated across several robustness checks.

Sources: TDM, IMF, Bailey et al (2017), Egger and Larch (2008), WITS, Eurostat, European Commission, and ECB calculations.

This result is robust to alternative specifications and may reflect the EU's high degree of global supply chain integration, the fact that production structures are highly inflexible to changes in prices, at least in the short term, and that such rigidities increase when countries are deeply integrated into global supply chains (Bayoumi *et al* 2019).

Nonetheless, we find evidence of de-risking in strategic sectors<sup>1</sup>. When we use trade in strategic products as the dependent variable, we find that geopolitical distance significantly reduces EU imports (Figure 3, Panel A).

We conduct an event analysis to explore the implications of Russia's invasion of Ukraine on euro area exports. We find that the war has reduced euro area exports to Russia by more than half (Figure 3, Panel B), but trade flows to Russia's neighbours have picked up, possibly due to a reordering of the supply chain.

Euro area exports with geopolitically aligned countries are estimated to have been about 13% higher following the war, compared with the counterfactual scenario of no war. We find no signs of euro area trade reorientation away from China, possibly reflecting China's market power in key industries.

However, when China is excluded from the geopolitically distant countries, the impact of Russia's invasion of Ukraine on euro area exports becomes strongly significant and negative.

### **Concluding remarks**

Our findings point to a redistribution of global trade flows driven by geopolitical forces, reflected in the increasing importance of geopolitical distance as a barrier to trade.

In this column we review recent findings on geopolitics in trade and their impact since 2018, the emergence of friend-shoring rather than near-shoring, and the interactions of strategic sectors with geopolitics in Europe.

In sum, we bring evidence of new forces that now drive global trade – forces that are no longer guided by profit-oriented strategies alone but also by geopolitical alignment. ■

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## Endnote

1. We follow the definition given by the European Commission and define strategic products as military equipment, raw materials, battery packs, high-tech, medical goods, and all those goods which are particularly relevant for security, public health, and the green and digital transitions.

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This article was originally published on [VoxEU.org](#).



# Advancing China's economic growth

China is approaching a fork in the road: rely on the policies that have worked in the past or update its policies for a new era of high-quality growth.  
Kristalina Georgieva discusses

## The global economy

For the world, the year ahead will require careful calibration of monetary and fiscal policies to secure a soft landing — bringing inflation down while maintaining growth firmly in positive territory. Many central banks have the difficult task of deciding when to cut interest rates and by how much, based on data. They can no longer take cues from others as both the pace of disinflation and growth are diverging across countries.

It will be also a challenging year for fiscal authorities in most countries — they need to embrace consolidation to reduce debt and rebuild buffers, and at the same time finance the digital and green transformations of their economies.

Fortunately, the global economy has proven to be remarkably resilient to the shocks of the last years. This resilience is mostly due to strong macroeconomic fundamentals in most of the advanced and emerging market economies and robust consumer and government spending. Labour markets have held up and supply chains have normalized.

Therefore, despite the higher global interest rates, we project over 3 percent growth this year and next. While inflation remains above target in many countries, we see it continuing to fall. The picture here in Asia is more nuanced, because inflation did not rise as much as elsewhere, and it is coming down faster. As a result, interest rates have not risen as much.

But looking to the medium term, we expect global growth to be around 3 percent, which is weak by historical standards – during the pre-COVID decade the annual average was 3.8 percent. Low productivity growth and high debt levels are posing challenges to all, but especially to emerging and developing economies. And geopolitical tensions affect trade and capital flows, which have been essential engines of growth over the last decades.

The good news is that the digital and green transformations present opportunities to boost productivity growth and improve living standards. Deep structural reforms can enhance the conditions for entrepreneurship, innovation and economic performance.

*Our analysis shows that decisive steps to reduce the stock of unfinished housing and giving more space for market-based corrections in the property sector could both accelerate the solution to the current property sector problems and lift up consumer and investor confidence*

## China – a new era of high-quality growth

Zooming in on China, we saw a strong post-COVID rebound in 2023, with growth exceeding five percent. In the medium-term, China will continue to be a key contributor to global economic growth. While low productivity growth and an aging population are factors affecting growth, there are also tremendous opportunities.

China is poised to face a fork in the road — rely on the policies that have worked in the past or update its policies for a new era of high-quality growth.

According to our analysis, with a comprehensive package of pro-market reforms, China could grow considerably faster than a status quo scenario. This additional growth would amount to a 20 percent expansion of the real economy over the next 15 years—in today's terms, that is like adding US\$ 3.5 trillion to the Chinese economy.

What are the ingredients of such a package of reforms? It all starts with sound macroeconomic fundamentals. I was very encouraged to hear the commitment to sound fundamentals and strong institutions here in China.

Decades of impressive growth in China have significantly improved living standards and provided ample policy buffers to address its most-pressing near-term challenges. These include transitioning the property sector to a more sustainable footing and reducing local government debt risks. Tackling these challenges is essential for a smooth transition to a new era of high-quality growth.

Our analysis shows that decisive steps to reduce the stock of unfinished housing and giving more space for market-based corrections in the property sector could both accelerate the solution to the current property sector problems and lift up consumer and investor confidence.

A key feature of high-quality growth will need to be higher reliance on domestic consumption. Doing so depends on boosting the spending power of individuals and families. China's social security system covers more people than any other on the planet. But there is room to expand its reach further and increase benefits—think of strengthening the pension system in a fiscally responsible way.

Domestic consumption also depends on income growth, which in turn relies on the productivity of capital and labour. Reforms such as strengthening the business environment and ensuring a level playing field between private and state-owned enterprises will improve the allocation of capital. Investments in human capital — in education, life-long training and reskilling – and quality health care will deliver higher labour productivity and higher incomes.

This is particularly important as China seeks to seize the opportunities of the AI 'big bang'. Countries' preparedness for the world of artificial intelligence is no longer a goal for the future — it is already an issue for today. The IMF has identified four areas that are critical for countries' AI preparedness — digital infrastructure, human capital and labour markets, innovation, and regulation and ethics.

Our analysis finds that China is at the forefront of emerging economies in terms of AI preparedness, with well-developed digital infrastructure providing a head start. Establishing a robust AI regulatory framework and strengthening economic ties with other innovative countries will help China power ahead.

Similarly, China has enormous potential in advancing the green economy. It is already the global leader in deploying renewable energy, and is making rapid progress in green mobility. Its continued leadership is vital to addressing the global climate crisis. Building on progress in recent years to sell a greater share of electricity at market prices would make China's decarbonization even more efficient. So, too, would extending the coverage of the emissions trading system to the industrial sector.

The transformation ahead is not easy. China's remarkable development success has delivered tremendous benefits to hundreds of millions of people. The younger generations, who have lived their whole lives in an environment of exceptionally high growth rates, are experiencing what many countries have experienced before as economies mature and growth moderates.

But this transition from high rates to high quality of growth is the right fork in the road to take and China is determined to do so. As the government recognizes, high-quality development ultimately depends on reforms. In this endeavour, the IMF is committed to being a partner, including through our ongoing policy dialogue and mutual learning. And also to working together to tackle global challenges such as fragmentation, climate change, and debt.

### **Working together delivers for all**

International cooperation in our interconnected world is essential to solving these challenges—which we know have an outsized impact on the most vulnerable members of our global community. The world comes together at the IMF to tackle problems, and we appreciate China's continued support for our efforts.

China has helped strengthen the IMF's financial capacity through contributions to our concessional lending instrument for low-income countries, our recently created Resilience and Sustainability Facility, and our capacity development initiatives. China has shown remarkable leadership in helping forge the agreement to increase the IMF's permanent resources by 50 percent.

We also recognize China's important role in addressing debt distress in emerging and developing economies. With many countries at or near debt distress much work is needed among creditors to speed up debt relief and we look forward to China's continued strong engagement.



With the dynamism, confidence, and luck of the dragon—and a renewed spirit of international cooperation—China and the world can rise together to the challenges we face today for a more prosperous future for everyone. ■

**Kristalina Georgieva is Managing Director of the International Monetary Fund**

*This article is based on [remarks](#) at the China Development Forum, Beijing, March 24, 2024.*

# Bridging the innovation gap

Andrés Rodríguez-Pose and Zhuoying You show how artificial intelligence and robotics present a potential solution to the innovation gap problem for cities in China

In recent years, the potential of artificial intelligence and robotics to revolutionise production processes and stimulate innovation has attracted considerable attention (eg. Presidente and Calì 2022). Despite this, their capacity to address disparities in innovation remains underexplored. In our recent paper (Rodríguez-Pose and You 2024) we delve into the capacity of AI and robotics to not only spearhead technological innovation, but also to trigger innovation in the less developed and less innovative Chinese cities – those places where traditional innovation-boosting policies have often failed.

### **The geographical concentration of innovation**

Science and technology (S&T) spending has traditionally been at the heart of innovation policies (Audretsch and Feldman 1996, Pavitt 1982). However, policies based on S&T have mostly favoured regions already at the forefront of technological progress and largely failed in less innovative areas, contributing to a massively uneven distribution of innovation.

Innovation has therefore become increasingly geographically concentrated in a few hubs endowed with substantial human and financial resources (Loumeau and Egger 2019). This concentration results in large disparities in innovation between more and less developed regions (Audretsch and Feldman 1996).

Less developed cities and regions, often positioned at or below the technological frontier, struggle to match the innovation outputs of their more advanced counterparts due to inadequate human capital and financial resources (Aghion *et al* 2019).

Policies aimed at promoting innovation, such as investments in S&T, have therefore contributed to a distribution of innovation across the world that is more geographically concentrated and uneven than that of virtually all other economic indicators, such as employment, income, investment, or productivity.

## **The potential of AI and robotics in China**

AI and robotics – characterised by the implementation of technologies that enable machines to learn and make decisions without human intervention and by the use of programmable machines to perform tasks (Liu *et al* 2020), respectively – offer new avenues for stimulating innovation. It has been argued that investing in these technologies can significantly enhance productivity, economic growth, and innovation (eg. Acemoglu and Restrepo 2020). But are they also capable of bridging the innovation gap?

*Less developed cities and regions, often positioned at or below the technological frontier, struggle to match the innovation outputs of their more advanced counterparts due to inadequate human capital and financial resources*

China, a country determined to become a global AI leader by 2025 (Ciocca and Biancotti 2018), is actively resorting to AI and robotics as a means to spur economic activity. It pioneered a national campaign to attract AI talent (Zeng 2021) that strengthened its position in the field.

Until 2017, Europe had more than twice the number of AI researchers compared to China. However, from 2015 to 2020, China's AI skill penetration became 1.4 times the global average, trailing only behind India and the US (Lundvall and Rikap 2022). The campaign also aimed to promote AI for innovation in less innovative areas of the country.

Despite significant investments in science and technology, China's technological innovation was (and remains) highly concentrated around the big Eastern hubs of Shanghai, Guangzhou, and Beijing (Li 2009). A shift in focus to AI and robotics was considered a way to address this polarisation in innovation.

The approach to promoting AI adopted in China has been decentralised. Local governments have been allowed to tailor AI development strategies to local conditions (Zeng 2021). Individual cities and regions have developed their own AI strategies, leading to a geography of AI that is more variegated than that of innovation.

AI is concentrated in traditional innovation hubs, such as the Pearl River Delta and the Yangtze River Delta, but its use has also become widespread in many inland provinces (Figure 1).

Similarly, the adoption of industrial robots has grown significantly, particularly in the manufacturing sector. Since 2013, there has been a consistent increase in industrial robots.

Once again, the geography of robotics in China expands beyond the traditional industrial hubs, with robotics making substantial inroads in provinces such as Henan, Shandong, Fujian, Hebei, and Anhui, outside the main Chinese innovation centres (Figure 2).

### **AI and robotics and the innovation gap in China**

Has this drive to promote AI and robotics delivered? And has it contributed to reduce the acute geographical innovation gap in China? We argue that, in the case of China, AI and robotics have acted as catalysts for technological innovation across cities and regions, particularly enhancing innovation in traditionally less innovative places.

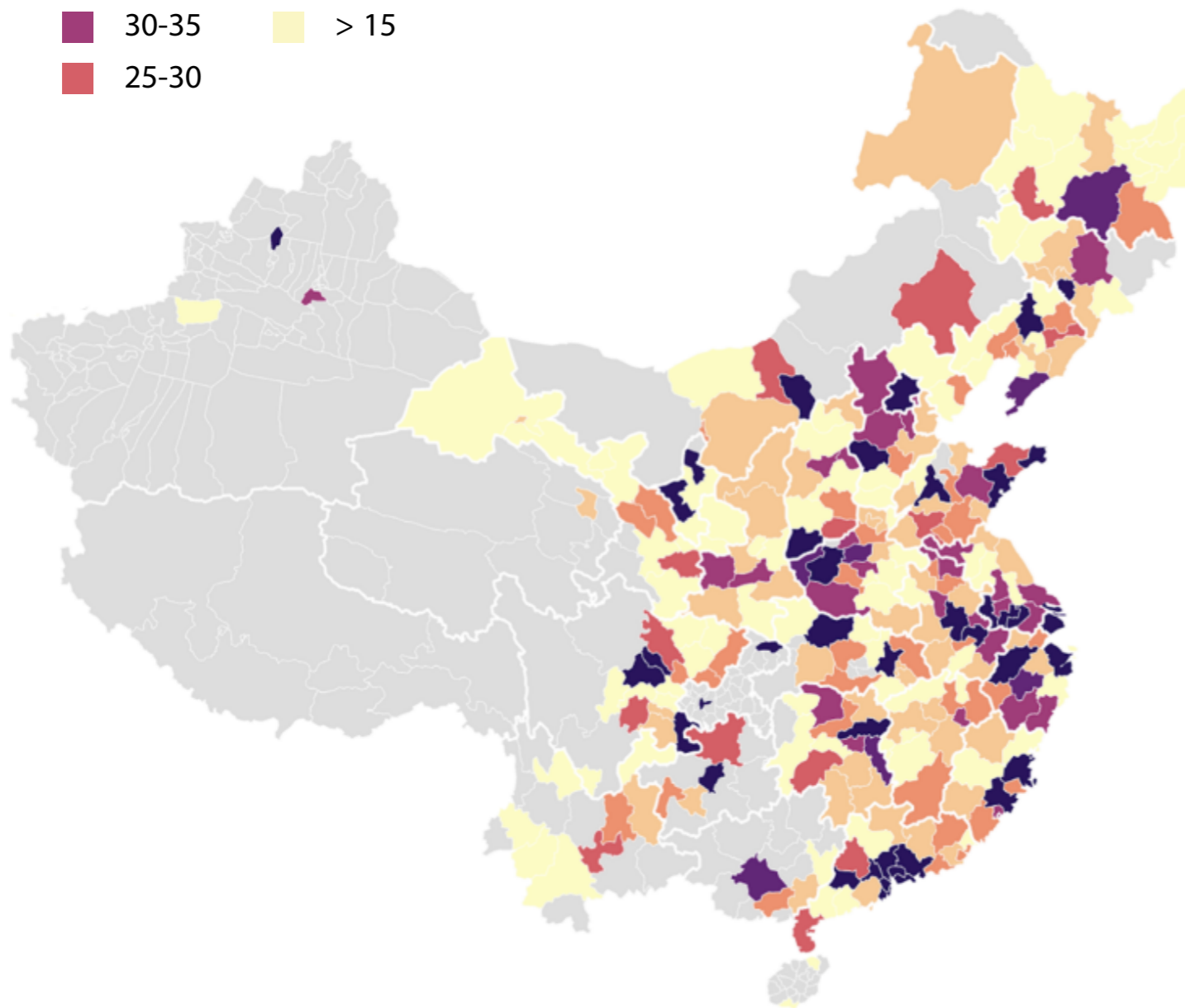
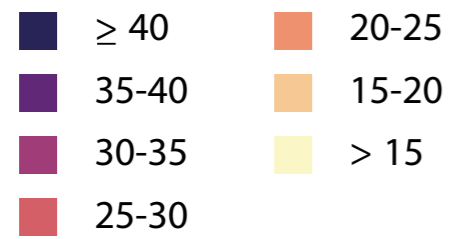
After examining the impact of investment in AI and robotics on technological innovation across 270 Chinese cities from 2009 to 2019, we posit that these novel technologies not only have driven innovation directly but have also enhanced the returns on S&T investments. This dual effect is particularly pronounced in regions at or below the technological frontier, thus offering a promising strategy for reducing regional innovation disparities.

We show that investments in AI in Chinese cities correlate with an increase in innovation overall. Similarly, the density of industrial robots is positively associated with technological innovation, suggesting that cities with more robot installations tend to have higher patent intensities.

Furthermore, we also find that the impact of AI and robotics varies across the innovation spectrum. While these technologies enhance innovation in all cities, their effects tend to be more substantial in traditionally less innovative regions. This finding suggests that AI and robotics can help bridge the innovation gap by providing greater relative benefits to cities below the technological frontier.

**Figure 1. AI development in mainland China, 2008-2018**

The frequency of AI keywords

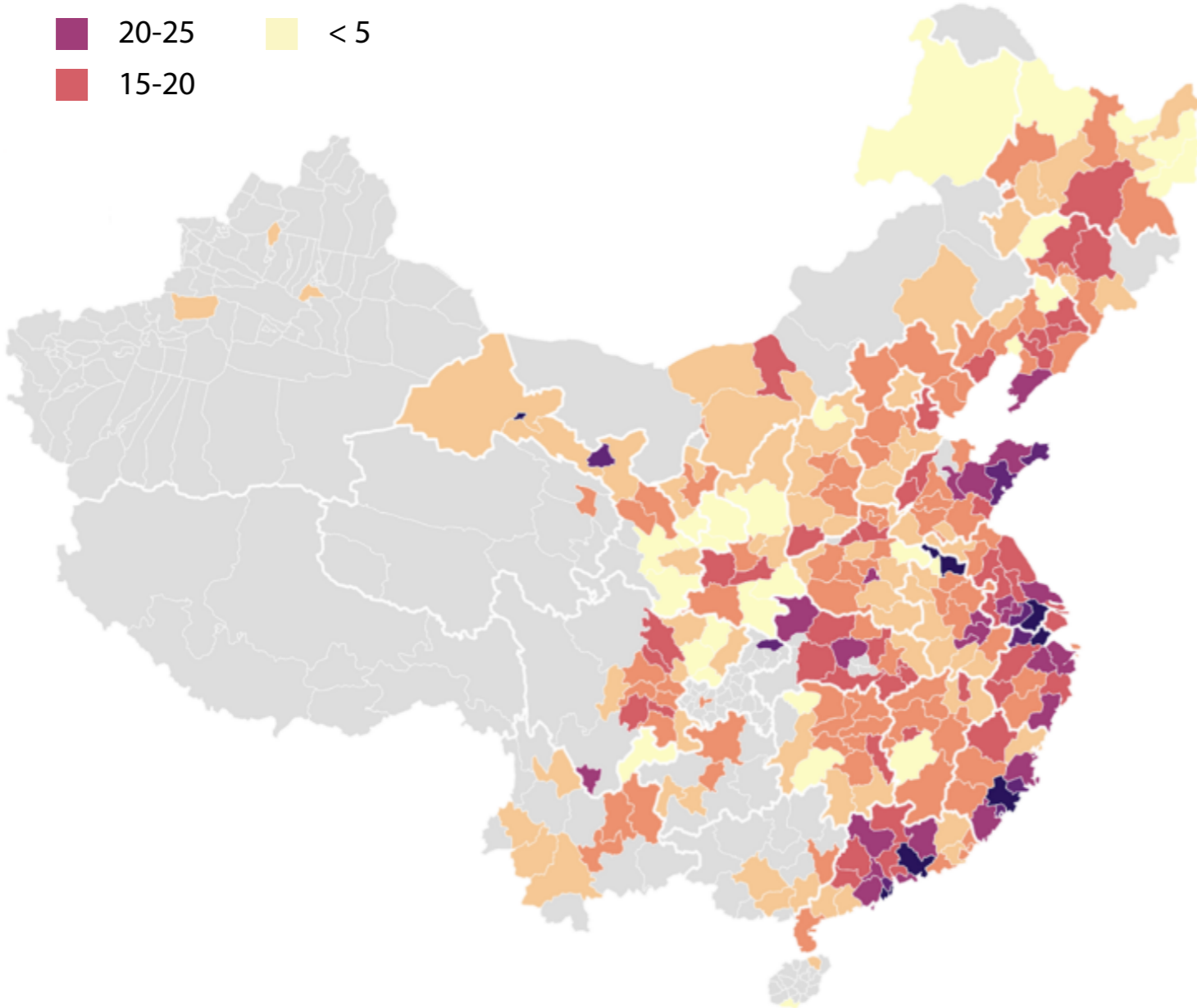




**Figure 2. Geographical distribution of the average density of industrial robots in mainland China, 2008-2018**

The density of industrial robot installation

- $\geq 30$
- 25-30
- 20-25
- 15-20
- 10-15
- 5-10
- $< 5$



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Our study also highlights the moderating roles of AI and robotics on the relationship between S&T expenditure and technological innovation. AI and robotics amplify the positive effects of S&T investments on innovation. This moderating effect is particularly strong in less innovative cities, further underscoring the potential of these technologies to reduce regional innovation disparities.

### **Policy implications**

The results of our study point to the need to include AI and robotics as integral components of innovation strategies aimed at fostering technological progress across all regions. Subnational governments, particularly in less developed areas, need to prioritise the development and adoption of these technologies as a more effective way than old-style innovation strategies to enhance innovation across the board.

The findings underscore the limitations of traditional S&T investments in driving innovation in less developed regions. While S&T expenditure remains important as a tool to promote innovation, its returns are greatly enhanced by initiatives that promote the deployment of AI and robotics.

This integrated approach can boost the returns on S&T investments and ensure that the benefits of technological progress are more inclusive and more evenly distributed across people and territories.

By focusing on AI and robotics, governments can develop targeted strategies that not only increase overall innovation but also specifically support less innovative cities. This targeted support can help mitigate the risks associated with regional disparities in innovation, such as economic stagnation, social inequality, and political discontent.

Overall, AI and robotics have demonstrated themselves in China to be powerful drivers of technological innovation and effective mechanisms for reducing regional disparities in innovation performance. Integrating these technologies into innovation strategies can foster more inclusive and sustainable economic growth, ensuring, as Baldwin (2019) has stressed, that changes towards AI and robotics *“will give more ‘head’ to people with big hearts, but no extra heart to people with big heads.”*

Hence, innovation based on AI and robotics will encourage the use of new types of skills that are more widely distributed across all territories, meaning that the benefits of technological progress, as shown in the case of China, are shared more widely, ultimately leading to greater economic and social wellbeing. ■

**Andrés Rodríguez-Pose is a Professor of Economic Geography at the London School of Economics, and Zhuoying You is a Research Fellow at Bocconi University and a PhD student at Ku Leuven**

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This article was originally published on [VoxEU.org](#).

# Unlocking the power of ideas



The history of human progress has been defined by technological breakthroughs generated by ideas. Christine Lagarde argues we need the right conditions that allow them to reach their full potential

**T**ucked away in the Sterling Memorial Library in the heart of Yale's campus lie the papers of America's first diplomat, Benjamin Franklin. Franklin was many things – ambassador to France, scientist, inventor, writer and publisher, to name a few – but above all, he was a man of ideas. As a young man, Franklin understood the power of ideas.

*“All our ideas are first admitted by the senses and imprinted on the brain, increasing in number by observation and experience,” he wrote. “There they become the subjects of the soul’s action.”<sup>1</sup>*

By inspiring action, ideas can help us grow. This might be personal growth – a student's learning, say, allowing them to make the right decisions throughout their future career. But it holds at the societal level too: ideas help push our economies forward.

In recent decades, we had few barriers globally to the flow of ideas. Advanced economies shared their technologies with emerging ones, and emerging economies shared their cheaper input costs with us – the process we knew as ‘globalisation’. But in recent years, the global economic order as we know it has been changing.

We now see that previously emerging economies are taking leadership in some advanced technologies. And we are seeing globalisation go into reverse, threatening access to the resources on which advanced technologies depend. So, how do we all prosper in this new world? I will argue that the key ingredient for our prosperity remains the same as ever: generating and sharing new ideas.

But history tells us that ideas can only drive growth if we first create the right conditions that allow them to reach their full potential – and if we are committed to breaking the bottlenecks that stand in their way. This is the challenge we all face today to thrive in this new world. And today, I will focus on what this challenge means for our economies and, in particular, for Europe.

## **The power of ideas across history**

The history of human progress has been defined by technological breakthroughs generated by ideas. But ideas do not immediately translate into economic prosperity. Take Johannes Gutenberg's printing press – an ingenious device that combined metal prisms for moulding letters with an oil-based ink and techniques found in wine production<sup>2</sup>.

*What truly unlocks growth is when these three forces combine: when ideas translate into innovations, innovations diffuse into productivity growth, and our societies have the necessary ambition to remove any barriers that are in the way*

By reducing the cost and increasing the speed at which books were produced, the printing press unleashed a communications technology that would revolutionise our world. In fact, an original Gutenberg bible is on display in the beautiful setting of the Beinecke Rare Book and Manuscript Library in Yale. But the printing press arrived at a time when literacy rates were still exceptionally low – around 9% in Gutenberg’s native Germany<sup>3</sup>.

Its ultimate benefits depended on rising literacy rates in the centuries that followed, with cheaper and more plentiful books also lowering the costs of learning. Countries that were quicker to embrace literacy reaped the gains in higher rates of economic growth and GDP per capita – a correlation that persists to this day<sup>4</sup>. In more recent centuries, we can identify three conditions that need to be in place for ideas to reach their full potential: translation, diffusion and ambition.

Translation means the ability to translate ideas into socially usable projects. And history has shown us that this ability depends on having the right economic ecosystems in key areas like finance and the supply of inputs. For example, until the turn of the 17<sup>th</sup> century, the ability to fund new ideas was severely limited by underdeveloped financial markets. One factor that helped change the game was the emergence of the modern joint-stock, limited-liability company around this time<sup>5</sup>.

Suddenly, large pools of capital could be raised to fund bold proposals, such as expanding global shipping routes from east to west, which facilitated supplies of inputs. Countries that embraced joint-stock companies tended to experience faster growth<sup>6</sup>.

If the right economic ecosystem infrastructures can facilitate ideas, the reverse is also true. The pioneering rollout of railroads across the US continent proved revolutionary in spurring the development of the country’s capital markets<sup>7</sup>.



But for ideas to be truly impactful at the macro level, there also needs to be diffusion. Technologies need to spread through an economy and become widely used. History suggests that a key factor in the diffusion of ideas is scale: that is, operating in a large, integrated market. Scale encourages firms to adopt new technologies, so that by expanding their production they can achieve lower unit costs.

The clearest example of the impact of scale is in the United States. While its constitution brought together thirteen disparate colonies, the country's economic trajectory would ultimately depend on how that constitution – in particular its Commerce Clause - was interpreted.

A pivotal moment occurred in 1824, when the Supreme Court's decision in *Gibbons v. Ogden* asserted the right of Congress to regulate interstate commerce and, in effect, to override state-granted monopolies that risked fragmenting the US market. This decision helped establish a truly nationwide economy and allowed the ideas of US entrepreneurs to spread and flourish. By several estimates, US GDP per capita at least doubled between 1800-20 and 1820-40<sup>8</sup>.

In many of these cases, however, change did not happen by itself. It happened because of the ambition of entrepreneurs, economists, jurists or policymakers, their courage in overcoming hurdles to progress, and their ability to inspire others to follow their vision. But the nature of this ambition always evolved with the times.

In the 1800s, remote states scattered across the United States needed visionary entrepreneurs like Cornelius Vanderbilt, whose railways helped unify the country's economy. But as railroad tycoons established monopolies that undermined the public good, it took the ambition of policymakers like Theodore Roosevelt to break them up and foster competition.

What truly unlocks growth is when these three forces combine: when ideas translate into innovations, innovations diffuse into productivity growth, and our societies have the necessary ambition to remove any barriers that are in the way.

### **The power of ideas today**

This brings me to the present day. As our economies grow, the relative importance of the different forces that drive growth changes<sup>9</sup>. For emerging economies that are far away from the technological frontier, deploying first their labour and later capital can help them to catch up.

But once economies mature and become advanced, productivity increases are mostly what propels us forward. And productivity is above all about ideas.

Most advanced economies, however, have seen productivity decelerate for some time. This slowdown led to a debate in the 2010s between techno-pessimists, who believed that most groundbreaking ideas were behind us, and techno-optimists, who believed that we were on the cusp of a new technological revolution.

Developments in recent years suggest that the case for optimism was stronger. Just as in Gutenberg's time, new revolutionary technologies like artificial intelligence (AI) and robotics are on the verge of transforming our societies. One study finds that generative AI alone has the potential to add up to almost USD 4.5 trillion annually to the global economy, roughly 4% of global GDP<sup>10</sup>.

The good news for global productivity growth is that we see these new ideas flourishing across major economies, a direct legacy from the common ties that were crafted during the era of globalisation. And Europe, in contrast to what some may believe, is actually well placed to benefit from these ideas.

The European Union accounts for around one-fifth of the world's most-cited publications, patents, and research – despite making up less than 7% of the global population<sup>11</sup> – and this innovative activity includes key sectors such as AI and machine learning. According to one study, Europe draws in more AI talent than the United States, with over 120,000 active AI roles, and last year, Europe accounted for one-third of total early-stage capital invested in AI and machine learning across the two economies<sup>12</sup>.

Our region also has many innovative companies in other high-tech sectors. Europe's manufacturing firms often operate at the global frontier, be it in producing photolithography machines for advanced chips or industrial robotics. In fact, Europe's share of the market for such robots is double that of China and more than thirtyfold that of the United States<sup>13</sup>.

And many of Europe's most successful companies are not even listed. Of the 2,700 'hidden champions' worldwide – that is, small and medium-sized enterprises that are global leaders in their niche markets – more than half are found in Germany, Austria and Switzerland<sup>14</sup>.

But as globalisation recedes and technological change accelerates, all economies are facing bottlenecks in transforming these ideas into sustained productivity growth. And these bottlenecks are in the same three areas that have been critical to unlocking the potential of ideas throughout history: translation, diffusion and ambition. So, the question we face is: how can we break these bottlenecks?

## **Breaking the bottlenecks**

### **Translation**

Let me start with the first bottleneck, translation. To translate new ideas into marketable projects, we need economic ecosystems that are suited to the specific requirements of today's technologies. We need financial systems that allow us to invest massively in innovative firms.

Sectors like AI, for example, need a lot of cash upfront to build up computing power and server capacity. According to industry leaders, the cost of training AI models is set to jump tenfold in the space of a year, and could soon rise to between USD 5 and 10 billion<sup>15</sup>.

And we need secure access to a wide range of natural resources. The International Energy Agency estimates that training a single AI model uses more electricity than 100 US households consume in an entire year<sup>16</sup>. And as we electrify our transport systems and invest in renewable energy technologies, global demand for rare earth elements may increase three to sevenfold between now and 2040<sup>17</sup>.

So, all our economies need to be proactive in ensuring that we have these ecosystems in place. But in Europe we face two specific challenges. First, we have a large financial sector, backed by high rates of saving from European households. But intermediation mainly takes place through bank lending rather than capital markets, which issue bonds and equities.

Bank lending works well for established companies that are relatively low risk and have generous collateral, such as our traditional manufacturing leaders. But it works less well for young, high-risk companies that typically drive radical innovation.

Innovative companies need access to ample risk capital, which requires a large venture capital sector that can back them until they go public. But the availability of risk capital is around ten times lower in Europe than in the United States<sup>18</sup>, meaning that even firms that find backing at the early stage have less support when they enter the growth stage. The average venture capital-backed company in the EU receives about five times less backing than its US peers over its life cycle<sup>19</sup>.

This gap often means that European entrepreneurs have to go overseas to get the financing they need – and sometimes their ideas go with them. And it is a key reason why, last year, Europe invested just USD 1.7 billion in generative AI compared with USD 23 billion of US venture capital and private equity<sup>20</sup>.

Second, we are not endowed with significant natural resources in Europe, meaning that we depend heavily on imports<sup>21</sup>. And this dependency leaves us vulnerable in a less globalised world and a changing geopolitical landscape.

The brutal Russian invasion of Ukraine, which led to an almost complete shut-off of gas supplies to Europe, shows what is at stake. Even though we have successfully replaced Russia as a supplier, that process has left our firms at a notable cost disadvantage.

Before the pandemic, electricity costs for European firms were 1.7 times higher than those in the United States and 1.2 times as high as China. Now, that gap is 2.5 and 2.3 times respectively. In both cases, however, Europe is creating solutions in response to these constraints. As the former French President, Valéry Giscard d'Estaing, is reputed to have said, *"We may not have oil, but we have ideas."*

Where we can, we are acting to build the ecosystems we need internally. Europe's leaders have agreed to push forward with developing Europe's capital markets union, with a strong focus on improving the conditions for the financing options of European scale-ups<sup>22</sup>. We are also frontloading investment in renewables, which will ultimately make us more energy independent, although this process will take time and we will need to be realistic.

In the interim, we may need to depend even more on countries that have the necessary resources. For example, 80% of the global supply for rare earth metals currently comes from just three countries<sup>23</sup>. But we are also working

together with our friends and allies who face similar bottlenecks, like the United States, to make our supply more diversified. For example, the EU intends to establish a Critical Raw Materials Club, inviting partners with similar geopolitical and economic security concerns to join in the pooling of investments<sup>24</sup>.

## Diffusion

But once ideas are commercialised, they need to be diffused. Remember that what drives long-term growth is not only innovation by superstar firms, but also that innovations spread widely to less productive ones. Historically, one of the strongest drivers of technology diffusion has been free trade, especially between our two economies. For example, analysis points to a lag of three to four years between innovations in US industry and those in European industry<sup>25</sup>.

But research suggests that diffusion has slowed across advanced economies in recent decades<sup>26</sup> – a trend that may partially reflect the nature of the digital economy itself, which tends to create ‘winner-takes-the-most’ markets<sup>27</sup>. And in Europe’s specific case, slow diffusion also reflects the fact that, unlike the United States, we have not yet fully unlocked our innate scale as a continental-sized economy.

We have developed a business model in Europe that is unusually reliant – for a large economy, at least – on selling to other large economies, including capital goods that enable them to exploit their own scale. More than a third of our manufacturing GDP is absorbed outside the EU, compared with around a quarter for China and just a fifth for the United States<sup>28</sup>.

But we have not made full use of our own scale to encourage our companies to adopt more technology. We are home to over 445 million consumers and 23 million firms<sup>29</sup> and yet our internal market remains fragmented, especially for services<sup>30</sup>. Intra-EU trade in services accounts for only about 15% of GDP compared with over 50% for goods<sup>31</sup>.

This untapped potential is costing us dearly in terms of foregone growth and productivity gains. Remaining trade frictions in the EU mean that we are leaving around 10% of potential EU GDP on the table, according to one estimate<sup>32</sup>.

And it is also affecting our competitiveness. We now see that other major economies are using their combination of technology and scale to push ahead faster in key sectors. China may now be leading in 37 of 44 critical technologies including electric batteries, hypersonics and advanced high-frequency communications such as 5G and 6G<sup>33</sup>.

But Europe is also acting on this front to lift its constraints. Europe's leaders welcomed a major new report on the Single Market, calling for removing the remaining barriers in the crossborder provision of services as well as a 'policy shift' to reflect the new geopolitical and competitive environment<sup>34</sup>.

And here again, Europe and the United States have shared interests in working together, especially in ensuring a level playing field between countries that play by the rules, while acting robustly in instances where rules are being broken to create an unfair advantage<sup>35</sup>.

In other words, we should not become engaged in a subsidy race between our economies, which creates a zero-sum game. We should instead ensure that we use our collective weight in international trade to discourage others from anti-competitive practices, while increasing the free flow of ideas amongst ourselves – a positive-sum game.

### Ambition

Will we be able to achieve all this? Ultimately, it is a question of ambition – and that is the final bottleneck we will have to break. In recent years, leadership has often been *reactive* in nature. This has been somewhat understandable in an era of 'permacrisis' – in which one shock, like the pandemic, is quickly followed by another, such as the outbreak of war.

But reactive leadership is no longer enough. Crises are becoming ever more global, requiring unprecedented levels of coordination across several sectors of society. And at the same time, the world is moving in directions that make such cooperation more difficult.

That is why we need *proactive* leadership – where we define the flow of events instead of simply responding to them. And for this we need to be far more ambitious.

The history of Europe gives us many examples of how effective such leadership can be. In the 1950s, an era marked by supply shortages and rationing, Europe started building common supply chains and pooling the production of inputs such as coal and steel.

In the mid-1980s, when Europe had exhausted the potential of what was then its common market, it forged ahead by creating the Single Market and reinvigorating growth. And in the 1990s, when exchange rate volatility threatened the stability of our currencies, we pushed forward with our monetary union to anchor our Single Market.

In doing so, we achieved what many had once thought impossible, and progressively united a continent that had been torn apart by two world wars.

When I look across advanced economies today, I am confident that our leaders understand what is required of them. Both the CHIPS Act and Inflation Reduction Act in the United States are accelerating the take-up of new technology. And I have listed many initiatives in Europe that are in the works, while there are many more that I have not touched upon.



But focusing on Europe in particular, what gives me hope is that, unlike after the great financial crisis, both leaders and citizens are aligned on what needs to be done. We realise that we can no longer afford to see ourselves as a loose club of independent economies.

That perspective is outdated in a world that is fragmenting into geopolitical blocs centred around the largest economies. And we know that we need to start seeing ourselves as a single, large economy with predominantly shared interests. This change in perspective also calls for joining forces in more areas.

We face increasing demands on spending from ageing populations, the climate transition and a changing security environment that we will only be able to meet together. And if we do not, we will face some difficult choices between sustaining our social model, delivering on our climate ambitions and playing a leading role in global affairs.

By acting as a Union to raise our productivity growth, and by pooling our resources in areas where we have a tight convergence of priorities – like defence and the green transition – we can both deliver the outcomes we want and be efficient in our spending so that we do not have to make sacrifices elsewhere.

And while this approach may require breaking some long-established taboos, we say in French that *“nécessité fait loi”* – or necessity knows no law. Our citizens understand this reality, even in a context where populism is on the rise. We see in poll after poll that Europeans believe that acting together is the best route to prosperity and security.

Over two-thirds of EU citizens feel that the EU is a place of stability in a troubled world<sup>36</sup>, more than three-quarters are in favour of a common defence and security policy<sup>37</sup>, and eight out of ten agree that the EU needs to invest massively in areas like renewable energy<sup>38</sup>. And in the euro area, support for our single currency remains close to record levels<sup>39</sup>.

So I am confident that the ambition of our policymakers and the will of our people are aligned, and that we will break the bottlenecks that are preventing us from reaching our potential.

## **Conclusion**

The global economy finds itself at a turning point, with old realities being replaced by new uncertainties. But amid all this change, some things remain resolutely the same. It is by generating new ideas, and creating the conditions in which they can spread and flourish through our economy, that we can drive future growth.

To create those conditions, Europe needs to break key bottlenecks in translation, diffusion and ambition. This will not be easy. But for too long we have simply talked about these problems instead of solving them through concrete actions. As Franklin once put it, *"Well done is better than well said."*<sup>40</sup>

In the end, we have a simple choice to make: either we break these bottlenecks, or we let these bottlenecks break us. Given the sense of urgency, the support for action and the consensus on what Europe needs to do, I know which side I stand on. And I am confident we can succeed. ■

**Christine Lagarde is President of the European Central Bank**

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*This article is based on a [speech](#) by delivered at Yale University in New Haven, USA, 22 April 2024.*

# Reforming EU innovation policy



Europe lags behind in innovation. Clemens Fuest, Daniel Gros, Philipp-Leo Mengel, Giorgio Presidente and Jean Tirole argue that EU innovation policy should support disruptive innovation to compete

**T**hat Europe is lagging in innovation has been diagnosed for a long time. More than a decade ago, the EU launched the Innovation Union, and increasing expenditure on R&D to 3% of GDP has been an official goal since the launch the Lisbon Strategy in 2000. However, gross domestic expenditure on R&D in the EU is still below 2% of GDP, lower than in other major economies such as the US, Japan, and China.

The reason why the EU lags behind other regions is not that governments (national and EU) spend less on R&D than its rivals. In 2020, government-funded R&D amounted to €110 billion in the EU (mostly by national governments) and €150 billion in the US, accounting for a very similar percentage of GDP (around 0.7%) and higher than in many other regions of the world.

The key reason for the overall transatlantic difference is the lower engagement in R&D by the business sector, whose spending amounts to only 1.2% of GDP in the EU, versus 2.3% of GDP in the US. These often-cited OECD figures, however, do not allow for a sectorial breakdown.

To analyse in more detail the sectoral composition of R&D, in our recent paper (Fuest *et al* 2024), we use data from the EU Industrial R&D Scoreboard, which are based on the accounts of the 2,500 largest companies in the world in terms of R&D spending<sup>1</sup>.

### **Europe's middle technology specialisation**

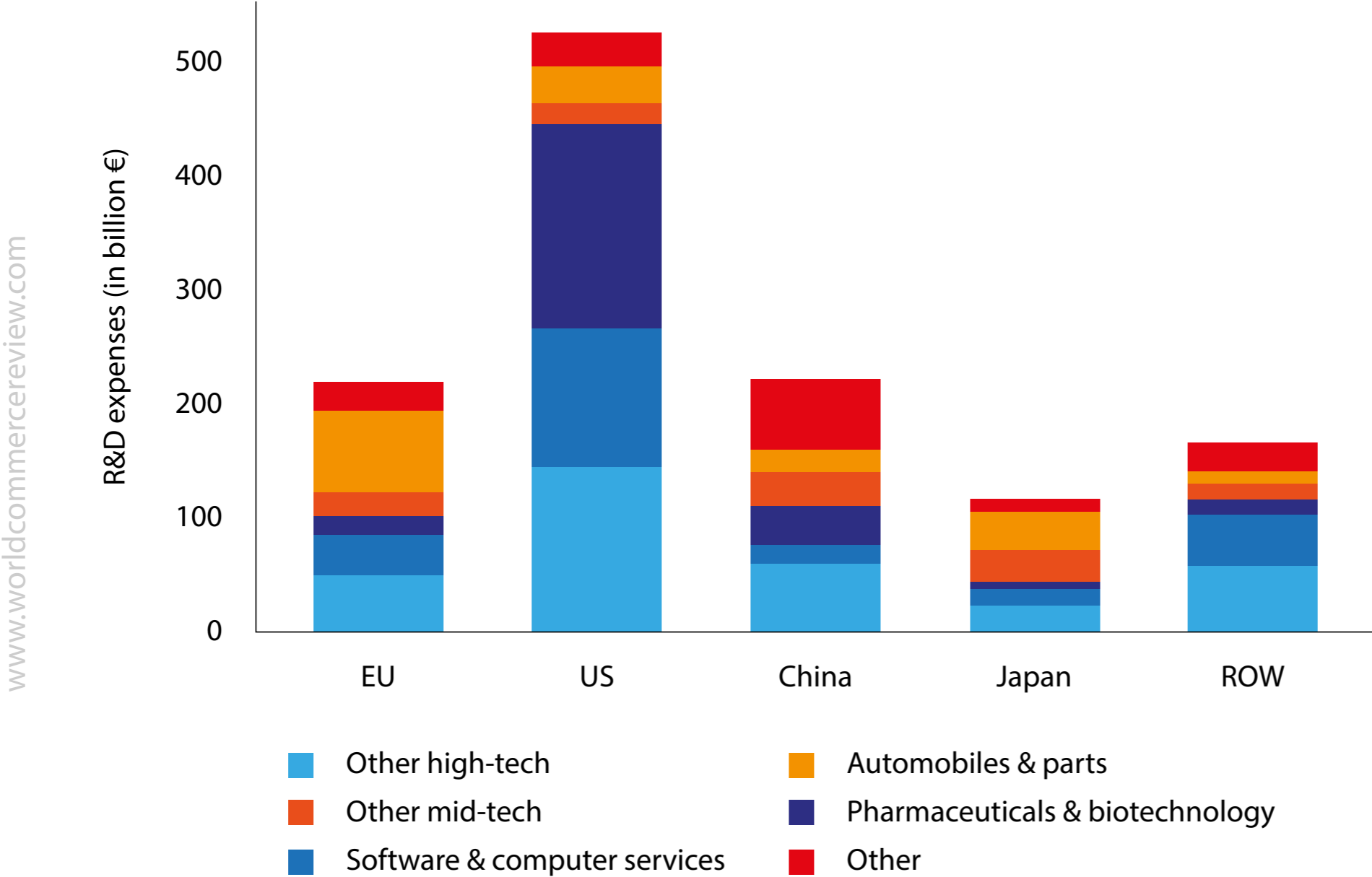
Figure 1 shows the sectoral composition of business R&D spending (BERD) in nominal terms for businesses headquartered in the four regions plus a residual, the rest of the world (ROW). In the US, high-tech industries – mostly software & computer services and pharmaceuticals & biotechnology – account for 85% of BERD.

In the EU, by contrast, mid-tech industries – especially automobiles & parts – account for roughly 50% of BERD, a much higher share than in the US<sup>2</sup>. The sectoral composition of corporate R&D spending by EU-headquartered firms is more similar to that of Japan and China than the US.

*The European pendant to DARPA was supposed to be the European Innovation Council (EIC), created in 2021 with the aim of supporting disruptive innovations*



**Figure 1. BERD by technology level, top 2,500 companies**



Source: Industrial R&D Investment Scoreboard (2023).

Not surprisingly, high-tech industries are much more R&D-intensive than mid-tech industries. Therefore, the larger share of high-tech industries in the US is a key factor explaining why BERD is so much higher than in other economies.

What is more, evidence suggests that public-sector support is more likely to crowd out business R&D in low R&D-intensity industries (eg. Marino *et al* 2016, Szücs 2020), which might explain the low business-sector multiplier in the EU relative to the US<sup>3,4</sup>.

### **Europe's middle technology specialisation is permanent – a trap?**

Table 1 shows the top three R&D spenders and their industries over time as a further illustration of the diverging development across the Atlantic. It gives the top three companies in terms of R&D spending and their respective industries over the last 20 years in the US, EU, and Japan<sup>5</sup>.

In the US, Microsoft is the only company appearing more than once among the top three R&D spenders. Meanwhile, in the EU and Japan, Volkswagen (VW), Mercedes, and Toyota remain in the top three over the 20 years, while Panasonic, Bosch, and Honda appear at least twice.

Interestingly, in the US two of the three top R&D spenders in 2003 were also in the automotive industry, but this changed over time. The software industry became increasingly important over the years; by 2022, all top-three spenders produced software.

In the EU and Japan, the auto industry tended to dominate throughout the 20-year period. These patterns are consistent with the literature on path dependence in innovation and industrial specialisation (eg. Acemoglu, 2023, Aghion *et al* 2021, Aghion *et al* 2016)<sup>6,7</sup>.

**Table 1. Top three R&D spenders and their industries compared over time**

	2003	2012	2022
US	Ford (auto)	Microsoft (software)	Alphabet (software)
	Pfizer (pharma)	Intel (hardware)	Meta (software)
	GM (auto)	Merck (pharma)	Microsoft (software)
EU	Mercedes-Benz (auto)	VW (auto)	VW (auto)
	Siemens (electronics)	Mercedes-Benz (auto)	Mercedes-Benz (auto)
	VW (auto)	Bosch (auto)	Bosch (auto)
JPN	Toyota (auto)	Toyota (auto)	Toyota (auto)
	Panasonic (electronics)	Honda (auto)	Honda (auto)
	Sony (electronics)	Panasonic (electronics)	NTT (telecom)

Source: Industrial R&D Investment Scoreboard (2004, 2013 and 2023).

EU (and Japanese) industry thus failed to transition to high-tech sectors. One reason might be that the incentive to do so was much lower in Europe, where the profit margin of high-tech industries was only about 3 percentage points higher than mid-tech ones, whereas in the US the difference in profit margins between high-tech and mid-tech industries was about 7 percentage points (Redding and Melitz 2021). The incentive to allocate capital to high tech firms was thus much higher in the US than in Europe.

It is possible that the higher profit margins of US high-tech firms at least partially reflect the near-monopoly position of US software giants in their respective markets. But this does not alter the fact that the availability of higher profit margins for US firms presented a strong incentive to invest in these industries.

R&D-intensive industries can be considered natural oligopolies, in which a few market leaders emerge, sustained by the dynamics of large market shares fuelling R&D, which in turn sustain large market shares in a virtuous cycle leading to dominant positions<sup>8</sup>. In these industries, sales and R&D expenditures follow a similar pattern (Sutton 2007).

The evolution of profits in our data reflects these patterns of natural oligopoly formation. The initial advantage of the US in high-tech was magnified over time, whereas EU (and Japanese) industries remained in their specialisation pattern. Breaking this path dependency justifies public-sector intervention to provide the seeds for an alternative model of specialisation.

### **How to break out: fostering innovation**

In the US, the Defense Advanced Research Projects Agency (DARPA) is widely credited as having played a crucial role in fostering the emergence of high tech, including such pivotal innovations as the internet.

ARPA, as it was called initially, was created in response to the 'Sputnik shock' of the late 1950 to support, as the name suggests, advanced research projects that are not of commercial interest because their significance might reveal itself only later. The selection of the projects to be financed is left to the Agency that employs by now close to 100 highly qualified programme managers.

This model of supporting advanced research is not limited to the defence sector, there exist now ARPAs for energy health and artificial intelligence<sup>9</sup>.

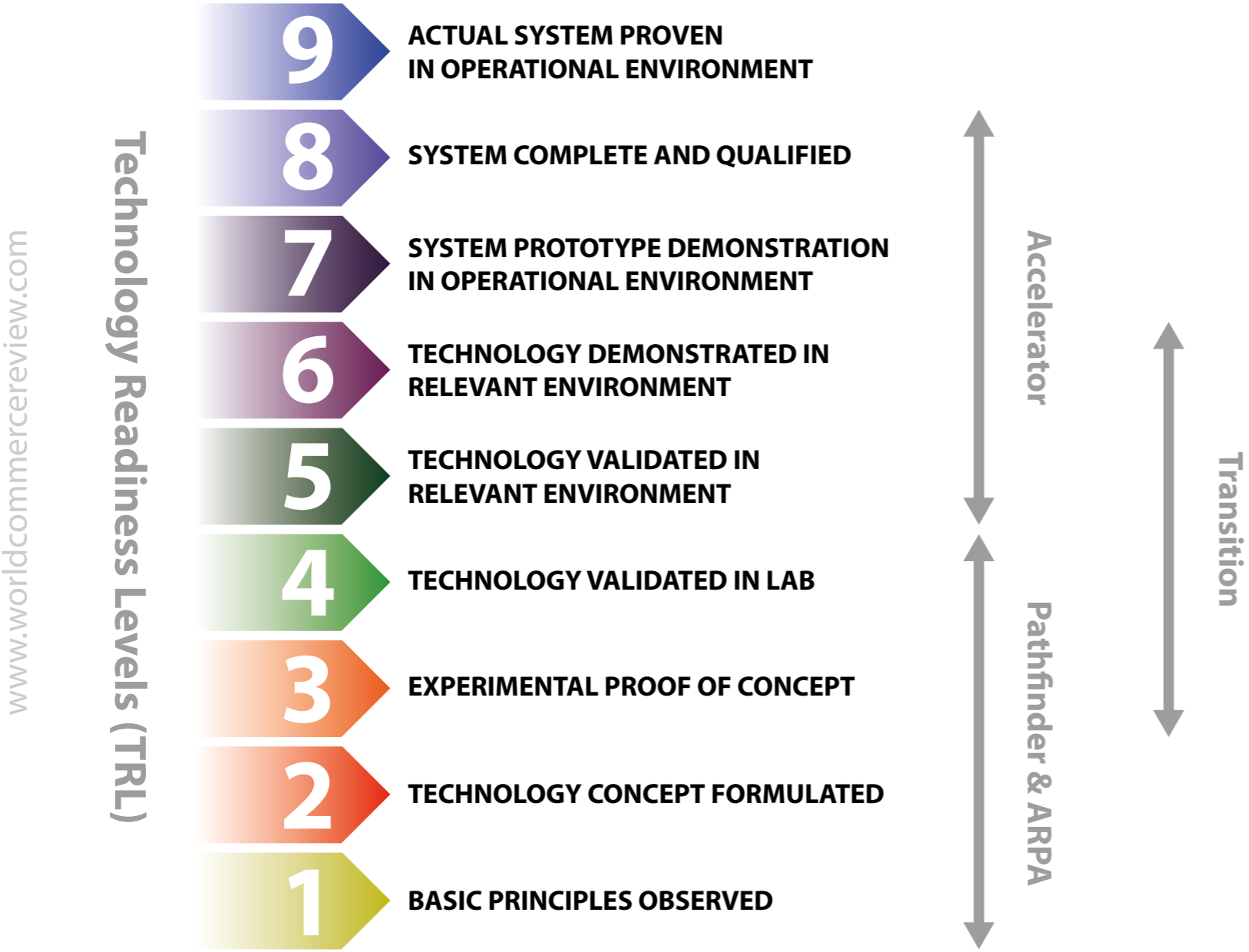
The European pendant to DARPA was supposed to be the [European Innovation Council](#) (EIC), created in 2021 with the aim of supporting disruptive innovations. The name 'Council' is actually misleading since the EIC consists essentially of three separate programmes, called Pathfinder, Transition, and Accelerator.

As the headings suggest, Pathfinder finances projects at their early stage, whereas the purpose of Accelerator is to 'accelerate' the commercial application of emerging technologies and support the growth of start-ups. The annual budget of the EIC is about €1 billion (against about \$4 billion for DARPA alone).

Similar to the ARPAs, the details of EIC calls are set by programme managers within the overarching objectives of the European Commission. Programme managers also determine the specific goals of the individual projects and group them in thematic portfolios. Still, despite efforts to emulate the salient features of the ARPA model, the EIC falls short in at least two key respects.

A first key aspect, the type of projects financed by the EIC, can best be explained using a technology readiness level (TRL) indicator, described in Figure 2. This indicator goes from 1 (only basic principles observed) to 9 (actual systems in operation).

**Figure 2. Technology readiness levels**



Source: Authors' representation based on official sources.

ARPAs typically focus on developing 'proof-of-concept' (Azoulay *et al* 2019) or projects up to TRLs 3-4 at most. Once projects reach a sufficient maturity, usually taken to be the demonstration stage (TRL 5 or above), they 'graduate' and leave ARPAs with the expectation that private capital will flow and scale them up.

Azoulay *et al* (2019) position ARPA-funded projects on the initial flat part of the innovation S-curve, relating research effort and technical progress (Foster 1986)<sup>10</sup>. On the initial part of the curve, a high degree of effort results in very limited performance gains, and delayed payoffs limit incentives to pursue the project. This is where public-sector support is most needed because it addresses a clear market failure.

Instead, about two thirds (€700 million) of the annual budget of the EIC goes to the Accelerator programme that finances projects with TRLs above 5. This is [expressed in the official task](#) of the EIC to *"support disruptive innovations throughout the lifecycle from early stage research, through to the financing and scale up of start-ups and SMEs."*

The EIC thus has a dual mission not only to support disruptive innovation, but also to finance scale-up and SMEs. It is thus not surprising that the management of the EIC programmes is housed in the former EU executive agency for SMEs, renamed the European Innovation Council and SMEs Executive Agency (EISMEA). Given the large share devoted to high TRL products, the EIC thus has only about €300 million for ARPA type projects, one tenth of DARPA alone.

A second key difference concerns the selection of projects and their management. First, the selection process is still politically controlled, which is in conflict with the best international standards (ARPA structures here, and also NSF, NIH and the EU's own ERC for fundamental research).

Second, the EIC has only a very small number of project managers, each of which oversees dozens of projects. This means that each project manager has to deal with projects that are outside her areas of expertise. Moreover, only

about one half of the Board of the EIC is composed of scientists and engineers that might have the qualification to find the most promising projects.

Based on this analysis we propose two approaches to improve EU support for innovation that do not require an increase in the EU budget:

1. Better management. Reform the governance of the EIC, hiring a larger number of independent and highly qualified programme managers and giving them greater discretion over project selection and management.
2. Better use of budgetary resources toward disruptive research, which currently accounts for a paltry 5% of total funding. Scale down existing under-performing programmes like the European Institute of Innovation and Technology (EIT) and the European Innovation Ecosystem (EIE).

Replace the financing of equity stakes from the Accelerator budget with other sources whose mission is investment, rather than innovation. For example, the EIC could be merged with the European Investment Fund (EIF) or the proposed Sovereignty Fund. This would free up €0.41 billion per annum.

With this combination of management reforms and redirection of existing resources, Europe could create a much stronger structure to prioritise and boost game-changing innovations through a budget neutral restructuring, thus taking into account limitations for the overall EU budget. ■

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## Endnotes

1. The data are taken from the EU Industrial R&D.
2. For the purpose of this exercise, we have used three broad categories: high- and mid-tech plus the remainder, 'other', mostly including services and utilities. Our classification is similar to that adopted by Eurostat and the OECD.
3. One reason might be that R&D-intensive industries need resources far exceeding the typical amounts of a grant.
4. In the EU, €1 of public-sector spending is associated with €2 spent by the private sector. In the US, the private-sector multiplier is equal to 3.
5. We do not include China because some companies there have changed their reference industry over the years.
6. Typically, in these models increasing returns to scale resulted in past advances (in a given sector or technology) facilitating further advances in the same sector.
7. These patterns are also consistent with evidence of declining business dynamism around the world (eg. Akcigit 2024, Biondi et al 2024, Decker et al 2020), but analysing that aspect goes beyond the purpose of this study.
8. We wish to thank Michele Polo for pointing this out.
9. They are called ARPA E-ARPA H and ARPA-I.
10. The metric of technological progress depends on the technology considered, such as kilowatt-hour of electricity generated, or computational speed.

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This article was originally published on [VoxEU.org](#).

# Not a 'side dish'

Industrial policy is undergoing a major resurgence. Cristina Caffarra and Nathaniel Lane argue that getting Europe to improve performance will require a massive, concerted effort at national and EU levels

**S**peaking recently to an audience in Brussels (at an event that has since become known as the 'Anti-Davos')<sup>1</sup> the European Commission's top competition enforcer provocatively remarked that, "[w]hen it comes to the big issues of our times, I am afraid competition policy is neither the problem, nor the solution – it's a side dish."

The statement triggered a cascade of reactions and responses. Weeks away from a European election that may change Europe's political landscape, in this column we discuss why competition policy has a broader role than the comment credits it for. Far from being a 'side dish', antitrust will be important to the transformative role that resurgent industrial policy will need to play, particularly in Europe.

### **Beyond digital regulation**

Digital enforcement ('taming Big Tech') has assumed totemic value in Europe: it is the test of our credibility, resolve, and effectiveness in confronting surveillance business models and the entrenched market power of Big Tech. As antitrust enforcement in digital has failed, regulation is now the beach on which we fight.

If Europe can achieve results here, it shows the world what can be done. But digital enforcement is also getting too much attention in relation to the scale of Europe's real structural problems. While we pride ourselves of our efforts to 'tame Big Tech', policymakers must urgently confront Europe's underwhelming economic performance across sectors.

Europe is falling behind on multiple fronts: productivity, competitiveness, R&D, IT investments, and more. This view is not controversial: many have been sounding the alarm, from the ECB (Schnabel 2024) to the Bruegel think tank with their recent report for the Commission's EGov Directorate (the 'Bruegel EGOV report'; Pinkus *et al* 2024)<sup>2</sup>.

Digital enforcement will do its thing, and it is underway. Yet on the eve of a European election, deep structural problems are urgently on the table for the incoming 2024-29 Commission. The European Commission has tasked two former Italian prime ministers, Mario Draghi and Enrico Letta, to report on competitiveness and progress towards the Single Market, respectively.

*Europe is falling behind on multiple fronts: productivity, competitiveness, R&D, IT investments, and more. This view is not controversial: many have been sounding the alarm*

Their reports will inevitably discuss the causes of Europe's fragmentation – its multitude of languages, cultures, rules, financial markets, capital markets, and economic trajectories – and what can be done to reduce those barriers and address our 'competitiveness crisis' (Schnabel 2024).

The reports are also expected to highlight the need for massive ramp-up of investment in multiple strategic sectors, to promote green transition and digitalisation, to increase Europe's resilience in the global economy, and curb de-industrialisation. The future demands and scope of these investments will be unprecedented.

While Europe has experience with large-scale government spending, both historically and with the pandemic and its aftermath (eg. the EU Recovery and Resilience Facility), calls for state-led investment are now much more expansive. The confluence of post-pandemic emergencies and the waning of the Washington Consensus have created a further sense of urgency in two dimensions.

First, a global resurgence of economic interest in the design of appropriate industrial policies (eg. Juhász *et al* 2022); and second, a significant pivot in the US away from the traditional aversion to the state playing a role in markets (Armstrong and Wu 2024). What does this all mean for Europe, and the role of competition policy?

### **The 'New Industrial Policy'**

Industrial policy has returned as a major object of interest, with a proliferation of new thinking over the last five years by academics and practitioners (Rodrik *et al* 2023). Questions around industrial policy have turned from 'whether' (ie. 'should governments carry out industrial policy?') to 'how' ('how should industrial policy be carried out?').

A recent wave of research, the 'New Economics of Industrial Policy', has generated more nuanced views, and nascent work is tempering historical concerns that industrial policies are necessarily harmful: because 'losers pick governments', and state support necessarily produces 'zombie companies' – inefficient national champions.

While these risks are real, recent empirical work has also established key episodes where industrial strategies likely *"shifted resources in the desired direction, often producing large long-term effects in the structure of economic activity"* (Juhász *et al* 2023).

A diverse community of industrial policy thinkers is coalescing around critical themes. There are undoubtedly differences in the 'how' (from Mazzucato 2020, urgent advocacy for mission-oriented 'moonshots', to more mainstream economic theories of intervention in Juhász *et al* 2023), but there are also key commonalities: the importance of focusing on strategic sectors, the need to go beyond blunt instruments of post-war policy, and a focus on collaborative and deliberative policymaking, with input from the private sector.

Scholars are also emphasising the importance of averting government failures through the design of guard rails and conditionalities (Lane 2021, Mazzucato and Rodrik 2023).

What makes the rethink all the more salient is the big 'pivot' of the current US administration towards 'industrial strategy', with large public funds being allocated and disbursed to support a variety of goals: green transition, rebuilding domestic capacity offshored in the neoliberal era, supporting deindustrialised areas, reducing dependency on concentrated and brittle supply chains, and 'crowding in' complementary private investments.

Foroohar (2024) argues this does not yet amount to a fully coherent industrial policy, but we would be inclined to be indulgent given the magnitude of the pivot.



## **'Antimonopoly' thinking as foundational**

The focus on averting the misadventures of past industrial policy (in particular, support for 'national champions') is an important reason why antitrust thinking has a major role to play in the new landscape.

In the US, the worlds of industrial policy and antitrust have recently been colliding. With the major shift in antitrust thinking in Washington over the past few years has come recognition that antimonopoly values (fairness, equality, citizenry) must pervade and motivate other economic policy tools – including trade and industrial policy.

As the Chair of the Federal Trade Commission, Lina Khan, recently articulated, *"we are hearing arguments that America must protect its domestic monopolies to ensure that we stay ahead on the global stage. (...) we should be extraordinarily sceptical of these arguments, and instead recognize that monopoly power is a major threat to America's national interest."*

Further, *"the choice to bring antitrust lawsuits against AT&T and IBM ended up fostering waves of innovation"* (Khan 2024). And yet further: *"competition policy will be a key complement to achieve industrial policy goals. As we're handing out subsidies, are there going to be strings attached, that create trajectories on an open and competitive path, rather than a closed and monopolistic path? If the industrial policy vision is one of government as a more active participant in 'market making' and 'market shaping', we need to make sure that our values and our vision around competition policy are wholly a part of that decision making."*<sup>3</sup>

Tim Wu, a key architect of Biden-era thinking on antitrust, also describes antitrust (and, in particular, past lawsuits breaking up monopolies) as 'industrial policy'.

Indeed, where antimonopoly promotes intentional economic change, it is, by definition, “*an industrial policy*” (Juhász *et al* 2022). Making antimonopoly thinking part of the industrial policy toolbox can help break with the past: there is clear recognition among industrial policy scholars that where strategic investments are made, markets must remain ‘oxygenated’ – not favour dominant players; and that the more successful industrial policies are those which have supported competition (Aghion *et al* 2015, Nahm 2021).

Just like the ‘efficiency paradigm’ of the neoliberal era has been superseded in antitrust, efficiency goals may not sufficiently capture the broader aims of an industrial policy – for suppliers, regional economies, communities, citizens, and more.

‘Antimonopoly’, the fight against market power and its pathologies, is a fundamental value that must underpin also the direction of investments to lift entire sectors and communities. What may not be ‘efficient’ may have other social benefits.

### **The European predicament**

Europe has responded to the pandemic and the ‘polycrisis’ also with a large increase in public spending initiatives, but we continue to face a large and widening gap in economic performance with the US and other blocks.

This reflects in part a deep structural problem of persistent fragmentation along national borders, which has been Europe’s ‘Sisyphean rock’ for decades notwithstanding major past efforts (Pinkus *et al* 2024).

Confronting our declining economic performance will require a major increase in public spending in selected strategic sectors, which is hard for a collection of sovereign countries, with limited federal-level resources and persistent fears that common public spending could benefit some countries more than others.

The Bruegel EGOV Study suggests as a possible way forward what they describe as “*coordination for competitiveness*” – the European Commission performing a central coordination role to “*cooperate in areas that offer the greatest gains on a sector-by-sector basis, supported by some EU-level funding. Energy policy coordination and an EU Advanced Research Projects Agency (ARPA) are two examples.*”<sup>4</sup>

### **What should competition policy do?**

What should be the role of competition policy in designing these policies? Pushing back against ‘national champions’ is certainly not new in Europe, where European Commission state aid policy has been traditionally tasked to control excess spending by national governments, and their incentives to prop up their own ‘zombie firms’ with state funds.

State aid is a large part of Directorate-General (DG) for Competition, systematically vetting national schemes dreamt up by member states to support local interests, with the objective of avoiding distortions to ‘competition in the Internal Market’. The traditional requirement for state support not to fall foul of state aid rules is that it ‘addresses a market failure’ in the ‘most efficient way possible’.

It is thus unsurprising that in a recent contribution to the debate on the need for more industrial policy, senior DG Competition officials drawing from their state aids experience recommended that each industrial policy intervention be justified by a specific market failure, and adopted measures be ‘efficiency-enhancing’ (Piechucka *et al* 2023).

The paper mentions ‘efficiency’ over 100 times, ‘efficiency-enhancing’ over 30 times, and ‘market failure’ 80 times. While of course we want to avoid wasteful effort, this focus seems out of line with the evolution of current thinking both in antitrust and industrial policy.

For instance, efficiency criteria are at odds with the rationales driving policy discussions on place-based policies and 'good jobs', which are aimed to produce larger social benefits. Efficiency criteria are also empirically incomplete: how do we prove something is 'efficiency enhancing', particularly in the case of policies with long gestation periods and whose benefits are borne in the future (Lane 2020).

But more fundamentally, the usefulness of 'efficiency' as a principled goal has come deeply into question. As put by Deaton (2024), *"we valorize (efficiency) over other ends. Many subscribe to (the vision) that says economists should focus on efficiency and leave equity to others, politicians or administrators. But the others regularly fail to materialise, so when efficiency comes with upward redistribution – frequently though not inevitably – our recommendations become little more than a license for plunder."*

Simply put, extending traditional 'state aid' thinking to industrial policy is undesirable at a time when thinking and practice around interventions are evolving. We don't need to reassure ourselves we are being 'orthodox' by casting everything as a market failure (which is easy to do, in any event, if one tries – but so what?).

Nor is efficiency the 'north star' we need to be pursuing. We will need major increases in spending from the centre, and coordination of spending at the national level to ensure that collective objectives are not undermined. But if the aim is to build capacity and improve performance in Europe, industrial policy intervention that benefits citizens (not merely as consumers) cannot be held to a 'market failure/efficiency-enhancing' paradigm.

Competition insights and capabilities can and should be involved in industrial policy design to provide not just an assessment of state plans along traditional state aids lines, but also affirmative values of antimonopoly, de-concentration, fairness, and distribution.

Traditionalists will say ‘but what is the limiting principle?’ – this the generic objection to everything by those who want no change. We cannot be stuck with ‘efficiency’ when we need to accomplish so much more, and neoliberal ‘trickle down’ has been shown to be a chimera.

### **Urgent proof of concept: a digital industrial policy**

Major focus needs to be placed on powering Europe’s digital infrastructure. Europe has set huge store by its ability to ‘tame Big Tech’ via multiple laws: the Digital Markets Act (DMA), Digital Services Act (DSA), Data Act, and AI Act. Whether this effort will truly enable European challengers to acquire more than a marginal role remains to be seen.

But we need more than extracting from Big Tech concessions to provide better deals to app developers, search rivals, ad-tech companies and e-commerce sellers, and create access regimes to platforms that are now critical infrastructure. We also need to invest locally in an independent, federated, decentralised digital infrastructure on which Europeans can build.

Europe has lower advanced technology adoption than the US, and the productivity divergence between high- and low-productivity firms has widened more in digital-intensive sectors (Criuscolo 2021). On the positive side, the number of EU-based start-ups is high, and there is vitality in terms of researchers, digital skills, and emerging technologies (Meyer 2024). Yet Europe’s fragmentation and its dependencies on US giants make it challenging to implement, commercialise, and scale hi-tech activity.

We thus need a robust digital industrial policy alongside the existing diet of EU regulation and innovation policies. This means coordinating national and EU-level efforts to create autonomous infrastructures and reduce the dependency on Big Tech. These goals also align with narratives on ‘sovereignty’.

As summarised by Bria (2023), *“to strengthen our economic and political sovereignty in a complex geopolitical environment, Europe needs a combination of regulatory frameworks and active digital industrial policies. This objective goes beyond merely crafting regulations. It’s about building new markets and industries, creating innovative institutions, and fostering ecosystems that truly serve the public interest.”*

Investing in a ‘Europe stack’ tech ecosystem should be an attractive candidate for EU-level funding because the crossborder externalities are high. Bria (2023) suggests a €10 billion EU Digital Sovereignty Fund, which would *“blend grants and equity investments, fostering pan-European collaboration among our national innovation agencies (...) to establish robust digital public infrastructures and digital commons, offering viable alternatives to current monopolistic digital platform models, supporting the deployment of open AI models and decentralized applications, sovereign data spaces, open knowledge tools and content, privacy-preserving digital IDs, and digital payment systems.”*

The Bruegel EGOV Study (Pinkus *et al* 2024) suggests an ‘EU ARPA’ involving the creation of an independent agency with a €5 billion budget to pool investment projects and coordinate spending at national level, to be topped up with additional funds from EU programmes. Objectives would be set by the EU Council and the European Parliament, but the agency would be autonomous in policy implementation.

While prior initiatives have proven insufficient for multiple reasons (for example, the Juncker Plan of 2015 and the European Fund for Strategic Investments), and significant obstacles remain – not least risk-taking appetite and competencies – we need to double down now that we have more scholarship, experience, and expertise.

Critically, the experience and expertise of DG Competition in digital markets will be critical here: successful investment in federated decentralised infrastructures requires understanding of the regulatory environment,

and of competitive dynamics which can facilitate private complementary investment and innovation on these infrastructures.

Overall, getting Europe to improve performance will require a massive, concerted effort at national and EU levels to identify strategic sectors and disburse funds in a targeted way that will crowd in private investment.

Competition thinking has a key role to play, not to enforce narrow and nebulous efficiency goals, but to ensure initiatives are consistent with antimonopoly values, fairness, and opportunities. Not a 'side dish'. ■

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## Endnotes

1. <https://www.politico.com/news/2024/02/16/how-some-of-the-worlds-most-powerful-regulators-are-trying-to-upend-the-economic-system-00141802>.
2. The analysis of the causes of the gap in the Bruegel EGOV report includes: low labour and total factor productivity growth relative to the US especially since 2020, with large intra-EU differences; especially dramatic difference in productivity with the US in information and communication technology (ICT); slower accumulation of IT capital and better technology adoption in the US; much lower intensity of R&D spending especially in three key sectors – pharma/ biotech, software and IT; significantly higher industrial electricity retail prices than the US; higher hourly labour costs; much higher cost of equity finance and lower volume of venture capital funding and therefore much greater restrictions in accessing risk capital; and finally, much lower trade across national borders than one would expect to see given past effort at market integration.
3. <https://cepr.org/events/competition-policy-rpn-reinvigorating-antitrust-citizens-not-just-consumers>.
4. The reference is to the US ARPA, which has been instrumental in mobilising resources and investing them in high-risk, high-reward projects.

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*This article was originally published on [VoxEU.org](https://voxeu.org).*



# Broader border taxes in the EU

The EU needs new resources to fund its budget. Pascal Saint-Amans considers the problems of tax leakage and discusses how the EU can access new funds

## Executive summary

There is widespread agreement on the need for new resources to fund the European Union's budget in order to meet increasing spending demands, not least repayment of debt incurred as part of the EU's post-pandemic economic recovery.

In particular it is seen as desirable that the EU should have 'own' resources, or reliable ongoing revenue streams. But there is little agreement on what new own resources could consist of.

Limited reform so far has led to the introduction of a levy paid by EU members depending on plastic packaging waste generated in their territory and not recycled. Meanwhile, the European Commission has proposed resources for the EU budget from emissions trading revenues, and from levies collected under the EU carbon border adjustment mechanism (CBAM). These proposals are pragmatic and move in the right direction, but do not go far enough.

The debate about own resources should focus on whether the EU will be able to build genuine own resources based on common tax policies. The EU suffers from 'tax leakage' in which profits are shifted from high-tax to low-tax EU countries, and from there onto no or low-tax non-EU jurisdictions, often without the application of withholding taxes.

It may not be too much of a stretch to compare this situation of tax leakage with the situation addressed by CBAM – a quasi-tax at the border. So far, an opportunity for what could be seen as a tax at the border of the internal market, aiming to protect the market from harmful competition, may have been missed.

Such a tax could reflect the undertaxed profit rule agreed as part of the international deal on the corporate minimum tax. Focusing on protecting the revenues of EU members by common tax borders could offer scope for new own resources.

*In proposing new own resources, it was wise for the Commission not to go back to the idea of a European digital services tax*

## 1 Introduction

While the budgets of its member countries are funded primarily by taxes approved by their parliaments, the funding of the European Union budget is much more complex, reflecting in part the ambiguous nature of the EU. The Treaty on the Functioning of the European Union provides that *“without prejudice to other revenue, the budget shall be financed wholly from own resources”* (Article 311).

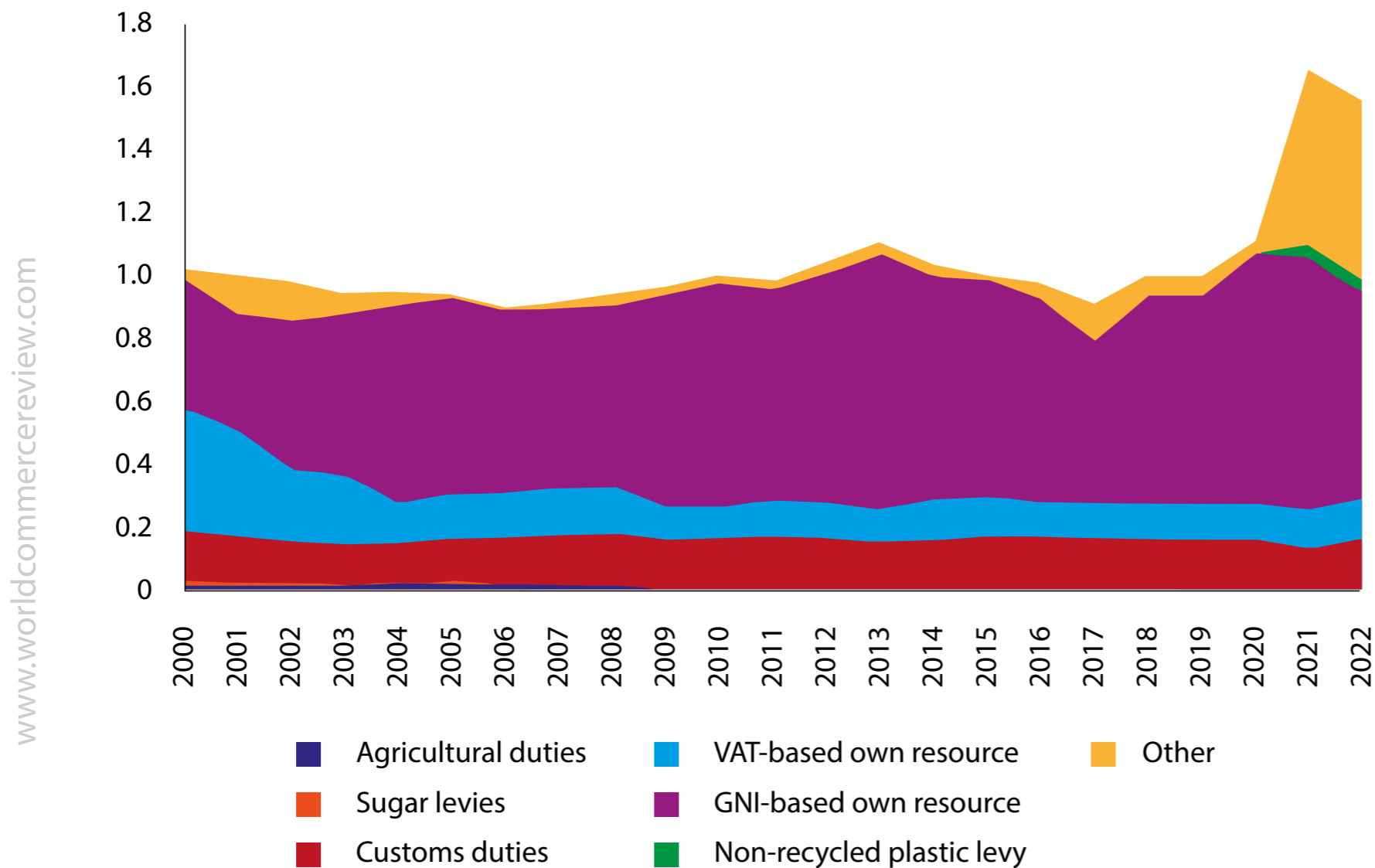
‘Own resources’ are ongoing streams of revenue mainly collected by member countries and passed onto the EU, with EU governments responsible for deciding by unanimity what these resources should be.

Consequently, revenues for the EU budget comprise a mixture of so-called ‘genuine’ own resources (levies that belong to the EU, such as custom duties) and other contributions from member countries, usually based on statistical aggregates, like value-added tax and gross national income (GNI)<sup>1</sup>. The latter have significantly increased over time and represented almost three-quarters (72 percent) of the EU budget in 2020 (Figure 1; for pre-2000, see European Commission, 2021).

‘Genuine’ own resources now account for a small portion of the overall budget, which is a good illustration of why the EU needs a new approach to funding its activities. The adoption in December 2020 of the EU’s post-pandemic recovery programme NextGenerationEU (NGEU), allowing debt financing for the first time in European Union history, was an opportunity to reopen the debate on own resources.

Also in December 2020, an EU Inter-Institutional Agreement<sup>2</sup> on the EU budget provided that *“The repayment of the principal of such funds to be used for expenditure under the European Union Recovery Instrument and the related interest due will have to be financed by the general budget of the Union, including by sufficient proceeds from new own resources introduced after 2021.”*

**Figure 1. Sources of financing for the EU budget (% of EU GNI)**



Note: Borrowing to finance NextGenerationEU is included for 2021 and 2022, reflected in the large increase in the 'Other' category. This category also includes smaller sources of revenue such as fines, surplus from the previous year and revenue from EU policies.

Source: Bruegel based on [European Commission](#).

On 14 December 2020, the Council adopted a new own resource – on non-recycled plastic waste – for the first time in years, as if a new era was beginning. The European Commission then proposed, in December 2021, three new own resources:

1. Contributions from the EU emissions trading system (ETS);
2. Contributions from the carbon border adjustment mechanism (CBAM), which is designed to equalise the carbon cost of certain goods, whether produced inside the EU or imported;
3. A share of the revenue expected from the application of an Organisation for Economic Co-operation and Development agreement on the taxation of the residual profits of large multinational companies.

Though endorsed by the European Parliament, this proposal failed to trigger much discussion among EU countries. In June 2023<sup>3</sup>, the Commission tabled a revised proposal for 'An adjusted package for the next generation of own resources' (European Commission, 2023a).

As well as setting out new ideas for revenues, the proposal called on EU countries *"to accelerate the negotiations"*, with the objective of getting a unanimous decision by 1 July 2025 for the introduction of the new own resources in January 2026.

The question is what such new own resources should be, and particularly, whether it is possible to identify additional 'genuine' own resources with a European character – as opposed to statistically-based contributions such as VAT and GNI shares, which encourage thinking about the EU budget in terms of net balances received or contributed by member states (Fuest and Pisani-Ferry, 2020).



Before assessing the Commission's proposal, one can only note the lack of appetite among EU countries to move this debate forward. In February 2024, an agreement among EU countries on a midterm review of the EU's seven-year budget (the Multiannual Financial Framework, MFF) gave only a cursory mention to new own resources, with no update on the position of member states on the Commission's proposed package<sup>4</sup>.

The purpose of this paper is two-fold: first, to review the Commission's revised proposal in the context of the new financing challenges resulting from NGEU, and second to contribute some new ideas for 'genuine' own resources.

We find that the Commission has taken a pragmatic approach aimed at speeding up the negotiations, rather than revisiting the nature of the own resources. As to new 'own resources', we offer some recommendations that draw on recent progress on international taxation.

## **2 Background: the impact of NGEU on the EU budget and its financing**

In adopting NGEU, EU countries called for a revision and expansion of the EU's own resources, to finance the borrowing costs for the approximately €421 billion in NGEU grants and to reduce reliance on the GNI-based own resource (Council, 2020).

They also agreed to raise the maximum potential amount of their annual contributions to the EU budget by an additional 0.6 percent of GNI, expressly for the purpose of servicing NGEU interest and debt.

For the first time in decades, a new resource based on non-recycled plastic waste, was adopted and entered into force in 2021<sup>5</sup>. However, this new resource is relatively small money compared to the debt service required for NGEU, contributing only about 3 percent of total EU revenues (European Commission, 2023b). Moreover, it is not an EU levy, but is based on contributions from members, reflecting their levels of non-recycled plastic packaging waste.

With the first repayments of NGEU borrowing due in 2028, a timeline was agreed to revisit this issue and find new resources. The December 2020 Inter-Institutional Agreement provided that *“the expenditure from the Union budget related to the repayment of the European Union Recovery Instrument should not lead to an undue reduction in programme expenditure or investment instruments [...] It is also desirable to mitigate the increases in the GNI-based own resources for the member states.”*

In absence of an agreement on additional own resources, the burden of financing this debt will fall directly on EU countries through the increased ceiling, leading to an even greater reliance on the GNI-based contribution to the EU budget. It could also translate into cuts in current programmes to make room for debt service.

The Commission has already had to propose changes to the current MFF to respond to the much higher-than-expected interest rates on EU borrowing costs (Figure 2)<sup>6</sup>. Hence, the debate on increasing own resources is critical to EU-funded policies.

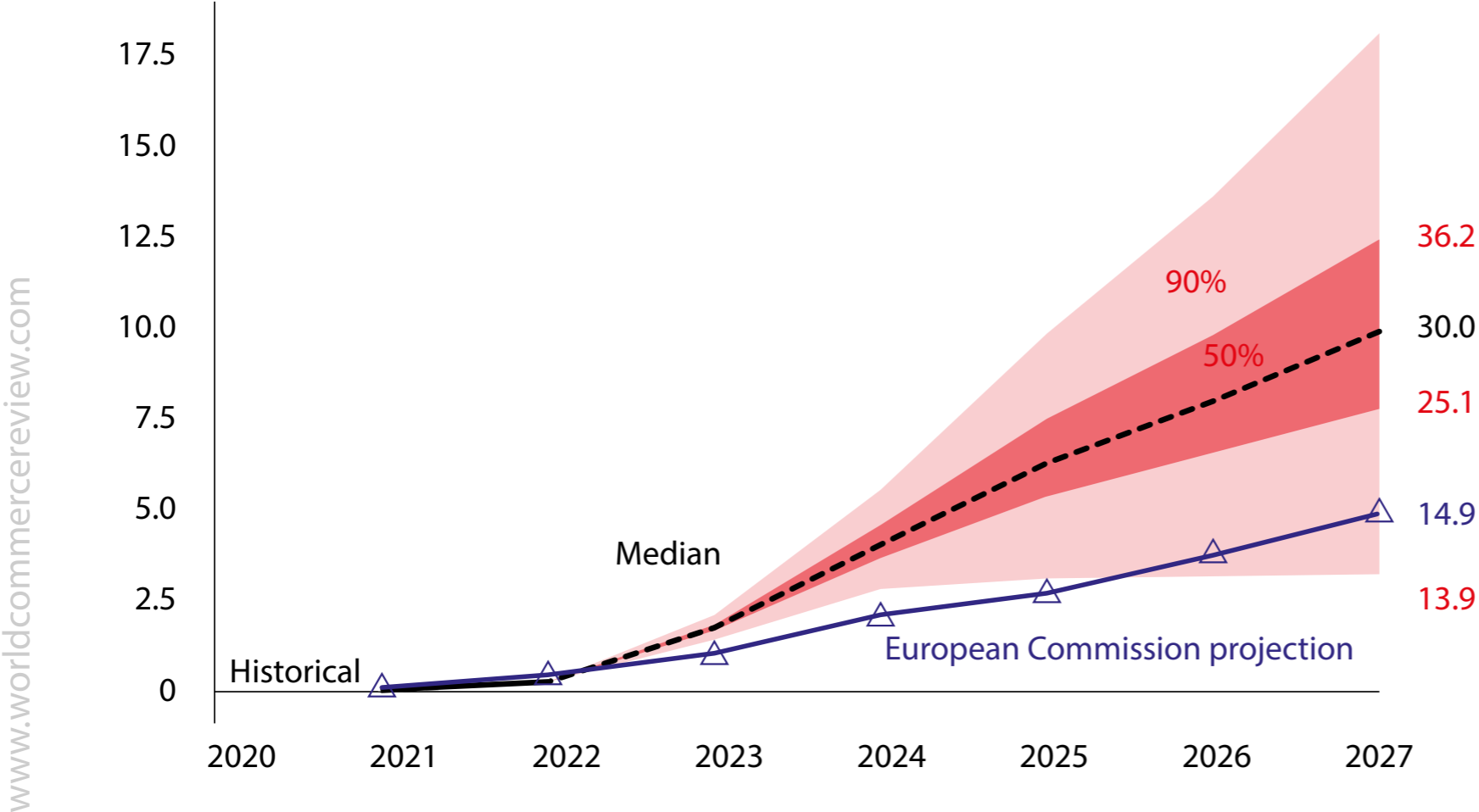
### **3 The European Commission proposals on own resources**

#### **3.1 The initial Commission proposal of December 2021**

A first package of three new own resources was proposed by the European Commission in December 2021 (European Commission, 2021). This package introduced what could be considered ‘genuine’ own resources, with 25 percent of the emissions trading system (ETS) revenues and 75 percent of carbon border adjustment mechanism (CBAM) revenues going to the EU budget.

CBAM, which would levy a border toll (the Commission refrains from using the word ‘tax’) on certain carbon-intensive imports, entered into force in October 2023 and will become a definitive system in 2026. It will not be a significant revenue raiser.

**Figure 2. Projected annual and total interest costs borne by the EU (in € billions)**



Source: Claeys et al (2023a).

However, CBAM shares some similarities with custom duties as it is an EU levy at the point of entry of goods into Union territory. The ETS, meanwhile is clearly an EU-wide policy and, even though revenue can be tracked nationally, with most of the revenue allocated to each member state, the over- all approach remains an EU approach.

The Commission's proposal was therefore to rebalance own resources away from contributions from member states, whether based on VAT or GNI, and towards EU policy-based resources.

The third element of the December 2021 proposal related to the potential revenue generated by the agreement reached at the OECD on the reallocation of taxing rights among more than 140 countries to some of the profits of the world's largest and most profitable companies.

This was the culmination of an issue debated for more than a decade in the context of the idea that market jurisdictions were not receiving fair shares of revenues from the world's biggest digital companies. While the OECD negotiations on a global approach progressed slowly, some EU members, led by France, pushed for the introduction of an EU digital services tax (DST), which failed to obtain unanimity in 2019.

Some members introduced domestic DSTs from 2018 to 2021, while the OECD was still negotiating a multilateral solution within its Inclusive Framework on Base Erosion and Profit Shifting (bringing together 140+ countries<sup>7</sup>). In July 2020, EU countries agreed that, in the case of a failure of the OECD negotiations, a tax on digital companies would be agreed and would be an own resource.

In 2021, the Biden Administration rebooted the negotiations, which resulted in a two-pillar agreement at the OECD. Pillar 1 provides that a quarter of the rent (defined as the profit above a 10 percent profit margin on sales) earned

by the largest and most profitable multinationals (above €20 billion in revenues and 10 percent profitability) would be allocated to market countries (countries where the goods or services are sold) using a formula based on sales, whether or not the company is physically present in the country.

This is a significant departure from traditional transfer pricing rules and a move towards what economists call 'destination'. Interestingly, Pillar 1 would not be limited to tech companies, as was initially asked for by most European countries.

The Commission's December 2021 proposal proposed that 15 percent of the revenue accruing to EU countries from the Pillar 1 taxing rights reallocation would become an own resource.

The rationale behind that reallocation seemed to be more reflective of a political mood ('taxing the digital economy', or "*taxing the GAFA*" as the French finance minister repeated, in Council throughout 2018<sup>8</sup>, even though the scope of the OECD agreement had already broadened) than about building a genuine own resource, as could have been the case with the initially planned DST.

The proposed rate of 15 percent was hard to explain (at the global level, the reallocation of profit for taxing has been projected to be in the range of €150 billion).

Pillar 1, however, is subject to the development of a multilateral convention, which would require ratification by all signatories, including the United States, with a two-thirds Senate majority. The development of the multilateral convention is running late, with a new deadline in June 2024 for signing, and very uncertain prospects for ratification.

Interestingly, the Commission did not propose anything on own resources in relation to Pillar 2 of the OECD agreement, which provides for the establishment of a global minimum tax of 15 percent on the profits of multinationals with revenue above €750 million.

The expected additional tax revenues globally from this pillar are higher (in the range of €200 billion), with a complex three-tier mechanism that might be interesting from an EU own-resource perspective. We return to this issue in section 4.

### 3.2 The revised European Commission package

The Commission's June 2023 *"adjusted package for the next generation of own resources"* (European Commission, 2023a) added to the December 2021 plan in three ways: an increased slice of ETS revenues for the EU budget, a change to the date when some supplementary ETS revenues would start to flow into the budget, and a proposed new own resource related to corporate profits.

The EU budget share of ETS proceeds would increase from 25 percent to 30 percent, with no change related to CBAM. As the carbon price has increased, this would still leave more revenue to member states (€46 billion per year from 2028) while securing an annual €19 billion for the EU budget. CBAM, meanwhile, would be expected to generate €1.5 billion as of 2028 for the EU budget.

The June 2023 proposal formally maintains the 15 percent contribution deriving from the OECD deal, despite that deal's uncertain prospects of implementation.

In addition, the Commission proposed a new statistical-based resource on company profits. This was described as a *"national contribution calculated on the basis of statistics from national accounts under the European system of accounts"*, a proxy for company profits.

It would be less of a genuine own resource than CBAM and ETS contributions. It is also a pragmatic reflection of the fact that an EU harmonised tax on company profits is still a distant prospect.

The Commission estimates the base of corporate profits could reach €3 trillion and trigger revenues from €3 billion to €16 billion per year, with a call rate of 0.1 percent to 0.5 percent. The proposed resource has merit in that it would increase the absolute contribution of the largest and most advanced EU members (Germany, France), while having the largest effects in terms of GNI on smaller members that have benefitted from decades of corporate profit shifting (predominantly Ireland and Luxembourg; Figure 3).

While the ETS own resource could disproportionately penalise some Eastern European countries (because of their shares of electricity generation from fossil fuels), this new resource would balance the contribution back to the 'west'.

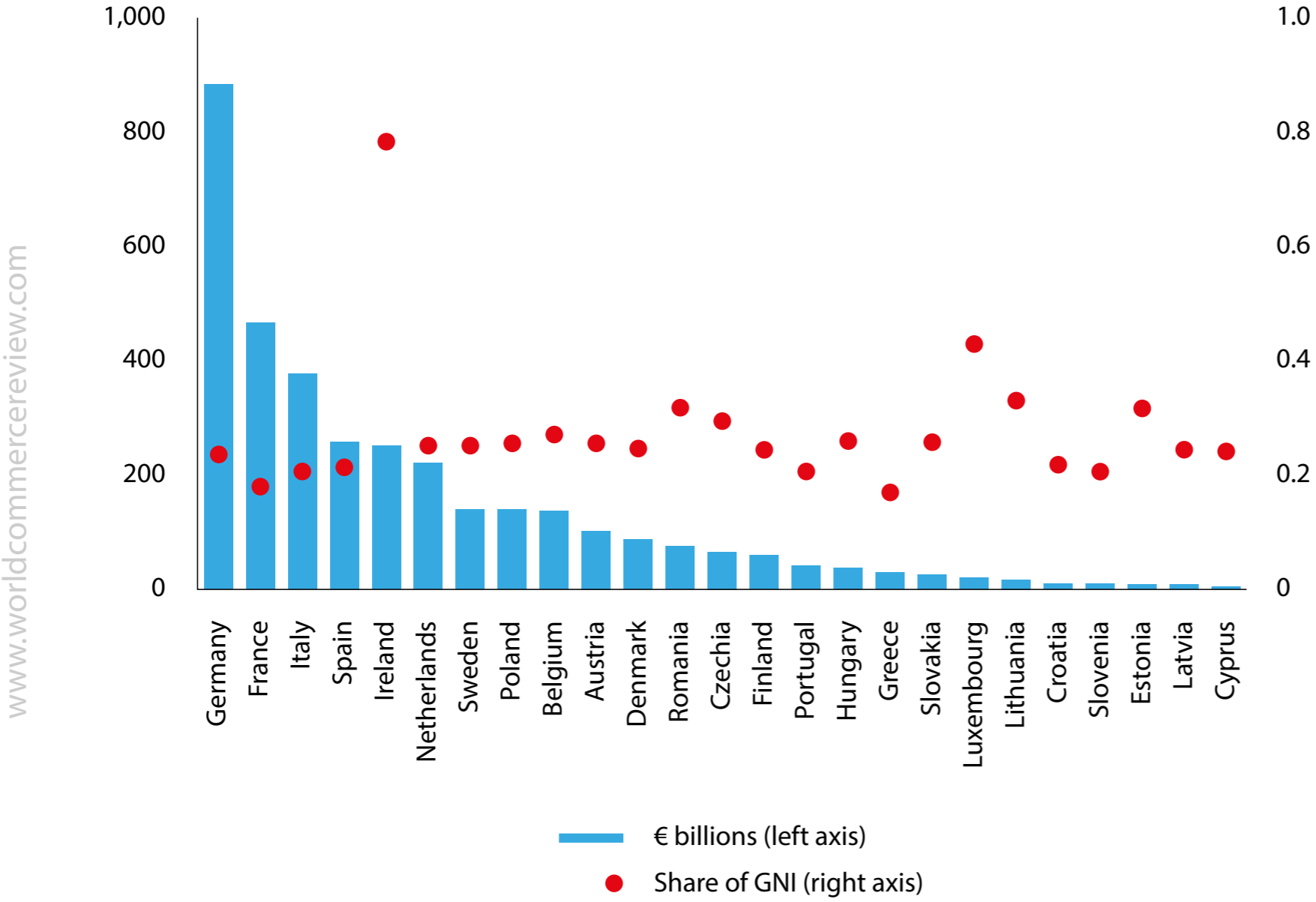
Expected amounts from the resource would be broadly comparable with €19 billion from ETS/CBAM. Finally, this resource is presented as temporary: it would be superseded by a share of taxes on corporate profits based on a common European tax base for corporations, which the European Commission is pushing for<sup>9</sup>.

The new statistical based resource on company profits is one of eight potential new own resources, most of them previously mentioned by the European Parliament<sup>10</sup> and scanned by the Commission. This 'scanning' exercise against three selection criteria (revenue potential, simplicity in terms of compliance and administrative burden and fast mobilisation) was brief and could look like lip service to seven potential new own resources<sup>11</sup>.

### 3.3 An evaluation of the Commission proposal

The Commission's revised proposal is pragmatic and moves in the right direction, but does not go far enough.

**Figure 3. Gross operating surplus for corporations by country in € billions and as a share of GNI, 2021**



Note: Gross operating surplus data is unavailable for Bulgaria and Malta.  
 Source: Bruegel based on AMECO.



First, the Commission rightfully puts the emphasis on ETS revenue, increasing the allocation to the EU budget from 25 percent to 30 percent. As demonstrated by Fuest and Pisani-Ferry (2020), ETS revenues fit best the criteria for EU budget resources: *“carbon emissions do not primarily cause damage where they occur [...] additional emissions in a particular member state should be regarded as negative externalities in other member states [...] emission reduction objectives are set at the EU level.”* As the authors concluded, *“ETS allowances are not that different from custom duties”*, making them genuine own resources.

In addition, potentially big revenue can be derived from the ETS. Since the Commission’s December 2021 proposal, the EU carbon price has increased significantly. The price per tonne of CO<sub>2</sub> was until recently above €90 and likely to rise further in the mid-term, much higher than the price assumption of €55 for the period 2026-2030, as presented in the Commission’s legislative proposals related to the 2030 emissions reduction target of minus 55 percent compared to 1990.

Not only has the price increased, but the scope is also broadening, with a second ETS (ETS 2), which covers buildings and road transport, becoming operational in 2027. This dynamic allows the Commission to increase the EU share of ETS revenue from 25 percent to 30 percent, while leaving net increased revenue to member states at €46 billion per year from 2028.

The only downside to this approach may be of a political nature. Carbon pricing remains unpopular when directly borne by households, which is why the allocation of ETS 2 revenue was politically committed to social compensation and redistribution, rather than financing EU own resources.

Allocating part of ETS 2 to policies not directly related to greening the economy represents some political risk that the Commission and other EU institutions must be mindful of.

It will be important for the Commission to assure people that money collected from ETS 2 will be spent on climate objectives to alleviate the burden on households of the energy transition. It may make political sense to allocate the revenue to funding green policies and not divert it to other actions.

Second, the Commission is right to maintain its proposal to allocate 75 percent of CBAM revenues to own resources. Logically all resources arising from CBAM should in fact be allocated to the EU budget, but it was politically impossible for the Commission to not leave 25 percent of CBAM revenue to member states.

The Commission estimates that €1.5 billion from CBAM would accrue annually to the EU budget from 2028. This however would depend on the reaction from the main impacted EU partners. Some may adopt pricing policies, which would reduce CBAM revenues.

This would remain good news as the overall policy objective is about emission reductions and not revenue. In any case, CBAM is not where the bulk of revenue is. In the long run, when decarbonisation occurs, the fundamental question of finding a more stable revenue base will arise.

Third, the new statistical based resource on a proxy for corporate profits can be considered a smart move. It does not rely on the fast adoption of BEFIT, the latest Commission proposal on harmonising corporate income tax in the EU. Whatever the merits of BEFIT, the prospect of adoption is extremely low given how difficult the corporate income tax debate has been in Europe for decades.

More importantly, it is wise for the Commission not to go back to the idea of a European digital services tax (DST) as a substitute for the OECD deal, notwithstanding that, in July 2020, EU governments recommended the adoption of a European DST in case of OECD negotiation failure<sup>12</sup>.

DSTs are taxes on transactions, which would be a proxy for EU countries to tax the profits of tech companies that leave very little profits on their territories because of aggressive tax planning that takes advantage of the inadequacy of existing international tax rules.

DSTs may seem like a good idea but to the extent that they are taxes on gross income, they would create double taxation, would be borne by consumers more than companies, and would likely generate trade tensions with the US.

For all these reasons, they are divisive and an EU DST is unlikely to garner the necessary unanimity to be adopted. By not mentioning this option, the Commission risks of being criticised by DST advocates (France, Italy, Spain), but spares itself a difficult and unpromising negotiation within the EU and tensions with the US.

While it adds little to the December 2021 proposal, the adjusted Commission proposal can be defended as a pragmatic move to facilitate a discussion of own resources with member states within a constrained calendar.

European elections are approaching, and a Multilateral Financial Framework proposal will have to be tabled by 2025, while the strategic agenda will have to be approved in 2024. With the first repayments of NGEU debt in 2028, EU institutions are running out of time.

#### **4 EU taxation ideas worth of exploration**

Beyond the urgent need to agree on a package to pay back NGEU, the debate about own resources should focus on whether the EU will be able to build genuine own resources based on common tax policies.

This is a more fundamental debate, raising the question of the nature of the European Union, and the debate between those seeing it as a confederation of sovereign states and those believing in its federal destiny.

For the time being, the Treaties reflect the situation in which tax remains at the core of national sovereignty and consent to tax, one of the fundamental human rights, a pure national exercise. The EU's unanimity rule on tax-related decisions is the basic translation of this stubborn reality, in which it is unlikely that the European Parliament would be considered as sufficiently legitimate to consent to tax.

The decision-making difficulty resulting from unanimity is increased by the interests of member countries not being aligned. Large EU countries and other high-tax countries have an interest in establishing a common tax base, which would limit tax leakage, for both individuals and companies, even at the cost of limiting their sovereignty.

On the contrary, to attract investment, most of the small members have to compensate for the sizes of their economies, or their peripheral geography, with lower taxes, in particular on mobile factors, including corporate profits or high-income earners. Diverging interests and unanimity are why the EU is in a stalemate situation.

It could be observed that previous EU enlargement to low-tax countries, such as Malta and Cyprus, without changing the decision-making rules, or asking these countries to change their laws before joining the Union, has just made the issue more intractable.

Overall, this means that the prospect of genuine own resources deriving from harmonised taxes remains remote, as unanimity is unlikely to be reached any time soon.

Moving from unanimity to qualified majority voting in tax decisions, which would require Treaty changes, can only reflect agreement on the nature of the institutions. This does not seem feasible, especially at a time of rising populism when national sovereignty is increasingly emphasised.

The current situation, within the EU, reflects a tax anomaly. To avoid leakage, national tax systems provide for tax borders: residents are taxed on their worldwide incomes and countries tax non-residents via withholding taxes on the incomes they derive from those countries.

In short, to avoid leakage, outbound payments (including dividends, interest, royalties and salaries) are subject to withholding taxes, while anti-abuse rules ensure that residents don't shift profits abroad. With globalisation, the robustness of these rules has been tested.

International efforts driven by the G20 and the OECD since 2008, to introduce a tax regulation of globalisation have aimed to restore these instruments in a coordinated manner, rather than a situation of pure protectionist unilateral tax measures.

The EU offers however a unique environment in which countries have lost their ability to apply taxes at the internal borders (within the internal market) following a set of EU Court of Justice decisions starting in the 1990s, which have found anti-abuse rules to be discriminatory.

As a result, high-tax countries lost their ability to limit the risk of profit shifting within the EU, where there are low-tax countries. Low-tax countries, as part of their 'tax offer' to foreign investors, removed their own external borders, when they had such measures.

For instance, they used to offer hybrid instruments and entities allowing companies to book profits generated in Europe in no-tax jurisdictions like Bermuda or Cayman Islands. They also usually offer no withholding taxes and no controlled foreign company regimes, providing tax planners with easy opportunities to shift profits outside the EU at a very low tax cost.

In short, the EU offers the possibility to do business in a high-tax country, shift the profits to an EU low-tax country, without any toll, and then shift the profits to a low- or no-tax country outside the EU, still without any toll.

In parallel with OECD progress on fighting base erosion and profit shifting (BEPS), the European Union has adopted an unprecedented number of tax directives, with various directives on administrative cooperation (which deal with exchange of information between tax authorities<sup>13</sup>) and two directives on anti-abuse rules.

These EU instruments implement rules adopted at the OECD by the Inclusive Framework. These directives bring more coherence to the system by increasing cooperation between tax authorities, and also by helping members to protect their tax base.

The most recent example is the directive translating into EU law the OECD Pillar 2 agreement establishing a global minimum tax, which EU countries should have implemented by the end of 2023 for entry into force in 2024 (Directive (EU) 2022/2523).

Preceded by global agreements, facilitating a worldwide level-playing field, these EU instruments show that EU members can overcome the constraints of unanimity. The EU has even been able to go beyond OECD efforts with a directive mandating publication of the country-by-country reports of multinationals (the issue was considered as non-tax and therefore was ruled with qualified majority).

Some of this recent progress could facilitate a move towards genuine EU own resources. For instance, the 15 percent global minimum tax could have offered an opportunity to mutualise some resources at the EU level as a genuine own resource.

The minimum tax rules provide for a complex three-tier mechanism to ensure that profits of multinationals, where initially taxed below an effective 15 percent in a jurisdiction, will finally be taxed at 15 percent.

First, the country of residence of the multinational will include any such low-taxed income in its tax base and will collect the additional tax (the Income Inclusion Rule, IIR).

If a country does not exercise that taxing right, countries where the company sells its goods or services will have a right to collect the additional tax (the difference between the effective tax rate in any jurisdiction where the company operates and the 15 percent effective rate), through what is known as an undertaxed profit rule (UTPR).

In addition to the IIR and the UTPR, countries where profits are taxed below 15 percent (either because it is a no-tax country, or because it offers a tax holiday, as can be the case in developing countries) can decide to take the difference themselves through a domestic minimum top-up tax (DMTT).

While the nature of the IIR and the DMTT seems quite national (a country will tax the profit of its own companies abroad), the nature of the UTPR is less domestic. Concretely, if a US or Chinese company (these two countries have not so far moved to implementing the minimum tax rules) operates on the European market with under-taxed profit in a low-tax jurisdiction (say the Cayman Islands or Bermuda where there is presently no corporate income tax for the time being), European countries will be entitled to collect the tax.

Though the collection of the tax will be national, the right to tax, which will depend on allocation rules, seems logically to belong to the internal market and the EU as a whole. It may not be too much of a stretch to compare this with the CBAM, a quasi-tax at the border.

In that sense, it is surprising that the European Commission did not examine this option, and favoured, in its initial proposal, a share of the allocation of taxing rights resulting from the other OECD Pillar (Pillar 1). It is true that the distribution of the global additional annual €150 billion to €190 billion of revenue remains unclear and that, in the long term, this revenue may dry up with tax competition being neutralised.

Still, an opportunity to push for what could be seen as a tax at the border of the internal market, aiming to protect the market from harmful competition, may have been missed.

In theory, one could argue that the DMTT is a way for low-tax countries to put an end to their aggressive tax offers, which allowed excess profit to be allocated to their territory, in a way that is not commensurate to activity deployed there.

The OECD estimates that a significant part of the additional revenue will be captured, at least in the short run, through DMTTs (Hugger *et al* 2024). This additional revenue could in theory be mutualised, even though, focussing on UTPR, as an external tax border, seems like a more realistic and practical way. It is also consistent with the fundamental structure of tax systems.

More broadly, exploring how other external tax borders of the EU could be restored could be a way to move towards genuine new own resources. For instance, in the area of personal income tax, establishing a common exit tax on EU countries' residents moving abroad to avoid paying capital gain taxes could serve the purpose of protecting EU countries' tax bases and developing a new own resource.

This could also be considered in the field of wealth taxation or inheritance duties, even though it must be recognised that the lack of harmonised approaches to these taxes by EU countries does not help define a common external policy.



Fundamentally, however, the idea of establishing external tax borders, to limit the risk of the delocalisation of the tax base (through exit taxes on unrealised capital gains for instance), could be further explored and may be a way to move forward the tax conversation in Europe.

Rather than harmonising taxes, which proves difficult, focusing on protecting the revenues of EU members by common borders may unleash some potential.

## **5 Conclusion**

The European Commission's June 2023 adjusted proposal for own resources was motivated by the need to ensure a swift move towards adopting additional own resources to fund NGEU. The agreement to start debt financing the EU included an agreement to adopt new own resources.

Failure to move forward would jeopardise the ability of the EU to keep funding its existing projects, especially at a time when interest rate increases will make the repayment of both capital and interest heavier.

Time is running out, and the Commission proposed an adjusted mechanism that is pragmatic and rebalances the burden to make it more acceptable to Eastern European countries. It is a good move, even though no conversation has yet seriously taken place in the Council.

More importantly, the real debate on how to establish genuine own resources still needs to take place. A move to ETS and CBAM revenue to be mutualised is good and would give more weight to real own resources, aligned with EU policy objectives.

More needs to be done and recent international tax progress are a unique opportunity for the EU to explore how it could bring more consistency to tax systems in the EU while developing own resources. ■

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## Endnotes

1. The VAT and the GNI resources, based on statistical aggregates, are paid by members, which consider them to be national contributions, rather than resources owned by the EU.
2. In December 2020, the European Parliament, the Council and the Commission adopted an agreement on budgetary discipline, cooperation on budgetary matters, sound financial management and new own resources; see <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.LI.2020.433.01.0028.01.ENG&toc=OJ%3AL%3A2020%3A433I%3ATOC>.
3. This was brought forward: a decision on a second basket of own resources was initially envisaged for June 2024.
4. See European Council notice of 1 February 2024, '[Special European Council, 1 February 2024](#)'.
5. This own resource is proportional to the quantity of plastic packaging waste that is not recycled. EU countries contribute €0.80 per kilogramme of plastic packaging waste that is generated in their territory and not recycled.
6. See European Commission press release of 20 June 2023, '[EU budget: Commission proposes to reinforce long-term EU budget to face most urgent challenges](#)'.
7. See <https://www.oecd.org/tax/beps/about/>.
8. See for example Reuters, "'Enough excuses!' France's Le Maire grows impatient over GAFA tax', 18 October 2018. GAFA refers to Google, Amazon, Facebook and Apple.
9. The Business in Europe: Framework for Income Taxation (BEFIT) proposal, which aims to reboot negotiations on a common EU approach to taxation of corporate profits. See European Commission press release of 12 September 2023, '[Taxation: new proposals to simplify tax rules and reduce compliance costs for cross-border businesses](#)'.
10. See the European Parliament resolution of 10 May 2023, '[Own resources: A new start for EU finances. A new start for Europe](#)'.
11. The examined additional seven own resources were: (i) corporate tax BEFIT (no fast mobilisation planned), (ii) a financial transaction tax (same), (iii) an EU fair border mechanism aimed at fighting social dumping (modestly meeting the criteria), (iv) a tax on crypto-currencies (same), (v) a statistical resource based on gender pay gap (no fast mobilisation), (vi) a statistical resource on food waste, and (vii) a statistical resource based on e-waste, the latter two with

a good prospect of fast mobilisation but only adequate simplicity and revenue potential.

12. See <https://www.consilium.europa.eu/media/45109/210720-euco-final-conclusions-en.pdf>.

13. See [https://taxation-customs.ec.europa.eu/taxation-1/tax-co-operation-and-control/administrative-co-operation-and-mutual-assistance/enhanced-administrative-cooperation-field-direct-taxation\\_en](https://taxation-customs.ec.europa.eu/taxation-1/tax-co-operation-and-control/administrative-co-operation-and-mutual-assistance/enhanced-administrative-cooperation-field-direct-taxation_en).

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This article is based on [Bruegel Policy Brief Issue n°06/24](#) | March 2024.

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# Why are organisational cover-ups so common?

Ken Lay: Convicted on 19 of 28 counts  
Jeff Skilling: Convicted on 19 of 28 counts  
**Guilty! Guilty!**  
Verdict will mean prison for ex-Enron chiefs

Why do we keep seeing cover-ups in organisations and institutions? Anthony Montgomery argues that in a corporate environment, protecting the institution feels like the right thing to do

The TV dramatization of the UK Horizon Post Office scandal evoked outrage and disbelief. However, as another example of dysfunctional organisational behaviour, it was expected rather than exceptional. The Post Office saga joins a long list of cover-ups or scandals that includes Hillsborough, Enron, Grenfell, the infected blood scandal, the Tuam babies scandal in the Republic of Ireland, Boeing 737 Max and NASA (Columbia space shuttle). They represent what happens when there is a move within organisations and institutions to cover up the causes of a tragedy.

The corporate drive to hide the truth is not random, but, I would say, inevitable. So why does it happen and why is it likely to keep happening?

Charlie Chaplin's iconic movie *Modern Times* depicts humans as cogs in the wheel. The movie skewered scientific management of work movements (for example, that of engineer and author Frederick Taylor), which argued that work must be scientifically analysed to optimise efficiency.

Taylor's theory stresses that employees should be assigned to perform one specific task, with scientific methods finding the single best way to perform that task. Managers directly supervise employees and employees are paid based on their performance.

The Enlightenment and Industrial Revolution contributed to a desire to apply scientific management to the organisation of work. Taylorism fed directly into our treatment of factory workers as elements in the workflow that needed to be monitored and controlled.

The ghost of Taylorism is evident in our increasing use of artificial intelligence (AI) to replace human labour. Chaplin understood that the machine metaphor was more than just better technology, it was a kind of template for how people ought to behave.

Stories about scandals vilify the people involved – ex-Post Office boss [Paula Vennells](#) is the most recent example. Individuals do carry responsibility, but blaming bad leaders is easier than accepting that institutions and governments are culpable.

My field (organisational behaviour) has contributed to this problem by being servants to industry. The mantra to [measure, quantify and modify](#) adds a sliver of scientific respectability to the fields of business and management. But

*The corporate drive to hide the truth is not random, but inevitable. So why does it happen and why is it likely to keep happening?*



it can lead to a blind spot around how organisational systems can evolve to damage people. Executive behaviour in the Enron, Boeing and the UK Post office scandals were motivated by 'good' business principles – protecting the company. Protecting institutions can seem ethical.

But organisational scandals are a reminder of what happens when efficiency is championed over personal experiences, and dysfunctional systems are defended. The Horizon Post Office scandal highlighted the worst elements of the scientific management culture in the 'efficient' way that the sub-postmasters were hounded.

It was also evident in the delay in getting to the truth because no one would admit that the technology could be wrong. This approach is nothing new. Initially, [fans](#) were blamed for Hillsborough, and [pilots](#) for the problems with Boeing 737 Max.

### **Can organisations change?**

In these scandals, the institutions and corporations skilfully control the narrative until their bubble of lies or incomplete accounts bursts. Enforced transparency and a fair playing field could break this pattern. A [Hillsborough law](#), introducing a legally enforceable 'duty of candour' for police and public authorities in investigations, and equal legal funding for bereaved families at inquiries and inquests, would be one way to avoid the David versus Goliath journey.

The absence of convictions or meaningful repercussions following almost all scandals is abysmal. [Restorative justice](#) has a role to play, but wilfully perverting the course of public justice needs to be sanctioned.

We can't depend on leaders to do the right thing if we keep educating them to put their mission first and people second. We promote and hire on the basis that leaders put their organisations first. The overused explanation of a

'bad' culture being responsible for dysfunctional organisations simply means that everybody clearly understood the real vision and objectives, and committed to doing what was needed.

Organisations frequently don't want to talk about failures or even apparently to learn from them (we can take the Columbia space shuttle and 737 Boeing Max tragedies as examples of this). Similarly, [employee silence](#) is common and whistleblowing rare. The DNA of [business education](#) is flawed, with ethics and social justice seen as peripheral issues.

We need to start by accepting that organisations will do anything to [maximise profit and shareholder value](#), and reverse-engineer from this point.

For example, accepting that accidents are likely can protect people from organisational dysfunction. Commercial air travel is one of the safest industries in the world, and the success is based on the fact that plane crashes are impossible to hide.

Aviation (like nuclear power operations and chemical industries) are called [high-reliability organisations](#) (HROs), which function nearly error-free in extremely challenging and uncertain environments.

The key to HROs is that procedures to protect people are mandatory and strictly enforced by experts. They start from the perspective that accidents are very likely if systems are not in place to prevent them.

Imagine how different the Horizon scandal might have been if the Post Office invited sub-postmasters to collaborate in monitoring the new system for potential flaws when it was introduced.

We don't need a team of management consultants and policy advisers to understand that new work procedures might not begin perfectly. The biggest lie at the centre of most organisational failures – the Horizon Post Office scandal included – is that something unexpected and unpredictable happened. ■

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*This article first appeared in [The Conversation](#).*

# The populist dynamic

A black and white photograph of a hand holding a ballot box. The hand is on the left, and the ballot box is tilted, with a ballot being inserted into the slot. The background is a light, hazy sky.

There has been a surge in populism across Western democracies. Vincenzo Galasso, Massimo Morelli, Tommaso Nannicini and Piero Stanig evaluate how ruling parties might counter populism

**T**he past few decades have seen a remarkable surge in populism across Western democracies. Populist movements have successfully recast political competition as involving the conflict between ‘the people’ and the ‘corrupt elite’ (Mudde and Rovira-Kaltwasser 2017).

The populist rhetoric incorporates anti-expert sentiments, an aggressive communication style on social media, and a general impatience with the institutions of representative democracy. In advanced democracies, specific policy stances regarding globalisation, and in many cases nativism, are also central parts of the platforms.

The causes of this surge of populism in Western democracies have been studied extensively (for a review, see Guriev and Papaioannou 2022). Losers from structural transformations of the economy, such as globalisation and automation, and from other processes such as financial crises, austerity policies and welfare state retrenchment, have progressively abandoned mainstream parties and found the generic promises of protection of the populist alternatives appealing (Colantone *et al* 2022, Guriev 2018 Margalit 2019).

At the same time, the ‘silent revolution’ (Inglehart 2015) promoted by the progressive elites resulted in polarization over cultural issues.

As discussed in the VoxEU debate on populism, on the consequences of the rise of populism, the jury is still out. On the one hand, populist parties were able to convey the economic and socio-cultural grievances of neglected segments of the population in Western democracies (Frieden 2022, Rodriguez-Pose 2018).

On the other hand, populist parties are criticised for their extreme or unfeasible policy proposals, but, most importantly, for polarising the political debate, challenging pluralism, and seeding doubts regarding the institutions of representative democracies and the aims that these pursue, such as protection of minority stances.

In spite of the considerable amount of research on the topic, a set of questions is still unexplored. These are mostly related to the strategies that mainstream parties could adopt to counter the challenges posed by parties that use different – and often quite successful – rhetorical approaches and campaign tactics.

An old perspective (Dornbusch and Edwards 1991) suggests that populism could be self-defeating. By adopting low-quality economic policies, populist parties sow the seeds of their own political downfall, as voters may defect from them when economic conditions deteriorate. This prediction hinges on the belief that elections serve as an effective mechanism for holding politicians accountable.

*Mainstream party leaders in weak positions might feel a strong temptation to engage in tit-for-tat with populist parties, but this strategy runs the risk of further unravelling the fragile foundations of our democracies*

Importantly, voters might hold populist parties accountable for different actions compared to mainstream parties (Bellodi *et al* 2023). Populist parties often pledge straightforward and easily verifiable policies to their potential supporters, rather than seeking a broad mandate as mainstream parties tend to do.

Consequently, voters may primarily hold populist parties accountable for fulfilling their narrow promises rather than for policy outcomes. In addition, a failure to deliver on campaign promises on the part of populist parties may not necessarily induce voters to return to mainstream parties, instead pushing them into abstention or towards support of other, newer, populist alternatives.

If what we are witnessing is ultimately a long-term realignment of the electoral arenas of advanced democracies, and populist parties are here to stay, mainstream parties will need to devise effective political strategies to compete with them. Arguably, this is not only crucial for the survival of mainstream parties, but also for fostering broader democratic representation and enriching the policy debate.

Mainstream parties could borrow some of the populist tactics that proved successful at attracting voters especially in more marginalized sections of the electorate, or they could try to deflect attention from populist-friendly issues – for example, those related to anti-establishment or anti-immigration sentiments.

And if mainstream parties were to decide to address these populist-friendly issues, how should they approach them? Adopting a fact-based approach aimed at refuting the claims of the populist rhetoric is an option.

Alternatively, mainstream parties could incorporate elements of the populist playbook, for instance portraying populist politicians as a new opportunistic and corrupt establishment. Essentially, should mainstream parties fight fire with fire, or take the high road?



In our study (Galasso *et al* 2024), we tackle these questions in the context of the 2020 constitutional amendment referendum in Italy. We evaluate with a field experiment how mainstream parties might counter populism by estimating the short- and long-term effects of an anti-populist campaign.

### **Our experiment in 2020**

In 2020, we conducted a randomised controlled trial in Italy, leveraging the electoral campaign for a constitutional referendum on the reduction of the number of Members of Parliament (MPs) (Galasso *et al* 2022). The reform was proposed by two populist parties, the Five Star Movement and the League. The issue was particularly populist-friendly, as it emerged from scepticism about (if not outright aversion to) legislatures.

The referendum asked voters to confirm the constitutional reform cutting the number of MPs in the Lower House from 630 to 400 and in the Senate from 315 to 200. In early 2020, polls predicted a 90%-10% victory for the 'Yes' vote, favouring the reduction of MPs, over the 'No' vote, maintaining the status quo.

In September 2020, the 'Yes' vote won by 70% to 30%, with a turnout rate of 51%. Mainstream political parties approached the referendum campaign in different ways: some refrained from taking a stand, while others were internally divided. Our experiment was carried out in collaboration with a national committee promoting the 'No' vote and affiliated with the mainstream centre-left Democrats.

Using programmatic advertisement, the experiment deployed almost one million video impressions to Italian voters, aiming to expose more than half of the residents of each of 200 pre-selected municipalities to a campaign video.

Two 30-second video ads, created by the committee and supporting the 'No' vote, were employed in the experiment. Identical in length and graphics, they differed in tone and message. The first video, which we randomly assigned to half of the selected municipalities, aimed at debunking populist claims about cost savings and democratic representativeness, while the second video, randomly assigned to the other half, directly attacked populist politicians for opportunism and corruption (the videos are available [here](#)).

Based on the analysis of official returns at the municipality level, we document that both videos influenced voting behaviour in the same direction: they reduced the 'Yes' vote share by demobilizing voters and increasing abstention.

Interestingly, the more aggressive 'blame' ad was slightly more effective at capturing attention and produced stronger effects than the 'de-bunk' ad. This evidence suggests that countering populism using its own tactics can yield immediate benefits to mainstream politicians. In line with a demobilisation explanation, the effects were larger in municipalities with fewer college graduates, higher unemployment, and a history of populist support.

In other words, in areas where some marginal voters feel disaffected from politics and are already less likely to turn out, demobilisation appears to be an effective strategy to counter the electoral success of populist parties and of their policy proposals.

### **Longer-term effects**

The anti-populist campaign had unintended consequences in the long run. Analysis of the 2022 legislative election shows that municipalities exposed to the campaign experienced an increase in support for a rising populist party, Brothers of Italy, paired with a decrease in support for mainstream political parties but also for the two established populist parties that had introduced the 2020 constitutional reform.

A follow-up survey conducted in 2023 detected further significant shifts: residents of the municipalities targeted by the 2020 experiment displayed increased political interest, decreased trust in political institutions, and more anti-political sentiments.

Ultimately, the evidence points to a surprising phenomenon: countering populism using its own tactics seems to have benefited a newer populist party, rather than the mainstream options. Clearly, these effects should not be attributed directly to the 2020 campaign experiment, given the two-year gap since the administration of the video ads.

Conversely, the campaign acted as an exogenous shock that influenced voting behaviour in the constitutional amendment referendum, reducing the attachment of some voters to the two more established populist options. Demobilisation and disaffection plausibly persisted and cumulated with other grievances, opening space for a newer, and somewhat different, populist party.

Our results caution against the long-term effectiveness of negative campaigning by mainstream parties against populist forces, highlighting the need for non-myopic strategies on the part of mainstream – or, in general, anti-populist – parties. In fact, countering in a sufficiently effective manner a populist mobilisation might backfire, ultimately increasing voter disaffection in general.

Positive narratives that do not backfire in the longer run would have to be devised by the mainstream. Understanding the internal and external constraints faced by mainstream parties in adopting non-myopic strategies, however, was beyond the scope of our study.

It is nonetheless crucial to address these issues if one considers important to revitalise political engagement and resurrect trust in political institutions. Mainstream party leaders in weak positions might feel a strong temptation to engage in tit-for-tat with populist parties, but this strategy runs the risk of further unravelling the fragile foundations of our democracies. ■

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*This article was originally published on [VoxEU.org](https://voxeu.org).*

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# Elections and devaluations

An unprecedented number of voters will go to the polls globally in 2024. Jeffrey Frankel discusses incumbent's efforts to buoy the economy and the post-election economic situations



Lots of countries are voting, with 2024 an unprecedented year in terms of the number of people who will go to the polls. Recent elections in a number of emerging market and developing economies (EMDEs) have demonstrated anew the proposition that major currency devaluations are more likely to come immediately after an election, rather than before one. Indeed, Nigeria, Turkey, Argentina, Egypt, and Indonesia are five countries that have experienced post-election devaluations within the last year.

### **The election–devaluation cycle**

Economists will recall a 50-year-old paper by Nobel Prize winning professor Bill Nordhaus as essentially initiating research on the political business cycle (PBC). The PBC refers to governments' general inclination towards fiscal and monetary expansion in the year leading up to an election, in hopes of the incumbent president, or at least the incumbent party, being re-elected.

The idea is that growth in output and employment will accelerate before the election, boosting the government's popularity, whereas the major costs in terms of debt troubles and inflation will come after the election.

But the seminal 1975 paper by Nordhaus also included the prediction of a foreign exchange cycle particularly relevant for EMDEs. That is the proposition that countries generally seek to prop up the value of their currencies before an election, spending down their foreign exchange reserves, if necessary, only to undergo a devaluation after the election.

Nordhaus wrote: *"It is predicted that the concern with loss of reserves and balance of payments deficits will be greater in the beginning of electoral regimes, and less toward the end....The basic difficulty in making intertemporal choices in democratic systems is that the implicit weighting function on consumption has positive weight during the electoral period and zero (or small) weights in the future."*

The devaluation may be undertaken deliberately by an incoming government, choosing to get the unpleasant step – with its unpopular exacerbation of inflation – out of the way while it can still blame it on its predecessors. Or the devaluation may take the form of an overwhelming balance-of-payments crisis soon after the election.

Either way, a government has an incentive to hoard international reserves during the early part of its term in office, and to spend them more freely to defend the currency toward the end of its term.

*Of course, the association between elections and the exchange rate is not inevitable. India is undergoing elections now and Mexico will in June. But neither seems especially in need of major currency adjustment*

A political leader is almost twice as likely to lose office in the six months following a major devaluation as otherwise, especially among presidential democracies (Frankel 2005). Why are devaluations so unpopular that governments fear to undertake them before elections? In the traditional textbook model, a devaluation stimulates the economy by improving the trade balance. But devaluations are always inflationary in countries which import at least a portion of the basket of goods consumed.

Furthermore, devaluations in EMDEs often are contractionary for economic activity, particularly via the adverse balance sheet effects on those domestic borrowers who had incurred debts denominated in dollars.

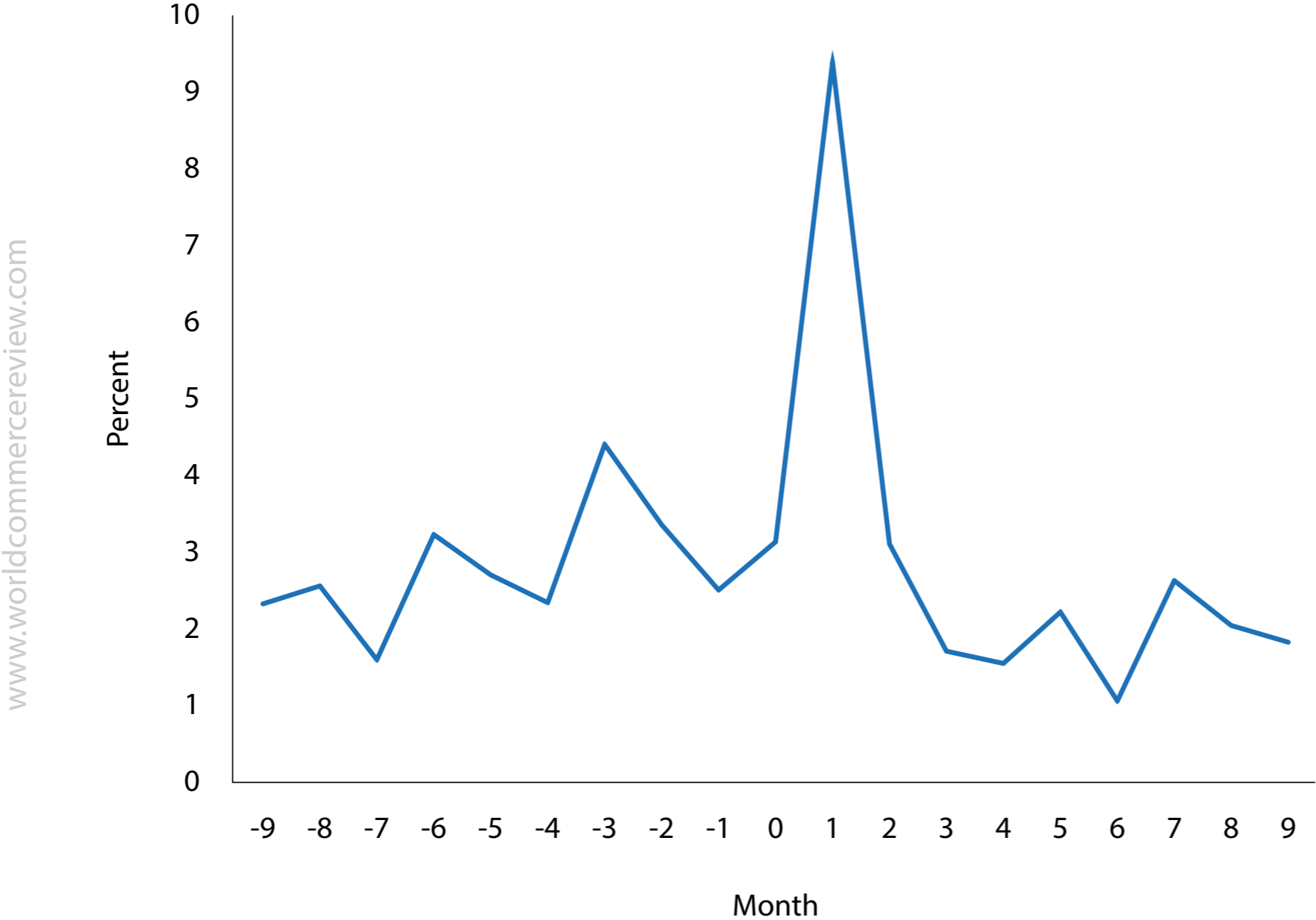
The theory of the political devaluation cycle was developed in a series of papers by Ernesto Stein and co-authors. One might think that voters would wise up to these cycles and vote against a leader who sneakily postponed a needed exchange rate adjustment. But given a lack of information about the true nature of the politicians, voters may in fact be acting rationally.

Figure 1, from Stein and Streb (2005) shows that devaluations are far more common in the immediate aftermath of changes in government. (The sample covers 118 episodes of changes, excluding coups, among 26 countries in Latin America and the Caribbean between 1960 and 1994)<sup>1</sup>.

### **Some devaluations over the past year**

Many EMDEs have been under balance-of-payments pressure during the last two years. One factor is that the US Federal Reserve raised interest rates sharply in 2022-23 and is now leaving them higher for longer than markets had been expecting. Consequently, international investors find US treasury bills more attractive than EMDE loans and securities.

**Figure 1. Average devaluation pattern before and after elections**



Source: Stein and Streb (2004).

A good example of the political devaluation cycle is Nigeria. Africa's most populous country held a contentious presidential election on 25 February 2023. The incumbent, who was term-limited, had long used foreign exchange intervention, capital controls, and multiple exchange rates to avoid devaluing the currency, the naira.

The new Nigerian president, Bola Tinabu, was inaugurated on 29 May 2023. Two weeks later, on 14 June, the government devalued the naira by 49% (from 465 naira/\$, to 760 naira/\$, computed logarithmically). It soon turned out that this was not enough to restore equilibrium in the balance of payments.

At the end of January 2024, the government abandoned its effort to prop up the official value of the naira, devaluing another 45% (from 900 naira/\$ to 1,418 naira/\$, logarithmically).

A second example is Turkey's election in May 2023. President Recep Tayyip Erdoğan had long pursued economic growth by obliging the central bank to keep interest rates low – a populist monetary policy that was widely ridiculed because of the president's insistence that it would reduce soaring inflation – while simultaneously intervening to support the value of the lira.

The government guaranteed Turkish bank deposits against depreciation, an expensive and unsustainable way to prolong the currency overvaluation. After the elections, the lira was immediately devalued, as the theory predicts. The currency continued to depreciate during the remainder of the year.

Next, on 19 November 2023, Argentina elected a surprise candidate as president, Javier Milei. Often described as a far-right libertarian, he comes from none of the established political parties. He campaigned on a platform of diminishing sharply the role of the government in the economy and abolishing the ability of the central bank to print money.

Milei was sworn in on December 10. Two days later, on 12 December he cut the official value of the peso by more than half (a 78% devaluation, computed logarithmically, from 367 pesos/\$ to 800 pesos/\$). At the same time, he took a chain saw to government spending such as energy subsidies rapidly achieved a budget surplus, and initiated sweeping reforms.

Argentine inflation remains very high, but the central bank stopped losing foreign exchange reserves after the devaluation, again as predicted by the theory.

A fourth example is Egypt, where President Abdel Fattah al-Sisi just started a third term, on 2 April 2024. The economy has been in crisis for some time. Nevertheless, the government had ensured its overwhelming re-election on 10-12 December 2023 by postponing unpleasant economic measures, not to mention by preventing serious opponents from running.

The widely expected devaluation of the Egyptian pound, came on 6 March 2024 depreciating 45% (from 31 Egyptian pounds/\$ to 49 pounds/\$, logarithmically). It was part of an enhanced-access IMF programme, which also included the usual unpopular monetary and fiscal discipline.

Finally, in Indonesia the widely liked but term-limited President Jokowi is soon to be succeeded by the Defence Minister Prabowo Subianto, who is less widely liked but was backed by the incumbent in the 14 February election. The rupiah has been depreciating ever since the 20 March announcement of the outcome of the contentious presidential vote. It fell almost to an all-time record low against the dollar on 16 April.

### **What next?**

Of course, the association between elections and the exchange rate is not inevitable. India is undergoing elections now and Mexico will in June. But neither seems especially in need of major currency adjustment.

Venezuela is scheduled to hold a presidential election in July. As with some other countries, the election is expected to be a sham because no major opposition candidates are allowed to run. The economy is in a shambles due to long-time mismanagement featuring hyperinflation in the recent past and a chronically overvalued bolivar.

But the same government that essentially outlaws political opposition also essentially outlaws buying foreign exchange. So, equilibrium may not be restored to the foreign exchange market for some time.

To stave off devaluation, these countries do more than just spend their foreign exchange reserves. They often use capital controls or multiple exchange rates, as opposed to allowing free financial markets. That doesn't invalidate the phenomenon of post-election devaluations; it just works to insulate the governments a bit longer from the need to adjust to the reality of macroeconomic fundamentals.

Unfortunately, many of these countries also fail to allow free and fair elections, which works to also insulate the government from the need to respond to the voters' verdict. ■

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## Endnote

1. Including Frieden and Stein (2001) and Stein and Streb (1998, 2004, 2005). More recently, Quinn et al (2023) find that voters punish leaders who devalue, in particular, when the currency was already undervalued. Steinberg (2015) finds that they are more likely to welcome a weak currency in countries where the manufacturing sector is powerful.

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*Author's note: A shorter version of this column appeared on [Project Syndicate](#). I thank Sohaib Nasim for research assistance. This article was originally published on [VoxEU.org](#).*



# Income inequality and the liberal economic order

The liberal economic order of market-based economic activity is under pressure. Shekhar Aiyar argues that global welfare gains should be safeguarded and built on, not undermined by a blinkered perception of liberalism

## 1 Introduction

The liberal international economic order – that venerable if teetering construct – has few friends these days. On the right, populists in several countries view it as anathema to a more robust nationalism, which is manifested in the economic sphere by curbs on immigration, restrictions on both the scale and composition of international trade and an aversion to rules-based internationalism. On the left, it is attacked as at best indifferent to, and at worst responsible for, a host of ills, prominent among them inequality, job losses and climate change.

The consequences of this lack of champions for the liberal order are increasingly evident at both the domestic and international levels. In nation after nation, industrial policy is enjoying a renaissance, protectionist barriers are finding fertile soil and immigration is being assailed. At the international level, countries are being asked to choose between opposing blocs, with economic relations with the rival bloc subject to increasing scepticism and scrutiny, while multilateralism is being discarded as ineffectual if not malign.

There are perhaps as many definitions of the liberal economic order as there are economists. But most would agree on a set of distinctive features: market-based economic activity, private entrepreneurship and a legal system that impartially enforces contracts between consenting parties.

The government's role is not to micromanage economic production or second-guess the price mechanism, but to step in when markets fail, for example to curb monopolies, provide public goods and eliminate or reduce inequality of opportunity among citizens. Liberal economies seek to engage in free trade with other economies without favouring domestic firms over foreign firms. They welcome new ideas and new immigrants, and broadly value cosmopolitanism over homogeneity.

On the international stage, they adhere to a rules-based system of dispute resolution and crisis management, even when this system produces outcomes not to their liking.

Clearly this is the ideal, not the uncaveated reality. But the ideal itself has long had a powerful impact on the economic organisation and institutions of both Western and non-Western countries. Following the end of the Cold War and the reforms of Deng Xiaoping, something close to a universal consensus developed around the liberal economic order, even a sense of inevitability as expressed in Francis Fukuyama's 'end of history'.

*There needs to be a much greater focus on redistributing income, strengthening the social safety net and ensuring that economic opportunity is not an accident of birth*

Many countries that were formerly part of the Soviet bloc, and many in the global South with chequered histories of state-led development and import substitution now aspired – however haltingly – towards the liberal ideal. But any semblance of inevitability has long evaporated.

Perhaps the most searing indictment of the liberal international economic order – especially but not exclusively from the left – is that it has led to rising income inequality. This is often singled out as the most fundamental driver of a wave of populism, bringing in its wake scepticism towards international trade, immigration and multilateralism, and creating political dysfunction on both sides of the Atlantic.

But the fundamental premise of this narrative is doubly wrong, or at least parochial in a sense that is rarely advertised. In fact global inequality has declined considerably in recent decades. And this has happened primarily because in two gigantic population centres, China and India, liberal reforms have supercharged their economic trajectories and pulled them closer to Western living standards, resulting in much more equality between citizens of the world. From a bird's eye perspective, this is the big economic story of the world over the past half century.

Since China and India began liberalising their economies and opening-up to the world, they have been transformed utterly from the plodding and insular economies that they used to be. Unprecedented growth has occurred at every point along their income distributions, resulting in a broadly shared flowering of prosperity.

The number of people living in absolute poverty – at a subsistence level barely imaginable in the West – has fallen by over 1 billion. This is the fastest recorded rate of poverty reduction in world history. The material prospects of the average person born today in China or India are immeasurably better than for somebody born in 1970.

It is within rich countries – a relatively narrow sliver of the global population – that income inequality has soared unacceptably over the last several decades. Median incomes have stagnated, while the shares of the richest have

risen steeply. In the United States especially, a large fraction of households has reported falling real incomes over a long period.

Inequality of opportunity, reflected especially in the barriers children from low-income families face in building human capital, has tended to stifle the liberal vision of getting ahead on the back of hard work and clever ideas. Urgent policy action is needed to redistribute income, strengthen the social safety net and move in the direction of a level playing field for all citizens.

Far from undermining the foundations of the liberal economic order, such actions would greatly strengthen it.

How should a universalist – somebody who holds that human life has equal worth irrespective of location – regard the sum total of these somewhat contrary developments: the broad and rapid rise in prosperity in China and India, together with the deteriorating income distribution in the West? One way of answering this question is to imagine that you are behind a Rawlsian veil of ignorance and know nothing about your attributes: whether you are young or old, female or male, rich or poor, Chinese or American.

From this perspective, which society would you choose to inhabit, the world of the 1970s or the world of today? Answering this question requires, first, an appreciation of how the global income distribution has changed over time.

## **2 Measuring inequality**

Measuring global inequality is complicated. At the national level, inequality is typically measured using regularly conducted household surveys. A representative sample of households is asked questions about their income or consumption patterns over a certain period of time, typically the past month. The collected data is then used to understand the position of a given household along the income distribution.

For example, one might ask: what is the income level such that 20 percent of the population earns less and 80 percent earns more (ie. the twentieth percentile)? Or: what is the share in national income of the poorest 20 percent of people, or the richest 5 percent, or those between the fortieth and forty-fifth percentile? And so on.

But there are no globally conducted household surveys from which to construct a global income distribution. No consumption survey or household questionnaire covers the whole world. And people in different parts of the world have very different patterns of consumption. Few Quebecois villagers will purchase jalebis or ikat saris, while few residents of a town in Orissa will buy poutine or ice-skates.

Moreover, the relative prices of various goods and services differ significantly across nations. As just one example, non-traded services are typically much cheaper in poor countries than rich countries. A haircut or heart surgery will cost considerably more in London than in Lima, while a taxi ride of identical distance will be more expensive in Miami than Mogadishu.

Constructing a global income distribution is therefore difficult. It requires pooling together national surveys conducted over roughly similar time periods in different countries, while making adjustments to ensure that the surveys are comparable with each other. The best-known such effort was undertaken more than a decade ago by the World Bank economists Bruno Milanovic and Christian Lakner (2013).

They collected and pooled data from 565 household consumption and income surveys from five benchmark years. Country coverage varied by year, but included the vast majority of the world in terms of both population and GDP<sup>1</sup>. They then converted local prices into US dollars using purchasing power parities, which measure what a similar basket of goods and services would cost across different countries.

This enabled the construction of a world income distribution, measuring the purchasing power of the poorest segment of global citizens irrespective of physical location, the purchasing power of the second poorest segment, and so on, all the way to the richest segment. Each segment might include people from several different countries.

Lakner and Milanovic's study popularised the so-called 'elephant graph', which provides an arresting visualisation of the evolution of global income distribution. The graph shows the growth rate of income from 1988-2008 across different percentiles of the distribution (Figure 1).

Its most striking feature is the stagnation of upper middle-class incomes – those between the seventy-fifth and ninety-fifth percentiles. On the other hand the elephant graph shows very robust growth between the tenth and seventieth percentiles of the distribution. The fastest growth occurred near the median of the distribution; the slowest between the eightieth and eighty-fifth percentiles.

Even at the very bottom of the distribution, incomes grew much faster than for the upper middle-class. The chief winners from this churn were workers in China, India and other relatively low-income countries. The laggards were mostly blue-collar workers in advanced economies, such as the US and Japan, who started out at much higher points in the world income distribution than even relatively prosperous citizens of low-income countries.

A few caveats are in order. The elephant graph does not track the income growth of a particular set of people comprising a particular decile in 1988. Instead, it compares the average income of a given decile in 1988 with the average income of the same decile in 2008. The decile could be – indeed is likely to be – populated by a different set of people across time, since the income of people at different points in the distribution grows at different rates (quite apart from the fact that births and deaths alter the composition of the distribution).



For example, China's remarkable growth over the period means that it comprised almost 40 percent of the lowest decile in 1988, but zero in 2008. At the other end of the distribution, the richest Chinese moved from their position between the sixty-fifth and seventieth global percentile in 1988, all the way up to the eighty-fifth percentile in 2008.

More recent work by Milanovic (2022) has updated the global income distribution to 2008-2018. The more recent data suggests that the trend towards greater equality not only continued but gathered pace in the more recent period (Figure 2).

The highest income growth occurred among the world's very poorest people, because of much higher-than-average growth rates in several countries with large numbers of poor people, including a number of countries in sub-Saharan Africa including Ghana, Kenya, Tanzania and Uganda, and among China's rural population.

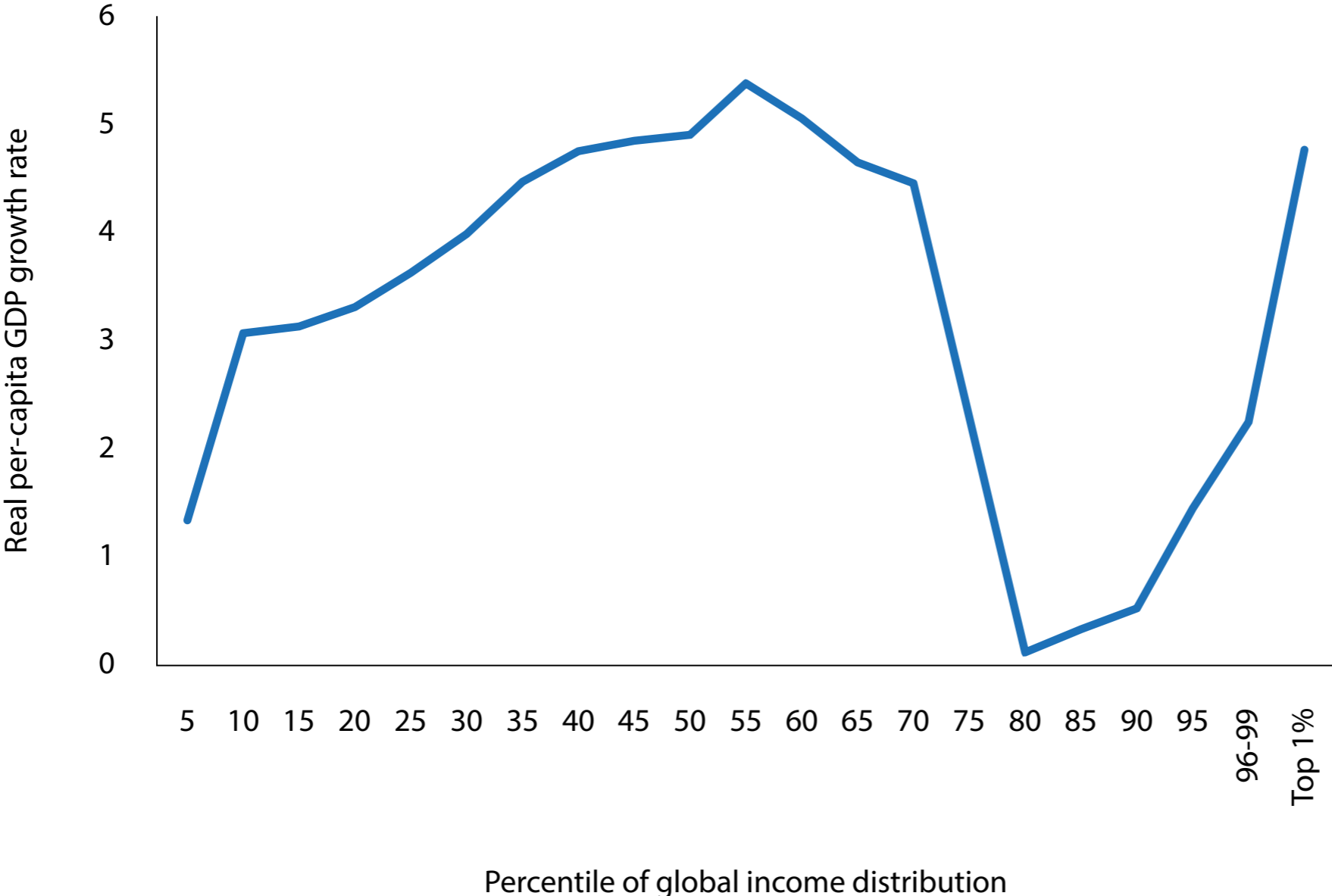
At the same time, the income growth rate of the very richest people in the world plummeted, completely eliminating the upturned trunk of the elephant in the original graph. This latter development occurred because of anaemic growth in some of the richest economies in the world after the Global Financial Crisis.

Just two countries – the United States and Germany – accounted for two-thirds of all people in the global top 1 percent, and both countries grew relatively slowly post-crisis, at or below about 2 percent per annum.

Data from the United Nation's World Income Inequality Database corroborates the story (Figure 3). The Gini index is economists' standard measure of inequality, measuring the extent to which a given society deviates from a condition of absolute equality where every member of society earns the same income.

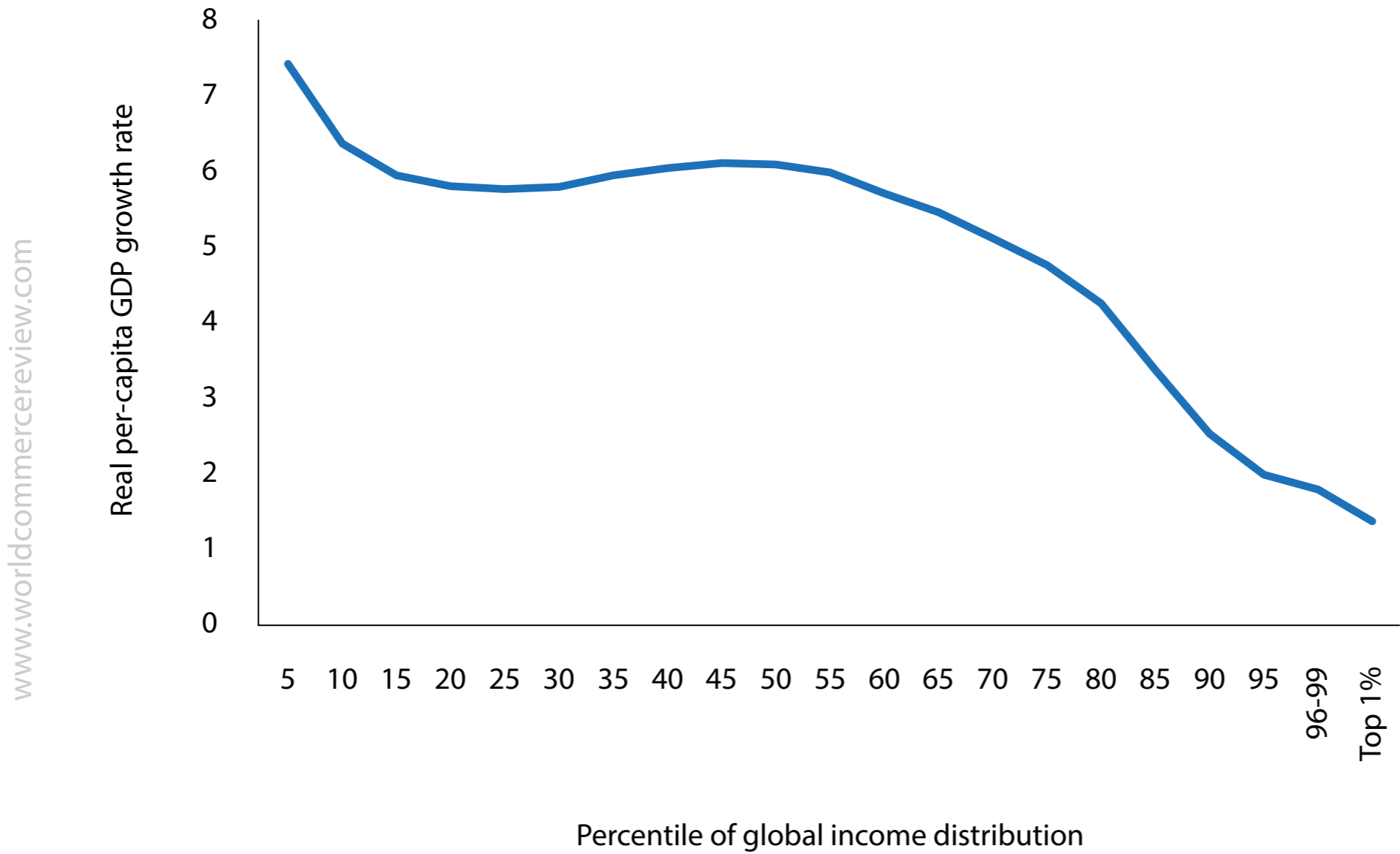
**Figure 1. Growth rates across percentiles of the global income distribution, 1998-2008 (%)**

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Source: Lakner and Milanovich (2013).

**Figure 2. Growth rates across percentiles of the global income distribution, 2008-2018 (%)**



Source: Milanovich (2022).

The higher the Gini index, the less egalitarian a society. Computing the Gini index for the world as a whole shows a precipitous drop in inequality from the early 1990s onwards.

The fundamental reason behind the drop in global inequality is the rapid economic rise of countries that used to have enormous numbers of poor people, relative to the mature economies of the West. Just two countries, China and India, accounted for about two-fifths of the world population in the 1980s; their progress relative to the West has been meteoric, more than offsetting any increase in domestic inequality within countries.

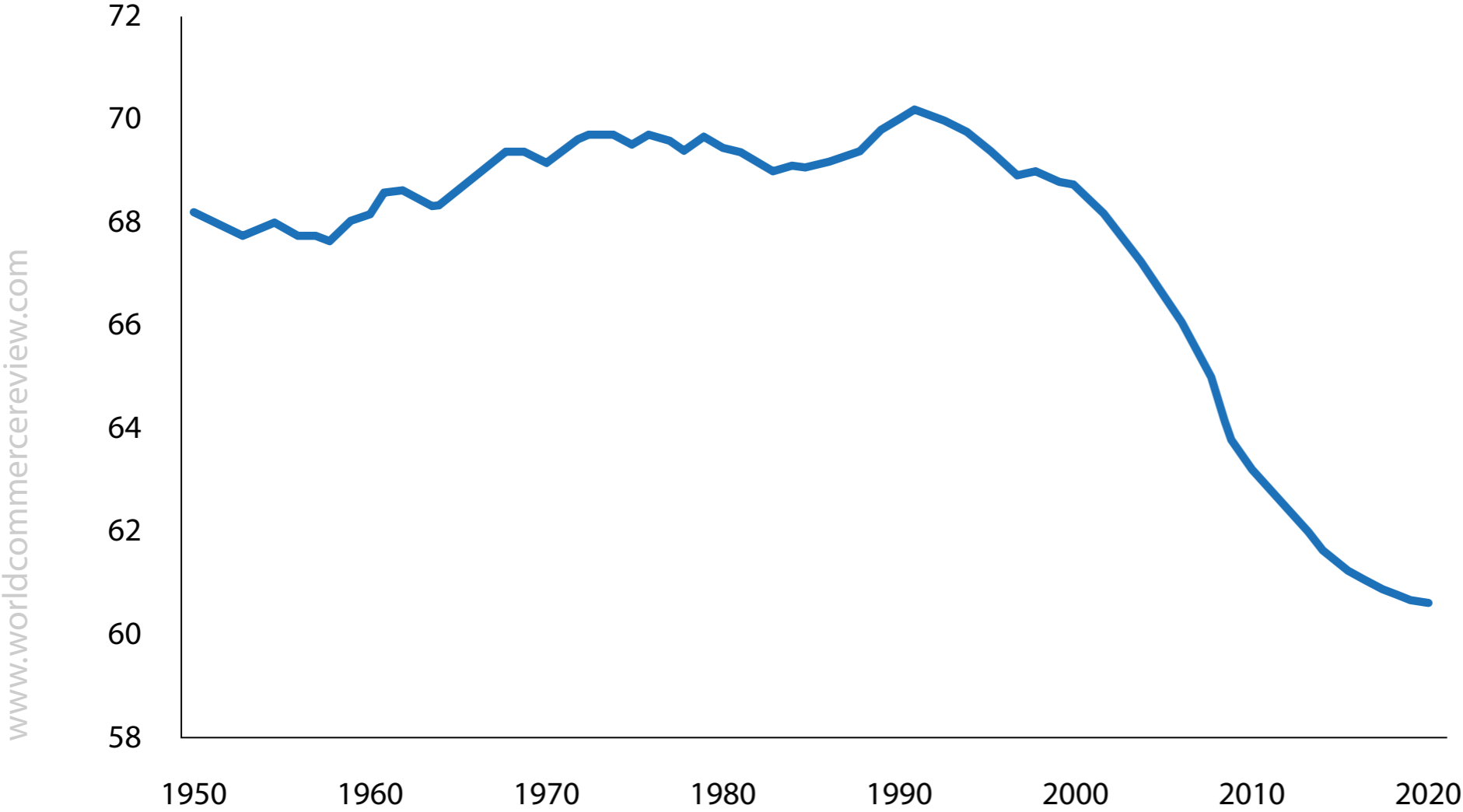
The Gini index cannot be decomposed into within-country and between-country components. But a related measure, the so-called Theil Index, can. Figure 4 shows that the big change since the 1980s is that between-country inequality has plunged, at a much faster rate than the relatively muted increase in within-country inequality.

In fact, the headline story of the global income distribution is the rise of China, and, to a lesser extent and with a delay of a decade or so, India (Darvas, 2019; Dabrowski, 2019). In 1980 these two giants accounted for almost two-fifths of the global population but only about 5 percent of global income.

By contrast, the US and Western Europe accounted for under 15 percent of the global population but commanded a full half of global income. This extreme inequity has been reduced greatly, though by no means eradicated, over the last four decades (Figure 5). China and India together now account for roughly the same share of global income, measured in purchasing parity terms, as the Western countries.

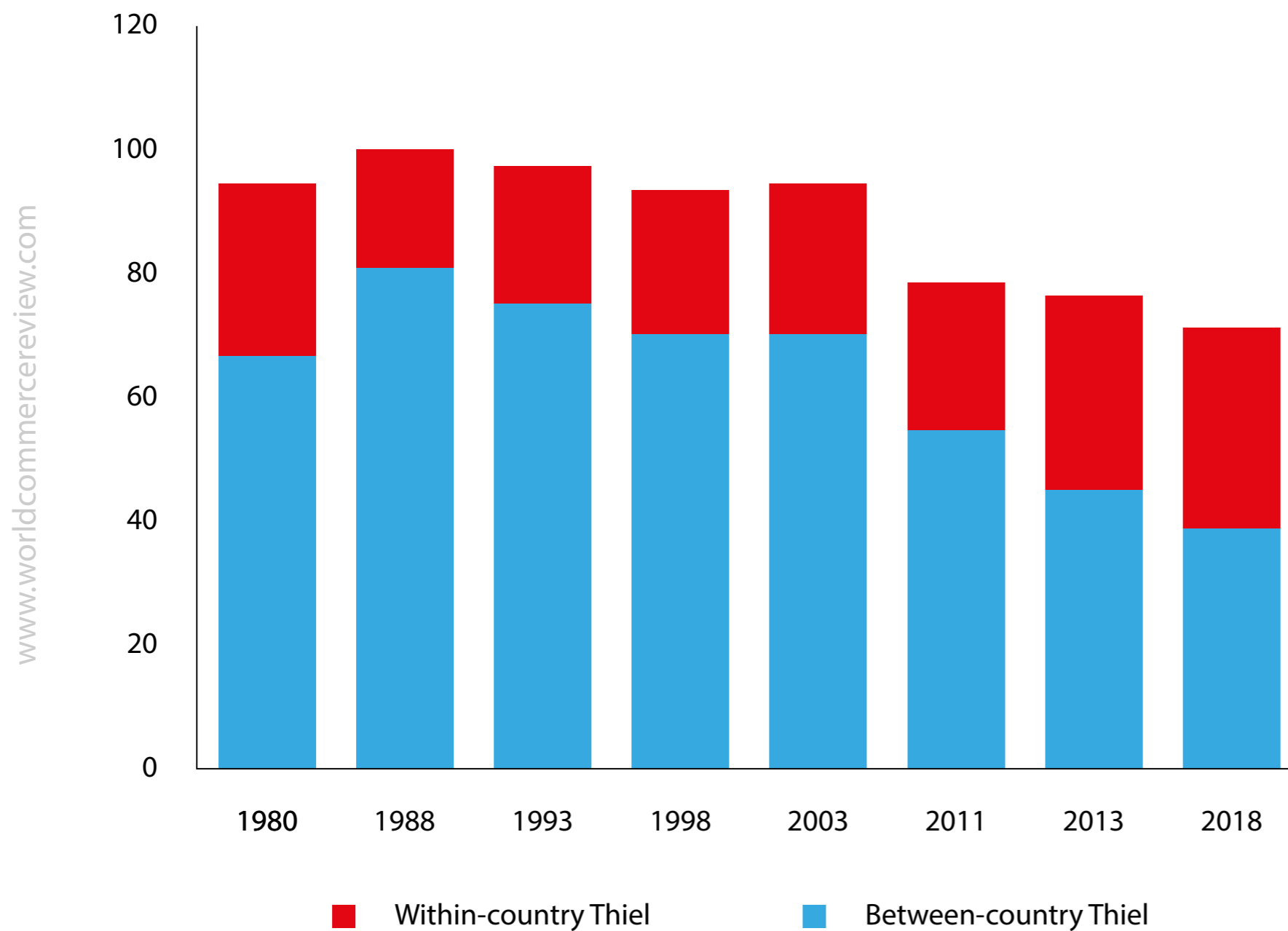
This still leaves a substantial gap between average incomes in 'Chindia' and the West, since the latter still accounts for a much smaller share of the global population than the former, but the gap has been reduced substantially.

**Figure 3. World Gini index, 1950-2020 (%)**



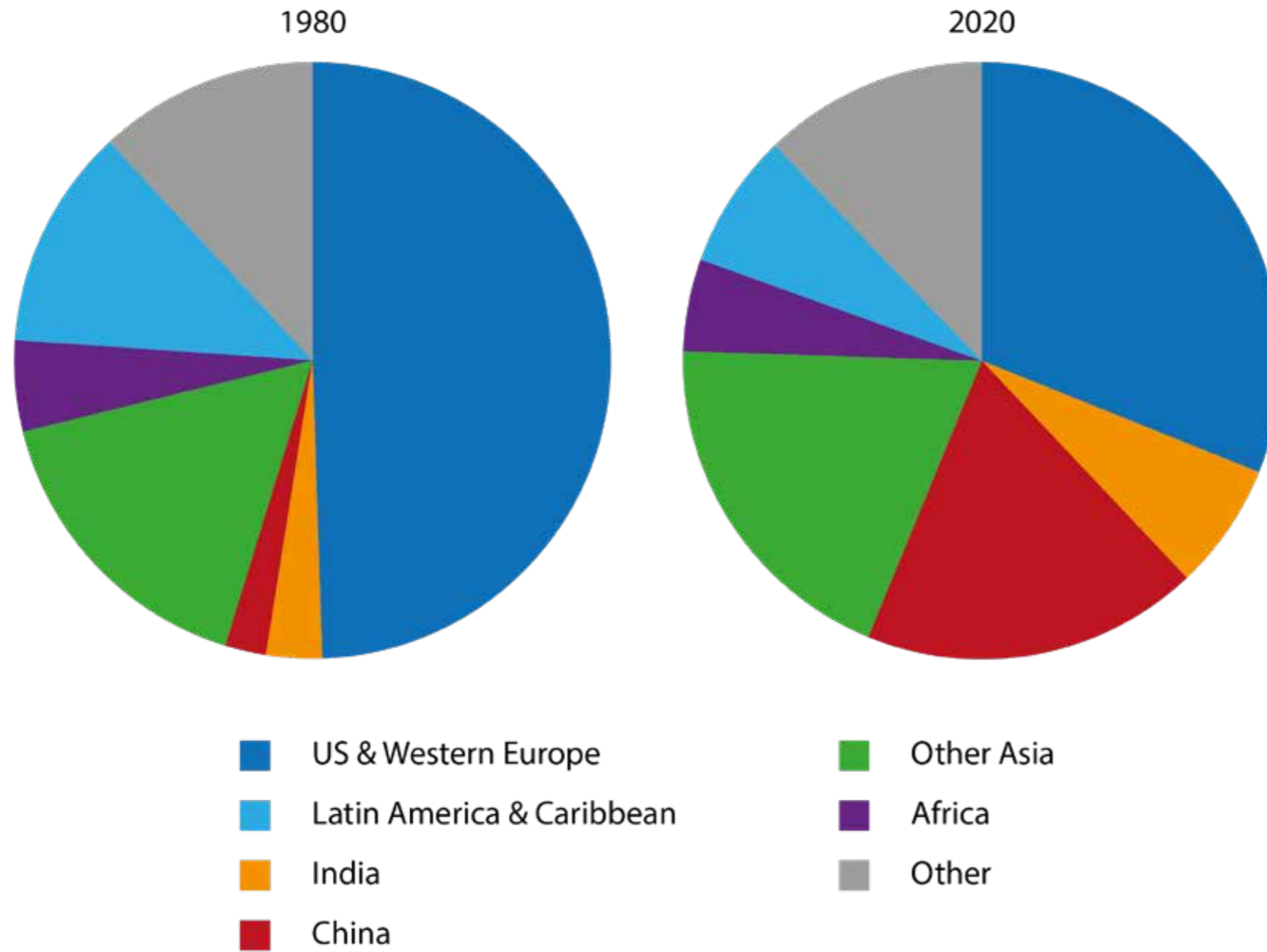
Source: [World Income Inequality Database \(WIID\)](#).

**Figure 4. Global inequality decomposed into within- and between-country inequality, 1980-2018 (Theil index)**



Source: Bruegel based on Milanovic (2022).

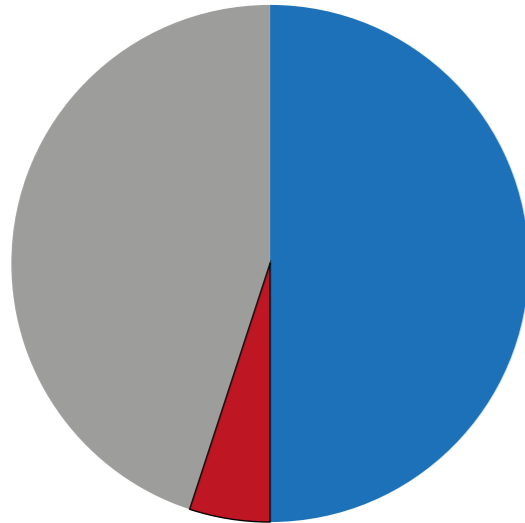
**Figure 5. Evolution of world income distribution, 1980-2020 (%)**



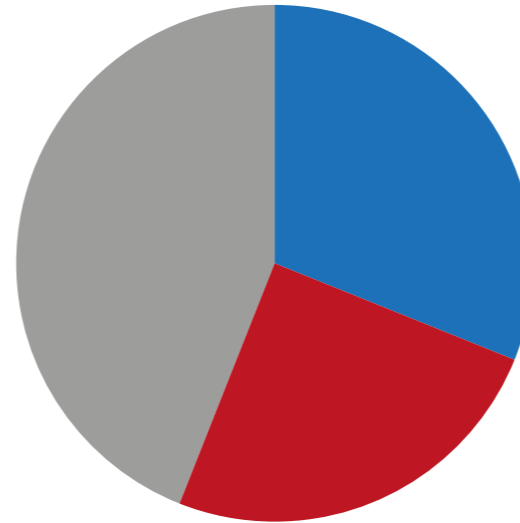
*Note: Income shares based on purchasing power parities (PPP).  
Source: Bruegel based on IMF, World Economic Outlook.*

**Figure 6. Evolution of world income distribution, main blocs, 1980-2020 (%)**

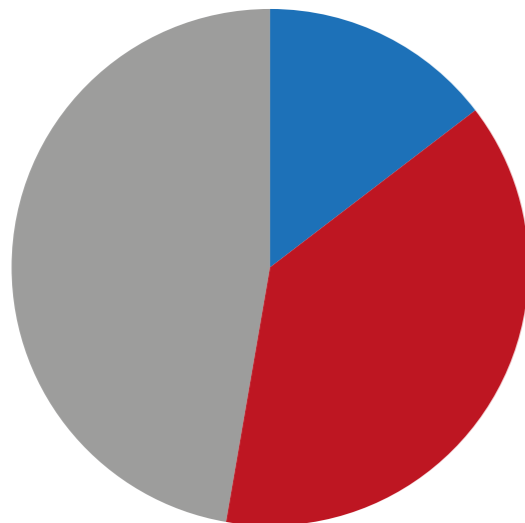
1980 World income shares



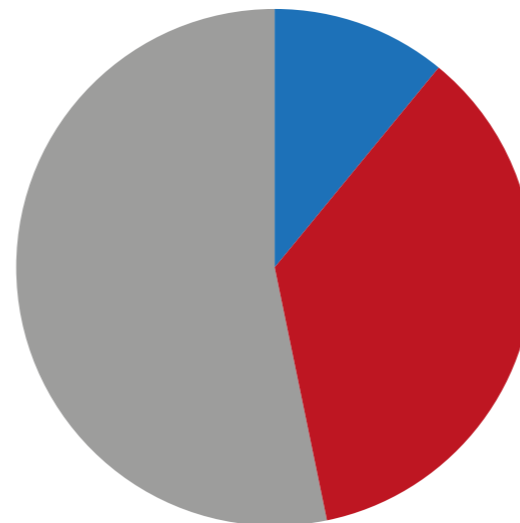
2020 World income shares



1980 World population shares



2020 World population shares



■ US & Western Europe   ■ India & China   ■ Other

*Note: Income shares based on purchasing power parities (PPP).  
Source: Bruegel based on IMF, World Economic Outlook.*



From a global perspective, this is the dominant theme of at least the last four decades. Other regions have waxed and waned in terms of their shares. For example, Latin America and the Caribbean have seen their share go down somewhat, while other Asian countries have seen their shares rise a little, but these are in the nature of footnotes to the grand redistribution of global income shares from the West to China and India.

This can be seen even more starkly by consolidating all the other regions in Figure 5 into a single category and looking at a version with just three segments (Figure 6). The West shrinks. Chindia expands. The rest stay more or less the same.

And all this occurs without major changes in the regional pattern of world population shares. Investigating the profound changes in China and India over the past half century is therefore key to understanding the evolution of the world income distribution.

### **3 Chindia**

China and India began liberalising their economies at slightly different times in the late twentieth century. In both cases, liberalisation was not a one-and-done event, but a process that waxed and waned, gaining speed at times and subsiding at others.

In China especially, economic governance under Xi Jinping is becoming more authoritarian in several areas, as part of a global turning away from liberal economic principles. Nonetheless, the overall trajectory over the last four to five decades has been unmistakable: a transformative change from central planning to market-based economic activity, from state ownership to private sector-led growth, and from near-autarky to broad and deep engagement with the world.

From the viewpoint of global economic welfare, the prolonged and fitful entry of China and India into the ranks of the liberal international economic order is probably the seminal shift of the twentieth century, of ultimately greater scope than other seismic events, such as the Great Depression, post-war reconstruction, the collapse of the Iron Curtain and the rise of the 'Asian Tigers'.

Until well into the 1970s, both the Chinese and Indian economies were characterised by dominant roles for the state. China's economy had been ravaged by two of Chairman Mao's policy disasters. The Great Leap Forward, focusing on the collectivisation and industrialisation of the countryside, resulted in a famine that took the lives of more than 30 million people.

The Cultural Revolution turned society upside down, with 'revisionists', 'rightists' and 'capitalist-loaders' purged from the party, and vast numbers of intellectuals sent to re-education camps or sentenced to hard labour in the rural hinterland. There was no private industry to speak of.

In India, meanwhile, the 'license-quota-permit Raj'<sup>2</sup> governed every aspect of the economy. The commanding heights of the economy – vital industrial sectors such as steel, energy and mining – were reserved entirely for state-owned firms<sup>3</sup>. Soviet-style five-year plans sought to promote rapid industrialisation by channelling resources towards favoured sectors (Bhagwati and Chakravarty, 1969).

The mantra of import-substitution resulted in the world's highest tariff rates, a host of inefficient domestic producers shielded from foreign competition and close to zero trade. At 8 rupees to the dollar, the exchange rate was massively overvalued, rendering exports uncompetitive.

Deng Xiaoping's 'Reform and Opening-Up' aimed to heal the Chinese economy after the depredations of the Great Leap Forward and the Cultural Revolution. After cementing his role as Chairman Mao's successor in 1978, Deng introduced wide-ranging market-oriented reforms. Land ownership was de-collectivised in the highly populated agricultural sector.

Under the new household-responsibility system, communes were divided into private plots and peasants were able to exercise formal control over their land, provided that they sold a specified portion of their crops to the government.

This was followed by industrial reforms to increase productivity. A dual-price system allowed state-owned enterprises to sell any production above the plan quota, and private companies were allowed to operate for the first time under Party rule.

Generally, these early reforms started with local experiments that were adopted and expanded elsewhere once their success had been demonstrated (Jin, 2023). Officials faced few penalties for experimenting and failing, and those who developed successful programmes received nationwide praise and recognition.

More ambitious reforms followed in the 1980s and 1990s, with many state-owned enterprises privatised or allowed to fail rather than kept afloat through state intervention. In order to increase labour productivity, the state allowed individual enterprises to introduce bonuses and to dismiss employees, rather than keeping them on to maintain full employment. The price mechanism was allowed to flourish in an ever-expanding sphere, starting with adjustments to the price of steel, a ubiquitous input for many products.

Domestic reforms were complemented by a broader opening-up to the world. Greatly influenced by the success of export-led development in Asian neighbours including Japan, Taiwan and South Korea, the state established a number of special economic zones (SEZs), characterised by much lighter regulation and much lower corporate tax rates (Keo, 2020).

These zones, especially the SEZ in Shenzhen, proved extremely successful in attracting foreign investment, initially from over-seas Chinese in Hong Kong and Taiwan, and later also from Japan and the US after the stabilisation of diplomatic relations with those countries. Meanwhile, protectionist barriers came down and tariffs were liberalised, culminating in China's accession to the World Trade Organisation in 2001.

In India, the Rajiv Gandhi government introduced a number of liberalising reforms in the mid-1980s. Many categories of imported goods, including, crucially, several types of machinery and intermediate goods, no longer required licensing.

At the same time, the government's monopoly over large classes of imports was reined in. Overall, the proportion of imports that could be imported without a license and was not reserved for the government shrunk from about 5 percent in 1980 to about 30 percent in 1987 (Pursell, 1992).

To incentivise exports, licenses were issued liberally for the import of capital goods, and these licenses could be traded on the market. At the same time, the first steps were taken to loosen the system of industrial licensing.

In 1985, 25 industries were released from licensing, the investment limit below which no license was required was substantially raised and automatic approvals were put in place for a range of capacity expansions by existing firms.

Much deeper reforms followed after India's balance-of-payments crisis in 1991. Narasimha Rao's technocratic finance minister, Manmohan Singh, swept away industrial licensing altogether, ushering in a fundamental change to India's philosophy of economic governance.

Henceforth, rather than a baseline state of myriad industrial restrictions alleviated by a 'positive list' granting exemptions, the default shifted to an absence of restrictions unless specified in a 'negative list': loosely speaking, India shifted from a mindset of everything-that-is-not-specifically-allowed-is-forbidden to one of everything-that-is-not-specifically-forbidden-is-allowed.

Public-sector monopolies were swept away in most areas, with only a few security-sensitive sectors henceforth reserved for government-owned firms. Automatic approval was granted for foreign direct investment up to a 51 percent stake.

The same philosophy was applied to licensing for imports, which was abolished except for a negative list of imports still subject to restrictions. In 1991, license requirements were swept away for almost all machinery and intermediate inputs<sup>4</sup>. A dramatic reform of import tariff rates – which were the highest in the world – was also put in train. In 1991, the top tariff rate was 355 percent; this had fallen to 25 percent by 2003.

Finally, exchange controls were lifted in stages, allowing the rupee to move much closer to its market-determined rate over time and substantially alleviating the penalty to exporters from a structurally overvalued exchange rate.

In both China and India, liberalisation brought an increase in inequality. For both countries, the World Bank's PovcalNet Database shows a rising Gini coefficient at the national level from the 1980s through the first decade of the twenty-first century, followed by a moderate decline dating from about the Global Financial Crisis (Figure 7).

The data should be interpreted with some care, since it pools together different vintages of household surveys, some of which cannot be easily compared with each other because of changing methodologies or coverage.

That said, the basic picture is clear, and is corroborated by several detailed studies: a sharp initial rise in inequality in China, followed by a mild decline, and a less pronounced version of the same developments in India (Bhagwati, 2011; Bhalla, 2011; Ahluwalia, 2011; Balasubramanian *et al* 2021; Jainchandra *et al* 2018; Kanbur *et al* 2017; Zhang and Li, 2016; Zhang *et al* 2011).

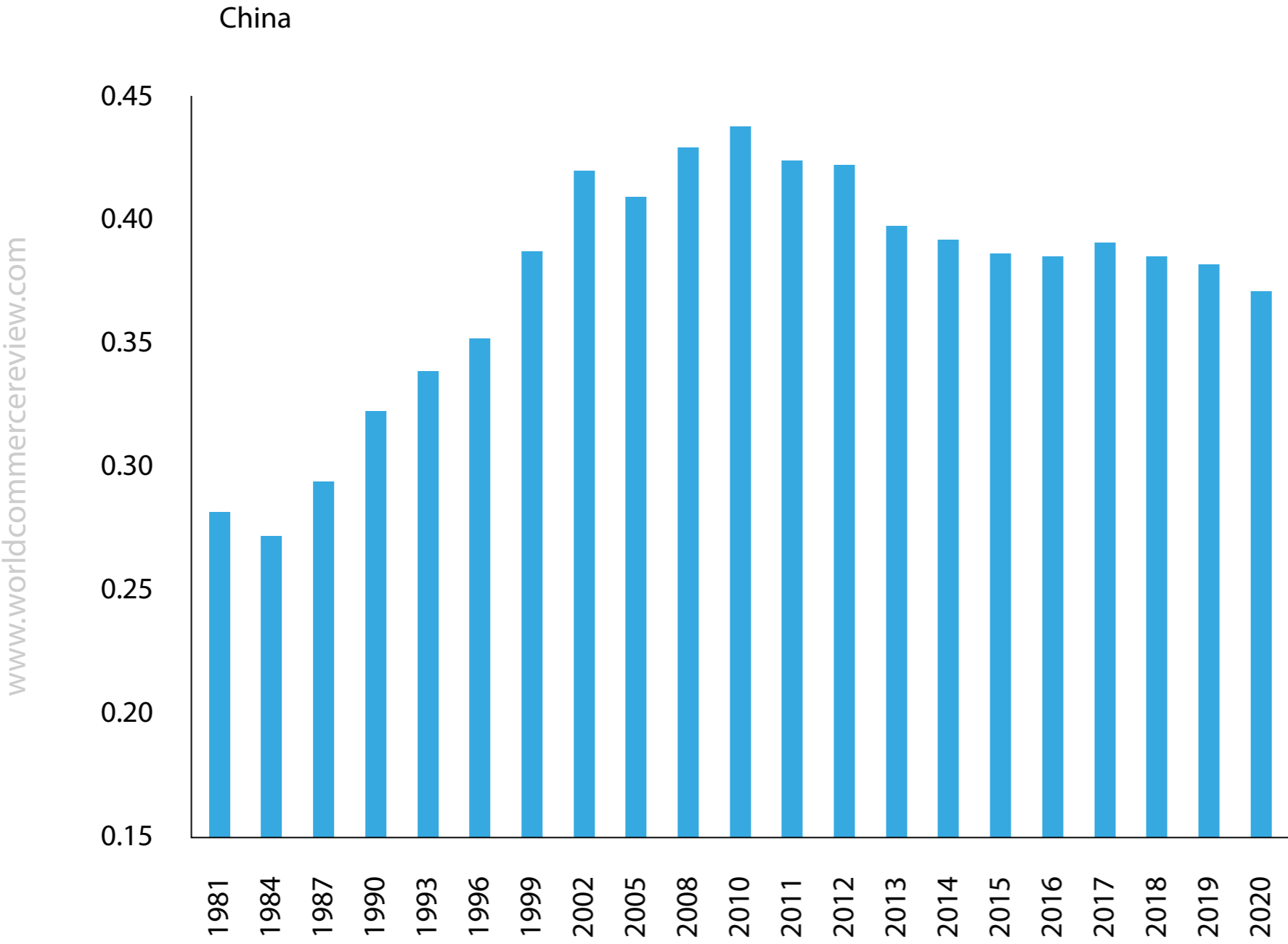
In China, a major reason for the rise in inequality during the first few decades of liberalisation lay in rapid urbanisation, in conjunction with a marked gap – common to most developing countries – between urban and rural incomes.

From earning about twice as much as the average rural household in 1980, the average urban household now earns about 3.5 times as much, and the urban population has increased greatly since the advent of China's reforms, rising from about 18 percent of the total in 1976 to over 65 percent in 2022 (Piketty *et al* 2019).

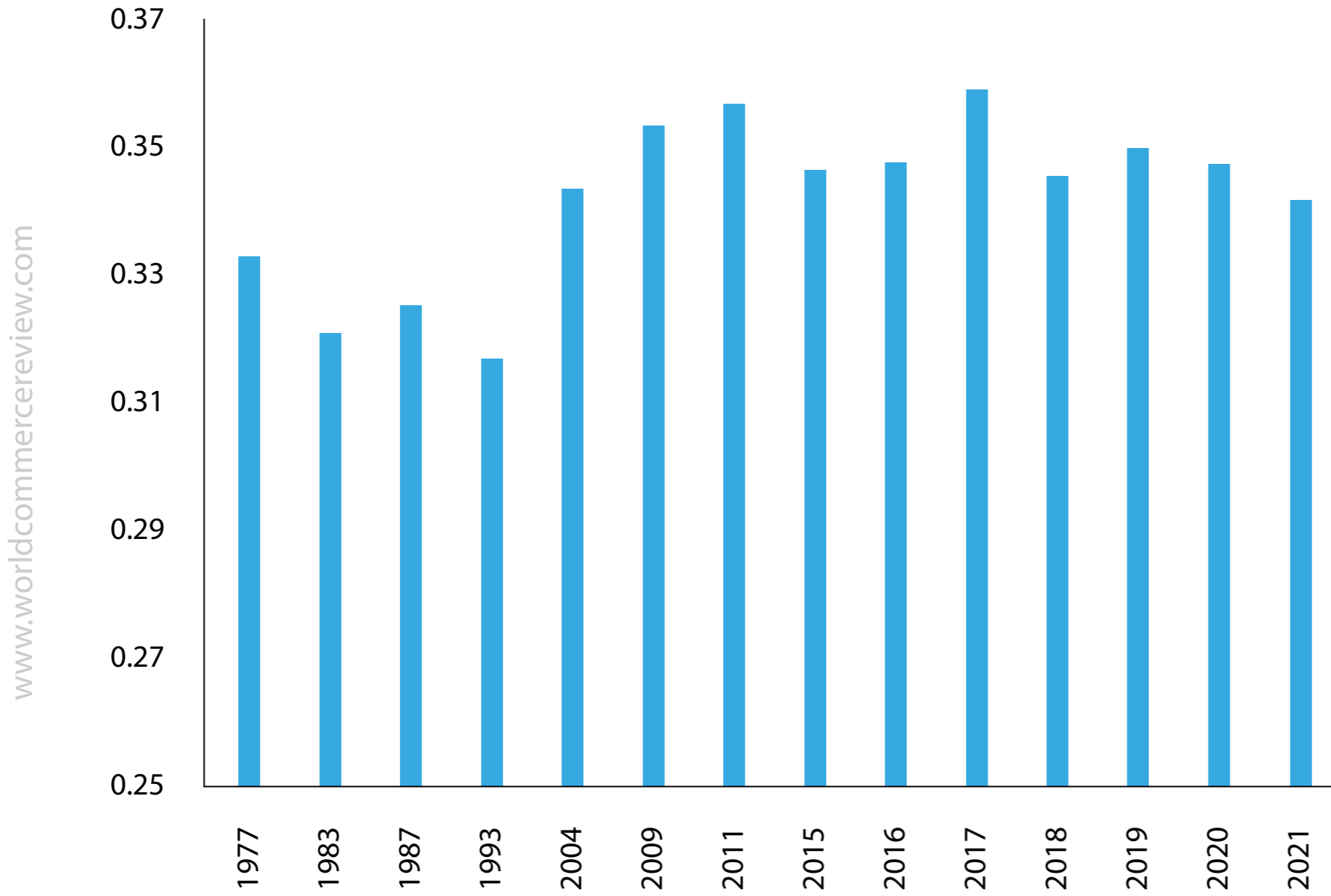
Differences in educational attainment were another important driver of the rise in inequality, with the returns to higher education rising rapidly on the back of an increase in the demand for skilled labour (Dollar, 2007).

But both these factors appear to have run their course, contributing to the mild decline in income inequality observed since the late 2000s. The rural-urban income gap has been narrowing since 2007, likely because several decades of galloping urbanisation have reduced surplus labour in rural areas sufficiently to support rising wages. The skill premium has also been falling, possibly because of a glut of university graduates, many of whom find it difficult to obtain suitable employment.

**Figure 7. China and India, Gini coefficient**



# India



Source: Bruegel based on World Bank Poverty and Inequality Platform.



The reversal could also be in part down to government policies explicitly geared towards reducing inequality, including higher minimum personal income tax thresholds, significant annual hikes to the minimum wage, public investment in rural infrastructure and the rapid expansion of medical coverage for rural residents.

In India, the increase in the Gini coefficient over the first few decades of liberalisation was much less sharp than in China, in line with the much slower pace of urbanisation. The proportion of city dwellers rose from a quarter of the total population in the mid-1980s to about 36 percent today. In stark contrast to China, the vast majority of Indians today still live in villages.

Nonetheless, the stronger growth impact of economic reforms in cities compared to villages was certainly an important driver of increasing inequality (Topalova, 2007). In addition, liberalisation tended to bring fewer benefits to initially less-affluent states, which typically had relatively inflexible labour markets that hindered geographical mobility, and less favourable demographic structures (Besley and Burgess, 2004; Topalova, 2007; Aiyar and Mody, 2013).

The subsequent decline in inequality over the last decade or so has also likely had several causes, including government policies including a massive rural employment guarantee scheme inaugurated in 2006 (currently the world's largest public works programme), and the exhaustion of the demographic dividend – the bulge in the working age population – in some of India's richer states (Deininger and Liu, 2013; Narayan, 2022; Aiyar and Mody, 2013)<sup>5</sup>.

But greater inequality since the dawn of liberalisation in India and China pales in significance compared to the transformative increases in material prosperity across the entire spectrum of the income distribution.

Both countries registered step-increases in GDP growth post-liberalisation compared to previous decades, sweeping away the entrenched fiction that only moderate rates of growth were possible for two such crowded, complex, poverty-stricken giants (Table 1 and Figure 8).

True, China's success was preceded in East Asia by the Tiger economies of South Korea, Taiwan, Singapore and Hong Kong, but, with the possible exception of South Korea, these were all regarded as mini-economies that could achieve growth rates inaccessible to their colossal neighbour.

Meanwhile economist Raj Krishna's famous phrase, the "*Hindu rate of growth*", captured pithily the fatalistic sense that an economy of India's size and diversity must plod along at an unambitious rate of growth, counting on time rather than speed for the achievement of prosperity.

**Table 1. China and India, GDP growth rates per decade (%)**

	1950s	1960s	1970s	1980s	1990s	2000s	2010s
China		5.0	6.2	9.3	10.5	10.6	6.8
India	3.6	4.0	3.1	5.6	5.6	6.8	5.2

Note: Data for the 1950s covers 1951/52 to 1960/61.

Source: Bruegel based on World Development Indicators (WDI) and the Indian National Statistical Organisation.

The sharp rise in the GDP rate of growth in both countries after liberalisation has supercharged the pace at which the average person can expect to see life-changing improvements to their economic circumstances (Table 2). In both India and China, the number of years that it takes to double GDP fell precipitously following liberalisation.

Moreover, in both countries, there has also been a substantial (in China's case spectacular) fall in the population growth rate, so the amount of time that it takes to double living standards has been cut even more steeply. In India, the number of years that it takes to double per-capita income has been cut from 46 pre-liberalisation to 17 post-liberalisation. In China the time has been cut from 26 years to a mere 9 years.

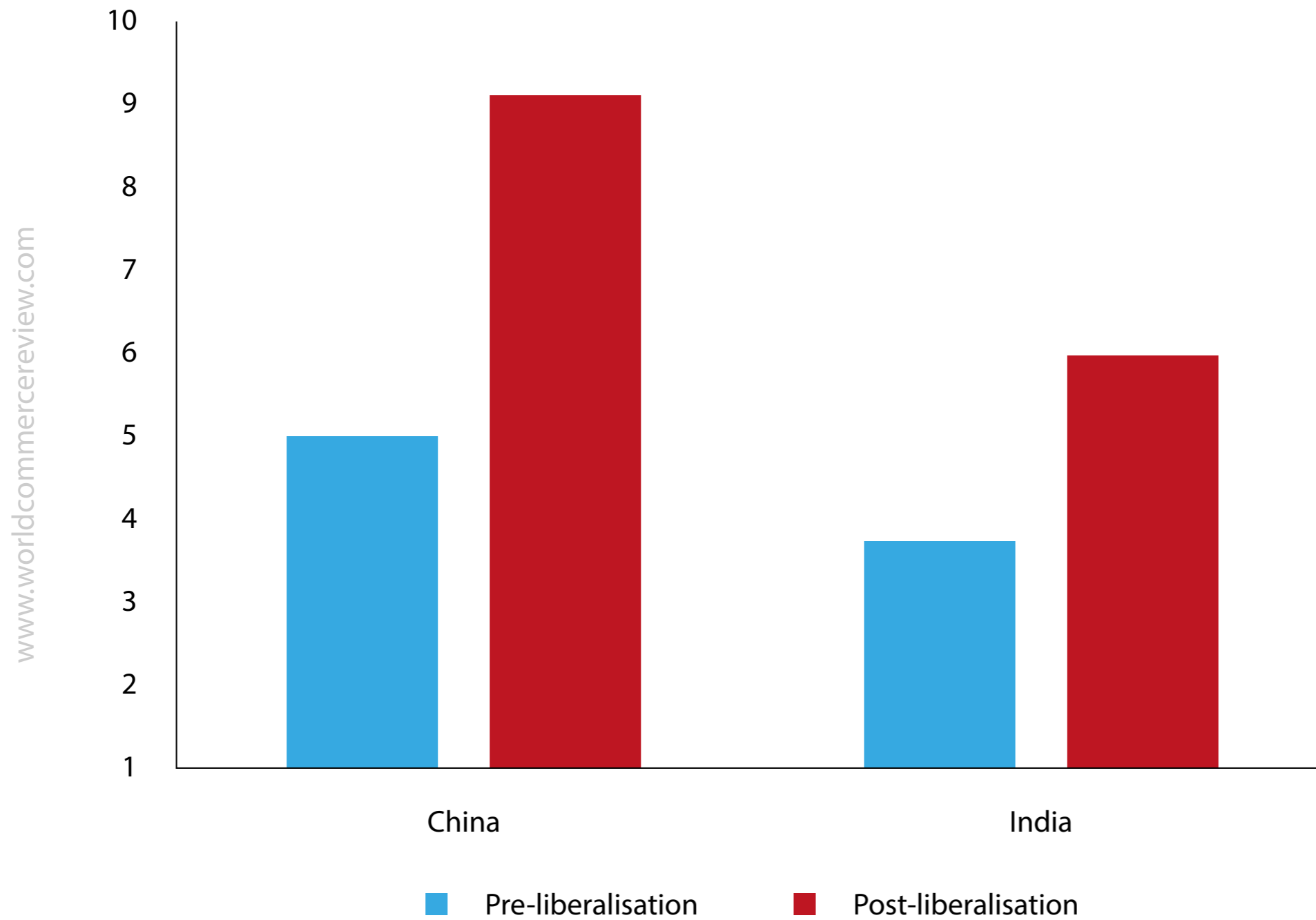
To put these numbers in perspective, by the time a child reaches the age of majority in India, she can expect twice the income that her parents earned when she was born. In China she can expect four times that amount.

**Table 2. Time in years to double income, pre- and post-liberalisation**

	China		India		USA 1961-2020
	Pre	Post	Pre	Post	
GDP growth rate	5.0	9.1	3.8	6.0	2.9
Years to double GDP	14	8	19	12	24
Per capita GDP growth rate	2.8	8.2	1.6	4.3	1.8
Years to double GDP per capita	26	9	46	17	40
Population growth rate	2.2	1.0	2.2	1.7	1.2

*Note: 'Pre-liberalisation' is 1961-1977 for China and 1952-1983 for India. 'Post-liberalisation' is 1978-2020 for China and 1984-2020 for India. Source: Bruegel based on WDI, Indian National Statistical Organisation, UN Population Prospects.*

**Figure 8. China and India, GDP growth rates pre- and post-liberalisation**



*Note: 'Pre-liberalisation' is before 1978 for China and before 1984 for India.*

*Source: Bruegel based on World Development Indicators (WDI) and the Indian National Statistical Organisation.*

More importantly, these quantitatively higher rates of growth lifted all. Figure 9 shows the cumulative growth over the last four decades for each decile of the income distribution. Note first that in India, economic growth was rather evenly spread among deciles; every decile saw cumulative income growth of somewhere between 350 percent and 400 percent.

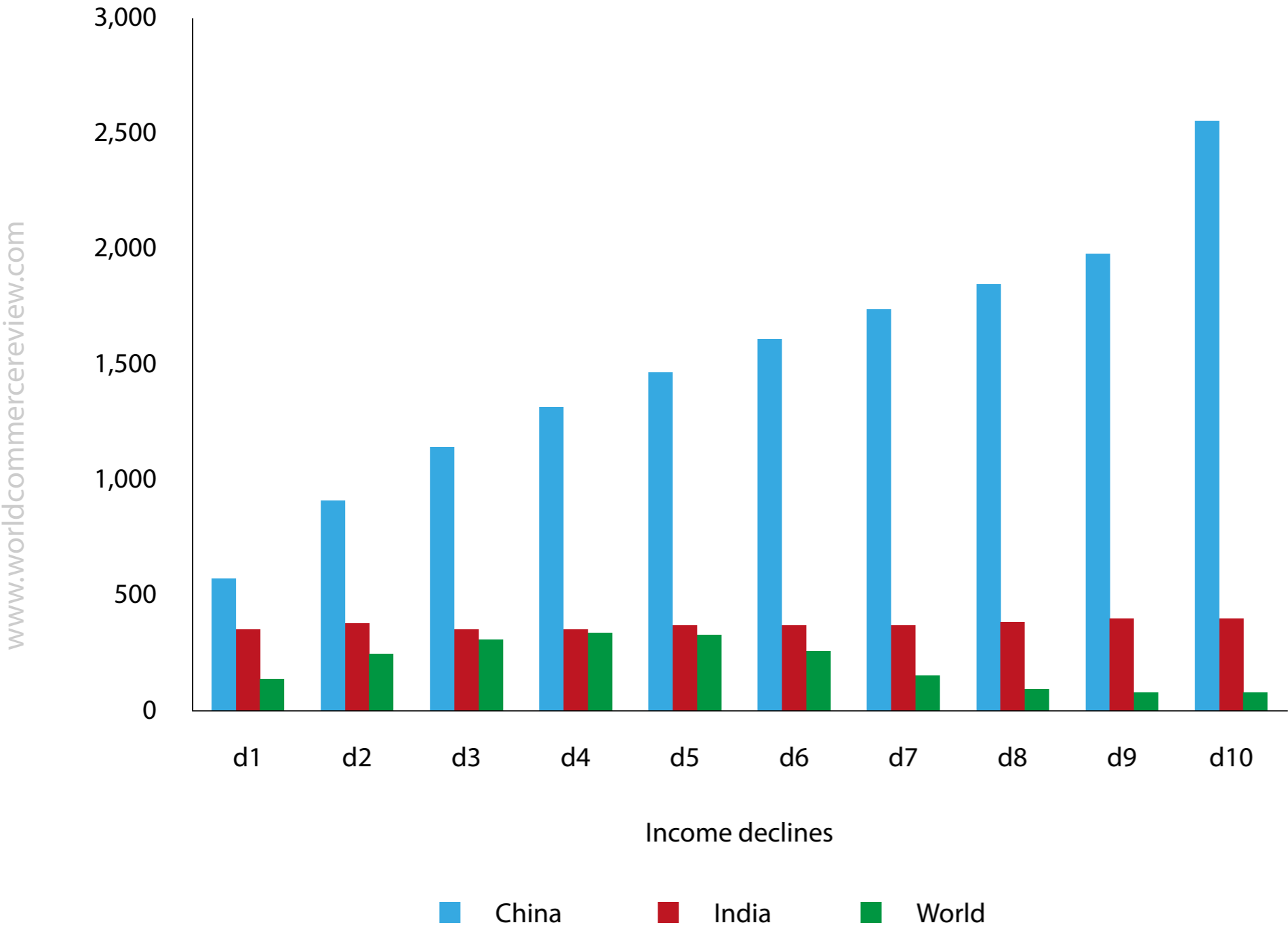
For the poorest decile, cumulative growth amounted to 354 percent, more than twice as rapid as income growth for the poorest global decile. So the poorest Indians saw their living standards improve much faster than the global poor. In fact, income growth for every Indian decile has outpaced its counterpart global decile since the 1980s.

Impressive as this performance is, it has been put in the shade by China, where growth in every decile towered above its counterpart global decile, while also standing comfortably above its counterpart Indian decile. The distribution of growth was far less even across deciles than in India, with the richest decile growing by over 2500 percent.

But even the gains of the lowest decile, at about 574 percent, were striking in comparison to both India and the global average. Even if the poorest in China were increasing their incomes at a modest pace relative to the richest, they were nonetheless progressing much faster than those in the same decile elsewhere.

The pattern becomes even starker further up the distribution. For the fifth and sixth deciles, cumulative growth in China was more than four times the growth in India, and close to six times the global average. The rise in income inequality in China and India is therefore fundamentally different from that in the West, where real incomes have stagnated or grown very slowly for those at the bottom of the distribution.

**Figure 9. Income growth by decile, China, India and the world, 1981-2022 (% cumulative growth)**



*Note: for India is from 1983-2022.  
Source: Bruegel based on World Income Inequality Database.*

The extraordinary impact of high rates of growth, shared by every decile of the population, is best seen in its impact on poverty. The World Bank defines absolute poverty as subsisting on less than \$2.15 a day<sup>6</sup>. At this level of income, hunger or the shadow of hunger is an inescapable fact of life: to use the phraseology of the UN Food and Agriculture Organisation, it is challenging to obtain *“a sufficient amount of calories on a regular basis to lead a normal, active and healthy life”*.

Malnutrition, disease and social exclusion are daily aspects of the lives of the truly poor. One could make a principled argument, based on diminishing marginal utility, that even small improvements to the material circumstances of somebody living in absolute poverty add more to human welfare than large improvements to the circumstances of those more fortunate.

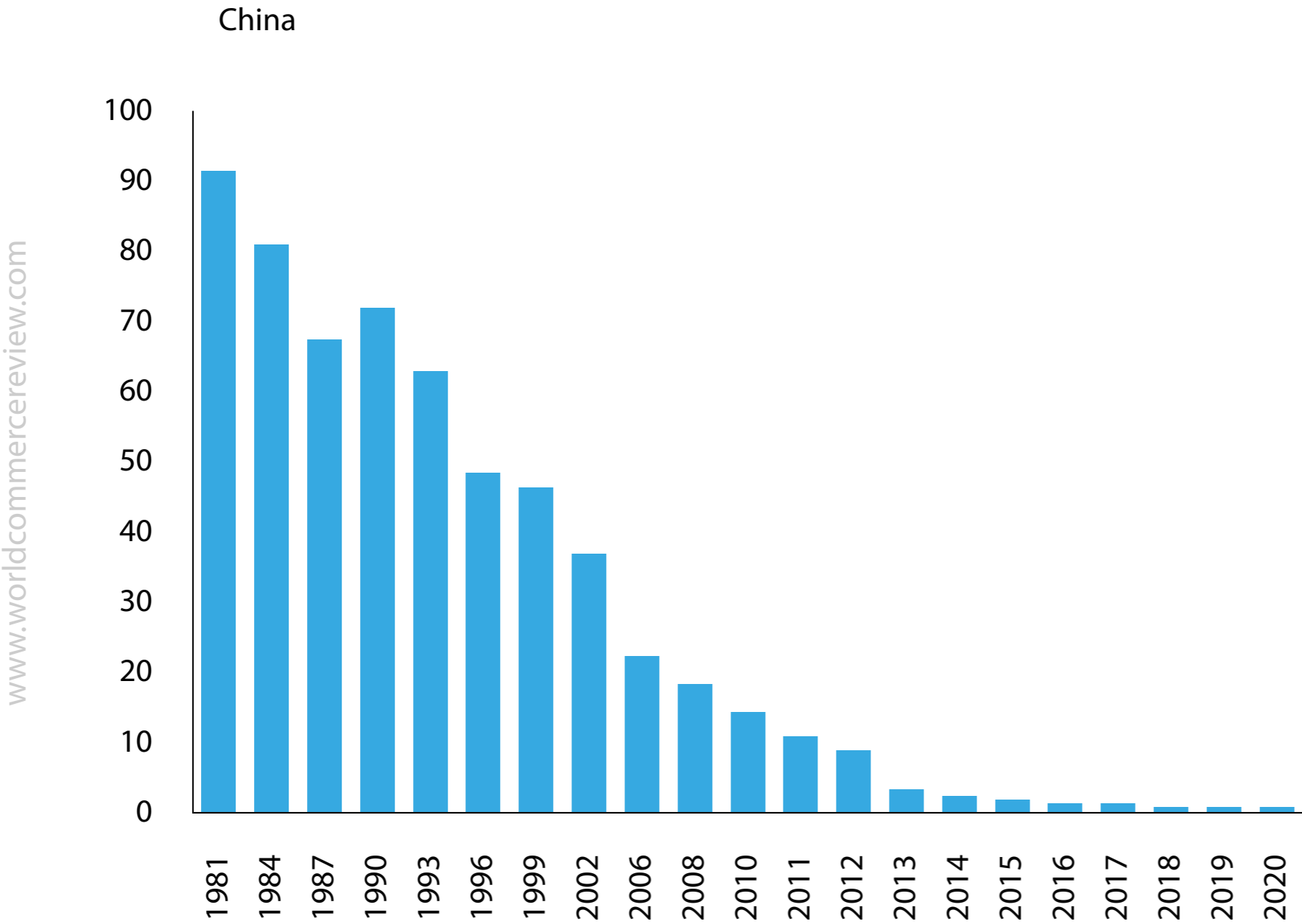
The steep falls since liberalisation in the numbers of people living in absolute poverty in China and India – the so-called ‘poverty headcount’ – must count as one of the most sweeping and dramatic improvements in human welfare in the history of the world (Figure 10).

In China more than 90 percent of the population lived in absolute poverty in 1981; today the fraction is close to zero. In India the poverty headcount ratio declined from well above 60 percent in 1977 to a little above 10 percent today.

In absolute numbers, China reduced the number of poor people from about 847 million in 1983 to a margin-of-error 2 million in 2019. India reduced the number of poor people from 420 million in 1983 to 147 million today.

Together, the two countries were responsible for lifting an astonishing 1.1 billion people out of poverty over the last four decades. Since the number of global poor fell by about 1.3 billion over the period, China and India accounted for more than 85 percent of the reduction (Figure 11).

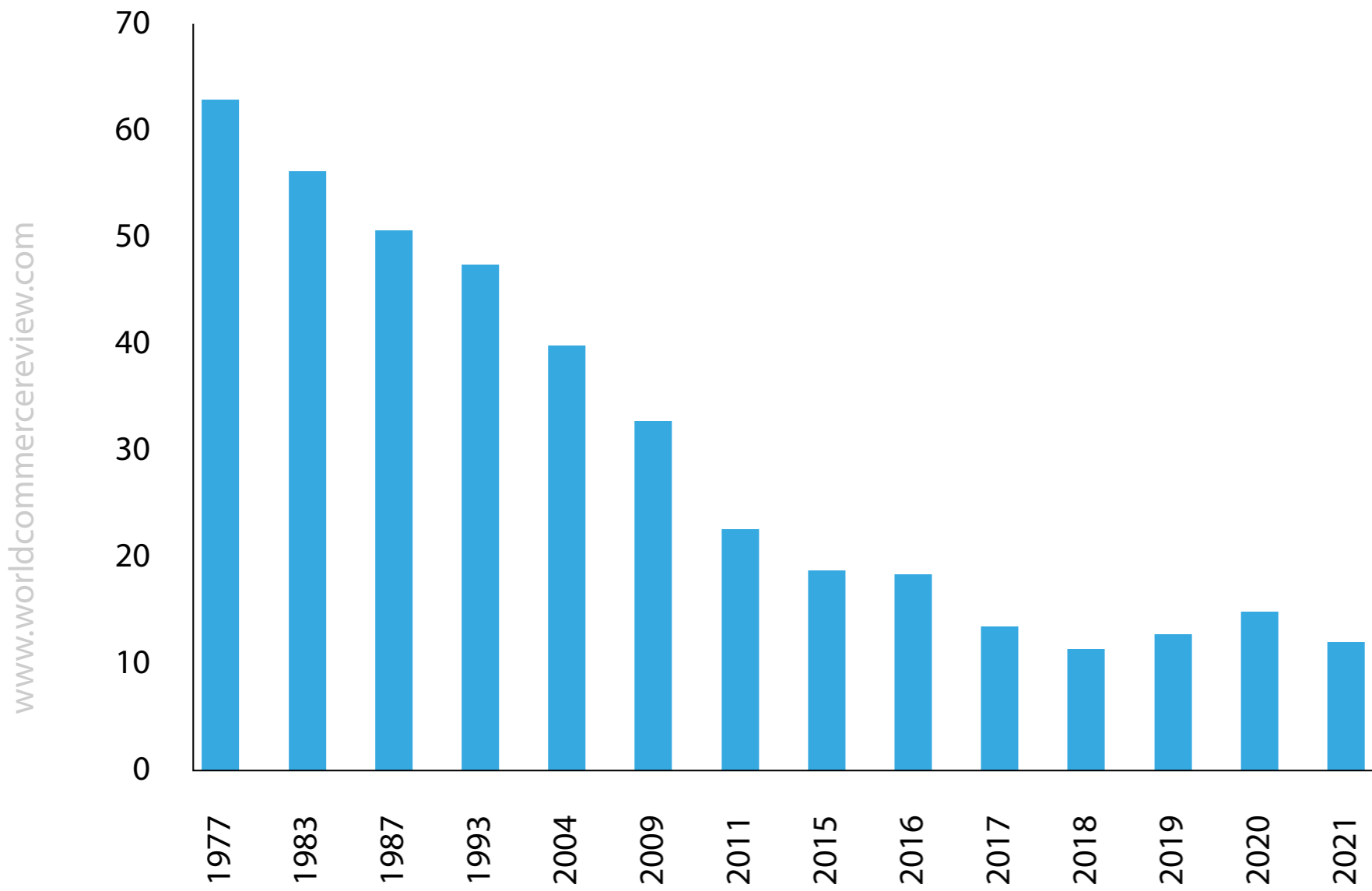
**Figure 10. Poverty headcounts, China and India (%)**



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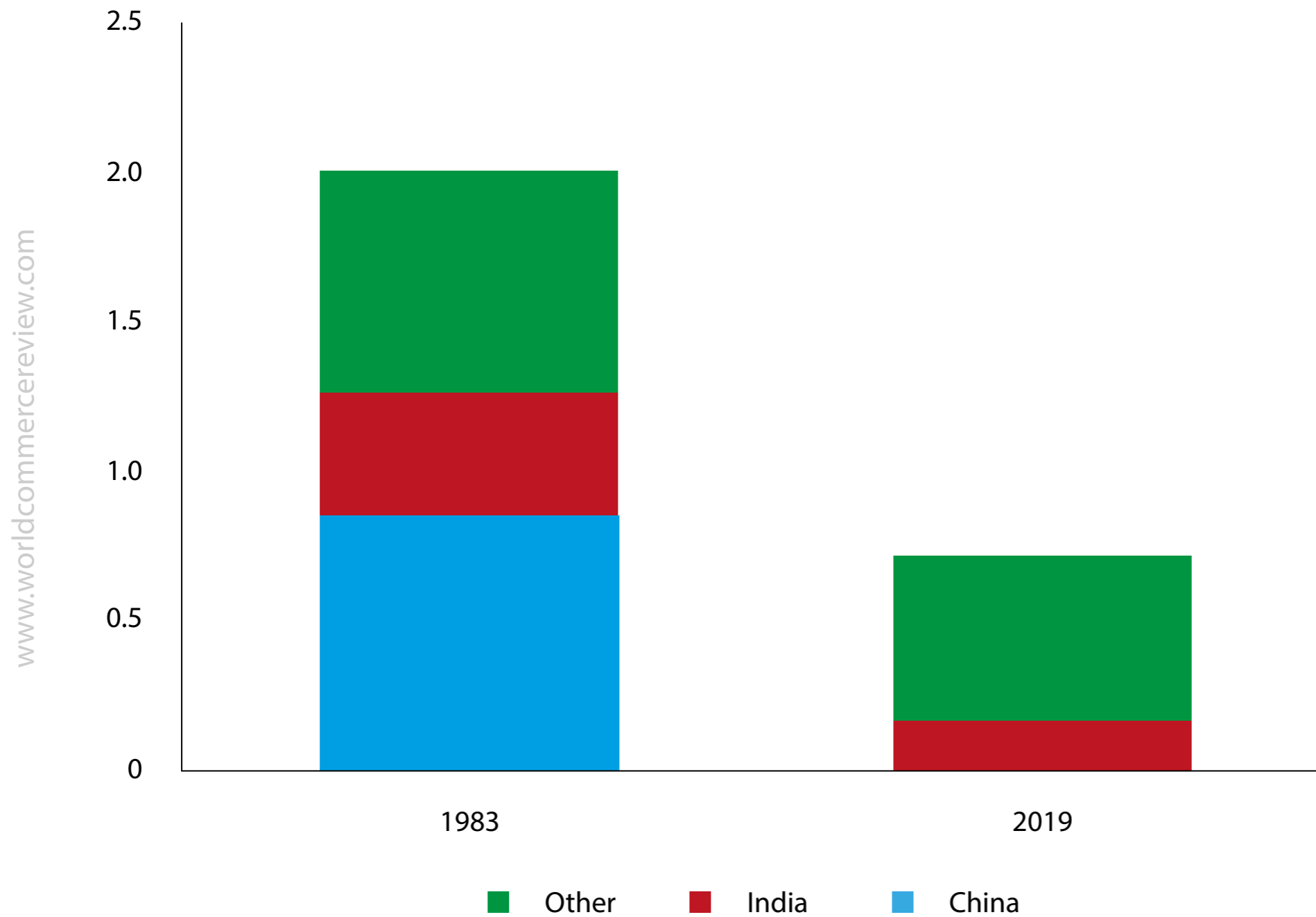
# India



Note: % on less than \$2.15/day, 2017 PPP.

Source: Bruegel based on World Bank World Development Indicators.

**Figure 11. Global population living in absolute poverty (billion people)**



Source: Bruegel based on World Bank World Development Indicators.

## 4 Rich countries

Of course, rising within-country inequality is certainly a serious economic issue in several rich economies, so much so that it has come to dominate the political discourse. Several excellent popular works, such as Martin Wolf's *Crisis of Democratic Capitalism* (2023) and Kimberley Clausing's *Open* (2020), document this trend in empathetic detail.

In most Organisation for Economic Co-operation and Development (OECD) countries, the labour share of income has declined substantially in recent decades, suggesting that the gains from economic growth have accrued disproportionately to the owners of capital and to the highly educated (Figure 12).

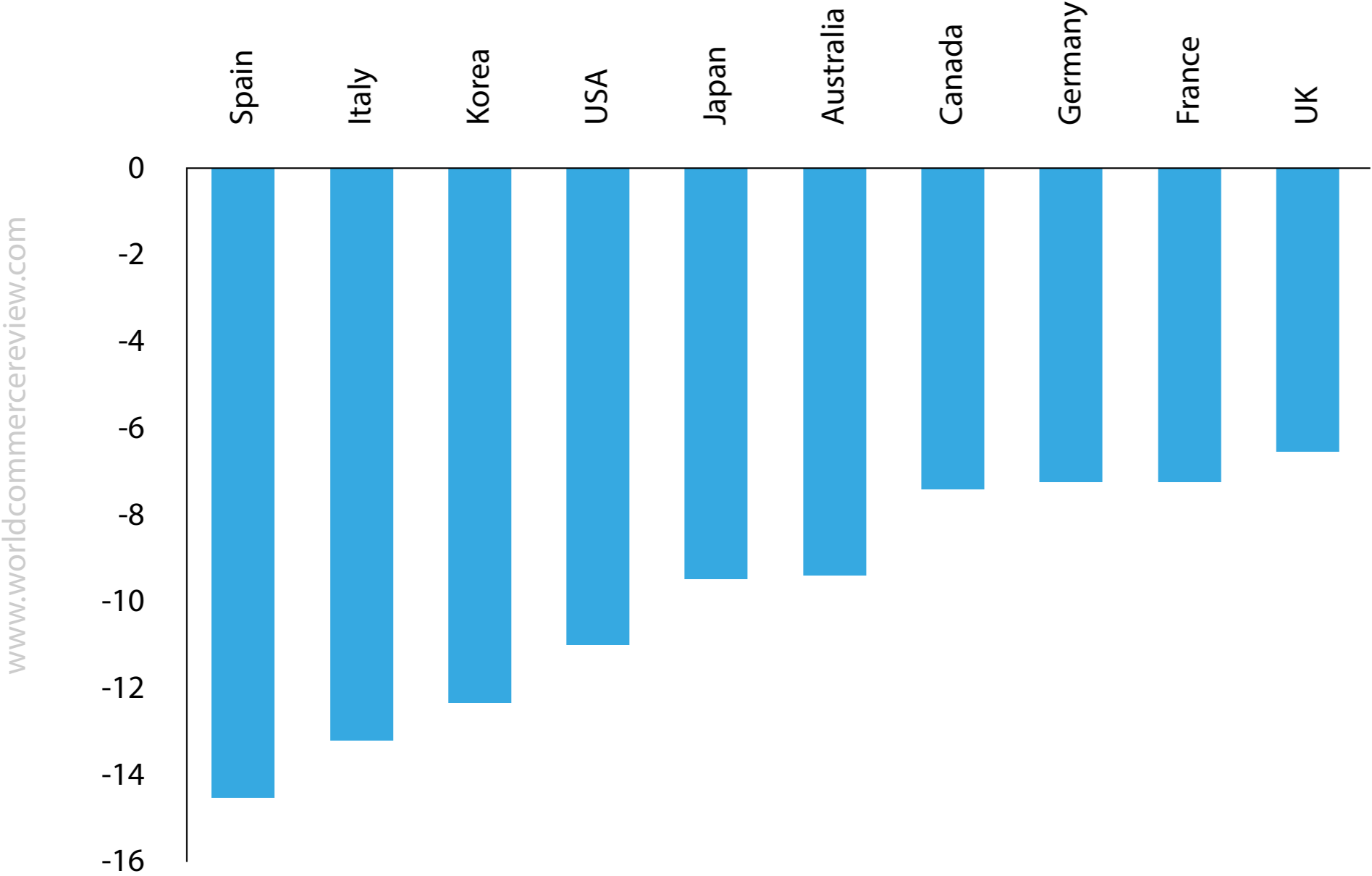
This creates a stark discrepancy between the rate of growth of the economy as a whole and that of the average person's earnings. A vivid illustration is provided by the US, where GDP per capita more than doubled between 1984 and 2022, but median household income rose much more slowly (Figure 13).

The sense that every generation would inevitably do better than their parents is being lost. The share of households with flat or falling real market incomes (ie. before redistribution) between 2000 and 2014 was a staggering 80 percent in the US, and more than 60 percent for a sample of rich countries (Figure 14).

The situation is made worse by conspicuous gains for those at the top of the ladder, even as the middle-class stagnates. In the US in 1965, the average CEO earned about 21 times the compensation of a non-supervisory worker; by 2022 the multiple had skyrocketed to a jaw-dropping 344 (Bivens and Kandra, 2023).

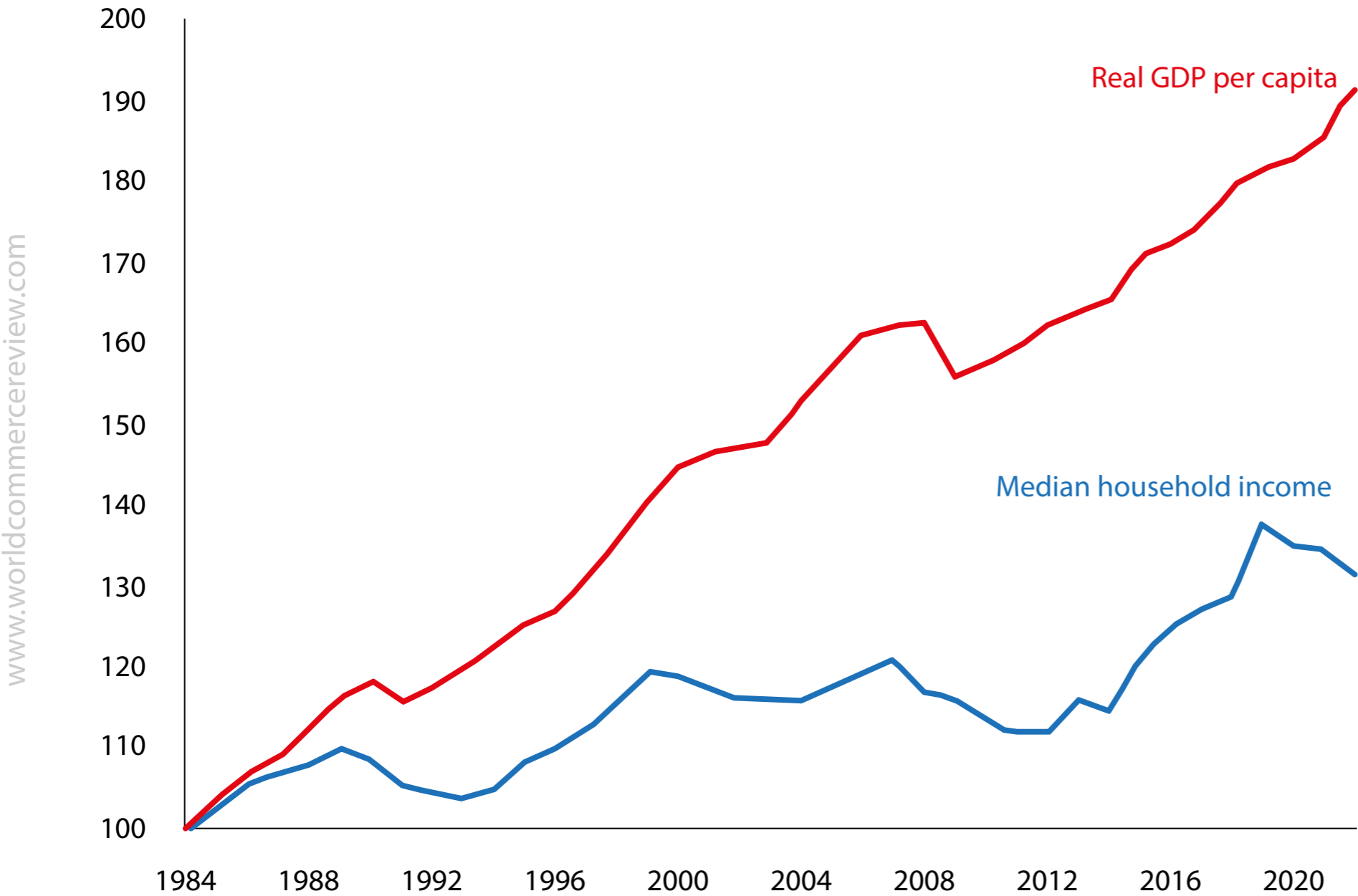
Correspondingly, the fortunes of the top 1 percent have soared. The economists Thomas Piketty and Emmanuel Saez famously used data from income tax returns to estimate that the pre-tax share of the top 1 percent of US earners in national income more than doubled between 1979 and 2019, rising from about 9 percent to 19.4 percent (Piketty and Saez, 2013)<sup>8</sup>.

Figure 12. Change in the labour share of income, 1970-2014 (%)



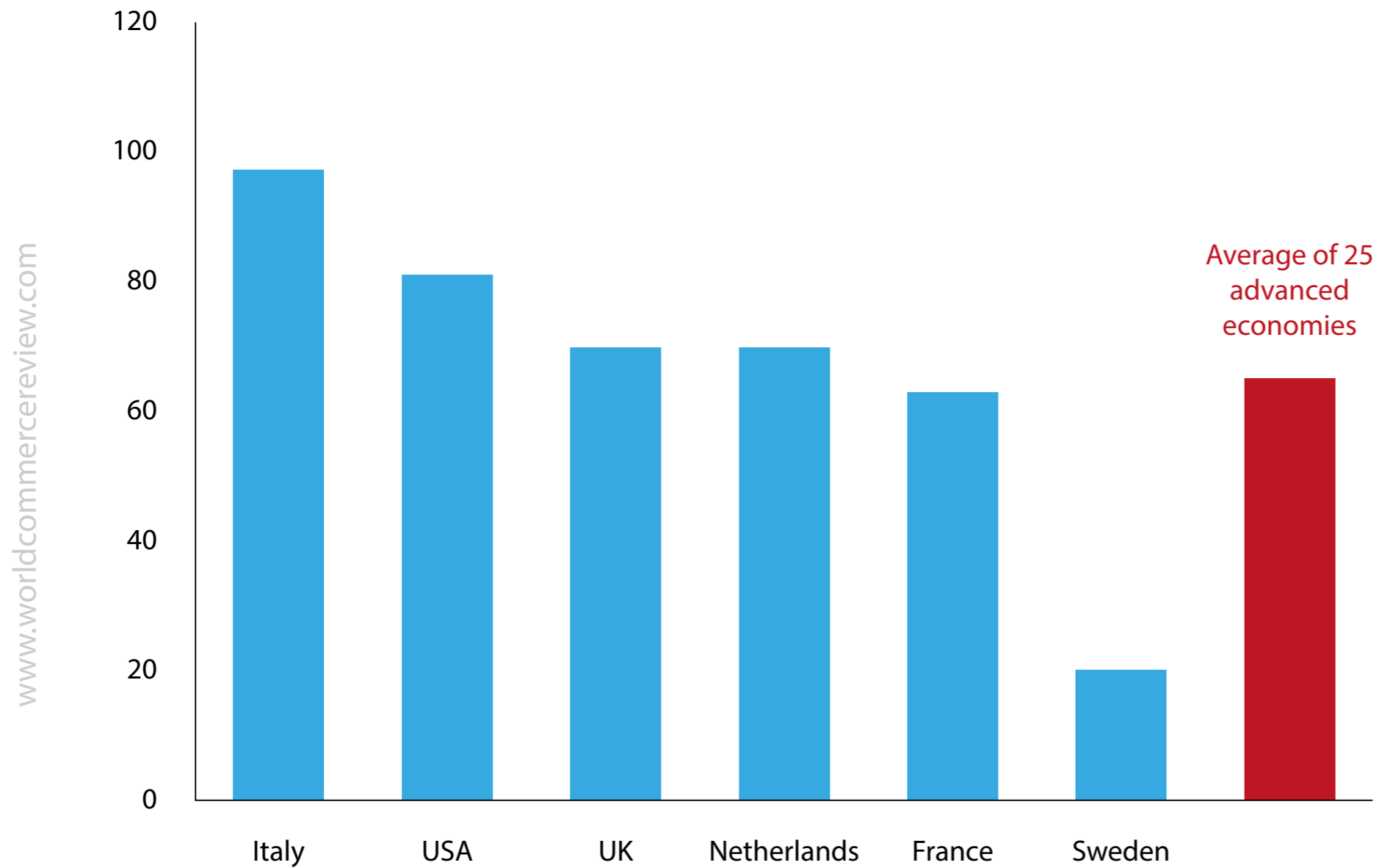
Source: Bruegel based on ILO and OECD (2015).

**Figure 13. US household median income vs real GDP per capita, 1984-2022 (1984 = 100)**



Source: Bruegel based on [Federal Reserve Bank of St Louis](#).

**Figure 14. Share of households with flat or falling real incomes, selected countries, 2000-2014 (%)**



*Note: Real market income from wages and capital.  
Source: Bruegel based on McKinsey Global Institute.*

These estimates have been challenged and refined by other economists, most notably by Gerald Auten and David Splinter, who correct for factors such as different divorce rates between rich and poor households, and a major reform to the US tax regime in 1986 (Auten and Splinter, 2023).

They found a more modest rise in the share of the top earners, from about 9.4 percent in 1979 to 13.8 percent in 2019. Whatever the exact numbers, the sense of an unequal distribution getting more unequal over time persists (Figure 15).

Even more concerning to a liberal, inequality of opportunity is unacceptably high. Economists measure inequality of opportunity by looking at the correlation between the lifetime incomes of parents and the lifetime incomes of their children.

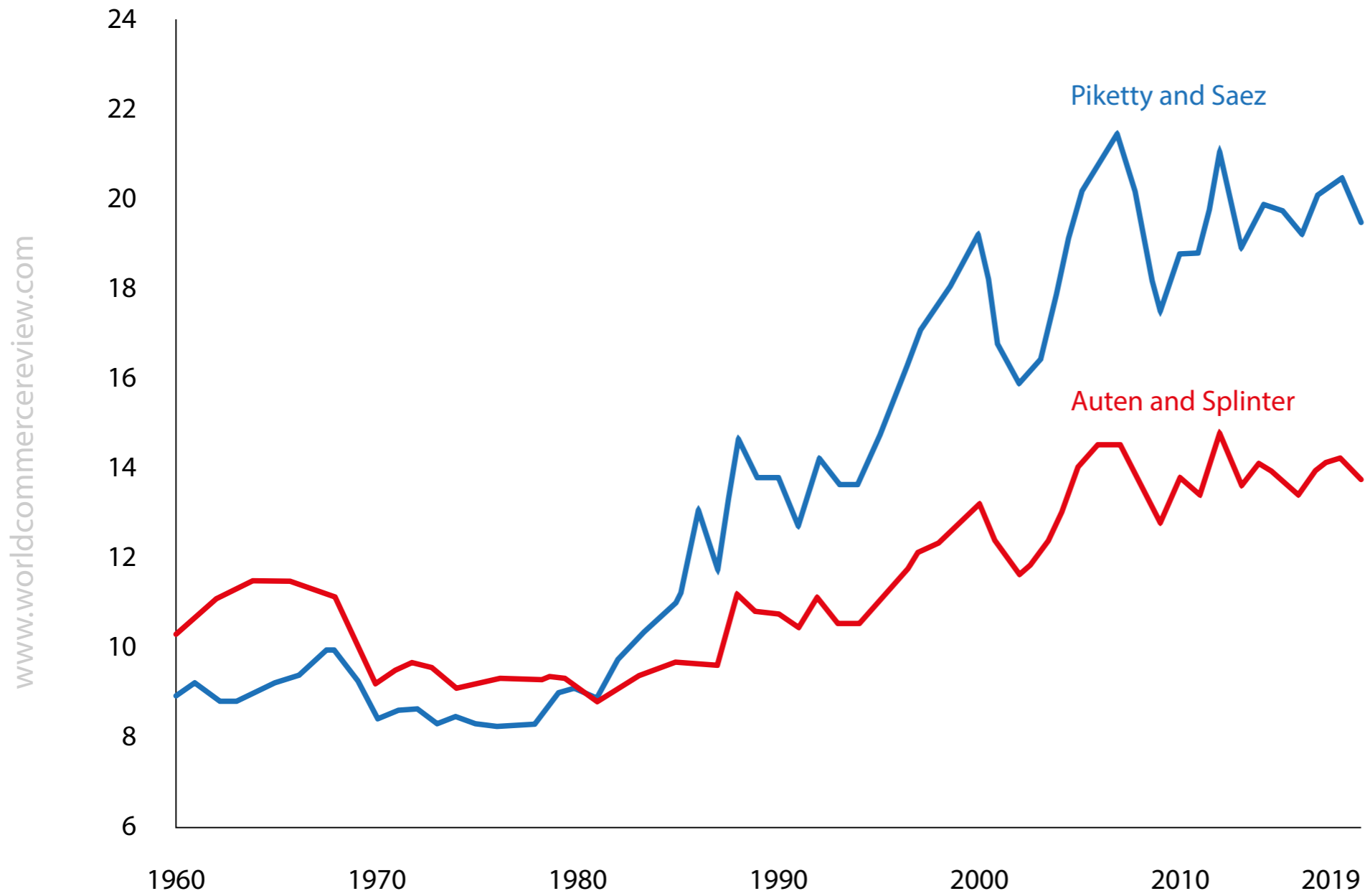
If the opportunities available to the children of the affluent and the destitute were identical, this correlation – called the inter-generational elasticity, or IGE – should be close to zero. Unsurprisingly this utopian condition does not prevail anywhere in the world.

Generally speaking, IGE tends to be higher, that is to say, inequality of opportunity tends to be more entrenched, in poor countries than in rich countries, a relationship dubbed the 'Great Gatsby Curve' (Krueger, 2012).

This makes sense: poor countries typically have more rigid class structures, with greater educational variation by income, leakier social safety nets and relatively few opportunities to transcend one's childhood background.

But IGE is also high in OECD countries. In the US, for example, research suggests that the IGE of income could be as high as 0.6 (Mazumder, 2005). At that level of IGE it would take, on average, five to six generations, or more than a

**Figure 15. Share of US national income accruing to top 1%, 1960-2019**



Source: Bruegel based on Piketty and Saez (2023) and updates; Auten and Splinter (2023).



hundred years, for descendants of a family living at the Federal poverty line to come within 5 percent of the average national income.

Contrary to the cherished mythology of the American Dream, the children of low-income parents clearly do not have access to remotely the same opportunities as the children of the more affluent.

Not only is inequality of opportunity self-evidently unjust, it also amplifies and extends the malign effects of inequality of outcomes. In societies where opportunity is unequally distributed – where the material circumstances of parents act as binding constraints on the opportunities available to their children – unequal outcomes exert a greater drag on economic growth (Aiyar and Ebeke, 2020).

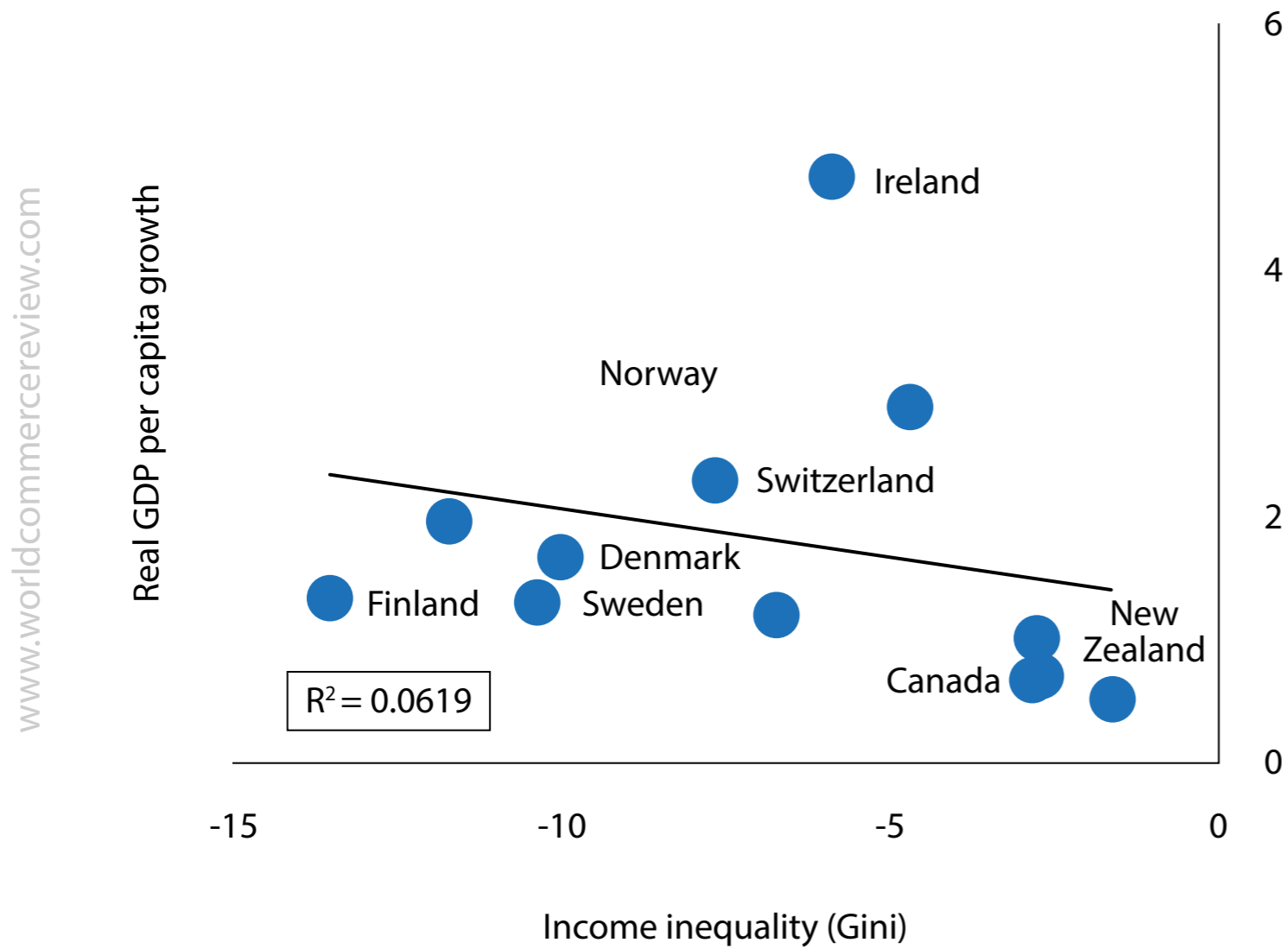
Any increase in income inequality tends to become entrenched, limiting the investment opportunities – broadly defined to include investment in children – available to low-income earners, thereby retarding aggregate long-run growth.

By contrast, in societies with more equal distributions of opportunities, an increase in income inequality can be more easily reversed and need not constrain investment opportunities and growth (Figure 16).

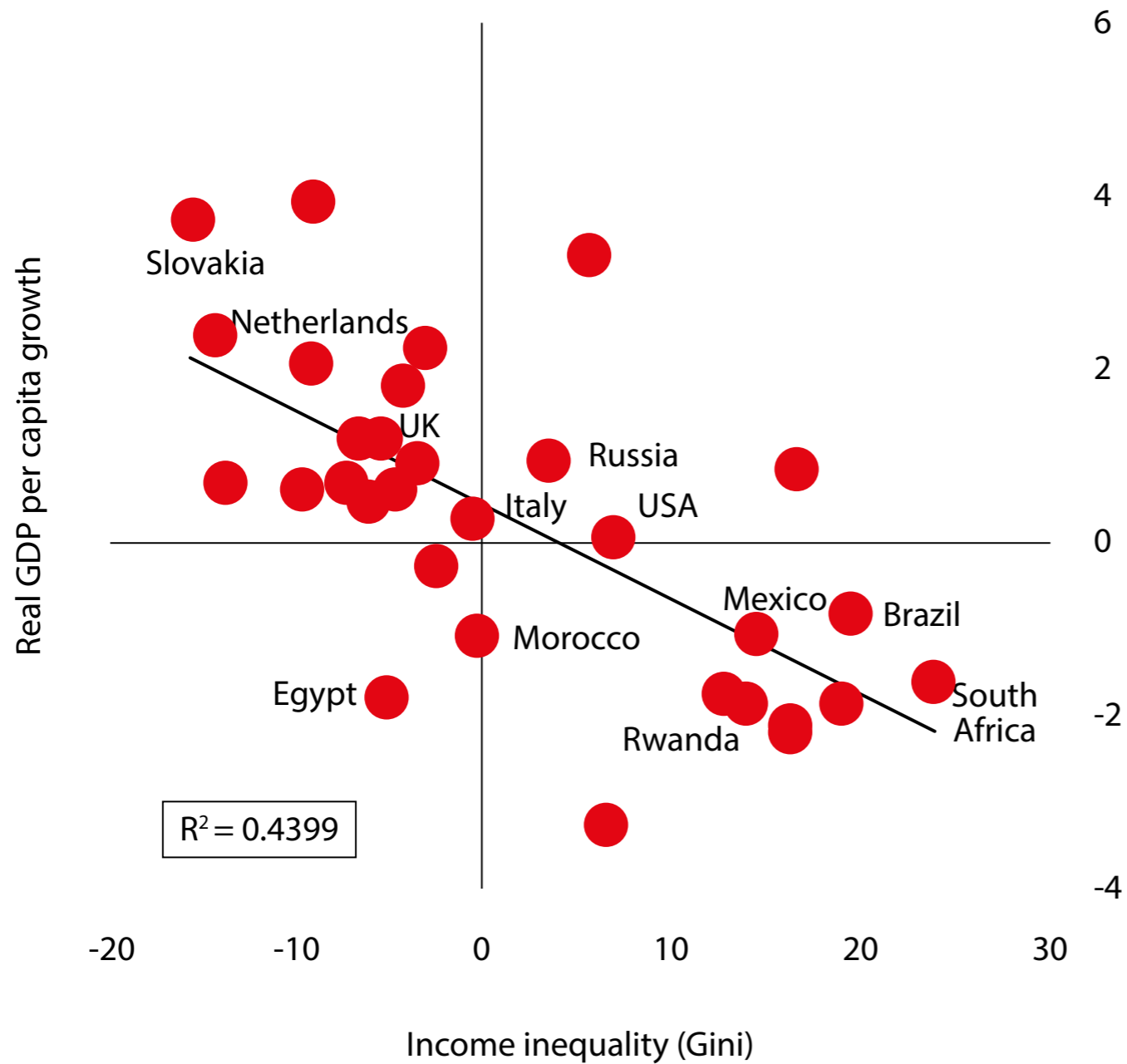
Clearly, then, these concerns about inequality of income and inequality of opportunity are far from trivial. They are profound and deeply connected to ideas about what constitutes a just ordering of society. But their remedy does not lie in dismantling any of the foundation stones of the liberal international economic order. There is no need for greater state intervention in economic activity, for curbs on immigration, or for the protection of favoured domestic firms from international competition.

**Figure 16. Income inequality and long-run growth (1970-2015)**

High intergenerational income mobility sample



### High intergenerational income mobility sample



Source: Aiyar and Ebeke (2019). Notes: The scatter plots show the residuals of both real per-capita growth and the income Gini derived from fixed effects regressions using five-year average data for a large set of countries over 1970–2015. The controls include the lagged levels of real GDP per-capita, the domestic investment rate, level of education and trade openness. The regressions also control for period fixed effects. The cut-off for intergenerational mobility into high and low samples is set at the value 0.3, which is the endogenously-determined threshold from the full-fledged non-linear estimations in Aiyar and Ebeke (2020).

Instead, the remedy lies in much greater income redistribution and high-quality provision of public goods, both to strengthen the social safety net and, more importantly, to move in the direction of more-equal life opportunities. For example, differences in school quality and nutrition early in life can have career-determining consequences.

To a liberal it is therefore of first-order importance to reduce these differences to the maximum extent possible, as part of what Nobel Laureate Angus Deaton (2023) called 'pre-distribution'. A much greater effort at establishing universal access to basic goods, combined with more generous income redistribution, is perfectly compatible with the liberal economic order and would greatly strengthen its foundations.

There are many excellent policy ideas for strengthening the social safety net and moving in the direction of equalising opportunities. More importantly, rich countries today have historically unprecedented financial resources with which to fund these proposals.

One idea that seems radical at first blush but requires only the requisite political will, is that of a universal basic income (UBI). Granting every citizen a minimum income, irrespective of job status or any other conditions, would comprise the ultimate social safety net.

And while no policy action could conceivably level the playing field for children by granting them all equally well-resourced and responsible parents, a UBI could at least shield every child from the tragedy of a truly destitute parent.

Many varieties of UBI could be considered, with hugely different price tags. Consider, as a baseline, a proposal by the legal scholars Miranda Fleischer and Daniel Hemel to provide a UBI of \$500 per month to every adult and every child in the US (Fleischer and Hemmel, 2020).

This level of income corresponds to roughly half of the federally defined poverty line and is sometimes referred to as the 'deep poverty' threshold. By construction, therefore, the proposal would eliminate deep poverty, a condition currently endured by an estimated 12 million adults and 6 million children (Fox and Pacas, 2018).

The cost of the proposal would be roughly 9 percent of GDP, or 7 percent if the UBI were accompanied by the scrapping of a plethora of federally-funded transfer programmes, including food and rental assistance for low-income people.

The cost is clearly substantial but adding it in full to the current level of US general government expenditure of about 45 percent of GDP would still leave public spending about in line with Germany, and comfortably below the level in several other rich countries, including France, Italy, Austria and Belgium<sup>9</sup>. Note too, that the proposal's price tag could be (modestly) reduced by deviating from a 'pure' UBI and phasing out the transfer beyond a certain income threshold<sup>10</sup>.

Critics often argue that the unconditional nature of UBI transfers will lead to poor spending choices by recipients that will degrade their quality of life over time: they will buy liquor, not food, they will gamble not invest. But quite apart from the questionable paternalistic premise that the critic knows better than the income recipient what is actually good for her, there is broad empirical evidence that unconditional transfers improve welfare over time.

In the US, studies have found that cash transfers are associated with improvements in infant health, additional years of schooling, increased test scores among students, and a lower rate of teenage arrests (Hoynes *et al* 2015; Dahl and Lochner, 2017; Akee *et al* 2010). These are precisely the kinds of indicators that one would use to measure whether early-life opportunities are being equalised.

In developing countries, studies have found that cash transfers lead to increased spending on food, education and medical care, and on capital investments such as acquiring livestock. There is little evidence of increased spending on 'vice goods', such as alcohol, tobacco or gambling.

The COVID-19 pandemic provided an interesting natural experiment on the impact of a sharp increase in unconditional transfers. The US Child Tax Credit was temporarily expanded to make the full credit available to low-income families that are usually excluded from coverage<sup>11</sup>.

The results were dramatic, with the child poverty rate falling from 9.7 percent in 2020 to a record low of 5.2 percent in 2021 (Jarrow, 2023). Moreover, this occurred without any measurable negative impact on employment among recipient families (Fenton, 2023).

Tragically, the expansion of the tax credit was rescinded as the pandemic waned, resulting in a swift rebound of child poverty to 12.4 percent in 2022, the steepest one-year rise in child poverty in recorded history.

Given that the cost of reinstating the full credit is estimated at a mere \$12 billion per annum, or about 0.05 percent of US GDP, the liberal case for doing so immediately would seem unassailable by any moral or practical calculus (Joint Committee on Taxation, 2021).

Short of a UBI, much can be done to improve the functioning of labour markets to strike an optimal balance between efficiency, job security and adequate compensation. A combination of employment-linked tax credits, publicly-subsidised childcare for working parents and generous unemployment insurance could in principle offer all workers an adequate income to participate fully in society.

The Danish system of 'flexicurity' has many of these features, aspiring to combine sufficient job security with the flexibility for employers to adjust their workforces in line with changing economic conditions (European Commission, 2007). When recession strikes – as it inevitably must – active labour market policies such as retraining and job-search assistance are essential to offer some degree of protection to workers.

Even with the most expert macroeconomic management, every so often there will occur a major economic disruption, with the potential to create mass unemployment and a downward spiral of declining demand and falling output.

The Global Financial Crisis and the COVID-19 pandemic provided examples from just the last couple of decades. In such episodes, prolonged layoffs can lead to the depreciation of workers' skills, posing additional barriers to re-entry into the labour force (Suphaphiphat and Shi, 2022). This is especially true for a spell of unemployment early in one's career, which can have lifelong effects (Yagan, 2019).

To cope with such large adverse labour-market shocks it is worth exploring innovative policy ideas that deviate from unemployment insurance. In particular, many European countries operate short-time work (STW) schemes, which subsidise firms to keep on their workers – typically on reduced hours – rather than firing them during a recession.

This enables the job match – the fit between the technical requirements of a job and the skills and experience of the worker currently employed in that position – to survive the downturn in market demand. Not only does this avoid the deterioration in worker skills, it also eliminates, in principle, costly post-recession searches for new workers by firms and for new jobs by workers.

Germany's venerable Kurzarbeit scheme, first conceived in the Weimar Republic but thoroughly updated and modernised in subsequent decades, is the paradigmatic example of a successful European STW. In the trough of the COVID-19 recession, with the parameters of the Kurzarbeit programme having been adjusted temporarily to make payouts more generous and easier to access, unemployment in Germany rose by only 1 percentage point, compared to a rise in unemployment of almost 10 percentage points in the US, despite a GDP contraction that was slightly higher in Germany (Figures 17 and 18).

Moreover, the evidence suggests that, subject to getting various other policies correct, the careful use of STWs is not associated with more rigid labour markets and misallocated resources, contrary to oft-expressed concerns about the application of such schemes.

Ultimately there is no shortage of policy ideas to ameliorate the unacceptably high levels of inequality in rich countries, which are rich not just relative to other countries in the world today but relative to any nation, tribe or empire in recorded history.

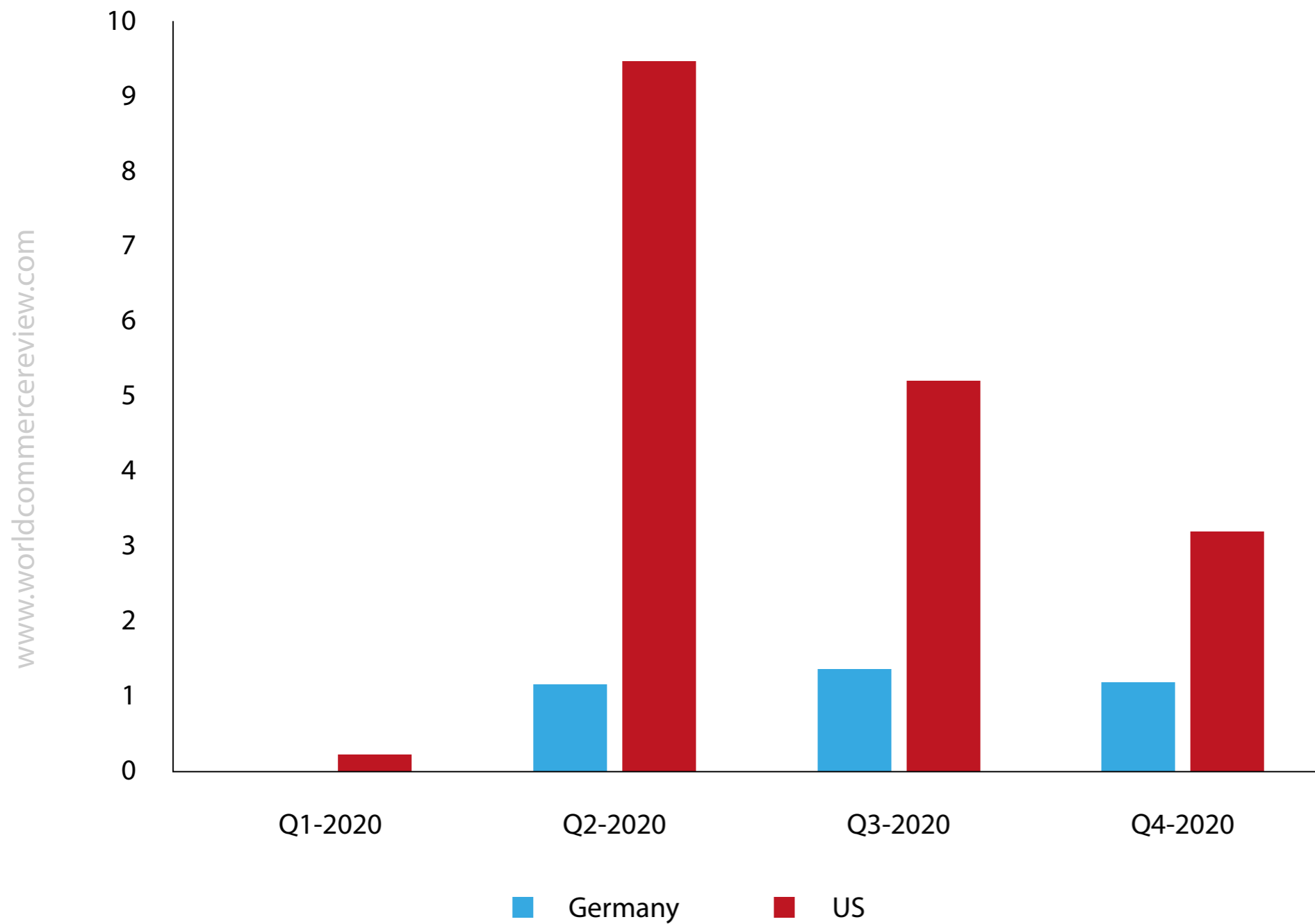
The resources with which to cushion the less fortunate and move in the direction of equalising opportunities for all members of society are unprecedented. Trying to put these ideas into action is not only compatible with the liberal economic order, but should be properly regarded as philosophically inseparable from it.

## **5 Evaluating global welfare**

From a global perspective, the dominant public discourse about liberalism's malign impact on economic inequality is alarmingly blinkered. The sharp rise of within-country inequality in rich countries needs urgent remedy, but applies to a set of countries that constitutes only about one-fifth of the global population.

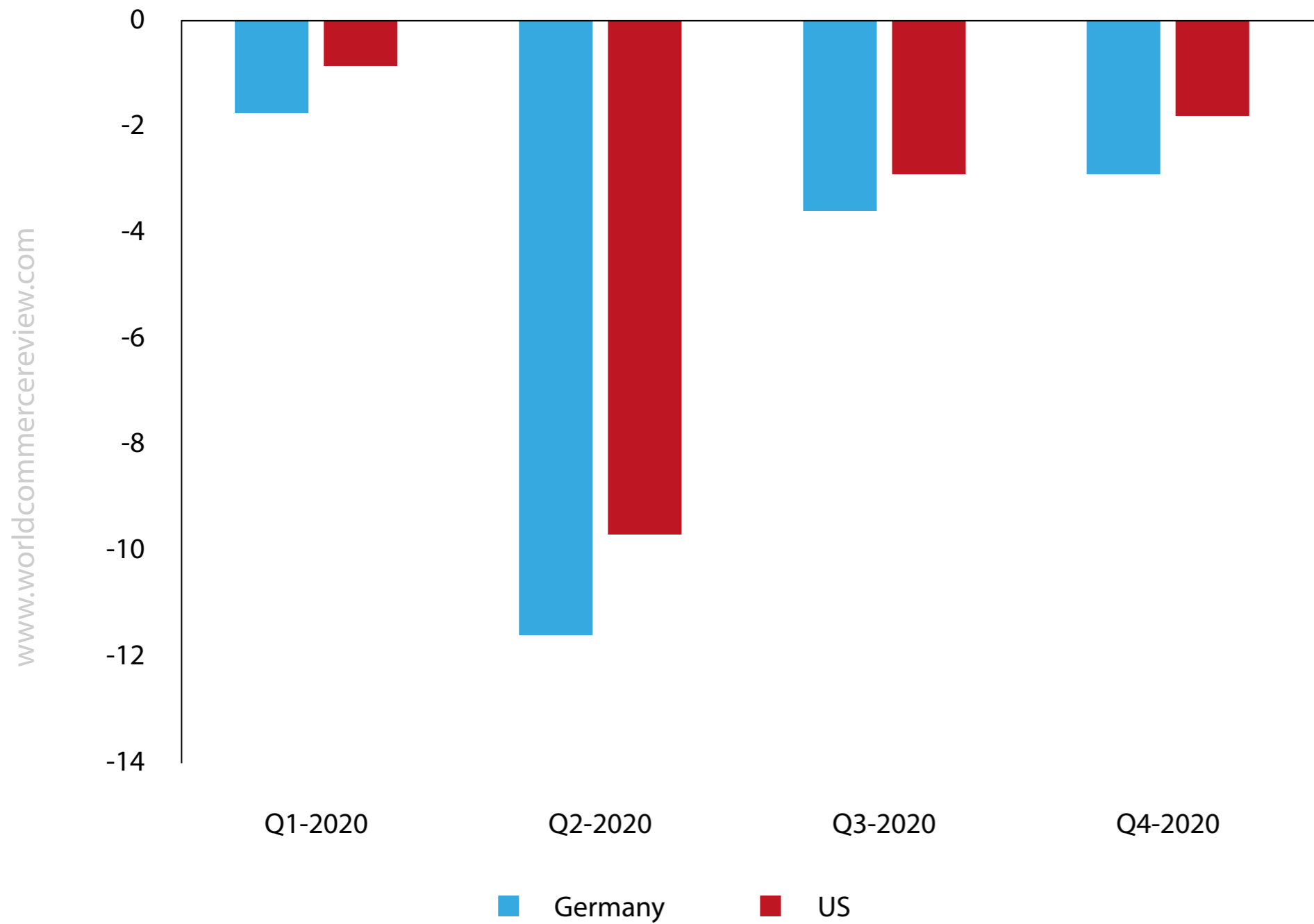


**Figure 17. Germany vs US, change in unemployment rate (% , from Q4 2019)**



Source: Aiyar and Dao (2021).

**Figure 18. Germany vs US, change in real GDP (% , from Q4 2019)**



Source: Aiyar and Dao (2021).

The swift and broadly-shared rise in affluence of two late liberalisers, China and India – which together comprise about twice the population of the West – is far more important quantitatively. Inequality is rising only if one consciously restricts attention to the domestic income distribution of advanced economies, placing zero weight on other individuals outside those economies.

While such a focus may be important in explaining domestic political sentiment within rich countries, it is incompatible with a welfare assessment that treats equally every individual regardless of location.

The American philosopher John Rawls (1971) famously constructed a thought experiment to determine which of two states of the world is 'better', when each of those states features multiple people with multi-dimensional preferences. Let's call one possible state of the world Eden and the other Swarga. Some people are happier in Eden because, say, they have a higher income and a more privileged societal position in Eden than in Swarga.

Others fare better in Swarga than in Eden. On what grounds might such inter-personal disagreements about desirable states of the world be mediated? How can an objective determination be made whether Eden is better than Swarga or vice-versa?

Rawls's solution was to imagine a 'veil of ignorance' behind which a hypothetical observer – a prospective member of society – is situated. The observer is completely ignorant of their own attributes. They do not know if they are rich or poor, young or old, female or male, educated or illiterate.

They can observe every detail of life in Swarga and Eden but have no prior information about what their position in either society would be. From behind the veil of ignorance, which society would they choose to live in? Their choice defines what is meant by the 'better' society.

To bring this thought experiment to bear on the debate about liberalism, let's say that Eden represents the world of about fifty years ago, pre-dating both the rise in Western within-country inequality and the liberalising reforms of China and India. Swarga represents today's world.

From behind the Rawlsian veil of ignorance it seems indubitable that an observer would choose Swarga over Eden. Most obviously, the observer would have about a two-thirds chance of being Indian or Chinese, and their likely prospects as a randomly selected member of either of those two societies today will be vastly superior to those prospects in 1970.

This raw probabilistic calculation should substantively overwhelm any intuition about whether it is better to be, say, a randomly selected American citizen today versus half a century ago. After all, the chance of being an American in either of the two states of the world is comparatively minuscule, at less than one-twentieth.

A conceptually different way of choosing between states of the world was provided by the Italian polymath Vilfredo Pareto (Cirillo, 1979). By the Pareto criterion, a state of the world is superior to another if at least one person is better off, and nobody is worse off. Due to the second stipulation, this criterion is much stricter than almost any other way of ranking societies.

Even if 99 people prefer Swarga to Eden we cannot say that it is the better society so long as there is a single holdout who prefers Eden to Swarga. But a looser, more practical application of the principle would suggest that a society is better than another if a large majority of people prefers it, even if a small minority does not.

Such a modified Pareto criterion would be one way to put flesh on the bones of the stirring but vague utilitarian dictum to seek the greatest good for the greatest number<sup>12</sup>.

A sufficiently loosened Pareto criterion would also rank the world today as far superior to the world that existed half a century ago. Not only would there be unambiguous and widely shared gains in India and China, but there would also be substantial but less equally shared gains in more thinly populated parts of the world, including the West.

However, there would certainly be a minority of the global population – especially in the West – that has lost relative income and status, and which thus prefers the old world.

In a sense both the Rawlsian criterion and the modified Pareto criterion take us back to the elephant graph presented at the very beginning of this essay. There is a segment of the global population situated between approximately the seventy-fifth to the ninety-fifth percentile of the starting income distribution, comprising mainly blue-collar workers in rich countries, that has seen relative losses in recent decades.

But a vastly larger group of vastly poorer people has seen enormous gains. If you did not know, from behind the veil of ignorance, where in the distribution you were situated, you would certainly want to be born into the present not the past. Similarly, if you were willing to loosen the strict Pareto criterion sufficiently to allow a roughly 80 percent majority to carry the day, then you would again prefer unambiguously the present to the past.

Of course, all politics are ultimately local. It is utterly rational for politicians to focus on what is good or bad for the populations of their own countries or even just their own constituencies, without too much regard for the impact of their policies on far-flung corners of the world. Indeed, one could argue that not caring more about the specific set of people that you represent would constitute political malfeasance.

But it is not clear that this courtesy should be extended to the broader intellectual class, widely defined to include academics, journalists, television pundits, professionals and policy analysts: all those who shape the Western (and therefore the global) public discourse.

These are people who would very likely profess to being universalists, holding dear the principle that the Gurugram call-centre operator and the Pittsburgh steelworker have equal human worth. They would view as an equal abomination a malnourished child in Hebei and a malnourished child in Hamburg.

For the intellectuals in these ranks, making welfare evaluations is necessarily more complex than simply surveying one's backyard. Yes, blue-collar workers in rich countries have fared relatively poorly over the last several decades, and many policy changes are needed to remedy this.

But such policy changes are well within reach in the richest countries in the history of the world and require no fundamental transformation of the system that delivered this unprecedented affluence. Instead, there needs to be a much greater focus on redistributing income, strengthening the social safety net and ensuring that economic opportunity is not an accident of birth.

Above all, it is essential to recognise that focusing on one thin sliver of the global population is a singularly parochial way to judge the success of the liberal international economic order, under which much larger groups have begun to emerge from much more desperate circumstances. From behind the veil of ignorance things look better than ever before, even if they could always look better still. ■

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## Endnotes

1. Lakner and Milanovic (2013). Coverage ranges from countries representing 81 percent of the world population in the benchmark year 1988 to 94 percent in the benchmark year 2003; and from countries representing 91 percent of the world population in 1988 to 96 percent in 2003.
2. A phrase coined by India's last Governor-General, Rajaji.
3. Originally coined by Lenin, the phrase "commanding heights of the economy" was popularised by the fervent revolutionary economist Yevgeni Preobrazhensky, who advocated state control of heavy industries to spur the rapid industrialisation of Russia's economy.
4. However, consumer goods still remained under licensing; it was only in 2001, after a successful challenge at the World Trade Organisation, that these goods were removed from licensing requirements.
5. Apart from the sheer scale of India's National Rural Employment Guarantee Scheme (NREGS), its design and implementation contain several features conducive to greater income equality. As pointed out by Narayan (2022), more than half of the workers employed under NREGS are women, a far higher proportion than in the regular labour market. NREGS stipulates equal payment for men and women, whereas in agricultural markets, wages are typically substantially higher for men. Moreover, NREGS employment among the poorest and socially marginalised communities – Dalits and Adivasis – is much higher than their proportion in the population.
6. A global poverty line of \$1 a day in purchasing power parity (PPP) terms was first proposed in the World Bank's World Development Report of 1990. It captured in an easy to understand and internationally comparable number the concept of living at or near subsistence. Subsequently there have been several updates to the line based on differential rates of inflation across countries and refinements to cross-country comparisons of minimum consumption levels. The updates include a threshold of \$1.25 per day (based on 2005 PPPs) introduced in 2009, \$1.90 a day (based on 2011 PPPs) introduced in 2015, and the current \$2.15 a day (based on 2017 PPPs). See Ravallion (2010) for a good overview, and for an explanation of the latest threshold at time of writing, Samuel Kofi Tetteh Baah, Aziz Atamanov, Dean Mitchell Jolliffe, Christoph Lakner and Daniel Gerszon Mahler, '[Updating the international poverty line with the 2017 PPPs](#)', World Bank Blogs, 2 May 2022.

7. See FAO, *'Hunger and food insecurity'*.

8. Updated estimates available at <https://eml.berkeley.edu/~saez/>.

9. See OECD Data, *'General government spending'*.

10. Formally, a UBI that phases-out beyond a certain threshold is identical to a UBI with no phase-out but with an equivalent income tax imposed on those beyond the income threshold. In turn, these proposals are formally identical to a 'negative' income tax. Despite the equivalence of the proposals, the precise framing might well make a difference to the political acceptability of the idea.

11. The conventional child tax credit incorporates an income threshold of \$2,500 per annum below which the credit is not paid. The threshold effectively screens out unemployed adults with zero income. An estimated 19 million children live in families that earn too little to receive the full credit.

12. Suppose that Eden comprises 99 individuals with zero income, and one individual who commands the entire GDP of society. Swarga has the same aggregate GDP but it is equally shared by all 100 members of society. Most people would have a strong intuition that Swarga is a better society than Eden, but the strict Pareto principle would not allow such an assessment. However, a looser Pareto criterion, and of course the Rawlsian test, would allow an unambiguous ranking of Swarga as the more just society.

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*This article is based on an essay in the [Bruegel](#) Essay and Lecture Series.*

# The rocky road to EU accession



## Executive summary

The Western Balkan countries and the countries of the Eastern Partnership are moving towards European Union accession at different speeds. We explore whether and how the variable speed towards EU accession can be traced to different legal regimes governing European integration: Stabilisation and Association Agreements (SAA) for the Western Balkan countries, and Deep and Comprehensive Free Trade Agreements (DCFTA) for the countries of the Eastern Partnership (EaP).

We find that DCFTAs apply more lenient conditionality to intra-regional cooperation. They subject non-tariff barriers to a more explicit regime than the Western Balkan SAAs. The DCFTAs also offer a more rigid and comprehensive approach to the approximation of laws than the SAAs, and the DCFTAs are more inclusive with regard to the role of civil society.

However, there is no indication that the differences in legal governance have translated into stronger economic performance in the EaP countries or greater integration with the EU, compared to the Western Balkans.

The Western Balkan countries remain significantly more integrated than the EaP countries with the EU in trade terms, while convergence with the EU has been stagnating both for the Western Balkan and the EaP countries. Economic shortcomings in the Western Balkan still need to be addressed.

Conditionality attached to both integration into the EU single market and EU funding should be nuanced; the eradication of non-tariff barriers should be prioritised both inter-regionally and intra-regionally between Western Balkan countries; the need for stronger EU investment in the region is reinforced by geopolitical concerns about

Chinese investments coming without EU-type conditionality attached; and governance should give a stronger role to civil society.

In order to address the shortcomings in SAAs, a pragmatic solution is to use the existing governance framework under the SAAs.

*The importance of EU single market membership to West Balkan economic prospects cannot be overstated*

## 1 Introduction

Until the Russian invasion of Ukraine, the European Union pursued a two-track approach to its south-eastern and eastern European neighbours. The EU accession prospects of the Western Balkan (WB) states (Albania, Bosnia and Herzegovina, North Macedonia, Montenegro, Kosovo and Serbia) were more promising than those of their eastern counterparts – in particular Georgia, Moldova and Ukraine – which were associated with the EU through its Eastern Partnership (EaP).

Georgia, Moldova and Ukraine declared they wanted to join the EU in the mid-2000s, but for a long time the EU preferred alternative models: first the European Neighbourhood Policy (in 2004) and then the EaP (in 2009). But though the EU pursued an integration model in relation to the EaP that did not aim at EU accession, Russia's war against Ukraine triggered a change to this two-track approach.

Suddenly, the process, at least with Ukraine, Georgia and Moldova (which are the reference point of comparison with the WB in this paper), turned into an accession process, ushering in the initiation of accession negotiations with Ukraine and Moldova in December 2022.

The three eastern European states had practically no waiting time before being accepted as candidate countries right after application (Box 1). This contrasts with the Western Balkans, with either, as for North Macedonia, a decade of waiting for the opening of accession negotiations because of resistance from some EU member states or, as for Serbia, a decade of dragging negotiations because of democratic backsliding.

As the progress report in Box 1 shows, given that WB applications to accede to the EU date back as far as 2004, the accession process has advanced much more slowly than for the EaP countries that applied only in 2022.



Yet, new impetus has spilled over to the WB, as the EU opened accession talks with Albania and North Macedonia in July 2023 and with Bosnia and Herzegovina in March 2024, while Kosovo officially submitted its membership application in 2022.

The new 'reversed order' of accession, with Ukraine seemingly outpacing the WB since 2022, adds to a dissatisfaction with the WB accession process that has long been growing. Among WB countries, the dominant perception was that the EU promise of WB membership was not credible, while the EU felt persistently concerned about the lack of "*genuine domestic reforms*" and remaining political rifts in the region (Dabrowski, 2022).

Ukraine's rapid move towards accession raises the question – notwithstanding the political accelerator for Ukrainian accession arising from the Russian assault – whether there are lessons to be learned from the new 'front runners'<sup>1</sup>.

With the relationship between the EU and Ukraine, Georgia, and Moldova now governed by a different set of agreements and governance, this paper explores possible differences between the relationships the two blocs have with the EU.

It has been argued – but not analysed in depth – that the Deep and Comprehensive Free Trade Agreements (DCFTA) led to Ukraine, Georgia and Moldova being better integrated with the EU in terms of their access to its markets, than the Stabilisation and Association Agreements (SAAs) did for WB countries (Blockmans, 2018). The DCFTAs form part of the countries' Association Agreements with the EU and supplement and deepen their integration into the EU internal market.

Our analysis explores more deeply the comparison between the two groups of agreements. Clearly, we consider the pre-war situation and as such exclude that war-related geopolitical factors changed the accession pace of EaP countries, and of Ukraine in particular.

Specifically, we seek to better understand the differences in regimes and access to the EU internal market. First, we systematically assess and compare the substantive, procedural and institutional differences between the eastern European AA/DCFTAs and the WB SAAs with respect to their potential in offering access to the EU internal market.

Despite large similarities between the agreements, we find considerable differences in legal governance related to conditionality, non-tariff barriers of trade, trade in services, foreign direct investment (FDI) and the approximation of laws. We extend the comparative analysis to shortcomings in the governance and implementation process of the relevant SAAs and working plans.

Second, in view of the differences, we explore the extent to which they may have had an impact on economic performance in terms of convergence with the EU, trade in goods and services, non-tariff barriers, FDI and what measures should be implemented to overcome the existing shortcomings.

These could be implemented either by modifying the WB SAAs or through modifications to the level of technical implementation. We caution against claiming a causal effect in terms of the differences in legal governance leading to Ukraine to obtain the status of accession negotiations so rapidly (geopolitical reasons are likely to trump the modest performance of Ukraine, for example).

Our analysis comes at a critical time. Political sentiment in some WB countries, particularly Serbia and North Macedonia, blames the EU for slow accession, while democratic backsliding and authoritarian regimes in the WB is leading to China and Russia, as underpinned by an influx of Chinese FDI (Figure 7), to be seen as alternatives to moving closer to the EU, with the EU portrayed as just one among the external players in the region (Vulović, 2023).

The new Growth Plan (European Commission, 2023a) and the draft Reform and Growth Facility for the Western Balkans (European Commission, 2023b) seek to revive WB integration. While additional funding for the region will be made available, the new proposal brings a demanding degree of conditionality, increasing the pressure for domestic reforms (in line with the EU Copenhagen, or accession, criteria), and setting additional intra-regional integration as cumbersome preconditions, both for internal market access and funding eligibility.

Yet, the current negotiations of a roadmap for Ukraine's accession to the EU may offer a new momentum for the WB states to integrate further into the EU single market, by underlining the mutual benefits. The new geopolitical reality enhances the significance of the EU's enlargement policy, but for it to materialise, it requires modification of the current regime governing market access, financial investment and governance.

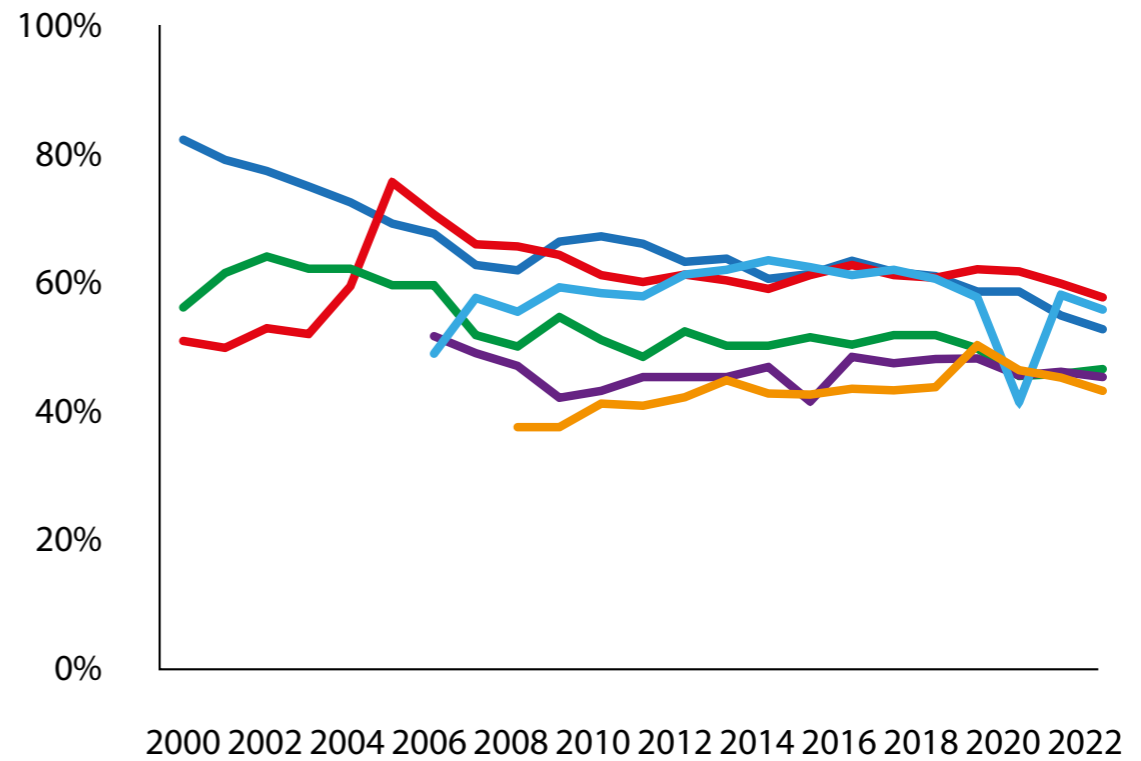
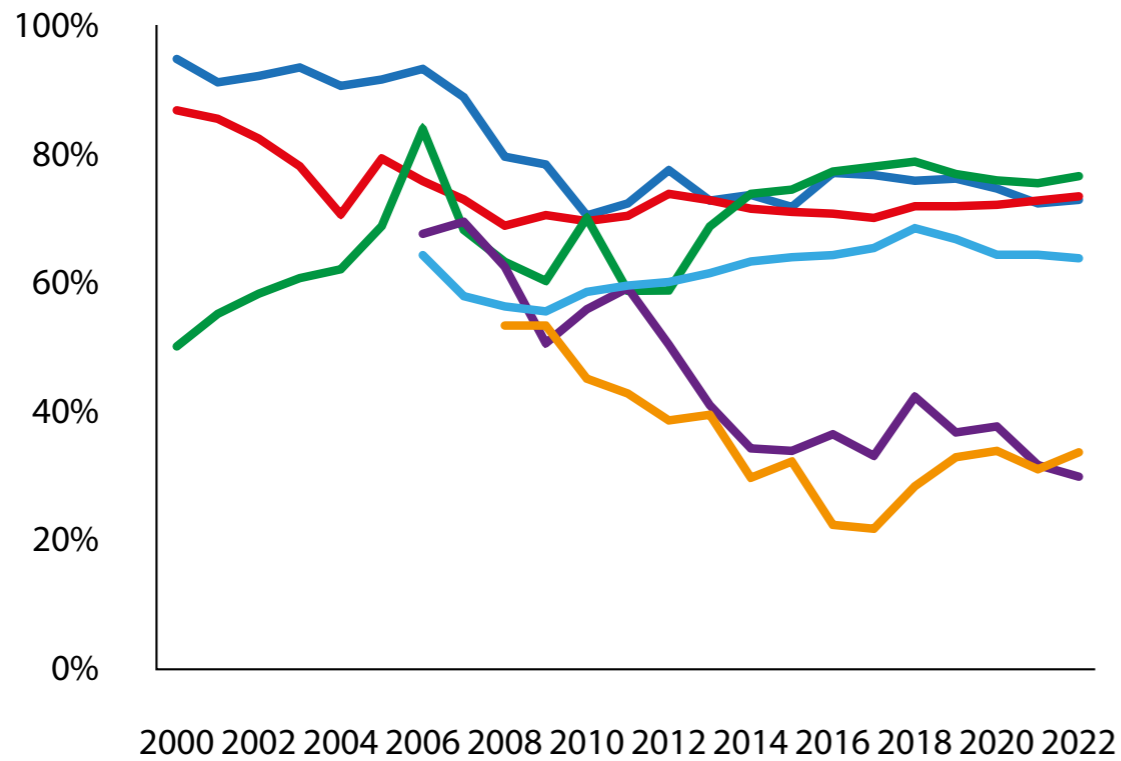
We focus on access to the single market both from the perspective of substantive market access and governance of the implementation. The EU is the key trading partner of the Western Balkans, with WB goods exports to, and imports from, the EU in 2022 amounting to €37 billion and €48 billion respectively (equating to simple averages of approximately 59 percent and 49 percent of their respective trade totals; Figure 1). Services trade between the two is also significant, with exports to and imports from the EU amounting to approximately €8.5 billion and €7.5 billion respectively for the same year (Figure 6)<sup>2</sup>.

However, the WB share of exports to and imports from the EU27 has been constant in average over the last twenty years. Since the sequential entry into force of SAAs since 2004 there has not been a significant increase in trade integration with the EU. In turn, the share of the EU as an export destination for EaP goods has on average increased (Figure 1b).

At the same time, the rate of convergence of the Western Balkans countries was described in the new Growth Plan as *"not satisfactory"* and *"holding back their progress on the EU track"* (European Commission, 2023, p.1).

**Figure 1a. The EU as an export destination (left) and import source (right) for WB goods (% of total exports and imports respectively)**

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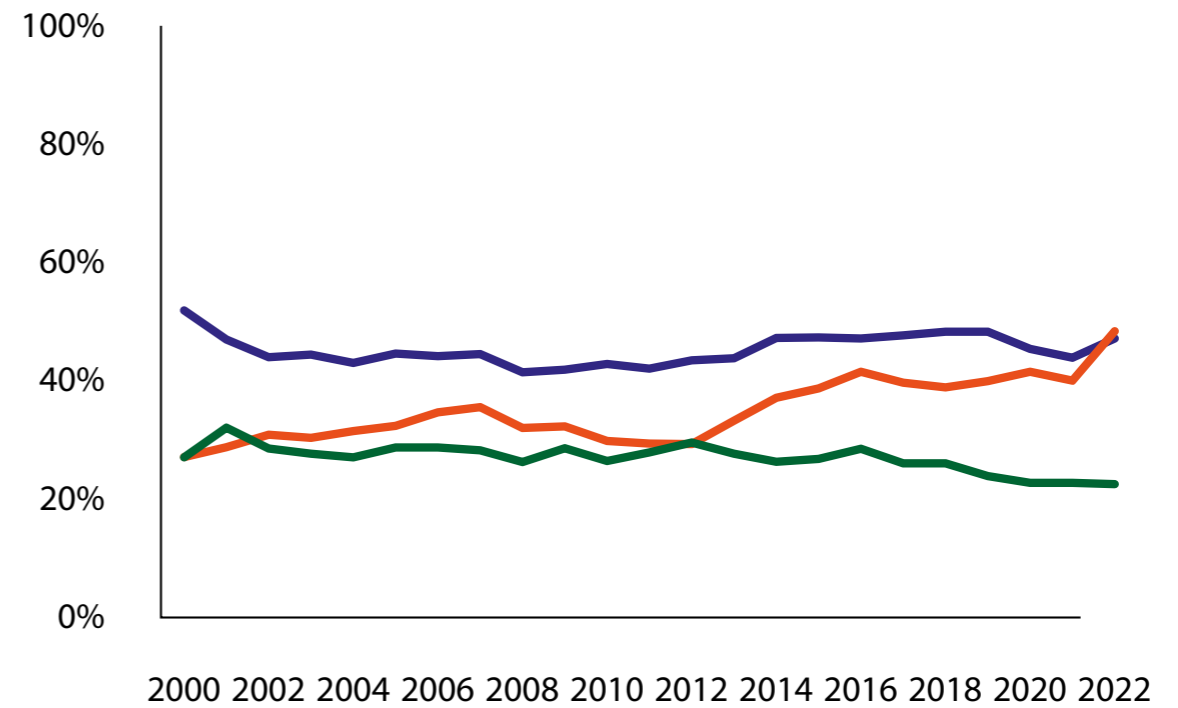
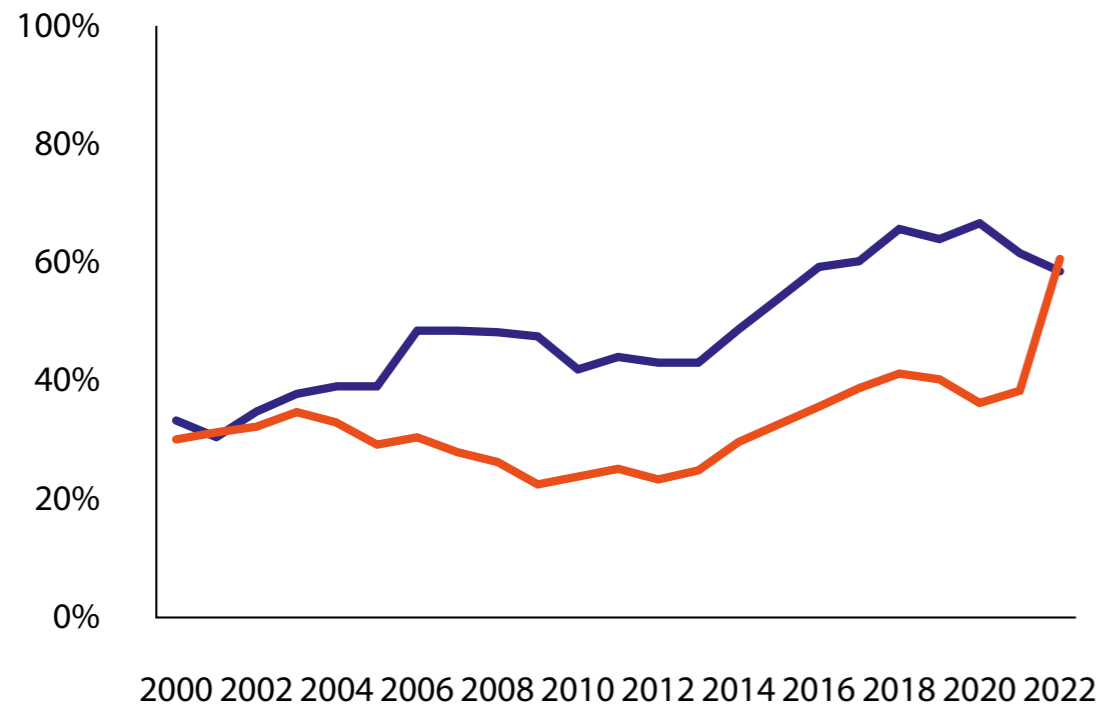
- Albania
- B & H
- N. Macedonia
- Montenegro
- Serbia
- Kosovo

- Albania
- B & H
- N. Macedonia
- Montenegro
- Serbia
- Kosovo

Source: Bruegel based on IMF Direction of Trade Statistics.

**Figure 1b. The EU as an export destination (left) and import source (right) for EaP goods (% of total exports and imports respectively)**

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— Moldova  
— Ukraine  
— Georgia

Source: Bruegel based on IMF Direction of Trade Statistics.

As illustrated in Figure 2, both regions have struggled with GDP per capita convergence to the EU27 average, recording moderate gains between 2011 and 2021. WB countries had higher initial GDP per capita level than the EaP countries (by approximately 10 percentage points of average EU27 GDP) but caught up less quickly up to 2021. In 2022, Ukraine and Moldova recorded reversals of their previous growth trends, because of Russian aggression against Ukraine.

The stagnating share of the EU27 in trade with the WB, and the moderate pace of convergence, provide the economic motivation for our analysis and for exploration of a possible connection to the legal regime set out in the SAAs.

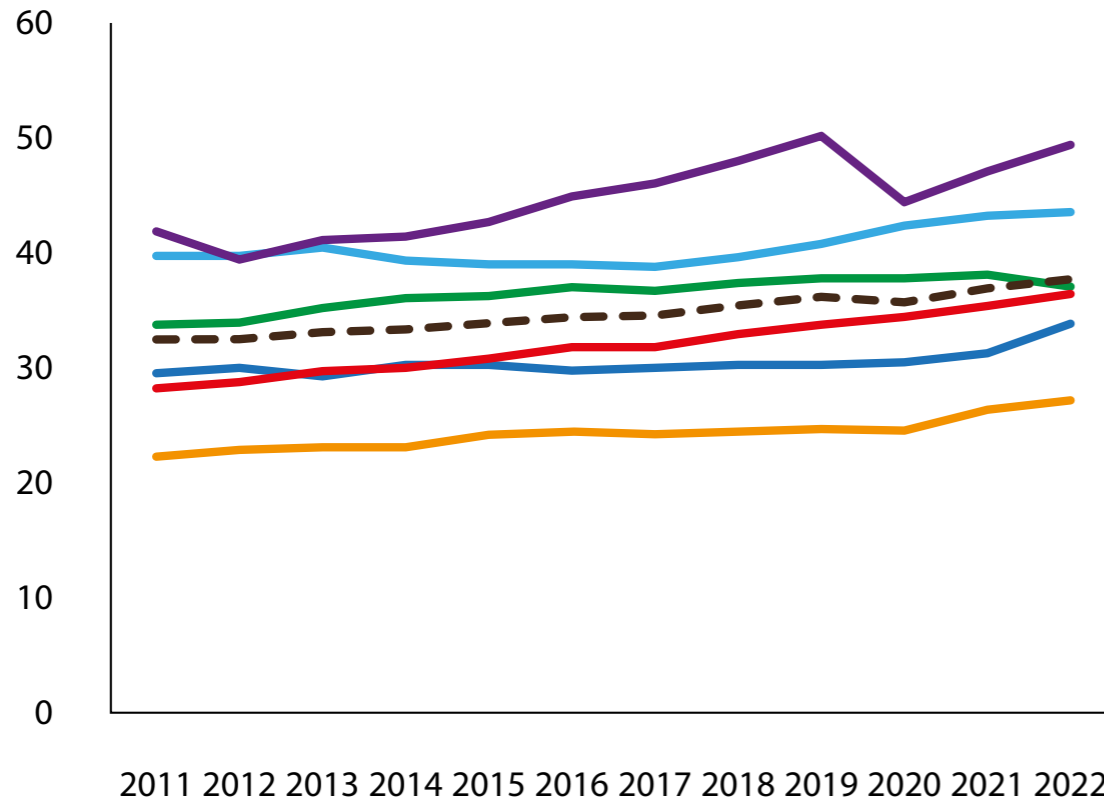
Based on our comparative legal and institutional analysis, we identify a number of differences between the agreements the EU concluded with the eastern European countries and the WB. Yet while differences in the legal governance of DCFTAs and SAAs would suggest WB economic underperformance compared to the EaP, because of a legal framework limiting WB integration into EU internal market in comparative perspective with the DCFTAs, this is not supported by the available economic evidence.

While these differences are significant deficiencies and should be addressed, we hasten to say that there is no compelling evidence that remaining shortcomings can causally be traced to the different legal treatments.

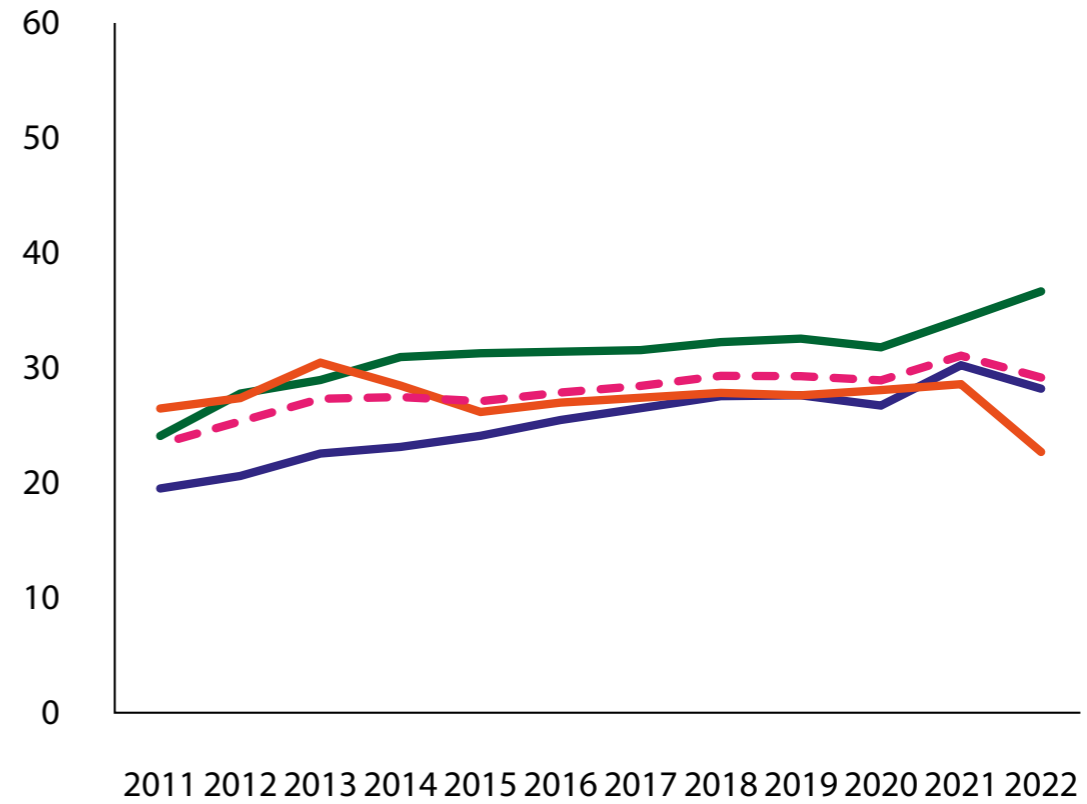
In any case, taking the DCFTAs as an example, the remaining constraints in the SAAs and in the new Growth Plan should be lifted to untap further potential for WB convergence with the EU internal market.

**Figure 2a. GDP per capita in PPP (percent, EU27 = 100)**

Western Balkans



Eastern Partnership



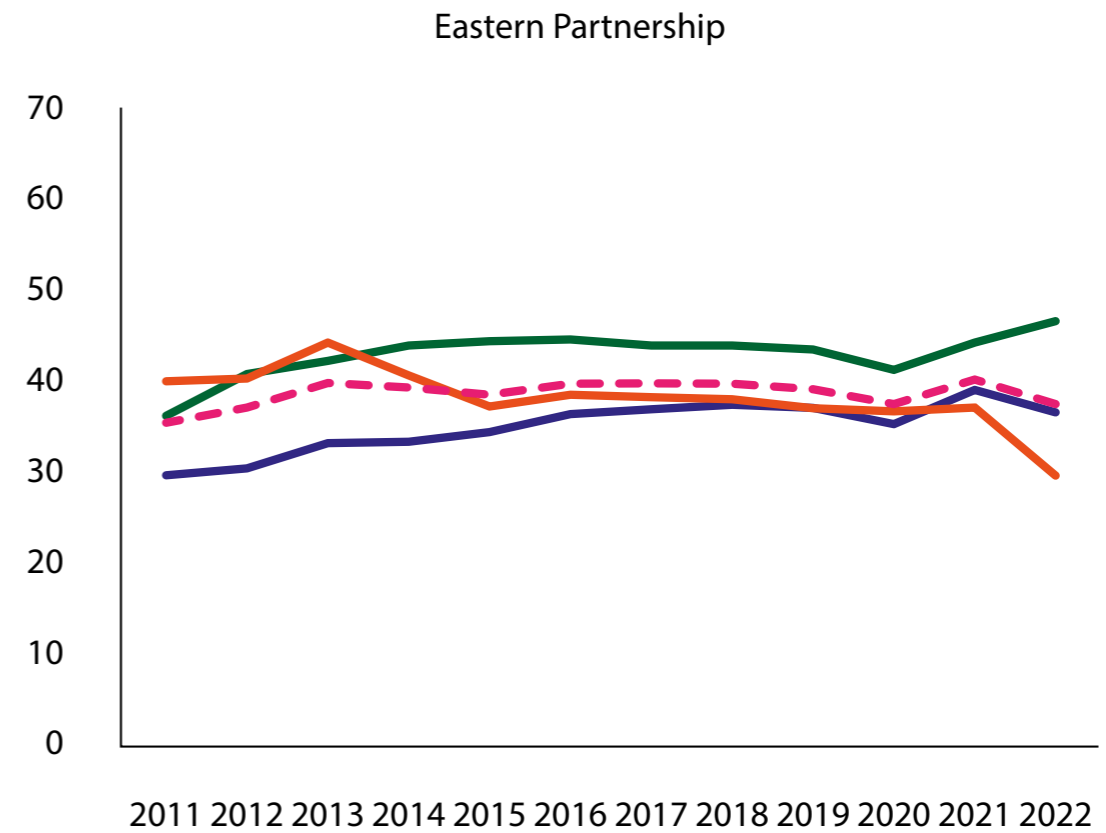
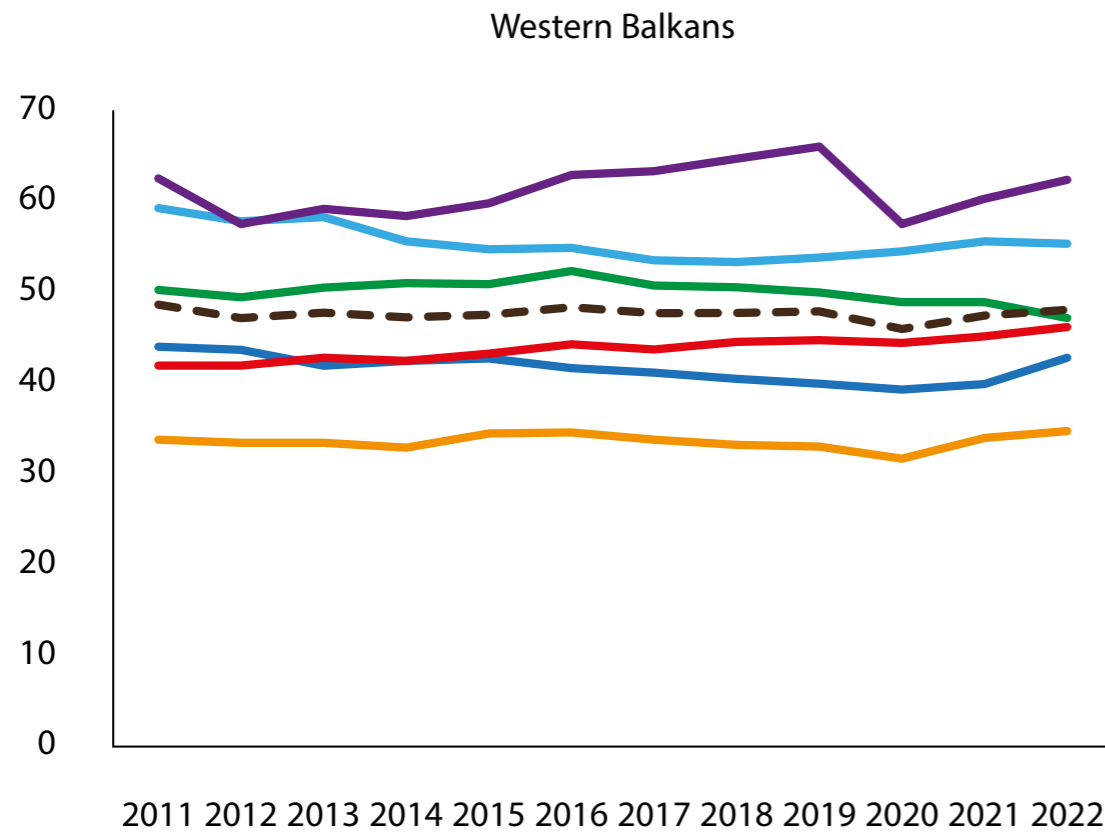
- Albania
- B + H
- N. Macedonia
- - - Western Balkans
- Montenegro
- Serbia
- Kosovo

- Moldova
- Georgia
- Ukraine
- - - Eastern Partnership

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**Figure 2b. GDP per capita in PPP (percent, 10 central and eastern European countries = 100)**

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- Albania
- B + H
- N. Macedonia
- - - Western Balkans
- Montenegro
- Serbia
- Kosovo

- Moldova
- Georgia
- Ukraine
- - - Eastern Partnership

*Note: The Western Balkans and Eastern Partnerships dashed lines are simple averages. For an insight into convergence in the regions in general, a weighted approach to account for population may be more appropriate. However, the relevant metric for accession is the convergence of the countries in question, not the regions as a whole. These averages are only included for ease of comparison.*

*Source: Bruegel based on World Bank World Development Indicators.*



### **Box 1. The nature and state of play of the Accession talks<sup>3</sup>**

*The EU accession process involves five main steps<sup>4</sup>. First, a country must apply to the Council of the EU to become a member. Article 49 of the Treaty on the European Union (TEU) stipulates that any European country that respects and commits to the values of the EU as expressed in Article 2 TEU can apply, and this is the stage that Kosovo is currently at.*

*The second step is a positive assessment of the Commission recommending the granting the candidate status. Third, candidate status is approved based on a unanimous decision of the European Council, which is what happened for Georgia for instance in December 2023. However, this does not necessarily mean that formal negotiations have been opened.*

*The fourth step is the accession negotiations, which begin with a detailed examination (screening) carried out by the Commission, together with the candidate country, of each policy field (chapter), to determine how well the country is prepared. This initial screening exercise of the EU's acquis serves to identify levels of preparedness in each policy field (which Albania and North Macedonia completed in 2023).*

*If completed satisfactorily, negotiations ensue focusing on six different thematic clusters, each consisting of various chapters; these negotiations take place at intergovernmental conferences (Montenegro, for instance, has opened negotiations on all chapters and closed three).*

*Fifth and finally, the process concludes when all chapters have been closed and an accession treaty is approved unanimously by the European Council and receives the consent of the European Parliament. Each EU country must also ratify the treaty according to its constitutional procedures (Dabrowski, 2014).*

Country	Stage of process (early 2024)	State of play	Next step(s)
Western Balkans			
Albania	Applied for membership in 2009; candidate country since 2014; accession negotiations began in 2022 <sup>5</sup> .	The screening meetings (ie. prior to accession negotiations entailing analytical examination of the EU acquis) were completed in November 2023.	First negotiation cluster will begin once the roadmaps identifying rule of law and public administration reforms are assessed and approved <sup>6</sup> .
Bosnia and Herzegovina	Applied for membership in 2016; candidate country since 2022; accession negotiations opened in March 2024.	The Commission noted positive steps towards meeting key priorities and opening negotiations following the awarding of candidate country status, but recent rule of law developments have proved a barrier.	Preparation of the negotiating framework.

Kosovo	Applied for membership in 2022; currently a potential candidate country <sup>7</sup> .	The European Reform Agenda was adopted in 2016 and updated in 2021 between the Commission and Kosovo to guide the implementation of SAA reforms. Due to a lack of de-escalatory measures regarding rising tensions with Serbia, the EU froze various cooperation and funding mechanisms in 2023 (European Commission, 2023d).	The frozen measures are temporary and will be reversed if and when authorities take satisfactory de-escalatory steps and implement commitments related to Serbia. The next steps of the accession process are unclear.
Montenegro	Applied for membership in 2008; candidate country since 2010; accession negotiations began in 2012.	Since 2012, all negotiating chapters have been opened, with three closed. The enlargement methodology was revised in 2021 to place more emphasis on fundamental reforms and reinvigorate the process.	Further progress on the rule of law chapters is necessary before any others are provisionally closed.

North Macedonia	Applied for membership in 2004; candidate country since 2005; accession negotiations began in 2022.	The screening meetings were concluded in December 2023.	First negotiation cluster will begin once the roadmaps identifying rule of law and public administration reforms are assessed and approved <sup>8</sup> .
Serbia	Applied for membership in 2009; candidate country since 2012; accession negotiations began in 2014.	Since 2014, 22 negotiating chapters have been opened, with two closed. The enlargement methodology was revised in 2021 to place more emphasis on fundamental reforms and reinvigorate the process.	The rate of progress in the rule of law chapters and in the normalisation of relations and de-escalation with Kosovo dictate the pace of negotiations.
Eastern Partnership			
Georgia	Applied for membership in 2022; candidate country since December 2023; accession negotiations yet to begin.	Due to progress on the 12 identified priorities since the application was made, candidate country status was granted on the understanding that nine steps would be taken.	Progress must continue on the nine steps detailed in the November 2023 Communication <sup>9</sup> on enlargement.

Moldova	Applied for membership in March 2022; candidate country since June 2022; Council decided to open accession negotiations in December 2023.	In the June 2022 Commission Opinion (European Commission, 2022a) on Moldova's application recommended to grant candidate status on the understanding that nine steps were taken. As of November 2023, six of the nine steps were completed.	Accession negotiation framework will be adopted once the three recommendations in the November 2023 Communication <sup>10</sup> on enlargement are completed. Screening began in January 2024 <sup>11</sup> .
Ukraine	Applied for membership in March 2022; candidate country since June 2022; Council decided to open accession negotiations in December 2023.	June 2022 Commission Opinion (European Commission, 2022b) on Ukraine's application recommended to grant candidate status on the understanding that nine steps were taken. As of November 2023, six of the nine steps were completed.	Accession negotiation framework will be adopted once the four recommendations in the November 2023 Communication <sup>12</sup> on enlargement are completed. Screening began in January 2024.

## 2 Comparing DCFTAs and the Western Balkan SAAs in terms of EU market integration

This section highlights differences between the legal regimes governing market access for the eastern European countries of Ukraine, Moldova and Georgia (on basis of DCFTAs) and the applicable framework under the Western Balkan SAAs. Differences are explored in relation to five benchmarks: conditionality, non-tariff barriers to trade, trade in services, movement of capital and the approximation of laws.

Annex I provides a comprehensive comparative assessment of the relevant agreements and the applicable rules, while this section discusses some of the marked differences. What facilitates the comparison (while highlighting the stark differences between the regimes) is a large degree of homogeneity in agreements within each group – within DCFTAs and Western Balkan SAAs. For the purpose of making comparisons, the Serbia SAA<sup>13</sup> will be the reference point for the WB SAAs, while the Ukraine AA/DCFTA<sup>14</sup> is referred to to exemplify the agreements the EU concluded with the eastern European partners.

### 2.1 Regional integration as conditionality

One core distinguishing feature between the DCFTA and the WB SAAs is the degree of conditionality attached to intra-regional integration as a precondition for further access to the EU internal market.

Most recently, this emphasis has been reiterated in the draft New Growth Plan, which, as an extension of the WB SAAs, makes single market access conditional not only on political and economic domestic structural reforms, but on the progress made in intra-regional market integration.

The Serbia SAA emphasises regional cooperation by requiring the WB country to “*enhance its cooperation*” and to “*implement fully the CEFTA*” (Article 14 Serbia SAA) – the Central European Free Trade Agreement governing trade relations between the WB states.

The Serbia SAA further requires the conclusion of additional bilateral conventions with WB countries that foster political dialogue, establish free trade, cooperation in justice affairs and provide free market access more globally (Article 15 Serbia SAA).

This conditionality has been constantly upheld in the EU's policy on the WBs, with the most recent draft Growth Plan tying access to EU internal market benefits and the release of funds under the draft Reform and Growth Facility (the financial assistance vehicle of the plan) (European Commission, 2023b) to a wide set of reforms.

This extends not only to traditional conditionality securing the Copenhagen criteria, including democracy, rule of law and human rights (which apply to WB and EaP countries alike). In the case of WB, the political conditionality also extends to requiring Serbia and Kosovo to normalise their relations and comply with the relevant agreements governing reconciliation, and to negotiate the Comprehensive Agreement on normalisation of relations (European Commission, 2023b, Article 5).

Importantly and in addition, the EU requests economic intra-regional integration as precondition and conditionality attached to access to the EU single market. For example, the Commission envisages making access to EU financial support through its draft Reform and Growth Facility (European Commission, 2023b) conditional ex ante on the implementation of the Common Regional Market Action Plan.

This Plan is the outcome of the Common Regional Market Initiative of the WB countries, which builds on the CEFTA framework (and thus connects to the conditionality embedded in the SAA). The Plan requires, inter alia, the development of a regional digital market, which requires investment in broadband internet access, 5G and digital services.

The Plan also foresees expansion of green lanes at the border to cut waiting times. Hence, the extended conditionality regime allows the EU to make internal market access and access to funding conditional on WB ex-ante investment in these areas.

This conditionality contrasts with the absence of mandatory regional cooperation under the DCFTAs. The agreements are silent on this type of intra-regional conditionality. Specifically, the Ukraine-DCFTA provides for “*regional stability*”, stipulating a vague obligation for Ukraine, Moldova and Georgia to “*intensify their joint efforts to promote stability, security and democratic development in their common neighbourhood*” (Article 9 DCFTA Ukraine).

The main conditionality in the Ukraine-DCFTA is the approximation of the relevant EU law by Ukraine along with the Copenhagen criteria, which must be respected by all EU aspirants. However, the DCFTAs lack the intra-regional layer of conditionality that the EU, in relation to the WB, has increasingly insisted on.

Not only are the DCFTAs lenient on regional integration as a requirement, the question is also whether the EU’s persistent insistence on regional economic cooperation is an adequate requirement. Intra-regional conditionality is plausible if it seeks to alleviate political rifts between Serbia and Kosovo, and societal tension and political blockages in decision-making (European Commission, 2023a; Ghodsi *et al* 2022). But the economic intra-regional conditionality referred to above appears much more ambivalent.

On one side, creating a common regional market for goods, services and labour within the Western Balkans offers opportunities for increased trade – according to one estimate<sup>15</sup>, regional economic integration in the Western Balkans could generate up to 2.5 percent of GDP growth, should the level of integration reach the level of that of the European Free Trade Association (EFTA), while it could even generate up to 7 percent should it reach the EU’s level of integration.



The most ambitious initiative negotiated in this regard is the creation of the Common Regional Market<sup>16</sup> as an outcome of the Berlin Process, launched in 2020<sup>17</sup>. It foresees WB intra-regional freedoms of goods, services, capital and people, including aspects relating to digital, investment, innovation and industry policy.

On the other side, barriers to intra-regional economic integration lie in the lacking physical infrastructure and persistent inequality in the WB. In particular, lack of public investment in roads, digital infrastructure, railways and energy have been identified as limiting factors (Ghodsi *et al* 2022).

The Commission itself noted in its November 2023 Communication on enlargement that *“there is a strong need to upgrade infrastructure; investments should be... consistent with the priorities agreed with the EU”* (European Commission, 2023c, p.11).

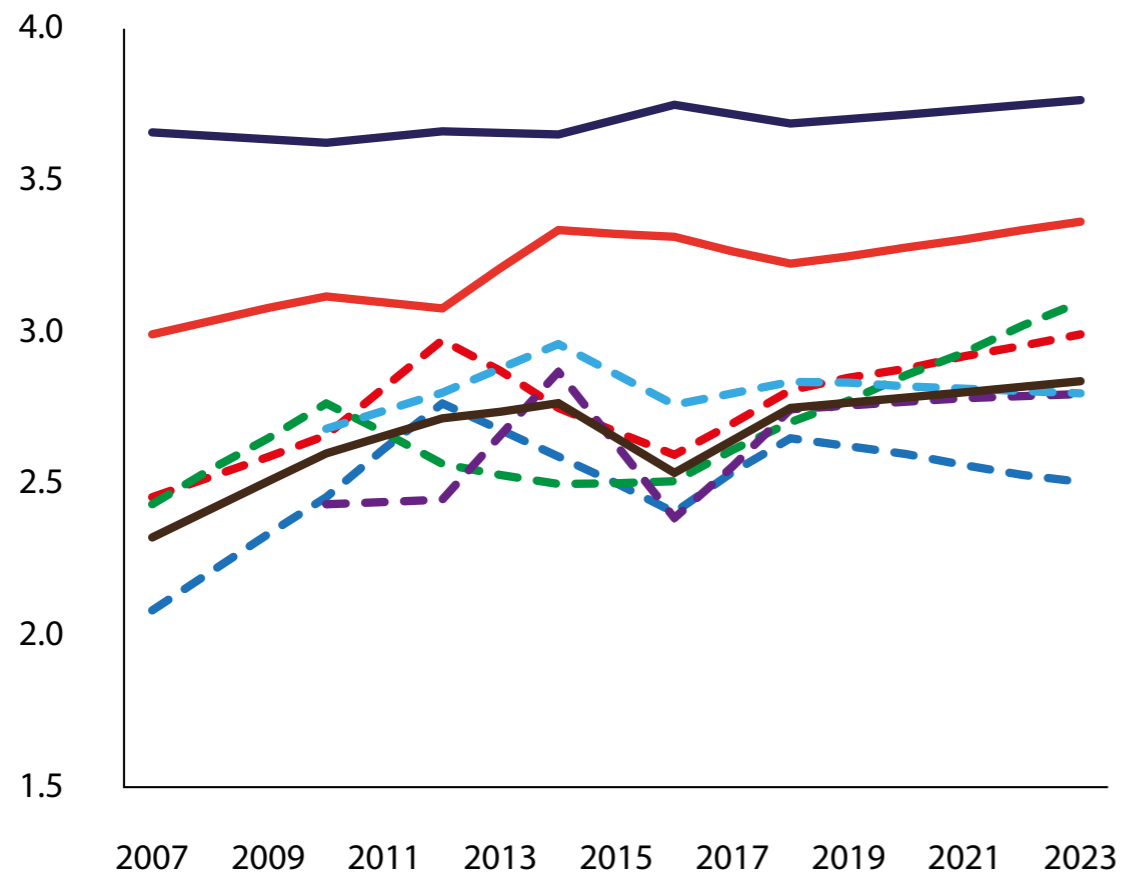
Panel B of Figure 3 highlights the limited progress achieved on improving the trade-related intra-regional infrastructure and in closing the gap with the EU, using the broader logistics performance index<sup>18</sup> (Figure 3, Panel A), similarly showing low levels of convergence.

Even the central and eastern European EU members (a more adequate group for comparison with WB countries) seem to have been more successful in improving trade-related infrastructure by reducing the gap with other EU members. However, convergence has not been better across the same indicators for the EaP countries (see Annex 4).

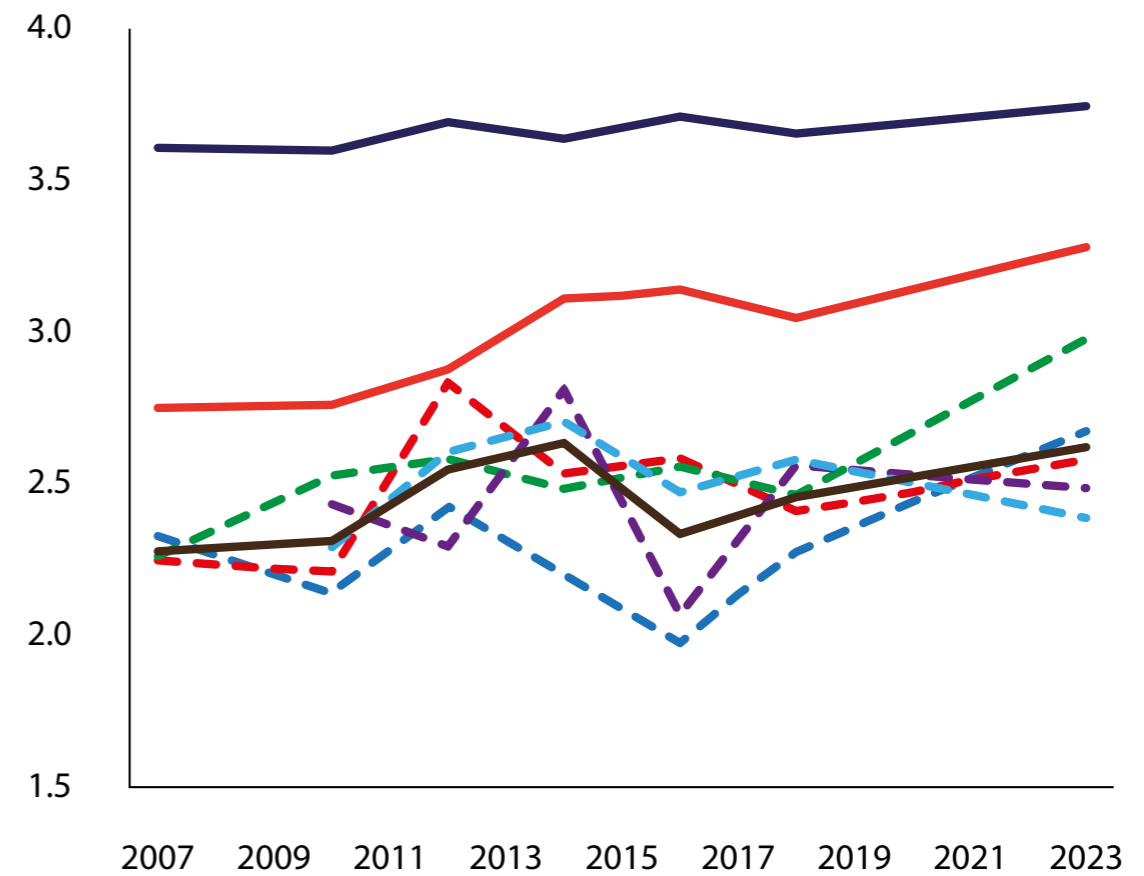
The connection to conditionality is that with limited public investment in infrastructure identified as one persistent barrier to regional integration in the WB<sup>20</sup>, the EU should not implement ex-ante conditionality on WB public

**Figure 3. Logistics and trade-related infrastructure**

Logistics performance index



Quality of trade and transport related infrastructure



- - - - - Albania
- - - - - B + H
- - - - - N. Macedonia
- Western Balkans
- - - - - Montenegro
- - - - - Serbia
- CEE 10
- Rest of EU

- - - - - Albania
- - - - - B + H
- - - - - N. Macedonia
- Western Balkans
- - - - - Montenegro
- - - - - Serbia
- CEE 10
- Rest of EU

*Note: Data is available for 2007, 2010, 2012, 2014, 2016, 2018 and 2023. Data for Serbia, Montenegro and Georgia unavailable for 2007. Data for Albania is unavailable for 2014. Data for Kosovo unavailable throughout. WBs is a simple average of the relevant countries. CEE 10 and Rest of EU refer to the simple averages of the central and eastern European countries that joined the EU in the 2000s<sup>19</sup> and the other 17 EU countries, respectively. See Annex 4 for the same exercise for EAP countries.*  
 Source: Bruegel based on World Bank Logistics Performance Index.

investments in digital infrastructure or crossborder trade facilities, as set out in the Common Regional Market Action Plan (eg. lanes at borders or customs procedures).

The EU should fund these 'win-win' investments, which are beneficial to the WB and the EU alike, rather than blocking EU internal market access because of the lack of these investments. This concerns in particular crossborder infrastructure and networks that are often underfinanced because of a mismatch between costs and benefits and that are, under EU internal market standards, typically eligible for funding. WB infrastructure should be prioritised accordingly. Conditionality attached to these kinds of projects is not a sensible approach.

In fact, intra-regional crossborder transport infrastructure has significant positive spillovers, such as the potential to reduce income disparities across the EU and its neighbouring regions.

In this regard, it is positive that the draft Growth Plan implies revising the trans-European transport framework (TEN-T), in order to include a new corridor crossing the Western Balkan region (Western-East Mediterranean corridor), and the EU's recent Economic and Investment Plan for the Western Balkans offers financing of rail transport<sup>21</sup>.

However, conditionality of the new Growth Plan should be relaxed for these infrastructure projects more generally and the involvement of European Investment Bank and the European Bank for Reconstruction and Development funding in the investment should be further facilitated (Ghodsi *et al* 2022).

Finally, conditionality should also be rethought in light of geopolitical rivalry. EU conditionality contrasts with Chinese investment in the region without strings attached, which makes Chinese FDI more attractive.

Again, the legal comparison of WB SAAs with the DCFTAs shows that the latter offer a more explicit acknowledgement of internal market integration. The Ukraine AA is explicit about its objective of bringing Ukraine into the EU internal market (Article I (d) of the Ukraine-DCFTA), while such an explicit recognition of this objective is absent from the Serbia SAA, in which language is limited to “*gradually develop a free trade area between the Community and Serbia*” (Article 1 (f) Serbia SAA).

While more assertive language in the agreements does not guarantee more favourable economic outcomes, specifying the objective in the agreement can bind the institutions under the SAA to work towards that goal.

## 2.2 Trade in goods and non-tariff barriers

The EU-Ukraine association agreement has been praised by European Commission officials as “*the most ambitious Agreement that the EU has ever developed with any partner*”<sup>22</sup>.

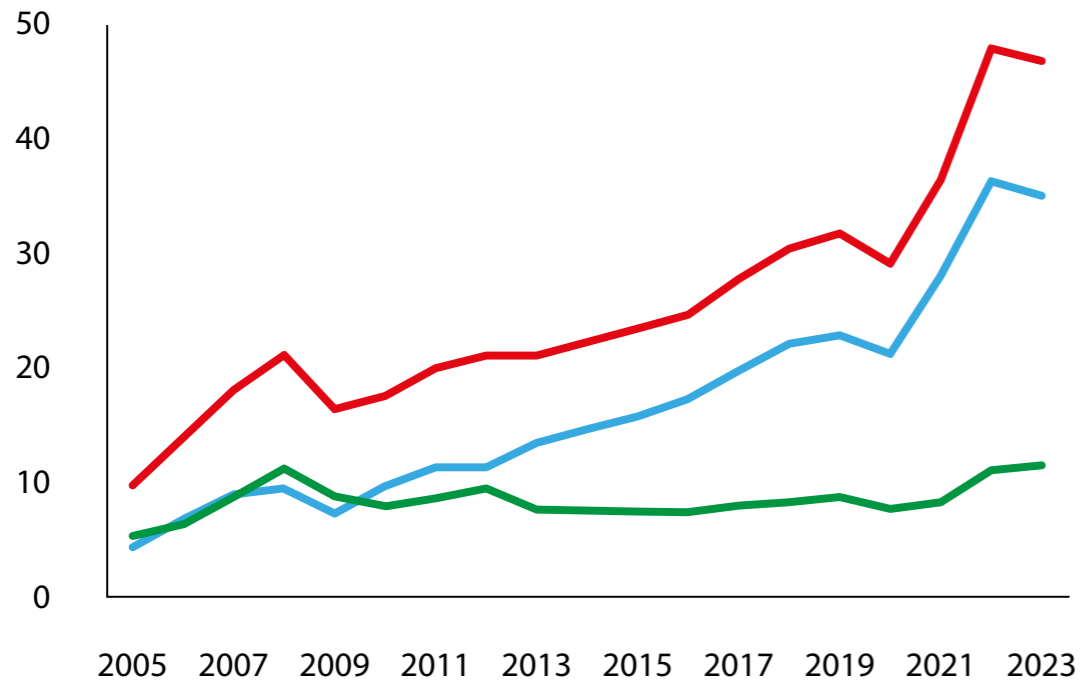
Indeed, by integrating the DCFTA into the Association Agreement, the integration of Ukraine, Georgia and Moldova into the EU has been propelled through wide-reaching market access and regulatory approximation, ushering in increased trade with the EU.

How do the agreements facilitate market integration? The WB SAAs have eliminated tariff barriers with the EU to a great extent, and trade with the region has grown by almost 130 percent over the past 10 years.

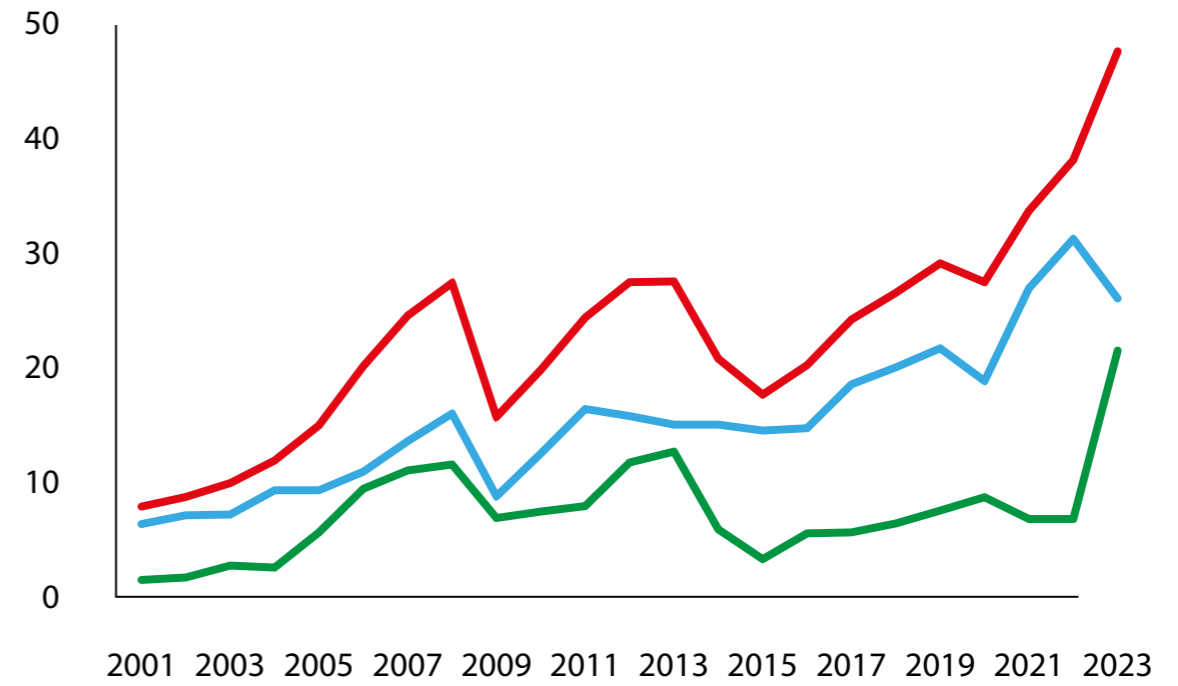
Figure 5 confirms that trade between the EU and WB has grown in absolute terms (though did not further increase the already high levels in relative terms, Figure 1), and there is no indication of being outpaced by the Eastern Partnership countries. Yet, non-tariff barriers (NTBs) remain significant – both barriers with the EU and within the Western Balkans region.

**Figure 4. EU27 trade in goods with WBs (left) and EaP countries (right), € billions**

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— Imports  
— Exports  
— Balance



— Imports  
— Exports  
— Balance

Note: See Annex 2 for data disaggregated by country.  
Source: Bruegel based on Eurostat (DS-018995).

NTBs can generally be associated with technical regulations, customs procedures, licensing requirements and other regulatory obstacles, all of which limit trade through increased costs, delays and administrative burdens.

For example, the waiting and processing time only at crossing points in CEFTA states generates between €250 million and €300 million in costs annually (World Bank, 2015). While reliable data on the scope of NTBs is limited, some proxies indicate their presence.

For instance, World Bank Trading Across Barriers data points to higher costs, both financial and in terms of time taken, associated with border and documentary compliance for importing goods to the Western Balkan countries, than to the EU or high-income OECD countries (Annex 5). While the same data limitations make it difficult to identify non-tariff barriers in EaP countries, the consensus is that they also pose challenges to trade in these countries.

Comparative legal analysis of the treatment of NTBs reveals a more detailed legal regime in the Ukraine DCFTA in three respects. First, the Serbia SAA does not foresee a non-discrimination rule regarding non-tariff measures, while the Ukraine DCFTA established a national treatment rule (Article 34).

It has been argued that the current legal reference to freedom of goods in the SSA should be interpreted in line with EU law and would thus suffice to ban non-tariff barriers (Sretić, 2023).

Second, the Ukraine DCFTA explicitly addresses technical barriers to trade (TBTs), in particular the *“adoption and application of technical regulations, standards, and conformity assessment procedures”* (Article 53).

Again, the Serbia-SAA is silent on the treatment of technical barriers to trade. The CEFTA addresses TBTs and provides for a governance structure to minimise them (Article 13). There have been further attempts to address

NTBs in the WB intra-regional integration process. For example, the Common Regional Market (CRM) has established green lanes at borders within the region.

Through better exchange of customs data before goods arrive at crossing points, the transit times for goods have greatly reduced (European Commission, 2023a). The draft Growth Plan, while requesting alignment with EU standards, does not foresee a regime to address further eradication of NTBs.

Yet overall the lack of salience of TBTs in the SAAs does not correspond to the significance of this source of impediment to market integration. Estimates suggest that a three-hour reduction in waiting times is the equivalent of a 2 percent reduction in tariffs (Del Mar Gomez *et al* 2023).

The OECD has considered the trade reducing effects of being outside the single market associated with TBTs and sanitary and phytosanitary measures (SPS) measures, suggesting these costs amount to 50 percent of the ad-valorem equivalent of measures on goods imported into the European Union from third countries (RCSPI, 2023). We infer that NTBs remain under-addressed at the level of the SAA agreements between WB countries and the EU.

Reducing NTBs is pivotal. Slow customs procedures are often the result of lacking infrastructure. For example, electronic payment of duties and charges and pre-arrival processing are essential infrastructure elements, lacking in all CEFTA economies. Serbia and Montenegro are reported not to offer the option of paying the fees for exports online (GIZ, 2022).

As argued above in relation to crossborder infrastructure and networks, infrastructure facilitating customs procedures should qualify for EU funding without (or with limited) conditionality, because the positive intra-regional economic effects are significant. The EU should allocate financial resources to the modernisation of such

facilities, in particular infrastructure that facilitates the payment of duties, taxes and other fees for the importation process.

In addition, mutual recognition also helps to reduce waiting times caused by scanning procedures and sample testing. The EU has created separate lanes with WB countries, and the same practice should be applied between WB countries (GIZ, 2022).

Again, where EU funding could facilitate this, there should be unconditional support for expanding joint crossing point facilities and establishment of separate lanes.

Likewise, concerning intra-regional commerce with 'mutual recognition' having proved itself as a motor for fostering intra-EU trade, WB countries should pursue recognition of conformity assessments procedures across the CEFTA region. The CEFTA provides the framework for this both in the field of SPS measures and NTBs more generally, but the available legal space under the agreement for eradicating NTBs (Articles 12, 13 CEFTA) should be exploited further.

In particular, Article 13 para. 4 CEFTA paves the way for WB countries to implement "*mutual recognition of conformity assessment procedures*", offering a powerful tool for eliminating non-tariff barriers.

Finally, the EU should see advantages for itself not only in liberalising access to the internal market but also in outbound investment into the WB region. Access to the EU internal market and EU-financed crossborder infrastructure would reduce WB dependence on geopolitically risky partners.



For example, given Serbia's persistent dependence on Russian energy supplies, the EU should integrate the WB into its energy internal market by fostering the construction of electricity and gas connections – in the EU's own best interest and without conditionality.

At a time when economic security is becoming so important, helping to integrate the WBs into the supply chain could be very useful and help reduce dependencies. The Trans-Balkan electricity corridor is a good example<sup>23</sup>, but further energy-oriented EU investments efforts could be directed to financing solar-energy capacity in the Western Balkans or wind and hydropower projects (Ghodsi *et al* 2022).

The EU can also do more to provide loan guarantees and investment incentives for private firms to invest in infrastructure in the region, in addition to tying this to reform and green agenda benchmarks. With EIB and ERBD expanding targeted loan guarantees to firms investing in these areas, the investment potential would be increased (Ghodsi *et al* 2022).

The draft Growth Facility aims at accelerating the green transition towards decarbonisation and to boost innovation, particularly for SMEs and in support of the green transition, yet no reference is made in the draft Facility to technological and industrial support to that end.

Energy-related infrastructure is an important policy field in view of the politically controversial energy dependence of WB countries on Russia (in particular Serbia). However, the CEFTA agreement is silent on issues of infrastructure, energy or gas supplies, leaving untapped a natural area of cooperation.

While integration into Europe's energy markets is part of the goals under the Serbia SAA (Article 109), there is no provision for translating these goals into substantive market access and specific cooperation obligations.

By contrast, the Ukraine DCFTA offers a comprehensive and substantive regime on energy, covering, inter alia, prohibition of trade-restrictive measures and striving for the emergence of energy markets (Article 338).

As long as there is no integration into EU energy markets in the WB, trade in energy will be constrained significantly by insufficient investment in transmission infrastructure and production capacity. China and Russia are likely to fill a void left by the EU, using state-driven investments in essential infrastructure in the WB (Stanicek, 2022).

Against this background, a proposal worth exploring on the level of implementation is to integrate the Western Balkans fully into the EU emissions trading system (ETS), which would accelerate the energy transition in the WB and be a significant new source of funding (Egenhofer, 2023).

### 2.3 Freedom of services

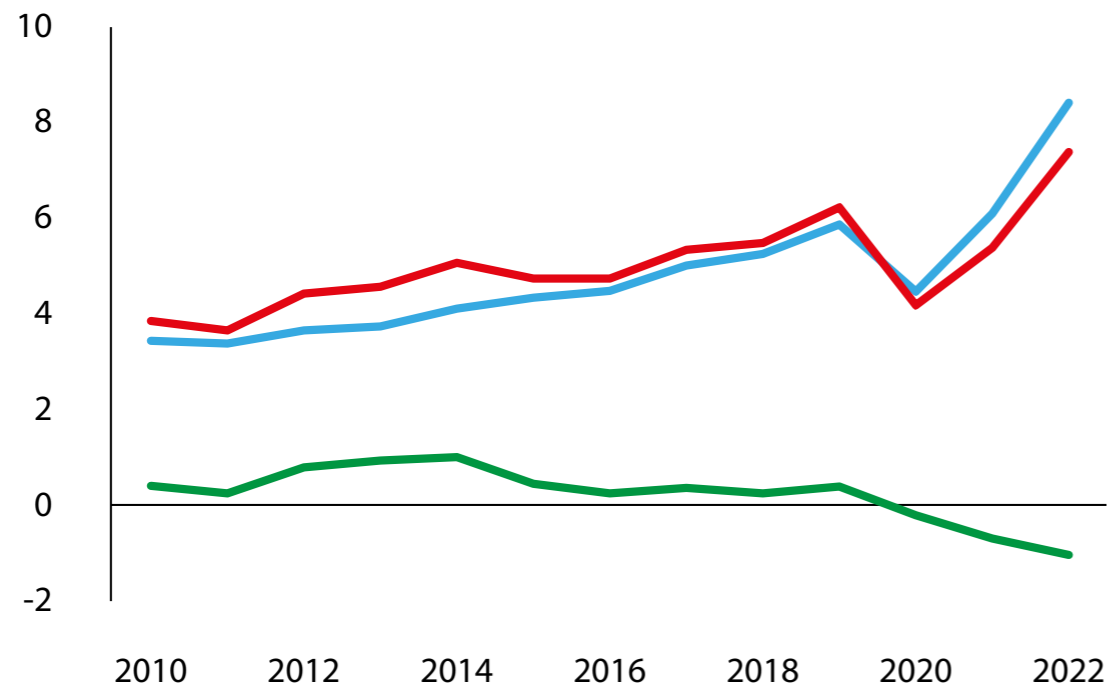
From a comparative perspective, data on trade in services shown in Figure 6 indicates that WB services trade with the EU has grown less quickly than goods trade (compare with Figure 4). Also, EU services exports have grown more quickly with the EaP than with the WB, though from a very low basis.

One reason for this may be associated with the shortcomings in unleashing the potential of services, which can be illustrated by the inferior treatment of services in the Western Balkans SAAs compared to the Ukraine DCFTA. The EU-Ukraine DCFTA establishes a non-discrimination standard for Ukrainian services provided in the EU.

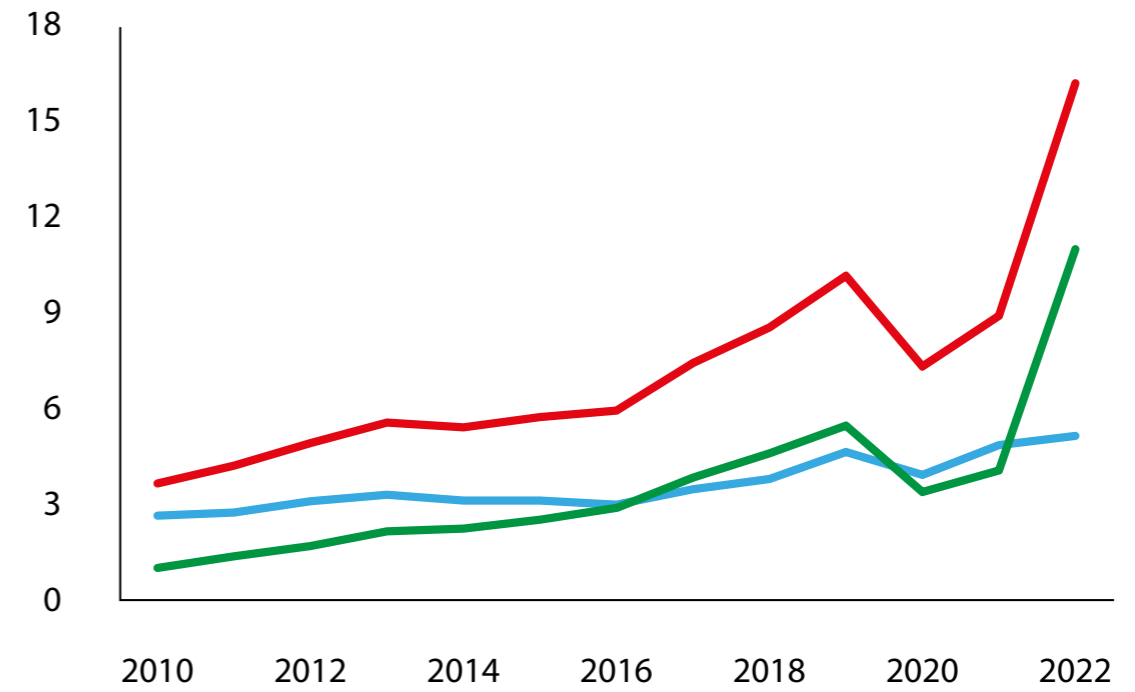
Specifically, these services must be granted “*treatment no less favourable*” than EU domestic services (Articles 93, 94). While this does not apply to all services, it extends to an extensive list of services. Consequently, the available evidence on Georgia supports the idea that its services sector has been expanded, with exports more than doubling in size since the entry into force of the DCFTA between 2014 and 2019 (Akhvlediani *et al* 2022).

**Figure 5. EU27 trade in services with the Western Balkans (left) and EaP (right), € billions**

www.worldcommercereview.com



— Imports  
— Exports  
— Balance



— Imports  
— Exports  
— Balance

Note: Data for Kosovo is not available. Data is presented from the perspective of the EU. See Annex 2 for data disaggregated by country.  
Source: Bruegel based on Eurostat (bop\_its6\_det).

The Serbia SAA does not stipulate a no-discrimination principle similar to the Ukraine DCFTA. The Serbia SAA provides that the EU may not take measures that are “*significantly more restrictive*” than the situation before the Serbia SAA. It also provides procedurally for the EU and the WB to engage in “*steps to allow progressively the supply of services.*”

Yet, this procedural potential has not so far been exploited, while substantive law liberalisation of services remains weak compared to the non-discrimination rule under the DCFTAs. Even the CEFTA does not provide unconditional liberalisation of services on intra-regional level.

The legal comparison points at the absence of rules providing for substantive discrimination prohibitions and the lack of regulatory harmonisation. This contrasts with the non-discrimination clearly spelled out in the agreement on trade in goods. Regulatory harmonisation (or mutual recognition) would be particularly beneficial in core service areas of the region, such as travel and transportation (RCSPI, 2023).

## 2.4 Capital movement

The EU accounts for approximately 60 percent of the current FDI stock in the Western Balkans<sup>24</sup>, but there is no indication that FDI is treated more favourably in either the Western Balkan or the countries of Eastern Partnership.

The rules laid down in the relevant agreements indicate a high degree of capital movement freedom. Established through a ban on discrimination, capital movement is guaranteed both in the WB (Article 63 Serbia SAA) and in the Ukraine (Article 145 Ukraine DCFTA). Both types of agreements explicitly extend the free movement of capital to direct investments.

However, specific relevant sectors enjoy less-favourable treatment in the WB. For the financial sector, for example, DCFTA agreements offer an elaborate regime to promote the access of European investment in the Eastern partnership countries.

Access is granted to payment systems (Article 132 Ukraine DCFTA), regulatory approximation is required (Article 133) and bans on discrimination exist (Article 128). By contrast, the WB SAAs emphasise that financial services are subject to significant restrictions (Articles 54, 56 Serbia SAA).

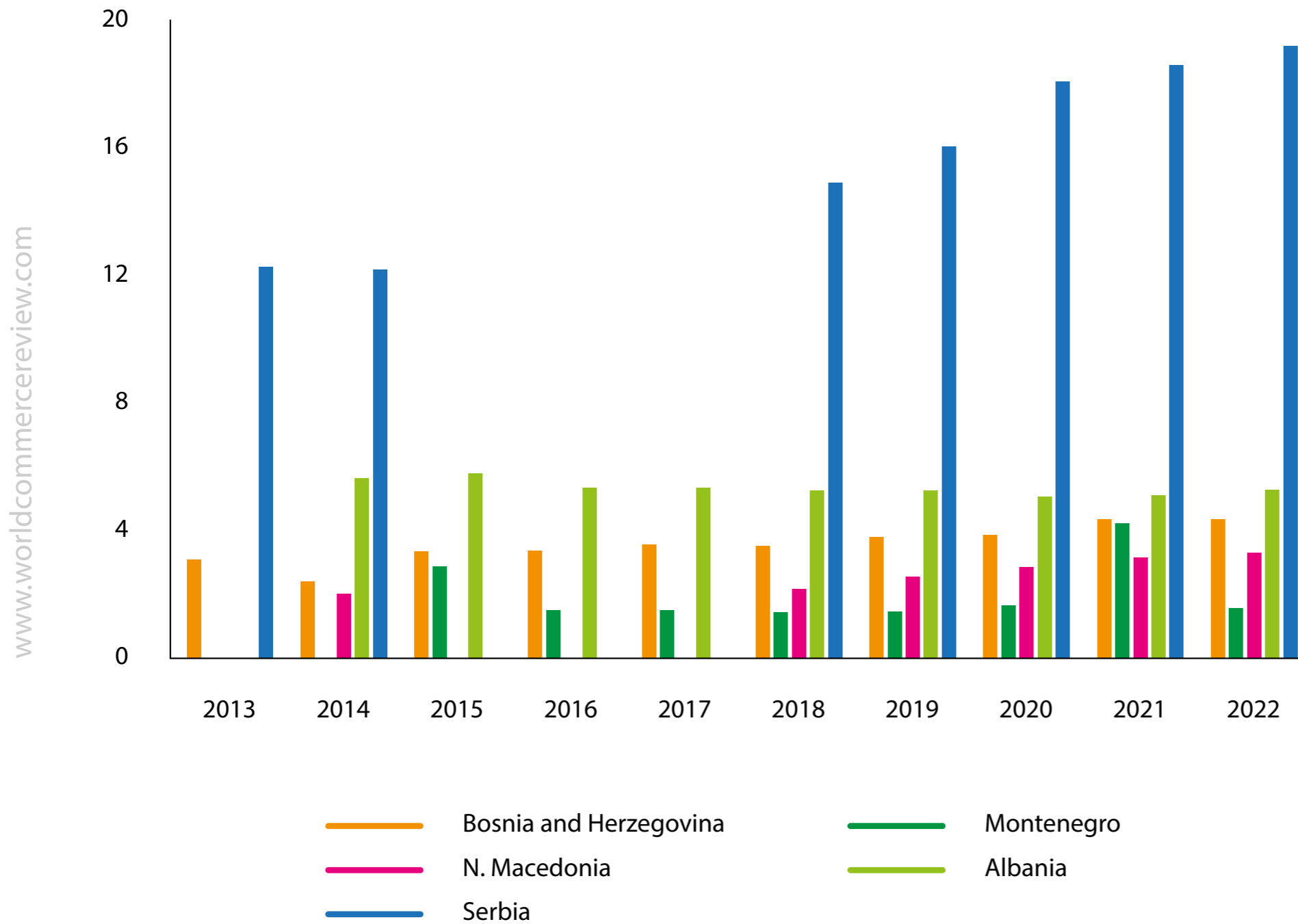
Figure 6 shows that, much like for trade, EU FDI in the two regions is mainly into Serbia and Ukraine respectively (however, see Annex 3 for a breakdown of EU FDI into the various countries as a share of their GDP)<sup>25</sup>.

The evidence suggests that FDI could be driven, more than the other freedoms we have discussed, not only by the openness of market access but by factors beyond the absence of barriers to moving capital. This is also evidenced by the experience of Bulgaria and Romania.

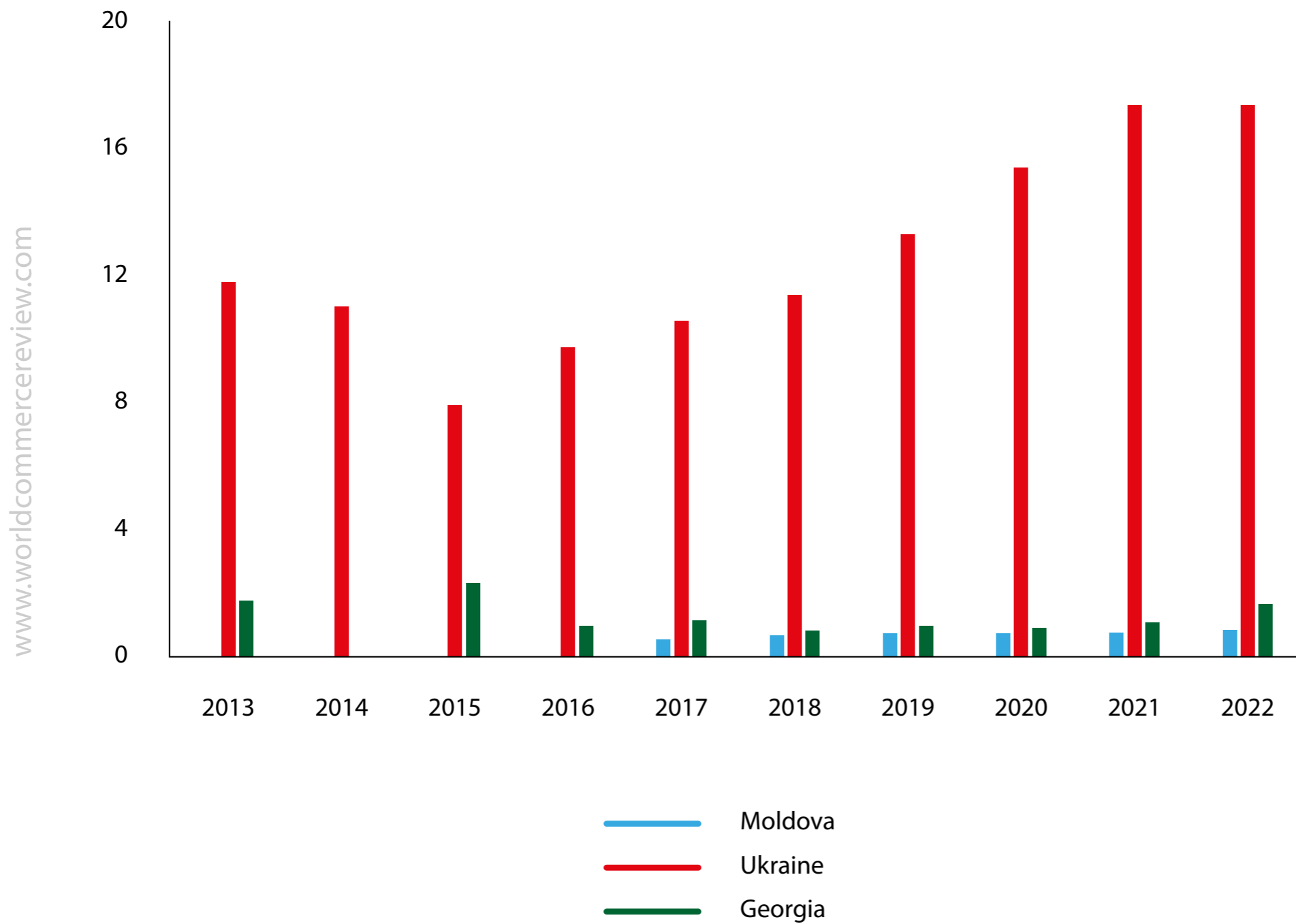
Both saw a one-time surge in FDI after accession to the EU, but have remained at pre-accession levels since. Rather, factors associated with state-driven investment and geopolitical competition have significant effects on FDI in the WB. The EU has historically been the dominant investor in the WB (See Annex 3).

In any case, a legal regime that secures non-discriminatory treatment of capital movement does not offer a complete picture on possible vulnerabilities related to FDI. This is so because state-funded, non-EU foreign investment increasingly outcompetes EU private investment. Some research points to a growing Chinese investment footprint in the region, especially in Serbia (Vulović, 2023; Bykova *et al* 2022), which seems to be driven

**Figure 6a. EU27 FDI stock in the Western Balkans (€ billions)**

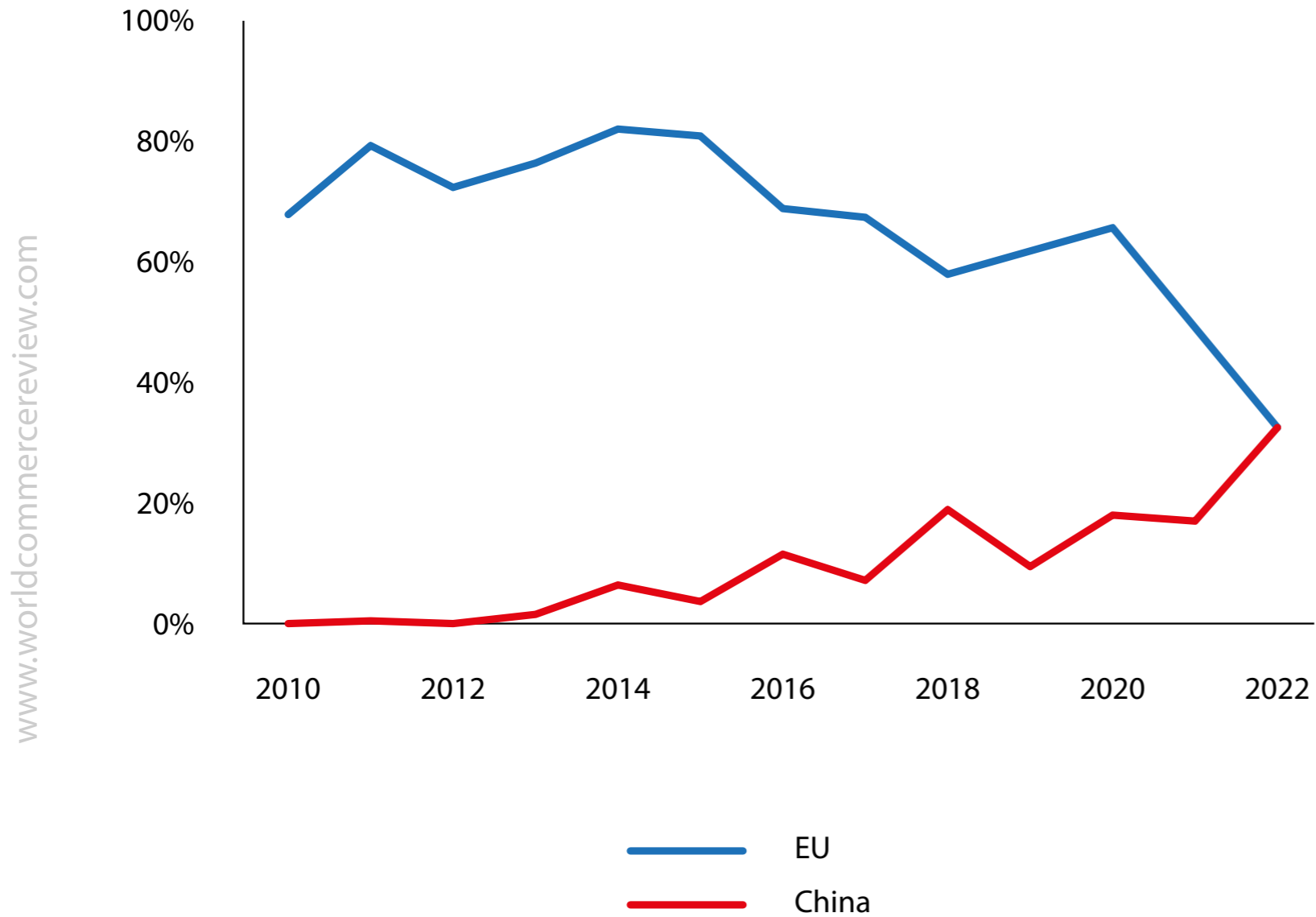


**Figure 6b: EU27 FDI stock in the EaP (€ billions)**



*Note: The lack of data in some years is due to data not being reported by Eurostat for confidentiality purposes.  
Source: Bruegel based on Eurostat (bop\_fdi6\_geo).*

**Figure 7. Share of net FDI flows to Serbia, 2010-2022**



*Note: The variable reported is the share of the EU27 and China net FDI in overall net FDI in Serbia. Net FDI is calculated as the difference between assets (Serbian residents' investments abroad) and liabilities (non-residents' investments in Serbia). Over this period there was consistently a larger inflow of investment into Serbia than outflow. This figure shows the share of that net inflow of FDI that comes from the EU27 and China.*  
*Source: Bruegel based on National Bank of Serbia<sup>26</sup>.*



by state-owned investors or by state-guaranteed finance linked to contract guarantees for Chinese companies (Ghodsí *et al* 2022).

Indeed, this increase in Chinese investment in Serbia is supported by China's growing share in net FDI flows to Serbia (Figure 7).

Dependence on countries perceived (from a European perspective) as geopolitical rivals increases the WB's vulnerability to geopolitical turmoil. A high EU share of FDI in turn should align EU and WB interests.

Furthermore, from the EU perspective, FDI in WB is self-serving, as one element of a 'de-risking' strategy, put in place by incentivising European firms to shift production closer to home, with the Western Balkan as one region in which geopolitical competition takes place.

As mentioned above, the ERBD and EIB can play an important role in promoting EU FDI in the region and in maintaining the FDI-based ties between the EU and WB, thus sidelining investment from geopolitical rivals. Through these institutions, the EU should develop and enhance the capital market in the region, in particular by stimulating investment by smaller firms in the region (Ghodsí *et al* 2022).

Both EU outbound investment promotion and inbound investment control can play roles here. Outbound EU investment to WB has positive implications (both for the EU and WB countries) beyond market opportunities and should be promoted through available incentivising instruments, while WB inbound investment control becomes increasingly important in light of the state-driven and strategic investment of China and Russia in the region.

The existing EU inbound investment control regime should be treated as relevant *acquis* that should enjoy priority in implementation in the WB. This would help to identify (and divert) state-driven acquisitions that could ultimately increase WB dependence and vulnerability.

Within the WB bloc, this implies that EU and WB countries must develop regional guidance on screening mechanisms that respond to FDI in line with the EU investment control regime.

## 2.5 Approximation of laws

Another comparative imbalance between the WB and eastern European countries are their variable commitments on the approximation of laws. While the EU generally makes the adoption of the *acquis* an ex-ante precondition for access to the internal market, there are significant differences in how this obligation is put in place substantively and in governance structure.

Approximation of laws forms an essential element of the SAAs, which provide for seamless access to the internal market for goods originating from WB countries based on a sufficient alignment of national rules with the Union *acquis*.

Specifically, the WB SAAs “*recognize the importance of the approximation to that of the Community*” (Article 72 Serbia-SAA) and they provide for a governance structure that aims at promoting the approximation process.

What is missing beyond this general obligation is a more detailed enumeration of specific legal texts to be adopted and by when. Likewise, CEFTA provides a governance structure on “*harmonization of technical regulations and standards*” in the field of TBTs (Article 13 of CEFTA) but remains silent on substantive obligations and concrete legal texts.

This contrasts with the extensive approach on the approximation of laws under the DCFTA agreements, which specify the approximation of laws for individual policy areas (rather than one single encompassing global obligation).

In the DCFTAs, the agreements are much more explicit, with the listing of hundreds of directives and regulations that the Eastern partnership countries are required to implement.

Take public procurement as a specific example. The Georgia DCFTA provides for a gradual approximation of public procurement legislation in Georgia with the Union public procurement acquis based on the specific EU procurement law (Article 141 Georgia DCFTA), and it requires further approximation with the Union's public procurement acquis (Article 146 Georgia DCFTA).

In essence, while the WB SAAs rely on a procedural framework to pursue approximation of law (through cooperation), the DCFTA agreements, in addition to a procedural framework, specify substantively the specific approximation obligation.

Evaluation of the Georgian experience shows that the gradual approximation to EU norms in public procurement improved the already reformed system (Akhvlediani *et al* 2022).

The higher degree of specificity in terms of the obligation to approximate the laws is also a result of a continuous practice of amending the SAAs. The Ukraine SAA has been modified and extended by new or revised Annexes to the SAA around ten times since 2018, while the Serbia AA has been amended in the same time period only once.

One reason for this difference could lie in the more compelling approximation ambition in the EaP SAAs. For example, the Ukraine SAA contains special approximation provisions for the areas of sanitary and phytosanitary and animal welfare legislation, as well as for telecommunications – these specific approximation obligations have been used to amend and further develop the Ukraine SAA. In turn, the Serbia SAA is limited to a general approximation provision but largely lacks more specific obligations.

### **3 Comparative assessment of governance deficiencies**

While integration into the internal market is primarily an issue of substantive requirements on market access, governance is essential in implementing effectively the commitments under the agreements.

The governance structure common to SAAs typically involves an SAA Council as political body, with high-level representatives of both the EU and the country in question, tasked to supervise and evaluate the integration process. A Stabilisation and Association Committee composed of high-level civil servants supports and prepares the work of the SAA Council. Sub-committees involving civil servants meet at technical level throughout the year to discuss and monitor progress on specific subject areas covered by the SAA.

There is also a joint SA Parliamentary Committee, involving members of the national parliament and of the European Parliament, from across the political spectrum. These joint institutional structures manage the process by jointly overseeing the implementation of the SAA.

#### **3.1 Political dialogue and civil society**

With the WB as a region characterised by multiple historical and contemporaneous internal political tensions (Domi, 2023), the political dialogue as a reconciliatory and inclusive element for integration of the WB into the EU single market is key when it comes to effective implementation of the agreements.

The EaP countries and the WB have established structures of political dialogue that serve to address political and technical issues impeding implementation and deepening cooperation. Dialogue can take place at different political and technical levels between the EU and the region (Annex 1).

Building on the general governance institutions mentioned above, a number of additional formats subsequent to the initial governance under the SAAs have been initiated. Intra-regional governance is put in place through the Regional Common Council (RCC) Secretariat under the Regional Common Market initiative, in cooperation with the CEFTA Secretariat.

The different institutions perform different functions, either inter-regionally to foster convergence with the EU, or intra-regionally between WB countries.

A core difference and shortcoming of the WB structures, compared to the relationship between the EU and the EaP countries, is the absence of civil-society involvement in the framework of implementing the agreements.

Civil society plays an important role in various ways: civil society is a carrier of expertise feeding into implementation of commitments; civil society is key in identifying and eliminating barriers to trade; it collects relevant information to provide to the bodies engaging in trade facilitation or rules approximation.

Civil society also has an important and disciplining surveillance function over governmental decision-making. Also, civil society is one of the groups affected by democratic backsliding in some of the WB countries, undermining the ability of civil society to monitor government action.

The sufficient integration of civil society into the governance structure of the SAA (and the EU Growth Plan) can thus be likened to the Copenhagen Criteria for EU accession, for which involvement of civil society without political and administrative pressures is indispensable.

In that respect, the Ukraine DCFTA establishes a comprehensive structure for political dialogue involving civil society. The EU and the DCFTA countries are obliged *“to involve civil society in the implementation of the agreement”*, to encourage mutual exchanges of experiences and multiple other forms of connecting civil society among each other, as well as with decision-makers (Articles 443, 444, SAA Ukraine). It even creates policy-specific civil-society exchanges, such as for trade and sustainability issues (Article 299, SAA Ukraine).

By contrast, the relevant agreements involving the WB are silent on the role of civil society. The WB SAAs do not assign a task to civil society, nor has CEFTA integrated civil society into the implementation process, nor does the Working Programme of the Common Regional Market<sup>27</sup> identify civil society as a relevant contributor to the implementation process.

In addition and likewise, the EU does not seem to attach much value either to civil-society involvement. Its draft Growth Plan foresees a role for civil society only at the evaluation stage, and only as one of many stakeholders (Article 25 of draft Growth and Resilience Facility).

The limited role of civil society in implementing the WB SAA is insufficient and forgoes benefits, both from the perspective of relevant expertise as well as a source of legitimacy and acceptance.

Again, Georgia can be referred to as a positive example in this respect. The Georgia SAA established a Civil Society Platform, which enables civil-society organisations from both sides to monitor the implementation process and prepare their recommendations to the relevant authorities.

Specifically, the Georgian National Platform of the Eastern Partnership Civil Society Forum was established in 2015 as a consultative body under the Association Agreement. It brings together up to 200 organisations, among them civil-society organisations, employee organisations, trade unions and associations.

Not only does this platform perform a bottom-up process of providing insight, but it also assures the monitoring of the AA/DCFTA's implementation by producing recommendations to the Association Council and the relevant authorities of both parties (Akhvlediani *et al* 2022).

### 3.2 The DCFTA Trio format as role model?

There is no shortage of political bodies created under the agreements and involved in the process. Association Agreements, CEFTA, the Common Regional Market Initiative – bodies abound, yet they remain deficient. CEFTA's governance structure lacks the enforcement capacity that other trade agreements with similar scope of ambition have.

CEFTA is designed in intergovernmental fashion, it has not created institutions endowed with competences to make legislative proposals, nor does it exercise adequate supervision over the implementation of the agreement.

While the CEFTA Secretariat is largely limited to providing technical and administrative support to the CEFTA Joint Committee and Bodies, the latter are plagued by the need to decide by consensus and are riddled by political controversies over the representation of Kosovo (RCSPI, 2023).

To some extent, the Common Regional Market initiative sought to create the missing element. The RCC Secretariat created under this framework (including countries such as Turkey and Greece) coordinates and monitors the Action Plan in close cooperation and consultation with CEFTA Secretariat.

While dialogue, reconciliation and cooperation characterise the work of the RCC, its success is limited because of the participation of countries beyond the WB, including the geopolitical rival Turkey, which limits the possibility for this governance framework to focus on the specific concerns of the WB countries in relation to the EU.

Drawing from the experience of the EaP countries, there is a need for a political framework dedicated to the joint WB endeavour for EU accession. The ‘new frontrunners’ – Ukraine, Georgia and Moldova – motivated but disappointed about the slow accession process, created an Associated Trio format in 2021 to push harder to “enhance their political association and economic integration with the EU”, in line with their European aspirations<sup>28</sup>.

The Trio format was complementary to the multiple other formats and bodies established under the Eastern Partnership, but it was complementary in a productive way by offering an agenda for the dialogues between the ‘Association Trio’ and the European Commission, in addition to the DCFTA-related issues, one that deepened cooperation in areas including transport, energy and green economy, even if the Trio has its own shortcomings and the war in Ukraine has hampered the effectiveness of this institution.

Taking the Trio format of the DGFCAs as role model, it is worth exploring an equivalent body as a complementary element to the multiple existing formats and bodies of the Western Balkans. While WB states maintain their individual agreements with the EU, there is no sufficiently visible format that focuses on the joint WB concerns in pursuing EU accession.

Just as the Trio format of DGFCAs established ad-hoc trilateral consultations to discuss specific issues in the framework of their integration with the EU, a similar institutionalisation could promote the concerns of the WB beyond the SAAs and the Growth Plan framework.



Such a framework could establish 'Trio' coordinators within the Ministries of Foreign Affairs, and coordinate meetings at expert, senior official and, when appropriate, ministerial levels.

The Open Balkan Initiative (OBI) could be a first step in this direction. Intended to intensify the economic integration between three WB countries (Albania, North Macedonia and Serbia), this initiative could grow further to become a representative body that represents WB interests in relation to the EU.

The initial motivation for the OBI arose from fatigue with the sluggish EU integration process, but it could become a productive forum by accelerating intra-regional economic integration, political cooperation in the areas of infrastructure and transport, and the fight against organised crime and terrorism (Semenov, 2022).

There is the potential that the EU finds a counterpart able to speak with one voice for WB countries. Yet, in its current setup, the OBI is not able to compensate for one of the core deficiencies of the cooperation frameworks under CEFTA and the Common Regional Market, which is the absence of an independent institution tasked with overseeing and implementing agreements, and which ensures consistent implementation across countries and alignment with the EU acquis (RCSPI, 2023).

#### **4 Conclusions**

The importance of EU single market membership to WB economic prospects cannot be overstated. This analysis sought to highlight differences between WB SAAs and DCFTAs and lessons to learn from the DCFTA process. It showed that the DCFTAs apply a more lenient approach to intra-regional cooperation.

Also, the DCFTAs subject non-tariff barriers to a more explicit regime than WB SAAs; rules governing trade in services incorporate a stronger non-discrimination standard; and the DCFTAs offer a more rigid and comprehensive

approach to the approximation of laws than the WB countries. It is the latter point in particular that underscores the different integration models underpinning the WB SAAs and the DCFTAs.

The WB SAAs were initially concluded with the prospect of addressing the adoption of the *acquis* during the subsequent accession negotiations (which then turned out to be delayed), rendering SAAs in some aspects less ambitious.

In turn, conclusion of the DCFTAs with the EaP countries was seen as a substitute for EU accession, which explains the (in parts) greater degree of trade liberalisation in the EaP countries than in the WB, and the more assertive stance of these agreements in particular on approximation issues.

There is no indication that the differences in legal governance have translated into a stronger economic performance in the EaP countries compared to the WB. From a comparative perspective, the analysis suggests that dubbing Ukraine and other EaP countries as the 'new frontrunners' appears premature if not misleading. Rather, they can be dubbed 'quickstarters', reflecting their rapid pace in moving from application status to candidate status and accession negotiations.

The WB remains significantly more integrated in trade with the EU than the EaP countries, while convergence with the EU has been stagnating both for the WB and the EaP. While not underperforming compared to the EaP countries, economic deficiencies in the WB nevertheless exist and should be addressed.

Conditionality attached to both internal market and EU funding should be nuanced; above all, in relation to economic intra-regional integration, it should not impede the necessary investments. The eradication of non-tariff barriers should enjoy priority both inter-regionally with the EU and intra-regionally between WB countries.

The EU's levers for promoting investment in the region should be further enhanced, a demand that is further reinforced by geopolitical concerns about Chinese investments coming without EU-type conditionality attached, and thus creating a tempting alternative for WB countries that have been increasingly disappointed with the slow progress in EU accession.

The question is whether and how the identified shortcomings in the agreements should be addressed. One avenue is to seek amendments of the SAAs and adjust according to the shortcomings identified in this analysis, which implies bargaining with the EU on amending the SAAs on a country-by-country basis. Such a formal amendment approach is likely to undermine the negotiation stage of EU accession (into which five out of six WB states have entered).

Amending the SAAs with a view to aligning them with the DCFTAs would in the WB region be perceived as a (disappointing) substitute for EU accession. An alternative would be to seek an agreement that is complementary to the existing ones, concluded between WB countries (negotiating in unity) on the one side and the EU on the other side.

This approach would be in line with the above exploration of a joint body as a counterparty to the EU. However, the existing and persistent intra-regional political tensions make a sufficiently homogenous stance, as a precondition for crafting a joint agreement, an unlikely prospect.

A third and more pragmatic solution would be to use the existing framework to the greatest extent possible. For example, regulation of trade in services gives leeway to the SAA Council to *"take the measures necessary to progressively"* liberalise the supply of services (Article 59 Serbia SAA). In addition, the SAA Council has sufficiently

wide procedural leeway to widen the scope of interaction with civil society and to create space for civil society in the implementation of the SAAs (Article 120 Serbia SAA).

In turn, the EU is more flexible in unilaterally adjusting its policies on the WB. It could nuance the conditionality embedded in its draft Growth Plan and the draft Growth Facility, and it can extend its tools to foster investment in the regional infrastructure, and thus contribute to stronger convergence by the region. ■

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## Endnotes

1. Lisa O'Carroll, *'As Ukraine and others queue to join, is EU ready for enlargement?'* The Guardian, 31 August 2023.
2. Services data is missing for Kosovo.
3. Based primarily on European Commission (2023c) and the latest relevant Reports and Conclusions from the European Commission and Council, *available for each country*; other sources referenced as appropriate.
4. For more details, see *'Treaty on European Union — Joining the EU'*.
5. Despite Council agreement to begin negotiations with Albania and North Macedonia in March 2020, the process only began for each country in July 2022.
6. See European Commission news article of 8 December 2023, *'Screening meetings completed as part of screening process with Albania and North Macedonia'*.
7. Meaning that it "should be offered official candidate status when it is ready"; see [https://neighbourhood-enlargement.ec.europa.eu/enlargement-policy/steps-towards-joining\\_en](https://neighbourhood-enlargement.ec.europa.eu/enlargement-policy/steps-towards-joining_en).
8. See footnote 6.
9. See point 16 in European Commission (2023c).
10. See point 15 in European Commission (2023c).
11. Based on media reports; see for instance Alexandra Brzozowski, *'EU Commission to start screening process for Ukraine, Moldova after 'surprise' delay'*, Euractiv, 17 January 2024.
12. See point 14 in European Commission (2023c).
13. See *'Stabilisation and Association Agreement with Serbia'*.
14. See *Association Agreement between the EU and Ukraine*.
15. See Majlinda Bregu, Secretary General of the Regional Cooperation Council, *speaking at the 10<sup>th</sup> Belgrade Security Forum*, 22 October 2020.
16. See *'The Western Balkans Common Regional Market – a catalyst for deeper regional economic integration and a stepping stone towards EU Single Market'*.

17. See <https://www.berlinprocess.de/>.
18. Which also includes factors such as the efficiency of the clearing process and the ability to track and trace consignments. For more details see <https://lpi.worldbank.org/>.
19. Bulgaria, Czechia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia.
20. As well as political tensions and institutional factors, for example.
21. See European Commission news article of 13 December 2023, [‘European Commission announces additional €680 million investment package for the Western Balkans under the Economic and Investment Plan’](#).
22. Christian Danielsson, Director-General for Neighbourhood and Enlargement Negotiations, speaking on 3 March 2020. See [Strategeast, ‘EU welcomes Ukraine’s progress in implementing the Association Agreement and the Deep and Comprehensive Free Trade Area’](#), 4 March 2020.
23. See EU Projects in Serbia, [‘The Trans-Balkan electricity corridor’](#).
24. See Council of the EU, [‘The EU: main investor, donor and trade partner for the Western Balkans’](#).
25. FDI data is problematic, given the opacity of the ultimate investor behind the FDI in question. To address these concerns, in Annex 3 we build on the work of Damgaard et al (2019), who used firm-level data to estimate the “ultimate investor economy” in FDI data.
26. See [‘Foreign direct investments, by country, 2010-2022 \(BPM6\)’](#).
27. Available from: [https://neighbourhood-enlargement.ec.europa.eu/enlargement-policy/policy-highlights/common-regional-market\\_en](https://neighbourhood-enlargement.ec.europa.eu/enlargement-policy/policy-highlights/common-regional-market_en).
28. See Ministry of Foreign Affairs of Ukraine, [‘Association Trio: Memorandum of Understanding between the Ministry of Foreign Affairs of Ukraine, Ministry of Foreign Affairs of Georgia and the Ministry of Foreign Affairs and European Integration of the Republic of Moldova’](#), 17 May 2021.
29. Source and notes are consistent for each figure in this section.
30. Eurostat does not provide services data for Kosovo.

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*This article is based on a Bruegel Working Paper that was produced with financial support from The Open Society Foundations Western Balkans. The author thanks Conor McCaffrey for research assistance, along with Marek Dabrowski, Zsolt Darvas, Heather Grabbe and André Sapir for their valuable comments and suggestions.*



## Annex 1. Legal comparison Annex 2. Trade data

Country (Date of entry into force)	Association Agreement/Deep and Comprehensive Free Trade Area Agreements	Associate Agreement Serbia (2013)	Observed differences between DCFTA and SAA
<p><b>Regional Cooperation Requirements (ie. necessity to integrate primarily regionally)</b></p>	<p>Ukraine (Association Agreement since 2014, DCFTA since 2016)</p> <p>Chapter 27 - promote regional understanding; support and strengthen involvement of local and regional-level authorities in crossborder and regional cooperation; strive to develop crossborder and regional elements in various areas; regular dialogue on this matter.</p>	<p>Title III, Art 14: "Serbia shall actively promote regional cooperation. The Community assistance programmes may support projects having a regional or crossborder dimension through its technical assistance programmes.... implement fully the CEFTA";</p> <p>Art 15: "Serbia shall start negotiations with the countries which have already signed an SAA with a view to concluding bilateral conventions on regional cooperation", main elements: political dialogue, free trade areas, various economic freedoms and cooperation in areas such as justice, freedom and security. "Readiness by Serbia to conclude such conventions will be a condition for the further development of the relations between Serbia and the EU";</p> <p>Art 16: Pursue regional cooperation with the other States concerned by the SA process;</p>	<p>The language seems stronger for SAAs-matches what Windisch said in his intervention "no access to the single market on any of the 7 pillars will be granted before there is integration on the common regional market."</p>

		<p>Art 17: "Foster its cooperation and conclude a convention on regional cooperation with any country candidate for EU accession in any of the fields of cooperation covered by this Agreement... should aim to gradually align bilateral relations... with the relevant part of the relations between the Community... and that country".</p> <p>Should also start negotiations with Turkey on establishing a free trade area.</p>	
<p><b>Political dialogue structure (institutional exchange, high level, lower level etc.)</b></p>	<p>Arts 460-468: Highest level is Summit level, to take place in principle once a year; political and policy dialogue at ministerial to take place at least once a year within the newly established Association Council; Parliamentary Association Committee established.</p> <p>Article 5: As well as the above, there will be regular dialogue at Foreign Minister, Political Directors, Political and Security Committee and expert levels.</p>	<p>Title II, Art 10-13: Political dialogue to be further developed between the parties to support the rapprochement between the EU and Serbia and increase convergence on international issues and security and stability; in addition to the institutions described below dialogue can occur directly between officials representing the Council Presidency or HRVP and those representing Serbia</p> <p>Art 119-125: Stabilisation and Association Council, made up of members of the European Council and Commission and the Government of Serbia, is established and shall meet at regular intervals and when required; the Council is to be supported by an SA Committee; Stabilisation and Association Parliamentary Committee established, consisting of members of the European Parliament and the Parliament of Serbia, to allow them to meet and exchange views.</p>	<p>Slight differences: DCFTAs seem to mandate ministerial meetings, whereas SAAs talk about senior officials.</p>

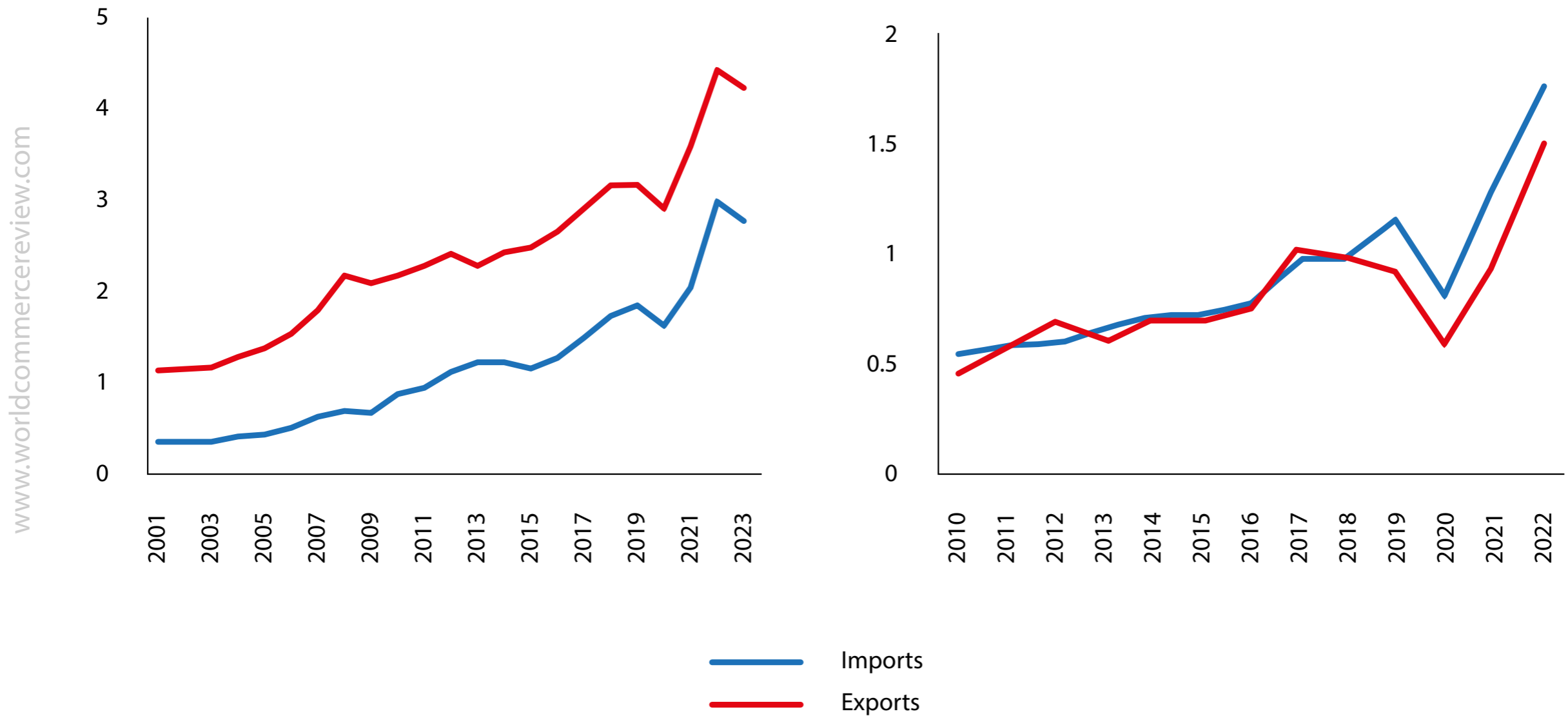
<p><b>Political dialogue: involvement of civil society</b></p>	<p>Arts 443 and 444: Promoting dialogue and cooperation between civil society groups in both regions. Arts 469 and 470: Parties will promote regular meetings as representatives of their civil societies; Civil Society Platform established to allow for an exchange of views and to meet with and make recommendations to the Association Council.</p>	<p>No</p>	<p>More of a reference to civil society in the DCFTAs.</p>
<p><b>Freedom/liberalization of trade in goods</b></p>	<p>Art 29: Sets out schedule for reduction/elimination of custom duties.</p>	<p>Title IV, Art 18: "shall gradually establish a bilateral free trade area over a period lasting a maximum of six years"; controversial legal interpretation, see Sretic (2023), pg 6-7.</p>	<p>Not significant.</p>
<p><b>Trade in services</b></p>	<p>Art 94: In the sectors where market access commitments are inscribed in Annexes... each Party shall grant to services and service suppliers of the other Party... treatment no less favourable than that it accords to its own like service and services suppliers.</p>	<p>Art 59: Liberalisation process-parties undertake to take the necessary steps to allow progressively the supply of services by firms/nationals of the other party, with a review after four years; temporary movement of key personnel allowed to support this; Art 60: "The Parties shall not take any measures or actions which render the conditions for the supply of services by Community and Serbia nationals or companies which are established in a Party other than that of the person for whom the services are intended significantly more restrictive as compared to the situation existing on the day preceding the day of entry into force of this Agreement."</p>	<p>Different form of no discrimination (time vs nationality).</p>

		Art 61: Provisions on transport services specifically.	
<b>Freedom of workers</b>	Art 97-102: Limited freedom of movement for certain classes of workers.	Art 49: Non-discrimination rules. Art 50: Bilateral agreements on access to employment for Serbians should be preserved, improved and possibly expanded to other member states. Art 51: Rules shall be laid down for the coordination of social security systems for Serbian workers, legally employed in the territory of a member state and vice versa.	Not significant.
<b>Freedom of establishment</b>	Art 88: Treatment no less favourable than that accorded to its own legal persons... or to any third-country legal person... whichever is the better;	Art 53: "no less favourable than that accorded to its own companies or to any third country company, whichever is the better."	Not significant.
<b>Freedom of capital</b>	Art 145: Shall "ensure the free movement of capital relating to direct investments made in accordance with the laws of the host country, to investments ... and to the liquidation or repatriation of such invested capitals and of any profit stemming therefro". Portfolio investments, financial loans, credits related to commercial transactions also covered. "Ukraine undertakes to complete the liberalisation of transactions on the capital and financial account of balance	Art 63: "With regard to transactions on the capital and financial account of balance of payments, from the entry into force of this Agreement, the Parties shall ensure the free movement of capital relating to direct investments made in companies formed in accordance with the laws of the host country and investments made in accordance with the provisions of Chapter II of Title V, and the liquidation or repatriation of these investments and of any profit stemming there from."	Not significant.

	<p>of payments equivalent to the liberalisation in the EU Party prior to the granting of internal market treatment in the area of financial services... A positive assessment of the Ukrainian legislation on capital movements, its implementation and continued enforcement... is a necessary precondition of any decision by the Trade Committee to grant internal market treatment with respect to financial services." Discussions to take place 5 years after the entry into force to see what still needs to be done.</p>	<p>Free movement of capital relating to credits related to commercial transactions/provision of services, portfolio investment and financial loans and credits are also covered. Serbia should authorise and liberalise the purchase of its real estate by EU nationals so that they ultimately receive the same treatment as Serbians. After four years the SA Council will determine what remains to be done to apply full EU rules on freedom of capital.</p>	
<p><b>Provisions on non-tariff barriers</b></p>	<p>Art 34-35: Each Party shall accord national treatment to the goods of the other Party in accordance with Article III of GATT 1994, including its interpretative notes... No Party shall adopt or maintain any prohibition or restriction or any measure having an equivalent effect on the import of any good of the other Party or on the export or sale for export of any good; Art 53-58: Reference cooperation and previous agreement on technical barriers to trade.</p>	<p>Title IV: No explicit mention in trade in goods (though legally controversial, Sretic 2023).</p>	<p>No explicit mention of non-tariff barriers in the SAAs, but the Sretic piece seems to argue they are implicit?</p>

## Annex 2. Trade data

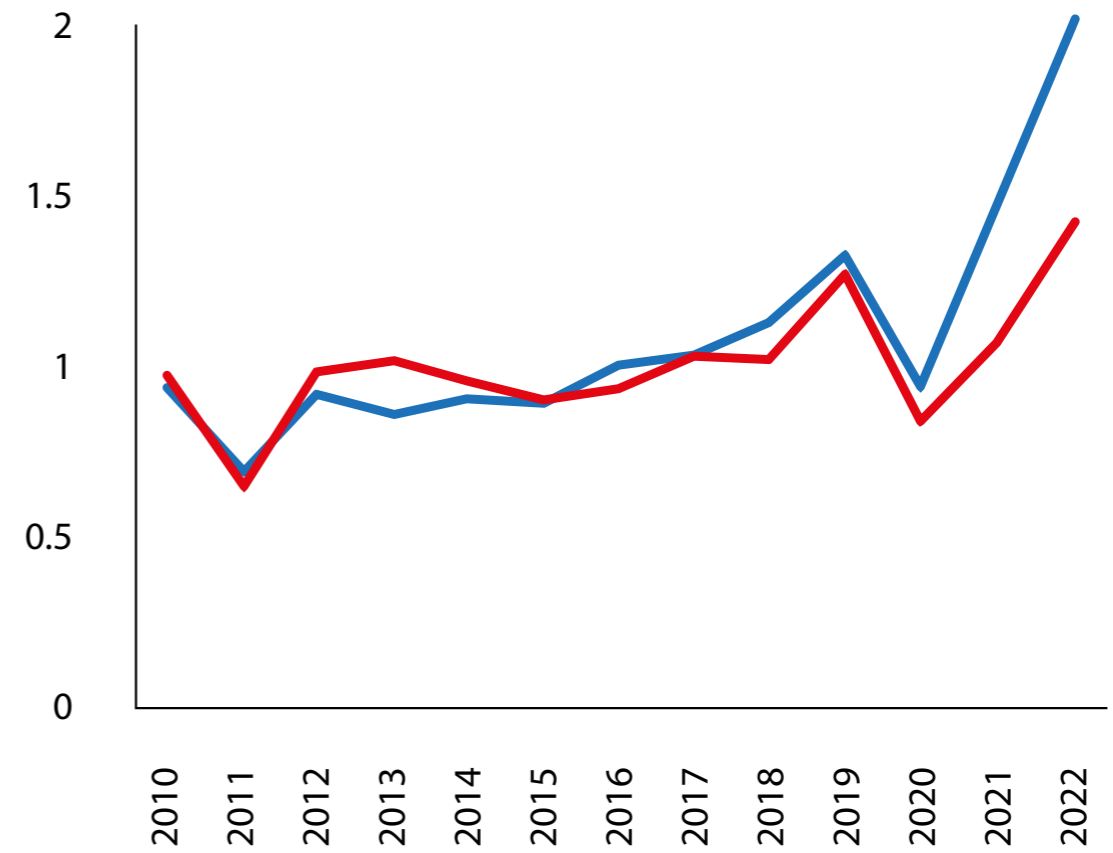
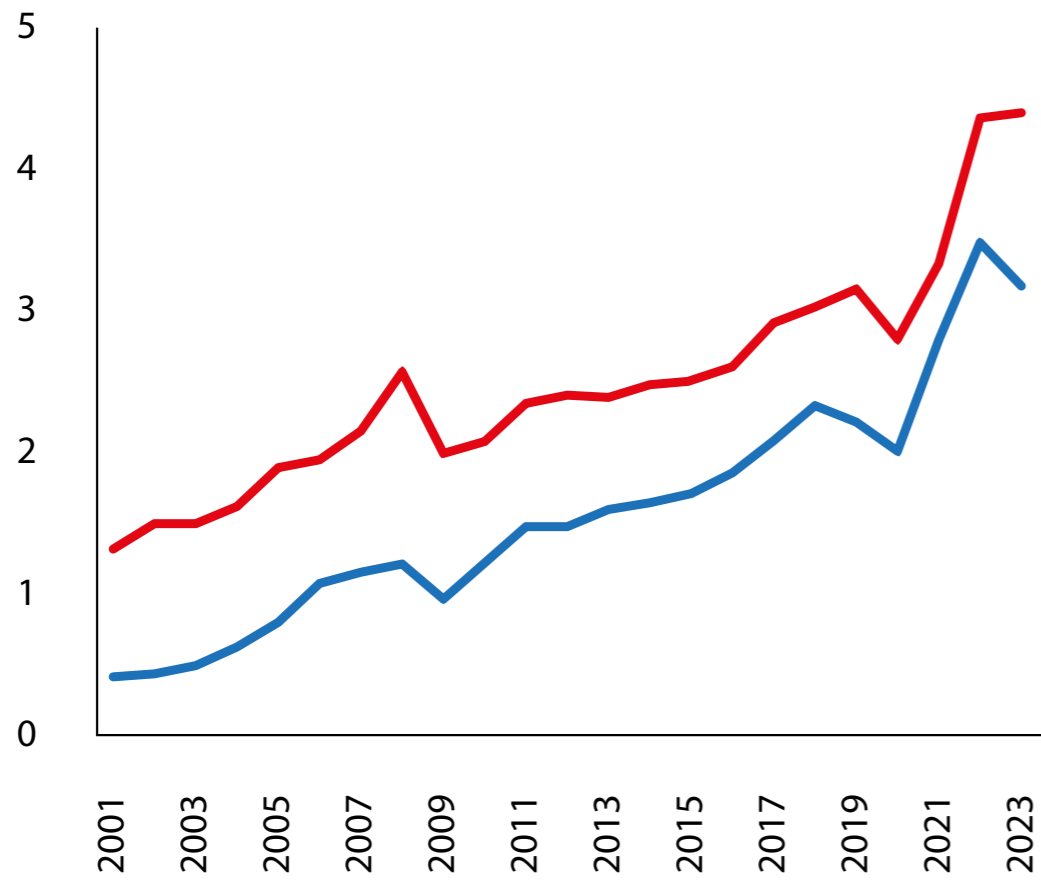
### EU27 goods (left) and services (right) trade with Albania (€ billions)



Note: Exports refer to EU exports to Albania and imports the reverse<sup>29</sup>.  
Source: Bruegel based on Eurostat (DS-018995).

## EU27 goods (left) and services (right) trade with Bosnia and Herzegovina (€ billions)

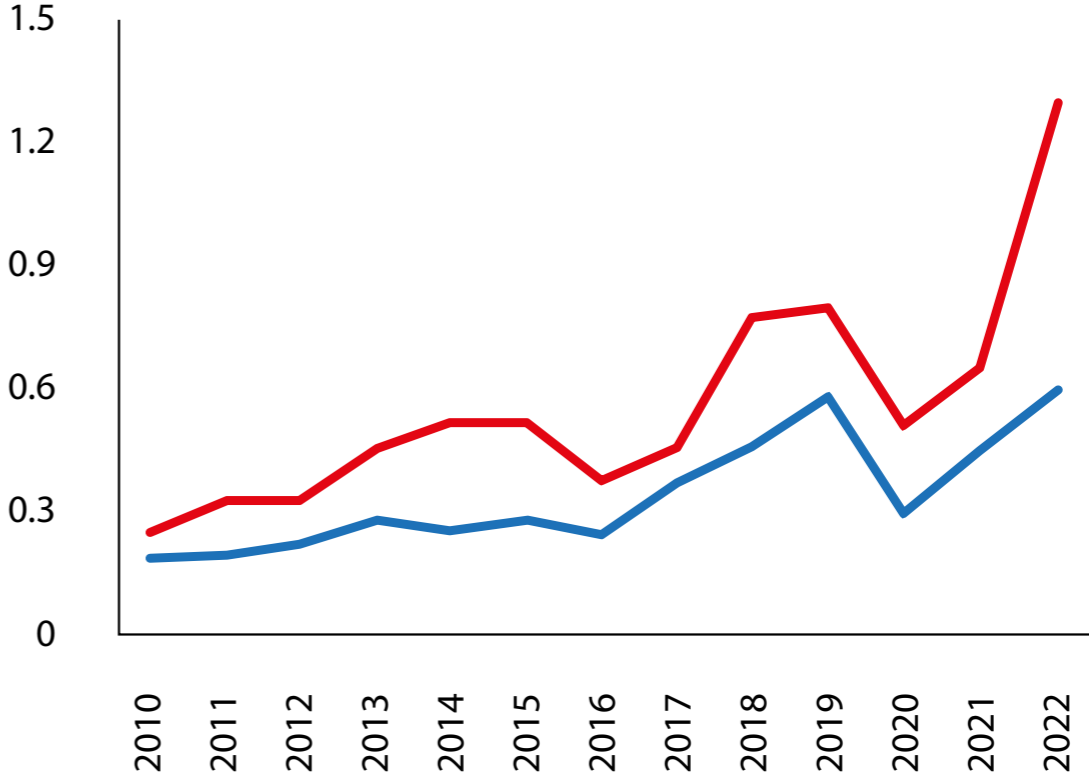
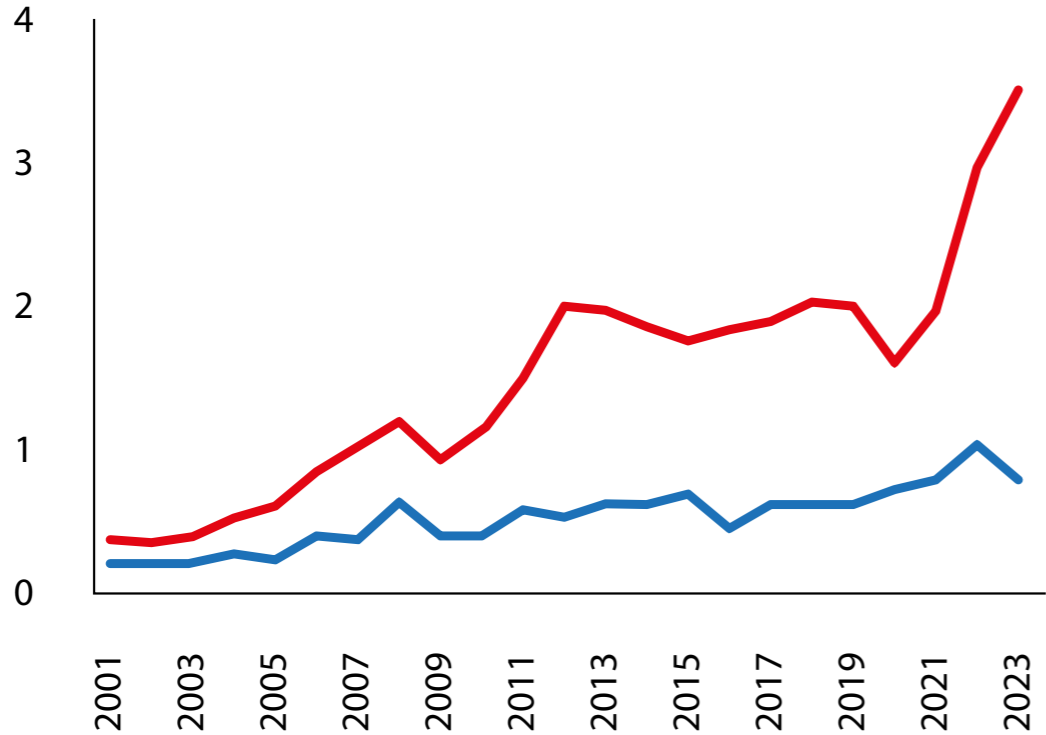
www.worldcommercereview.com



— Imports  
— Exports

**EU27 goods (left) and services (right) trade with Georgia (€ billions)**

www.worldcommercereview.com

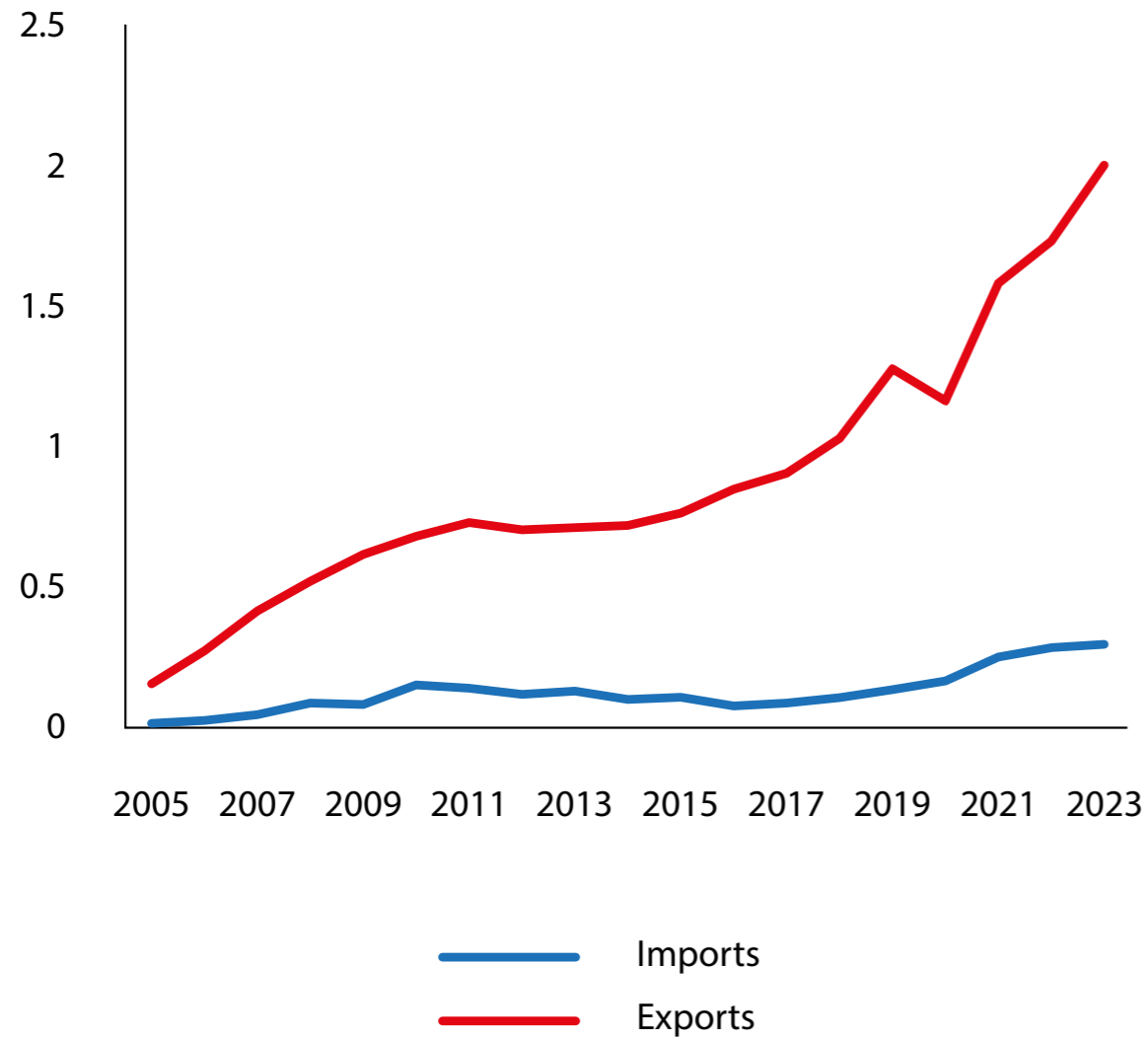


— Imports  
— Exports



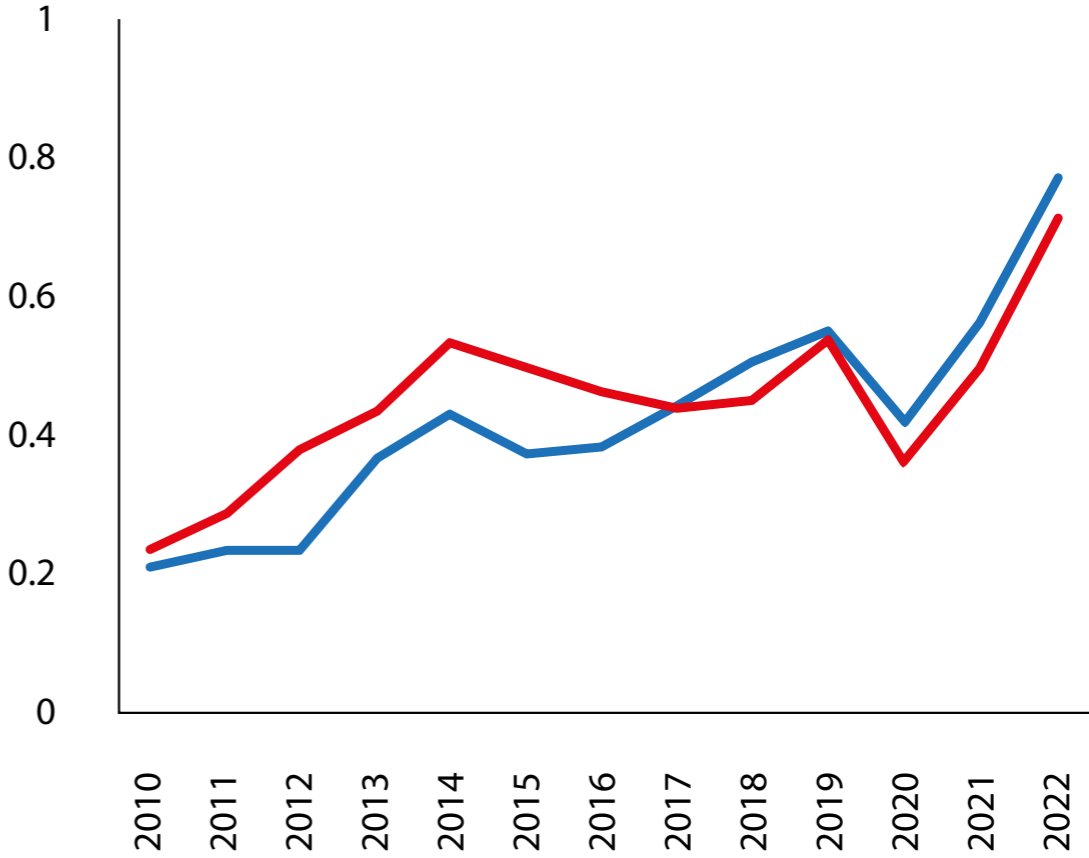
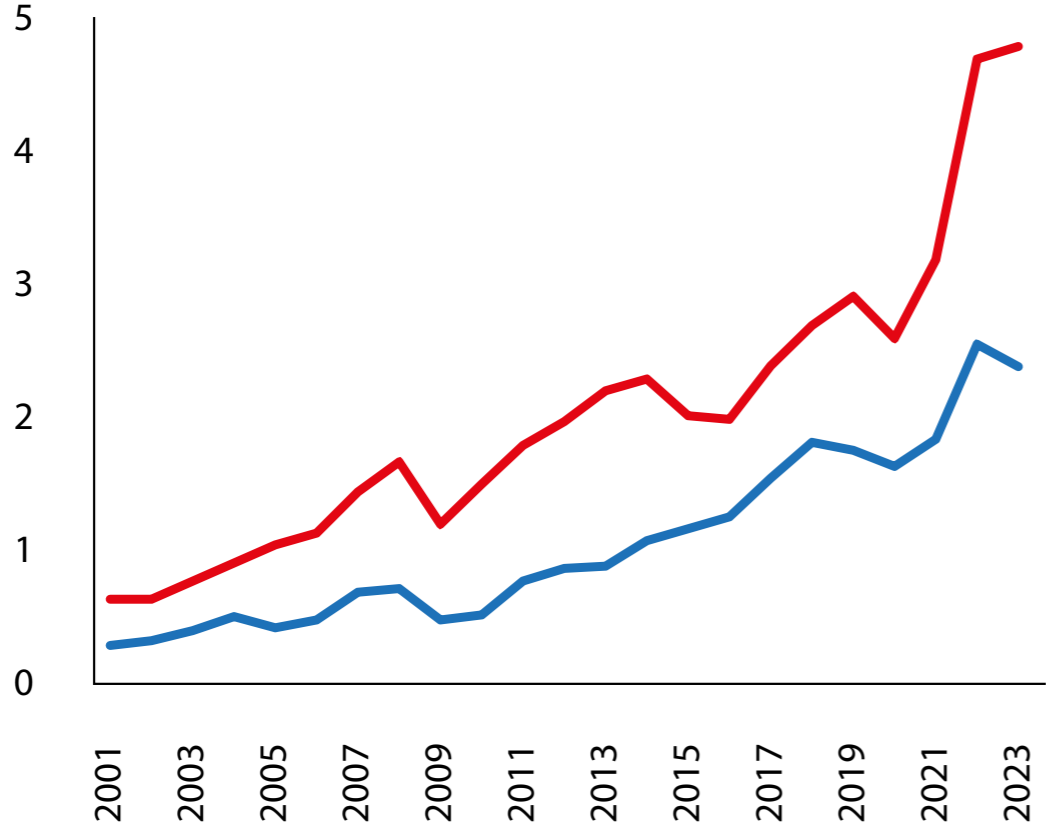
## EU27 goods<sup>30</sup> trade with Kosovo (€ billions)

www.worldcommercereview.com



**EU27 goods (left) and services (right) trade with Moldova (€ billions)**

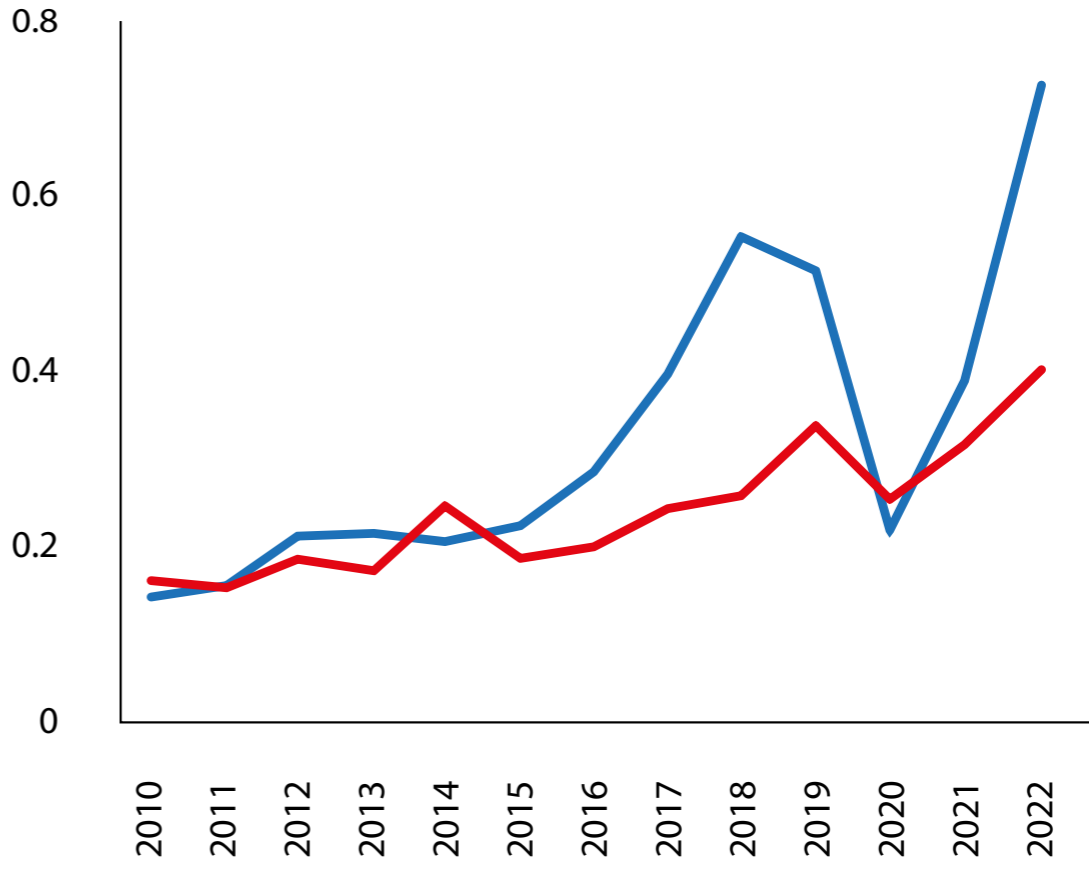
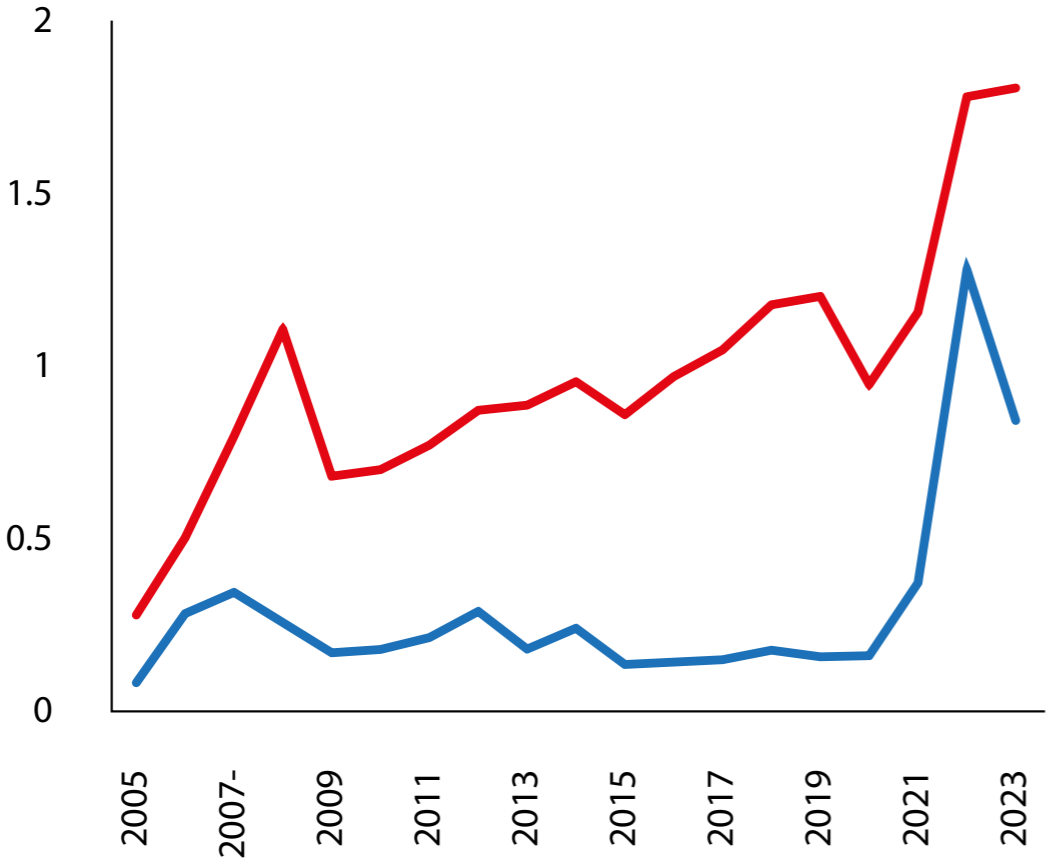
www.worldcommercereview.com



— Imports  
— Exports

**EU27 goods (left) and services (right) trade with Montenegro (€ billions)**

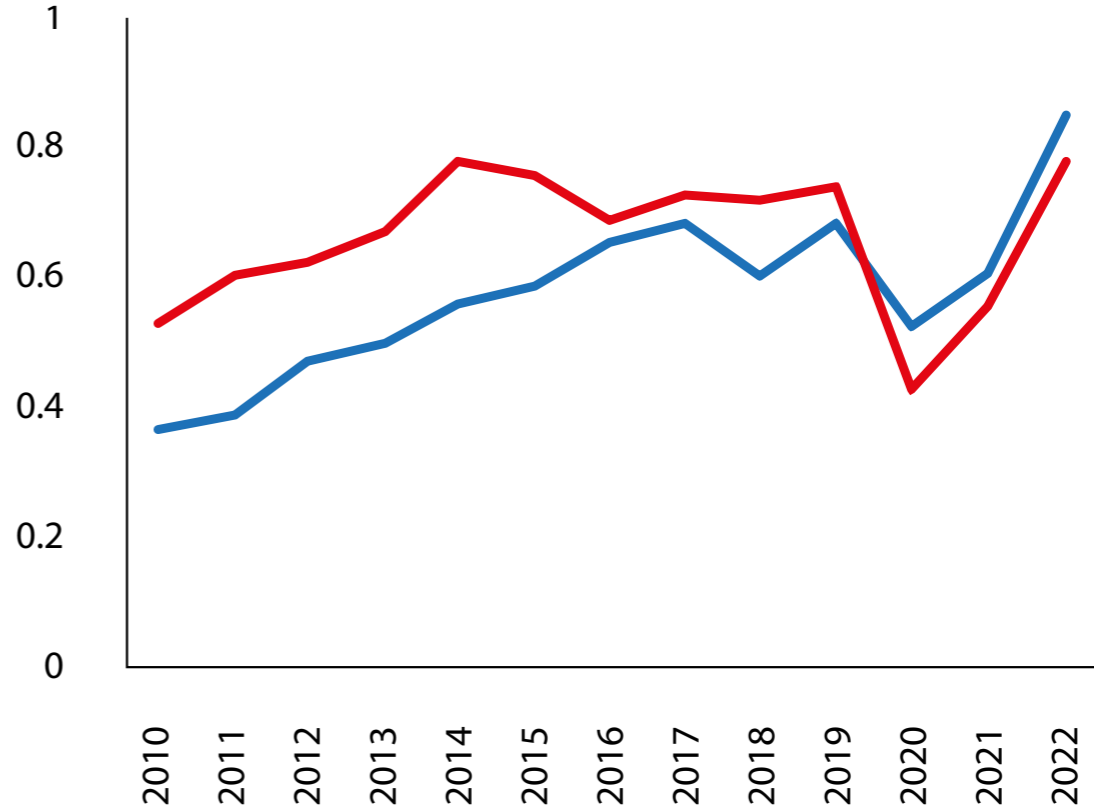
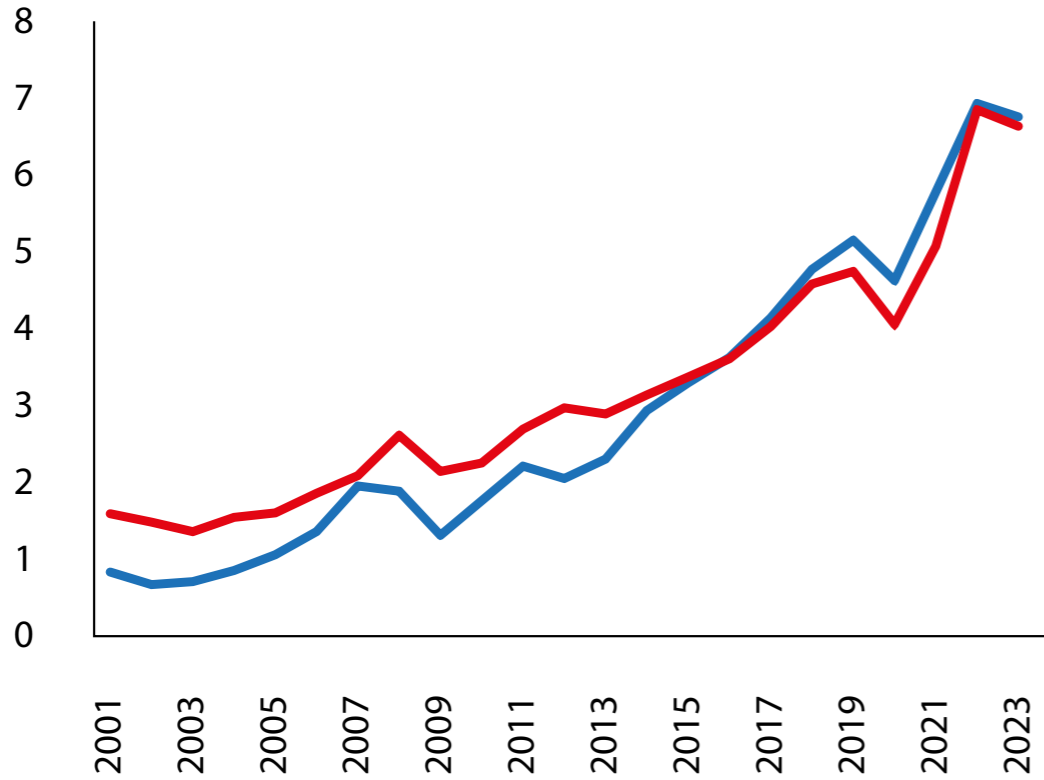
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— Imports  
— Exports

**EU27 goods (left) and services (right) trade with North Macedonia (€ billions)**

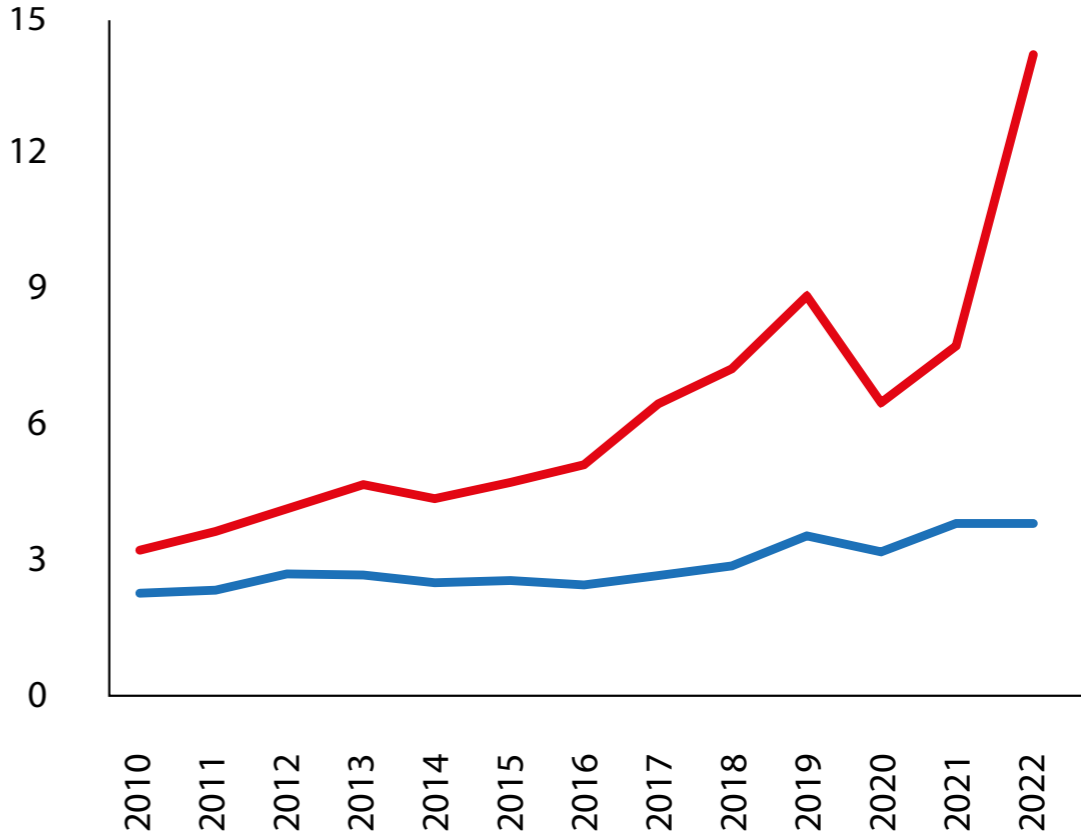
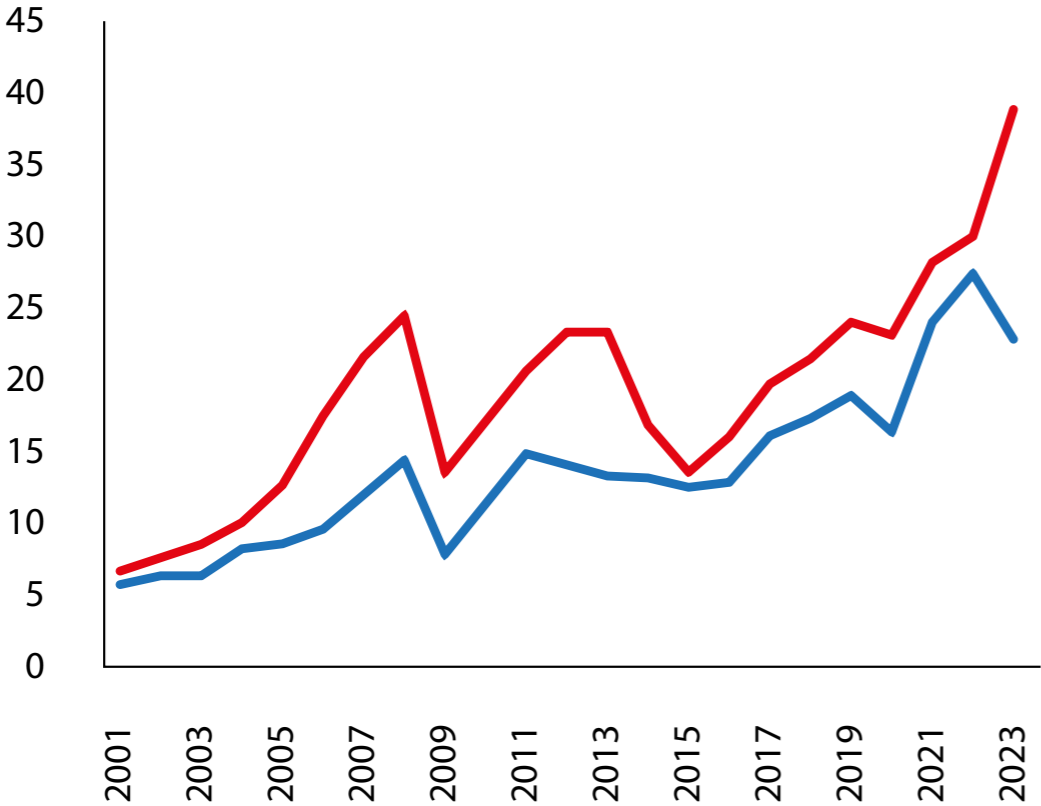
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— Imports  
— Exports

**EU27 goods (left) and services (right) trade with Ukraine (€ billions)**

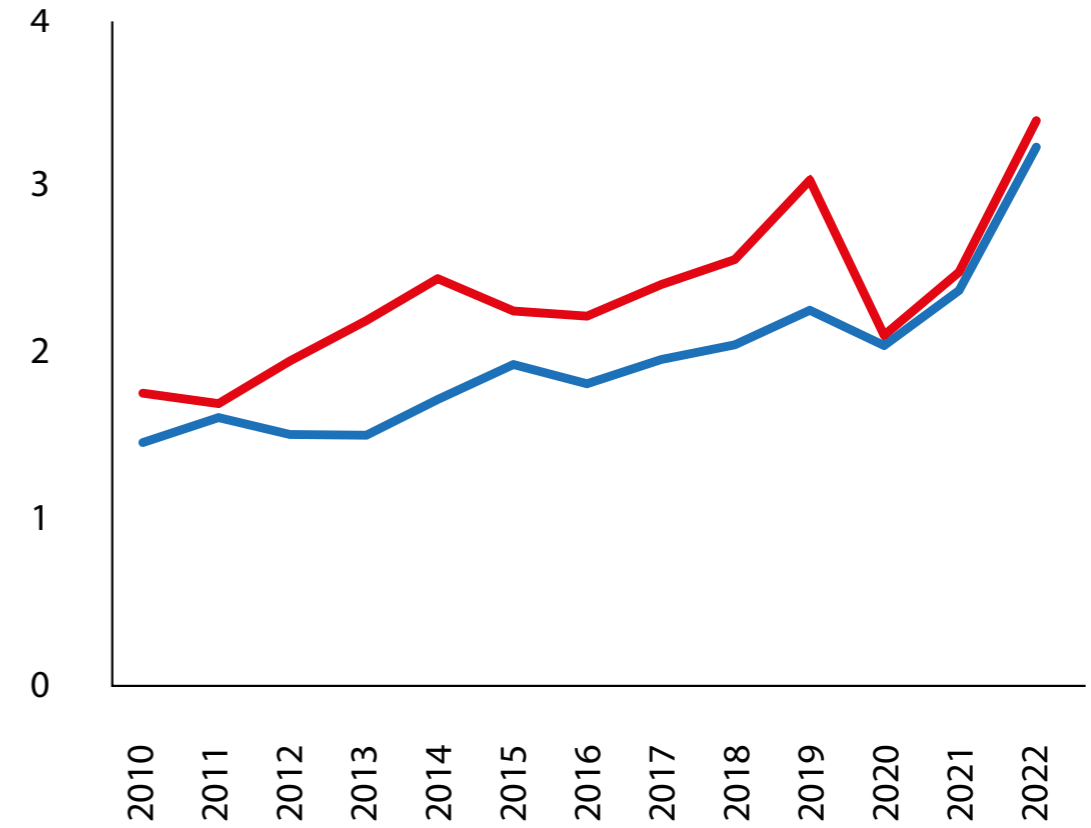
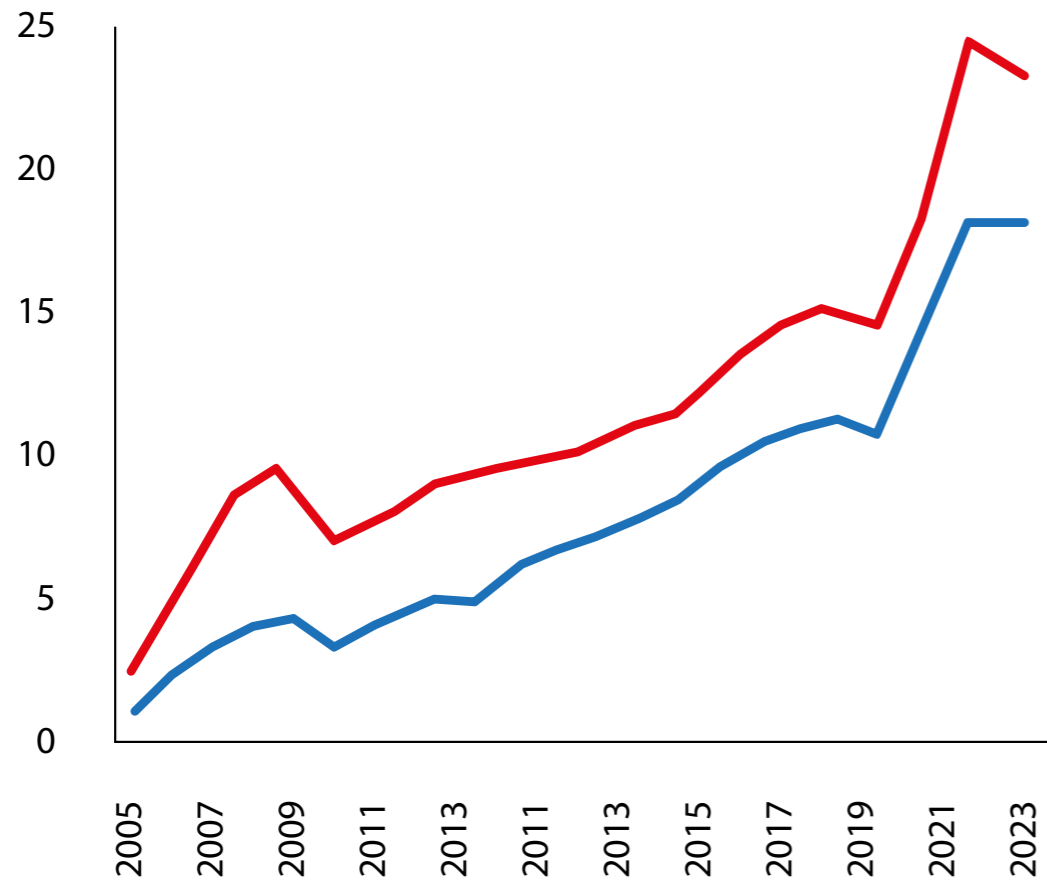
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— Imports  
— Exports

## EU27 goods (left) and services (right) trade with Serbia (€ billions)

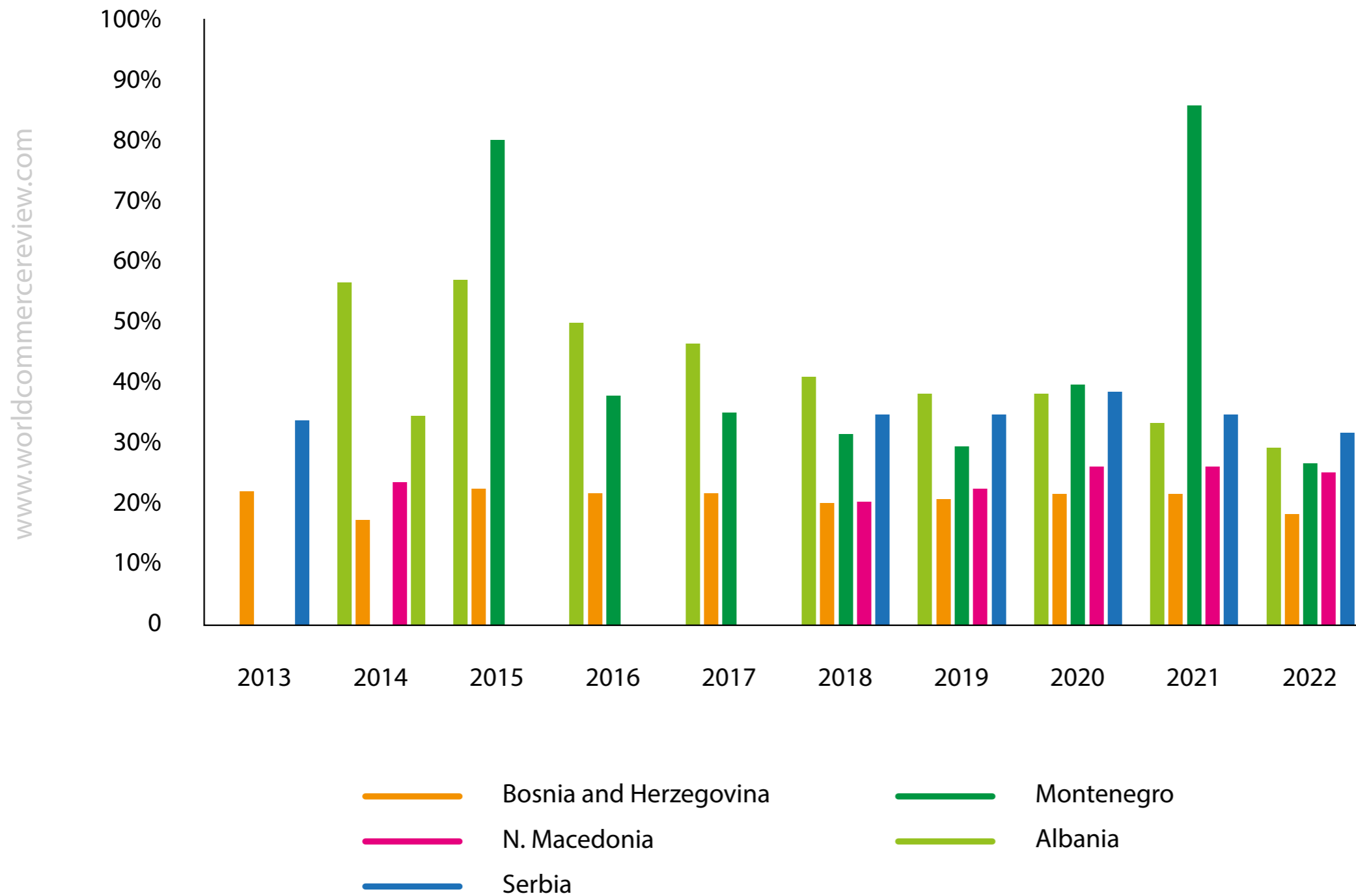
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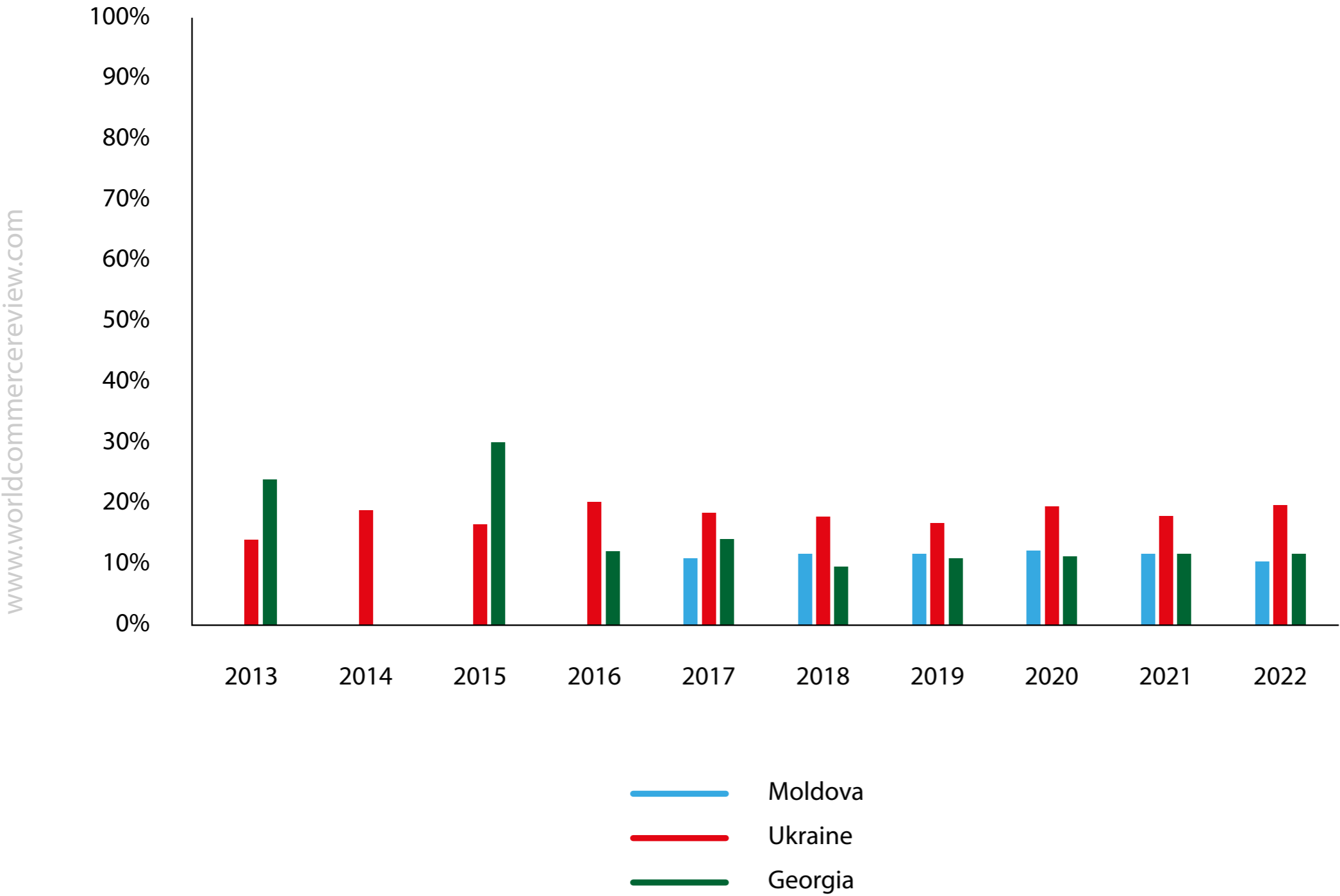
— Imports  
— Exports

## Annex 3. FDI data

Figure 3.1. EU FDI stock as a share of national GDP, Western Balkans



**Figure 3.2. EU FDI stock as a share of national GDP, EaP**



Source: Bruegel based on Eurostat, World Bank and OECD.



Reporting of FDI data must acknowledge that FDI statistics often mask the true origin of the investment in question, a phenomenon that is exacerbated in the case of the EU given the prominence of certain member states in global tax avoidance (Darvas *et al* 2023). Damgaard *et al* (2019) built a dataset for 2013-2017 that estimated FDI by what they term the “ultimate investor economy” (UIE). Over this period, the simple average for the WBs of FDI with the EU as UIE was 45 percent, higher than that of the EaP countries, but lower than the level of trade integration at the same time (the simple average for the EU as a share of total exports for the same period was 59 percent, Table 3.1). An average of 74 percent of the FDI reported as being from the EU across the WB countries actually had the EU as UIE, ranging from 90 percent in North Macedonia to just 50 percent in Montenegro (Table 3.2)

**Table 3.1. Share of FDI with the EU as the ultimate investor economy in total reported FDI stock into the WB and EAP countries**

Country	2013	2014	2015	2016	2017	2013-2017
<b>Western Balkans</b>						
Albania	43.7%	63.7%	65.0%	53.3%	45.4%	53.5%
B + H	49.7%	50.8%	54.0%	46.6%	47.3%	49.6%
Kosovo	19.0%	21.3%	20.8%	20.3%	20.7%	20.4%
Montenegro	30.6%	32.4%	21.3%	21.9%	21.9%	25.7%
North Macedonia	70.0%	73.0%	68.7%	60.0%	57.3%	65.6%
Serbia	58.8%	57.4%	51.2%	50.9%	45.0%	52.3%
<b>EaP</b>						
Georgia	14.9%	13.3%	10.9%	8.4%	7.5%	10.7%
Moldova	49.0%	48.3%	47.6%	50.6%	52.4%	49.6%
Ukraine	40.6%	34.8%	41.2%	35.1%	40.4%	38.7%

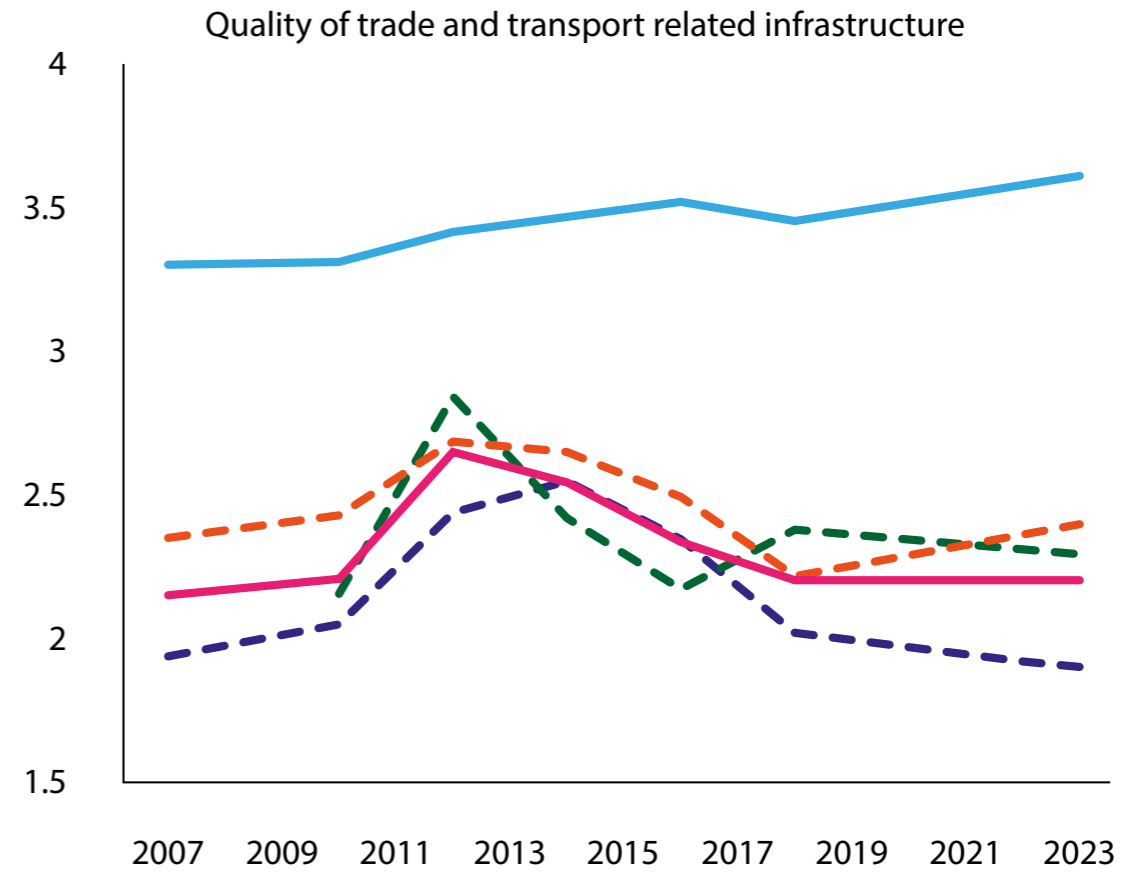
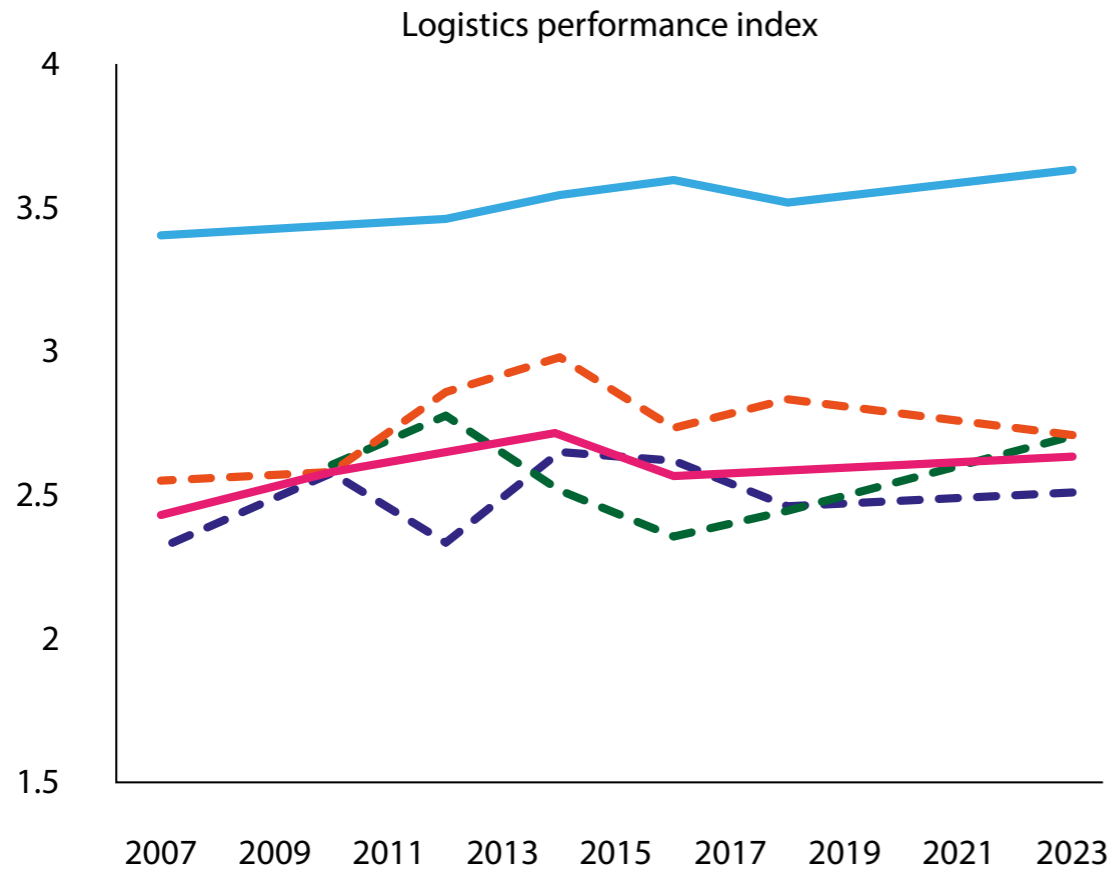
Source: Bruegel based on Damgaard *et al* (2019) and Darvas *et al* (2023).

**Table 3.2. FDI stock with the EU as the ultimate investor economy as a share of the reported EU FDI stock in each country**

<b>Country</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2013-2017</b>
<b><i>Western Balkans</i></b>						
Albania	91.3%	91.9%	93.0%	90.1%	81.3%	88.9%
B + H	84.7%	88.3%	92.9%	77.5%	76.8%	83.8%
Kosovo	65.6%	69.8%	67.5%	69.9%	66.3%	67.7%
Montenegro	51.1%	54.5%	48.6%	52.0%	46.8%	50.8%
North Macedonia	85.9%	93.5%	90.8%	90.8%	88.1%	89.7%
Serbia	70.5%	70.4%	64.6%	64.8%	58.5%	65.6%
<b><i>EaP</i></b>						
Georgia	49.1%	41.6%	35.0%	27.8%	26.6%	35.2%
Moldova	82.0%	81.5%	81.5%	83.4%	82.3%	82.1%
Ukraine	55.2%	49.1%	58.4%	51.8%	60.8%	54.7%

Source: Bruegel based on Damgaard et al (2019) and Darvas et al (2023).

## Annex 4. Logistics and trade-related infrastructure for EaP

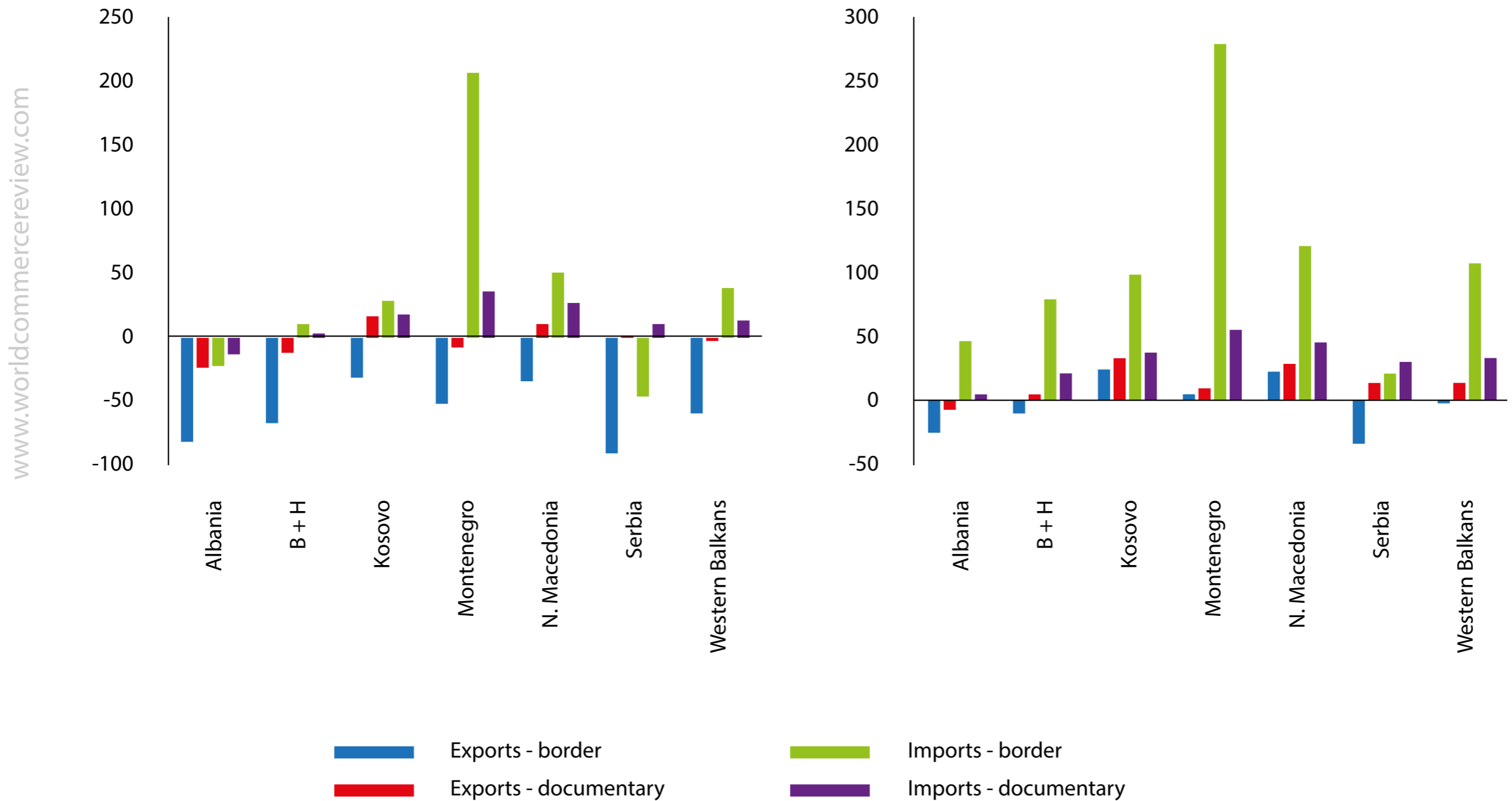


- Moldova
- Georgia
- Ukraine
- EU
- Eastern Partnership

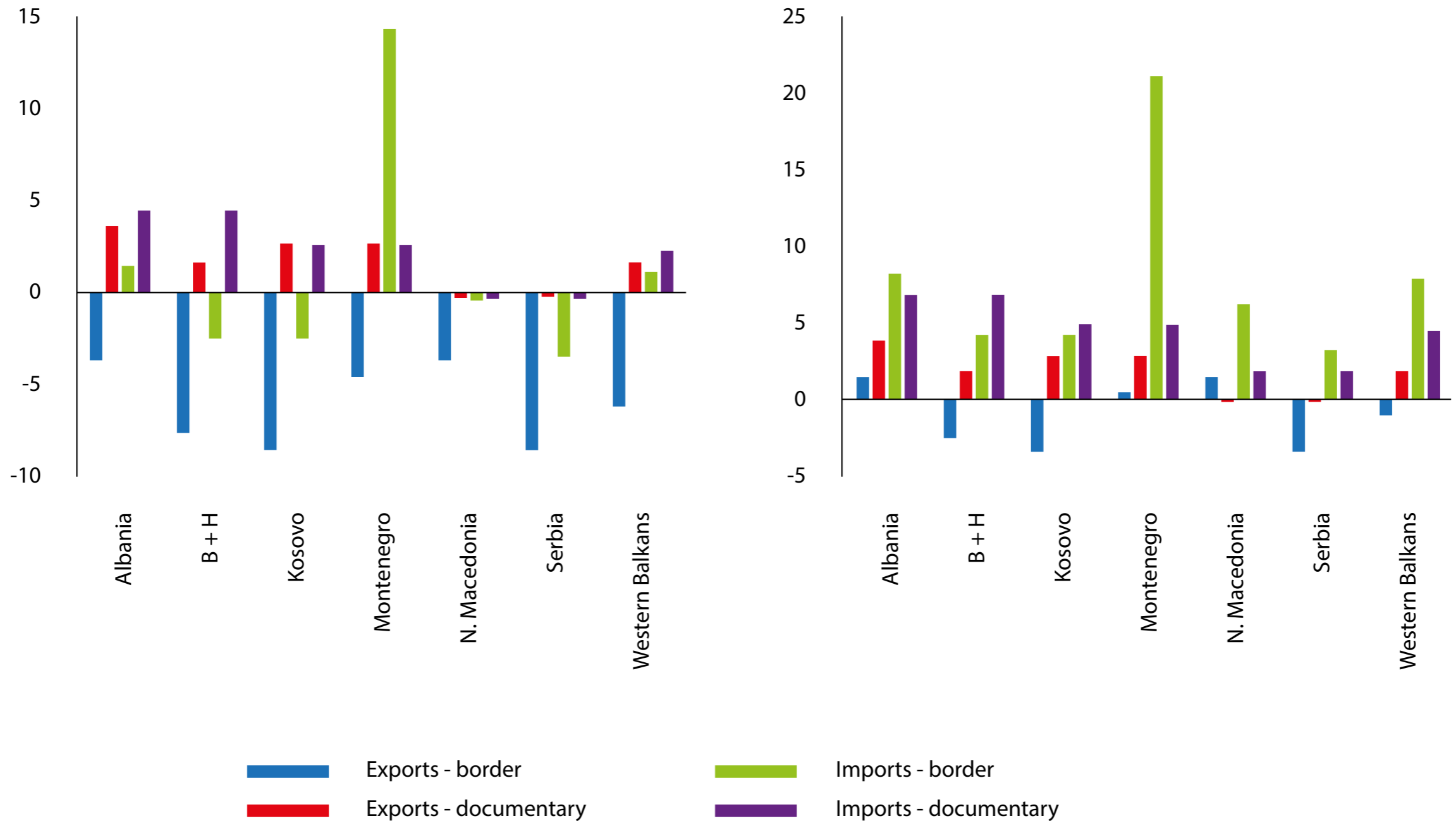
Source: Bruegel based on World Bank Logistical Performance Index.

## Annex 5. Non-tariff barriers

**Figure 5.1. Difference in compliance costs of international trade between the Western Balkans and OECD high income countries (left) and the EU (right), \$**

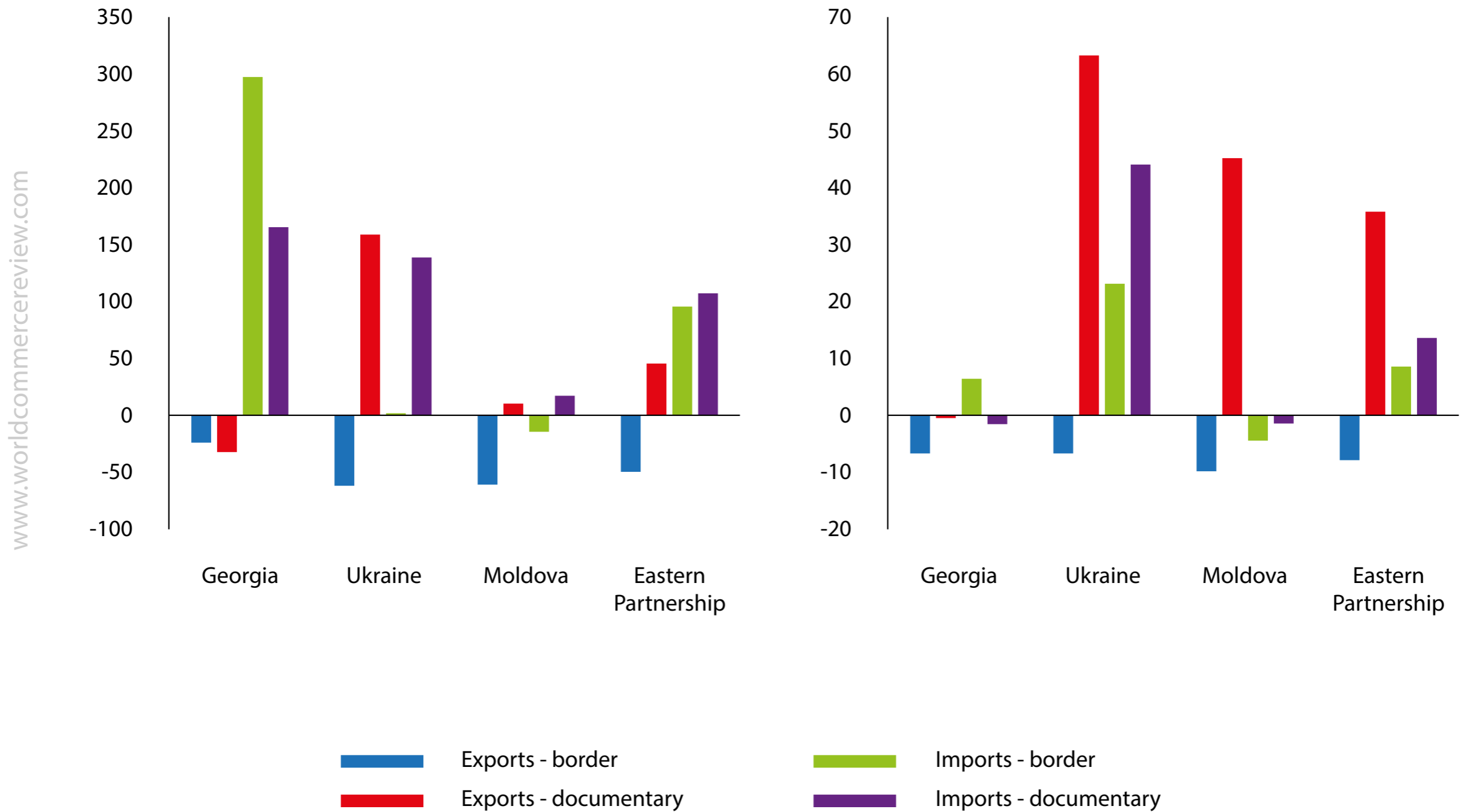


**Figure 5.2. Difference in time compliance of international trade between the Western Balkans and OECD high-income countries (left) and the EU (right), hours**



Note: WBs refers to a simple average of the six WB countries. EU refers to the simple average of the EU27 countries.  
 Source: The World Bank 'Trading across Borders'.

**Figure 5.3. Difference in compliance costs of international trade between the EaP and OECD high-income countries in \$ (left) and hours (right)**



Note: WBs refers to a simple average of the six WB countries. EU refers to the simple average of the EU27 countries.  
 Source: The World Bank 'Trading across Borders.'