

**Bank of England**

# Rethinking global imbalances: drivers, risks, and policy priorities

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## Foreword by Clare Lombardelli

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Few issues are more central to the international policy debate today than the re-emergence of large and persistent global imbalances.

Global imbalances are again historically large and have become more persistent. They have heightened trade tensions at a time of structural change, global shocks, and growing concern about resilience and stability. In that context, how countries save, invest, produce and trade matters for growth, financial stability, and the capacity of the international system to adjust in an orderly way.

That is why careful analysis of global imbalances is valuable. This paper makes a timely contribution to the discussion. It brings together historical perspective, empirical evidence and analytical discipline to examine how global imbalances have evolved, why they persist, and why policymakers should care. It takes seriously an important and often underexplored question: how the growing use of industrial policy may interact with underlying macroeconomic forces and shape external balances and their spillovers across countries.

This paper provides a perspective on the evolving drivers of global imbalances. It shows that these remain rooted, in important part, in macroeconomic forces. It also highlights why policymakers need to think carefully about how features of the global economy – including the increasing use of industrial policy to support strategic sectors, strengthen resilience, or pursue other public objectives – may affect adjustment dynamics and the broader international environment.

This work draws attention to current account positions themselves, and the wider risks that can accompany them. Large and persistent imbalances can bring tensions in the global trading system, distorting incentives for adjustment, and accumulating into large external positions. These can present vulnerabilities in themselves and may interact with other vulnerabilities in the global financial system to crystallise systemic financial stability risks.

These forces point to the importance of multilateral attention to stronger surveillance by, and closer cooperation across, the institutions that shape the international framework for trade and economic policy.

I hope this paper will be widely read by policymakers, researchers and others interested in the changing shape of the international economy. Better analysis cannot eliminate disagreement, but it can help ensure that debate is grounded in evidence and that policy choices are informed by a clearer understanding of the trade-offs involved.

**By Ambrogio Cesa-Bianchi, Dan Christen, Peter Denton, Will Dison, Aydan Dogan, Ida Hjortsoe, Mark Joy, Jeremy Martin, Daniel Ostry, Roger Vicquery and Simon Whitaker<sup>1</sup>**

## Abstract

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Persistent excess current account imbalances pose serious risks to the global economy. Anaemic global growth could stall, or worse, if trade tensions, in response to these imbalances, persist.

This paper takes a fresh analytical look at the drivers and consequences of global imbalances. It finds the following: (i) persistent excess imbalances are driven primarily by domestic macroeconomic factors, consistent with the literature; (ii) however, industrial policy, which there has been a resurgence of globally, can have second-order impacts on the current account over the short to medium term under certain conditions; (iii) it may also have impacts over the longer term, but our collective understanding of these impacts, and their spillovers, is partial; (iv) global external balance sheets show vulnerabilities that could interact with other global financial stability risks in disorderly unwind scenarios.

Reflecting on these findings the paper offers the following policy recommendations: (a) an orderly and symmetric rebalancing would reduce risks to growth and financial stability; (b) this would require reform of the multilateral stewardship of imbalances; (c) surveillance in any case needs to be strengthened; (d) closer collaboration on global governance of trade policy will be needed; (e) finally, efforts to improve traction of surveillance will be needed, especially with the largest contributors to global imbalances.

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<sup>1</sup> With thanks to Safia Mohamoud, Angel Rai, and Emmanuel Sobakin for valuable research assistance.

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# Contents

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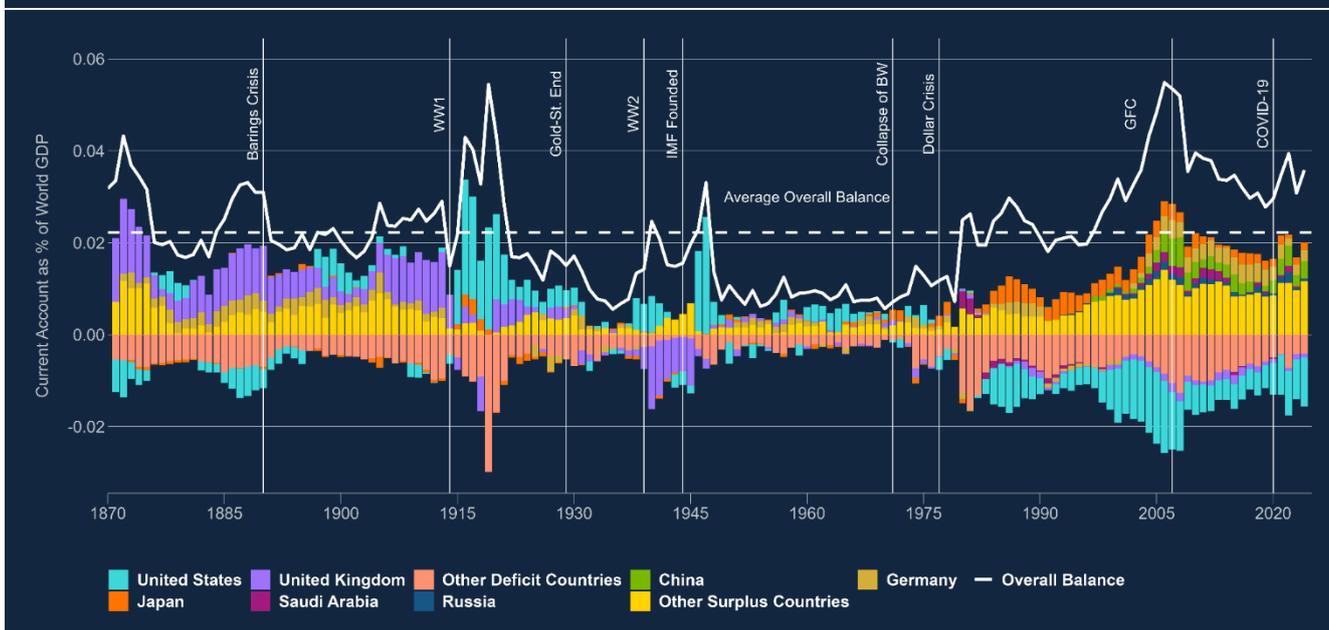
<b>Foreword by Clare Lombardelli</b>	<b>1</b>
<b>Abstract</b>	<b>2</b>
<b>A. Global imbalances: what's new?</b>	<b>4</b>
<b>B. What is driving global current account imbalances?</b>	<b>6</b>
B.1 Are global imbalances “excessive”?	8
B.2 What might be driving unexplained excess imbalances?	10
Box 1: Industrial policy – Definitional issues	14
B.3 How in theory might industrial policy affect current account imbalances in the short run?	16
Box 2: Types of industrial policies and their effect on the current account	18
B.4 How might industrial policy impact current account balances over the longer term?	20
B.5 Is industrial policy use related to imbalances in the data?	21
Box 3: Current account imbalances and a novel industrial policy measure	27
B.6 What role do capital flows and financial factors play in driving imbalances?	29
<b>C. What are the consequences of and risks from today's excess imbalances?</b>	<b>30</b>
C.1 What are the adjustment implications?	30
C.2 What are the spillovers of persistent excess imbalances to other countries?	31
C.3 What are the spillovers from industrial policy?	32
C.4 What are the financial stability implications of imbalances?	32
<b>D. What can be done to address and mitigate persistent excess imbalances?</b>	<b>36</b>
<b>Conclusions</b>	<b>36</b>
<b>Policy Recommendations</b>	<b>37</b>
<b>References</b>	<b>40</b>
<b>Annex 1. An earnings call measure of industrial policy</b>	<b>42</b>
<b>Annex 2. Description of the model from Section B.3</b>	<b>43</b>

## A. Global imbalances: what's new?

Just over a decade ago there was an overwhelming sense of relief among international economic policymakers that the era of global imbalances was over. The US current account deficit had shrunk to half its level of a few years earlier and China's surplus by almost three quarters. The financial excesses of the years running up to the global financial crisis of 2008-09 had unwound and there was a consensus that while global imbalances had helped facilitate that crisis, they were not the root cause of it. They should, however, be monitored closely going forward. As Maurice Obstfeld noted at the time (Obstfeld, 2012), protracted current account imbalances should always be looked upon with a wary eye by policymakers, "with no presumption of innocence". This section offers some observations on recent trends in global imbalances, sketching out similarities with and differences to previous periods of large imbalances. In particular we note three themes in the data: (i) imbalances are historically large; (ii) they have become more persistent, especially surpluses; (iii) that increase in persistence has coincided with an increase in use of industrial policy globally.

### Chart 1. Global current account imbalances today are well above the historical average

Current account balances as a percentage of world GDP, 1870-2024



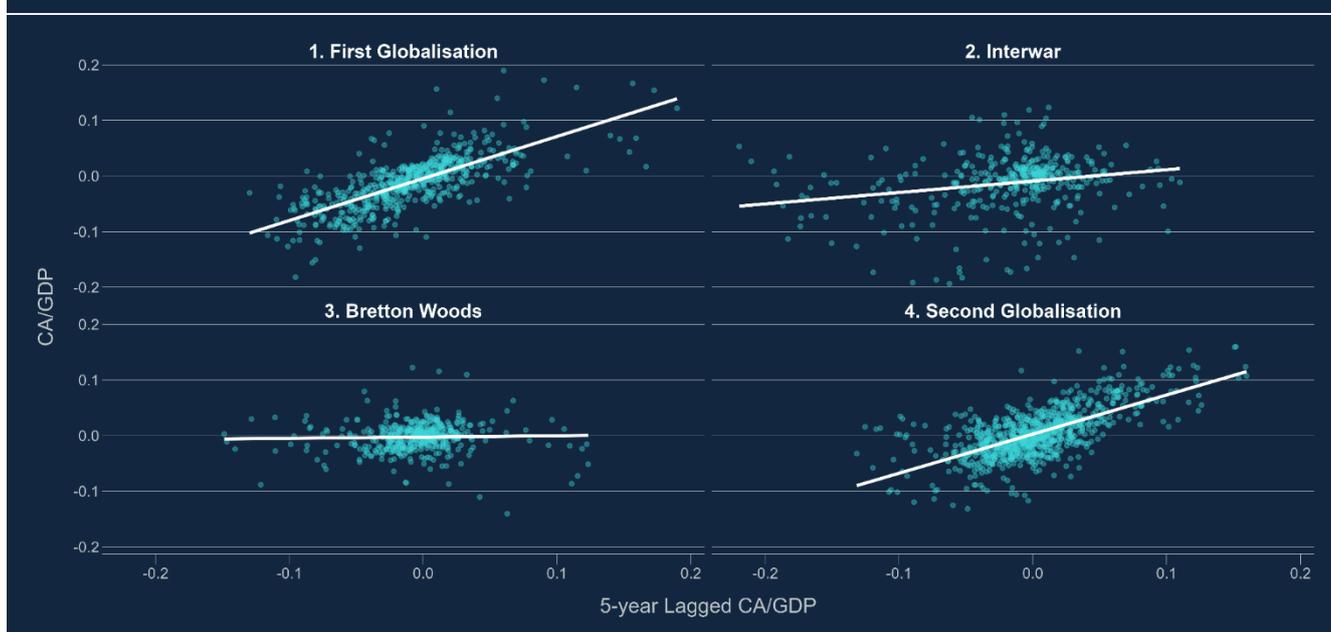
Sources: Jordà-Schularick-Taylor (2017), IMF World Economic Outlook and author calculations.

Notes: Prior to 1980, the figure is based on a sample of 18 advanced economies from Jordà-Schularick-Taylor (2017). The overall balance is defined as the sum of the absolute value of current account surpluses and deficits.

**Today, global current account imbalances are near their highest levels in 150 years and on each of the three occasions when they were higher, economic turmoil or crisis**

**followed (Chart 1).** The most recent previous peak preceded the global financial crisis of 2008-09. Over history, the size of imbalances and their adjustment has depended on capital account and exchange rate regimes. During the Bretton Woods period of 1945-73, capital account restrictions and coordinated realignments of fixed-exchange parities provided the mechanism through which imbalances could adjust symmetrically. As a result, imbalances were low and self-absorbing. Today, with more open capital markets and more flexible exchange rates we have no such formal international adjustment mechanism. While open capital markets offer many benefits, the adjustment of imbalances has been slow and persistence is commonplace (**Chart 2**).

**Chart 2. Imbalances have become more persistent since the end of Bretton Woods**  
Scatterplot of current account balances as a percentage of GDP against their five-year lag



Source: Jordà-Schularick-Taylor (2017) and author calculations.

Notes: Plot of five-year lagged current account balance as a percentage of GDP against the current account balance as a percentage of GDP during four eras of the international monetary system: the First Globalisation (1870-1913), the Interwar period (1914-1944), Bretton Woods (1945-1972), and the Second Globalisation (1973-2020).

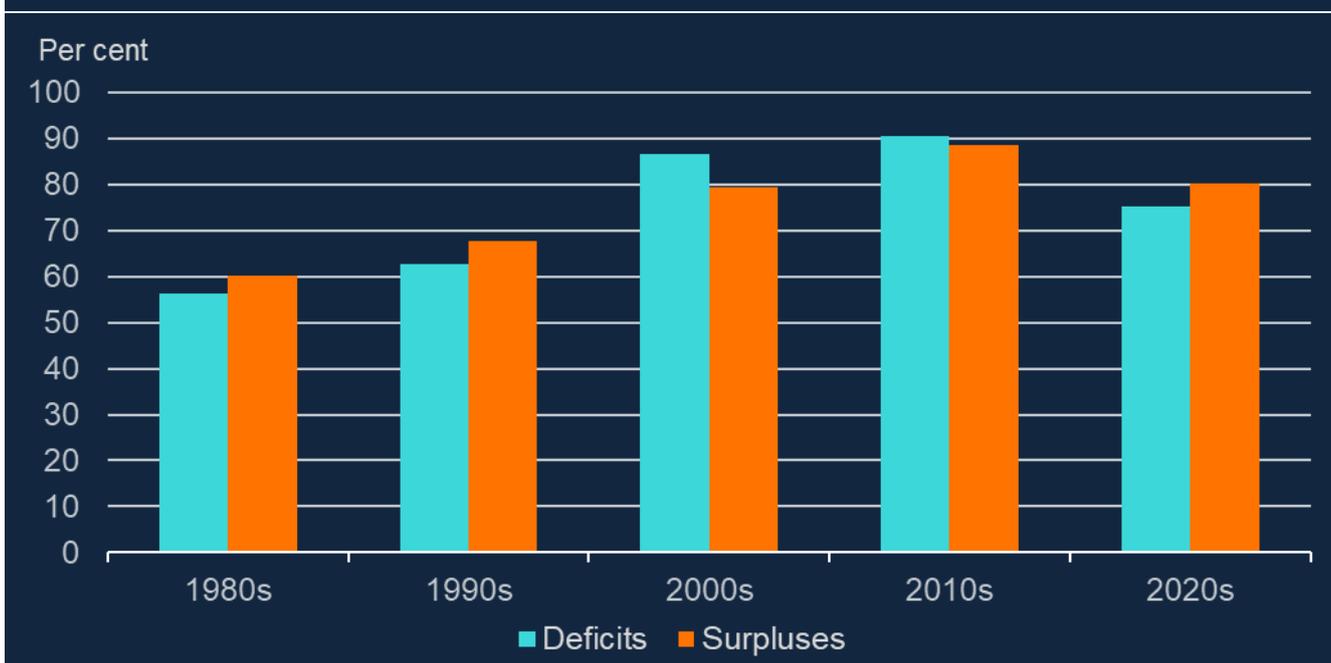
**Over the past 50 years surpluses have tended to adjust more slowly than deficits, and in more recent decades persistence has increased (Chart 3).** Today, the probability that a current account surplus persists for more than 20 years is nearly double the probability for deficits (16.4% vs 8.5%). In recent years, Japan, Germany, the Netherlands, China, and Switzerland have all run continuous surpluses for periods of at least 20 years.

**Historically, the onus on a deficit country to adjust has been much greater.** The net liabilities it accumulates exposes it to the risk of extremely painful adjustment if market confidence wavers, a "sudden stop" in external financing materializes, and some combination of a currency or domestic devaluation is required. In severe cases, this can precipitate a

painful debt crisis. By contrast, market discipline is not the binding constraint for countries running surpluses, which can therefore persist for a long time, unless domestic dissatisfaction with falling returns or actions by deficit countries prompt a correction.

**Recent years have also seen profound changes to the international trade and industrial policy landscape.** Global use of industrial policy has increased sharply across both advanced economies and emerging markets. And trade policy, including tariffs, has become a more pronounced feature.

**Chart 3. Deficits and surpluses have become increasingly persistent**  
GDP-weighted share of countries where deficits or surpluses remain over five years



Source: IMF World Economic Outlook and author calculations.

Notes: GDP-weighted share of countries for which the sign of the current account balance does not change in the preceding five years. The share is calculated annually and averaged over each decade.

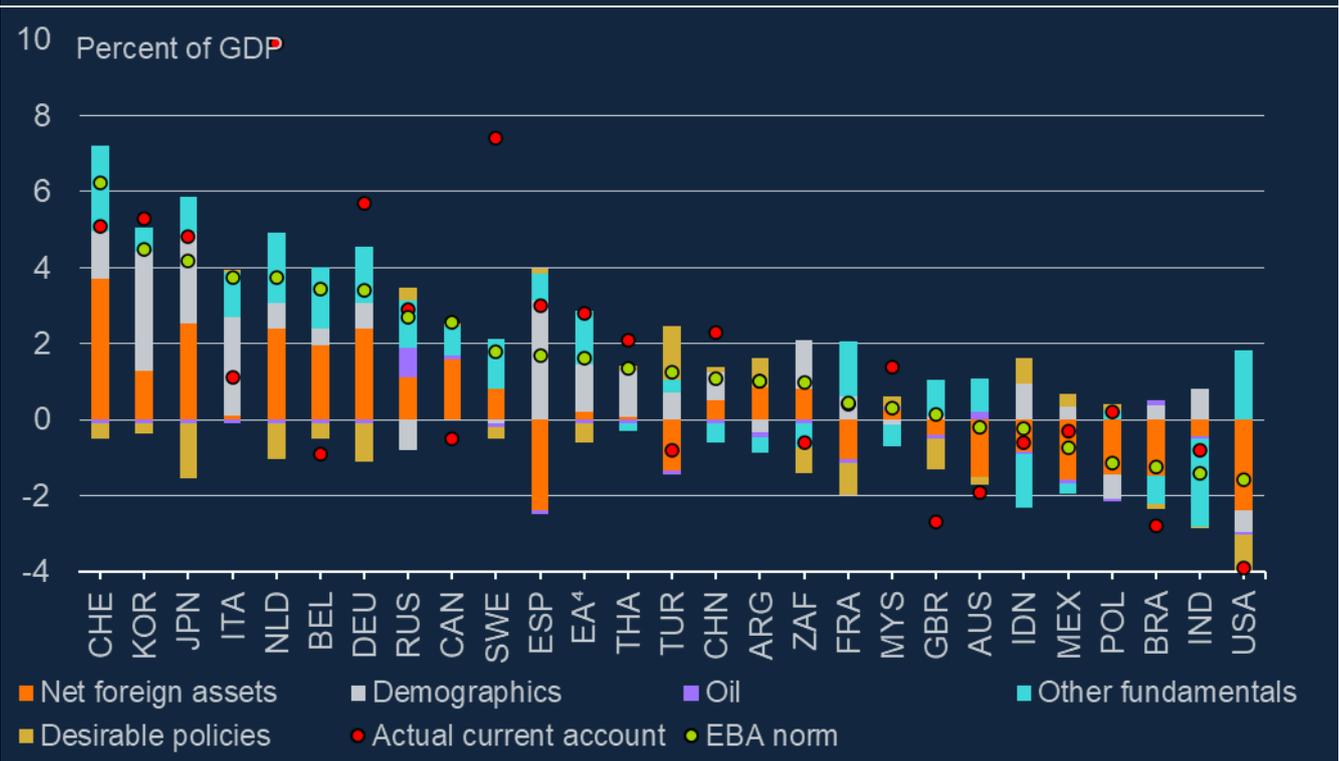
## B. What is driving global current account imbalances?

**This section surveys what is known about the drivers of today's global current account imbalances and explores whether, and through which mechanisms, the recent surge in industrial policy globally might be having some impact on current accounts.** The preliminary analysis in this paper suggests that macroeconomic factors are most important, but under certain conditions, industrial policy might be having some second-order effect. It is an important and contentious policy issue though and warrants further analysis. This section finally touches on the financial drivers of global imbalances.

To recap some balance of payments basics, the current account position of an economy represents the difference between what it earns and spends, and so is ultimately determined by factors that are significant enough to impact the whole economy – macroeconomic factors. The IMF tends to break these macroeconomic factors into three further subgroups when assessing current accounts: fundamental factors, cyclical conditions and policy settings. Fundamental factors include demographics, levels of development, and whether a country has large resource endowments such as oil (Chart 4). Cyclical conditions include the output gap, indicating the state of the business cycle. The third set of factors are policy settings, including for fiscal policy, health spending and foreign exchange intervention, but industrial policy is not accounted for. The IMF’s latest assessment of global current account gaps finds that the widening of gaps seen in 2024 was driven by domestic changes in these macroeconomic factors.

**Chart 4. Contribution of macroeconomic factors to global current account imbalances in 2024**

Current account balances and decomposition of IMF current account norms, 2024<sup>(1)(2)(3)(4)</sup>



Source: IMF 2025 External Balance Assessment and author calculations.

Notes:

- 1 The EBA current account norm is multilaterally consistent and cyclically adjusted.
- 2 “Other fundamentals” include output per worker, expected GDP growth, and International Country Risk Guide.
- 3 “Desirable policies” include credit gap, fiscal balance, foreign exchange intervention and health expenditure.
- 4 The current account norm is corrected for reporting discrepancies in intra-area transactions, because the current account of the entire euro area is about 0.84 percent of GDP less than the sum of the individual 11 countries’ balances (for which no such correction is available).

**Current account imbalances are an inevitable and appropriate feature of an open global financial system.** Countries ageing relatively quickly, like Japan, Germany and China, should be running surpluses to build up net foreign assets that their workers can draw on when they retire. These countries should be lending to more youthful countries running current account deficits. Those youthful countries can afford to run deficits so long as they are able to repay them out of future income. So we do not need to worry about imbalances per se. But we should worry about their scale, persistence and whether or not they are at levels that go beyond what is consistent with appropriate policy settings.

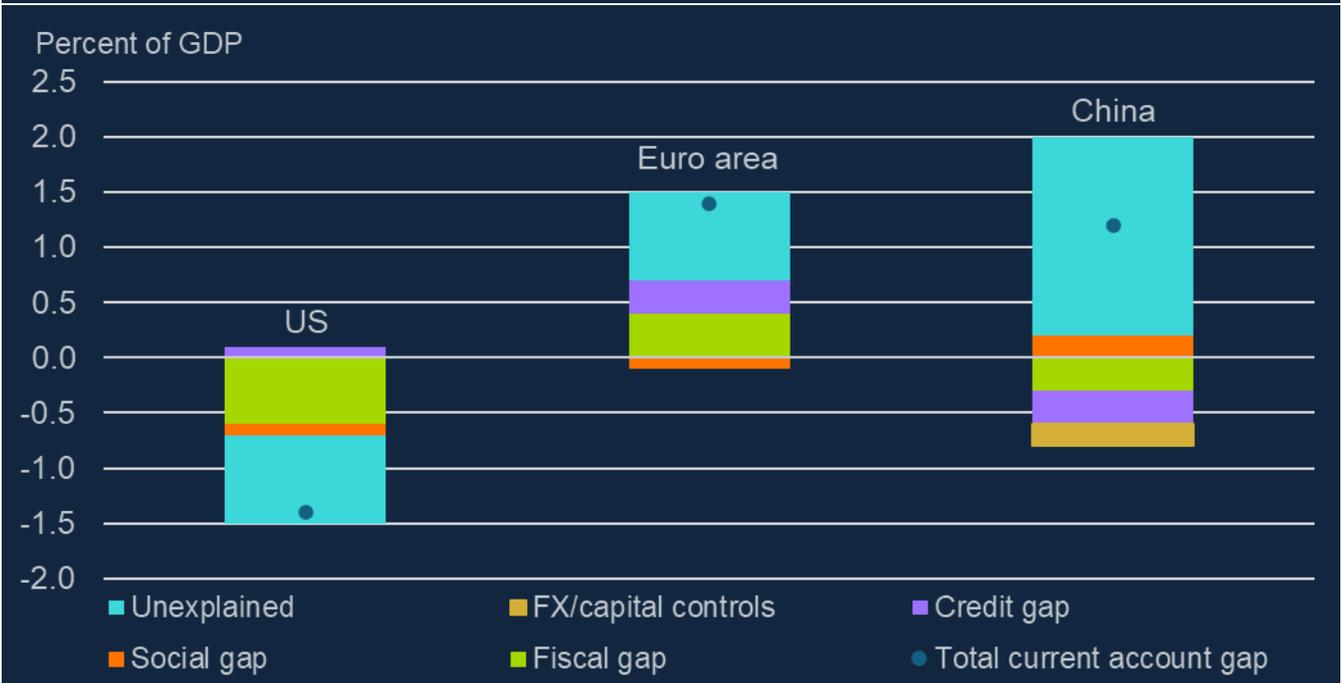
**The most relevant risk today from large, persistent current account imbalances is they may drive policymakers towards protectionism.** The protectionist actions of the 1930s exacerbated and extended economic and social chaos around the world. Furthermore, large imbalances have in the past been a precursor to financial crisis. A vast literature has documented how the expansion of global imbalances in the run up to 2007 could have been a contributor to the global financial crisis that followed (Obstfeld and Rogoff, 2009).

## **B.1 Are global imbalances “excessive”?**

**Coming to a judgement on the extent to which a current account surplus or deficit is appropriate or not, is complex, but tools for undertaking such an exercise do exist, the most familiar being the IMF’s annual External Balance Assessment.** Using a detailed cross-country empirical model, the IMF estimates current account “norms” for a range of countries (**Chart 4**). These norms encompass macroeconomic factors known to affect the current account and also reflect IMF staff’s judgement on appropriate (rather than actual) policy in areas like monetary and fiscal stance, health spending and exchange rate and capital controls. Current account balances that exceed these staff-assessed norms are considered by the IMF to be “excessive.” The IMF estimates that over the past 10 years on average around one half of imbalances have been excessive. But the increase in excess imbalances in 2024 was the largest in a decade, with major economies – China, the United States, and the euro area – driving the increase.

**IMF modelling finds it hard to explain what causes excess imbalances (Chart 5).** For example, the US excess fiscal deficit accounts for only around 1/3 of its excess current account deficit, based on the 2025 EBA exercise. And euro-area excess fiscal tightness and weak private credit accounts for about half of its excess surplus. For China, social policy (a proxy for the social safety net) accounts for only around 10% of the excess surplus. Other identified domestic policy distortions do not help explain China’s excess surplus.

**Chart 5. Identified policy gaps explain only a small share of excess imbalances**  
IMF EBA estimates of excess current account balances, 2024

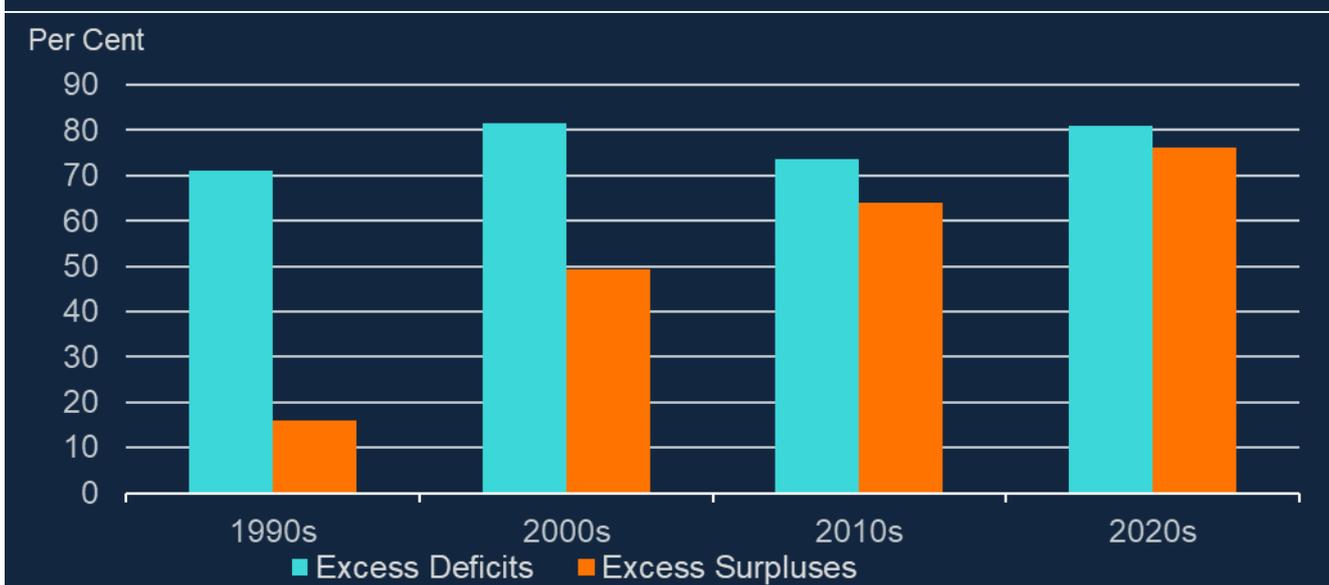


Source: IMF 2025 External Balance Assessment and author calculations

**Excess surpluses have also become more persistent in recent years (Chart 6).** In the 1990s, the GDP-weighted share of countries with excess surpluses that had persisted for at least 5 years was 16%. By the 2020s, this figure increased to 76%. One implication is that the IMF’s External Balance Assessment exercise could be missing important structural trends.

### Chart 6. Excess surpluses have become increasingly persistent

GDP-weighted share of countries where excess deficits or surpluses remain over five years



Sources: IMF World Economic Outlook, IMF External Balance Assessment and author calculations

Notes: GDP-weighted share of countries for which the sign of the External Balance Assessment excess current account balance does not change in the preceding five years. The share is calculated annually and averaged over each decade.

## B.2 What might be driving unexplained excess imbalances?

**Excessive current account balances – the gap between actual balances and IMF-assessed norms – likely reflect a range of factors.** As noted above, these include fiscal or monetary policy settings that deviate from what is appropriate, as well as other macroeconomic policy distortions such as weak social safety nets. But IMF analysis finds that such inappropriate policy settings can only explain some, but not much, of the gap between actual and norm. So what can explain the rest of the gap? A natural response is to ask whether the unexplained portion reflects features of domestic and international policy that have been hitherto ignored, or are genuinely new.

**One natural candidate is tariffs and trade policy uncertainty, given they have been such a prominent recent feature of the global economic backdrop.** Simulations in the IMF's 2025 External Sector Report indicate that in a tariff war the impact on economic activity would become uniformly negative across countries. But the impact on global imbalances would be limited as import tariffs do not have a robust impact on the gap between aggregate saving and investment.

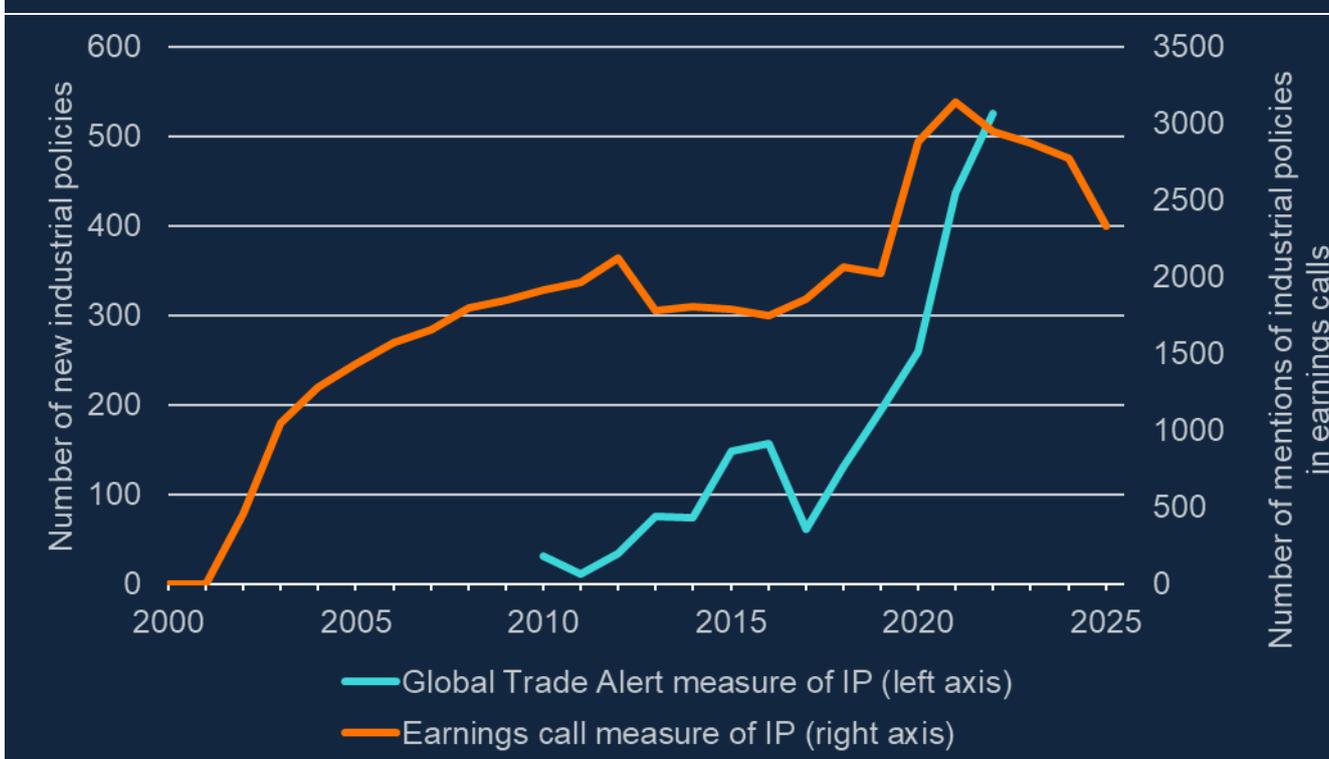
**The IMF's view of the impact of tariffs on imbalances is influenced by the textbook general equilibrium model.** For tariffs to affect imbalances they must affect intertemporal decisions on saving and investment. A permanent change in tariffs that raises a country's

income path will, in the textbook model, raise spending to the same extent (an instance of the permanent income hypothesis) and so have no effect on imbalances. In terms of the trade balance, a positive tariff-induced shock to demand for domestic relative to foreign goods would raise their relative price, leaving net exports unchanged.

**Another under-explored candidate is industrial policy, a tool that has grown increasingly popular among surplus and deficit countries alike (Charts 7 and 8).**

Industrial policies seek to spur structural transformation through public support – in the form of subsidies and other preferences – directed at specific industries or firms. The sectoral targeting is what distinguishes industrial policy from broader structural reforms or macroeconomic policies, which can also shape the economy but are not usually qualified as industrial policy. The use of industrial policy has accelerated in recent years, driven in part by shifts in views on its efficacy, on its ability to affect market failures, and on its use as a means to secure supply chains. During Covid, use of industrial policy increased sharply, as countries moved rapidly to address supply chain disruptions, especially in critical sectors like pharmaceuticals, energy, and food. Industrial policy takes many forms: domestic subsidies are the most common, accounting for around 60-70% policies globally (IMF, 2025), followed by export incentives (eg trade finance) and local content rules.

**Chart 7. Use of IP has increased in the past decade, accelerating during Covid**  
Measures of IP based on the Global Trade Alert database and firms' earnings call texts



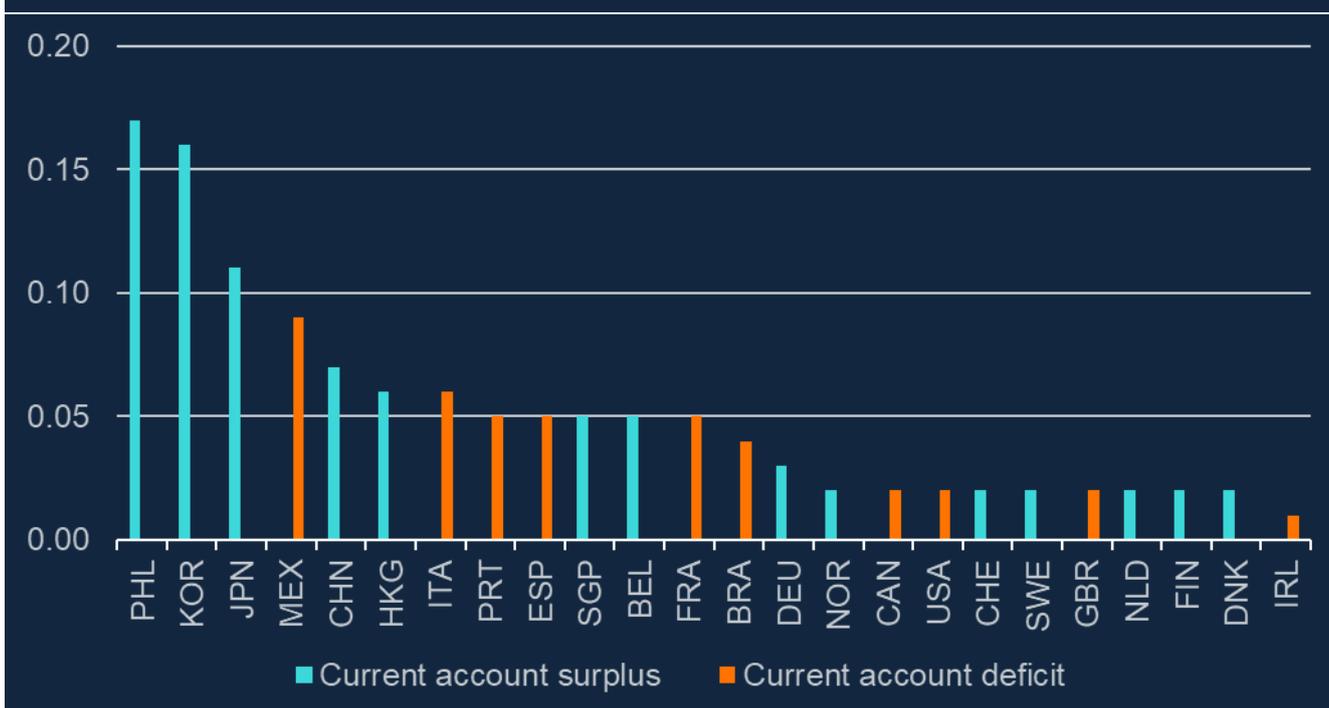
Source: NL analytics and author calculations.

Notes: The Global Trade Alert measure of IP is from Juhasz et al. (2025) and captures non-tariff IP. The earnings call measure of IP is the number of sentences in firms' earnings calls that mention IP with positive

sentiment, normalised. See Box 3 and Annex 1 for a detailed description of the earnings call measure of industrial policy used in this chart.

**Industrial policy is not easy to measure though, and it is probably being used more widely than common indicators suggest.** Existing measures in the economics literature typically cover only a subset of what conceptually qualifies as industrial policy. Hidden subsidies and directives, and sectoral regulations or public goods provision, are typically excluded (**Chart B1.1**). For example, Garcia-Macia et al (2025) measure industrial policy in China by identifying industrial subsidies from published financial statements of companies and land registry data. This excludes other forms of sectorally-biased policies. Juhász et al (2025) use a text-based measure of industrial policy that excludes sub-national policies – a significant omission for China, where industrial policy often has a strong regional dimension. In this paper, we rely on a novel measure that we construct by extracting information from firms' earnings calls (see Box 3 and Annex 1 for details).

**Chart 8. IP is prevalent across both advanced economies and emerging markets**  
Measure of IP based on firms' earnings call texts, across countries, by current account balance



Source: NL Analytics and author calculations.

Notes: See Box 3 and Annex 1 for a detailed description of the earnings call measure of industrial policy used in this chart.

**Industrial policy is traditionally thought of as having little impact on the current account.** In baseline intertemporal models of the current account (eg Obstfeld and Rogoff, 1995) where the “permanent income hypothesis” holds, industrial policy has no long-run impact on current account balances as it affects permanent income and consumption equally and hence leaves savings unchanged. This is why the IMF doesn’t include industrial policy in

its External Balance Assessment model, its workhorse empirical model of external imbalances.

### Box 1: Industrial policy – Definitional issues

Industrial policy (IP) is defined in the literature as “policies aimed at changing the sectoral structure of the economy” (Garcia-Macia et al, 2025). Structural or developmental policies are policies that affect the supply side of the economy. These include industrial policies (which target the sectoral composition of supply), but also a much wider set of policies that are not designed to target specific sectors but may still affect certain sectors more than others (eg skills policies promoting STEM subjects, and policies that affect  $R^*$  and therefore affect sectors differently depending on their capital intensity) (**Chart B1.1**).

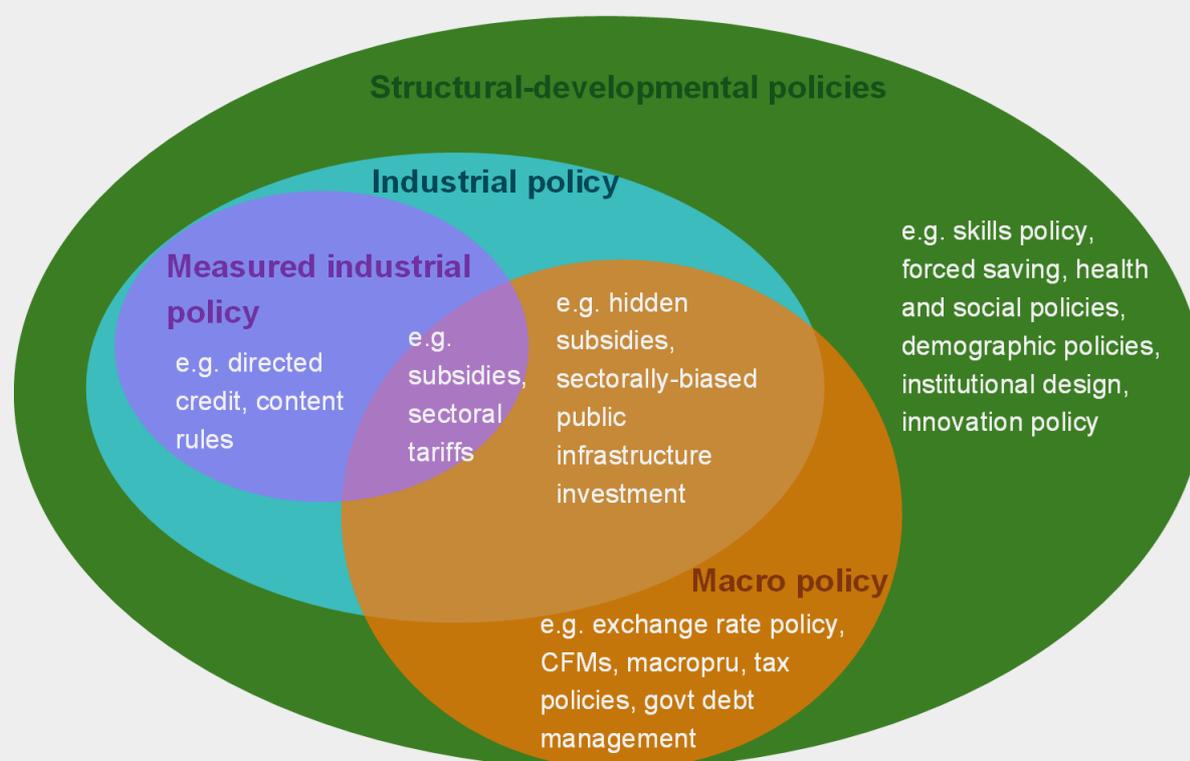
Macroeconomic policies are policies that affect aggregate demand in the short/medium term. These overlap with both structural-developmental policies and measured and unmeasured industrial policies. For example, subsidies appear in all these categories.

In policy discussions, the terms ‘industrial policy’ and ‘industrial strategy’, and commentary on their interaction with current accounts, often go well beyond the narrow definition of IP used and measured in the literature. They refer to wider elements of structural-developmental policies relevant to industrial development, even if they are not specifically intended to target particular sectors. This includes the exchange rate, capital controls, savings policies, and institutional design. For example:

- The Draghi Report recommends an ‘Industrial strategy’ for Europe that includes increasing innovation, reducing energy prices, and transforming the single market, in ways that do not target specific sectors and would therefore not be classified as IP.
- Germany’s industrial strategy is often cited as key source of its current account surplus. Germany’s current account surplus became substantially positive in the 2000s, largely due to a combination of the Hartz labour market reforms (which suppressed labour cost growth relative to other euro area members), and its fixed exchange rate (ie euro membership, which prevented nominal appreciation). While these policies did indeed promote the export and manufacturing sectors, neither exchange rate policy nor labour market reforms are classified in the literature as IP.
- Singapore’s compulsory savings scheme was an important influence on both its industrial development and its current account. Individuals in Singapore have been obliged to save as much as 40% of wages into the Central Provident Fund (CPF), leading to a persistently high national savings rate since the 1970s (Wickramanayake 1998). High national savings reduced the cost of capital for domestic business, enabling rapid development focused on capital-intensive export industries while holding down the equilibrium exchange rate. This created both competitive export industries and a persistent current account surplus. The compulsory savings policy therefore formed an important element of Singapore’s industrial development strategy – but is not classified as IP in the literature.

- Also in Singapore, public infrastructure investment (funded through the CPF) played a crucial role in industrial and trade development. As Lee Kuan Yew said, “Industrialisation cannot take off without adequate infrastructure: better roads, and a reliable supply of power and clean water, better ports and airports.” Public investment is not typically measured as IP, even where it disproportionately benefits the industrial sector.

**Chart B1.1: How industrial, structural-developmental and macro policies overlap**



### B.3 How in theory might industrial policy affect current account imbalances in the short run?

**Standard textbook models suggest industrial policy should have no effect on current accounts in the long run. But if short-run effects persist for a number of years, they may still be policy relevant.** These shorter-term impacts could be particularly material if significant amounts of new industrial policy is being implemented, so that short run impacts cumulate before they have fully unwound.

**There are a range of plausible channels through which IP could affect current account balances in the short to medium run, but the net direction is not clear a priori.** To illustrate this, we consider the effects of four different types of industrial policies on current account balances in a stylized general equilibrium two country model. The model captures key channels through which industrial policy may affect trade, including through its impact on productivity, international competitiveness and fiscal positions.<sup>2</sup> We show that the effect of industrial policies on the current account depends on the type of policy. Measures that reduce the costs of starting a new business deteriorate the current account, while production subsidies (whether export-oriented or not) and export-specific de-regulation both improve it. IMF and OECD research<sup>3</sup> indicates that the resurgence of industrial policy is marked by a predominance of subsidy-based measures (subsidised financing or direct support), with the cost as a share of GDP being particularly high in China. We describe each policy in the bullets below, with additional modelling details in Box 2.

- (i) **De-regulation policies, which lower entry costs and encourage firm creation, lead to a deterioration of the current account.** This is because many of the new firms are less productive, so that aggregate productivity falls, and because the increased labour demand by new firms pushes wages up, both of which lead to price increases and the real exchange rate appreciates. Exports become less competitive internationally, and as demand for exports falls, the current account deteriorates.
- (ii) **By contrast, domestic subsidies that reduce marginal production costs, lower prices and improve the current account.** As these subsidies feed through to prices, the real exchange rate depreciates leading to a shift in both domestic and global demand towards domestic goods. Labour demand rises, putting upward pressure on wages. Higher-productivity firms expand, crowding out inefficient entrants and raising overall productivity. Domestic consumption increases, though the effect is dampened by the fiscal costs of the subsidies. Overall, exports rise and imports fall, improving the current account.

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<sup>2</sup> The framework used for this analysis builds on Ghironi and Melitz (2005) and [Dogan and Hjortsoe \(2024\)](#). A detailed description of the framework is provided in Annex 2.

<sup>3</sup> WEO October 2025 and Government subsidies for large manufacturing firms: Insights from the OECD MAGIC database | CEPR.

- (iii) **Targeted export policies reinforce these patterns.** Export-specific de-regulation that cuts fixed export costs – such as red tape --- incentivises more firms to start exporting. As more firms export, labour demand and wages go up reducing the profitability of production for new entrants who are often less productive. Therefore, productivity goes up, and exports expand, improving the current account despite the real exchange rate appreciating as domestic prices and wages rise, even as the number of exported varieties grows.
- (iv) **Similarly, export-specific subsidies that reduce variable export costs – eg, by reducing the financial costs associated with exporting<sup>4</sup> – make exports cheaper and boost volumes.** The resulting increase in labour demand raises wages across all firms. This, in turn, increases production costs for domestically focused firms while making exports more competitive. As a result, entry falls, and average productivity rises. However, with the increase in prices of non-exported goods and domestic consumption constrained by fiscal costs, overall consumption may decline. At the same time, the real exchange rate appreciates, reflecting higher domestic prices and wages, even though exports become more competitive due to the policy. This appreciation makes imports relatively cheaper, leading to an increase in import demand, which partly offsets the improvement in the current account.

**Each of the policies lead to changes in exchange rates, and these relative price movements play a crucial part in determining current account movements.** If these movements are restricted (eg, through restrictions on capital account openness), current account movements will be impacted. In response to export-specific industrial policies, restrictions would lead to larger current account surpluses, but in response to economy-wide subsidies exchange rate restrictions would dampen the current account movements.

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<sup>4</sup> Firms' financial costs associated with exporting are significantly related to labour costs and can thus be thought of as variable costs, as shown in [Dogan and Hjortsoe \(2024\)](#).

## Box 2: Types of industrial policies and their effect on the current account

This box provides additional modelling details on the industrial policies considered in section B.3.

Type of IP	Modelled as	Transmission to exports	Effect on current account
<b>De-regulation / Production incentives</b>	Reduction in the cost of entry	<ul style="list-style-type: none"> <li>Productivity falls, as more (and less productive) firms enter the market.</li> <li>Export Competitiveness: Lower productivity drives up prices, appreciating the real exchange rate and dampening export competitiveness. Exports fall while imports increase.</li> </ul>	
<b>Domestic subsidies</b>	Reduction in variable costs of production, financed by households	<ul style="list-style-type: none"> <li>Productivity: The reduction in prices allow existing, more productive firms to expand their market share crowding out entry. Productivity in the economy rises.</li> <li>Export Competitiveness: Lower prices lead to a real exchange rate depreciation, making firms more competitive internationally and boosting exports.</li> <li>Fiscal costs: Consumption and imports are pushed down.</li> </ul>	
<b>Export-specific de-regulation / Export incentives</b>	Reduction in fixed export costs	<ul style="list-style-type: none"> <li>Productivity: Lowering the fixed export costs enables more firms with lower productivity to export. Because this increases labour demand and wages, the economy ends up with fewer but more productive firms and productivity rises.</li> <li>Export Competitiveness: As more firms export, aggregate exports expand despite higher average export prices and a real exchange rate appreciation.</li> </ul>	
<b>Export-specific subsidies</b>	Reduction in variable export	<ul style="list-style-type: none"> <li>Productivity: Cost of exporting falls enabling more firms to export and expand their market share. Labour demand and wages rise</li> </ul>	

Type of IP	Modelled as	Transmission to exports	Effect on current account
	costs, financed by households	resulting in having fewer but more productive firms. Productivity rises. <ul style="list-style-type: none"><li>• Export Competitiveness: Export prices fall, leading to a rise in set of exporters and their sales. Because non-traded goods prices increase, the real exchange rate appreciates and import demand also goes up. Overall, the surge in exports dominates and the current account improves.</li><li>• Fiscal costs: Pushes down on consumption.</li></ul>	

## B.4 How might industrial policy impact current account balances over the longer term?

As discussed above, in standard neoclassical models, industrial policy has no long-run effects on productivity or output composition; however, if productivity growth is endogenous and sector-specific, industrial policy can have persistent effects. We propose a model that features two-countries (labelled Country A and Country B, say), two-sectors (tradables and non-tradables), and where tradables productivity is endogenously determined by sector size.<sup>5</sup> In the standard neoclassical view, subsidies cause only temporary reallocation while the fundamental drivers of growth – capital accumulation, population growth, and exogenous technological progress – remain unchanged. Our model instead incorporates the classic market size effect from endogenous growth literature (Romer 1990; Aghion and Howitt 1992), but with a sectoral dimension: productivity gains from knowledge spillovers and learning occur specifically within tradables, while non-tradables exhibit stagnant productivity growth.<sup>6</sup>

**Within this framework where productivity growth is endogenous, we can examine how industrial policy affects current accounts.** Industrial policy alone cannot create long-run imbalances. If Country A subsidizes tradables, the permanent income hypothesis implies that consumption rises proportionally to production, leaving the trade balance unchanged. However, if Country A combines industrial policy with different forms of consumption suppression – such as weak social safety nets, capital controls, or high precautionary saving – subsidies generate persistent trade surpluses and become a beggar-thy-neighbour policy with negative international spillovers.

**The mechanism operates through sectoral reallocation.** Country A's subsidies expand its tradables sector, boosting productivity growth and innovation capacity. These assumptions find support in the data – Cesa-Bianchi et al. (2026) find that, across a panel of 24 countries over 2002–2019, more intensive use of industrial policy is associated with faster TFP growth and smaller falls in manufacturing employment shares. Meanwhile, Country B absorbs excess goods via trade deficits. Since tradables and non-tradables are complements in consumption, this raises Country B's demand for non-tradables (eg, domestic services). Labour reallocates from tradables to non-tradables, shrinking Country B's tradables sector and reducing its innovation activity and productivity growth. Country B experiences a "financial resource curse":<sup>7</sup> capital inflows finance higher consumption in the short run but erode its industrial base and long-run growth capacity. When paired with policies that

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<sup>5</sup> Cesa-Bianchi, Ferrero, Fornaro, and Wolf (2026).

<sup>6</sup> This assumption captures several well-documented patterns. First, tradable sectors exhibit systematically higher productivity growth than non-tradables (Duarte and Restuccia 2010). Second, manufacturing accounts for roughly 70% of business R&D spending despite representing only 10% of value added. Third, Rodrik (2012) shows that productivity convergence is restricted to manufacturing, suggesting that knowledge spillovers concentrate in tradable sectors.

<sup>7</sup> See Benigno, Fornaro and Wolf (2025). This is similar to the notion of natural resource curse, in which the discovery of natural resources leads to an exchange rate appreciation and a contraction in the tradable sector. But here, rather than by the discovery of some natural resources, the curse is triggered by cheap access to foreign capital inflows.

suppress domestic absorption, industrial policy redistributes not just current production, but global innovation capacity and future growth potential.

**What can Country B's government do in response?** The model highlights several options. One option is to boost national savings through fiscal consolidation, which improves the trade balance directly; the risk is that if implemented unilaterally or aggressively, it depresses global demand and pushes the world toward a liquidity trap. Broad-based tariffs, by contrast, are unlikely to address the underlying imbalance: they raise the price of imported goods but do not resolve the fundamental mismatch between Country A's production and Country A's consumption that drives the surplus. Subsidising R&D and high-tech tradable sectors can redirect cheap foreign capital toward productivity-enhancing investment, though it addresses the symptoms rather than the source of the imbalance. The most effective solution is likely multilateral: a coordinated combination of savings-boosting policies in Country B and consumption-expanding reforms in Country A. Such coordination, however, has historically proven difficult to achieve.

## **B.5 Is industrial policy use related to imbalances in the data?**

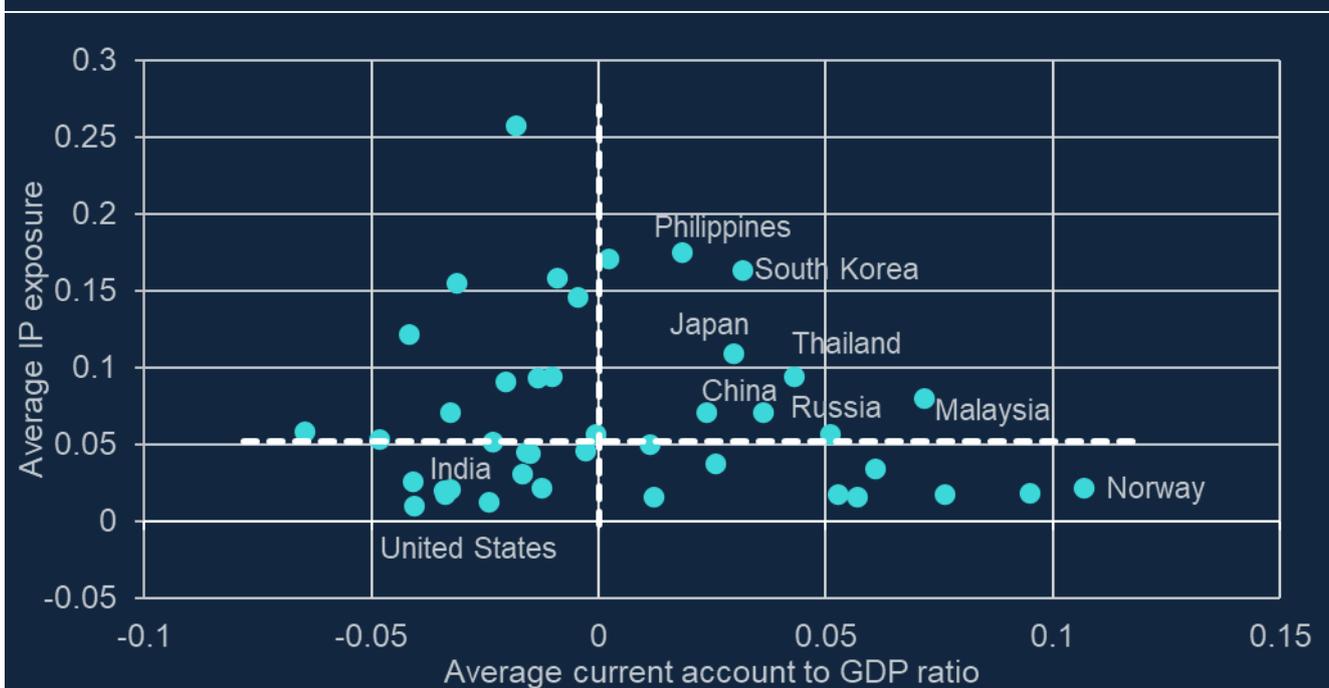
**A first look at the data shows no obvious correlation between a country's use of industrial policy and the size of its current account balance, on average (Chart 9).<sup>8</sup>**

While, for example, China, Japan and South Korea tend to use industrial policy intensively and run large current account surpluses, other surplus countries, such as the Nordics for example, make relatively little use of it. This suggests that IP is not the primary driver of current account balances. But that still leaves open the possibility that it may play a secondary role under certain conditions.

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<sup>8</sup> See Box 3 and Annex 1 for details on our text-based measure of industrial policy constructed from firms' earnings call transcripts.

**Chart 9. Industrial policy is not the primary factor driving persistent current account balances ..,**  
Industrial policy exposure against current account balance, across countries



Source: IMF EBA, NL Analytics and author calculations.

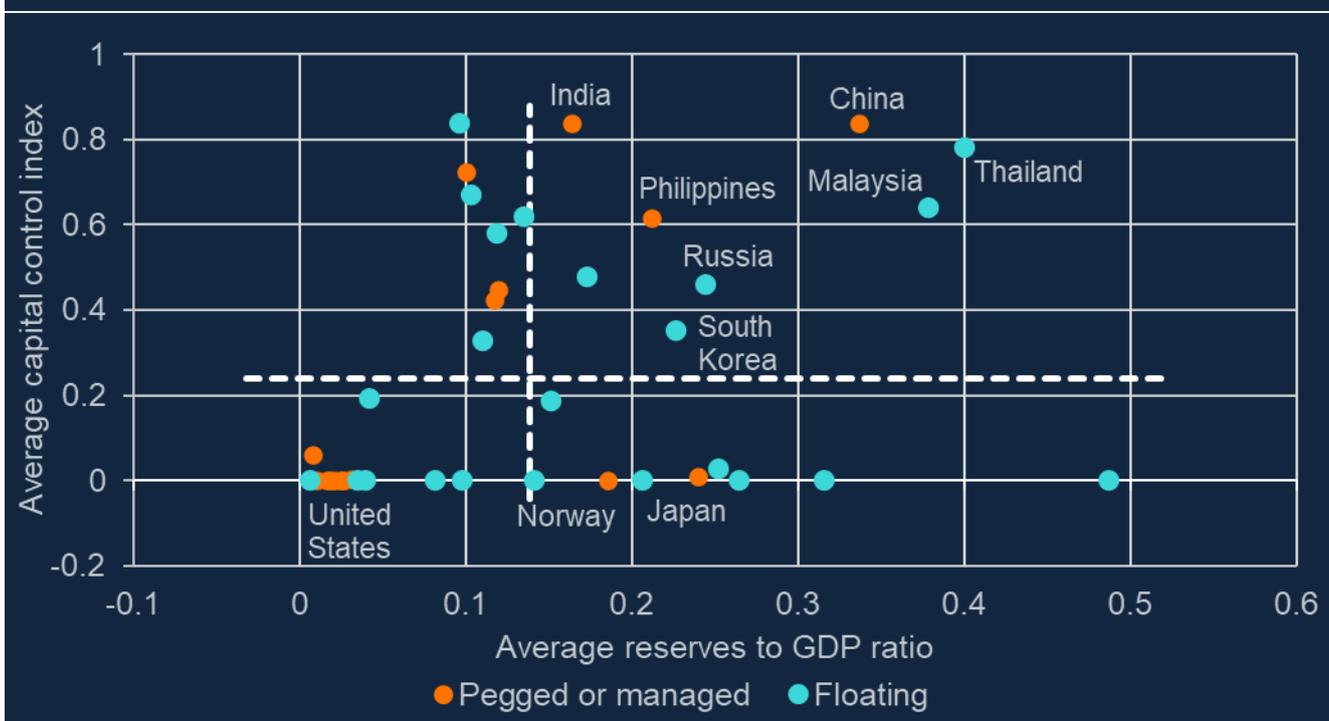
Notes: See Box 3 and Annex 1 for a discussion of the earnings call measure of IP. Vertical dashed line is at zero current account balance. Horizontal dashed line shows median IP exposure across countries.

**That IP use and current account surpluses are not correlated on average is somewhat unsurprising, since our theoretical framework highlights that persistent effects rely on industrial policy being combined with consumption suppression policies.** While consumption suppression can take many forms, we focus on three key policy levers that can be used to force savings abroad and/or depreciate the exchange rate, making exports cheap and imports expensive: capital controls (on inflows), FX reserve accumulation, and inflexible (pegged or managed) exchange rate regime. When industrial policy improves domestic productivity and hence income, such policies can mean domestic consumption does not rise proportionally, producing current account surpluses.

**Indeed, the data display a striking pattern: countries for which industrial policy is unconditionally associated with current account surpluses (upper right quadrant in Chart 9) have in place one or more policy levers that may depress domestic consumption: capital controls, pegged or managed exchange rate regimes, and reserve accumulation (Chart 10).** While this is only a correlation, it is consistent with industrial policies leading to the current account surpluses when combined with other distortive macro policies.

### Chart 10. ... but may play a secondary role for countries with capital controls, inflexible exchange rates and large stocks of FX reserves.

Capital controls against reserves, across countries, by exchange rate regime



Sources: World Bank WDI, Chinn and Ito (2006), Ilzetzki et al (2019) and author calculations.

Notes. Dashed lines show medians across countries.

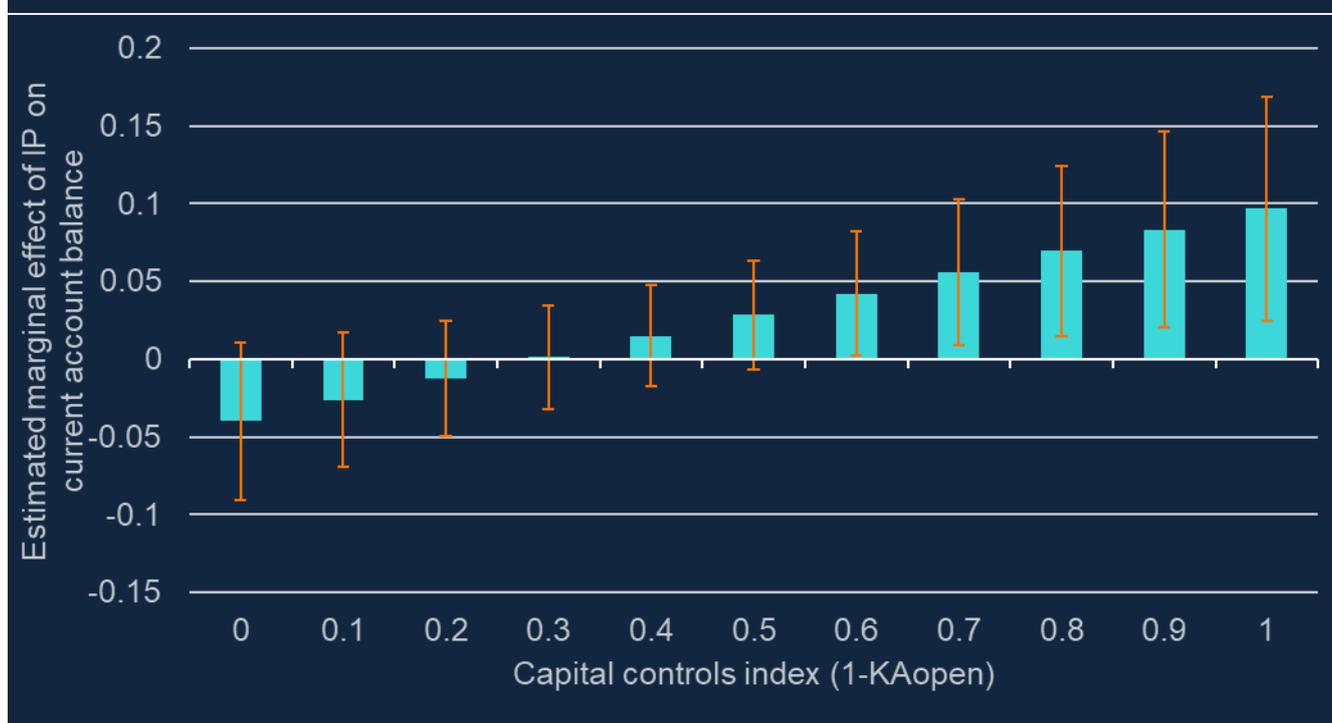
**To further probe the empirical link between industrial policy and the current account, we run a series of regressions incorporating industrial policy into the IMF's EBA framework, using our novel text-based measure of industrial policy** (see Box 3 for details). On its own, the industrial policy coefficient is not statistically significant. However, interacting it with country-level indicators of capital account openness, exchange-rate flexibility, and reserve accumulation reveals a clear pattern: where the capital account is relatively closed, the exchange-rate regime is inflexible, and reserve-to-GDP ratios are high, more active industrial policy is associated with larger current account surpluses (**Charts 11, 12 and 13**; see Box 3 for additional details on the empirical specification). The likely mechanism is that capital controls and reserve accumulation directly suppress the consumption response to higher income, while managed exchange rates limit the real exchange rate appreciation that would otherwise follow from industrial policy-driven productivity gains and help sustain the competitiveness of exports – together preventing the income gain from being absorbed domestically and redirecting it into external surpluses. As an example of the scale of the effect, for China<sup>9</sup>, a 1 standard deviation increase in IP – equivalent to increasing normalised IP from China's historical average to the average levels

<sup>9</sup> China has an average capital account openness index of about 0.15 over our sample

in South Korea, for example – is associated with nearly a 1/10th of a standard deviation increase – about 0.4ppt of GDP – in the current account balance (see **Chart 11**).<sup>10</sup> Overall, in the data, higher rates of industrial policy, when combined with consumption suppression policies, do appear to be associated with higher current account surpluses. But the magnitude of the effect suggests that significant amounts of IP combined with restrictive macro policies are required for the association to be economically material.

### Chart 11. Industrial policy may play a secondary role in driving current account surpluses when the capital account is relatively closed

Regression implied estimates of the marginal effect of a 1 standard deviation increase in IP on current account balances (in units of standard deviations), by degree of capital account openness



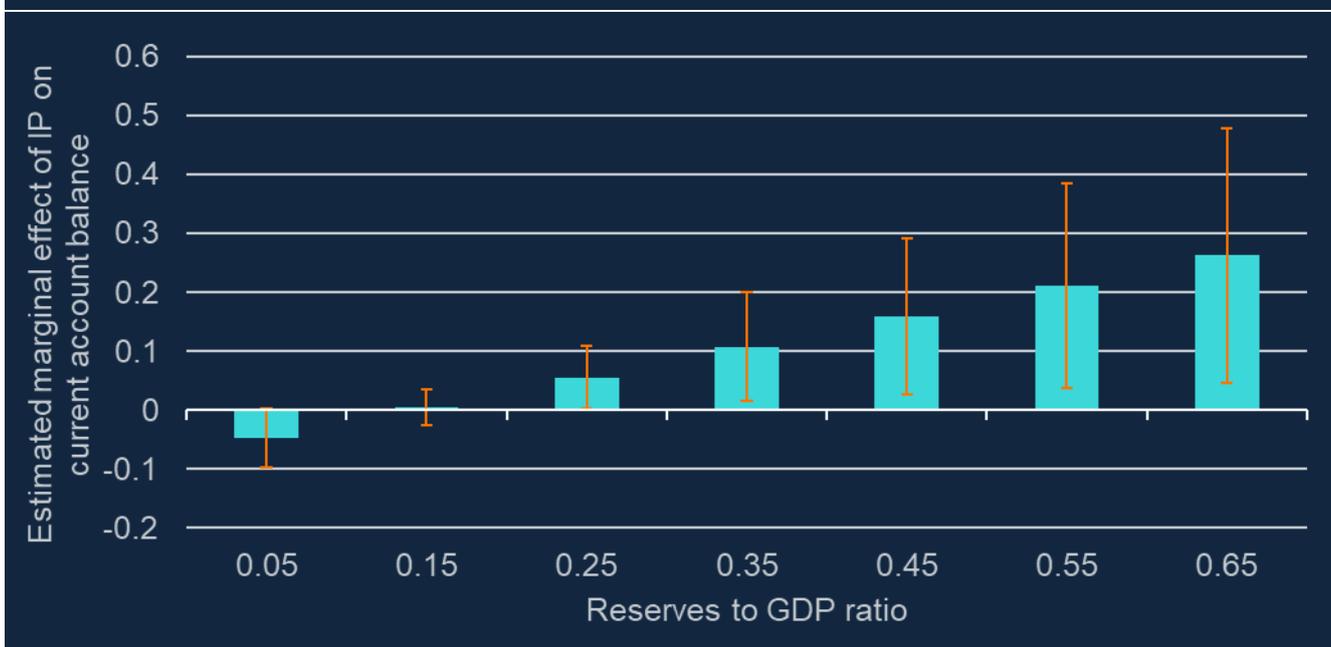
Source: IMF External Balance Assessment, NL Analytics, Chinn and Ito (2006) and author calculations.

Notes: See Box 3 and Annex 1 for a discussion of the earnings call measure of IP.

<sup>10</sup> The effects of Chinese industrial policy are even larger when interacting with reserves-to-GDP, but only about half as large when focusing on exchange-rate regime.

**Chart 12. ... when foreign reserve accumulation is relatively high...**

Regression implied estimates of the marginal effect of a 1 standard deviation increase in IP on current account balances (in units of standard deviations), by level of reserves to GDP



Source: IMF External Balance Assessment, NL Analytics, World Bank WDI and author calculations.

Notes: See Box 3 and Annex 1 for a discussion of the earnings call measure of IP.

**Empirical estimates based on the existing literature are also consistent with industrial policy playing a material – if secondary – role in driving current account balances.**

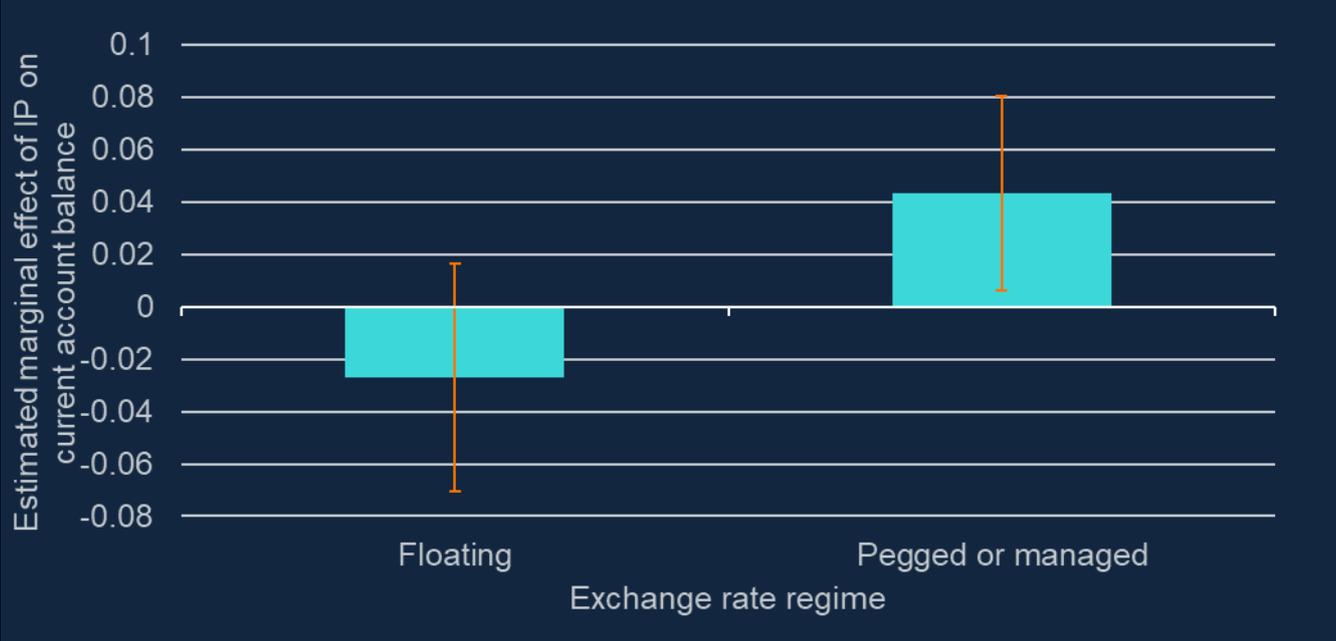
Using the Global Trade Alert database, Rotunna and Ruta (2024) estimate that Chinese exports are on average 0.9% higher, and imports 0.9% lower, for product categories that receive subsidies.<sup>11</sup> These multipliers are broadly consistent with subsidies increasing China's current account surplus by around 0.3% of GDP.<sup>12</sup> For comparison, China's current account surplus was 2.3% of GDP in 2024, of which the IMF estimated that 1.2ppts was in excess of norms.

<sup>11</sup> Coincidentally the same number.

<sup>12</sup> Rotunna and Ruta (2024) estimate that 77% of China's export product categories receive subsidies and 83% of its import product categories. China's exports were 20% of GDP in 2024 and imports were 17% of GDP. That suggests a current account impact of  $0.009 \times 0.2 \times 0.77 + 0.009 \times 0.17 \times 0.83 = 0.3\%$  of GDP.

**Chart 13. ... and when the exchange rate is relatively managed.**

Regression implied estimates of the marginal effect of a 1 standard deviation increase in IP on current account balances (in units of standard deviations), by exchange rate regime



Source: IMF External Balance Assessment, NL Analytics and Ilzetzi et al (2019) and author calculations.

Notes: See Box 3 and Annex 1 for a discussion of the earnings call measure of IP.

### Box 3: Current account imbalances and a novel industrial policy measure

This box provides additional details on our novel text-based measure of industrial policy (IP), as well as how we introduce such measure into the IMF's EBA framework. Further details on the IP measure are shown in Annex 1.

Our novel IP measure is constructed as the number of sentences in firms' earnings call reports that include, with positive sentiment, the words "subsidies", "grants" or "concessionary loans, bonds, credit or borrowing" from all levels of government, normalised by the total number of earnings call sentences across all firms in a given country and year. We focus on positive mentions to avoid counting the negative spillover effects of foreign IP, which may contaminate our measure. A side effect is that our measure likely picks up successful IP, which may raise productivity and income. Indeed, our IP exposure variable is unconditionally associated with greater country-level TFP growth and manufacturing employment share. A key benefit of this earnings call variable is that the IP must be sufficiently important to be mentioned in firms earnings call reports. Other benefits relative to other IP measures include its long sample period and that it can capture policies from all levels of government.

We incorporate this variable in deviations from the year's global average, denoted  $IP_{i,t}$ , into the IMF's workhorse model of current account balances both on its own and interacted with a series of country-level 'state' variables ( $Sup_{i,t-1}$ ) that capture additional policy levers through which governments force savings abroad and suppress domestic consumption. These include capital controls, measured as 1 minus the Chinn-Ito capital account openness index, the reserves-to-GDP ratio, and a course grouping of peggers vs floaters based on the Ilzetzki-Reinhart-Rogoff FX regime index. Specifically, we estimate:

$$CA_{i,t} = \beta_1 IP_{i,t} + \beta_2 IP_{i,t} \times Sup_{i,t-1} + \beta_3 Sup_{i,t-1} + \Gamma' X_{i,t} + u_{i,t},$$

Where  $CA_{i,t}$  is country  $i$ 's current account-to-GDP ratio and  $X_{i,t}$  corresponds to all other variables in the IMF model.<sup>13</sup>

After confirming the model fit is similar when restricting our sample to 42 countries from 2002 to 2019, based on the availability of data on  $IP_{i,t}$  we show in column (1) of Table 1 that the  $IP_{i,t}$  variable on its own in the EBA model carries a positive sign—such that more industrial policy is associated with a larger current account surplus—but is statistically insignificant. However, in columns (2), (3) and (4) of Table 1, the positive and statistically significant interaction coefficient  $\beta_2$  highlights that more industrial policy is associated with greater CA surpluses as countries progressively close their capital

<sup>13</sup> Most variables in the IMF EBA model are measured in deviations from their global average, as is our IP exposure variable. This is similar to including a time fixed effect in the regression, such that the model mostly exploits cross-sectional variation.

account, accumulate greater FX reserves, and peg or manage their exchange rate. Further, when we run a horserace between these consumption suppression policies in column (5), we see that all three remain significant, suggesting there is unique information in all three of these measures.<sup>14</sup> Of note, the negative and statistically significant coefficient  $\beta_1$  in column (5) highlights that for countries like the US who have no capital controls, accumulate very few FX reserves, and have a fully flexible exchange rate, more industrial policy is associated with a greater current account deficit. This may be because these consumption promoting policies, relative to other countries, lead consumption to rise more than one-for-one with income.

To better appreciate the economic significance of these marginal effects, Charts 10-12 re-scale them to capture the effect of a 1 standard deviation increase in IP – equivalent to doubling China’s average amount of IP – at different levels of consumption suppression policies. Doubling China’s IP use is associated with a 0.1 standard deviation increase in its current account – about 0.4ppt of GDP – when computed using its average FX reserve share of 35% of GDP. This highlights that while industrial policy does not drive the majority of CA imbalances, it can have meaningful second-order effects.

**Table B3.1. Regression results**

VARIABLES	(1) IMF Model + IP	(2) IP and Capital Controls	(3) IP and Reserves	(4) IP and FX Regime	(5) IP and All
$IP_{i,t}$	0.625 (0.917)	-2.222 (1.436)	-4.092** (1.952)	-1.503 (1.470)	-9.368*** (2.630)
$IP_{i,t} \times CC_{i,t-1}$		7.621*** (2.932)			7.607*** (2.874)
$IP_{i,t} \times Res_{i,t-1}$			28.822** (12.057)		30.124** (12.199)
$IP_{i,t} \times FXR_{i,t}$				3.925** (1.938)	4.077** (1.881)
$CC_{i,t-1}$		-0.012 (0.009)			-0.007 (0.008)
$Res_{i,t-1}$			0.061*** (0.020)		0.073*** (0.019)
$FXR_{i,t}$				-0.010*** (0.004)	-0.012*** (0.004)
Observations	725	725	725	725	725
Number of Country	42	42	42	42	42
R-squared IV	0.569	0.575	0.604	0.599	0.647
R-squared fit	0.566	0.572	0.614	0.594	0.655
Root MSE	0.032	0.032	0.030	0.031	0.029

Standard errors corrected for heteroskedasticity and contemporaneous and serial correlation in parentheses  
 \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Sources: IMF External Balances Assessment, NL Analytics, World Bank WDI, Chin and Ito (2006) and Ilzetzi et al (2019)

<sup>14</sup> Our preferred consumption suppression measure is reserves-to-GDP, since it is directional, i.e., pushing one’s currency to depreciate. On the other hand, while capital controls on inflows depreciate the exchange rate, capital controls on outflows do the opposite, and there is a strong correlation between inflow and outflow controls across countries. Similarly, managed exchange-rate regimes could in theory be used to artificially strengthen one’s currency.

## B.6 What role do capital flows and financial factors play in driving imbalances?

**Financial factors, outside of their interactions with industrial policy, are an important part of the imbalances story, but they need to be understood in terms of their interaction with domestic macroeconomic factors.** A prominent global financial factor is the US dollar's role as a global safe asset. Strong historic global demand for US dollar-denominated assets has fuelled US dollar strength and persistent US current account deficits, with [Chinn and Ito](#) (2022) and [IMF](#) (2019) estimating that this might account for as much as 2% of GDP on the US current account. This can be seen as an upshot of the “Triffin dilemma” (the tension between the *global* need for the US, as global reserve currency issuer, to preserve global dollar liquidity by running a current account deficit, and the US' *domestic* need to close this deficit to ensure external sustainability). Extensive dollar invoicing of global trade has also weakened the impact of exchange rate adjustment on the current account. The dollar's centrality in the IMFS has therefore complicated the adjustment process for global imbalances.

**Capital account openness can play an important role in current accounts and their adjustment.** China maintains a relatively closed capital account, which allows it to manage its exchange rate against the dollar, with the renminbi generally considered to have been undervalued as a result.<sup>15</sup> This undervaluation has contributed to global imbalances in the past, with China accumulating large stock imbalances, mostly through its holdings of US dollar-denominated reserves. Research indicates that these net official sector flows can have large impacts on current account balances ([Bayoumi, Gagnon, and Saborowski, 2014](#)), especially when capital accounts are closed, as is the case in China. The IMF currently assess<sup>16</sup> that the renminbi real effective exchange rate is undervalued by at least 12% and so may be an ongoing source of current flow imbalances (especially since an increase in Chinese consumption, a desirable way to reduce imbalances, might also be expected to appreciate the renminbi).

**Recent decades have seen sharp movements in net international investment positions (NIIPs).** The US' NIIP deteriorated by 16% of world GDP from 2000 to 2024, while there has been a broad-based improvement in the NIIP of other countries (including oil exporters, China, Germany, and financial centres). These stock imbalances reflect the growth in international balance sheets and changes in asset valuations, as well as trade flows. As these stock imbalances cumulate, they generate more (primary) income for the holders (i.e. surplus countries). The rapid rises in interest rates since 2022 have also raised the contribution to the current account from (primary) income flows associated with NIIP

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<sup>15</sup> [On the Renminbi: The Choice between Adjustment Under a Fixed Exchange Rate and Adjustment Under a Flexible Rate by Jeffrey A. Frankel :: SSRN](#)

<sup>16</sup> [People's Republic of China: 2025 Article IV Consultation-Press Release; Staff Report; and Statement by the Executive Director for the People's Republic of China](#)

positions.<sup>17</sup> And as primary income forms part of the current account, these stock imbalances can influence flow imbalances too. These flows accounted for over a third of the change in the US' current account deficit in 2024.<sup>18</sup> And the global sum of primary income balances has grown to over 0.4% of GDP in 2024, its highest level in well over a decade. Stock imbalances are highly persistent, so we should expect this phenomenon to continue. This makes rebalancing more challenging, since trade balances now constitute a smaller share of the current account than was the case in the past and will therefore need to adjust by more for global current account imbalances to close.

**It is important to understand the real economy origins of these financial drivers to gauge their relevance for imbalances.** China's accumulation of foreign reserves is a reflection of its exceptionally high national savings rates (i.e. the suppression of consumption). And the US current account deficit is a result of the interaction between high foreign demand for US assets and the US' low domestic propensity to save (since the US could, in effect, resolve the Triffin dilemma by exchanging dollar assets for other assets, rather than imports of goods and services). This interaction currently manifests as a relaxation of the US' external constraint. This has enabled the US to run large fiscal deficits, which in turn have contributed to its excess current account deficit.

## C. What are the consequences of and risks from today's excess imbalances?

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### C.1 What are the adjustment implications?

**Historically, the onus has been on deficit countries, rather than surplus countries, to adjust their imbalance position, excessive or otherwise.** The net liabilities deficit countries accumulate expose them to the risk of painful adjustment if market confidence wavers, a "sudden stop" in external financing materializes, and some combination of a currency or domestic devaluation is required. In severe cases, this can precipitate a painful debt crisis. By contrast, market discipline is not the binding constraint for countries running surpluses, which can therefore persist for a long time, unless domestic dissatisfaction with falling returns or actions by deficit countries prompt a correction.

**There are risks from excess imbalances adjusting in an asymmetric or sudden way.** If adjustment were to occur by surplus countries unilaterally raising expenditure, this would push up global interest rates. This risk is particularly important at present as many countries (including the UK, US, Europe, and many EMDEs) face large fiscal pressures, high debt

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<sup>17</sup> [https://www.graduateinstitute.ch/sites/internet/files/2025-10/Donato\\_Tille\\_IMFER\\_2025.pdf](https://www.graduateinstitute.ch/sites/internet/files/2025-10/Donato_Tille_IMFER_2025.pdf)

<sup>18</sup> [2025 External Sector Report: Global Imbalances in a Shifting World](#)

burdens, and urgent investment needs, which would be aggravated by a fall in global savings.

**Conversely, if adjustment occurs by deficit countries cutting spending unilaterally, the world may face a shortage of demand, recession and higher unemployment.** This risk should be easier to manage now than in the 2009-20 era during which monetary policy was highly constrained. When interest rates are positive, as at present, monetary policy globally can loosen to offset rising deficit-country saving. But there are limits, as monetary policy acts with a lag and does not address the structural costs of rapid sectoral change. Also, large adjustments might be constrained by the effective lower bound. So a large or sudden adjustment could be costly.

**In theory a cooperative solution between surplus and deficit countries could raise global growth and reduce global imbalances.** The April IMF WEO laid out a scenario where the US consolidates fiscal spending, the euro-area raises public investment, and China enacts reforms to boost investment and reduce precautionary savings. Global GDP increases by 0.8% and medium term global current account balances decline by about ½ percentage point of world GDP.

## **C.2 What are the spillovers of persistent excess imbalances to other countries?**

**Global imbalances can generate a range of spillovers to other countries.** Chief among these, and one we have seen play out aggressively recently, is that they can trigger trade policy responses and increase the likelihood of protectionist measures. Such policies drive trade fragmentation and reduce the efficiency of the global economy, making all countries worse off. Where imbalances are persistent, these can lead to a build-up of large financial exposures between countries, increasing financial stability risks. Where surpluses are persistent this can also lead to tradables sectors (such as manufacturing) shrinking in other economies, which can be welfare negative in the presence of productivity externalities.

**We might be particularly concerned about spillovers from excess imbalances.** Where current account balances are in excess of warranted norms, this represents a deviation from comparative advantage and a misallocation of resources that will weigh on global output. Furthermore, excess imbalances reflect undesirable policies in domestic economies which could themselves have spillovers. For example, excessive build-up of public or private debt could generate macro-financial risks. And product market distortions will constrain innovation, with negative effects on global productivity.

**Where imbalances are large relative to global GDP, the spillovers to other countries can be particularly material.** For example, negative demand shocks in large surplus economies can generate global demand deficits. Where trading partners are constrained by the effective lower bound they may be unable to offset this by loosening monetary policy.

## C.3 What are the spillovers from industrial policy?

**Industrial policy can have both negative and positive spillovers to other countries.**

Positive spillovers include technological innovation or support for the climate transition, for example. But many spillovers are negative. In today's geopolitical environment, the key negative spillover is that industrial policies can trigger trade policy responses. Like the imbalances they generate, IP is fomenting trade tensions, with negative implications for global economic integration. IP can also trigger retaliatory subsidies, which may be welfare negative if they have high fiscal costs or are poorly targeted.

**Industrial policies can also impose production relocation externalities on overseas economies.** This externality occurs when IP support to a sector of a domestic economy leads to the equivalent sector shrinking in overseas economies ([Hodge et al, 2024](#); [Ossa, 2011](#); [Lashkaripour and Lugovskyy, 2023](#); Cesa-Bianchi, Ferrero, Fornaro, Wolf, 2025). In some cases, this reallocation of resources may be welfare negative for the overseas economy, if it reduces productivity by shifting the economic structure away from comparative advantage. And even if the production relocation is welfare positive in aggregate for the overseas economy, for example due to cheaper imports, there may be distributional consequences, with workers in the affected sector worse off. While transfers or economic restructuring might in principle make everyone in the overseas economy better off, such policies may be politically challenging to implement. While there is substantial debate about the strength and implications of this spillover channel, it has significant political salience.

**In extremis, large scale IP can also generate sectoral overcapacity, where the potential supply of a supported sector exceeds global demand.** In this situation, the negative implications for that sector in overseas economies may be particularly large. China is concerned about domestic excess capacity ('involution') and export growth has been strongest in sectors where domestic demand remains weak, suggesting that excess supply may be being directed abroad. Concerns about excess supply being exported to European markets has prompted the EU Commission to apply tariffs to Chinese-made EVs.

**Beyond its economic spillovers, IP can have national security implications.** Large scale IP may generate critical supply chain dependencies, where one country dominates production of a good with few substitutes, increasing that country's geopolitical leverage. Sectoral dominance in security related sectors, for example military technology, may also generate security risks for other countries.

## C.4 What are the financial stability implications of imbalances?

**Current account imbalances lead to net flows of capital, but these net flows aren't the primary cause of today's most pressing global financial stability risks.** The textbook financial stability risk associated with imbalances is a sudden stop: credit flowing from surplus to deficit countries dries up, leading to a rapid rise in interest rates in deficit countries and valuation losses for surplus countries. Typically, this manifests itself in sharp reversals in the

flightiest of such flows (i.e. portfolio debt and equity and banking flows, rather than FX reserves or FDI). These flows are also most likely to involve significant financial interlinkages, and therefore most likely to cause financial stability risks to emerge. The US's status as issuer of the global reserve currency continues partly to insulate it from sudden stop risk, while simultaneously complicating the adjustment to imbalances, given continuing strong demand for US dollar assets.

**There is little evidence that current account deficits among advanced economies have attracted a glut of flighty capital.** Countries against which the US runs large bilateral current account deficits have generally not been accumulating large portfolio claims on the US in recent years. Of the countries against which the US has the largest trade deficits, Ireland is the only country to have accumulated large portfolio debt claims against it in recent years. And while Japan has a large stock of such claims, they are below their 2020 levels. There has however been a pivot in purchases from the foreign official sector to the foreign private sector, which might make the foreign investor base flightier. Meanwhile, banking investments account for only a small share of the US' external liabilities. In portfolio equity terms, there has been a rise in claims on the US, but this is a US success story, as its stock market has outperformed relative to other advanced economies. Since US equities are held primarily by US residents, we can deduce that its wealth, and hence capacity to repay, has risen significantly too, which reduces the risks associated with a deterioration in its NIIP.

**There is little evidence either that stretched equity valuations are being driven by global current account imbalances.** US stocks are held primarily by domestic investors and so the recent run up in prices is unlikely to have been driven primarily by capital inflows. A correction in US equity prices, for example via a fall in AI-related equities, would translate to a narrowing of global imbalances, as the US NIIP improved at the expense of the rest of the world, effectively reversing the transfer of wealth from the US to the rest of the world that occurred during the run up in US equities. Such a development would be appropriate if AI stocks are mispriced. Yet it might lead to an economic slowdown or recession in the US if consumption and AI-related investment were to slow, and elsewhere too, given the extent of global exposure to US equities.

**Nonetheless, persistent excess imbalances would lead to further deterioration in the US' NIIP, which would heighten the risk of a sharp reversal in flows.** On current trends, the US' net liability position is on an unsustainable path, as its NIIP, having worsened significantly in the recent past, is deep into negative territory, while capital inflows, which, all else equal, lead to further worsening, will continue so long as the current account remains in deficit. For the US' external position to remain sustainable, the US' current account deficit is likely to need to narrow, absent a sharp increase in US growth. Tariffs might close the US' trade deficit somewhat, but they are likely to jeopardise the US' ability to refinance its debt at low cost and distort the global trade landscape. Capital flow management measures, such as taxes on transactions or holdings, or capital controls, could help to reduce flow imbalances, by reducing the demand for US assets. But these too are likely to lead to similarly

undesirable side effects, by raising the cost of borrowing and jeopardising the dollar's preeminent status as global reserve currency.

**Higher interest rates on US government bonds have eroded the “exorbitant privilege” that the US has traditionally enjoyed, creating perhaps the most significant global financial stability risk linked to imbalances.** Since 2022, the US has earned increasingly larger valuation gains on its net external debt position (**Chart 14**), driven by a sharp decline in the value of foreigner's holdings of outstanding US debt (**Chart 15**), especially US Treasuries. This is due to the sharp rise in US Treasury yields—as reflected in the deterioration of the US net external investment balance—since 2022. While such valuation gains are beneficial from a macro perspective, since they reduce the trade surpluses the US must run going forward, the correspondingly higher yields raise the risk of a debt rollover crisis in the US, especially given foreigner's holdings of US Treasuries have plateaued since 2015. Fiscal sustainability risks could in a tail risk scenario combine with Treasury market dysfunction, spilling over to the wider global financial system.

#### Chart 14. The value of the US net external debt position has risen sharply since 2022 ...

Cumulative net valuation effects on US external debt position, percent of GDP



Source: US BEA, FRED, and author calculations.

**Global imbalances have also in the past contributed to credit bubbles in specific sectors, as was the case pre-Global Financial Crisis with the US housing sector.** An adequate macroprudential framework, including for market-based finance is needed to ensure that these net flows are accommodated without “excess elasticity” in the financial

sector. Yet it is ultimately by examining gross flows, not (net) imbalances that financial stability risks can be identified and addressed.

**Finally, there are risks from imbalances through policies that react to them.** As this year has demonstrated, global imbalances risk pushing policymakers in deficit countries towards a combination of protectionism, distortive industrial policies, and/or financial repression.

**Chart 15. ... as the value of foreigners' holdings of US debt has fallen sharply**  
Cumulative valuation gains on US holdings of foreign debt and foreign holdings of US debt, as a percentage of US GDP



Source: US BEA, FRED, and Author Calculations.

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## D. What can be done to address and mitigate persistent excess imbalances?

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**Persistent excess current account surpluses and deficits have caused profound geopolitical rifts and economic problems in the past and are doing so again today.** Protectionism is on the march and multilateralism faces an existential challenge. The IMF warns that excess imbalances are widening. Barriers to trade are being erected at the fastest rate in a century. Meanwhile, because such a large share of the financing of imbalances now flows through non-bank financial plumbing with known vulnerabilities, uncertainty over how a disorderly unwind of imbalances could affect financial stability is high.

**Left unaddressed, today's persistent excess imbalances are likely to aggravate geopolitical tensions, motivate further non-cooperative policies and weigh heavily on global growth.** Further, they have the potential to translate shocks into acute and widespread financial stress.

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## Conclusions

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Having reviewed the drivers and consequences of persistent excess imbalances, this paper finds the following:

### **D.1 Persistent excess imbalances are largely driven by domestic fundamentals**

**First, our findings reinforce rather than challenge the traditional view that it is mostly domestic macroeconomic forces that drive imbalances.** Macroeconomic factors are the primary cause of both persistence and of imbalances running in excess of where fundamental, cyclical and structural factors suggest they ought to be.

### **D.2 Industrial policy's impact on the current account is second order over the short-to-medium term, but our understanding of its spillovers and long-term impacts needs deepening**

**Second, we find that industrial policy can have impacts on imbalances too, but over the short to medium term, these tend to be small, unless other policies and forces are acting to amplify its impact.** If industrial policy is deployed at sufficient scale to be macroeconomically significant domestically, and if it is pursued in an environment where the capital account is not open enough to permit the domestic currency to appreciate in response, then under those conditions, our empirical work and theory indicate industrial policy can have a material impact on the current account.

**Further, going against the grain of conventional wisdom, we can derive models where industrial policy impacts current accounts over the longer term.** If we step outside standard frictionless models and follow a thought experiment that sees subsidies combine with consumption suppression policies then under certain stylised conditions, they can cause surpluses to persist over the long term. In this scenario, industrial policy is beggar-thy-neighbour, has clear negative spillovers for other countries – eg, reduces manufacturing employment shares and overall productivity.

### **D.3 Global external balance sheet positions that previous current account imbalances have cumulated to, show vulnerabilities that could interact with and amplify other global financial stability risks**

**Third, the most pressing global financial stability risks associated with current account imbalances stem chiefly from the risk of trade tensions being stoked to a point that translates into widespread financial stress.** The trade wars of the 1930s provide a chastening reminder of how a cycle of protectionism and financial instability can spiral out globally.

**A close second concern is the potential for today’s large external balance sheets to interact with fragilities in the non-bank financial sector.** While the US’s unique position as issuer of the only truly global reserve currency continues to shield its deteriorating net international investment position from sudden stop risk, its “exorbitant privilege”, in an external balance sheet sense, has been eroded. Known risks stemming from non-bank leverage in core markets, in particular but not exclusively the US Treasury market, could interact to trigger an acutely disruptive unwind of stock imbalances.

## **Policy Recommendations**

### **D.4 Excess imbalances require an orderly and symmetric unwind**

**Orderly and more symmetrical adjustment is in the interests of all, while uncoordinated adjustment would be costly.** Adjustment that is heavily skewed towards deficit countries would significantly reduce global demand, to an extent that monetary policy easing may struggle to offset. Conversely, adjustment only via surplus countries spending more would increase global interest rates, interacting with limited fiscal space, significant public investment needs and high debt service burdens across many countries. Symmetry and orderliness are therefore paramount. Those countries whose imbalances account for a significant share of overall global imbalances, face a particular imperative to adjust. China needs to rebalance its economy. The US requires significant fiscal adjustment, as it has itself acknowledged. Similarly, where persistent excess imbalances exist elsewhere, savings-investment gaps should be narrowed. Such advice is not new. The data and historical experience tell us that, if followed, it is the most effective way of closing imbalances and defusing their risks. Countries doing so in a coordinated manner is preferable to an

uncoordinated approach, as the former reduces the risk of abrupt changes in policy which create volatility in markets and changes to global output gaps.

**Adjustment via crisis would be a lose-lose scenario.** Fragmentation would also be lose-lose, with large costs for both deficit and surplus countries, and no guarantee that trade restrictions would adequately correct stock or flow imbalances. So, there is a common interest globally in reducing excess imbalances well before stock imbalances reach dangerous levels or trade tensions become insurmountable (even if adjustment is difficult to square with other domestic priorities).

#### **D.5 The multilateral stewardship of global imbalances needs reform**

**The IMF has a vital role to play in providing a sound analytical basis as well as a collaborative and coordinated environment to guide countries towards an orderly unwind.** The IMF of course is not the root cause of excess global imbalances, or in possession of formal policy levers for their redress (or even to enforce their redress), but it does have an outsized role to play in resolving them. The Fund should continue to identify policy combinations (as it has in recent WEOs) which are “win-win” from the perspective of the largest contributors to excess imbalances and raise global growth. An upgraded IMF analytical toolkit, that incorporates a role for industrial policy, could provide renewed support for the IMF to convene plurilateral discussions on resolving imbalances. Some technical ground clearing and direction could be provided by reprising the IMF-WTO roundtable of 2023, which gathered finance and trade officials to discuss the nexus of trade, industrial and fiscal policies.

#### **D.6 Analysis and surveillance of global imbalances need to be strengthened**

**We see three main areas in which the IMF could improve both its analytical approach to assessing imbalances and how this analysis is then deployed.**

**First, there needs to be a greater emphasis on spillovers, and spillbacks, from distortionary policies driving imbalances.** For the largest economies, even modest imbalances scaled by domestic output can generate substantial negative externalities. For example, while the IMF has repeatedly emphasised that China should phase out policies which distort or override signals from market prices, it has made less of the harm those policies cause others, their interaction with geoeconomic fragmentation, and how this negatively feeds back onto the Chinese economy. This could be complemented by greater attention to how exchange rate policies impede necessary adjustments, negatively affecting others. Such work should utilize a more sophisticated and varied approach to assessing “fair” valuations, which takes account of whether exchange rate ‘fundamentals’ are themselves skewed by distortionary policies, such as broad-based subsidies

**Second, surveillance needs to take a fuller account of distortions associated with industrial policies.** The IMF needs to set out a path towards taking explicit account of the role of industrial policies and non-market practices in its assessment of excess imbalances,

building on its own work to monitor such policies, and the OECD's project mapping industrial policy expenditures across countries.

**Third, modelling of the risks associated with excess imbalances requires more ambition.** The IMF could make more use of macro scenario analysis. To better account for risks from the non-bank financial sector, it should also embrace 'flow-test' analysis, tracing out shocks across financial sub-sectors, markets and borders, to explore how shifts in the global financial system, could be affecting the mapping from excessive and persistent imbalances to financial stability risks.

#### **D.7 Multilateral work on trade issues needs to be prioritised and undertaken with a greater degree of collaboration**

**Almost three decades after the original IMF-WTO Cooperation Agreement, it is time for these institutions to re-assess how they can best work together (and with the OECD), within their respective mandates, to promote the balanced growth of international trade.** The IMF should combine its macroeconomic expertise with the WTO's insights into the most challenging aspects of trade discussions to provide more nuanced assessments of the global trading system, and to enhance the traction of its messaging on industrial policies.

#### **D.8 Surveillance needs greater traction**

**Recent developments have underscored the need for the IMF to be a well-evidenced "brutal truth teller" to all its members on the domestic and international spillover costs associated with excessive external imbalances.** The IMF's multilateral surveillance on imbalances needs a higher profile. The External Sector Report should be complemented by a more prominent role for imbalances and associated spillovers in the IMF's other flagship publications, and in its headline economic messages at Spring and Annual Meetings. To gain traction with its largest members, the IMF will need to make skilful use of tailored private advice and dialogues with authorities in between formal bilateral surveillance cycles. It will need to re-energise its strategic policy dialogues with those largest members to ensure sufficient airtime on this topic. This could be complemented by partnering with national economic institutions, to seed deeper discourse on the interactions between domestic and external imbalances, as well as initiating discussions of imbalances in bilateral and plurilateral fora in which the IMF already participates (eg, 1+6 discussions with China, Saudi Arabia's Aluhah Conference).

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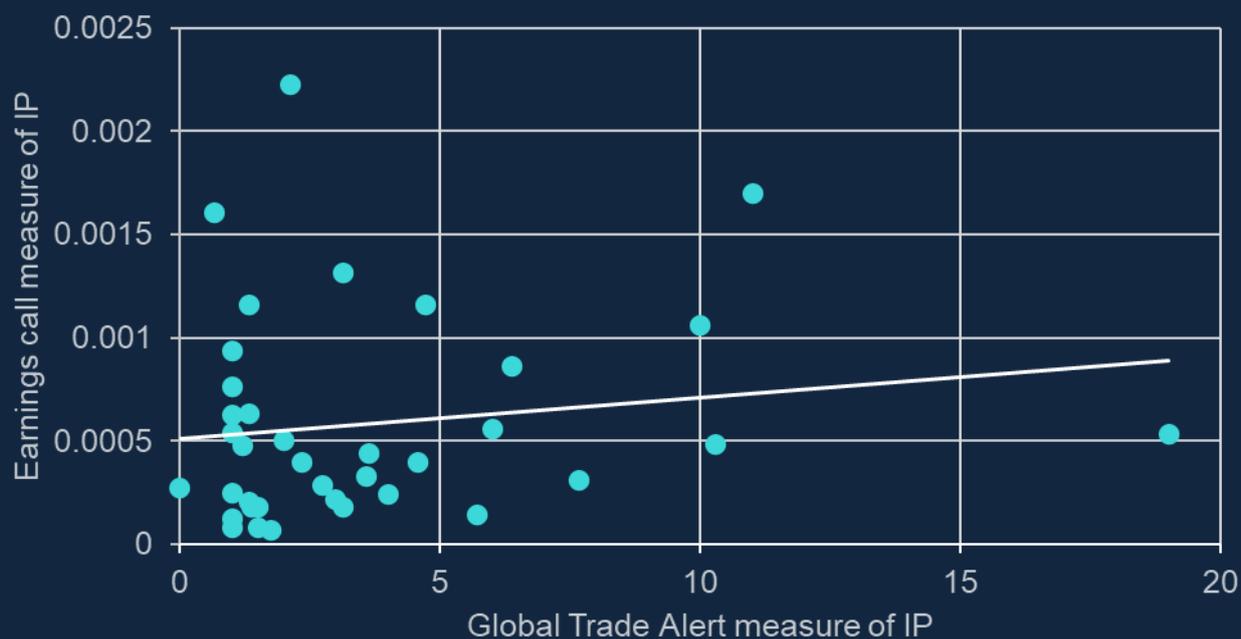
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## Annex 1. An earnings call measure of industrial policy

To measure the use of industrial policies across countries, we use a novel technique that extracts information from the text of firms' earnings calls.<sup>19</sup> We apply a machine learning approach to count the number of sentences in the text that mention IP with positive sentiment. This earnings call measure of IP correlates well with the widely used IP measure from the Global Trade Alert database (**Chart A1.1**) but has a number of advantages. It has a longer sample. It can capture IP applied by local authorities, whereas the GTA measure only captures national-level policies. And it focuses on industrial policies that are sufficiently important to be mentioned by firms in their earnings calls, whereas the GTA measure only captures the number of measures and not their size or significance.

**Chart A1.1. There is a mild positive correlation between the earnings call and Global Trade Alert measures of IP**

Earnings call IP measure against Global Trade Alert measure of IP, across countries



Source. NL Analytics and author calculations.

Notes: The Global Trade Alert measure of IP is from Juhasz et al. (2025) and captures non-tariff IP. The earnings call measure of IP is the number of sentences in firms' earnings calls that mention IP with positive sentiment, normalised.

<sup>19</sup> The earnings call data is sourced from NL Analytics.

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## Annex 2. Description of the model from Section B.3

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The model builds on [Ghironi and Melitz \(2005\)](#) and introduces asymmetric country size following [Dogan and Hjortsoe \(2024\)](#). In each country, a continuum of monopolistically competitive firms produce differentiated varieties. They must pay a sunk entry cost – in effective labour units – to enter the market. Upon entry, firms draw a productivity level, which remains fixed over their lifetime. Every period, firms face an exogenous exit (“death”) shock that is independent of productivity. Labour is the only input, and prices are flexible: firms set prices as a mark-up over marginal cost.

After entering, firms always serve the domestic market and may choose to export. Exporting is a per-period, endogenous decision. To access the foreign market, firms must pay a fixed export cost (again in effective labour units) and incur a variable trade cost. Because exporting involves both fixed and variable costs, only more productive firms choose to export. The model therefore features both extensive and intensive margins of trade adjustment, as well as endogenous aggregate productivity.

We analyse four types of industrial policy shocks: two that apply economy-wide and two that are specific to exporting.

### 1) Economy-wide policy shocks

- **Shock to entry costs.** We model a reduction in the sunk entry cost required for firm creation. Lower entry costs directly stimulate firm entry. This shock can be interpreted as a simplification of regulatory or administrative procedures (“red tape”) associated with starting a business. Since the shock affects entry generically, it does not differentiate between firms that will become exporters and those that will not.
- **Production subsidy.** We introduce a subsidy to the firms’ production, financed through a tax on households. This measure lowers marginal costs for all firms once they start operating.

### 2) Export-specific policy shocks

- **Reduction in fixed export costs.** We consider a fall in the fixed cost of exporting, which we interpret as a reduction in product-customisation requirements (e.g., conformity with foreign regulations, market-specific marketing) and administrative burdens such as customs documentation. Lower fixed export costs encourage more firms to export, expanding the extensive margin.
- **Export subsidy.** Finally, we introduce an export subsidy for exporters, financed by household taxes. This policy reduces marginal export costs and therefore disproportionately benefits firms that already export or are close to the productivity threshold for exporting.

The transmission mechanisms underlying these four shocks are described in detail in the main text.