



FOR BETTER OR WORSE, HAS GLOBALIZATION PEAKED?

Understanding Global Integration

Executive Summary

Citi GPS: Global Perspectives & Solutions

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FOR BETTER OR WORSE, HAS GLOBALIZATION PEAKED?

Understanding Global Integration

Kathleen Boyle, CFA
Managing Editor, Citi GPS

The average person's fundamental understanding of the economy is usually closely tied to their personal experience. If they're working and able to pay their bills then the economy is doing okay. If they're able to get an extra vacation in during the year and plan to take the kids to a theme park or have saved up enough money to buy a new car, then the economy is doing better than okay. And when bad times hit and jobs become scarce, paychecks become stretched, and rainy day funds are dipped into to cover basic expenses, the economy is bad.

Without identifying it by name, the average person actually has a good understanding of the economic cycle — peaks and troughs, expansions and contractions. Since the 1980s, an added piece to the economic narrative was that globalization would help drive the economy and make the transition between economic ups and downs a bit smoother as global corporations would have a bigger marketplace for their goods and services. Consumers would benefit from a larger variety of imported goods at their local stores and, as corporates set up global value chains, they would also benefit from lower prices on the goods they purchased. In the end, the selling point was the world would be a wealthier place as the rising tide of globalization would lift all boats.

However, not everyone believes globalization actually delivered on its promise. Manufacturing companies in advanced economies were able to create global supply chains utilizing lower cost workers in different parts of the world. And yes, those products came back to the consumer at a lower price, but that didn't matter if you were the one who lost your job when the factory moved overseas. A decline in manufacturing jobs, an increase in inequality, and lower productivity growth entered the economy and fingers were pointed at globalization.

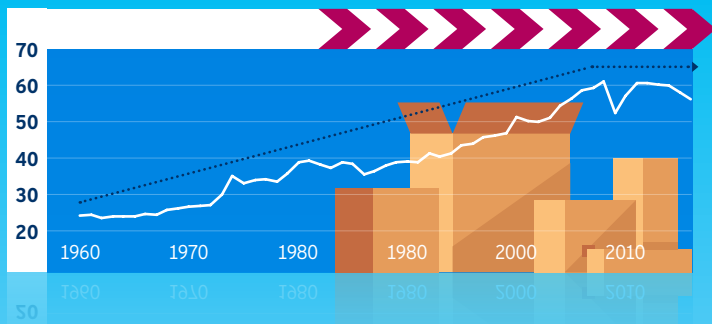
But was globalization really to blame? Should the fact that many measures show globalization peaked around 2008 be welcomed? In the report that follows, Catherine Mann, Citi's Global Chief Economist reviews the advantages of globalization in its many guises but also takes a step back to place globalization against the backdrop of rising disparities in outcomes including income and wealth, and across generations, firms, and regions.

Instead of blaming globalization for the ills of the economy, Ms. Mann believes the concern should be reinterpreted as a domestic policy question. Peak globalization means the pie is no longer getting bigger and portends fewer resources to address inequalities, regardless of their cause. From this perspective, the problem is not too much globalization, but too little. To address the adjustment and distributional challenges facing the economy, we need both to reinvigorate and to deploy domestic policies to ensure the gains are widely shared.

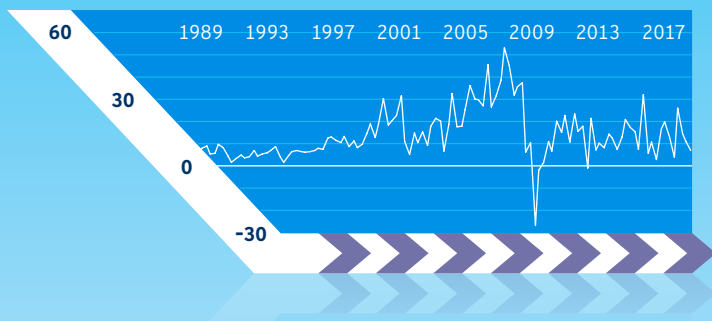
GLOBALIZATION: NOT TOO MUCH, BUT TOO LITTLE

MULTIPLE METRICS SHOW GLOBALIZATION PEAKED IN THE EARLY 2000s

World Trade intensity (exports + imports as % of GDP) has stalled at 60% after rising at an increasing rates during the 1980s

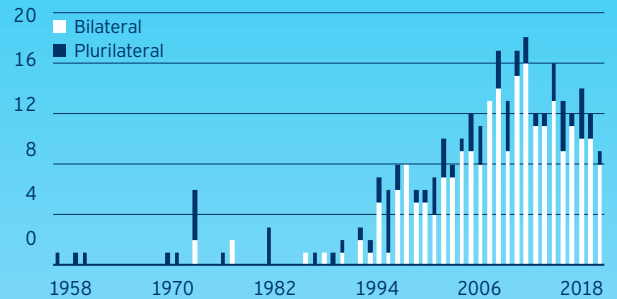


Cross-asset financial flows (sum of assets and liabilities as share of GDP) peaked in 2007

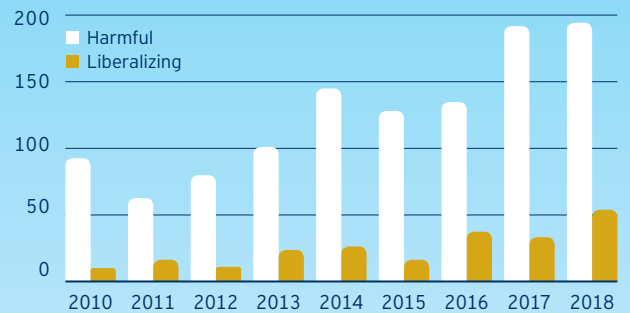


Source: World Bank, IMF, WTO, Global Trade Alert

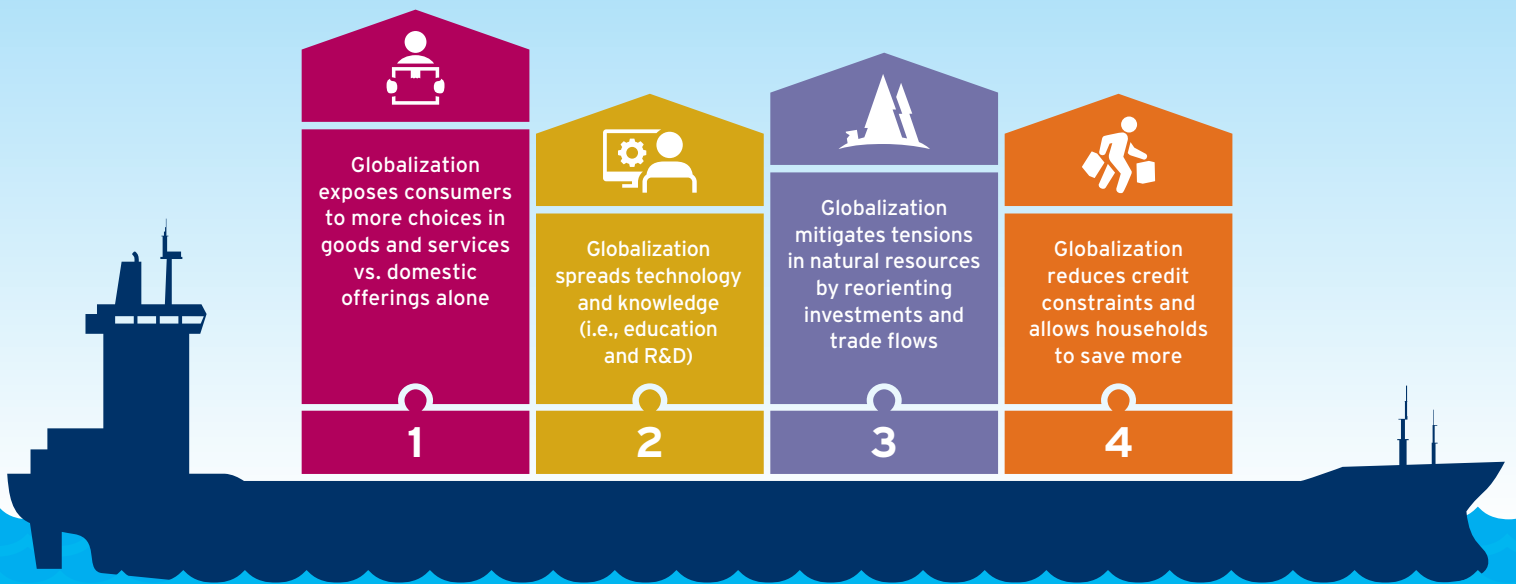
The number of new Regional Trade Agreements peaked in 2006



The number of harmful trade interventions have outpaced liberalizing trade interventions since 2010



DOES IT MATTER THAT GLOBALIZATION HAS PEAKED? YES, WE LOSE OPPORTUNITY

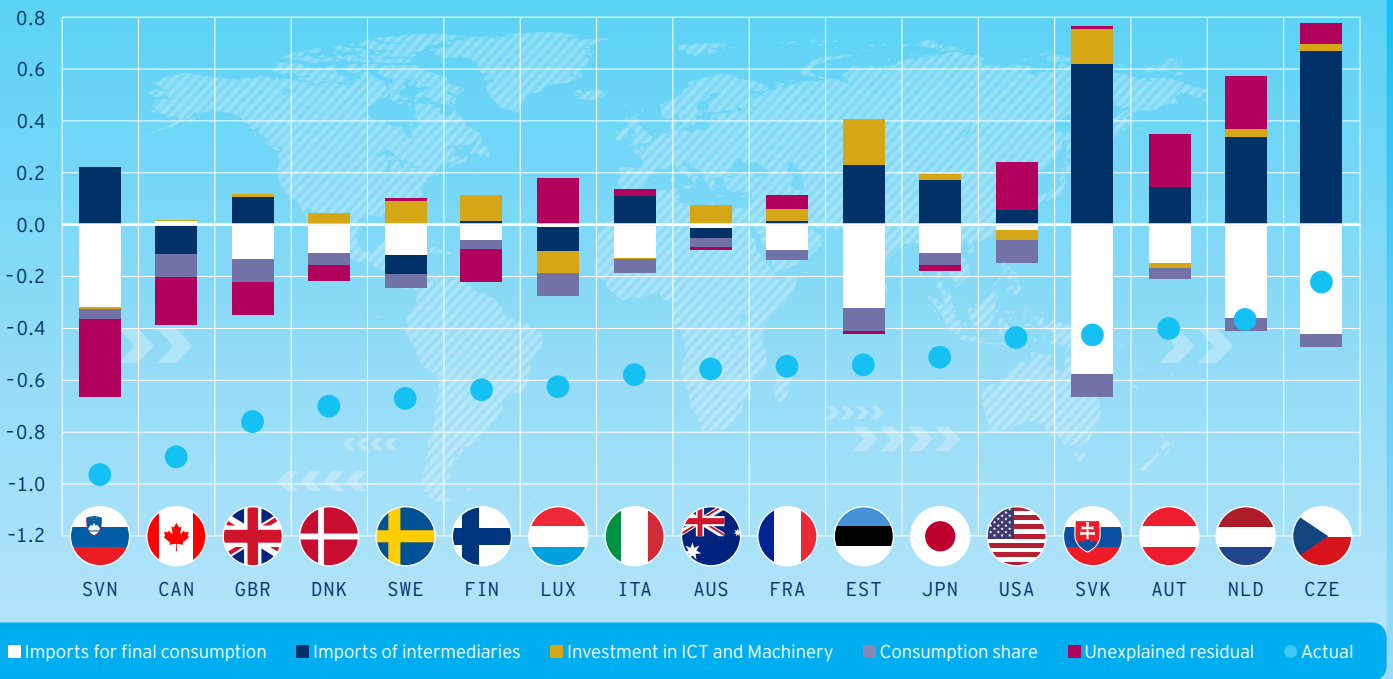


GLOBAL REAL GDP HAS GROWN TO ALMOST \$20 TRN WITHOUT A RECOVERY IN GLOBALIZATION BUT THE ECONOMIC ILLS OF JOB LOSSES AND INEQUALITY REMAIN



SO MAYBE TRADE ISN'T TO BLAME?

Globalization is blamed for the loss in manufacturing jobs in advanced economies but investment in technology and a shift in preferences towards services vs. goods are larger contributors



Source: OECD, STAN database

THE WAY FORWARD IS INCREASED GLOBALIZATION

- 1  There is a direct relationship between trade openness and productivity
- 2  Improve strategies to avoid crises i.e. adopting the OECD's Vulnerability Indicators
- 3  Deploy domestic policies to mitigate adjustment costs and disperse gains



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Executive Summary

If globalization has peaked, is this to be welcomed or countered?

By many metrics, global integration has peaked. Is this a natural evolution — there is a maximum desired share of foreign products in the consumption basket, a maximum fragmentation of production into global value chains, a maximum diversification of financial portfolios? Is this globalization realism — global integration has gone too far anyway, with jobs lost, regions hurt, and finances in disarray? The question really is: If globalization has peaked, is this to be welcomed or countered?

Trade flows have stalled and some linkages and measures of globalization actually are in retreat.

This Citi GPS report starts by examining multiple measures of globalization (trade, financial flows, human movement, etc.), ultimately concluding that globalization by many metrics seems to have peaked during the past decade. Whereas globalization through trade flows receives much of the emphasis, other linkages and measures of globalization also have stalled and some are in retreat. Based on this assessment, we move next to, “So what?” Here, we review the advantages of globalization in its many guises, and conclude with some numerical references on the aggregate benefits of globalization.

Synergies between trade and technology, plus a shift towards services consumption, together yield winners, losers, and inequalities.

We then take a step back to place globalization against a backdrop of rising disparities in outcomes including income and wealth, and across generations, firms, and regions. Regardless of the aggregate benefits of trade, the gains have not been widely shared. But, this also begs the question: How much is trade to blame for the disparities? Synergies between trade and technology, as well as trends toward services consumption as economies get richer (e.g. changes in ‘tastes’ as people age and economies develop) can make it difficult to identify just a globalization effect.

The three forces – trade, technologies, and tastes – yield similar patterns of winners, losers, and inequalities. So, the globalization concern should be reinterpreted as a domestic policy question — have we failed to deploy policies to address disparities, or are policies simply less effective in the face of the three forces at work?

‘Peak globalization’ portends fewer resources to address inequalities, regardless of their proximate cause. From this vantage point, the problem is not too much globalization, but too little.

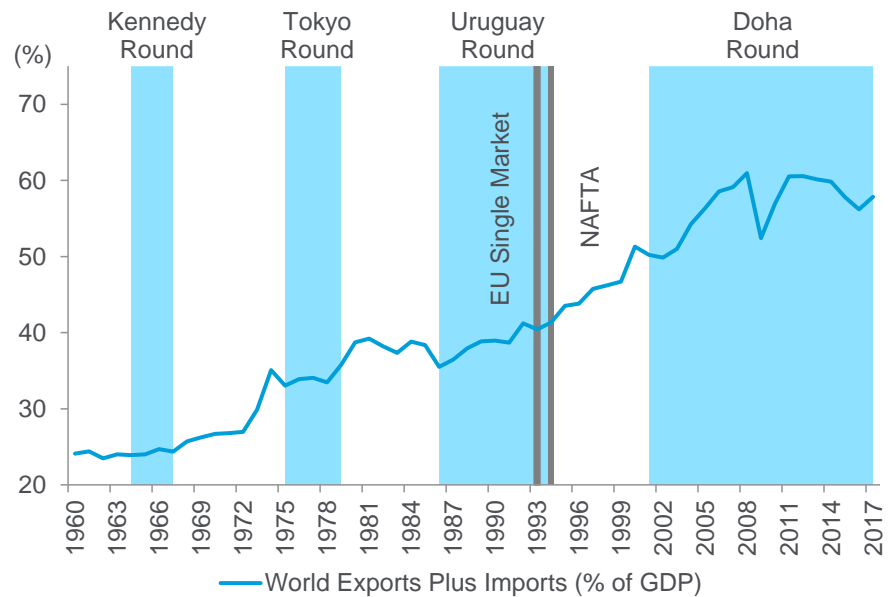
Globalization does ‘expand the pie’ and is not unique in generating distributional challenges. So, if globalization has peaked, this portends fewer resources to address inequalities regardless of their proximate cause. From this perspective, the problem is not too much globalization, but too little. To address the adjustment and distributional challenges, we need both to reinvigorate globalization and to deploy domestic policies to ensure that the gains are widely shared.

Trade Integration in Retreat

World trade intensity has stalled since the financial crisis.

World trade intensity, measured in several ways, rose until around the time of the financial crisis, at which point it stalled. One metric, exports plus imports as a share of global GDP, rose fairly steadily, and then at an increasing rate from the 1980s, almost doubling from the 1970s to stall at about 60% of world GDP in the late 2000s. Since then, this measure of integration has retreated (Figure 1). Similarly, the elasticity of GDP with respect to trade, i.e., how much an increase GDP growth is associated with an increase in trade growth, peaked in the latter part of the 1990s before slowing down. By these metrics, globalization has peaked.

Figure 1. Global Trade Volume as a Percent of GDP, (%) 1960-2017



Source: World Bank, Citi Research

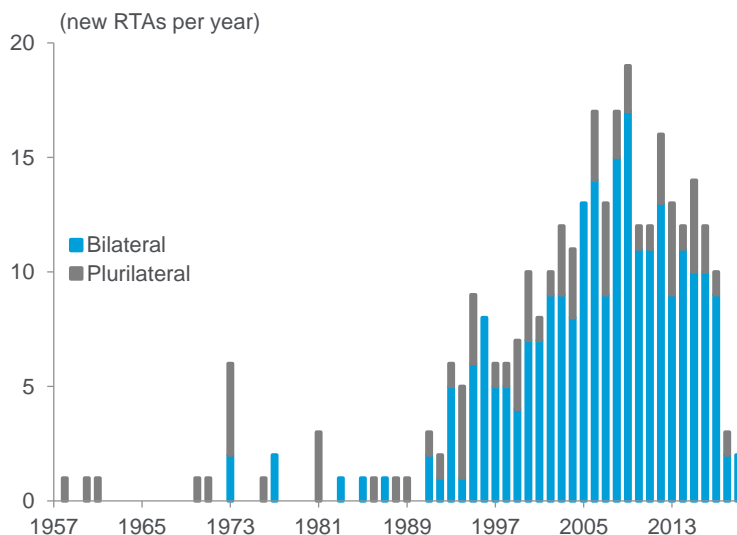
Stalled progress on trade liberalization, with trade negotiations peaking in the mid-2000s, is a factor in declining trade intensity.

Stalled progress on trade liberalization is one reason for the decline in trade intensity, which in turn is related to the coverage of trade negotiations and participants. Trade liberalization is the removal or reduction of restrictions or barriers on the free exchange of goods and services between nations. One way to increase trade liberalization is through trade agreements, which can take three primary forms: (1) multilateral – an agreement with many nations; (2) bilateral – an agreement between two nations; and (3) plurilateral – an agreement between a number of nations. Following World War II, the General Agreement on Tariffs and Trade (GATT) was created with the purpose of promoting international trade through a reduction in trade barriers, which addressed barriers to trade in goods. Agreements were devised through a series of rounds of talks over the subsequent years with the last successful round, the Uruguay Round, ending in 1994 after 8 years of discussions. This was the last successful multilateral trade negotiation as the Doha Round, the ninth round which started in 2001, ended with negotiations breaking down in 2008.

The Uruguay Round ushered in the World Trade Organization (WTO) (successor to the GATT) and the General Agreement on Trade in Services (GATS). Since that time, as multilateral negotiations stalled, bilateral agreements skyrocketed, from one or two per year in the early 1990s to about 15 per year in the mid-2000s; plurilateral agreements also flourished. Bilateral and plurilateral agreements have been described as either stepping stones or stumbling blocks to more extensive liberalization. Either way, they stick to sectors where deals can be reached, avoiding deeper reforms which would generate the greatest gains (but also adjustment challenges).¹ In any case, the mid 2000s saw the peak of trade negotiations of all types (Figure 2).

¹ Baldwin, Richard and Elena Seghezza (2007) Are Trade Blocs Building or Stumbling Blocks? New Evidence, C.E.P.R. Discussion Papers, CEPR Discussion Papers.

Figure 2. Evolution of New Bilateral and Plurilateral Regional Trade Agreements, 1957- 1Q 2019



Note: Regional Trade Agreements include Free Trade Agreements (FTAs), Economic Integration Agreements (EIAs), Customs Unions (CUs), and Partial Scope Agreements (PSAs)
 Source: WTO Regional Trade Agreements Information System, Citi Research

Services trade is growing more rapidly than trade in goods, is more locally-tied so more globally dispersed, and is more consumer-oriented so more trade-cycle resilient. But, it has been liberalized less than manufactures.

An important feature of trade over the last few decades is the rising importance of international trade in services, including activities such as financial & insurance services, information & communication technologies, engineering, marketing, and tourism and transportation services. While accounting for only about 25% of global trade, cross-border services trade has been growing more rapidly than trade in goods, is more locally-tied so is more globally dispersed across many markets (as compared with production concentration into ‘factory’ North America, Asia, and Europe for goods), and is more consumer-oriented so is more trade-cycle resilient (e.g. is less tightly correlated with and is dampened relative to the business cycle). The latter two characteristics come from the fact that many services are domestically anchored by consumer preferences. Even with increased trade integration, services are less prone to creating winners and losers.

The WTO General Agreement on Trade in Services (GATS), created as part of the Uruguay Round, was an important step towards deepening global integration in services, but the WTO needs to institutionalize the presumption of openness for services similar to that which is the presumption for trade in goods under the GATT. E.g. the presumption should be that services can be traded on a most-favored-nation basis by countries unbound by restriction, unless a country has specifically derogated a service from the list.

Services account for 50% of value added in manufacturing exports, so more efficient services through liberalization improves competitiveness.

What is the incentive to liberalize services? Services account for about 50% of the value added in manufacturing exports. Liberalization that enhances the competitiveness of services increases the competitiveness of manufacturing through two channels: (1) by reducing the cost of services inputs and (2) by enhancing inter-firm competition in the sector.² Therefore, to deepen global trade intensity, further liberalization by all countries in the services sector will be needed.³

² OECD (2017) Services Trade Policies and the Global Economy, OECD.

³ Hoekman, Bernard M. and Aaditya Mattoo, (2013) Liberalizing Trade in Services: Lessons from Regional and WTO Negotiations, European University Institute, Robert Schuman Center for Advanced Studies, RCSCAS 2013/34.

Trade intensity has also been hurt by the unraveling of GVCs.

If GVCs unravel and protectionist pressures increase, it will be more difficult for poorer economies to achieve higher living standards.

Another facet of the decline in trade intensity in recent years is the unraveling of global production networks; so-called global value chains (GVCs).⁴ Global production networks, as well as managerial and contractual relationships among firms are a source of technology transfer, economies of scale, and cluster economics, all of which support productivity growth. The most productive firms are those that are part of global families, linked through hub-and-spoke networks. Exporting to a multinational corporation (MNC) is associated with a greater productivity gain than importing from one, which suggests the importance of domestic reforms to get the most from global integration.

The limits of GVCs might have been reached within some sectors and economies given enhanced concern for supply chain vulnerability and desire for supply chain transparency. For example, a variety of disasters exposed supply chain vulnerabilities in the auto, IT, and apparel supply chains and firms are reassessing time-to-market and brand value of far-flung and opaque supply chains. Changing technology of 3D printing may also affect supply-chains.

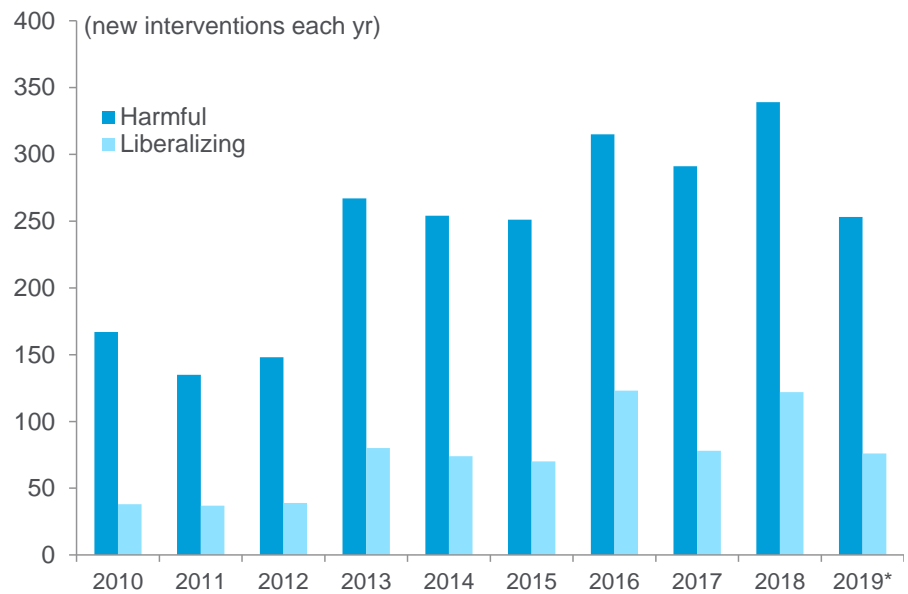
However, limiting or unraveling supply chains before poorer countries have yet to gain a foothold in global trade undermines their prospects for economic integration, which both constrains their own economic growth to higher living standards and limits the expansion of their market to purchase complex products from advanced economies.⁵ Global production networks that disintegrate on account of protectionist policies, such as tariff measures, subsidies for domestic companies, and government-imposed technology transfer from foreign companies sacrifice productivity improvements and competitiveness gains for all economies touched by protection. By various metrics, trade liberalizing efforts have weakened and in some countries harmful trade practices have worsened.⁶ (Figure 3)

⁴ Haugh, David, Alexandre Kopoin, Elena Rusticelli, David Turner, Richard Dutu, (2016) "Cardiac Arrest or Dizzy Spell: Why is World Trade So Weak and What Can Policy Do About It? OECD 2016 Economic Policy Paper. This estimation follows the same pattern as the University of International Business and Economics GVC index presented in Figure 2.7 of the Global Value Chain Report 2017.

⁵ World Bank (2017) Measuring and analyzing the impact of GVCs on economic development. Washington DC: World Bank Group.

⁶ Criscuolo, Chiara and Johnathan Timmis (2017) The Relationship Between Global Value Chains and Productivity, International Productivity Monitor, no 32, Spring.

Figure 3. New Trade Interventions per Year by All Countries: Harmful vs. Liberalizing



*Through May 21, 2019. Note: harmful measures include contingent trade-protective measures, subsidies, enacting tariff measures, etc. Liberalizing measures include lowering tariff measures, lowering export subsidies, etc. Source: Global Trade Alert

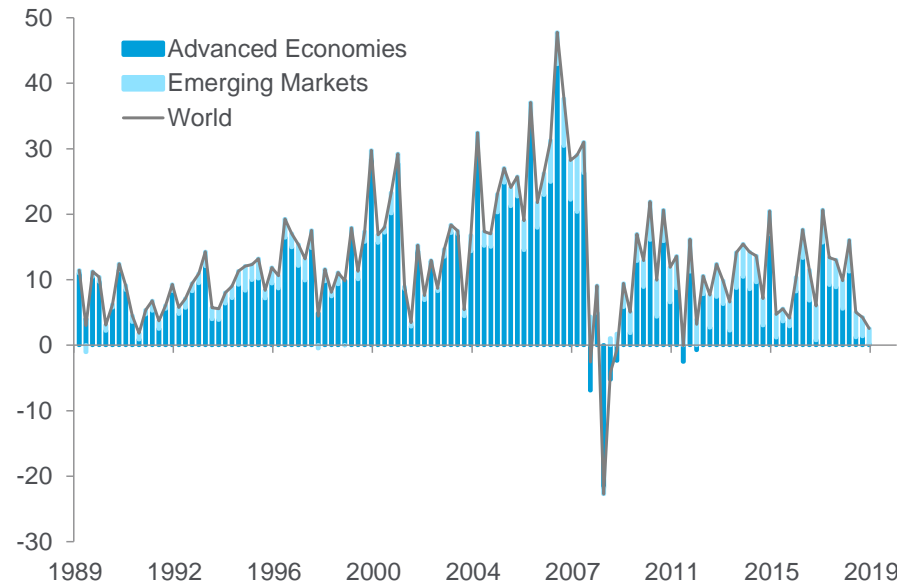
Overall cross-border financial flows peaked in 2007 and have retreated since. This is not completely a negative outcome, given the costs of financial crises.

Financial Integration in Retreat

Cross-border financial flows, as measured by the sum of assets and liabilities as a share of GDP, peaked in 2007. The retreat was mostly by advanced economies with stabilized exposures in emerging markets other than China. An overall retreat is not completely a negative outcome in that less financial integration could moderate what has been an important transmission channel for economic crisis. On the other hand, global financial integration supports trade and investment, enables borrowing and lending to smooth consumption and savings, as well as provides diversification gains in the financial portfolio of assets.⁷

⁷ Caldera, Aida and Alain de Serres, Phillip Gori, Oliver Rohn (2017) Economic Resilience: Trade-offs between growth and financial fragility, VOX CEPR Policy Portal.

Figure 4. Total Assets and Liabilities as a Percentage of GDP, 1990-2018



Source: IMF Balance of Payments Statistics, Citi Research

The types of financial integration have changed and data suggest the non-bank private sector may now be the dominant channel for financial turbulence.

The types of financial integration have changed, which may help tip the balance of gains versus vulnerabilities. Bank foreign claims and bonds issued in international markets peaked in 2007 and have decreased ever since. Other types of global international claims, including non-bank financial flows, peaked in 2007 and have been steady ever since. Lower global connectivity through banks could make contagion and tax-payer consequences of financial crisis less severe by reducing government responsibility for 'too-big-to-fail' institutions.

But the data suggest that the non-bank private sector may now be the dominant channel for transmission of financial turbulence, and the nature of networks and implicit support are less well known in this area.⁸ Currency, maturity, and liquidity mismatches can be present in non-bank finance. Certain types of macro-prudential policies (attention to portfolio debt flows and real estate exposures) could moderate the risks while not limiting the upside gains from financial integration.⁹

International reserves — an insurance policy against financial crisis, but also a drag on growth — appear to have peaked

Another type of financial integration which appears to have peaked is International reserves. International reserves are an 'insurance policy' against unstable financial flows, although countries, to different degrees, use this insurance policy to offset movements in foreign capital. Excess reserves can be viewed as a drag on global demand and on a country's potential growth, in that they represent savings that are invested in low-return financial investments rather than productivity-enhancing real investments.¹⁰ Policies to support financial integration with less fear of crisis could reduce the holding of excess reserves and deliver a potential benefit of real investment to support potential output and growth.

⁸ BIS (2018) Global Shadow Banking Monitoring Report 2017.

⁹ OECD (2015) How to restore a healthy financial sector that supports long-lasting, inclusive growth? OECD Economics Department Policy Note no. 27.

¹⁰ IMF, Assessing Reserve Adequacy <https://www.imf.org/external/np/spr/ara/> accessed November 20, 2018.

People Flows, Remittance Flows, and Digital Flows Have Not Peaked

Over the last 20 years, flows of people and remittances have risen with the bulk of the increase in the migrant population within advanced economies.

Increased migration and global tourism mean that, unlike products or finance, global people flows and associated expenditures and remittances are rising. Documented migration more than doubled over about the last 20 years to reach about 3% of the global population. In the last decade, the bulk of the increase in the migrant population is within the advanced economies.

Increased migration is beneficial to economies over the long run and is conducive to native-born and overall prosperity. In Germany and the U.K., for example, if immigration had been frozen in 1990, real GDP in those economies would have been around €155 billion and £175 billion lower respectively in 2014.¹¹ Financial flows associated with migration rose dramatically throughout the 2000s and even after the financial crisis. Remittance flows have followed growth cycles since the financial crisis, and currently amount to about \$700 billion. Remittances and associated migrants contribute to production and consumption in the host country support consumption in the home country, but also can have the downside of undermining productivity at home.

International tourism has increased in the same period...

Temporary flows of people — i.e., international tourists — have boomed; more than doubling over the last 20 years to about 1.2 billion people. Tourism arrivals in Asia-Pacific had the most growth, while the bulk of tourist arrivals were within the European Union. Financial flows associated with tourism are also increasing. In 2017, the direct contribution of tourism to global GDP was about 3%, increasing at rate of about 4% per year in real terms. Indirect contribution to GDP (via local services such as restaurants and hotels) is more than double the direct contribution.

...and digital flows continue to rise; at least for now.

Digital flows also continue to rise, with the world becoming more and more interconnected through digital platforms. Global IP traffic — the amount of data flowing across the Internet in measured in exabytes per month — normalized by global GDP, has been accelerating. So too, however, have concerns regarding privacy and security of platforms and data, as well as cyber intrusions for commercial gain. As these concerns heighten, deeper digital integration may be at risk.

U.S. Global Integration Has Peaked, but the Aggregates Mask Dynamism

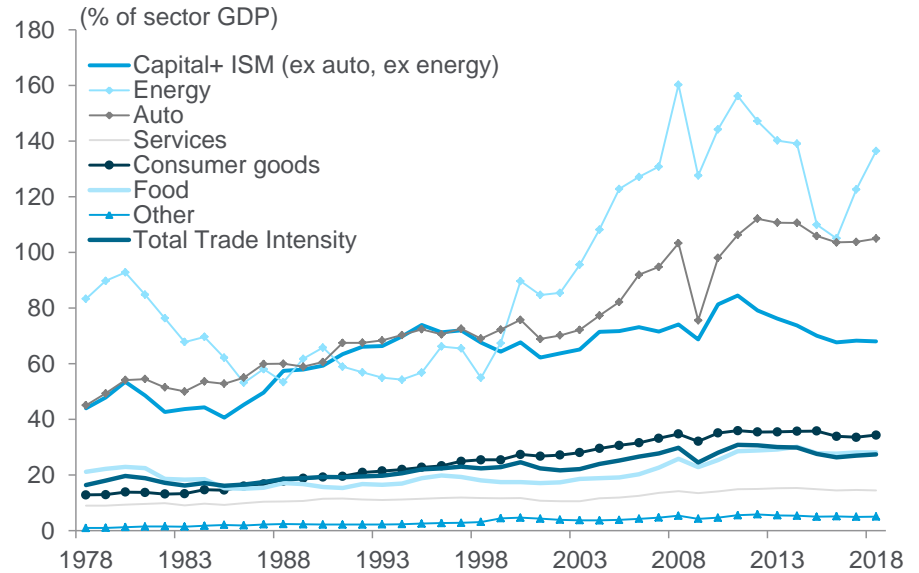
U.S. data look similar to global averages in both trade and finance.

Just as metrics of global integration have peaked, so too have many metrics of U.S. trade and finance. But the U.S. has a more dynamic pattern of trade intensity driven by cyclical peaks and valleys in the intensity of energy and of industrial products, i.e., capital goods and non-energy industrial supplies & materials. These peaks and valleys are driven by fragmentation, technology, and macroeconomic cycles.

On the whole, longer GVCs for more complex products such as capital goods and autos are reflected in higher intensity of trade as compared to less complex products, such as consumer goods and food, because the former products cross borders many times before they reach their final use. Although services trade has increased rapidly, services trade intensity remains very low: Overall U.S. trade intensity is about 27% (in 2017). Services trade intensity is about 7%.

¹¹ Citi GPS (2018) Migration and the Economy.

Figure 5. U.S. Trade Intensity by Important Sector (Exports + Imports as % of Sector GDP), 1978-2018

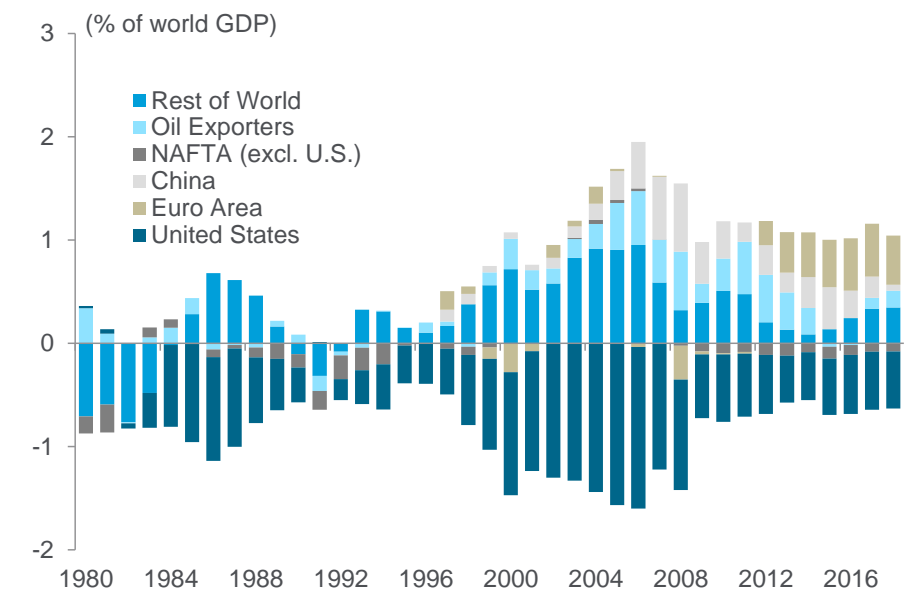


Source: Bureau of Economic Analysis, Citi Research

Although persistent, the U.S. current account deficit measured as a ratio to U.S. GDP has retreated since the early 2000s.

An important feature of the U.S. in global trade has been the persistent current account deficit, the main component of which is the trade deficit, since the U.S. imports more goods and services than it exports. But even by this metric, the U.S. economy's imbalances vis-à-vis its global partners (as measured by the deficit to global GDP) were greatest in the early 2000s, and have retreated since then. In fact, all other major regions have had more dynamism in their shares of global GDP: Europe running a balance, then a deficit, then a surplus; China's surplus shrinking; and oil producers' surplus quite variable (Figure 6).

Figure 6. Current Account Balance: Top Economies as Percentage of World GDP, 1980-2018



Source: IMF, Citi Research

U.S. financial integration has peaked, but not the dependence on foreign financial flows to finance both the current account and the fiscal budget deficit.

U.S. financial integration has peaked by several, but not all, metrics. Because the U.S. runs a current account deficit, it depends on sales of US assets to foreign buyers. These current account deficits accumulate to the net international investment position for the country, which is increasingly negative, although the trajectory has bottomed. Foreign holdings of U.S. assets continue to rise even as U.S. holdings of foreign assets have plateaued. Because the composition of the holdings by U.S. investors is skewed toward equities vs. a skew towards U.S. Treasuries by foreign investors, even though the U.S. is 'in debt' to the rest of the world, the rest of the world still paid the U.S. interest of some \$246 billion in 2018, or 1.2% of US GDP.

Within the foreign portfolio, foreign holdings of U.S. Treasuries peaked at 42% at the onset of the financial crisis as the Federal Reserve shifted its monetary policy strategy and started purchasing U.S. Treasuries; about 29% of U.S. Treasuries were owned by foreigners at the end of 2018. Going forward, if global financial integration has peaked and international reserves have peaked there may be reduced appetite for foreigners to buy U.S. Treasury securities. Once the Federal Reserve is no longer an important buyer, and if there is less demand from abroad, U.S. private domestic investors (pension funds, mutual funds, hedge funds, financial intermediaries, etc.) would be needed to finance the U.S. budget deficit.

Globalization, Productivity, and Inequality: Not Too Much Globalization, but Too Little?

The global financial crisis exposed and exacerbated macroeconomic, societal, and geographic troubles but a retreat from globalization will not remedy them.

Data on trade and financial flows are not sufficient to either cheer or bemoan globalization in retreat. The global financial crisis exposed and exacerbated brewing macroeconomic, societal, and geographic troubles: Increasing public debt burdens — and a shifting support for progressive policies; Rising inequalities — within generations, across generations, and across regions within countries; Slowing productivity growth — the only durable way for economies to meet commitments to their citizens.

Were these troubles caused by globalization such that a retreat will remedy them? Not likely. Global growth has regained its pre-financial crisis trend, despite stalled globalization: Yet, debt burdens have increased, inequalities have worsened, and productivity growth has not improved. So the problem could be not too much globalization, but too little globalization (that would expand the pie) and too few supportive domestic policies (that would distribute the pie). What is the evidence on the relationships between globalization, productivity growth, and inequalities?

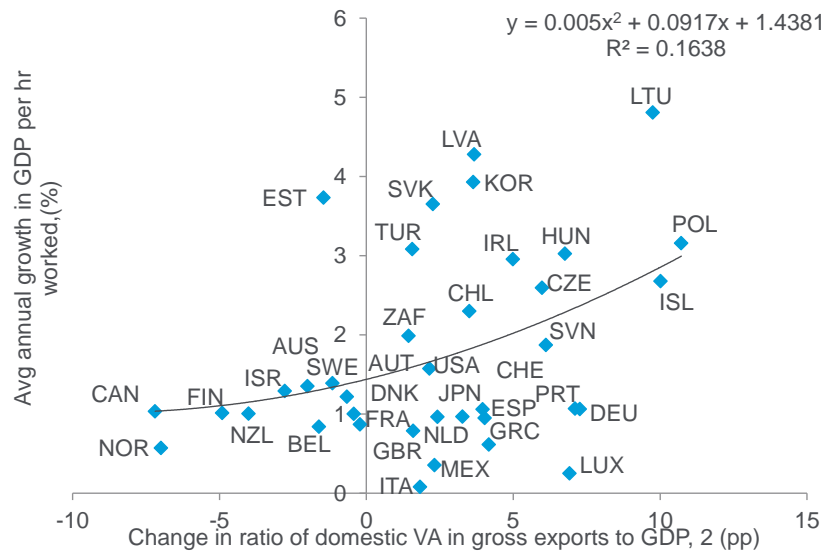
The retreat from globalization is both a cause and an outcome of the loss in output and the divergence in growth prospects in terms of GDP per capita.

Global growth has returned to trend, but with some 6% of global GDP lost — apparently permanently — because policies never supported a strong enough boom to recover the lost output. The rate of growth of GDP per capita has slowed: Between 1990 and 2007, global per capita growth averaged 4.7% year-over-year but fell from 2008 to 2018 to an average of 2.3%. This fall has been most pronounced in high and upper-middle income countries, whereas lower-middle income and low income countries have experienced higher GDP per capita growth. The period of rapid globalization and rapid GDP per capita growth from 1990 to 2007 set expectations and the difference between those expectations and the last decade has been profound, both for upper and lower income groups. Upper income citizens have been disappointed and lower income citizens have been positively surprised. The retreat from globalization is both a cause and an outcome of the loss in output and the divergence in growth prospects in terms of GDP per capita.

Labor productivity has been weak since the financial crisis but given GVCs, globalization and productivity are all linked, it's not surprising they are in retreat together.

An important correlate of the retreat of globalization is the evolution of labor productivity, which has been weak since the financial crisis, although it was already sluggish. Labor productivity in the OECD has grown at about half the rate of the pre-crisis period. Productivity growth has also slowed across most industries, particularly manufacturing, even if productivity growth in manufacturing has outpaced that in services. GVCs, globalization, and productivity are all linked; therefore it is not surprising they retreat together. A recommitment to the policies that support deeper global integration — widening the participation by all countries in trade liberalization efforts including in services, getting more countries into multilateral rather than bilateral trade agreements, etc. — is an important part of the recipe to improve productivity growth too.

Figure 7. Change in Value Added in Exports to GDP Ratio and Growth in Labor Productivity, 2000-2014



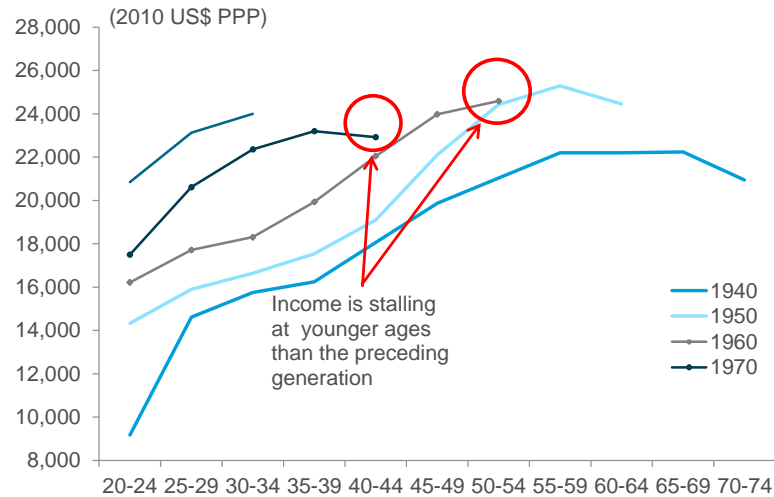
Source: OECD Compendium or Productivity Indicators 2018, Citi Research

Peak earnings have been reached at a younger age—well before retirement age—for the most recent working generations vs. older generations; this is a very worrisome situation.

Younger generations are bearing the brunt of the output loss and the drop in labor productivity. For the 1960s birth cohort, income growth slowed in their peak earning years (when they were in their 50s). The situation for the 1970s cohort is worse: their income growth has fallen in their formative earning years (late 30s). For the 1980s cohort, it is still too early to tell, but prospects are not favorable. Because earnings are flattening earlier in life, these generations will find it challenging to both support their own dreams and meet the fiscal commitments relating to the health and pensions of their parents.

When members of the 1940s and 1950s cohorts who were parents were asked: “Will your children live better than you?” and they answer, “We fear that our children will not be better off”, the data bear them out. These parents lived in generations characterized by rising globalization, rising income, and rising productivity, whereas their children live in a period where all are in retreat.

Figure 8. Slowed Income Gains Across Generations: Earnings vs. Age for Generations Born in a Given Year



Note: Data cover 24 OECD countries. The series shown are derived for each cohort from a specification controlling for country and age fixed effects.
 Source: OECD (2017), Preventing Ageing Unequally, OECD Publishing, Paris

There are many reasons behind the loss of manufacturing employment, with globalization being just one.

Globalization is often cited as a cause of lost manufacturing employment, a factor relating to income and regional inequalities within economies. A closer look at changes in manufacturing employment highlights that certain kinds of trade do have an effect, but also that there are other factors at work. Trade with long GVCs (such as for industrial products) promotes manufacturing employment to complement the intermediate inputs. But, trade with short GVCs (such as consumer products) substitute imports for domestic sales, resulting in a loss of domestic jobs. Capital investment in technology is GVC intensive and tends to support manufacturing employment in advanced economies. On the other hand, a general trend in consumer buying habits towards services rather than goods weighs on manufacturing employment even without considering trade.

Clustering and changing patterns of trade and technology increase regional inequality and need to be addressed by sub-national policy.

Increased regional inequality within economies is a concern. A successful manufacturing production cluster often crowds out other sectors by attracting resources and paying them well. But, if the core of the cluster falters, the whole region can falter too. Changing patterns of trade and technology put clusters in advanced economies' regions at risk.¹² Clustering leads to regional concentrations of firms and employment and disproportionate exposure to technology and globalization shocks. National policy is ill-designed to respond to the regional heterogeneity. Place- and person-based initiatives at the sub-national level in education, production diversification, and mobility services are needed. A retreat from globalization is not part of that recipe and will not solve a region's exposure to technology or trade.

¹² Rusticelli, Elena, David Haugh, Axelle Arquie, and Lilas Demmou (2018) Going Local: A Regional Perspective on How Trade Affects Labour Markets and Inequality", OECD Economics Department WP_18.

Conclusion

Global integration — whether trade and production networks, financial flows, or migration and tourism — is a process. Consumers, firms, and workers are part of that process. The process benefit is productivity growth, the durable economic benefit which protects an economy in the face of financial volatility and generates the where-with-all to make good on the dreams of younger people and the commitments to older people. The process challenge is adjustments that face workers and firms.

Policy choices and business decisions — regional, national, multinational — determine whether firms and workers have the resources, skills, and mobility to be resilient and turn the process to their benefit. Ultimately, policies and decisions determine both the size and the distribution of the economic pie. The retreat in globalization coincides with stagnant productivity growth and widening inequalities — a smaller pie, more poorly distributed. A renewed commitment to globalization, married with the distributional objectives of domestic policies and business decisions, is needed to revive prospects for workers, firms, and the global economy.

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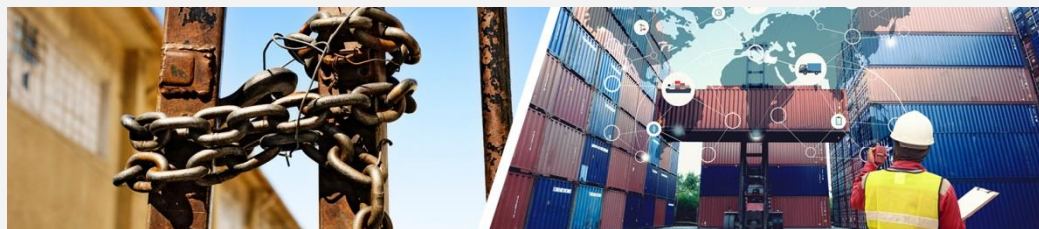
GLOBAL REACH

World integration rose dramatically in the second half of the 20th century with world trade intensity almost doubling from the 1970s to a peak of 60% of world GDP in the late 2000s. / **Stalled progress on trade liberalization, intensification of protectionist policies, a peaking of financial integration and other metrics signify globalization peaked around 2008.**



LABOR MARKET

Since the 1990s, industrial employment as a share of total employment has fallen in high-income countries while rising in low-income countries while inequality has risen. / **However, those regions with more integrated global value chains experienced less significant falls in manufacturing employment.**



SHIFTING WEALTH

In older generations, income growth starting slowing in peak earnings years (when members were in their 50s). / **For younger generations, income is stalling at younger ages with the 1970s cohort having their income growth fall in their formative earning years (when members were in their 30s).**



