

What Prompted the Global Trade Slowdown?

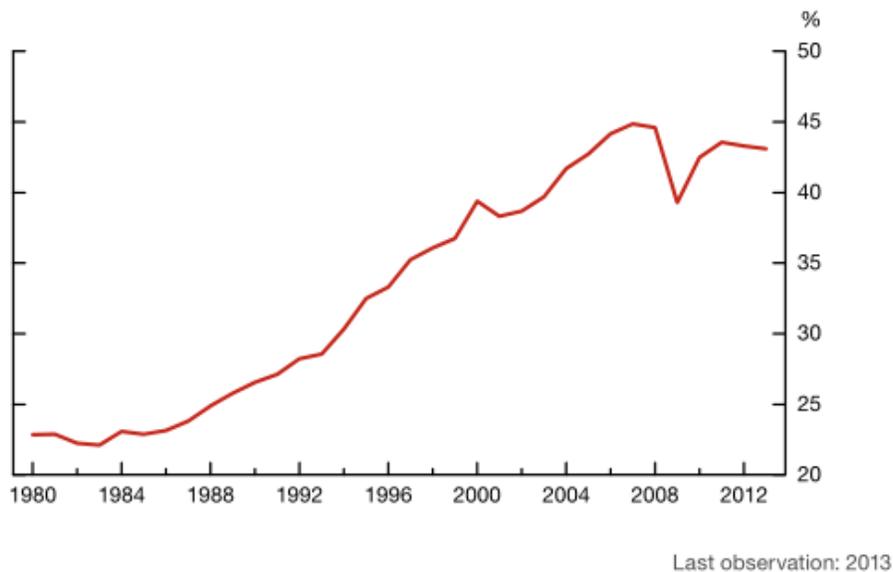
Scott Miller and Daniel G. Sofio

Introduction

The global economy has slowly recovered from the financial crisis of 2008–2009. Since the crisis, however, economic prospects have been adversely affected by disappointing performance in global trade. The world economy experienced an extended period of rapid trade growth referred to as “globalization,” beginning in the 1980s and continuing up until the 2008 crisis (Figure 1). Trade consistently grew almost twice as fast as output over this 25-year period due to major shifts in technology and government policies.

Post-crisis, with the exception of a 13 percent “rebound” in 2010, trade growth slowed from a pre-crisis average of 7 percent per year to an average 3.4 percent between 2012 and 2014. Merchandise trade as a share of global output rose from 23 percent in 1982 to a peak of 44 percent in 2007, fell during the crisis, but has not yet returned to the 2007 peak.

Figure 1: World Merchandise Trade Volume as Percentage of World GDP



Source: Bank of Canada / IMF World Economic Outlook.¹

¹ Michael Francis and Louis Morel, “The Slowdown in Global Trade,” *Bank of Canada Review* (Spring 2015), <http://www.bankofcanada.ca/wp-content/uploads/2015/05/boc-review-spring15-francis.pdf>.

This report reviews some of the factors that accelerated trade during the years before the crisis, considers various explanations for the post-crisis slowdown, and examines the role of government policies in reducing the headwinds now affecting global economic growth.

Technological Changes Contribute to Globalization and Growth of Trade

Trade costs are strongly influenced by advances in transport and communication technology. Discontinuous improvements during the past 30 years caused trade costs to fall substantially.

Transport

Much as steam power helped reduce transport costs by 70 percent between 1870 and 1910, the innovations of containerization and modern logistics played an important role in reducing trade costs in recent times.² For the United States, where technological innovation combined with deregulation, the cost of moving 40 cubic feet of cargo across the Pacific fell from \$40.94 in 1979 to \$2.39 (westbound) or \$15.89 (eastbound) by 1986, with 40–60 percent of the decline attributable to improvements in container shipping.³ Technological advances in transport have also greatly improved speed and reliability, not just cost alone.⁴ Similarly, advances in air travel have lowered barriers to the movement of people, ideas, and culture.

Telecommunications

Telecommunications allows commercial transactions to happen more efficiently, and the costs of telephone and Internet services have fallen dramatically. In 1982, a one-minute station-to-station telephone call from New York to Los Angeles cost around \$1, and international calls were even more expensive. Today, the marginal cost of a telephone call is practically zero. The early 1990s saw an explosive growth in global data flows. In 1992, global Internet traffic amounted to an average of 100 gigabytes (GB)⁵ per day. By 2002, traffic had reached 100 GB per second (GB/s).⁶ By 2007, when the iPhone debuted, global Internet traffic was 2,000 GB/s. The cost of storing 1 GB of data fell from \$569 in 1992 to under \$1 by 2003.⁷

² Marc Levinson, *The Box: How the Shipping Container Made the World Smaller and the World Economy Bigger* (Princeton, NJ: Princeton University Press, 2006), 267.

³ *Ibid.*, 263.

⁴ Alberto Behar and Anthony J. Venables, “Transport costs and International Trade,” Working Paper No. 179, Forum for Research in Empirical International Trade, May 2010, 20–21, <http://www.eiit.org/WorkingPapers/Papers/TradePatterns/FREIT179.pdf>.

⁵ One gigabyte (GB) is equivalent to roughly 1 million pages of text. For more, see James E. Short, *How Much Media? 2013: Report on American Consumers* (Los Angeles: Marshall School of Business, University of Southern California, October 2013), <http://classic.marshall.usc.edu/assets/161/25995.pdf>.

⁶ Cisco, “The Zettabyte Era: Trends and Analysis,” Cisco Visual Networking Index White Paper, May 2015, http://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/VNI_Hyperconnectivity_WP.html.

⁷ Mary Meeker, “Internet Trends 2014—Code Conference,” Kleiner, Perkins, Caufield, Byers (KPCB), May 28, 2014, https://s3.amazonaws.com/kpcbweb/files/85/Internet_Trends_2014_vFINAL_-_05_28_14-_PDF.pdf?1401286773.

Finance

Advances in information and communication technology opened the door to enormous increases in the scale, speed, and variety of cross-border capital flows. In addition, key policy improvements in the treatment of foreign investment complemented the new capabilities. Foreign direct investment rose from 6.5 percent of world GDP in 1980 to almost 32 percent by 2006.⁸ The stock of foreign assets and liabilities (foreign direct investment, or FDI, and portfolio investment) rose from around 75 percent of GDP in 1995 to over 180 percent of GDP in 2007.⁹ This trend toward greater capital mobility was accompanied by an enormous increase in transaction volume and speed.

Pre-crisis Policy Changes Contribute to Globalization and Growth of Trade

Alongside these discontinuous improvements in technology, governments across the world adopted pro-market, liberalizing policies that led to a dramatic reduction in trade costs.

Economic Reforms in China

In 1978, China's GDP was \$148.2 billion, of which exports and imports combined accounted for only 12.6 percent. In 2007, China's GDP was almost 20 times as large in real terms, with a trade-to-GDP ratio of over 60 percent. Beginning with unilateral trade liberalization and the establishment of special economic zones (SEZs) in coastal cities where limited foreign investment was allowed, China implemented a wide range of economic reforms. After an almost decade-long accession process, China joined the World Trade Organization (WTO) in 2001. By 2007, China was the world's second-largest goods exporter.

The Fall of the Soviet Union and the End of Central Planning

In the 1990s, Western economists were finally able to see behind the Iron Curtain and study how centrally planned economies worked. As Alan Greenspan observed, they didn't.¹⁰ The newly independent economies in Central and Eastern Europe quickly moved toward liberalization by lowering tariffs, abolishing export and import controls, and welcoming FDI from the west.¹¹ From 2000 through 2007, the average annual GDP growth rate across the newly

⁸ International Monetary Fund (IMF), "Globalization: A Brief Overview," *IMF Issues Brief* no. 08/02 (May 2008), <https://www.imf.org/external/np/exr/ib/2008/053008.htm>.

⁹ Philip R. Lane, "Cross-Border Financial Linkages: Identifying and Measuring Vulnerabilities" (paper prepared for the 2014 IMF Statistical Forum, Washington, DC, November 18–19, 2014), 24, <https://www.imf.org/external/NP/seminars/eng/2014/statsforum/pdf/lane.pdf>.

¹⁰ Alan Greenspan, "Remarks by the Chairman of the Board of Governors of the US Federal Reserve System, Mr. Alan Greenspan, at the Woodrow Wilson Award Dinner of the Woodrow Wilson International Center for Scholars in New York," October 6, 1997, <http://www.bis.org/review/r970626c.pdf>.

¹¹ Antonis Adam, Theodora S. Kosma, and Jimmy McHugh, "Trade-Liberalization Strategies: What Could Southeastern Europe Learn from the CEFTA [Central European Free Trade Area] and BFTA [Baltic Free Trade Area]?" IMF

independent states was above 7 percent. Exports from these countries grew almost 10 percent annually, despite persistent net capital outflows. Imports grew even faster, reflecting a trend toward economic integration with Western Europe, and ultimately leading to joining the European Union.

The European Union

The European Union was inaugurated in 1992 with the signing of the Maastricht Treaty among 12 member states. Three years later, the European single market came into effect, lowering tariffs and regulatory barriers to intra-EU trade, opening public procurement to other EU member states, and marking a major step forward in European economic integration. The European Union also expanded, reaching a total of 27 member states by 2007. The value of intra-EU trade more than tripled from around €800 billion in 1992 to more than €2.5 trillion in 2007.

The Uruguay Round

In 1986, the signatories to the General Agreement on Trade and Tariffs (GATT) launched the Uruguay Round, the eighth round of multilateral negotiations under the GATT framework.¹² The Uruguay Round marked a major expansion of the GATT to cover new aspects of trade, such as intellectual property, and sought liberalization in traditional bastions of protectionism such as agriculture and textiles. The final agreement was achieved among 123 economies and succeeded in creating the WTO. Moreover, the Marrakesh Declaration promised a global reduction of tariffs by 40 percent and established new disciplines for trade in services (GATS) and trade-related aspects of intellectual property rights (TRIPS).

NAFTA

The North American Free Trade Agreement (NAFTA) helped deepen commercial integration of Canada, Mexico, and the United States. Building from the Canada-U.S. FTA, NAFTA helped pioneer the comprehensive FTA by incorporating disciplines on services, investment, transparency, and other substantive matters related to trade but occurring behind the border. Between NAFTA's entry into force in 1994 and 2007, intra-North American trade tripled.¹³ NAFTA helped integrate North America as a unified production base for a variety of goods, and increased the continent's attractiveness as a destination for FDI.

Working Paper no. 03/239, International Monetary Fund, December 2003, <https://www.imf.org/external/pubs/ft/wp/2003/wp03239.pdf>.

¹² "Ministerial Declaration on the Uruguay Round," General Agreement on Tariffs and Trade (GATT), September 20, 1986, https://www.wto.org/gatt_docs/English/SULPDF/91240152.pdf.

¹³ Andréa Ford, "A Brief History of NAFTA," *Time*, December 30, 2008, <http://content.time.com/time/nation/article/0,8599,1868997,00.html>.

Regional Trade Arrangements

Regional trade arrangements (RTAs), often in the form of preferential agreements, emerged in the years following World War II from Africa to South America. Following the completion of the GATT's Uruguay Round, however, their popularity exploded, with 243 RTAs notified to the WTO between 1994 and 2006, almost twice as many as during the previous 40 years.¹⁴ Asia has been both a latecomer and a standout in the development of RTAs. In 1991, the 48 regional members of the Asian Development Bank had signed a total of seven bilateral or plurilateral FTAs either between themselves or with other nonregional countries. A decade later, the number of completed Asian FTAs had grown to 55; by 2007, this number had ballooned to 155, with 42 additional agreements proposed.¹⁵

Rise of Global Value Chains

Lowered trade costs combined with advanced communication technologies led to the rise of global value chains (GVCs). As described by economist Richard Baldwin and others,¹⁶ GVCs develop based on the enhanced ability for firms to coordinate tasks across geographies, allowing for increasing specialization through “trade in tasks.” GVCs have led to products that are “made in the world”¹⁷ rather than originating in a specific country, and are the driving force behind the popularity of regional trading arrangements. Bilateral cooperation has become the political “path of least resistance.”

GVC expansion has led to high levels of firm-directed trade and deep integration of economic activities once not considered tradable. Today, trade should no longer be viewed as a series of arm's-length transactions between unrelated parties—UN Conference on Trade and Development (UNCTAD) research shows that nearly 80 percent of merchandise trade is now firm-directed.¹⁸

Technology and policy effects can combine to create a “virtuous cycle,” evidenced clearly in the case of products covered by the Information Technology Agreement (ITA).¹⁹ The ITA, as a practical matter, created sectoral free trade at its launch in 1997. Many of the covered high-tech

¹⁴ Roberto V. Fiorentino, Luis Verdeja, and Christelle Toqueboeuf, *The Changing Landscape of Regional Trade Agreements: 2006 Update*, WTO Discussion Paper No. 12 (Geneva: World Trade Organization, 2007), 4, https://www.wto.org/english/res_e/booksp_e/discussion_papers12a_e.pdf.

¹⁵ Asian Development Bank (ADB), “Asia Regional Integration Center: Free Trade Agreements,” <http://aric.adb.org/fta>.

¹⁶ Richard Baldwin, “Trade and Industrialization after Globalization's 2nd Unbundling: How Building and Joining a Supply Chain Are Different and Why It Matters,” NBER Working Paper no. 17716, National Bureau of Economic Research, 2011, http://siteresources.worldbank.org/INTRANETTRADE/Resources/Baldwin_NBER_Working_Paper_17716.pdf.

¹⁷ Andreas Maurer, “Trade in Value Added: What Is the Country of Origin in an Interconnected World?,” Background paper, World Trade Organization, 2011, https://www.wto.org/english/res_e/statis_e/miwi_e/background_paper_e.htm.

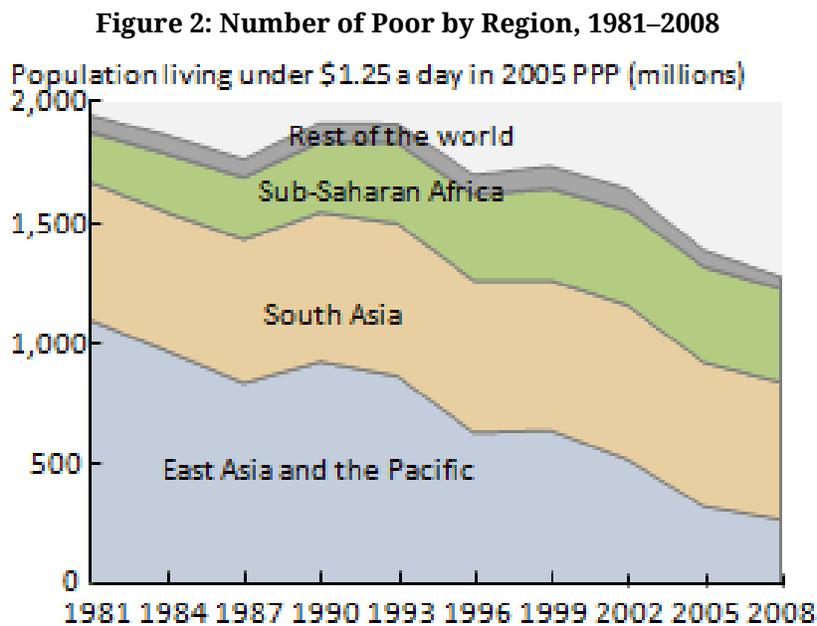
¹⁸ UN Conference on Trade and Development (UNCTAD), *World Investment Report 2014: Investing in the SDGs [Sustainable Development Goals]: An Action Plan* (Geneva: UNCTAD, June 2014), http://unctad.org/en/PublicationsLibrary/wir2014_en.pdf.

¹⁹ World Trade Organization, “Information Technology Agreement—an explanation,” https://www.wto.org/english/tratop_e/inftec_e/itaintro_e.htm.

products were undergoing rapid technological advances, as “Moore’s Law” made each new generation of device faster, smaller, and more powerful, yet less expensive than its predecessors. Lowered trade costs added incentives toward further specialization along the production chain, which also helped drive down consumer prices and broadened the market for the products themselves. Over the life of the ITA, information technology has been the fastest-growing sector in world trade, and now accounts for over 10 percent of global merchandise trade.

What Were Benefits of Globalization?

The period of globalization from 1982 to 2007 saw the greatest reduction in poverty in human history (Figure 2). According to the World Bank’s calculations, between 1981 and 2008 the percentage of the world population living on less than \$1.25 per day fell from 53 percent to 22 percent.²⁰ Several economists have noted that trade liberalization, supported by good domestic policies, is a key component to economic growth strategies. In the 1990s, those countries that experienced sustained growth were those that also decreased trade barriers and experienced growth in trade as a percentage of GDP.²¹



²⁰ World Bank, “PovcalNet: Regional aggregation using 2005 PPP and \$1.25/day poverty line,” <http://iresearch.worldbank.org/PovcalNet/index.htm?1>.

²¹ Poverty Reduction and Economic Management Network, “Trade Liberalization: Why So Much Controversy?,” *Economic Growth in the 1990s: Learning from a Decade of Reform* (Washington, DC: World Bank, 2005), 133, http://www1.worldbank.org/prem/lessons1990s/chaps/05-Ch05_kl.pdf.

²² World Bank, “PovcalNet: an online analysis tool for global poverty monitoring,” October 9, 2014, <http://iresearch.worldbank.org/PovcalNet/index.htm?0>.

Cyclical and Secular Factors behind Global Trade Slowdown

Both cyclical and secular factors likely contribute to the slowdown in global trade. Weak demand was a major factor in the dramatic collapse in 2009, with some studies reporting that this factor alone accounted for up to 90 percent of the contraction.²³ Such weakness can persist: the International Monetary Fund (IMF) reports that, five years after a crisis, import demand is typically 19 percent below its predicted level in the absence of a crisis.²⁴ Weak aggregate demand is still pronounced in the high-income economies like the United States and Europe, which account for 65 percent of global import demand; this lingering weakness has no doubt slowed the recovery of trade growth.

A secular factor identified by World Bank analysts is a change in the relationship between trade growth and output growth.²⁵ While the overall effect of policy and technology gains during the pre-crisis period was impressive, it appears that the “elasticity” of trade growth can vary considerably. Consider the ratio of trade growth to GDP growth over three extended periods, as shown in Table 1.

Table 1: Ratio of Trade Growth to GDP Growth

Time Period	Ratio: Trade Growth / GDP Growth
1970–1985	1.7
1986–2000	2.2
2001–2013	1.7

Source: World Bank, 2015.²⁶

This suggests that global trade may be growing more slowly because the marginal gains from technology improvements are slowing down as global value chains mature. Other researchers observe that, at a global level, the composition of GDP may be shifting away from import-intensive components of demand such as investment, and toward components with a higher degree of nontraded content, such as consumption or government spending.²⁷ In the years prior to the crisis, advanced economy exports were growing fast, reflecting both demand and performance from investment. Post-crisis, weak demand coupled with poor investment performance would explain part of the sluggishness.

²³ Rudolf Bems, Robert C. Johnson, and Kei-Mu Yi, “Demand Spillovers and the Collapse of Trade in the Global Recession,” *IMF Economic Review* 58, no. 2 (2010): 295–326.

²⁴ Caroline Freund, “The Trade Response to Global Downturns: Historical Evidence,” Policy Research Working Paper 5015, World Bank, August 2009, <https://openknowledge.worldbank.org/bitstream/handle/10986/4208/WPS5015.pdf?sequence=1>.

²⁵ World Bank, *Global Economic Prospects: Having Fiscal Space and Using It* (Washington, DC: World Bank, January 2015), 176, http://www.worldbank.org/content/dam/Worldbank/GEP/GEP2015a/pdfs/GEP15a_web_full.pdf.

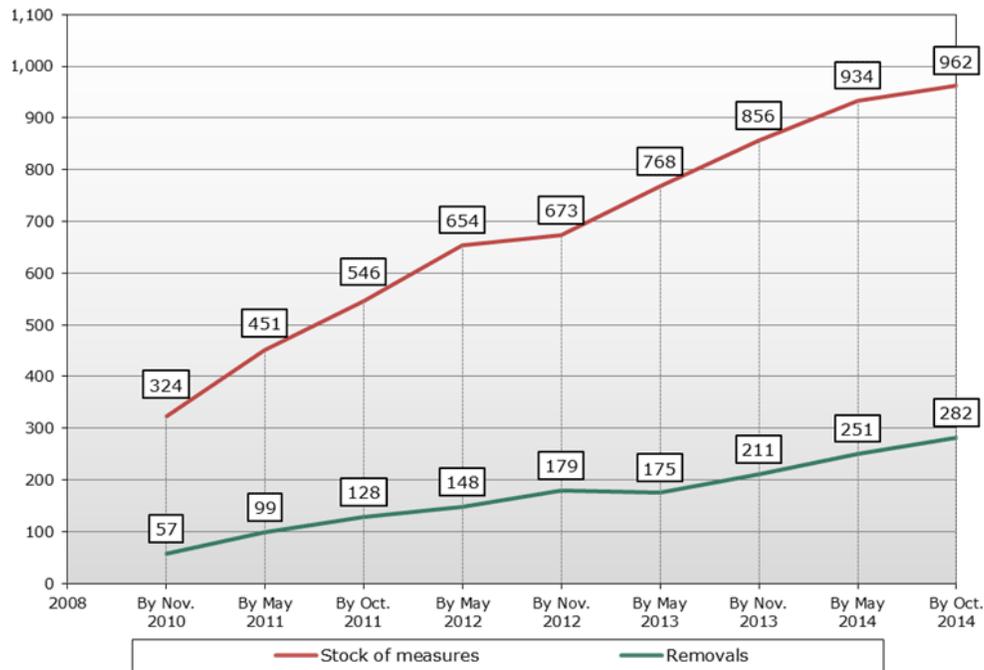
²⁶ *Ibid.*

²⁷ Louis Morel, “Sluggish Exports in Advanced Economies: How Much Is Due to Demand?,” Discussion paper no. 2015-3, Bank of Canada, March 2015, <http://www.bankofcanada.ca/wp-content/uploads/2015/03/dp-2015-3.pdf>.

Weakness in trade finance may be another factor.²⁸ While not independent of demand, trade finance became more costly and less available during the financial crisis and its aftermath. Financial institutions faced pressure to repair their balance sheets, and short-term, self-liquidating instruments like trade finance lending tend to be affected by “credit crunches.” Evidence suggests that traders, particularly smaller firms, faced serious funding challenges during and after the crisis.

Finally, rising trade protection contributed to the slowdown. If policy improvements during the pre-crisis era helped accelerate trade growth, then policy reversals (or a slowdown in further liberalization) would be a factor in a slowdown. While the 2009 collapse was likely not caused by increased protection,²⁹ there are clear signs that protectionism has been on the rise post-2009. The WTO reported that, in the year ending in May 2014, Group of 20 (G20) members put in place 228 new trade-restrictive measures, amounting to nearly 1,000 new protectionist measures since 2010 (Figure 3).³⁰ Worse, while many of these measures were meant to be temporary, the vast majority of them have remained in place.

Figure 3: Trade Restrictions since 2008 (Number of Measures)



Source: World Trade Organization.³¹

²⁸ World Bank, *Global Economic Prospects: Having Fiscal Space and Using It*, 172.

²⁹ Hiau Looi Kee, Cristina Neagu, and Allesandro Nicita, “Is Protectionism on the Rise? Assessing National Trade Policies during the Crisis of 2008,” *Review of Economics and Statistics* 95, no. 1 (March 2013): 342–46.

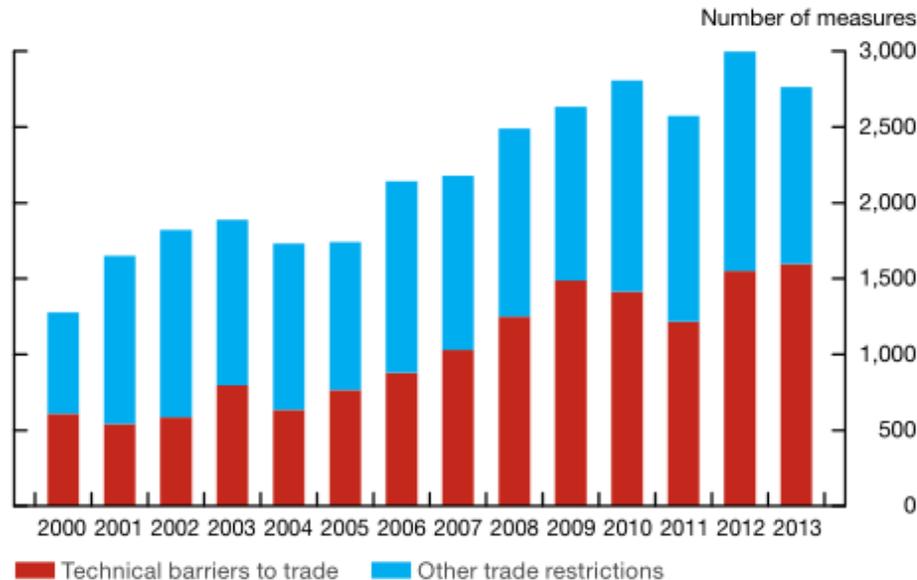
³⁰ World Trade Organization, “Reports on G20 Trade and Investment Measures (Mid-May 2014 to Mid-October 2014),” November 5, 2014, https://www.wto.org/english/news_e/news14_e/g20_joint_summary_oct14_e.pdf.

³¹ World Trade Organization, “Reports on G20 Trade and Investment Measures (Mid-November 2013 to Mid-May 2014),” June 16, 2014, https://www.wto.org/english/news_e/news14_e/g20_joint_summary_jun14_e.pdf.

As shown in Figure 4, many of the new restrictions are nontariff measures, with the largest increase being technical barriers to trade. With most technical barriers, compliance costs are high, and despite tariff bindings their main effect is to act as an impediment to trade.

Figure 4: Use of Technical Barriers to Trade and Other Trade Restrictions

Number of restrictive measures that G-20 countries intended to implement each year



Last observation: 2013

Source: Bank of Canada / World Trade Organization.³²

While the WTO estimates that the total increase in trade-restrictive measures since October 2008 affected a little more than 4 percent of world merchandise imports, the additional barriers represent a reversal of the pre-crisis trend toward liberalization.³³

The rise in trade protection by major economies was accompanied by a sharp decline in new liberalizing initiatives. Global Trade Alert reports that since November 2008, G20 countries have implemented three times more discriminatory measures than liberalizing and transparency-improving measures.³⁴ The University of Toronto's report card on the 2013 G20 summit noted that compliance on trade was the worst of all G20 commitments.³⁵ Moreover, as shown in Figure 3, discriminatory measures are being introduced more quickly than they are being phased out.

³² Francis and Morel, "The Slowdown in Global Trade."

³³ World Trade Organization, "Reports on G20 Trade and Investment Measures (Mid-May 2014 to Mid-October 2014)."

³⁴ Simon J. Evenett, *The Global Trade Disorder: The 16th GTA Report* (London: CEPR Press, 2014), 57–71 (chapter 2), <http://www.globaltradealert.org/sites/default/files/GTA16.pdf>.

³⁵ G20 Research Group and International Organisations Research Institute, "2013 St. Petersburg G20 Summit Final Compliance Report," November 15, 2014, <http://www.g8.utoronto.ca/g20/compliance/2013stpetersburg-final/index.html>.

Conclusion

Our analysis points to two key areas for attention by policymakers.

First, actions to improve economic growth, especially in high-income economies, are essential to improving aggregate demand, which remains the principal lever for trade growth. In the United States, policies to reform international tax policy, ease the burdens of regulation, and boost productivity should be the focus of an agenda geared toward faster economic growth.

Second, the United States and other key economies need to return to a trade-liberalizing agenda. The action by the U.S. Congress earlier this year to renew Trade Promotion Authority is an encouraging start, but the key next step is to conclude and implement trade-expanding agreements like the Trans-Pacific Partnership and the Transatlantic Trade and Investment Partnership. In addition, the United States should provide the leadership for progress at the multilateral level via the WTO's Trade in Services Agreement, as it did in the recent expansion of the ITA.

Technological gains will continue to reshape the world and lower the barriers to the movement of goods, people, ideas, and culture, to the benefit of a vast swath of the world. Governments should embrace their complementary role in reducing barriers that interfere with mutually beneficial exchange, and in doing so raise the prosperity of their citizens.

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About the Authors

Scott Miller is a senior adviser and holds the William M. Scholl Chair in International Business at the Center for Strategic and International Studies (CSIS) in Washington, D.C. Daniel G. Sofio is a research assistant with the CSIS Scholl Chair.

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