



Rethinking the National Export Initiative

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As the United States struggled with unemployment and other effects of the Great Recession in January 2010, President Barack Obama set the goal of doubling exports within five years and creating 2 million new export-related jobs. Four years later, however, exports are less than halfway toward that goal and the rate of export growth is slowing. More worrisome, the administration's strategy failed to boost average export growth from historical levels, despite the robust recovery in international trade after the collapse of 2009. The National Export Initiative (NEI) has come up short.

The goals of opening foreign markets and improving the trade balance, identified in the NEI, were (and continue to be) important ones, but few new policies were implemented to achieve these goals. The one exception was an initiative on exports and jobs centered on small and medium enterprises (SMEs). In this Policy Brief I argue that the emphasis on SMEs was misguided and recommend a specific set of policies that the administration should concentrate on to boost exports.

The administration's logic for its emphasis on SMEs was attractive: SMEs account for a large share of job creation, and export-related jobs tend to pay better than jobs connected to

domestic production. At the same time, SMEs export very little, so turning them into exporters would accomplish the goals of boosting exports and creating more and better jobs. It would also help to expand the constituency in favor of trade deals.

This logic, however, led to an impractical policy. The administration sought to streamline export procedures, ease trade finance, and expand trade missions abroad to help small and medium businesses in particular, and to build on trade agreements and enforce trade rights abroad with a similar emphasis on SMEs. These steps were no doubt well-intentioned, but exporting is by its nature dominated by large businesses. An export strategy based on SMEs would do (and did) little to lift exports because only the most productive firms can compete globally, and such highly productive firms grow to be large firms precisely because they are so efficient.

The National Export Initiative has come up short.

As a jobs strategy, the SME focus was also unviable. While SMEs create the most jobs, they also destroy the most jobs. The intuition is that new firms, which by definition create jobs, and exiting firms, which by definition destroy jobs, tend to be small. A fraction of startups do grow rapidly into large firms, and these “gazelles” are the job creators. In fact, once firm age is controlled for, there is no systematic relationship between firm size and net job creation in the United States (Haltiwanger, Miranda, and Jarmin 2013). Overall, net employment creation is all about new and young firms and large firms. Instead of the SME focus, what was needed was a broad package to expand incentives for exporting by the most efficient and innovative firms that drive export growth and net job creation.

A striking feature about exports is the heavy concentration in a few very large firms. The top 1 percent of US exporters, fewer than 3,000 firms, is responsible for about 80 percent of merchandise exports. The other 99 percent of exporters, or 275,000 firms, account for the remaining 20 percent. In manufacturing, SMEs account for just 15 percent of exports. Services

exports are also the domain of the large, exhibiting similar patterns to manufacturing. Thus, if SMEs are to drive export growth, it would take annual growth rates of roughly 50 percent to double exports in five years. Put simply, exports cannot grow unless exports of the top firms are growing fast. Any successful strategy targeting aggregate exports would have to either grow the exports of the largest firms or expand the group of firms at the top of the distribution.

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An export boom requires a system that encourages the largest firms to invest and expand exports and facilitates the rapid growth of new highly efficient firms so we get more export superstars. This Policy Brief outlines a three-step strategy to facilitate stronger export growth, generating more and better jobs in the process. The United States should

1. seek a competitive exchange rate—nothing limits exports more than their relative price. While progress has been made in recent years, estimates still suggest that the dollar is overvalued with respect to a number of Asian currencies, including those of Singapore, Taiwan, Japan, China, and Hong Kong;
2. provide greater leadership in the global trade system to support the big deals, where market size is large and restrictions on imports of services, which remain high, can be removed. In particular, the Trans-Pacific Partnership and the Transatlantic Trade and Investment Partnership are major deals that could significantly open markets to US exporters; and
3. improve the business climate for US production and supply chains. This includes important reforms such as reducing corporate taxes, promoting innovation, streamlining trade facilitation and expanding trade finance, enhancing job training, investing in energy, and maintaining open markets, which together would significantly boost US export growth.

This Policy Brief first documents US export performance relative to other countries, the export landscape at the firm level, and what they mean for policy design to support robust

export growth. It concludes by outlining a broad trade strategy that would go farther in reaching the president's ambitious goal.

DEFINING A GROWTH TARGET IN LIGHT OF US EXPORT PERFORMANCE

The NEI targeted a five-year doubling of exports. In this section, I define a more realistic yet ambitious target, highlighting the strengths and weaknesses of US export performance relative to others.

Doubling exports in five years was unattainable even in the best of times. The most lenient metric uses 2009 as a starting point and measures trade using nominal dollars. Trade plummeted during the financial crisis, making 2009 a low point and allowing the trade recovery in 2010 to count as part of five-year growth. Measuring trade in nominal terms allows inflation to contribute to growth. Using this liberal metric, if nominal exports grew at the average rate of 8.2 percent that prevailed during the 25 years before the collapse, they would grow by just under 50 percent after five years.¹ Thus, doubling exports would require annual average export growth of nearly twice the earlier trend.

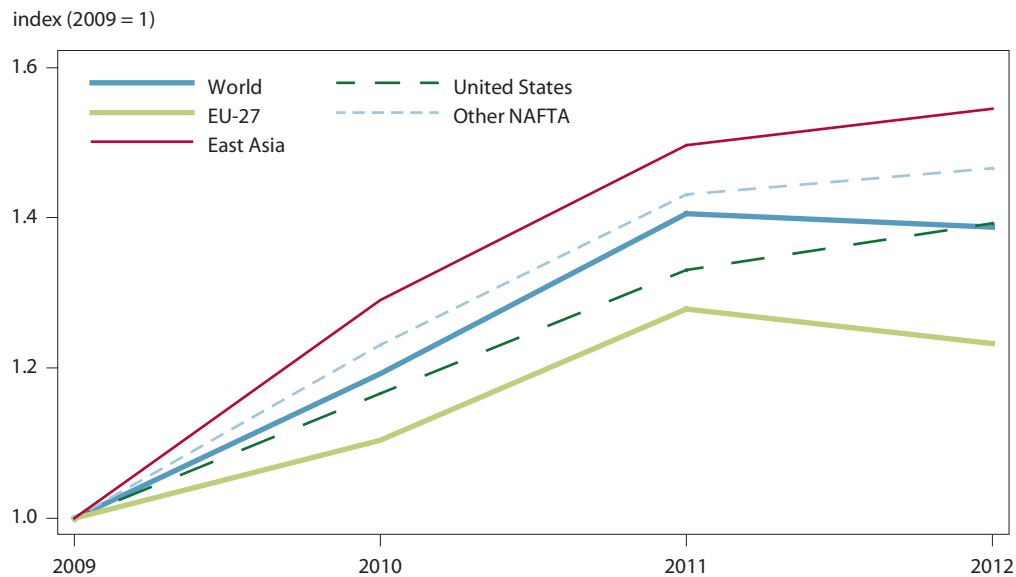
What is perhaps more troubling than missing the target is that export growth has slowed sharply over the last two years. After double-digit growth in 2010 and 2011, US export growth was below 5 percent in 2012, and 2013 growth is estimated at 2.8 percent. While this largely reflects global trends, US export performance remains underwhelming when compared with Asia or its North American Free Trade Agreement (NAFTA) partners. Figure 1 shows an export index for the world, the United States, other NAFTA, Asia, and the 27 EU countries, based on goods and services data recorded by the United Nations. While the expansion in US export volumes closely tracks global exports in 2012, NAFTA partners and countries in Asia have performed far better, and 2013 estimates suggest the United States will once again come in below the global average.

A more important goal would be to grow exports at a faster clip than imports, until near trade balance is restored, and thus reduce the trade gap, limiting the external drag on growth and jobs. However, over the last few years as exports have recovered, imports have increased even faster and are up 49 percent in 2013 compared with 2009, while exports are up 44 percent over the same period.

Why have US exports failed to boom or even to surpass global averages? Part of the problem was that trade growth was

1. Calculations based on US Balance of Payments data from the Bureau of Economic Analysis.

Figure 1 Index of real exports, 2009–12



NAFTA = North American Free Trade Agreement

Source: UNCTADStat Database, <http://unctadstat.unctad.org/TableView/tableView.aspx?ReportId=25116>.

discussed in the context of bringing SMEs into the global trade system. The next section highlights why this was misguided.

A MISGUIDED STRATEGY OF SME EXPORT PROMOTION

The NEI was premised on small firms being the missing link in US export growth. The main components of the initiative were (1) expanding financing for exports, especially SMEs; (2) advocating export promotion, which included attempts to streamline export procedures, adding trade staff located in US embassies abroad, and more trade missions to help reduce export costs and provide information to small businesses interested in entering new markets; (3) expanding US markets through trade agreements; and (4) enforcing US trade rights abroad. The goals were to help SMEs export and create jobs, to facilitate rebalancing of trade, and to expand services exports.

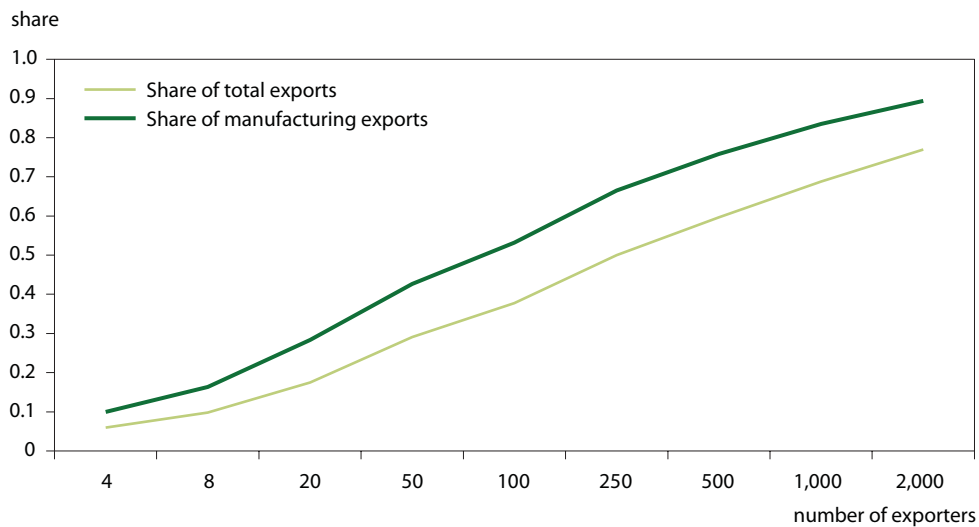
While it may be appealing to call on SMEs for export growth and job creation, especially at a time when large global firms appear to be benefiting from special tax treatment, this ideal is difficult to defend on either empirical or theoretical grounds.

Exporter data show that large firms dominate international trade. From a theoretical perspective, this is not particularly surprising. Large firms are the most productive. In a market economy, more resources should flow to them, as they offer the greatest returns to labor and capital.

Consider the following simple example. Imagine that the United States exports only machinery (the biggest export category). Now assume 100 US machinery firms use the same input quantities but employ different technologies. Specifically, ranking the firms from best to worst, the first firm exports twice as many machines as the second, three times as many machines as the third, four times as many as the fourth, and so on. Some firms are simply much more productive than others and export more.

As we move down the distribution, the smallest firms will find that their export quantities are simply too small to cover the fixed costs of exporting and so will not export. A government interested in expanding exports may choose to assist these small firms. It could intervene to lower entry costs or offer subsidized resources on the grounds that these firms need them the most. The problem is that small firms are typically among the least efficient producers and can produce only small quantities. Even if government interventions help them to enter the export market, their exports are likely to be so small as to have only a marginal effect on aggregate exports. Only if a distortion prevents small firms from growing to be large firms would policies aimed at small firms have an important effect. But in the United States and other countries with relatively free markets, resources flow to the more productive firms, which offer a greater return on investment. These naturally become the export superstars.

To the extent that distortions need to be removed to grow

Figure 2 Number of exporters and share of exports, 2010

Source: US Department of Commerce (2012); author's calculations.

exports, distortions affecting exporters at the top of the distribution are likely to have a bigger bang for the buck. Put differently, raising demand for or the competitiveness of existing exports will have a bigger impact than bringing new firms into exporting. The reason is that the marginal firm is very small, so the additional exports it can generate are tiny. Interventions that affect foreign demand or variable costs, such as foreign tariffs and transportation costs, are likely to achieve more than interventions that affect the entry costs that new exporters face.

Consistent with the dominance of incumbents in growing exports, Andrew Bernard and Brad Jensen (2004) examine the sources of the US export boom from 1987 to 1992 when exports grew above 10 percent a year. They find that most of the increase in exports came from increasing export intensity at existing exporters rather than from entry into exporting. They also find that the two most important determinants were the exchange rate and foreign market growth. It is not surprising that existing exporters drove export growth when we consider how concentrated exports are. As I show below, a small fraction of very large firms account for the bulk of exports, and thus rapid export growth must be associated with growth of these incumbent firms.

IN TRADE, BIGGER IS BETTER

Large firms define exports. The top 1 percent of US exporters account for roughly 80 percent of exports; this is true of total exports or manufacturing only. The top four firms alone account for 6 percent of exports. In manufacturing the number is even higher, with the top four manufacturing firms holding 10

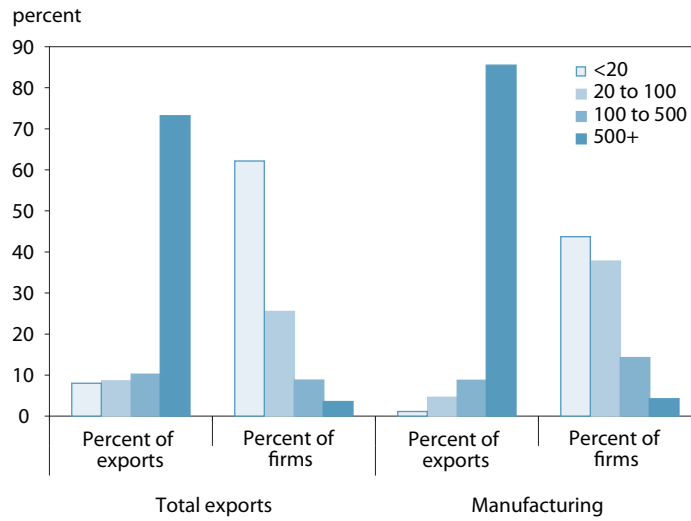
percent of manufacturing exports. Figure 2 shows the number of exporters (ranked from largest to smallest) and their share of total exports and manufacturing exports. While the United States has nearly 300,000 exporters, just 2,000 firms account for the bulk of exports.² And this is magnified in manufacturing.

Employment tells a similar story. SME employers do not contribute much to exports. Large firms, those that employ more than 500 people, account for more than 70 percent of exports and more than 80 percent of manufacturing exports, despite being a small share of firms (figure 3). Small businesses, those with less than 20 workers, account for less than 10 percent of exports and only 1 percent of manufacturing exports, despite there being many of them. The top single exporter, Boeing, contributes more than three times as much to exports as all 25,000 small manufacturing firms combined.

Services exhibit a similar pattern to goods, with a few firms accounting for the bulk of exports. Because services exports typically require in-country presence, services are largely exported via multinational corporations (MNCs), which account for 83 percent of services trade. Within the group of MNC exporters, available data on firm size allow an examination of concentration among services exporters and a comparison between goods and services exporters. Looking at MNCs that export services, figure 4 shows the share of firms that are SMEs (less than 500 employees) and their share of exports. In services, SMEs

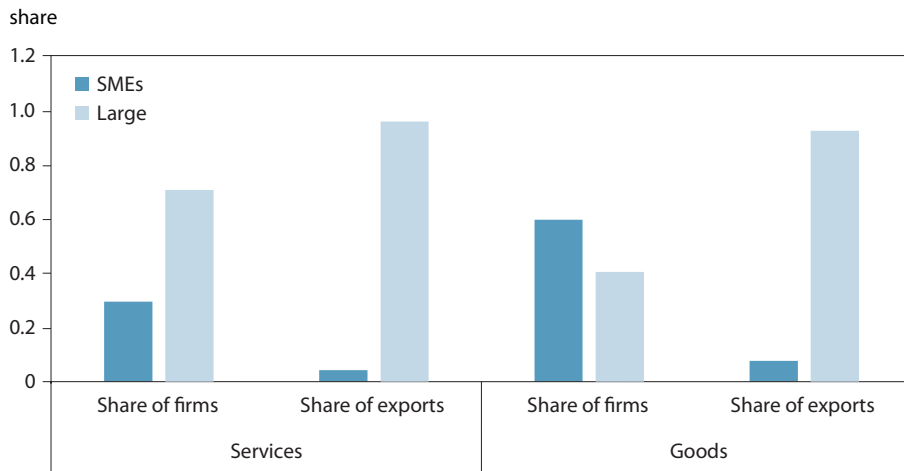
2. All figures are calculated as shares of "known" exporters. Exports by unknown exporters include "exports by individuals, governments, low-value estimates, and information filed with missing, unknown, or incomplete company identifiers" (US Department of Commerce 2012). Unknown exports accounted for 11 percent of exports in 2009–10.

Figure 3 Firm size and share of exports, 2010



Source: US Department of Commerce (2012); author's calculations.

Figure 4 Comparing multinational corporation goods and services exporters, 2008



SMEs = small and medium enterprises

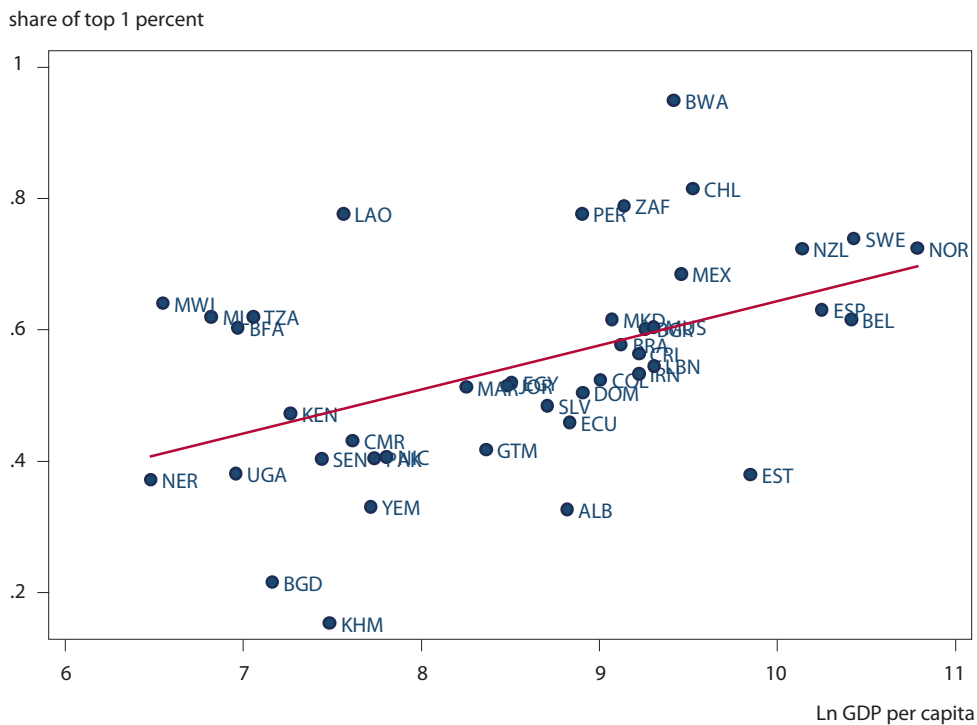
Sources: Barefoot and Koncz-Bruner (2012); author's calculations.

account for 30 percent of firms and just 4 percent of exports, compared with 60 and 8 percent, respectively, for goods. If anything, services exports are even more concentrated in large firms than goods exports.

The dominance of large firms in exporting is not unique to the United States. In small countries, a single firm can transform exports. There are well known examples, such as Nokia in Finland, Samsung in Korea, and Intel in Costa Rica, each of which accounts for around 20 percent of the country's total

exports. Looking across countries, on average, the top firm alone holds almost 15 percent of total (nonoil) exports in developing and emerging-market countries. The top 10 firms account for nearly 40 percent of exports. The top 1 percent of exporters accounts for 53 percent of exports on average. The remaining volume of trade is mainly concentrated in the next tier of large firms. Specifically, the top 5 percent of firms accounts for almost 80 percent of exports on average and the top 10 percent accounts for almost 90 percent (Freund and Pierola 2012a).

Figure 5 Export share of top 1 percent of exporters and stage of development



Note: The countries in this figure are as follows: Albania (ALB), Bangladesh (BGD), Belgium (BEL), Botswana (BWA), Brazil (BRA), Bulgaria (BGR), Burkina Faso (BFA), Cambodia (KHM), Cameroon (CMR), Chile (CHL), Colombia (COL), Costa Rica (CRI), Dominican Republic (DOM), Ecuador (ECU), Egypt (EGY), El Salvador (SLV), Estonia (EST), Guatemala (GTM), Iran (IRN), Jordan (JOR), Kenya (KEN), Laos (LAO), Lebanon (LBN), Macedonia (MKD), Malawi (MWI), Mali (MLI), Mauritius (MUS), Mexico (MEX), Morocco (MAR), New Zealand (NZL), Nicaragua (NIC), Niger (NER), Norway (NOR), Pakistan (PAK), Peru (PER), Senegal (SEN), South Africa (ZAF), Spain (ESP), Sweden (SWE), Tanzania (TZA), Uganda (UGA), and Yemen (YEM).

Source: Freund and Pierola (2012a).

If anything, export concentration among the top 1 percent of firms tends to increase as countries get richer, suggesting that the dominance of large firms is part of development. Figure 5 displays a scatter plot of stage of development and concentration in the top 1 percent for 43 countries for which the World Bank has data. The graph shows a positive and significant relationship between the share of exports accounted for by the top 1 percent of exporters and the per capita income in a country. As countries get richer, exports become more concentrated. Perhaps this is not too surprising if we consider that the biggest firms are the most productive. Channeling more resources to large firms increases output, which raises living standards.

It is worth noting that export concentration is generally unrelated to income concentration. Norway, Sweden, and New Zealand all have high export concentration, but the share of the top 1 percent of the population in income is less than half

that of the United States.³ In contrast, Colombia has very high concentration in income, above the level of the United States, yet exporter concentration falls below the fitted line in figure 5.

In addition to driving export volumes, large firms also drive export growth and diversification. Using raw firm-level data for 32 countries, over the most recent three consecutive years, the top 1 percent of exporters account for over half of total export growth and of the growth driven by product markets new to the country (the extensive margin). Moreover, research shows that it is extraordinarily rare for a small exporter to grow gradually and join the top 1 percent in a decade, even in poor countries.

3. According to data from the most recent year available in the World Top Incomes Database, the top 1 percent of the population in New Zealand, Norway, and Sweden has 7.35, 7.94, and 7.02 percent of income, compared with 17.43 percent in the United States. See <http://topincomes.g-mond.parisschoolofeconomics.eu>.

Rather, firms in the top 1 percent were typically large a decade ago or grew to be large in a short period of about three years. This is important because it implies that directing resources to the average SME will do little to spur export growth. Highly productive firms face market conditions that allow them to grow rapidly into export superstars.

Going beyond trade, recent literature also points to a critical role for large firms in explaining aggregate macroeconomic fluctuations, employment, and growth. For example, Xavier Gabaix (2011) shows that the top 100 US firms explain one-third of the variation in output growth. Chang-Tai Hsieh and Pete Klenow (2012) show that an important difference in firm dynamics in India, Mexico, and the United States relates to the ability of firms to grow large. Firms in the United States grow to be much larger, but in Mexico and India weak life-cycle dynamics constrain productivity by an estimated 25 percent. Their work shows that the ability of firms to grow large is more important for income growth than expanding the number of small firms.

In terms of employment, large and fast-growing firms are also the big winners. John Haltiwanger, Ron Jarmin, and Javier Miranda (2013) find that young, fast-growing, and large firms are the primary net job creators in the United States. While SMEs account for a large share of job creation, they also account for a large share of job destruction. For net job creation, we must turn to large firms and startups.

Analysis based on exporter data implies similar dynamics exist for trade, with highly productive firms growing quickly into large firms that dominate exports, and there is evidence of an up or out phenomenon among these firms. Taken together jobs, productivity, export growth, and diversification all rely heavily on the ability of an economy to foster the development of large firms and maintain an environment where they can thrive.

With the goal of rapid export growth, a number of interventions can stimulate demand for US goods and raise the international competitiveness of US exporters. This is the subject of the next section.

MAKING US EXPORTS BOOM

An export boom would require a better environment for existing large firms to grow and for expanding the number of large firms. The policies most likely to help are (1) a competitive exchange rate, (2) US leadership on market access trade agreements, and (3) business climate improvements, such as training and migration to fill the skills gap, encouraging investment and innovation, more stable energy prices, and championing trade openness to facilitate global supply chains and attracting the most productive large foreign firms.

Maintain a Competitive Exchange Rate

The single most important price that affects US exporters, large and small alike, is the exchange rate. As the real exchange rate appreciates, US goods become more expensive abroad and demand for them falls. Governments that allow exchange rates to get significantly overvalued do a huge disservice to their export industries.

In earlier work with Denisse Pierola, I examined the determinants of export booms, defined as significant and sustained increases in export growth (Freund and Pierola 2012b). We find that the real exchange rate is the most important variable in predicting booms. In industrial countries, the exchange rate tends to depreciate by about 15 percent on average prior to an export boom. The role of the exchange rate is even more pronounced in developing countries.

The United States fits this pattern. In our cross-country sample from 1980 to 2006, the United States had only one export boom according to our filter. The boom started in 1987, during the previous two years, the real dollar depreciated by nearly 30 percent. Over just six years exports doubled, very close to the type of surge President Obama had hoped to initiate. Bernard and Jensen (2004) examine the sources of this US export boom in detail. They find that both exchange rate depreciation and foreign market growth were important. As noted above, this expanded the exports of existing exporters. Entry and improvements in plant-level productivity were less significant in the boom.

Despite recent adjustments, the dollar remains overvalued with respect to many Asian currencies. William Cline (2013) estimates that currencies in Singapore, Taiwan, Japan, China, and Hong Kong are all undervalued with respect to the dollar. The currencies of Singapore and Taiwan are moderately to severely undervalued, while those of Japan, China, and Hong Kong are only mildly undervalued if the target is a US current account deficit of 3 percent of GDP. Many economists, however, feel that advanced countries, which do not need to rely on foreign capital for investment over extended periods, should have a current account target of closer to zero. With a deficit near zero, Cline's estimate of the undervaluation of the Chinese renminbi is about 18 percent.

C. Fred Bergsten and Joseph Gagnon (2012) calculate that from 2007 to 2011, 20 countries were purchasing an additional \$1 trillion in foreign assets per year. They estimate that about 60 percent was in US dollars, raising the value of the dollar and reducing US competitiveness. One way of addressing the problem would be for the United States to make countervailing interventions in currency markets to offset such manipulation. The advantage of this strategy is it is purely defensive. In

addition, because it offsets the target of manipulation, without reducing the costs of manipulation, it could limit interventions or help to bring other countries to the negotiating table with respect to limiting currency manipulation in trade agreements.

In a world where currency manipulation against the United States has become ubiquitous, the exchange rate cannot be ignored in an export strategy.

US Leadership in the Global Trade System

President Obama's State of the Union address highlighted the importance of new trade agreements to promote jobs and growth.⁴ He was right to do so (if mistaken about the importance of small businesses) because such agreements expand the markets for US firms, allowing them to grow fast and hire more workers. While markets abroad are more open than ever before, there is still a ways to go, especially for a number of industries in which US companies have comparative advantage, such as services, where the potential for export growth is enormous.

The policies most likely to help are a competitive exchange rate, US leadership on market access trade agreements, and business climate improvements.

In recent years, the United States has had mixed success with new market access agreements. While three new bilateral trade agreements were passed (with Colombia, Panama, and Korea), the far bigger Doha Development Agenda stalled in the face of a leadership vacuum. However, two large agreements currently under negotiation, the Trans-Pacific Partnership (TPP) and the Transatlantic Trade and Investment Partnership (TTIP), would offer a vast new market for US exporters. The TPP market is about 50 percent larger than NAFTA and the TTIP market is nearly 75 percent larger.⁵ Moreover, Europe and East Asia are both areas where US exports have significantly lagged exports from the rest of the world (see appendix A figures). The United States has had free trade agreements (FTAs) with six of the 11 TPP countries since at least 2009. Figure 6 shows that in recent years, US exports to FTA countries have performed better than US exports to non-FTA countries. Competing in more open markets helps US exporters.

4. White House, Speeches and Remarks, January 28, 2014.

5. Measured by GDP in current trillions of US dollars, NAFTA is 18.7, TPP is 27.5, and TTIP is 32.3.

In addition to a bigger trade area, the new agreements aim to offer improved market access in services. Laws that constrain ownership of domestic services firms or prohibit US firms from competing on government infrastructure projects prevent US architects, engineers, and business professionals from broadening their market. Regional agreements often have the leverage to break these barriers. For example, NAFTA contains language on national treatment for most service providers (US service providers must be treated like Mexican providers) and on local presence (service providers are not required to have a local presence). Figure 7 shows that while the United States has fallen short of global services growth, services growth to NAFTA surged in the years following the trade agreement and has kept pace in recent years. Both TTIP and TPP are likely to offer even better market access and have the potential to greatly expand services trade.

Jensen (2011) shows the tremendous potential of US services exports. Services account for 80 percent of US GDP, 70 percent of jobs, but just 30 percent of exports. The United States consistently runs a trade surplus in services. Exports of business services have been growing fast in recent years but remain well below manufacturing exports, yet more people are employed in this sector in the United States and such jobs pay higher wages than manufacturing. If foreign markets were open to US services, Jensen estimates that it would create about 3 million new jobs.

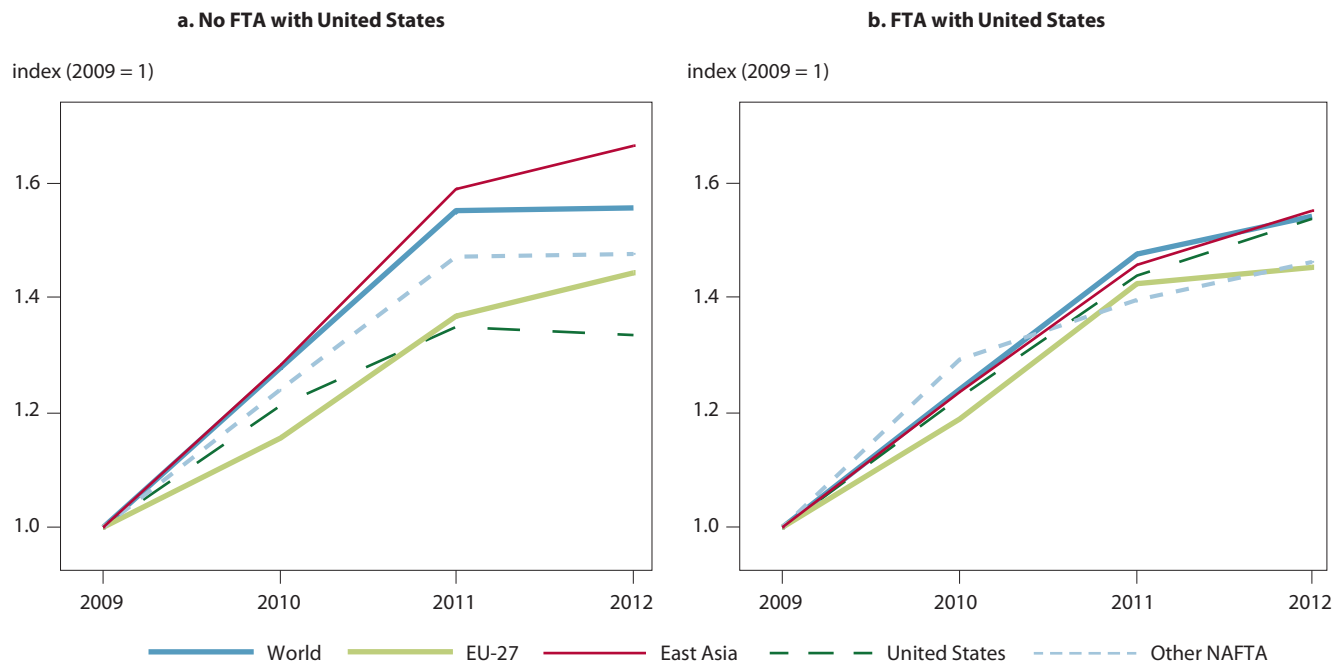
Expanding government procurement to US firms in the agreements, and potentially in the World Trade Organization (WTO), would improve efficiency in signatory countries while opening an important market to the United States. Jensen shows that as infrastructure in emerging markets catches up with global standards, and if these countries opened procurement to foreign competition, it would be a boon to US firms that have the engineering and business know-how to build it. A broader government procurement agreement through large bilaterals or in the WTO would help achieve this goal.

The TTIP is being designed to reduce regulatory barriers to trade, which would significantly lower costs of exporting, as US products would need less modification for European markets. Going behind simple tariffs would also set an important precedent that, if successful, would help open the WTO to broader negotiations on these issues.⁶ It would also allow the advanced countries to have a first go at setting what may very well turn out to be global standards.

Trade promotion authority (TPA, formerly called fast-track) legislation would be an important first step. TPA requires an up or down vote on trade agreements within a specified

6. See Schott and Cimino (2013) for more details on what can be done in the TTIP.

Figure 6 Goods exports to Trans-Pacific Partnership countries, 2009–12



NAFTA = North American Free Trade Agreement; FTA = free trade agreement

Source: UN Comtrade Database via World Bank, World Integrated Trade Solution Database, wits.worldbank.org/wits.

period of time. Without TPA, the United States has little credibility in negotiations because Congress can amend agreements, which means US concessions made by trade negotiators are not credible. Reciprocity has been at the core of all agreements. If the United States cannot credibly make concessions, it cannot hope to open new markets and lead in trade agreements. In addition, TPA is crucial to curb the United States’ own special interests, such as sugar or shipping, where protective policies continue to raise prices facing American consumers.

Business Climate for Supply Chains

Besides exchange rate and trade agreements, standard business climate improvements, which make US exporters more globally competitive, would help expand exports. In this section, I explain a number of such improvements.

Promote, Not Punish, Investment

The United States has the highest corporate tax rate in the Organization for Economic Cooperation and Development (OECD). Gary Hufbauer and Martin Veiuro (2013) report that the average effective US tax is 8 to 9 percentage points

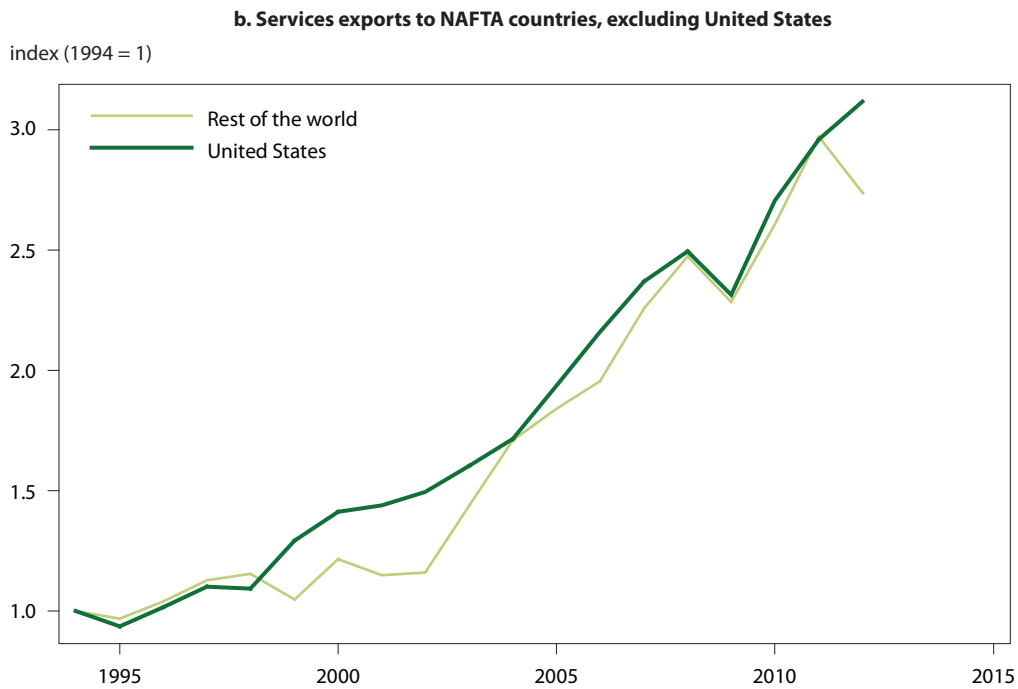
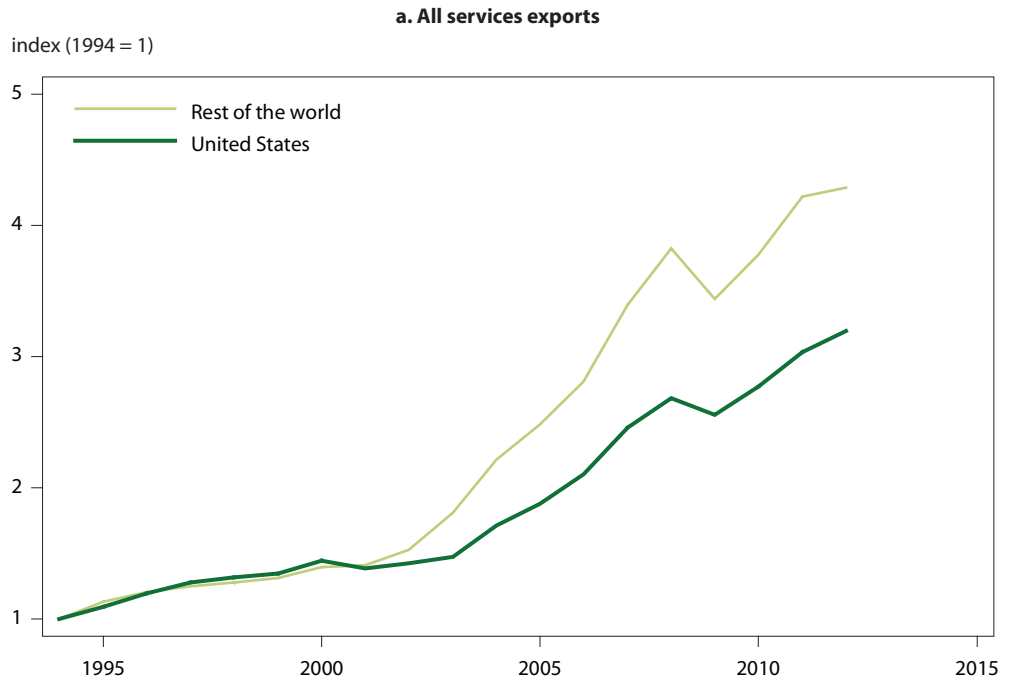
higher than the average of competing countries. This is a disincentive for investment and generates incentives to use creative accounting to avoid the tax, which is costly and unproductive.

The current system is especially messy for multinationals—the biggest exporters. US firms that accrue profits abroad face the highest tax rate of all advanced countries on repatriated earnings. Multinationals are currently allowed a tax deferral, which roughly offsets the disadvantage they would otherwise have been at in foreign markets. Most high-income OECD countries, however, have adopted territorial tax systems, which impose only small taxes on foreign income. With supply chains expanding rapidly, moving to a similar system in the United States would boost the competitiveness of US multinationals, which have parts and components round-tripping the globe as final goods are made.

Stimulate Innovation

Focusing on trade, a key comparative advantage of the United States is innovation. But innovation typically involves uncertainty, and because of imitation firms are potentially unable to reap the full rewards from technological advances, leaving research and development (R&D) undersupplied in equilibrium.

Figure 7 US services growth to NAFTA and the world



NAFTA = North American Free Trade Agreement

Sources: UNCTADStat Database, <http://unctadstat.unctad.org/TableViewer/tableView.aspx?ReportId=25116>; US Department of Commerce, Bureau of Economic Analysis, www.bea.gov/international/international_services.htm.

Because other firms can expropriate R&D, especially in the technology sector, there is an argument for a more interventionist policy. Experience from Israel, which offers a range of industrial policies—from government financing to incubators for entrepreneurship—suggests that such a policy can work. Using government funds to promote technology, while designing the interventions as controlled experiments, could be critical to boosting US comparative advantage while advancing knowledge about what works.

More broadly, R&D funds are vital to achieve this goal. Yet the America Competes Act, which proposed in 2007 a doubling of funds over ten years for research at the National Science Foundation, the Department of Energy, and the National Institute of Science and Technology, has been ignored (Sargent 2013). Getting funding back on its growth path would help.

Reduce Trade Costs

While trade facilitation in the United States is relatively good, infrastructure is aging and few technical improvements have been made in recent years. In contrast, other countries have been investing rapidly in improving trade logistics. In addition, trade costs associated with financing exports in the United States are higher than in its Asian competitors.

While the United States ranks fourth overall on ease of doing business, according to the World Bank's Doing Business indicators, it is 22nd on trade facilitation, and no improvements have been made since the data started being collected eight years ago. The World Economic Forum's broader Enabling Trade index shows a decline in the standing of the United States, from 14th place in 2008 to 23rd in 2012. The United States falls behind in border administration, government efficiency, and the regulatory environment—and export processing is relatively costly compared with other OECD countries. Robert Lawrence (2012) calls on the government to obtain feedback from exporters about the main bottlenecks and improve service. The United States cannot afford to remain complacent as other countries make great strides in improving trade facilitation.

The Export-Import Bank reduces costs associated with trade finance. It finances trade that otherwise might not have happened because either banks find such loans unattractive or the export destination is risky. By lowering the cost of export finance, the Export-Import Bank expands trade. The lending limit of the bank, whose profits are turned over to the US Treasury, is being expanded modestly from \$120 billion to \$140 billion over the next three years. While this is an important step, it would make more sense for the limit to be capped at the greater of a nominal sum or a *share* of the previous year's exports—say 6 percent. This would prevent limited access to

finance from restricting trade when it is poised to grow rapidly while not limiting trade when financial conditions are weak and a greater share of transactions require finance from export credit agencies.

Address the Skills Gap

Many companies report that the skills mix of US workers does not match their needs. Today's manufacturing requires a different type of worker than yesterday's. In particular, computer skills, engineering, and machine works are all more important now than in the past. More options for vocational training and allowing more skilled immigration could help fill this gap.

The Manufacturing Institute's *Skills Gap Report* (2011) finds that two-thirds of more than 1,000 manufacturing firms surveyed report a shortage of qualified workers and the majority see the problem worsening over the next three to five years. Shortages are the most severe for machinists or technicians, where 83 percent of respondents report a shortage.

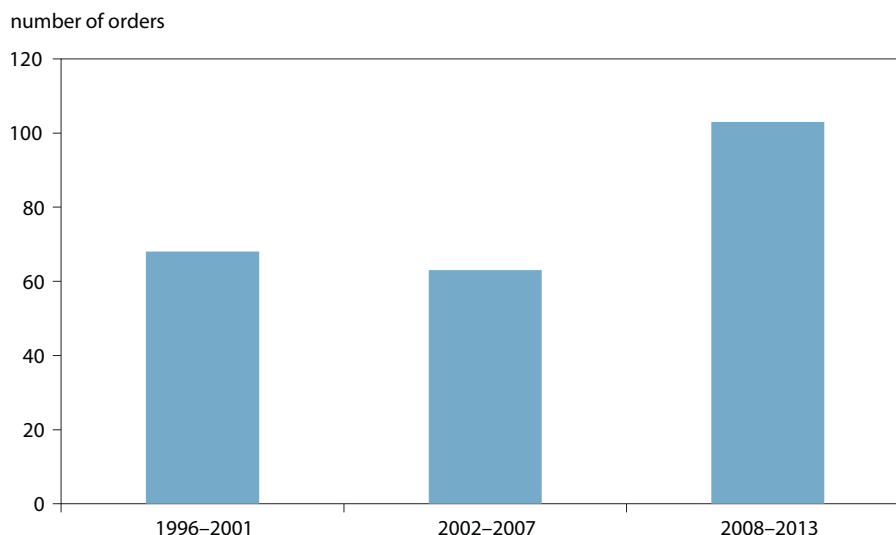
To fill this gap, the United States could take a lesson from Germany, the second largest global exporter, which offers high quality vocational training for young adults. Young Germans have the option of pursuing vocational training starting from secondary school, and more than half of Germany's high school students chose such programs in recent years (Hoeckel and Schwartz 2010). Better training has allowed Germany to remain competitive, even with relatively high manufacturing salaries, because workers are more productive. For instance, despite German auto workers receiving twice the US salary and benefits, Germany produces more cars than the United States.⁷

While education would take years to adjust and fill the skills gap, expanding H-1B visas for skilled foreign workers could help US firms meet their requirements for more skilled labor quickly. Since 2009 the H-1B cap of 85,000 visas has been reached earlier every year. Companies can start applying for visas on April 1 of each year. In 2009 and 2010 the cap was not reached for eight or nine months, but in 2013, it was reached in just five days. The cap has been constant since 2005, and it is time to expand it. Bringing in more skilled foreign workers would also spur innovation.

Leverage Global Supply Chains and Attract Large Foreign Firms

The United States has traditionally been a champion of open trade. It is important that this image not be tarnished by protec-

7. Frederick Allen, "How Germany Builds Twice As Many Cars As The U.S. While Paying Its Workers Twice As Much," *Forbes*, December 21, 2011.

Figure 8 Antidumping and countervailing duty orders, 1996–2013

Source: US Trade Representative.

tionist policies. Closing US markets to foreign competition will not help to grow US exports.

Among the large firms that dominate trade, a specific profile is becoming increasingly active. These are the firms that engage in related-party trade—trade between a parent firm and its affiliates. Such trade now accounts for one-third of US exports. Bernard et al. (2009) show that these globally engaged firms dominate not only trade flows but also employment among trading firms.

Foreign firms are also important to US exports. US affiliates of foreign firms account for over 20 percent of US exports (US Department of Commerce and Council of Economic Advisers 2013). For example, among the large car companies, not just Ford and General Motors export from the United States; BMW, Honda, and Toyota do as well, and perhaps more importantly their exports are expanding. Similarly, outward foreign direct investment (FDI) by US multinationals is likely to advance US export goals (Hufbauer, Moran, and Oldenski 2013), as US multinationals account for a large and increasing share of trade.

As the birthplace of many large multinationals, the United States is already intricately involved in global supply chains. The US economy also offers many features to attract foreign companies, including a large market, good business environment, open trade and investment regime, and increasingly relatively cheap energy sources. From this perspective, the United States is doing well.

However, the recent uptick in inward-looking policies

could hurt such trade and more broadly US competitiveness. Supply chains thrive on nimble production across borders. Since the global financial crisis, the number of antidumping and countervailing duty orders has increased (figure 8). Many of these are on inputs to production, such as steel and chemicals, making production of final goods in the United States more costly. Such protection can also encourage retaliation by trade partners, directly affecting US exports.

Also of concern was the “Buy American” provision of the 2009 stimulus package, which required that public building or public works projects funded use only iron, steel, and other manufactured goods produced in the United States. Notwithstanding the sizable distortion and additional red tape to the projects, this requirement encouraged foreign governments to enact similar provisions and defend them on similar grounds—thus locking US manufactures out of foreign markets.

In contrast, the WTO has led an education campaign on a “Made in the World” label that characterizes 21st century global supply chains. Imported inputs are becoming increasingly important and countries specialize in stages of production. A large and growing body of academic literature shows that access to imported inputs does more to expand firm productivity than exporting (Amiti and Konings 2007) and helps firms diversify their export bundle (Goldberg et al. 2010). The relatively rapid growth of exports from foreign trade zones in the United States, which allow companies to use duty-free imported inputs in exported goods, also supports this notion.

To promote exports, therefore, it is important that the United States remain a champion of open markets at home and abroad and resist any backsliding.

Form a Transparent Energy Plan

The shale gas revolution is an exciting time for US manufacturing, but unclear strategy has made manufacturing's response slower than it might have otherwise been. Predictable energy supply and more stable prices raise the competitiveness of US exporters, especially manufacturers.

The most important first step is approval of the Keystone XL Pipeline, which would allow oil to be transported from the Alberta tar sands and potentially the North Dakota shale formation to a Nebraska transfer station. Holding back the pipeline are concerns about the long-run environmental impact. A recent State Department report evaluating the pipeline makes the important point that extraction will take place irrespective of the pipeline. Without the pipeline, transportation is likely to cause as much damage to the environment and be more dangerous, as oil would be transported via rail. Approval of the pipeline would allow the president to demand regulations on the Canadian extractors and couple it with energy efficiency legislation that could reduce carbon emissions, offsetting much of the environmental damage from Keystone XL.⁸ Reaching such an agreement would put Keystone XL squarely in the national interest.

Also of importance is the potential to export natural gas as US production grows. With respect to liquefied natural gas (LNG), the large price differential between the US and foreign markets highlights the incentive for firms to ship gas abroad. The International Energy Agency (IEA 2013) estimates that

natural gas in the United States trades at one-third of the import prices in Europe and one-fifth of those in Japan, and while the differential is narrowing it will remain through 2035. Exports outside of NAFTA, however, require export licenses and have been limited on security and environmental grounds.

Exporting gas makes sense on economic, environmental, and security grounds. As Gary Hufbauer, Allie E. Bagnall, and Julia Muir (2013) highlight, there are a number of important reasons not to restrict energy exports. The United States has opposed export restraints on natural resources by other countries. Restricting exports without limiting domestic consumption violates WTO rules and would serve as an excuse for foreign nations to ignore the rules as well. In addition, denying LNG export permits is not the appropriate tool to address environmental or security concerns. In terms of environmental concerns, low US prices encourage overconsumption of energy, while high European gas prices have led to a greater reliance on coal, which is much more detrimental to the environment. US national security interests are met by diversifying production and low global prices, not by restricting exports. Finally, exporting LNG would help meet the US goal of doubling exports.

CONCLUSION

Four years ago, the administration recognized the importance of expanding exports. The strategy put in place failed to achieve superior growth. What is needed now is a comprehensive strategy that brings US leadership back to global trade negotiations, where the United States is a model open economy, a strategy that stimulates investment and innovation, gives US workers the skills to compete in the 21st century, offers firms a stable energy source, and works to prevent an overvalued exchange rate.

8. Michael McElroy, "The Keystone XL Pipeline," *Harvard Magazine*, November–December 2013.

APPENDIX A EXPORTS BY TYPE AND REGION

Figure A.1 Total exports

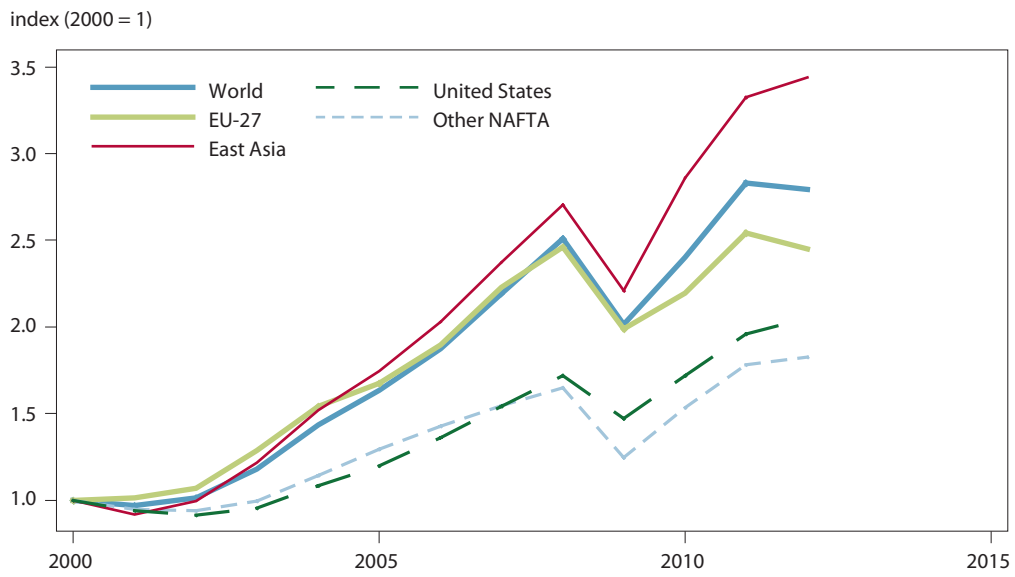


Figure A.2 Total goods exports

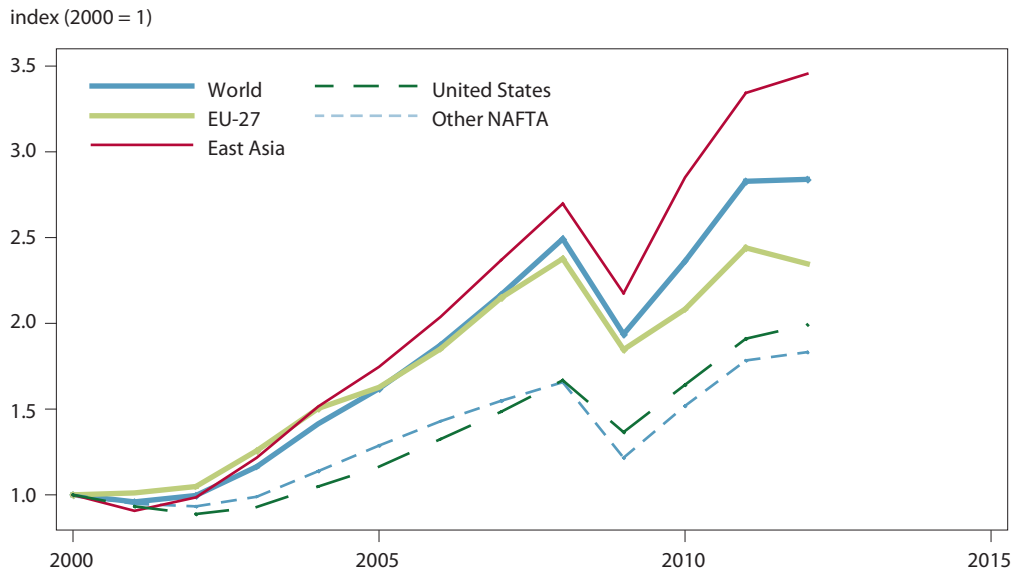
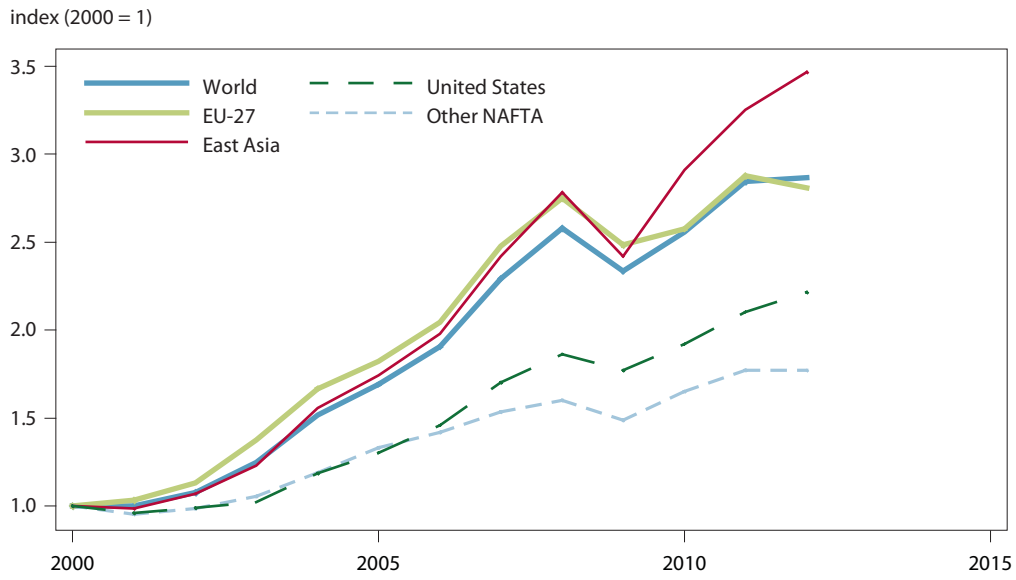


Figure A.3 Total services exports



Figures A.4 Exports to EU-27 countries, by region

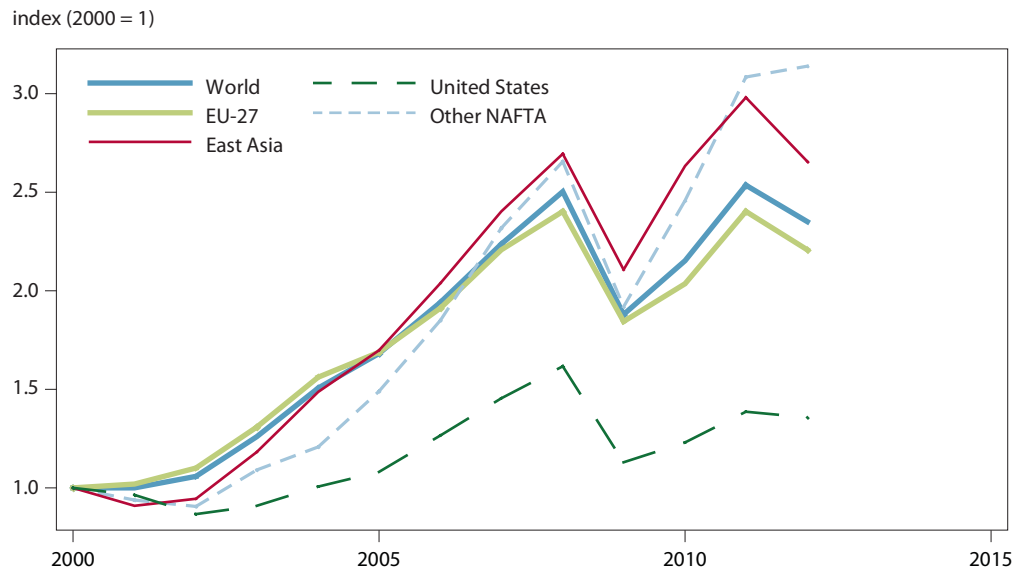


Figure A.5 Exports to East Asia, by region

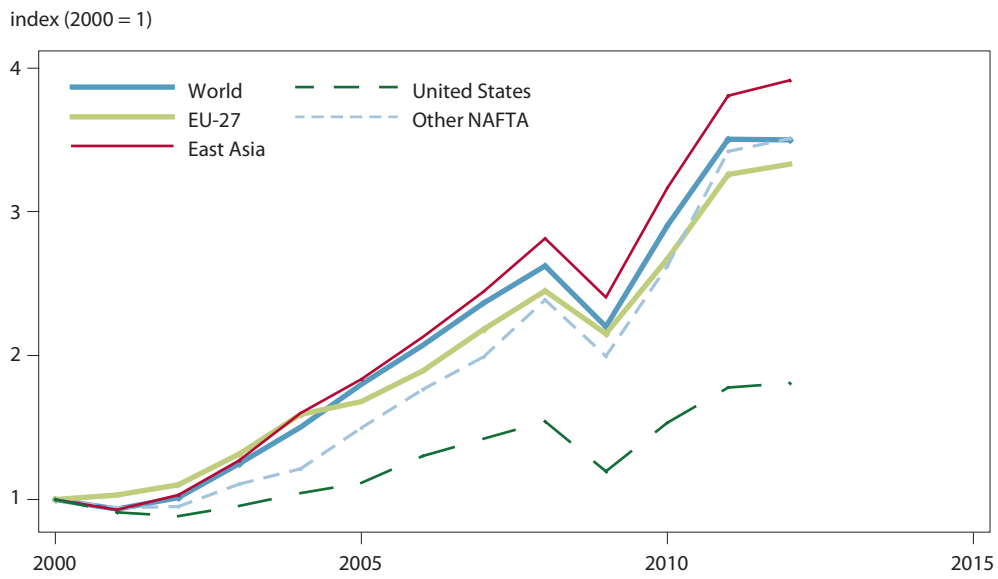


Figure A.6 Exports to South Asia, by region

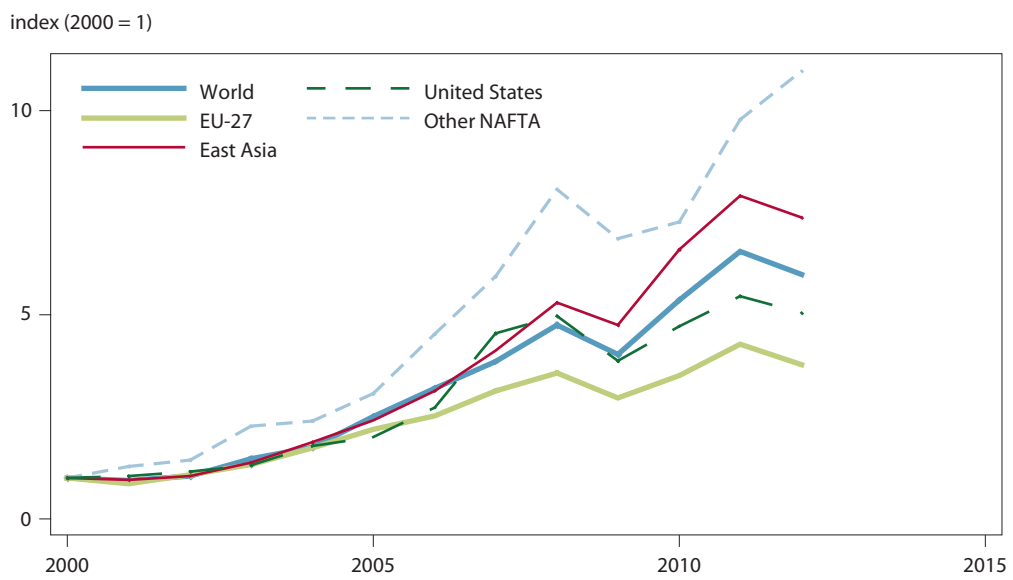


Figure A.7 Exports to Latin America, by region

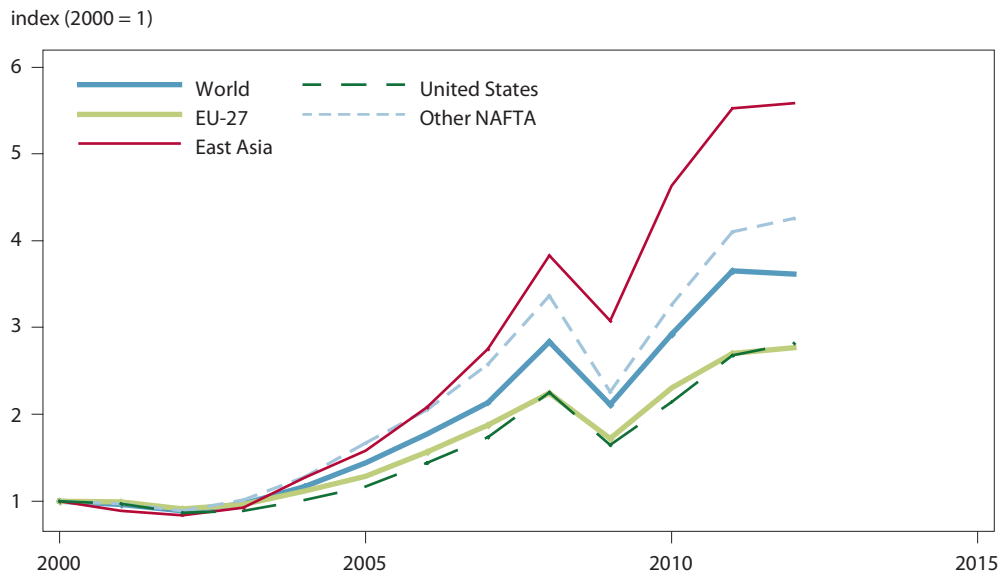


Figure A.8 Exports to the Middle East and North Africa, by region

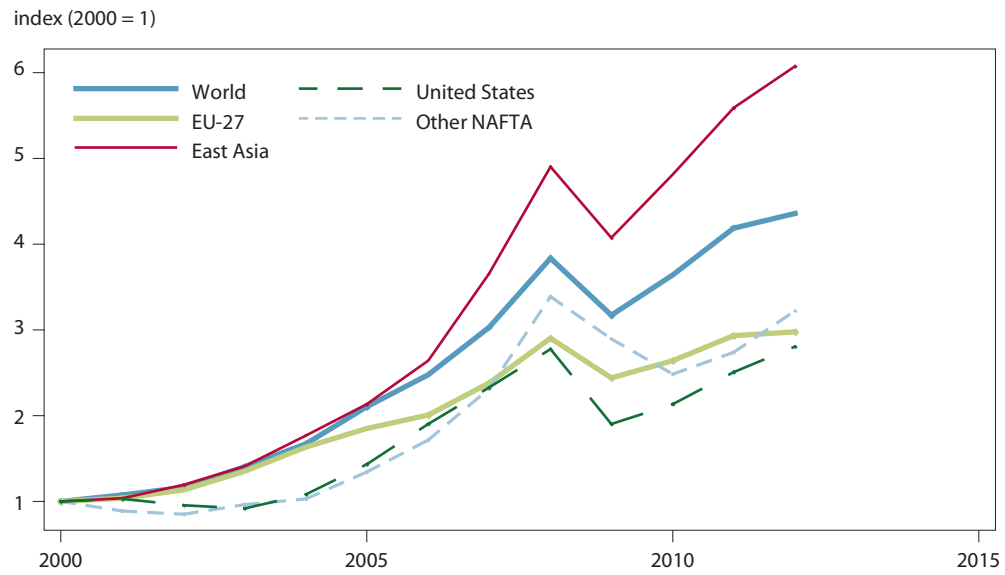
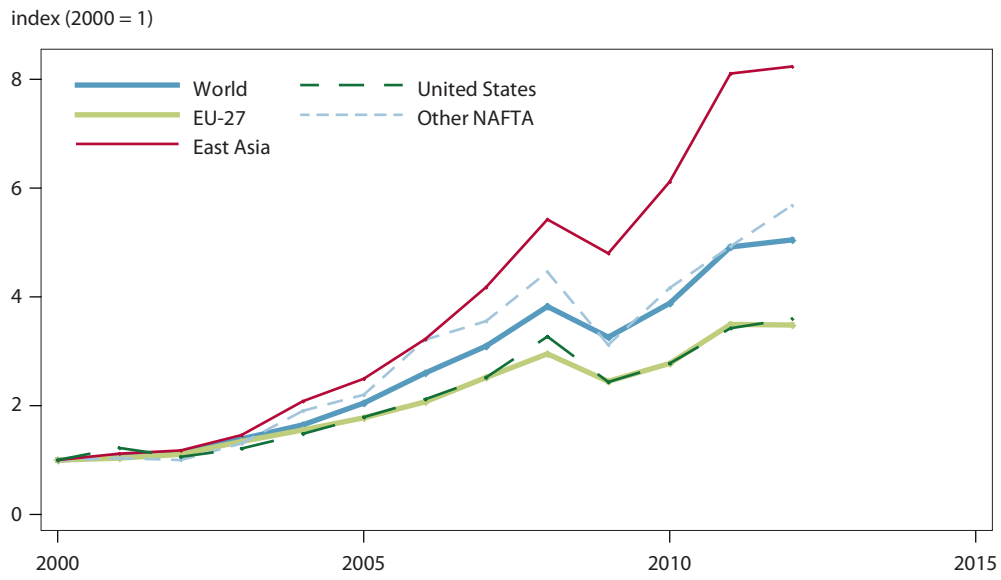


Figure A.9 Exports to Sub-Saharan Africa, by region



NAFTA = North American Free Trade Agreement

Sources: Figures A.1 to A.3: UNCTADStat Database, <http://unctadstat.unctad.org/TableViewer/tableView.aspx?ReportId=25116>; figures A.4 to A.9: UN Comtrade data accessed via World Bank, World Integrated Trade Solution Database, wits.worldbank.org/wits.

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