

The World Trade Revolution

To see how the world will eventually right today's massive trade imbalances, look to the Atlantic, not the Pacific.

BY MARTIN WALKER

LAST YEAR, TWO OF THE MOST POWERFUL CORPORATIONS in the United States reversed a decades-long trend of sending money and jobs to low-wage factories overseas and announced that they would be investing up to \$10 billion in manufacturing goods at home.

Two-thirds of that investment is to be made by Intel Corporation, which will be upgrading its existing plants and building a new chip fabrication facility in Oregon. That might have been expected. While Intel makes more than 70 percent of its sales overseas, it has traditionally kept three-quarters of its manufacturing in the United States. But the other announcement, by General Electric, was a surprise. Its investments, more than \$400 million on top of some \$600 million made during the past two years, will go toward building new manufacturing plants for household appliances such as refrigerators, freezers, and washing machines. These are traditionally the kinds of mass-market, low-technology products that can be produced more cheaply in China and imported back into the United States.

The advantages of lean manufacturing and ad-

vanced design are among the reasons GE gave for its decision, along with innovative wage agreements with its unions. Rising fuel—and thus transport—costs may have also played a part, along with a thoughtful assessment of the marketing value of a label saying “Made in USA” at a time of high unemployment. And China is less and less a low-wage economy. The well-publicized strikes at Honda’s plants in China last year led to 24 percent wage increases. In Guangdong, the legal minimum wage in export industries has been increased twice, by 20 percent and then by 19 percent, in the last 18 months.

In August, China’s state-owned shipping giant COSCO stunned the international maritime trade community by saying it would no longer honor the contracts it had signed three years ago to pay \$50,000 to \$80,000 a day to charter the category of huge merchant ships known as “capesize” (because they are too big for either the Panama or Suez Canals and must round Cape Horn or the Cape of Good Hope). With the going charter rate for such ships at around \$22,000 a day, COSCO reckoned it was losing money. After aggrieved charter firms took legal action to impound some of the ships they had leased to COSCO, the company resumed some payments, but the threat not to

MARTIN WALKER, a senior scholar at the Woodrow Wilson Center, is senior director of A. T. Kearney’s Global Business Policy Council. *Dark Vineyard*, the latest novel in his best-selling series about a policeman in rural France, was published this summer by Knopf.

pay illustrated that something fundamental seems to be shifting in world trade. The assumption of permanent, inevitable growth is crumbling.

For the past 60 years, the value of world trade has been the lifeblood of globalization, consistently growing much faster than world economic output—sometimes twice as fast. Over the past two decades, while global economic output has increased by an average of around three percent annually, the value of world trade has grown by more than five percent annually. But this trend may be drawing to an end.

This may sound counterintuitive, with unprecedented tonnage of new shipping on the stocks or being launched. Moreover, the emerging markets of Asia, Africa, South America, and the Middle East are gearing up for a massive expansion of trade among themselves as the developed economies of the G-7 countries falter.

But when we look at the main components of world trade by volume, rather than by value, doubts begin to creep in. Economists look at the value of trade, but the shipping companies that carry the goods have to think in terms of volume, which means how much shipping capacity they will need. They then have to balance the price they pay for the ships and crews against the fees their customers will pay to charter the ships.

Between 1970 and 2010, the volume of world seaborne trade more than tripled, from 11 trillion ton-miles a year to 34 trillion. Last year, half of this volume was composed of crude oil, oil products, and coal. Another quarter of it was iron ore and grain. The rest consisted of other merchandise, mostly carried in containers.

So the critical question for future trade volumes is what will happen to seaborne oil and coal, iron ore, and grain. Looking beyond the coming decade, oil and coal seem likely to start losing their dominance as sources of energy. The European Union is aiming to obtain 20 percent of its energy from renewable sources by 2020 (Germany is almost there already), and China looks set to beat its own target of 15 percent.

This is not to say that the world will not need supertankers for oil and huge LNG (liquefied natural gas) tankers for many years to come. As millions of

newly middle-class Chinese and Indian consumers start to buy cars, global demand will continue. But that demand may be fed more by pipelines than by tankers. And an increasing percentage of those new vehicles are likely to be powered by hybrid or all-electric motors, while cars of the future that run on gasoline will be getting much higher mileage than today's models.

Tomorrow's cars will also have plenty of ethanol for their tanks. The production of ethanol from wood cellulose, including wood chips and various grasses, is finally looking promising. U.S. energy secretary Steven Chu announced in August that researchers at the U.S. Department of Energy-funded BioEnergy Science Center have identified the single gene that controls ethanol production capacity in the microorganism *Clostridium thermocellum*. And scientists are now experimenting with genetic alterations in biomass plants that may allow enhanced processes such as those coming from the BioEnergy discovery to yield even greater concentrations of ethanol.

All of these developments mean that the power train revolution for the automobile is under way, and oil imported by tankers is starting to see the erosion of its century-long dominance of the trade routes.

Two other trends seem likely to reduce the world's appetite for seaborne oil. The first is the preference for pipelines where possible, and for a variety of reasons. China, for example, is building pipelines from Central Asia because of the strategic risks of depending on oil tankers from the Persian Gulf that can be interdicted by U.S. or Indian naval power. Europe will receive increased quantities of imported oil and gas via pipeline from Russia, Azerbaijan, Kazakhstan, and North Africa. The Medgaz pipeline, which conveys natural gas from Algeria to Spain, was officially inaugurated in March. The \$7 billion Greenstream pipeline from Libya to Italy, which began shipping 10 billion cubic meters of gas annually when it opened six years ago, is expected to resume operations before the end of this year, after service was interrupted by the Libyan revolution.

The second important trend is the dramatic expansion in the availability of natural gas, a far cleaner

energy source than coal or oil, and a resource that the United States and China have in abundance, thanks to the new technology of hydraulic fracturing, or “fracking.” With increasing amounts of domestic natural gas coming online, the U.S. appetite for imported energy is shrinking dramatically. A Department of Energy advisory panel recently reported, “As late as 2007, before the impact of the shale gas revolution, it was assumed that the United States would be importing large amounts of liquefied natural gas from the Middle East and other areas. Today, the United States is essentially self-sufficient in natural gas, with the only notable imports being from Canada, and is expected to remain so for many decades.” Natural gas currently supplies nearly a quarter of U.S. energy needs. Over time, the panel added, domestic shale gas could reduce America’s dependence on imported oil.

Then consider the seaborne trade in iron ore. China

accounts for half of this, much more than the combined imports of Japan, Germany, and South Korea, the next-biggest importers. This is not simply because of China’s great steel output but because the other advanced economies get a growing share of their steel from recycling. No less than two thirds of the steel produced in the United States is created from recycled materials. As the stock of steel products accumulates in China, it too will start to replace imports with recycled materials.

In the longer term, the amount of grain being shipped, now roughly three trillion ton-miles a year is also likely to decline. This is not because the world will stop being hungry; far from it. But shipping grain is a highly inefficient way of distributing food. Because of the large amounts of water used in the production of grain, shipping it is, in effect, like shipping water, and water is becoming an increasingly valuable com-

Iron ore is unloaded from a massive cargo ship, or “bulker,” in the major Chinese port city of Qingdao.



PHOTOGRAPH BY YAN JUN/IMAGINECHINA

modity that most countries will seek to preserve.

Advances in genetic modification and food technology suggest that by the next decade the shipment of grain by boat could start giving way to the shipment of smart seeds by air. New seeds that are drought resistant or salt-water tolerant are already entering widespread use. Seedlings grown from the S1, a genetically modified seed developed by researchers in the Philippines, can survive more than 10 days' immersion in saltwater, an

attribute that could save many, many lives in flood-prone areas such as Bangladesh and the Mekong Delta. It would mean that people could still eat when the floods subside. Smart seeds can already be custom designed for the soil, climate, and environmental conditions of a particular region, or even a particular field. They look like the future of food trade.

So the global trade in oil, coal, iron ore, and grain, which together account for more than two-thirds of shipping volumes, looks likely to slow in the future, and even to shrink. But trade is not going to disappear. Trade in container-shipped manufactured goods will continue, and airfreight looks likely to thrive. In their own studies, Boeing and Airbus see airfreight growing at around six percent annually for the next two decades, and they are planning and building the aircraft to carry it. Thanks to computer chips and motherboards, smartphones and tablets and liquid-crystal displays, electronics account for 40 percent of the value of all airfreight. It is a lucrative business; air carries about one-third of international trade by value, but only about six percent by volume.

Trade in manufactured goods has a big question mark hanging over it. World trade is out of balance. The United States is running a trade deficit of nearly \$600 billion a year, half of it accounted for by one country—China. Protectionist pressures are building. It may only be a matter of time before China learns



The \$12 billion Nord Stream pipeline began delivering Russian natural gas to Germany this year.

to do what Japanese and German auto manufacturers did when faced with protectionist threats in the 1980s. They built plants in the United States. As China follows, world trade volumes are likely to shrink yet further.

Perhaps the best way to understand the shift that is taking place in the nature of world trade is to compare the values of the world's two great trading routes, the one across the Atlantic between Europe and the United States, and the one across the Pacific. On the face of it, in terms of raw trade volumes and prices, the Pacific trade appears to dwarf that across the Atlantic. Last year, the United States imported \$335 billion in goods from Europe but \$599 billion from the top five Asian economies (China, Japan, South Korea, India, and Taiwan). In the same period, the United States exported \$235 billion in goods to Europe and \$230 billion worth to the five Asian countries. Include Asian countries with smaller economies such as Singapore, Malaysia, Vietnam, Indonesia, and Pakistan, and the Pacific trade was worth almost \$1 trillion last year, while the Atlantic trade was worth only \$367 billion.

But that is to measure trade as it used to be. These days, trade in goods is just one part of a much broader and more sophisticated set of commercial relation-

ships. The Atlantic nations ship fewer goods because they conduct their trade in different ways. The Atlantic trade in services, which includes insurance and financial services, data management, advertising and entertainment, and royalties and license fees, was worth more than \$300 billion last year, and the United States enjoyed a surplus of nearly \$7 billion from it.

Trade in services is only a fraction of the overall Atlantic economic relationship. Rather than transport goods to one another in ships, the Atlantic economies instead send investment, executives, product designs, and marketing strategies so that they can manufacture goods in one another's markets. The transatlantic economy generates \$5 trillion in total commercial sales a year and employs up to 15 million workers in mutually "onshored" jobs on both sides of the Atlantic.

Total U.S. investment in the EU countries is three times higher than American investment in all of Asia. And European investment in the United States is around eight times the amount of EU investment in India and China together. The total U.S. investment stock in Europe, as measured by the Office of the U.S. Trade Representative, is worth more than \$1 trillion. The total European investment in the United States is very nearly as great.

The United States and Europe are also each other's "most important commercial partners when it comes to services trade and investment," argue Daniel Hamilton and Joseph Quinlan in the latest edition of their annual survey, *The Transatlantic Economy 2011*, from which many of the statistics in this section are drawn. Hamilton is director of the Center for Transatlantic Relations at Johns Hopkins University's Paul H. Nitze School of Advanced International Studies, and Quinlan is a fellow there. "The economies of the United States and Europe have never been as intertwined as they are today in financial services, telecommunications, utilities, insurance, advertising, computer services, and other related activities,"

Europeans and Americans build plants and employ workers in one another's countries. Last year, Europe-based affiliates of U.S. companies earned record profits of \$196 billion, equal to more than half of all foreign output by U.S. affiliates. They accounted to the same share even in the recession year of 2009. The sales of U.S. affiliates in Europe last year were roughly double

those in the Asia-Pacific region. And European affiliates accounted for two-thirds of the \$670 billion in total 2008 foreign affiliate production in the United States. Indeed, American-owned affiliate companies sell as much in the United Kingdom alone as they do in all of Asia.

The transatlantic economy remains by far the largest, most integrated, and wealthiest market in the world, with 54 percent of global GDP. Even after the financial crisis, American and EU financial markets continue to account for well over two-thirds of global banking assets, three-quarters of global financial services, more than 70 percent of all private and public debt securities, almost 75 percent of all new international debt securities, and 70 percent of all foreign-exchange derivatives transactions. Of all the world's foreign exchange holdings, 94 percent are in dollars (62 percent), euros (27 percent), or sterling (four percent).

In short, world trade in the future is likely to look much more like the Atlantic trade of today than like the Pacific trade. Most trade is mutually beneficial, but the Atlantic exchange is visibly beneficial to voters and politicians in that it employs local people. This is a major advantage at a time when high unemployment builds political resistance to imports from China and other low-wage competitors. It is even more of an advantage when the greatest volume of U.S. exports to China, filling those otherwise empty containers, consists of wastepaper and scrap metal.

Herbert Stein, who was chairman of the Council of Economic Advisors under Presidents Richard M. Nixon and Gerald R. Ford, coined a saying that has become known as Stein's law: "When something can't go on forever, it will stop." This almost certainly applies to the current massive imbalances in U.S.-China trade, in which the U.S. deficit is running at more than \$20 billion a month, a pattern symbolized by all that wastepaper and scrap metal Americans ship to China. The Atlantic trade points to the more balanced and politically acceptable way this trade is likely to develop, within the concept of the slow revolution in the nature and components of world trade now under way. ■