
Exports Matter . . . And So Does Trade Finance

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Until fairly recently, US exports had a low profile. As late as 1985, exports accounted for only 6 percent of US gross domestic product. In a little more than a decade, their share doubled to 12 percent. The largest firms, of course, always exported. For many others, exports just “weren’t their thing.” At least two generations of American students have learned about exports almost as an afterthought, as the quid pro quo for unique or high-quality imports, or as the “X” before “M,” long after “C, I, and G,” and important only in comparison to “M.”¹ US government policies toward exports in their own right have been infrequent and limited in scope.² Policies toward standards, national security, foreign sanctions, and

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1. X, M, C, I, and G are standard shorthand in most economics textbooks for, respectively, exports, imports, consumption, investment, and government spending.

2. The US Export-Import Bank dates from 1934, and Webb-Pomerene associations from 1918. From time to time, the US government has used special tax preferences to encourage exports, notably the Domestic International Sales Corporation (DISC, introduced in 1973) and its successor, the Foreign Sales Corporation (FSC, introduced in 1984). Title II of the Export Enhancement Act of 1992 created an interagency Trade Promotion Coordinating Committee (TPCC) in 1993 with the mandate to streamline US official export promotion programs and to make them more effective. Its annual reports are the best single summary of US export policies. (See TPCC, *The National Export Strategy: Working for America: Seventh Annual Report to the US Congress*, 2000.)

industrial regulation have been more frequent and have had important spillovers to US exports, not all of them positive.³

Until fairly recently, exports were an eddy in the mainstream of US economic activity, and the government and the public could afford to treat them with some nonchalance. No more! Exports have grown strongly as a share of recent US economic activity, faster than almost anywhere in the world. And their contribution to the impressive US growth since 1989, 20 percent, has been twice as large as their 10 percent contribution to the level of US national income.⁴ More and more US firms, both large and small, see inviting opportunities for export growth and diversification into new markets.⁵ And influential voices have urged the US government to attack “export nonchalance”⁶ and embrace active export facilitation, if not promotion.⁷

This chapter argues that deep US export dependence is a good thing—as is the inevitable, corresponding import dependence. It argues further that the quantitative rewards from deep export and import dependence are much larger, and much more widely dispersed across US society, than previously thought. It explains that because most US trade is in inputs, not final consumer goods,⁸ trade dependence contributes to pro-

3. See Richardson (1993) for a study of US policies that discourage tens of billions of dollars of US exports, so-called export disincentives, or XD's.

4. See Huether and Richardson (2000), who impute the value-added component of US exports (net of intermediate imports) for the period 1989-99.

5. Export participation by US firms has grown sharply, as have the export shares of sales of those firms. Between 1987 and 1992, the participation of small US manufacturers in exporting rose from 10 to 19 percent; the corresponding rise for medium-sized to large (250 employees or more) manufacturers was from 49 to 59 percent (Richardson and Rindal 1996, 15). Between 1992 and 1996-97, small- and medium-sized exporters increased 10 percent in numbers, while large exporters (500 employees or more) increased only 5 percent (US Department of Commerce 1999, 5). Both small and large firms increased export-to-sales ratios, so much so that the share of the 50 very largest US exporters in total US exports has remained stubbornly at (only) 30 percent (Richardson and Rindal 1995; 1996)—although the figure for US manufactured exports is 45 percent (US Department of Commerce 1999, 4).

6. Reece and Shooshtari (2000) provide one of the most recent demonstrations of export nonchalance, in a survey of small to medium-sized firms in the US Northwest. More than half of their survey sample was not involved in international trade: they did not attend trade shows, they did not follow up on ad hoc international orders, they were “too busy . . . serving domestic customers.”

7. See, for example, the Competitiveness Policy Council (C. Fred Bergsten, chairman, *First and Second Annual Report to the President and Congress*, 1992; 1993), or Richardson and Rindal (1995; 1996). President Bill Clinton himself urged this on Congress and the nation in his January 1999 budget request for an extra \$108 million (\$81 million of which was for Ex-Im Bank) to “Promote Manufacturing Exports to Sustain US Jobs.”

8. For example, Lovely and Richardson (1998, section 2) subdivide US exports and imports into producer goods and consumer goods. For most sectors, producer-goods trade

ductivity, not to mere greed. It documents that the types of goods that we export and import—and not just the amounts—contribute to the large rewards that arise from trade dependence. It describes the underappreciated sources of these rewards, drawing on new research at the firm and worker levels. This new research is similar to research on identical twins. It compares the performance of firms and workers that are in most ways identical, except for their “global engagement.”⁹

But US policy posture, although positive, is cautious. Exports are hardly sacred. Sweeping export promotion schemes often degenerate into corruption and mindless mercantilism. Exports (and imports) should not be treated as lightly as they have been in recent generations, and they deserve promoting. But the government’s role in this promotion is more limited than it may appear. It boils down to doing no harm and being wise as a serpent. The US Export-Import Bank has an important part to play in helping to deepen US trade dependence and in maintaining the favorable pattern of US comparative advantage.

Ultimately, the nation’s standard of living matters more than exports. Although exports and imports contribute to the US living standard in important ways, the fundamental determinants of this standard are technology, resources, incentives, and the institutions that regulate and allow markets to function. Export nonchalance is costly not just if it deters exports, but also if it inhibits technology, diverts resources, and blunts incentives. Certain of the new reasons why exports are important suggest that exactly such slippage, diversion, and stagnation could happen without greater public appreciation of why exports matter and without greater public support for US export (and import) engagement. Public education may be the first and greatest concern of wise export promotion.

The chapter reviews the old and new evidence for why exports matter to the US economy. Then it clarifies how the large gains from deep export dependence are really just the other face of the large gains from deep import dependence (in spite of net gains, deepening trade dependence

is typically three to four times as large as consumer-goods trade (food, apparel, footwear, and passenger motor vehicles are the exceptions). Huether and Richardson (2000), using a different method of subdivision, find that between 1989 and 1999, US export shares of (1) capital-goods inputs increased from 9.5 to 13 percent (import shares from 11.5 to 15.5 percent); (2) intermediate-goods inputs shrank slightly from 57 to 56 percent (import shares remained stable at around 52 percent); and (3) consumer-goods household purchases shrank from 22 to 20 percent (import shares shrank from 28 to 26 percent). See also Mann (1999, chap. 3) for the United States; Andersson and Fredricksson (2000), who study intermediate- and final-goods trade within Swedish multinational firms; and Ng and Yeats (1999), who impute smaller but rapidly growing shares of intermediate components in overall East Asian manufactures trade.

9. Lewis and Richardson (forthcoming) show how the real story is broader still. Global engagement is what really generates rewards and improved performance, whether through trade dependence or through inward or outward investment and technology transfer.

also always involves costs). The discussion is refined further, showing that the “quality” (sectoral pattern) and “quantity” (the depth to which the United States embraces trade dependence) of US comparative advantage also matter. The chapter concludes with a brief statement of policy implications for US export promotion policy and the US Export-Import Bank.

Why Are Exports Important? A Dozen Answers

Some answers to the above question are obvious and familiar, and are treated very briefly. Others are subtle and surprising, springing from recent changes in the global trading environment and the means for analyzing it. All 12 answers increase the “stakes” in exporting—and the stakes in avoiding export nonchalance, in refraining from export disincentives, in providing wisely targeted policy support to exports, and in maintaining market-opening momentum in trade negotiations.

The first two benefits of exports are familiar from discussions of macroeconomics. Two others are familiar from microeconomics. But eight others from microeconomics are less familiar, and increasingly relevant to the modern US economy. All 10 microeconomic benefits explain why, *apart from* considerations of employment and trade balance, a country might benefit from more export dependence—and more import dependence; hence, more outward orientation in general. They explain why having larger export and import *shares* in overall economic activity is beneficial, even to the United States. They also explain why some sectors’ exports may be “better” than others, and why export-related jobs and export-engaged firms in export-oriented communities may be “better” than others.

Few of these benefits are well understood by the broad public. It is important to emphasize and reemphasize one overwhelming source of misunderstanding and controversy:

Having larger export shares with constant employment and trade balance *necessarily* also implies having larger import shares.¹¹ Imports are “good” for essentially the same reasons as exports. A commitment to stronger export engagement is a commitment to deeper import penetration. Export promotion and export finance support usually encourage imports as much as they encourage exports.¹² Openness is openness. It is not mercantilism.

10. Ex-Im Bank policies are described and evaluated in greater detail in other chapters of this book, especially those by Cline (chap. 7), Evans and Oye (chap. 8), and Mendelowitz (chap. 9).

11. Microeconomic evaluations often assume this and leave employment and trade-balance effects to be analyzed by macroeconomics. But see the appendix to this chapter.

12. Although few would argue that this regularity helps explain why Ex-Im Bank is called the Export-Import Bank!

The section after this one explains the new benefits from more outward orientation in an evenhanded way—in terms of both more exports *and* more imports.¹³ But it is easier to explain the high stakes in the new benefits if one starts from the perspective of exporting sectors and firms and their workers alone. That is the purpose of this section.¹⁴

Two Familiar Macroeconomic Answers

1. *Jobs.* Exports are important when they provide jobs for otherwise unemployed workers and resources. However, this benefit is not unique to exports. Any extra spending, say consumption or investment, can reemploy the unemployed.

Exports are also important if the jobs they provide are especially attractive relative to other jobs. This in fact tends to be true, and is discussed below. Exports do not really create jobs; they create “better” jobs. It is the quality of jobs, not the quantity, that matters.

2. *Trade balance.* Apart from employment, exports may be important when the trade balance is important. For example, if the US government is concerned about reducing or financing trade deficits—say to avoid the buildup of protectionist political pressure—then “greater exports” have considerable appeal over other broad alternatives (e.g., import compression, sales of US-owned foreign or domestic assets, or increased US indebtedness to foreigners).¹⁵

Two Familiar Microeconomic Answers

3. *Gains from trade.* Exports are important when they are the necessary means to obtain unique or uniquely desirable imports. Exports are the quid pro quo for imports in the classic account of gains from international trade. They are the cream of the nation’s competitiveness exchanged for the cream of overseas competitiveness. They are what our workers and resources produce best, traded for what others produce best. Without exports and imports, each nation is left producing more milk and less cream. However, even this benefit is not unique to exports. Improved technology is another way of turning milk into cream.

13. *And* more inward and outward investment and technology transfer, as argued in Lewis and Richardson (forthcoming).

14. In the technical terms of economists, this section provides a partial-equilibrium discussion, whereas the next section gives a general-equilibrium discussion.

15. But would generic export promotion policies really influence the trade balance? The question is more subtle than it appears, and has no unambiguous answer, as the appendix to this chapter shows. See also Mann (1999, chap. 6).

4. *Political economy and commercial diplomacy.* Exports are important for both political and diplomatic reasons. Export interests are often effective counterweights to insular special interests, and thus are helpful in supporting open-trade policies, as documented by Destler and Odell (1987).¹⁶ Export interests serve informally as “commercial diplomats,” communicators of US market, cultural, and political information to foreign interests.¹⁷

Three Newer Answers from Sectoral Microeconomics

Modern thinking about the current world trade environment suggests many new, less obvious reasons why exports may be important. Potential new benefits from exporting include fixed-cost economies, competitive intensity, and qualitative diversity. A sector can reduce its average costs and sharpen its price and nonprice competitiveness when more of its firms commit deeply to export participation.

5. *Fixed-cost economies.* Exports mean low overhead. Exports are important when they allow fixed costs to be spread across a larger customer base. For example, an open world market of 10 firms, each with its own research and development (R&D) laboratory,¹⁸ conserves resources in comparison with a world with 180 closed national markets, each with 10 firms and 10 R&D laboratories. The first world requires exports; the second need have none.

6. *Competitive intensity.* Exports perfect competition. Exports increase the density and intensity of competition. An open world market of 1,800 firms (10 firms in each of 180 countries), each able to sell freely to any customer, has more intense competition than the segmented world of 1,800 firms divided into 180 national markets served by 10 firms each. The first world requires exports; the second need have none.

7. *Qualitative diversity.* Exports refine quality, precision, and choice. The qualitative—not merely the numerical—density of competition also matters. An open world of 1,800 finely differentiated varieties of a product

16. This counterweight function is undermined when one country runs large, recurrent trade deficits with another country. This weakening has been an important and unfortunate factor in the past two decades of US trade with China, Japan, and other Asian partners. It has left US exporters and users of imported inputs unable and unwilling to deliver counterpressure against US insularity.

17. See Garten, Zoellick, and Shinn (1998) for a consideration of the pros and cons of active commercial diplomacy, especially in an Asian context. The cons include increased incentives for corruption and cronyism, with ensuing increases in public cynicism and declines in the integrity of democratic governance. The alleged pros (and the cons, too) could accrue just as readily from self-interested users and distributors of imported inputs and finished goods as from exporters. But they are a subpopulation of all importers, and hence are not as politically weighty as the population of (all) exporters.

18. Fixed costs, in addition to R&D, include marketing, legal, strategic, and other headquarters services.

comes closer to satisfying the precise specifications of industrial buyers and preferences of consumers than a segmented world of national markets with 10 varieties available in each.¹⁹ This is discussed further below.

And Five Still Newer Answers from the Microeconomics of Real-Life Firms and Their Workers

Recent economic research on real firms and workers suggests further reasons why exports may be important. This research matches firms and workers that are comparable (essentially identical twins) in every way, except for their export engagement.²⁰ Potential new benefits from exporting include diversification and self-insurance, informational and infrastructural externalities, better jobs, better firms, and “better” (healthier) industries. Exporting firms and their workers enjoy business and jobs that are more stable, more productive, more remunerative, faster growing, and better informed.

8. *Diversification and self-insurance.* Exports facilitate diversification; diversification facilitates stability. Because business cycles are not synchronized across regions, a nation’s firms enjoy more predictable and stable prosperity when exports allow them to be diversified²¹ geographically than when the same average business volume is concentrated locally.²² Recent research (Richardson and Rindal 1996) suggests that

19. Qualitative density, or the number of differentiated varieties that are available for any basic product group, is sometimes considered to be of minor importance. The attitude is that variety caters to the rich, whose preferences for BMWs relative to Mercedeses ought not to be indulged by the society at large. But this attitude is both dubious, on the face of it, and misleading. Variety is no frivolity. More than two-thirds of US exports and imports are made up of intermediate and producer goods, purchased by firms themselves for productive use and further processing. Qualitative density can make available “just the right lathe” or “the perfect truck for our route structure,” thus increasing corporate productivity, not consumer utility.

20. Bernard et al. (2000) is a good first effort at reconciling the new literature, which features significant differences among firms within a sector, with the more traditional literature, which assumes that a sector’s firms are identical (homogeneous).

21. Whether workers share in these gains is not clear. In a study of US workers from the US Bureau of Labor Statistics Displaced Worker Surveys, Addison, Fox, and Ruhm (2000) find that workers displaced from export-oriented sectors have the same or higher risk of job displacement as comparable workers displaced from other sectors. An earlier version of their essay (Addison, Fox, and Ruhm 1996) had been more optimistic about the effects of export orientation for US workers in the 1990s.

22. A derivative benefit is that export promotion may even serve as an alternative to import protection! Recourse to “trade remedies” (temporary barriers to imports, such as safeguards, and antidumping and countervailing duties that are contingent on “injury”) can be less frequent in a world where exports even out an industry’s business swings, and injury from rival imports is consequently less frequent. From this vantage point, exports are a form of natural self-insurance for a firm and its workers against the

American plants and firms that have sustained an export commitment, or that have initiated exports, since the late 1980s are 9 percent less likely to go out of business in an average year than otherwise comparable plants and firms (size, location, industry) that never exported or stopped exporting.²³

9. *Informational and infrastructural externalities.* Exports bring serendipity; they are important for their externalities.²⁴ For example, they can be effective channels by which information about foreign markets and customers is acquired and disseminated within the United States.²⁵ Activities of seasoned exporters convey free, valuable information to exporter neophytes, reducing the new entrants' costs of "taking the plunge." Early exports enhance the economic viability of the private export infrastructure: trade journals, advertisers, marketing consultants, logistics specialists, and shippers and consolidators that specialize in markets abroad.²⁶ Later exports enjoy lower costs "free," because of the existence of infrastructure that could not have covered its fixed costs without the early exports. These informational and infrastructural externalities are of less importance when whole export sectors become seasoned. But they may still be quite significant for the United States. Exporting is still an exotic sideshow for many US firms, especially those that are smaller, newer, and minority owned.²⁷

vagaries of import competition. Exports conserve resources that would otherwise be expended by formal administrative procedures and trade barriers that proxy inefficiently for insurance. Self-insurance also reduces so-called moral hazard inefficiency, in which trade remedies (such as third-party insurance) tempt firms to alter behavior in wasteful ways, e.g., using corporate resources to bring antidumping suits to harass foreign rivals.

23. Chen and Ku (2000) find similarly greater stability for Taiwanese firms with outward direct investment stakes, relative to otherwise comparable Taiwanese firms. This goes against the intuition that firms with cross-border investments are more volatile, more footloose.

24. Externalities are hard-to-price (and unpriced) benefits or costs that spill over from one economic activity to another. Pollution is a classic negative externality. Those described in the text are positive externalities: the value of information and infrastructure that one firm gains "free," because of the exporting activities of other firms.

25. One veteran trade fair organizer claims that the two most important things he brokers for his US exporter clients are "gossip" (information) and trust (Richardson and Rindal 1996, 14; see also Richardson and Rindal 1995, 9, 17, 20-21).

26. See, e.g., "More Small Firms Are Turning to Trade Intermediaries," *Wall Street Journal*, 2 February 1993, B2. Kolarik and Ellsworth (1993) report that a little more than one-third of US exports pass through export intermediaries.

27. Headd (1998) implies that such gains may differ across ethnic groups, because US firms with fewer than 500 employees more typically export if they are Hispanic-owned and Asian-Pacific-owned (2.7 and 2.3 percent, respectively, of such small firms export) than if they are owned by "whites" (1.8 percent export) or "blacks" (0.8 percent export).

Exports can also be effective channels by which information about US products and services is disseminated to overseas buyers.²⁸ So-called follow-on business involves repeated sales and service by a firm that has made the initial export incursion, as well as by the initial firm's own suppliers and subcontractors who inherit the relevant commercial connections and networks "free" or at greatly reduced cost.²⁹

10. *Exporting firms are "better" firms.* Exports are a corporate catalyst. US exporters surpass nonexporters that are comparable in size, location, and industry in productivity, growth, and technological adaptation. Richardson and Rindal (1996, 13) found that

American plants and firms that have sustained an export commitment, or that have initiated exports, since the late 1980s, experience almost 20 percent faster employment and sales growth than those that never exported or stopped exporting.

Exports help enhance a firm's own competitive "timbre." Exports are important as a barometer of a firm's competitive success. Successful exporting is winning one's share of the "away games."³⁰ Authors know that their writing is influential when it is translated for foreign audiences. Restaurants know that their service is first-rate when they attract a clientele from far as well as near. Producers know that their product is competitive when its export markets are as diverse and deep as its home markets. Actively seeking to achieve export success can sharpen incentives to innovate and can tighten up a firm's internal organization, enhancing its internal efficiency.³¹

28. Conversely, export unpredictability (which is often fomented by policy disincentives such as sanctions) can create negative informational externalities by making all US exporters suspect as unreliable suppliers.

29. See Krugman (1992) for the view that even broader "infrastructural externalities"—involving suppliers of nontradable intermediate goods as well as marketing and information—establish an empirically relevant case for policy promotion of scale-sensitive industries that depend intensely on these externalities. Facilitating exports is, of course, one example of such policy promotion, as, e.g., Trindade (1999) demonstrates.

30. This helpful sports and fitness metaphor is spelled out elegantly by Donald M. Spero, corporate executive and Olympian, in Richardson and Rindal (1995, 27, and 1996, 22).

31. Nelson (1993, 16-17, 24) summarizes the strong cross-national evidence (from elsewhere in the same book) for how export orientation provokes a firm's own innovation. Baily and Gersbach (1995) and (more guardedly) Tybout (2000, 34-35), summarize similar evidence for how export orientation—as well as other links to the global economy—tighten up internal efficiency. A slightly older research literature, however—Caves and Barton (1991, 71-72, 93), Nishimizu and Page (1991), and Tybout (1992, 205-06)—found more mixed evidence for how export orientation enhanced internal corporate efficiency. Caves and Barton found that an industry-wide measure of internal efficiency ("X-efficiency") is actually lower for US industries when export orientation is higher. But they argued that there is further evidence that this is an anomaly due to aggregation: exporting firms within an industry *do* enhance their internal efficiency, as expected. Nonexporting

11. *Exporter jobs are “better” jobs.* Exports and “high-value-added” jobs go together. US exporters and their workers surpass nonexporters that are comparable in size, location, and industry.³²

- Production workers at exporting plants earn 6.5 percent higher compensation;
- Nonproduction workers at exporting plants earn 4.5 percent higher compensation; and
- Worker productivity at exporting plants is up to 20 percent higher.³³

The compensation and productivity premiums for export-engaged workers are even larger on average, making *no* adjustments for comparable size, location, and industry, because exporters are disproportionately made up of large firms with large plants in high-wage industries and locations.³⁴

12. *Exporting sectors are “better” sectors.* The whole league “plays” better with exports. Sectors with lots of exporting firms have healthy rivalry, healthy dynamics,³⁵ and healthy spillovers.³⁶ Exporting firms grow faster and fail less frequently than nonexporting firms.³⁷ They steadily displace nonexporting firms in high-export sectors, improving the entire sector’s average levels of compensation, productivity, and technological adaptation. Forty percent of the US growth in overall manufacturing productivity between 1983 and 1992 can be attributed to the faster growth rates of US plants that export, relative to slow-growing or shrinking or failing plants that do not (Bernard and Jensen 1999b). The effect of export engagement on productivity is due to rejuvenation (rationalization), the

firms end up further away from the efficient frontier that has been pushed out by the exporting firms; when exporting and nonexporting firms are added together, the industry as a whole looks further away from its efficient frontier, but precisely because exporting has “upped the standard” for internal efficiency.

32. See Bregman, Fuss, and Regev (1991), who find similar patterns in Israel, and Ergas and Wright (1994), who find them for Australia. Preliminary results from a study of the exporter community by the Australian Trade Commission find that jobs at exporters are also safer, less likely to be temporary or part-time, and more eligible for training.

33. Exporting plants have a somewhat smaller but still significant edge in total factor productivity, according to Bernard and Jensen (1998; 1999a; 1999b).

34. Yet small US exporters enjoyed differential performance that was never worse and often better than large exporters, in each case relative to comparable nonexporters.

35. Cameron, Proudman, and Redding (1999) find a high correlation between measures of UK sectoral openness and total factor productivity from 1970-92.

36. Lovely and Rosenthal (2000), in very early, provisional work, find a high correlation between the concentration of exporting plants within a US zip code and the zip code’s average labor productivity among its plants, while controlling for other factors.

37. In Taiwan, so do firms with outward direct investment abroad (Chen and Ku 2000).

displacement of low-productivity plants by high-productivity plants in the same sectoral category (Melitz 2000; Tybout and Westbrook 1995).

An Important Caveat

But these newer conclusions remain controversial.³⁸ The most challenging of the objections is that correlation is not causation—the most likely causation is that a “good” firm’s wise decisions generate both performance payoffs and export success. The argument holds that

exporters and their workers have superior performance, but only because smart business decisions generate correlation between better wages, higher profits and stronger export competitiveness. Export commitment and better performance are not causally related. Promoting smart business is, of course, wise; promoting exports gets you nothing on top of that.

This challenge, though alluring, is simply wrong in important ways.³⁹ Most important, it is wrong about the stability and growth benefits described above. Bernard and Jensen (1999a) show that these *do* accrue to smart businesses that decide to export *after* they do something demonstrably smart, and that they do not accrue to nonexporters, however smart they are. Thus

export commitment and smart business decisions are mutually supportive. Each encourages the other. Each is a distinct source of favorable performance.

It is true that smart US plants—those that adopted technologies more aggressively than the median for their size class—grow jobs faster and have significantly higher survival rates, just as exporters do. But the finding that exporters grow more stable jobs more rapidly is *not* an indirect result of technological activism—both exporting and technological smarts have independent, additive effects on job stability and growth.⁴⁰

38. Richardson and Rindal (1995, 25-28; 1996, 29-32) address a number of objections.

39. The best articulation of the challenge is found in a recent firm-level study by Clerides, Lach, and Tybout (1998) of Colombia, Mexico, Morocco. It finds indeed that good firms begin exporting, but that productivity trajectories do *not* shift subsequent to a firm’s commitment to exporting (consistent with Bernard and Jensen 1998; 1999a). But this study does *not* examine whether trajectories for employment or firm or plant mortality shift favorably, subsequent to exporting, as Bernard and Jensen (1999a; 1999b) find. And it is contradicted by other recent firm-level studies: for Taiwan by Aw, Chung, and Roberts (1999), who find an upward shift in productivity trajectories subsequent to exporting; and for Bulgaria by Djankov and Hoekman (1998), who find an upward shift in productivity trajectories from significant and sustained *redirection* of exports toward OECD buyers and *redirection* of imported materials and components toward OECD suppliers.

40. See Jensen and Musick (1996), who use the 1987 and 1992 US Census of Manufactures for fabricated metal products, machinery, electronics, transportation equipment, and scientific equipment—Standard Industrial Classifications codes 34-38—to measure both technological choice and export commitment.

Why Are Exports *and Imports* Important? A Broader Recap

But what about imports? Without them the arguments about the importance of exports seem suspiciously like modern mercantilism. In what sense are more imports the inevitable companion of more exports? In what sense are the benefits from exports simply the opposite face of the costs of imports? Firms and jobs in import-competing sectors are often good firms and good jobs, *too*. Are they not lost when exports are promoted? This section offers some answers. It squares our *nonmercantilistic* line of argument.

There are many reasons for the US economy to engage the global economy in deep dependence on *both* exports and imports. These reasons go well beyond the tiresomely familiar reasons (however true) of efficiency and comparative advantage.

Trade as Diversity

Trade encourages valuable diversity. Many people understand that exports are good, and think of imports as the necessary evil to be able to export. Classroom contrarians sometimes like to claim that the opposite is more logical. Exports are the necessary evil to get imports, they say. Exports are the stuff we produce but have to give up; imports are what we get without having to produce it. It seems unfruitful to polarize the discussion in either of these ways. The issues are not clear-cut. Exports and imports each have distinctive value.

We have seen the distinctive value of exports. Imports also have a distinctive value. But the value of the one is not the same as the value of the other. So their analysis cannot be symmetrical. We can illustrate. Most people would adhere to the following:

- People prefer to produce goods that are as highly valued as their personal capabilities permit.
- People like to consume goods that are as highly varied as their needs require.

Most societies would prefer the same if we put it to a vote: high-value production and diverse opportunity to acquire goods that match needs. That is the point. That is exactly what international trade dependence does. Exporting encourages a society to produce goods that are especially highly valued, given its collective talents. Imports allow it to diversify its spending across goods that are highly varied, given its collective tastes—and across imported components that match production needs closely and are subsequently embodied in production.

Trade as Transformation and Availability

Exporting is a force for transformation. Importing multiplies options.

Exporting is a force for corporate innovation, diversification, stability, and information.

Exporting is also a force for job transformation. Exporting increases society's high-value-added jobs—jobs that can be filled by workers who are currently in more ordinary jobs, workers who are possibly displaced by import competition. No transformation is costless. There are inevitable and painful burdens.⁴¹ But the burdens are familiar burdens of transition to any better job—having the requisite skills, adaptability, and mobility.

Importing is a force for availability that may not be indigenous to a society:

- Availability of good quality, sometimes higher, sometimes simpler (as in appropriate technologies);
- Availability of precision inputs—for example, parts, components, and equipment that are perfectly suited to the production needs of US firms;
- Availability of information about technology, design, and marketing or of partnering potential; and
- Availability of variety, simplicity, and style.

This kind of importing is one of the keys to fruitful job transformation in exporting and in all workplaces. When imports are the source of superior machinery—or precision components or better ideas—then the productivity of typical workers rises. They get to work with better tools and methods. They also get to negotiate for the better compensation that

41. Richardson and Rindal (1996, 9, 26) include real—and illustrative—case studies of worker and firm adjustment. Research based on the Displaced Worker Surveys shows that a typical worker's lifetime earnings loss from involuntary displacement is large—\$80,000. But up to half of that is estimated to be rents attributable to job-specific experience, job seniority, and other traits that have no particular value in alternative jobs. The worker loses when such rents are forgone, but the society as a whole does not. Workers who must switch industries to become reemployed, however, have 2 to 12 times larger losses (with a smaller share representing rents) (Jacobson, LaLonde, and Sullivan 1993; Jacobson 1997). Kletzer (1998a; 1998c), using the same Displaced Worker Surveys, shows how hard it is to disentangle the distinctive effects of “trade displacement” from the way workers with high search costs and low search skills are overrepresented in import-sensitive industries (see also Kletzer 1998b). Addison, Fox, and Ruhm (2000), however, claim to be able to isolate significant effects of trade, technology, and socioeconomic status on US job displacement in the mid-1980s and early 1990s.

is essentially their share of the increased productivity.⁴² In turn, in all these cases, US *exports* of air travel services, of computers, and of automobiles are encouraged by the job-complementing *imports* that enhance worker productivity. This sheds light on the controversial practice of “outsourcing.”

Trade and Outsourcing

Outsourcing is a mixed blessing. Productivity-enhancing imports all occur because of overseas “outsourcing” by US firms. That term has become familiar—and often alarming—in the past few years. The fear is that the United States is “losing” the ability to supply itself with frontier technology, good-quality machinery, and precision components.

But there is an untold story that countervails such worries. It could be called the “swap-sourcing” story. Overseas sourcing is prevalent all around the world. It is not just a US phenomenon. When firms abroad outsource, or when their US-based affiliates buy supplies, US firms often turn out to be the ideal source for what the foreigners want—but only if they meet global-market standards. Americans export aircraft, semiconductor chips, and automotive components as well as importing them. In fact, capital goods and intermediate inputs accounted for almost 70 percent of both US exports *and* imports in 1999, according to Huether and Richardson (2000), who use the US input-output tables to impute US trade in inputs. Worldwide, capital-goods exports alone increased from 30 to 37 percent of global trade during that same period.⁴³

Outsourcing is a universal and *reciprocal* practice. Hence “swap-sourcing” would be a better name. Jobs and business that some US suppliers may lose because of outsourcing are offset by jobs and business that other Americans win through export supplies to overseas business customers,

42. See Ozler and Yilmaz (2000) for theory and Huether and Richardson (2000) for US evidence. See Connolly (1998) for empirical evidence across 40 countries, Hoekman and Djankov (1997) for empirical evidence in Central and Eastern Europe, and Bleaney and Wakelin (1999) for empirical evidence in the United Kingdom (where high “imports” of R&D from other sectors enhance a sector’s own export competitiveness). This is not mere ivory-tower reasoning. In the United States, United, Northwest, and US Airways workers are aided by imports of European aircraft and parts that help them operate certain routes more effectively than if they used US-made counterparts. Workers at US computer assemblers gain from imports of standardized semiconductor chips and subassemblies that embody them. Unionized workers at New United Motor Manufacturing, Inc., the California joint venture between Toyota and General Motors, benefit from imported ideas about inventory and quality control, about organizing supplier relationships, and about assigning shop-floor tasks.

43. Grant, Papadakis, and Richardson (1993, table 5).

or through local supplies to their US affiliates.⁴⁴ Even small US exporters have prospered from foreign outsourcing—“US-sourcing,” to coin another counterbalancing phrase for outsourcing.⁴⁵

Global Competition Often Involves Both Exporting and Importing

From this perspective, global competition is less a do-or-die war for sweeping industrial dominance, and more a set of recurrent battles to secure and maintain precise capabilities that can be exported worldwide at low cost—because of economies of scale in research, marketing, purchasing (often of imported components), experience, quality control, and service.⁴⁶

Today’s exporters face import competition in very closely related products and services. Today’s import competitors can also become export-competitive in closely related markets.⁴⁷ Few firms today can claim to be pure exporters or pure import competitors.⁴⁸ Integrated global markets in highly specialized goods and services make such pure segregation impossible.

The new global competition in mutual swap-sourcing is no less intense than the old competition, but it is more productive. It makes available new qualities and new varieties. It is cost-effective. Its winners are the globally most capable firms and workplaces, not just the nationally and locally most capable. Its winners are also the users of these capably produced products and services—often themselves workers and corporate buyers—who value dependability, precision, and availability as much as they value low cost.

44. The United Auto Workers Local 624 workers, featured in Richardson and Rindal (1995, 14, and 1996, 9), sell exports of transmission components all over the world. Hoekman and Djankov (1997) show how Central and Eastern European export expansion was correlated with increased imports of intermediate inputs and machinery.

45. Richardson and Rindal (1996) discuss several case studies.

46. Global competition, along with often involving both exporting and importing, also often involves investing, technology transfer, and intercultural personnel exchange. See Lewis and Richardson (forthcoming).

47. Huether and Richardson (2000) find, e.g., in a study of US exports and imports from 1989-99 in 69 sectors of the US input-output table, that the fastest growing 20 sectors in their exports include 14 sectors that are also among the top-growing 20 sectors in their imports. Ishii and Yi (1995, 13) similarly find that the industries in which imported inputs by US multinational corporations rose dramatically between 1977 and 1989 were the *same* industries in which multinational corporate exports increased.

48. The countries that are the top nine largest exporters of producer goods in the world are also the top nine largest importers of producer goods in the world. Their rank in the exporter “hit parade” is never different by more than one notch from their rank in the importer hit parade. See Hummels (1994, table 3).

Trade to Grow Growth

Exports and imports both help to “grow growth”!⁴⁹ Open trade increases an economy’s growth potential as well as its living standard. This is not an obvious proposition. Most traditional reasoning suggests that an economy’s average standard of living will be higher with open trade, but not necessarily that its growth rate will be higher.⁵⁰ What is it about open trade that enhances an economy’s annual salary raises as well as its salary level? What is it about open trade that enhances an economy’s body-building capabilities as well as its health maintenance?

The answer involves three simple realities. First, growth requires specialized resources that are dedicated to growth. Trade often provides them. Second, such resources usually must be pulled away—sacrificed, transformed—from traditional and familiar activities. Trade helps this transformation. Third, there are both smart and dumb ways of organizing these dedicated, transformed, growth-pursuing resources. Trade is one of the smart ways.

These observations may be simple, but their implications are very rich. First, growth is a unique economic activity that itself requires resources—resources that are above and beyond those required to maintain status quo levels of output. For output to grow, there must be new work effort, or new skills and machines, or new research into new ideas and new technologies that enhance the productivity of existing workers and machines—making them “twice the worker they were.” Trade makes available new resources, technologies, and ideas.

49. Maurer (1999) is a comprehensive source, both for the theory underlying this section and for empirical evidence on how imports of capital goods can increase total factor productivity growth and output growth. Connolly (1998) did an empirical study of 40 industrial and developing countries from 1970 to 1985, and found that those that doubled their import dependence on high-technology imports from industrial countries also grew faster by from 0.1 to 0.3 percent per year.

50. The World Bank (*Global Economic Prospects and the Developing Countries*, 1996), before the 1997-99 financial crisis, projected that growth rates in the standards of living through 2005 for industrial economies and “fast-integrating” emerging-market economies would be 2.5 to 3.5 percent, but only 1 to 1.5 percent for other economies. The measure of integration included not just trade (both exports and imports) and direct investment, but low sovereign credit risk as well (Richardson et al. 1998, 58-59). Even in the teeth of the financial crises between 1993 and 1997, a recent study by A.T. Kearney (2000, 5-6) finds a similar correlation—among 34 representative countries, per capita GDP grew 4 percent faster in “aggressive globalizers,” also using a broad measure of globalization, than in the rest of the sample, and 2 percent faster in “strong globalizers.” See also Wacziarg (1998) for empirical calculations of roughly the same size, and World Trade Organization (1998, 45-46, and appendix table 2) for a recent survey of research linking a country’s trade openness positively to its growth rates. See Krishna, Ozyildirim, and Swanson (1998) and Maurer (1999) for a survey of the theory and empirical evidence (see also Barro 2000). There is a critical core of researchers who remain unconvinced, best represented by Rodriguez and Rodrik (1999).

Second, for an economy to start growing faster, resources need to be diverted from status quo uses to new uses. These new uses include research and the production of new, growth-enhancing resources themselves—such as new machines, new technologies, and new workplace skills. For an economy to start growing faster, at least some of its traditional sectors must temporarily shrink to free up the resources needed to implement growth. The United States has always been more competitive in innovation than in traditional activities. It pays to divert resources from the traditional to the innovative, just as trade encourages.

Third, because growth itself requires resources, an economy can pursue growth efficiently or inefficiently. It all depends on how it organizes the resources that enhance growth. Krugman (1994) recalls famously that the strong medium-run growth record of the former Soviet Union in the middle of the twentieth century sowed the seeds of its own long-run destruction. Its insular and coercive allocation of resources to growth invited inefficiencies and waste by distorting market signals generally and global market opportunities more particularly.⁵¹ Trade traditionally enhances efficiency. That includes efficient growth.

In sum, international trade in either growth-enhancing resources (e.g., patented technologies, advanced education, or the services of business and financial consultants) or in the goods involved in growth activities (e.g., machine tools that themselves make machines) is one way to pursue more efficient growth. Trade opens efficient channels for all manner of economic activity. Growth is one of those activities.

Growth to Grow Civility

Growth, in turn, opens channels for hard-to-measure benefits, such as democratic process and environmental improvement. Growth improves the social climate. Unionists, among interviewees in Richardson and Rindal (1995; 1996), emphasize the virtuous circle in which realistic engagement of global competition creates superior plant-level performance. This performance provides the growth and profit cushions that firms are willing to share with their workforce, either through negotiations or through explicit worker stakes in performance and profit. Freeman (1995, 18) notes that rising social inequality with strong overall growth evokes more acceptance than rising inequality with weak overall growth. “Getting a disproportionately small share of the gains” feels tolerable if problematic; “bearing the brunt of the losses” feels intolerable. Anthropologists have documented how, when growth is unusually low or negative, destructive forms of social reciprocity (“I offer nothing to you because I expect

51. Krugman goes on to argue, more controversially, that the same was true of several fast-growing East Asian countries in the 1980s and early 1990s.

nothing from you”) displace constructive forms of social reciprocity (“I’ll help you because I expect you’ll help me”).

How Some Export-Import Patterns Are Better Than Others

The research summarized in this chapter, although still controversial, undergirds this author’s conviction that the benefits of deep export and import dependence are high, even for the US economy today. In addition, this research offers an implicit conclusion, albeit also controversial: The *pattern* and the intensity of exports and imports also matter. Some patterns are better than others—“higher-quality” comparative advantage, in a sense.

At least in principle, a country should prefer its exports and comparative advantage to be in sectors with strong market powers, diversely differentiated products, strong technological growth, and positive production spillovers (externalities that enhance productivity in closely related sectors, or the productivity of their own workforce). Correspondingly, a country should prefer its import dependence to be in the opposite kinds of sectors, including those with positive *use* spillovers (externalities that accrue to users of a good or service from use by others, such as network externalities in telecommunications and informatics sectors). Other things being equal, exports would be more beneficial from sectors with large fixed costs, significant positive linkage to other sectors or to workers in occupations with large spillovers, and many different qualities (detected in practice by strong product differentiation and by simultaneous exports and imports). High-technology goods and services are generic examples of desirable exports, with large R&D costs and significant spillovers to engineers and innovators, and to successive generations of products in their own and related sectors.

High technology and other sectors with similar characteristics are sometimes called “strategic” in the research literature. The economic analysis of strategic trade and industrial policy has developed rapidly in the past 20 years, yet it is still subject to fierce academic debate over its deepest fundamentals. It also raises many concerns in practice—capture, corruption, cronyism—that are not the focus of this chapter.⁵² However, it is worth noting that the US Export-Import Bank for a number of years has been explicitly charged with supporting exports in key linkage industries and those with unusually high-skilled jobs, spillovers to technology

52. More controversially still, if firms, workers, or communities are heterogeneous in these same qualities, then a country should prefer comparative advantage that gives advantages to those firms, workers, or communities with the qualities that are most beneficial.

that develops new capital goods, and high value added (what an economist would call sectors with high total factor productivity).⁵³

Export Promotion and Finance

So what are the lessons of this chapter for US export promotion and finance policy? First, do no harm. The United States still follows policies that discourage exports, and seems to be accelerating its recourse to nickel-and-dime sanctions and regulatory disincentives. It also fails to meet the export finance competition of global rivals to the US Export-Import Bank, thus forgoing potential exports.⁵⁴

Second, be as wise as a serpent. Broad, generic export promotion is ripe for corporate capture and corruption. The export-promoting policies that seem to work best are either infrastructural or tactical. Infrastructural policies provide information,⁵⁵ documentation, speedy clearance of customs and export controls, a stable dollar, fair treatment abroad for US products and services (and national treatment at home for foreign products and services), and so on. Tactical policies provide informed embassy personnel, and targeted market-replacing and market-perfecting export finance support, such as Ex-Im Bank has pioneered.⁵⁶

Last, do the right thing. Educate. Deliberate. Debate. Attack insularity and nonchalance. More than anything else, in the current US environment, that means getting the word out clearly and honestly to Americans that

53. For example, see p. 11 of the *1999 Annual Report* of the US Export-Import Bank.

54. Richardson (1993) calls such forgone-policy export disincentives “passive” export disincentives.

55. For example, facilitating the information flow to US exporters through data collection (e.g., the slow-to-be-updated Exporter Database; see Kolarik and Ellsworth 1993, and US Department of Commerce 1997, 1999).

56. Richardson (1993, 79-90) has derived one important qualitative conclusion about Ex-Im Bank finance policies, and translated it into a quantitative estimate of as much as \$3 billion worth of US exports forgone in the early 1990s from weak export finance. The qualitative conclusion is that US exports are especially sensitive to export finance policies, much more sensitive to them than, e.g., to taxes and regulatory policies. US export finance inadequacies are both capitalized (multiplied, or leveraged over time) and generate more elastic (i.e., less loyal) current demand for US exports. By contrast, tax and regulatory disincentives can often be “passed along” to buyers (“shared” with them). Richardson’s calculations predated the widely acknowledged credit rationing associated with the Mexican and Asian-Russian financial crises of the mid-1990s. Under credit rationing, the qualitative and quantitative impact of adequate export finance programs on US exports is even greater. This is a situation in which financial markets really *do* observably fail, and in which Ex-Im Bank and other similar export finance programs virtually restore missing finance markets and “save” multiplied billions of dollars that threatened to convert a global export recession into a global export depression.

global market engagement is a great opportunity: Not without risk and pain; but not without significant gain either, at least for most.

Conclusion

This chapter has shown how wise export activism can serve as effective import protection. In essence, a good export offense is a good import defense. Japan has indelibly etched on world consciousness the opposite idea: that import protection might facilitate export success. The reasoning applies especially to high-technology sectors and others with declining costs or with quality competition to establish a dominant product. But exactly the same reasoning supports the argument that active exporting is an effective means of corporate protection against imports.

Export orientation helps firms in declining-cost sectors to expand their markets, slipping lower along their cost curves, and making them more cost competitive. Export orientation is the *only* way for firms to compete in the race to establish worldwide quality leaders. When export-oriented firms have either lower unit costs or dominant quality, they can better beat back import incursions in their home markets.⁵⁷

In addition, export orientation is one of the surest ways of collecting information about potential import competition. Firms can better avoid being blindsided by unexpected surges of imports when they are able to monitor rivals by exporting into their home markets.

In practice, these possibilities have many implications for both corporate strategy and government policy. For a firm, export nonchalance actually enhances the relative competitive position of rivals. It is not just that an opportunity is lost when exports are neglected; it is that nonexporting actually creates opportunities for competitors—cost advantages, quality advantages, and informational advantages. For government, this heightens the importance of open-trade activism and wise export-promotion policy.

The stakes are higher than most people realize in deepening US trade dependence; and so are the stakes in devising policies that support and maintain that objective.

Appendix: The Ambiguous Effect of Generic Export Promotion on the Trade Balance

None of the benefits of exports (and imports!) described in this chapter depends on the trade balance—even though exports are, of course,

57. One example of this, from Richardson and Rindal (1996, 25), is that neither the Will-Burt Company nor its European rivals compete in each other's home market for telescoping masts.

by definition its “positive” component. That is just as well, because the impact of export promotion (and trade policy in general) on the trade balance is ambiguous. It could be positive, negative, or zero. Here are three accounts.

1. *Simple intuition*: It could be *positive*. Simple intuition seems clear. The trade balance is “X-M,” so it must be more positive with more exports; promoting exports would improve the trade balance.

2. *A more sophisticated account*: It could be *zero*. A floating exchange rate system undermines simple intuition. Policies that promote demand for our exports cause increased demand for dollars. A stronger dollar in the foreign exchange markets generates compensating declines in exports and rising imports. Export promotion would have little if any effect on the trade balance (overall or bilateral). The same would be true, for that matter, for almost any border policy.⁵⁸

3. *Thinking more deeply still*: It could be *negative*. Fair enough, but mobile international capital undermines this account, which itself undermined the simple intuition with which we began. US export promotion increases the returns on export-oriented investments in the United States and discourages similar investments abroad, especially by any multinational firm that has a choice between sourcing from the United States or sourcing from an affiliate abroad. Most of this effect of export promotion would represent a one-time cross-border reallocation of corporate assets.

But there is also a recurring effect whenever economies are growing (McCulloch and Richardson 1986, 54-56): proexport policies cause yearly increments to a firm’s investable funds also to be reallocated across borders toward the United States. Strong US export prospects encourage yearly replacement investment, plant expansion, and facilities upgrading in the United States, and discourage these same investments abroad. Larger US and smaller foreign investments annually for these purposes imply a larger steady-state US capital-account surplus, and correspondingly larger steady-state current-account deficit. (The current-account balance must, of course, be the mirror image of the capital-account balance.)⁵⁹ So

58. Bergsten and Cline (1987, especially 138-43) reason from this perspective. So does Litan (1991), although he also pays passing respect to the third view, that the impact is negative.

59. This discussion springs from current analytical thinking about international payments. Current analysis stresses the role of international trade in assets as the dominant determinant of exchange rates, and hence of trade in goods. Although we have become accustomed to viewing international borrowing as a means of filling gaps between exports and imports, in today’s world this traditional perspective may be misleading. It may be more nearly correct to think of trade in goods and services as adjusting to gaps between capital exports and imports. When this is so, the nation’s current-account deficit will reflect and accommodate the capital-account balance; for an extended early account of this perspective, see McCulloch and Richardson (1986). For more recent discussions, see Obstfeld and Rogoff (1996) or Mann (1999, especially chap. 2).

export promotion may actually increase the current-account deficit because of its ongoing impact on investment incentives.

The ambiguity is clear, if unresolved. Boosting exports may improve the trade balance, leave it unaltered, or worsen it.

Fortunately, resolution of the ambiguity is not necessary for the perspective adopted in this chapter. Whatever the impact on the trade balance, US exports themselves—and imports, as well—are worth cultivating. Outward orientation alone is reason enough to care, as the chapter has argued. We maintain that the ratio of exports (or imports) to output is a much more important correlate of prosperity than the difference between exports and imports!

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