

Yes, But Does Globalization Really Cause Any of This Stuff?

Global commitment and favorable economic performance, whether measured at the level of a firm, a worker, or a community, are closely correlated. Globally engaged firms grow faster, are more productive, and have better survival rates. Workers in these plants earn higher pay and benefits. And the communities in which all of this is happening experience surprisingly large and favorable spillovers from their global engagement.

But is this really because global commitment matters? Do any of these findings necessarily imply that it is globalization that caused the performance gains? Or is it more the other way around, that favorable performance causes both local success and global success? Those are the crucial questions to answer in deciding whether further globalization is valuable. If globalization is at least in part the cause, and not just the effect, then continuing to embrace global integration is wise. If otherwise, then further global integration will disappoint micro units, as many nostrums do, and efforts to promote integration will only divert Americans from the real pursuits that deliver performance. Even then, however, we will see at the end of the chapter how further global integration can still rejuvenate societies of micro units.

The new research suggests that global commitment does cause some, but not all, of the benefits for the firms, workers, and communities dis-

cussed above. Two that it does cause are faster growth and higher survival rates. Because of these two, the new research has a second answer. It suggests that industries, workplaces, and regions—the broader aggregates of firms, workers, and communities—may gain from global commitment, even if their individual members gain only stable growth. The key to this surprising insight is that global integration allows better-performing firms, workers, and communities to grow faster than other firms, workers, and communities, and so to increase their share of their industry, their labor market, and/or their region. What seems to be happening is something akin to natural selection in biological evolution. Globally integrated economies may not make individual firms, workers, or communities any better than they were before, but it does seem to help create an economic environment that selects and prefers those firms, workers, and communities that were good already, allowing them to survive and expand.

Two aspects of the microdata research underlie these tentative conclusions. One is that it is the *fact* of global commitment that makes the biggest difference, not its intensity. The second is that certain changes over time in the microdata show that the traits that global engagement seems most likely to encourage are exactly those that engender the tonic of industry rejuvenation.

In chapter 4 we will summarize how this all seems to add up. But the case for global commitment will remain a suggestive, not a definitive, one. More research is still being done in this area that will increase our understanding of how these puzzles fit together.

Along with these causality and evolutionary complications is a third complication: How do the different *types* of global engagement—exporting, importing, investment, technology transfer—reinforce each other (if in fact they do)? Each seems surprisingly highly correlated with the others, both at the firm level and at the industry level: firms and industries that engage in one way of globalizing are likely to engage in others, as we show at the end of this chapter. And American firms and industries pursuing global engagement of *several* types pay considerably higher wages than other industries. Foreign microdata research has documented similarly strong correlations across firms in trade engagement, investment linkages, and product licensing commitments.¹

Commitment, Not Intensity

Some of the earliest microdata research done on exporting in the mid-1990s turned up a surprising finding, already mentioned in chapter 2, namely, that the benefits from exports were associated with the fact of export commitment, that is, the decision to start exporting. Once that commitment was in place, these benefits, for the most part, were not significantly correlated with either the level of or the growth in the share of exports in a company's overall sales. One might have expected just the opposite: that a firm would have to achieve a certain threshold level of exporting before it realized any benefits, and that beyond that threshold, the benefits would keep increasing as the firm's global involvement deepened. This line of thinking, motivated by the "good-firms-

1. Harcourt and Shepherd (2001); Kraay, Soloaga, and Tybout (2001).

cause-exports" interpretation of the patterns, held that better firms would export more and the best firms would export most. The microdata research shows this hypothesis to have been right about the threshold,² but wrong about the performance premium growing with the intensity of global involvement.³

Company executives to whom we presented these findings, however, were less skeptical and did not find them out of line. One explained it as follows:

In the 1960s, personal fitness began as a fad. Joggers bought fancy gear. Some used it and got healthier; some wore it to snack in front of their TVs; some were injured while jogging; and a few died of cardiac arrest. Most people assumed that exercise promoted fitness, but little scientific or medical evidence proved the point.

Today, the data are clear. Fitness results from appropriate personal life-styles including aerobic exercise, stretching, proper diet, adequate sleep, stress control, and avoidance of smoking, drugs, and alcohol. There is no simple, magic panacea. The benefits result from persistent, long-term efforts, and there are some costs and risks in the process. So it is with exporting.

In other words, firms that *commit* themselves to becoming healthier firms embrace exporting (and other types of global integration) as part of an overall regime to improve their lifestyle. This fitness regime also includes other best business practices in the areas of customer service, quality

2. Roberts and Tybout (1996) were the earliest researchers to identify threshold effects in and threshold costs of exporting. They interpret these as special, one-time, irrecoverable (sunk) costs of committing to export. In their (1997) research, they ranged from one to two times a firm's annual export profits. See footnote 4 in chapter 2.

3. Export intensity was found to matter in some studies. Compensation premiums for less-skilled workers at exporting plants seemed to be greater, the larger the share of exports in a plant's overall sales (Richardson and Rindal, 1996). Technology use also seemed greater in plants with higher export levels (Richardson and Rindal, 1995). Productivity seems to correlate with higher levels of exports as well (Bernard and Jensen, 1999a). But in no case do the numbers rise startlingly with export intensity, once the commitment to export is in place.

control, product innovation, financial performance, and employee training and motivation. As with personal fitness, companies that commit themselves to only one or a few of these practices are less likely to achieve their goals than those that commit to a full program.

Today we have even more data on this issue. The same findings about commitment have now turned up in research on foreign investment. As discussed in chapter 2, the benefits associated with this type of investment seem to kick in regardless of whether the parent's foreign investment amounts to 10 percent or 100 percent of the affiliate firm. As with exporting, the intensity of inward investment turns out to be less important than the initial decision to take on a foreign owner or partner.

To say the least, these findings should be interpreted with some caution. The message here is not that a company president can expect to wake up one morning, commit his or her company to becoming a global firm, and quickly and automatically reap the benefits described in chapter 2. Although even that sometimes happens, turning the commitment into results usually takes time and effort (sidebar 3.1).

The Chicken *and* the Egg

The causality story we are exploring here—whether good companies are the ones that go global or whether global commitment makes companies good—is a complex one. As we will see below, companies that succeed in international markets change in important ways before they actually enter those markets. Nonetheless, the fact that diverse research on exports and investment, both in the United States and abroad, is turning up similar results should not be ignored.⁴ Future research will no doubt give us a

4. Clerides, Lach, and Tybout (1998) was one of the earliest and most influential papers to doubt whether there was anything more to these patterns than the one-way story that good firms in Colombia, Mexico, and Morocco became exporters.

better understanding of how corporate decision making leads to a company becoming globally engaged. We suspect that the best way to think about these matters is in terms of a feedback loop in which each activity reinforces the other.

Some of the research to date does give us a little better insight into the causality question. Studies of both American exporting and Taiwanese outward investment point toward similar conclusions.⁵ Moreover, a recent small-sample microdata study shows that inward investment linkages and import competition, as well as exports and outward investment, seem to encourage firm-level productivity and adoption of best practices.⁶ The authors of this study resolved the causality question judgmentally: the firms in their sample were clients of a major business consulting firm, and their decisions about both management practice and global engagement were intimately known to the authors. They ended up confident that causality ran *both* ways.

The American microdata research on exports treats the subject in a linear fashion, with some events happening before others. Figure 3.1 illustrates how this sequence unfolds for exports, as revealed by some of the earlier microdata research. In a nutshell, at some point a company makes the right choices in terms of a number of business practices (first column of figure 3.1), and it begins to differentiate itself from comparable firms. Some of the payoffs from these decisions—better compensation for workers and improved productivity—show up before the company actually starts to export. Yet once the company does begin to export, some important additional benefits kick in: faster employment growth, faster sales growth, and better survival rates (last column of figure 3.1).

What this research does not show is any feedback from exports to wages or productivity. That is, there is no US research evidence that a

5. On American exporting see Bernard and Jensen (1999a) and Richardson and Rindal (1996). On Taiwanese investment, see Chen and Ku (2000).

6. Baily and Gersbach (1995).



Sidebar 3.1 Addison Biological Laboratory, revisited

Our 1996 report, *Why Exports Matter: More!*, included a case example of a small manufacturer of veterinary products, Addison Biological Laboratory, Inc., located in Fayette, a town of approximately 3,000 in Missouri. At the time, Addison employed 17 people, having just added 3 new employees (2 of whom had been unemployed), largely thanks to a booming market for its products in Japan and Korea. We decided to go back and see what had happened to the company and its employees since then, especially in light of the financial and economic crisis that hit Asia in 1997.

What we found was a continuing success story in terms of both domestic and international business. Addison has seen continued growth in its international business and a big jump in domestic sales resulting from a new business strategy. It has added to its workforce and now employs 25.

The Asian crisis had indeed hit Addison. It lost approximately 55 percent of its Asian business in that year. Even with this loss, however, Addison was left with a respectable market in Asia, and sales are now back to about 65 percent of where they were before 1997. Moreover, since 1996, the number of markets around the world to which Addison sells has grown from 15 to 24, with several more to be added in the near future. As a result, international sales, even with the falloff in Asia, have increased since our last visit, but not nearly as fast as US sales. Addison has successfully pursued a strategy over the past four years of manufacturing for the bulk market in the United States—something it was just developing in 1996. With these new domestic sales, the ratio between domestic and international sales has shifted. International sales today represent about 14 percent of total sales, down from nearly 35 percent four years ago. Does this mean that international business is less important to Addison than it was four years ago? The short answer is no.

Company executives remain glad that they devoted the time to developing their international business. To begin with, the company's experi-

ence of four years ago shows what happens when the rapidly growing markets are not in the United States but overseas. Its executives believe that global markets are where tomorrow's growth will come from, and that if a company waits until tomorrow to develop these markets, it will be too late. Addison's employees, too, take pride in being part of a global company. It creates confidence within the company and the local community, and it makes Addison something of a big frog in a small pond. People in Fayette know that some of those daily airfreight trucks coming to the plant are taking high-tech biological products out of their small town to deliver all over the world.

What is more, many of these products are home grown. They are developed in Addison's own research and development shop, not in some large corporate facility. In addition, talented university scientists often are in need of trustworthy partnerships that provide manufacturing and marketing capabilities. Addison essentially has provided the bridge between such university-developed technologies and the global market, while at the same time adding to its own product line. The company made significant investments in new manufacturing facilities and an international marketing team to realize this potential.

Developing its international business has been time consuming. It took, for example, approximately two years to build relationships in Korea and Japan. Addison's basic approach to selling overseas is to find distributors or manufacturers of veterinary products whose existing product lines Addison products can complement. Some of these firms are a good deal larger than Addison, whereas others are the same size. In many ways this approach to selling products overseas demonstrates the win-win nature of international trade. Addison can take advantage of an existing distribution network in a foreign country, and foreign firms can provide a more complete product line to their customers. Adam Smith would recognize this mutually beneficial aspect of globalization.

Figure 3.1 Exporting *after* doing the right stuff is *best* of all

<p>Phase 1</p> <p><i>A firm makes the right choices . . .</i></p> <ul style="list-style-type: none"> • product innovation, • customer service, • financial management, • quality control, • worker training, and • technology use <p>. . . that begin to differentiate it favorably from comparable firms—e.g., it begins to do the right stuff. . .</p>	<p>Phase 2</p> <p><i>Advantages of doing the right stuff . . .</i></p> <ul style="list-style-type: none"> • better compensation for workers and • improved productivity, <p>. . . both of which start before the firm becomes an exporter</p> <ul style="list-style-type: none"> • becomes exporter <p>and once it begins to export, additional benefits kick in . . .</p>	<p>Phase 3</p> <p><i>Advantages of exporting</i></p> <ul style="list-style-type: none"> • faster employment growth, • faster sales growth, and • better odds for survival, <p>. . . which in turn reinforces the firm's initial choices . . . and allows the exporters with the right stuff to grow at the expense of other firms, even nonexporters with the right stuff—good news for industry-level productivity and the industry's workers.</p>
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firm's choice to begin exporting causes still further wage and productivity boosts. As indicated earlier, however, from extensive discussions with corporate executives,⁷ we suspect that such a loop exists, but like the elusive neutrino in particle physics, actually finding it is going to take some more research.

More recent research gives us a better understanding of how this works for at least two important variables at the firm or the plant level: productivity and employment growth.⁸ Both seem affected by the choice of good business practices, but only the second seems affected by the subsequent commitment to exporting. When faster employment growth is coupled with faster sales growth, however, the *industry* will be rejuvenated and will reveal *both* faster growth *and* higher productivity from exporting.

Firm-Level Productivity Dynamics

Figure 3.2 shows what happened in one study over a five-year period with productivity, which as already indicated seems to increase before a

7. And consistent with the evidence in Baily and Gersbach (1995).

8. Bernard and Jensen (1999b).

plant starts exporting. The figure deals with four different types of plants:

- those that exported continuously throughout the five-year period,
- those that started to export during this period,
- those that stopped exporting during the period, and
- those that never exported at all (indexed at zero at the beginning of the five-year period).

The changes in productivity that occurred in these plants differ in important ways. Those plants that exported throughout the period were 8 to 9 percentage points more productive than plants that never exported. Plants that started to export halfway through the period started out about 3 percentage points below the plants that stopped exporting and rapidly moved up toward the level of the continuous exporters. That is the good news.

The bad news is that plants that stopped exporting saw their productivity growth plummet to the level of the nonexporters. Failure in the global economy carries a steep price. It is perhaps better to have tried and failed, however, than to have never tried at all: the worst productivity performance of all was turned in by the never-exporting plants.

Figure 3.2 Productivity growth and exporting

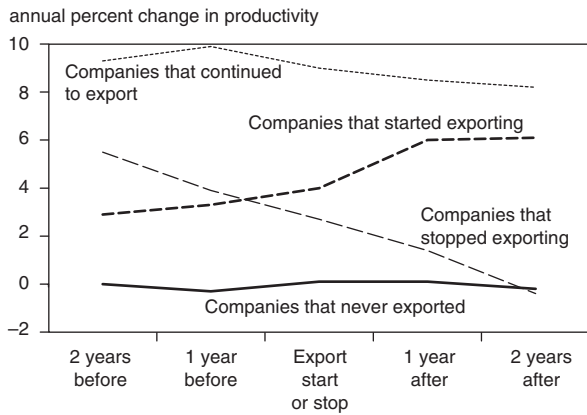
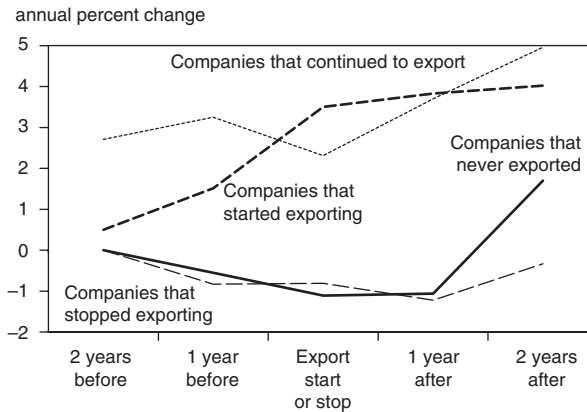


Figure 3.3 Exporting and employment growth



Note: Horizontal mid-point defines transition year for export starters and stoppers; five-year span is a random sample of adjacent year for continuous exporters and nonexporters. Base for comparisons (zero) is non-exporters two years before.

Source: Bernard and Jensen (1999b, tables 6 and 8).

Firm-Level Job Growth Dynamics

Figure 3.3 tells a similar story for employment growth: here, too, exporting makes a big difference.

As the figure shows, at the start, continuous exporters have employment growth approximately 2 percentage points higher than the other types of plants. The plants that start to export, however, see employment growth rise sharply and then level off in the general range of the continuous exporters, around 4 percent per year.⁹ Once again, the news on the other side is not good. Plants that stop exporting see their employment growth become steadily negative, and plants that never export experience a similar but less dramatic falloff, with small positive growth in the final year.

9. Admittedly, those US plants that adopted technologies more aggressively than the median for their size class grow jobs faster and have significantly higher survival rates, just like exporters. But the finding that globally engaged firms grow more stable jobs more rapidly is not merely an indirect result of technological activism: both exporting and technological sophistication have independent, additive effects on job stability and growth. See Jensen and Musik (1996), who use the 1987 and 1992 US Census of Manufactures for five industries—fabricated metal products, machinery, electronics, transportation equipment, and scientific equipment—to measure both technological choice and export commitment.

Industry-Level Productivity and Job Growth Dynamics

But this is not the end of the story about how productivity, employment, and output growth are linked to exporting.¹⁰ The firm-level growth dynamics from exporting lead to large shifts of resources, including workers, from less productive to more productive plants. So, even though exporting may not cause productivity increases in these plants, it does cause atypical growth. This atypical, export-driven growth shifts market share toward the higher-productivity firms, and the result is that measured productivity in the industry as a whole rises.

This is important. Over the long haul, higher productivity and higher worker pay are inseparable.¹¹ Therefore this type of resource allocation is good for an *industry's* workers, too, even though,

10. This section is based on Bernard and Jensen (1999b).

11. For a clear illustration of this see, for example, chart 7.6 in the 1998 *Economic Report of the President*, which shows the relationship between real wages and compensation (appropriately adjusted for price changes), on the one hand, and productivity growth, on the other.

at the level of the firm, wages may respond primarily to wise business choices and not subsequent exporting.

Moreover, for workers especially, these within-industry resource shifts from lower- to higher-productivity firms may not be as disruptive as shifts between industries. Recent microdata research estimates that earnings losses for a typical dislocated worker who is later reemployed within the same industry are *zero*.¹² In contrast, a typical dislocated worker who must move between industries experiences a loss of earnings of 10 percent.

Other recent microdata research reveals how having more people and resources working more efficiently shows up in overall productivity. In one such study, the reallocation of resources caused by exporting accounted for almost 40 percent of productivity growth in US manufacturing over the period examined.¹³

To summarize, for individual American firms, exporting may or may not be the tonic that rejuvenates. But it *is* a tonic at the industry level, because it encourages resource shifts from less to more productive activity. And at least one microdata study abroad finds exactly the same mechanisms at work among a sample of best-practice Taiwanese firms, some of which committed themselves to undertake investment abroad while others did not.¹⁴

Global Commitments Are a Family of Activities

The patterns above still rest importantly on the unsurprising discovery that best-practice firms

12. Kletzer (2001a). In her work, industries are defined at roughly the three-digit SIC level, and the “typical” dislocated worker’s earnings loss is that incurred by the median dislocated worker.

13. Bernard and Jensen (1999b). On the general theory of rejuvenation from global integration, see Melitz (2000) and Bernard et al. (2000).

14. Chen and Ku (2000).

naturally commit to exports and to investment abroad. What is more surprising is that the same microdata research in the United States and abroad shows that *best-practice firms are heavy importers, too, and sometimes welcome joint ventures with inward investors*. The Carrier Corporation and its workers (sidebar 3.2) are a good illustration.

But there is more general evidence as well. For example, parent operations of American multinationals account for 63 percent of US exports and 40 percent of US imports, even though they produce only 26 percent of GDP. American affiliates of foreign multinationals account for an additional 20 percent of US exports and 30 percent of US imports.¹⁵ Likewise for Colombian, Mexican, and Moroccan firms, “international activities indeed come in bundles—exporting, importing intermediate goods, importing capital goods, and sales of equity to multinationals are not independent activities.”¹⁶ And in Australia, the typical (median) small or medium-size firm that was globally committed selected two items, not just one, from the standard menu of international activities (exporting, importing, inward and outward investment, licensing, and joint venturing).¹⁷

These patterns are hard to understand if one believes in the hypothesis of one-way causation—that firms export and invest abroad simply because they were good firms to start with. The patterns are easier to understand if one accepts the hypothesis of two-way causation—that there is mutual feedback between making wise choices of technology, strategy, and so forth, on the one hand, and global commitment. When these feedback loops are working, good firms that export and invest abroad can learn about good opportunities for importing components or capital equipment or technology and for savvy equity partnering with foreign firms (inward investment).

15. *Economic Report of the President* (2000); Mataloni (1999).

16. Tybout (forthcoming, 24), citing microdata research by Kraay, Soloaga, and Tybout (2001).

17. Harcourt and Shepherd (2001).



Sidebar 3.2 The Carrier Corporation and its workers: Globally engaged, reciprocally

The Carrier Corporation, a subsidiary of United Technologies Corporation, is a manufacturer of heating and cooling equipment for homes and businesses and refrigeration systems. Although Carrier's roots are American, its current operations span 145 countries, and fewer than half of its roughly 13,000 employees work in the United States. Of these, more than 3,500 work in Syracuse, New York, many of them unionized metal workers (sidebar 2.6). Carrier's American workers and its Syracuse operations (which date from 1937) illustrate both the gains from globalization, which the Syracuse community shares abundantly, and the mutual dependence that modern global engagement entails. At the same time, Carrier is also a paradigm of how global engagement is a family of commitments.

Carrier's Syracuse plants—three manufacturing plants and five engineering centers—are both exporters and importers, and all are linked to various Carrier-owned plants in the United States and abroad, and to foreign firms with which Carrier has joint ventures and alliances. Carrier workers are linked to other workers around the world: some serve on global production teams and others on local, cross-functional teams. Neither Carrier nor its workers could be adequately described by such simple and familiar terms as export-dependent, import-sensitive, investment-hungry, or investment-pressured. But they are all those things, simultaneously, and better for it.

Some of Carrier's recent acquisitions—of Toshiba's cooling business in 1998, for example—have been aimed explicitly at importing the property rights to specific best-practice technologies: to compressor sound-and-acoustics expertise in Toshiba's case. These are then combined with other best-practice technologies that Carrier already owns, such as the manufacturing process for compressors at the Syracuse facility. Compressor parts and components production has now been standardized and integrated, and these intermediate inputs flow in both directions between

Syracuse (the home of Carrier's Replacement Component Division) and Japan.

Carrier is a major employer in the Central New York region. Several generations of family workers are a common occurrence. Mark Rabbia from Utica, New York, is one such worker. Mark started at Carrier the day after he graduated from Syracuse University in 1992, having interned at Carrier in a cooperative work-study program. Carrier moved him through a series of engineering jobs and has been underwriting both his master's degree in engineering and a master's in business administration (via video-streamed courses). Today Mark firmly disagrees with his old Utica friends who say, "Utica's dead. Central New York State's dead." Mark believes his experience shows that "global competition helps you to become a better company" (and implicitly a better worker).

Carrier is committed to training its blue-collar workers, too—and to listening to them. It views both activities as human investments that build worker loyalty. Carrier works with its unions to keep workers' technical skills at best-practice levels. Beyond that, Carrier's parent company offers Carrier workers (and those from its Otis Elevator and Pratt and Whitney subsidiaries) a chance to participate in its innovative Employee Scholar Program (ESP). It is through the ESP that Mark Rabbia is getting his master's degrees. United Technologies funds the pursuit of any college degree for its workers, and even continues its ESP commitment to laid-off workers (from relocated work) for four years. On completing the degree, each worker-graduate receives a gift of United Technologies stock.

George David, the parent firm's chairman and CEO, describes the ESP as a "race to the top": a competition to find and train top workers for top jobs in the global economy. "Americans," he says, "don't want the jobs at the bottom of the economy. We want the jobs at the top. The issue is how to get there." Carrier, and United Technologies more generally, seems to have found a way to get there—through broad-based global engagement and investing in its workforce.

If this mutual feedback model is the one that operates in the real world, it makes sense to encourage more global integration—of any kind—because it will help firms make wise choices and rejuvenate their industries. But if causation is a one-way affair, then global integration is the result, not the cause, of good performance, and special encouragement to “globalize more” would make no sense. The only implication is the not very helpful one that firms should be the best that they can be.

In aggregate US manufacturing data, one can observe a remarkable reflection of the growing microdata consensus that global integration is a family of commitments. Across manufacturing industries at the two-digit SIC level:

- Export intensity and import penetration go together.
- Inward and outward investment intensities go together.
- Trade intensity (either exports or imports) and investment intensity (either inward or outward) go together.
- Average wages are highest in the manufacturing sectors that are deeply committed to global linkage *of every sort*.

Figure 3.5 shows how import and export intensity go together. Figure 3.4 shows the same for inward and outward foreign investment. Figure 3.6 closes the “family circle” by showing how trade intensity and investment intensity go together. It also shows how industries that are *deeply* committed to the global economy—engaged with exports, imports, and inward *and* outward investment—pay their workers (who make up 42 percent of all manufacturing workers) 44 percent higher wages (a difference of \$15,000 a year) than other industries pay. Here “other industries” includes both those that are less integrated and those (with only 7 percent of manufacturing employment) that are heavily import-sensitive or export-intensive, but not both (see summary table for figures 3.4–3.6).

Among other things, this helps explain why some critics of globalization find that those

American wages subject to high (and rising) import penetration pay high wages.¹⁸ The finding is often interpreted to mean that imports are undermining high-value American jobs. Our counterexplanation is that the American industries where the highest-value jobs exist are those that are deeply globalized, with high imports, high exports, *and* high cross-border investment. We find it more and more important to think about an American industry’s depth and frequency of global commitment *of all types* than to think of it as an export-oriented industry (“good” for jobs) or an import-sensitive industry (“bad” for jobs).

In sum, we think the microdata and the aggregate evidence support the view that deep global commitment pays off for American firms, workers, and communities, in the sense that more global integration makes them, on average, significantly better off. It does not pay off to dig in one’s heels and choose not to engage global markets. The stakes are high.

But the research is still very new and very provisional. So it is worth asking one more time: What if the critics are right about the causation running only one way at the micro level? Must we then accept the innocuous conclusion that global integration has no tonic effect of its own and therefore is not worth pursuing? The surprising answer is that more global integration may *still* be worth pursuing, although admittedly the stakes would be lower.

Even if Global Presence Meekly Mirrored Local Performance, There May Be Gains

Suppose that the causality skeptics are completely right at the level of the individual firm, worker, or community. Good firms, workers, and communities succeed at home and abroad, and reap the benefits accordingly, because they are good. But suppose further that, because they are good, they have better survival skills and grow

18. Among the critics are Scott, Lee, and Schmitt (1997).

Table 3.1 Background data for figures 3.4–3.6—Wages and employment shares of deeply globally integrated and less globally integrated manufacturing industries

Type of industry	Average annual wages (dollars)	Share of manufacturing employment (percent)
Deeply integrated ^a	49,647	42
Less integrated ^b	35,336	53
Unbalanced outward ^c	56,103	2
Unbalanced inward ^d	22,492	5

a. Industries with significant imports, exports, and inward and outward investment, as a percentage of domestic shipments: chemicals (SIC 28), machinery (35), electronics (36), transportation (37), and instruments (38).

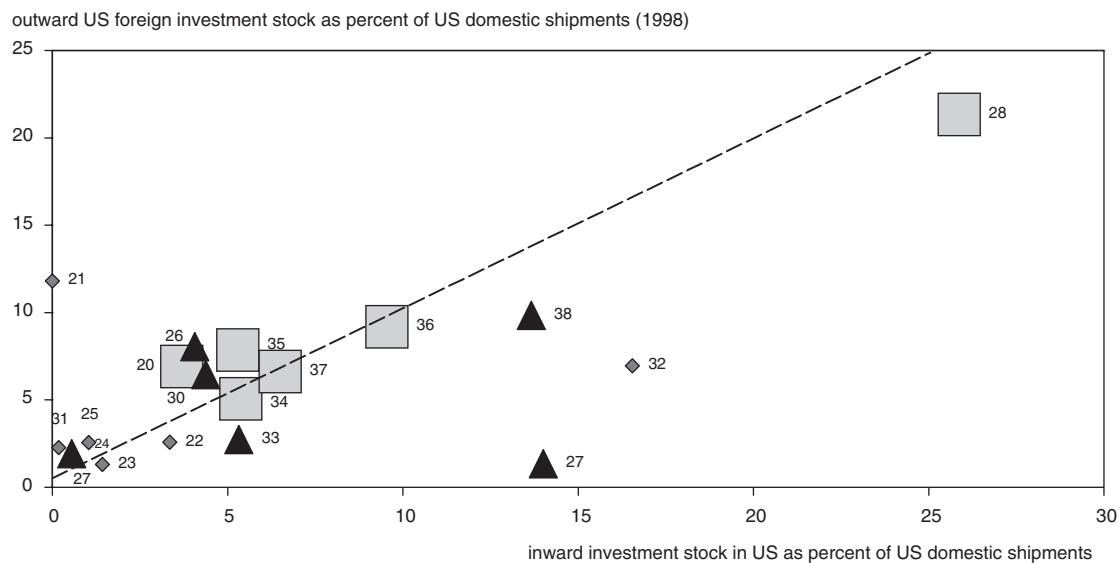
b. Industries with smaller amounts of imports, exports, and inward and outward investment, as a percentage of domestic shipments: food (SIC 20), textiles (22), lumber (24), furniture (25), paper (26), printing (27), rubber (30), stone (32), primary metal (33), and fabricated metal (34).

c. Industries with significant outward foreign investment and/or exports, but not inward investment or imports, as a percentage of domestic shipments: tobacco (SIC 21).

d. Industries with significant inward foreign investment and/or imports, but not outward investment or exports, as a percentage of domestic shipments: apparel (SIC 23) and leather (31).

Source: US Department of Commerce.

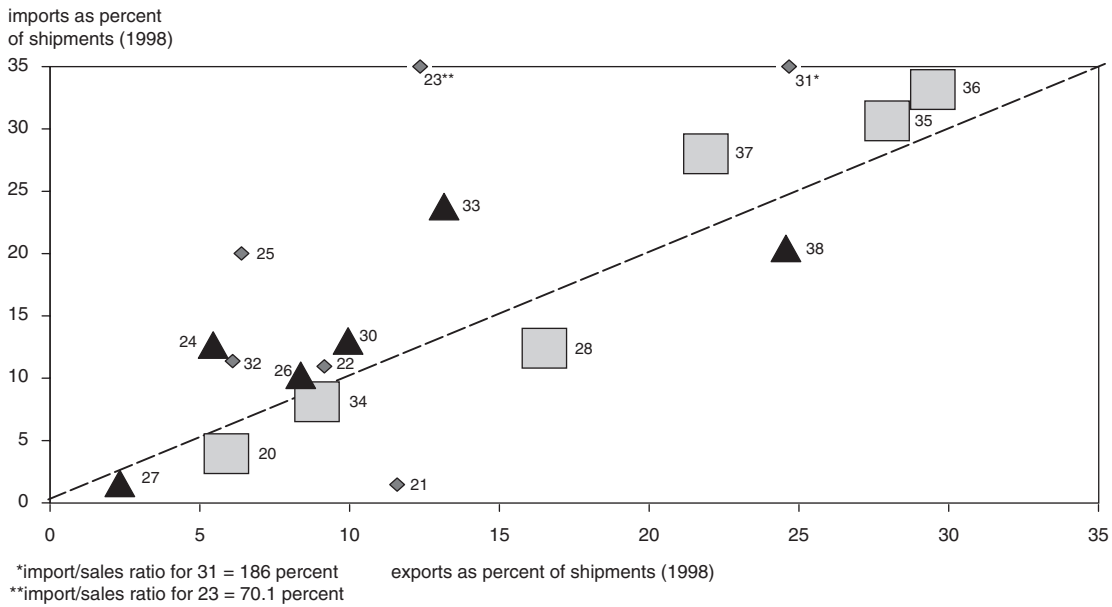
Figure 3.4 Outward and inward investment go together



Source: US Department of Commerce.

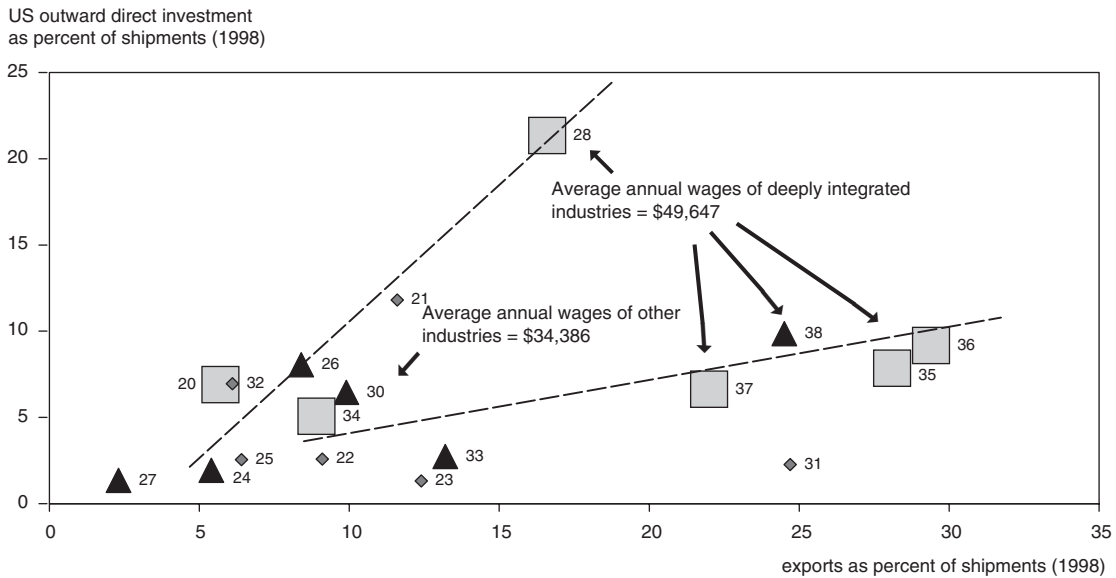
- Industrial sectors with employment between 225,000 and 600,000.
- ▲ Industrial sectors with employment between 100,000 and 225,000.
- ◆ Industrial sectors with employment below 100,000.

Figure 3.5 And, exports and imports go together



Source: US Department of Commerce.

Figure 3.6 Even exports and outward investment are closely associated . . . and wages, too



Source: US Department of Commerce.

- Industrial sectors with employment between 225,000 and 600,000.
- ▲ Industrial sectors with employment between 100,000 and 225,000.
- ◆ Industrial sectors with employment below 100,000.

faster than other firms, workers, and communities, as the research in fact shows.

Then, although the skeptics are right at the micro level, they are wrong about the aggregates—about the effects of global integration on whole industries, labor markets, and regions. They are wrong because global integration will still rejuvenate and refresh these larger entities by changing their makeup.

Here is how. Assume that global commitment “causes” nothing at all. Let it be merely the result of “random acts of goodness”—wise or lucky choices by managers, workers, and community leaders toward technology, education, clean government, and so on. Even then, global integration allows each country to *import* the goods, services, technologies, investment strategies, and best practices of those foreign firms, workers, and communities

that have risen to the top in their home country, whether they got there randomly or through wise choices. *Broad dependence on import and inward investment* remains the way that a country is served by the highest-performing economic actors in the world, rather than by its own naturally uneven mix of high-, medium-, and low-performing actors.

So, even under the very worst assumptions, global integration can still be a tonic for increasing the population and prospects of high-performance firms, workers, and communities. And since our reading of the research is considerably less skeptical than this extreme, we are prepared to draw a more positive, if still provisional, conclusion: global commitment actually helps firms, workers, and communities to succeed. Global engagement pays, and America—and the world—needs to choose more of it.