1-1-2000

The USA in the World Trading System

Sven W. Arndt
Claremont McKenna College

3. The USA in the world trading system

Sven Arndt

The USA has been an important player on the post-war world economic stage, but for much of that period what happened in the world economy was not of much consequence to the majority of the country's citizens. Trade was, and in many ways still is, a small part of overall economic activity. To assess the importance of trade one has to go to sector- and industry-specific levels, where shifts in world demand and supply can affect wages, profits, employment and output. The public at large has a general sense that the US economy is becoming more 'globalized' and that this process could have important implications, but most would be hard-pressed to come up with hard evidence from personal experience.

The term 'globalization' is used here in the broadest sense to refer to the totality of ways in which an economy becomes more integrated into the world trading system. In the realm of goods and services, this usually means that exports and imports come to make up a growing share of GNP.[1] In the realm of factors of production, it means that cross-border flows of capital and labour play a rising role in domestic economic activity. In the process, domestic markets become more sensitive to developments in the world economy. In the realm of economic policy, it means that the conduct and efficacy of domestic economic policies are increasingly influenced by developments in other countries and in the world economy generally.

Although changes in all three dimensions are taking place in the current phase of globalization, none is entirely new as a phenomenon.[2] Trade liberalization at home and abroad, as well as the gradual removal of capital controls and of constraints on the movement of persons, is playing a significant role in facilitating the integration of the US economy into the global system. While the dismantling everywhere of protectionist policies has been a key element in this process, technological advances in transportation and communication have contributed by greatly reducing the cost of cross-border transactions.

Although the current phase of globalization has features that have been seen before, their relative importance has changed. More important now than before, is the globalization of production and the consequent rise of trade in

parts and components. While outsourcing of components has always been an important part of production, it was long confined mainly to the domestic economy. This meant that the international division of labour could not be pushed much beyond the level of products. This limitation is reflected in traditional trade theory and its strong focus on trade in finished products.

This chapter begins with a review of the domestic sources of US trade policy and the external influences on that policy. It then examines changes in the external orientation of US manufacturing, focusing in particular on the rapidly spreading phenomenon of offshore production of parts and components. Although the latter has been criticized as inimical to the interests of American workers, it is, on the contrary, capable of improving the lot of workers and strengthening the competitive position of US manufacturers. It generates positive overall welfare effects by making resource utilization more efficient. The chapter moves next to consideration of competition policies and their role in affecting trade patterns and the distribution of the gains from trade. Next on the agenda is a discussion of the political economy of globalization and its implications for the future of economic policy. A brief summary section wraps up the discussion.

DOMESTIC SOURCES OF US TRADE POLICY

Traditionally, the dominant influence on US trade policy has come from import-competing industries.[3] Pressures for protection have traditionally come from producers rather than consumers and from producers of import-competing products rather than exports. Agriculture, industries associated with the first industrial revolution, especially coal and steel, and industries producing standardized mass-consumption goods such as automobiles, textiles, apparel and household appliances have been the primary sources of policy activism over the years and for much of the post-war period.

Among main trade policy instruments, tariffs and quotas played major roles in earlier years, and quotas continue to be important in the Multifibre Arrangement covering trade in textiles and apparel. As multilateral trade negotiations gradually reduced tariffs and limited the use of quotas, American policy-makers turned increasingly to other instruments such as voluntary export restraints (VERs) and anti-dumping procedures, and to contingent protection generally. American trade policy gradually moved away from multilateral, non-discriminatory approaches to more selective, more discriminatory and more bilateral or unilateral initiatives.

In the more recent past, however, the focus of trade policy has shifted from protecting the home market to opening foreign markets. Pressures on trade policy have increasingly come from export industries. US makers of commu-

nications equipment, computers, construction machinery and various other capital- and human capital-intensive products have looked to trade policy for opening foreign markets. In this effort, goods producers have increasingly been joined by service providers from industries such as banking and finance, entertainment and telecommunications. The objective has been to open foreign markets to US goods and services and to prevent foreign producers from infringing on US patents and copyrights. As a result, the tool kit of trade policy has been expanded to include market-opening initiatives, enforcement of intellectual property rights and Section 301 proceedings.

The stress on opening foreign markets naturally forces trade negotiators to think in product- or sector-specific terms. In the USA, thinking along these lines has developed to the point where policy-makers view such approaches as the most promising for achieving current objectives. Sector-specific approaches simplify the bargaining process by reducing the number and complexity of issues that need to be dealt with simultaneously, but they often leave little to 'bargain' over in the sense of reciprocity. When everything is on the bargaining table, there is no need to search for reciprocity within a sector. When the USA wants a developing country to open its telecommunications market, for example, it has little to offer in that sector which would be of much interest and value to such a country. But a concession offering greater access to the US apparel market would be of interest.

Overall, therefore, the shift in the sources of trade policy has been from parties suffering from comparative disadvantage and bent on preventing imported products from cutting into their share of the home market, that is, bent on keeping the US economy closed, to parties with strong comparative advantage intent on using policy to increase their share of foreign markets. Although all this has brought major changes to US trade and trade policy, international trade is even today relatively unimportant in relation to overall US GNP.

EXTERNAL INFLUENCES ON US TRADE POLICY

In the early decades after World War II, political and strategic considerations often dominated US foreign economic relations. For example, US support for waivers under GATT rules to permit discriminatory trade policies in the European Economic Community (EEC) and European Free Trade Association (EFTA) was motivated by Cold War strategic rather than national economic considerations. For an extended period of post-war history, US trade policy adopted a relatively permissive attitude toward what were often hostile external events and policy moves by trading partners. This relaxed attitude was facilitated by the dominant competitive position of US producers in the world

economy and by the relatively small role international trade played in the economy.

In recent years, however, as foreign competitive presence has risen in industries once dominated by US firms and as the end of the Cold War has dissolved strategic arguments, economic considerations have reasserted themselves. A major contributing factor, as Destler (1995), Krueger (1995) and others have noted, has been the sharp deterioration of the US current account. Although this erosion has been the result mainly of macroeconomic conditions within the United States, represented in particular by the budget deficit and a large shortfall of private saving relative to investment, the enormous size of the current account deficit has made it an easy political target and opponents of a more open economy have been quick to place the blame on 'unfair' foreign trade practices.

As noted, in the first few decades after World War II, multilateral approaches played a dominant role in US trade policy. The motivation was provided in part by the US objective of developing and sustaining coherent and coordinated policies among its allies in the context of the Cold War. More recently, as the US position in multilateral organizations has become weaker, Washington has looked more toward regional approaches and has become a primary practitioner of unilateral trade policy. In the process, as Krueger (1995) has observed, protection in the USA has taken on an 'administered' look, with trade policy relying more and more on bilateral bargaining – over dumping, subsidies, escape-clause issues and other unfair-trade provisions of US law.

This approach has been criticized by the country's trading partners, but the USA has rejected such complaints and has rebuffed calls to subject these policies to multilateral surveillance and regulation. This stance has served protectionist interests and has given the executive branch a way of dealing with interventionist sentiments in the Congress, but as other countries have become frustrated with what they perceived as US abuses in this policy area, they have started to employ similar practices. As a result, US exporters are now increasingly harassed by contingent protectionism abroad. In the future, US trade negotiators will have to devote a rising share of their time to bilateral bargaining over 'administered protection.' When this burden becomes sufficiently onerous, the USA will bring the issue to the global negotiating table for resolution. Until that happens, however, conflicts over administered protection will become an increasingly costly and potentially disruptive element in the country's trade relations.[4]

In addition to systemic external influences on US trade policy, relations with Japan have been a major source of challenges and frictions for policy-makers. In their efforts to open up the Japanese economy, US policy-makers have employed the gamut of approaches from sector-specific, market-opening nego-

tiations to initiatives aimed at changing the structure of the Japanese economy and society. Whatever may be said about the intrinsic value of such efforts, they were often justified politically by reference to Japan's large and sustained trade surplus with the world generally and with the USA in particular.

Bilateral disputes of a similar nature, but less severe and sustained, have arisen in US relations with China. Here, the United States has pursued its efforts to pry open China's market and to press China to adopt certain practices and policies by linking them to negotiations over Chinese membership in the World Trade Organization (WTO). These bilateral engagements are likely to continue, even after China gains admission.

From time to time, the European Union (EU) has caused problems for US trade policy, less on overall grounds and more with respect to specific issues, including the EU's Common Agricultural Policy (CAP). US policy objectives have been more focused on resolving specific issues rather than restructuring a trading partner's internal economy. Bilateral frictions between the two partners will continue and possibly intensify as the introduction of monetary union in Europe (EMU) comes to challenge US hegemony in world financial markets.[5]

EXTERNAL ORIENTATION OF US MANUFACTURING

In much of the post-war period, the dominant orientation of US manufacturers has been to serve the domestic market. Unlike producers in countries with small domestic markets, US manufacturers can focus on developing products for the internal market. That market is large enough to support exploitation of scale and scope economies, while leaving plenty of room for the benefits that flow from product variety.

When US manufacturers turned to offshore production in the post-war period, it was the first-generation multinationals who led the way. Makers of automobiles and computers, among others, set up production operations in a foreign country to serve the local market. Often, an important motivation was to jump tariff barriers, especially the discriminatory kind of barriers levied by preference areas like the EEC and EFTA. In the early years, goods produced abroad were very similar to those made for the US market, but model types and other details were increasingly tailored to respond to local tastes, practices and regulatory requirements.

Local production typically required some direct investment outlays and so capital flows were closely linked to the global production decisions of multinational firms. This created pressures on US trade policy to push for the elimination of barriers on capital flows and the opening of foreign capital markets and financial sectors.

The current phase of globalization also contains an element of offshore production and, once again, multinational firms are playing an important role. But this time it is not necessarily production of entire products but rather of parts and components that is moved offshore. Production is becoming increasingly decentralized and globally 'fragmented'[6] as the various phases of the manufacture of a product or the provision of a service are spread across national borders. Components made abroad may or may not be produced by affiliates of a US company. Offshore sourcing of components is playing a growing role in industries whose final products are exportables as well as industries who compete with imports in final product markets.[7]

In some cases, US firms export components for assembly abroad and then import the final product. Well-known examples of this type of arrangement are US–Canada linkages in the auto industry and the maquiladora operations in Mexico. In other cases, US manufacturers, including aircraft and computer makers, import components for domestic assembly and then export the final product. In this way, a significant portion of the value-added of US imports of final products may be represented by US-made components, while the value-added of US exports of final products may include component imports from abroad. As production becomes increasingly decentralized and scattered across borders, products take on an increasingly multinational character.

This new form of specialization pushes the global division of labour beyond products into the realm of parts and components. For the world as a whole, the chemicals and machinery and equipment industries have led the rush to 'vertical specialization,' according to Hummels et al. (1998). Overall, 'increases in vertical-specialization-based trade ... account for more than 25 per cent of the increase in total trade in a group of ten OECD countries' (p. 81). In particular regions and settings, offshore production has been important in the automobile industry and in textiles and apparel. But even aircraft producers like Boeing and Airbus routinely use offshore production and procurement in order to stay competitive.

The Costs and Benefits of Offshore Sourcing by US Industries

Offshore sourcing by US firms has raised concerns among some observers. During the NAFTA debate, for example, Ross Perot warned that it would contribute to the 'great sucking sound' of jobs lost by US workers. Patrick Buchanan wants to levy special tariffs on component imports. Boeing workers have protested against offshore activities by their company. In Europe, critics see offshore procurement as a source of their continent's high unemployment.

What makes this issue a particularly volatile topic is that offshore sourcing often involves low-wage countries. The perception is widespread that trade

with such countries destroys jobs in high-wage economies and depresses wages there. It turns out, however, that at least some of these fears are misplaced, because offshore procurement of labour-intensive parts and components often raises employment, output and wages in industries which undertake it. This section lays out the basic intuition in support of this conclusion, while the appendix provides a more formal and rigorous development of the argument.

If specialization according to comparative advantage is beneficial at the level of finished products, why would it not bring further benefits if it were applied to trade in components? Such specialization obviously works within nations, where it has been practised for years. Until recently, however, outsourcing across national borders has been limited by a variety of barriers, including high transport and coordination costs.

If the various components of a product are subject to different resource- or factor-intensities, then comparative advantage in component production will be systematically related to resource or factor endowments. Then, if each country produces and exports those components which use its plentiful resources, while importing components using scarce resources, all will gain.

The 'resources' in which we have a special interest are labour and capital. In the making of the typical product, some components will use more capital relative to labour than others at any given ratio of labour to capital costs. We may thus rank components in terms of their capital/labour ratios. At one end of the spectrum will be components with relatively high ratios of capital to labour, the so-called capital-intensive components, while the other end will track components with relatively low capital–labour ratios. Those will be the labour-intensive elements of a production process.

All other things being equal, the relative price of labour should be lower in labour-rich countries and the relative price of capital should be lower in capital-rich countries. For any common technology, then, labour-intensive components should be relatively cheaper to produce in labour-rich countries, while capital-rich countries should have a cost advantage in producing capital-intensive components. Hence, capital-rich countries should export capital-intensive components and import labour-intensive components and vice versa for labour-rich countries. A capital-rich country can reduce the cost of producing a final product by importing labour-intensive components from labour-rich countries. As production costs fall relative to prices, profitability rises, allowing the industry to expand.

This principle applies to product assembly as well. When assembly is relatively labour-intensive, it will be cheaper in labour-rich countries, while capital-intensive assembly will be cheaper in capital-rich countries. We see this principle in action in the maquiladora system in Mexico, where capital-intensive components of consumer electronics products are imported

from the United States to be combined with labour-intensive components made in Mexico and assembled in labour-intensive assembly operations into final products, which are then shipped to the United States. At the other end, we see the Boeing Company importing less capital- and skill-intensive components, which are combined with relatively more capital- and skill-intensive US-made components in a US-based, relatively capital- and skill-intensive assembly process.

Component Specialization in the Import-Competing Industry

Given the logic of component specialization, how does its implementation affect employment, output and wages? Specifically, what are the consequences of its implementation in an industry which competes with imports in the markets for its final product? In advanced, capital-rich, high-wage countries, this type of industry tends to be the relatively labour-intensive industry which thus has most to fear from foreign competition.

The effect on employment and output depends on the movement of costs relative to prices. If offshore procurement of a component reduces costs relative to product price, then output expands as firms pursue the new profit opportunities. They will either sell more of the product at given world prices or sell more by undercutting the competition with lower prices.

Whether employment increases with output depends on whether the jobs created by the rise in total output are greater in number than the jobs lost when production of the labour-intensive component is shifted abroad. The appendix develops the precise conditions under which employment of both labour and capital in the industry will rise along with output.

The effect on wages, on the other hand, is determined by the growth in demand for both labour and capital as the industry expands and by the conditions under which resources are shifted from the rest of the economy into the expanding industry. When, as in the present case, it is the labour-intensive industry that expands, wages rise relative to capital rentals as well as absolutely.

These results are clearly at odds with the predictions of some opponents of component specialization. While these findings need to be empirically tested, they are compatible with studies of the effects of protection (Corden, 1972), where tariffs on imports of intermediate goods were shown to reduce the effective rate of protection provided by tariffs on imports of final goods by reducing domestic value added. In the present case, the cost reduction generated by component imports increases domestic value added at given world prices.

Component Specialization in the Export Sector

As noted earlier, export industries, which tend in advanced countries to be capital- and skill-intensive, are also making use of offshore component sourcing. As before, the object is to reduce costs by obtaining relatively labour-intensive components from their cheapest source. Cost reduction makes firms more competitive and thus increases their share of world markets. As sales rise, output and employment rise.

The effect on wages depends on the interaction of several influences. If the domestic industry is small relative to world markets, output can expand without depressing world prices. If it is large, additional output can only be sold at lower prices. Price cuts offset the effect on profit opportunities opened up by cost reductions. Output expands, however, as long as the price effect is smaller and when the capital-intensive industry expands in an economy, the wage–rental ratio must fall.

THE GLOBALIZATION OF FINANCE

While the globalization literature has tended to focus on integration of goods markets, financial turmoil in Asia, Latin America and elsewhere has drawn attention to financial markets generally and those in emerging market economies in particular. Liberalization of exchange and capital controls and of domestic financial markets around the globe has enabled capital to flow ever more freely across national frontiers. An important benefit has been the enhanced ability of countries with low saving rates to mobilize external resources. A disadvantage has been the disruption caused by large and rapid reversals of capital flows.

A very important lesson to be learned from recent financial upheavals is the danger of viewing exchange rates too much in terms of the trade balance or the current account. While such a view was appropriate in an earlier age of capital controls, in today's environment exchange rate determination and macroeconomic stability are crucially linked to capital movements. The ease with which capital crosses borders changes the character of exchange rate regimes and of macroeconomic adjustment in open economies. While goods market responses still play an important role, far more attention will have to be paid in the future to capital flows, asset market adjustment and associated wealth effects.

To a significant extent, the internationalization of production discussed in earlier sections depends on foreign investment. NAFTA was a pact to liberalize foreign investment as much as trade, as the growing flow of US and foreign capital into the maquiladora sector illustrates. But although capital

moves more easily across national boundaries today, its flow is still hampered by considerable obstacles, particularly in areas such as right of establishment, national treatment of foreign investment, discriminatory performance requirements, restrictions on income remittance, interventions via incentives and disincentives, as well as threats of expropriation.

US policy continues to pursue greater openness with respect to capital flows. While this objective still enjoys broad and bipartisan political support, it is not universally accepted. There are some who believe that capital outflows, particularly of the direct investment type, are detrimental to US well-being. It is a view, expressed by candidate Ross Perot during the NAFTA debate, for example, which treats foreign direct investment as a zero–sum game, so that an outflow of investment capital from the US to Mexico necessarily implies a reduction in US domestic investment.

The role of foreign investment in promoting the globalization of production and the impact of financial capital flows on exchange rates and macro stability raise important questions about their supervision and regulation. National governments have an important responsibility in this area, but policies run at national levels are likely to raise disputes over differences in standards and treatment. Thus, mechanisms will be needed for harmonization and coordination of policies and for dispute settlement. This raises important questions about the level – bilateral, regional, multilateral – at which to pursue this objective. The international institutions also have responsibilities here, although it is unclear whether their current structures are adequate for the purpose. Development and implementation of the future 'architecture' of the global economy will place heavy demands on US policy-makers.

DEEPER INTEGRATION: COMPETITION POLICY

While there remains considerable unfinished business in the area of trade liberalization, including agriculture and services, there is a growing consensus that future negotiations at multilateral and subsidiary levels will have to pay more attention to barriers other than those that occur at national borders.[8] While negotiations under the General Agreement on Tariffs and Trade (GATT) took up the anticompetitive features of subsidies, procurement and standards, more needs to be done in those areas, as well as in the regulation of antitrust policies, the treatment of cross-border mergers and acquisitions, and with respect to other aspects of economic relations that go beyond the mere movement of products.[9]

In their study of competition policy, Graham and Richardson (1997, p. 3) distinguish between border barriers, which have been the main focus of trade negotiations in the past, and entry barriers, such as monopoly and national

competition policies, which limit the ability of foreign firms to gain entry into a country's markets. As the importance of trade barriers has been reduced by successive rounds of trade negotiations, the protectionist implications of these barriers to market entry have become more urgent. The economic benefits to be obtained from the reduction of these entry barriers are likely to be larger, perhaps much larger, than the gains associated with further reductions in traditional constraints on trade.

The task is to make markets more contestable. The question is how? Ensuring market access is not always enough to enable foreign suppliers to contest a market.[10] While trade liberalization continues to be an important means of raising market contestability, it may need to be supported with other policies, in areas like government procurement, contingent protection, antidumping intervention, regulation of standards and antitrust policy.

At the multilateral level, the World Trade Organization (WTO) has established a Working Group on the Interaction between Trade and Competition Policy. Among the specific sectors or industries in which competition policy has been an issue of contention between countries are airlines, telecommunications, insurance and financial services. The USA has strong policy interests in each of them. Differences in regulatory practices, entrenched state or private monopolies and variations in cultural attitudes toward markets and competition, present major challenges to those wishing to lower barriers to entry and to facilitate the harmonization of policy approaches.

As Graham and Richardson note (1997, p. 5), competition policy determines the institutional mix of competition and cooperation that gives rise to a market system. But the regulations encompassed by competition policy differ widely and those differences can become the cause of frictions when globalization brings countries closer together. When confronted with such differences, it is easy for policy-makers to take the attitude that theirs is the better and fairer system and that it is up to other countries to conform. US policy-makers have been far from immune to the siren call of such self-serving 'solutions' of disputes. They have been aggressive not only in pushing the US view but in the extraterritorial extension of US laws to other nations.

In their dealings with Japan, US policy-makers have talked openly about remaking Japanese society. That experience makes an eloquent case for shifting some of these disputes to the multilateral level. It suggests that global standards of competition policy cannot be developed solely through bilateral bargaining. This does not mean, however, that all competition policy issues must be addressed at the multilateral level. Mutual recognition of national standards, for example, offers a broadly applicable approach for dealing with a variety of competition policy issues at sub-global levels. This applies especially to the multitude of cases where disputes over competition policy and

market access involve particular activities. Mergers and acquisitions are a case in point.

THE POLITICAL ECONOMY OF GLOBALIZATION

It is clear that globalization creates winners and losers. As economies become more open and domestic goods, factor and capital markets are drawn more completely into the world system and as production itself becomes more globalized, larger numbers of a country's citizens are directly exposed to external shocks, but their control and regulation seem to lie beyond the reach of national policy-makers. Unfairness is not only perceived, but is perceived to be irremediable as far as the purview of national policy is concerned. Accountability appears to have been eroded. As this perception spreads, it leads many observers to join Rodrik (1997) in asking whether globalization may have gone too far.

While economists can show how globalization may increase overall welfare, they cannot guarantee that the costs and benefits will be distributed 'fairly'. They typically assume that the political process will take care of the distributional issues. Global economic integration will lose political support if it moves too far ahead of the ability of political processes and social structures to deal with its consequences.

The increasing role of low-wage countries in international trade has added a new dimension and urgency to these considerations. While economists are still arguing over the relative roles of trade and technological change in explaining rising income inequality in the United States and high unemployment in Europe, the public debate is already altering the political economy of trade policy.[11] In the United States, trade with low-wage countries is perceived by many to have contributed to rising income inequality and wage-disparity among workers. In Europe, it shares the blame for high and persistent unemployment.

The case against trade has been made with reasoning that draws from the standard Heckscher–Ohlin, Stolper–Samuelson (HOSS) model and its prediction that trade with low-wage countries has a dampening effect on wages. While the HOSS model develops the argument in terms of trade in final products, opponents of global integration have extrapolated its conclusions to trade in components. Thus, the prediction that trade liberalization on the part of high-wage countries will cause the import-competing industry to shrink and wages to fall has been used to conclude that competition from imported components will have identical effects on the industry. As the preceding analysis makes clear, however, the two forms of competition should have exactly opposite effects on the competitiveness of the domestic import-

competing industry. The inflow of cheaper imports of final goods hurts the domestic industry, while the inflow of cheaper components strengthens it.

Apart from these issues, trade policy in the USA will continue to be haunted by the huge current account deficit. Liberal trade policies and the openness of the US economy will be blamed for the deficit and trade intervention will be advocated as a way of solving it. Such efforts will, of course, fail to eliminate the problem, because it is essentially a macroeconomic phenomenon. But protectionists will not fail to see the deficit as a useful policy wedge.

The political economy of trade policy will be further influenced by efforts to 'capture' trade policy as an instrument for the achievement of other objectives and purposes, including the imposition of tougher environmental protection and labour standards and improved human rights in other countries. If these efforts succeed in influencing US trade policy, the result is likely to be protectionist and welfare-reducing.

The Future of Sovereignty

The onrush of globalization has led some observers to conclude that this latest industrial revolution will make the nation state obsolete, in the sense that significant powers now residing with the nation state will pass to multilateral institutions or into the hands of regional entities like the European Union.[12] Others are more agnostic about the net effect of globalization on the role of the state. They suggest that globalization's tendency to touch the lives of more and more citizens will rouse political demands for governmental protection through improvements in safety nets and the like. Such developments would strengthen rather than weaken the nation state.[13]

CONCLUSION

The US economy is passing through another phase of globalization. On all fronts – goods and services, factors and finance – domestic markets are becoming more integrated into the world economy. While there is some debate over whether the economy is more open and global today than it ever was, it clearly is more so now than at the end of World War II.

The process of globalization brings challenges and opportunities for market participants and policy-makers alike. The opportunities flow importantly from the more efficient use of productive resources and the welfare gains implied by it. The challenge is to ensure rough balance between the distribution of welfare gains and the incidence of adjustment costs. Some critics of globalization believe that this challenge is not being met. Others worry that globalization is eroding national sovereignty, diminishing not only the effec-

tiveness of domestic economic policies but reducing the relevance of national governments and institutions, very much like the rise of national governments eroded the sovereignty of states and provinces in an earlier age. The issues are joined, but the answers are far from clear.

With the passage of time, the sources of US trade policy have changed. Whereas import-competing industries dominated the formation of trade policy earlier in the modern period, exporters and their need for open foreign economies have become a more organized and forceful influence in the recent past.

The instruments of US trade policy have also changed with time and with the changing nature of the global trading system. Once a staunch exponent of multilateral approaches to trade liberalization, the United States has gradually become frustrated and disenchanted. It has sought refuge in a variety of alternative approaches, including preferential trade liberalization and 'aggressive unilateralism'.

While the present phase of globalization shares many features with past episodes, it also differs in important respects. One of these is the increasing role of offshore sourcing of parts and components. Innovations in communications and transportation technologies have drastically reduced the cost of cross-border coordination and have thereby enabled production to be globalized. Thus, the integration of economies into the global market is being accomplished by the disintegration and cross-border fragmentation of production as the international division of labour spreads beyond products into the realm of parts and components.

When integrated production is replaced with processes that are dispersed across borders, prices, employment and output are affected – sometimes in ways that are at odds with the predictions of globalization's critics. This is true for component trade with low-wage countries which has the capacity to raise rather than reduce wages in high-wage countries, to raise rather than lower employment there and to boost output and welfare: No 'sucking sound' of jobs lost or convergence of wages to the 'lowest common denominator'.

APPENDIX

Offshore Component Sourcing by the Import-Competing Industry

Consider the simplest of trade models, the 2x2x2 Heckscher–Ohlin model, and assume that the country in question is small and thus does not affect world prices.[14] In Figure 3.1, $\mathbf{X}_0$ and $\mathbf{Y}_0$ are the unit-value isoquants, respectively, for final goods **X** and **Y**, while (w/r) represents the isocost line. This is the standard set-up for the analysis of trade in final goods under conditions of integrated production.

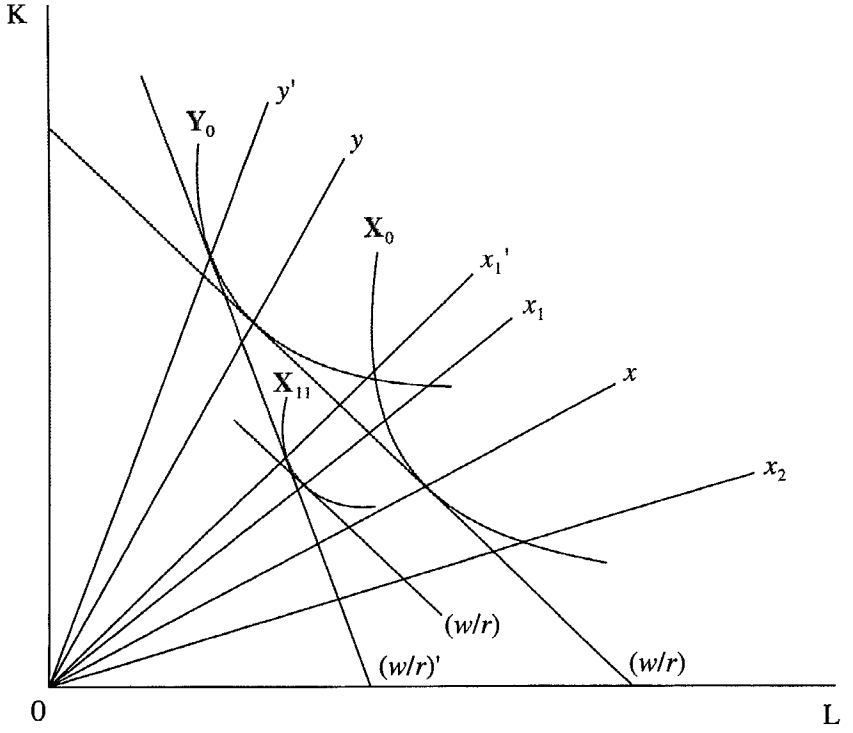

Figure 3.1 Offshore component production in the labour-intensive import-competing industry

In order to examine the implications of component specialization, assume that commodity **X** is made up of components x_1 and x_2, with the former more capital intensive than the commodity overall and the latter less capital intensive. These conditions are reflected by the expansion paths for x_1 and x_2 in the figure. Thus, the amounts of the two factors used in producing X_0 units of **X** are obtained by vector addition of the amounts given for the two components along their respective expansion paths. We assume, further, that these components are dedicated components of product **X** and cannot be used elsewhere. There are thus no stand-alone markets for them.[15]

Starting with full home production of good **X**, suppose that there exists a second country, which is capable of producing component x_2 at lower cost and that reductions in cross-border coordination costs allow the industry to manufacture component x_2 abroad. Assume that the industry pays for imports of x_2 with exports of x_1. Then, the cost of producing a unit of **X** will be smaller if the factor cost of x_1-exports is lower than the factor cost of producing x_2 directly.

With x_2 made abroad and X-assembly assumed to be part of x_1-production, x_1 isoquants now fully reflect input–output relationships in the X-industry. Suppose that at the initial factor–price ratio (w/r), isoquant $\mathbf{X}_{11}$ now represents the factor cost of producing $\mathbf{X}_0$ units of X. In other words, the factor inputs given by isoquant $\mathbf{X}_{11}$ produce the same value of X-output as the factor inputs given by isoquant $\mathbf{X}_0$. The difference in costs results from the resource savings inherent in offshore sourcing of component x_2.

With prices of final goods given in world markets, X-production now generates excess profits. Resources will be drawn into the industry and output and employment will expand until the excess profits are driven to zero. In the process, the factor–price ratio will rotate in a clockwise direction until it is tangent to the new X-isoquant and the original Y-isoquant. That new factor–price ratio is given by $(w/r)'$. It is clear that, in this instance, extending the international division of labour into the realm of parts and components raises wages and increases employment and output in the industry. Output and employment decrease in the Y-industry. The effect on trade is to reduce both imports and exports of final products.[16] National welfare increases unambiguously, as shown by Arndt (1998b).

This result suggests that import-competing, final-goods producers in high-wage, labour-poor countries can strengthen their international competitive positions by sloughing off production of the labour-intensive components of those products.[17]

Offshore Component Sourcing by Exportables Industries

In the US context, the foregoing would apply to a variety of products in the textiles and apparel, furniture, automobile, consumer appliances and electronics industries. Offshore sourcing, however, takes place among exportables producers as well. An obvious example is the Boeing company and various computer producers. In this section, we examine the implications of offshore procurement in the export industry.[18]

In Figure 3.2, it is now the Y-industry which is assumed to be capable of fragmented production. When the industry drops domestic production of the labour-intensive component y_2 in favour of cheaper imports, the relevant isoquant $\mathbf{Y}_{11}$ reflects the new unit value of Y-production. Again, that cost will be lower than before, provided that the amount of labour and capital embodied in the quantity of y_1 which is exported to pay for imports of y_2 is less than the resource cost of producing y_2 at home.

As before, with commodity prices given in world markets, factor prices must adjust to eliminate the profit opportunities created by the decline in production costs. The new factor–price ratio is assumed to be given by $(w/r)'$. In this instance, wages have fallen as a result of the intensification of

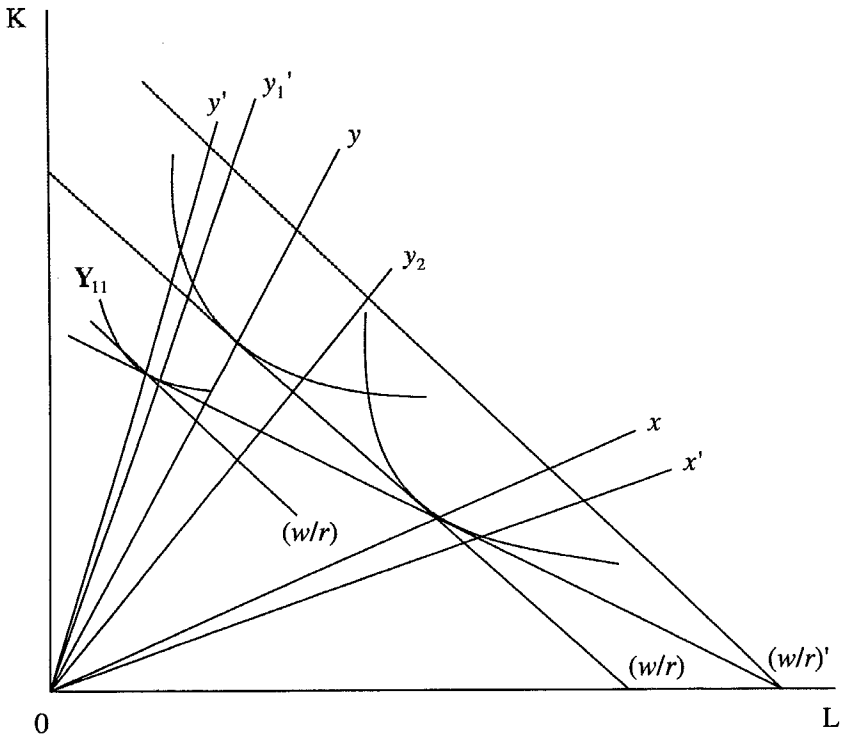

Figure 3.2 Offshore component production in the capital-intensive industry

international specialization. X-production has become more labour intensive, while the outcome is ambiguous for the Y-industry. In the case shown in Figure 3.2, Y-production is more capital intensive than before, but less capital intensive than production of component y_1. In general, output and employment in the Y-industry may rise or fall as a result of intra-product specialization.[19]

Terms-of-Trade Effects

When the countries in question are large, the shift to intra-product specialization will change the terms of trade. In the first case examined above, intra-product specialization in the import-competing industry (X) increases output in that sector while reducing output in the Y-sector. In general, these volume changes should reduce the price of X and raise the price of Y in world markets. This improvement in the terms of trade is welfare enhancing. In Figure 3.1, these price changes will shift the X-isoquants out and the

Y-isoquants in, thereby tending to offset the effects on wages, output and employment brought about by intra-product specialization.[20]

NOTES

1. See Feenstra (1998) and Hummels et al. (1998) for some recent ratios. Both Irwin (1996) and Krugman (1995) have argued that integration of the USA into the world economy is probably no greater today than it was at the end of the 19th century.
2. For a discussion of this well-known point, see for example, Rodrik (1997). See also Arndt (1997b) for a collection of views on globalization and its implications.
3. For a broad overview of US policy history, see Committee for Economic Development (1991). For an analysis of global trade policy issues, see Hoekman and Kostecki (1995).
4. On antidumping policies, see Hindley and Messerlin (1996). See also Mastel (1998).
5. For a general examination of trans-Atlantic economic relations, see Eichengreen (1998).
6. Application of the term 'fragmentation' in this context is due to Jones and Kierzkowski (1990).
7. See Campa and Goldberg (1997) for some recent evidence.
8. See, for example, Feketekuty and Rogowsky (1996), Graham and Richardson (1997) and the symposium on competition policy in *The World Economy* (1998).
9. Inclusion of competition policy in future trade rounds should not be seen as a casual or trivial expansion of the agenda of trade negotiations. It raises a host of issues associated with 'deeper integration' of national economies into the global system. For an analysis, see Lawrence et al. (1996).
10. See Lloyd (1998) for a detailed discussion.
11. For a recent review of the evidence regarding the respective shares of trade and technology in income disparities, see Sachs and Shatz (1996). See also Feenstra and Hanson (1996), Jones and Engerman (1996) and Leamer (1997).
12. See, for example, Feketekuty in Arndt (1997b).
13. See, for example, Ethier and Jones in Arndt (1997b).
14. This section draws on Arndt (1997a, 1998a,b). See also Deardorff (1998) and Jones and Kierzkowski (1999).
15. Deardorff (1998) and Jones and Kierzkowski (1999), on the other hand, assume that components have free-standing markets.
16. This form of specialization, which has also been called intra-product specialization (Arndt, 1997a) and super-specialization (Arndt, 1998b), thus increases intra-industry trade while reducing inter-industry trade.
17. It can be shown that analogous gains accrue to the low-wage, capital-poor country if it sloughs off production of the capital-intensive component of product **X** (Arndt, 1997a). Thus, if both countries continue to assemble the final product, but each specializes in the component in which it has a comparative advantage, wages will rise in both countries, output and employment will increase in both industries, and national welfare will rise in both countries. Price effect!
18. This section draws on Arndt (1998a).
19. These ambiguities are analogous to those found in the context of technological change. Indeed, although technological change has not taken place in the industry, the results of intra-product specialization have much in common with those long familiar from the literature on technological change. See, for example, Johnson (1971).
20. See Arndt (1998b).

REFERENCES

Arndt, S.W. (1997a), 'Globalization and the open economy', *North American Journal of Economics and Finance*, **8** (1), 71–9.

Arndt, S.W. (1997b), 'Globalization and trade: a symposium', *The World Economy*, **20** (5), 695–707.

Arndt, S.W. (1998a), 'Globalization and the Gains from Trade', in K.-J. Koch and K. Jaeger (eds), *Trade, Growth, and Economic Policy in Open Economies*, New York: Springer, pp. 3–12.

Arndt, S.W. (1998b), 'Super-specialization and the gains from trade', *Contemporary Economic Policy*, **XVI** (4), 480–5.

Campa, J. and L.S. Goldberg (1997), 'The evolving external orientation of manufacturing: a profile of four countries', *Economic Policy Review*, New York: Federal Reserve Bank of New York, **3** (2), 53–81.

Committee for Economic Development (1991), *Breaking New Ground in U.S. Trade Policy*, Washington, DC: Westview.

Corden, M.W. (1971), *The Theory of Protection*, Oxford: Clarendon Press.

Deardorff, A.V. (1998), 'Fragmentation in simple trade models', Research Seminar in International Economics Working Paper No. 422, Ann Arbor: University of Michigan, January.

Destler, I.M. (1995), *American Trade Politics* (3rd edition), Washington, DC: Institute for International Economics.

Eichengreen, B. (ed.) (1998), *Transatlantic Economic Relations in the Post-Cold War Era*, New York: Council on Foreign Relations.

Feenstra, R.C. (1998), 'Integration of trade and disintegration of production in the global economy', *Journal of Economic Perspectives*, **12** (4), 31–50.

Feenstra, R.C. and G.H. Hanson (1996), 'Globalization, outsourcing, and wage inequality', *American Economic Review*, **86** (2), 240–45.

Feketekuty, G. and R.A. Rogowsky (1996), 'The Scope, Implication and Economic Rationale of a Competition-Oriented Approach to Future Trade Negotiations', in S. Arndt and C. Milner (eds), *The World Economy: Global Trade Policy 1996*, Oxford: Blackwell.

Graham, E.M. and J.D. Richardson (eds) (1997), *Global Competition Policy*, Washington, DC: Institute for International Economics.

Hindley, B. and P.A. Messerlin (1996), *Antidumping Industrial Policy*, Washington, DC: AEI Press.

Hoekman, B.M. and M.M. Kostecki (1995), *The Political Economy of the World Trading System: From GATT to WTO*, Oxford: Oxford University Press.

Hummels, D., D. Rapoport and K.-M. Yi (1998), 'Vertical specialization and the changing nature of world trade', *Economic Policy Review*, New York: Federal Reserve Bank of New York, **4** (2), 79–99.

Irwin, D.A. (1996), 'The United States in a new global economy? A century's perspective', *American Economic Review*, **86** (2), 41–6.

Johnson, H.G. (1971), *Two-Sector Model of General Equilibrium*, Chicago: Aldine Atherton.

Jones, R.W. and S.L. Engerman (1996), 'Trade, technology, and wages: a tale of two countries', *American Economic Review*, **86** (2), 35–40.

Jones, R.W. and H. Kierzkowski (1990), 'The Role of Services in Production and International Trade: A Theoretical Framework', in R.W. Jones and A.O. Krueger (eds), *The Political Economy of International Trade*, Oxford: Blackwell.

Jones, R.W. and H. Kierzkowski (1999), 'Globalization and the Consequences of International Fragmentation', in R. Dornbusch, G. Calvo and M. Obstfeld (eds), Festschrift in honour of Robert A. Mundell (forthcoming).
Krueger, A.O. (1995), *American Trade Policy: A Tragedy in the Making*, Washington, DC: AEI Press.
Krugman, P.R. (1995), 'Growing world trade: causes and consequences', *Brookings Papers on Economic Activity*, (1), Washington, DC: Brookings Institution.
Lawrence, R.Z., A. Bressand and T. Ito (1996), *A Vision for the World Economy: Openness, Diversity, and Cohesion*, Washington, DC: Brookings Institution.
Leamer, E.E. (1997), 'In Search of Stolper–Samuelson Linkages between International Trade and Lower Wages', in S.M. Collins (ed.) (1998), *Imports, Exports, and the American Worker*, Washington, DC: Brookings Institution, pp. 141–203.
Lloyd, P.J. (1998), 'Multilateral rules for international competition law?', *The World Economy*, **21** (8), 1129–49.
Mastel, G. (1998), *Antidumping Laws and the U.S. Economy*, Washington, DC: M.E. Sharpe.
Rodrik, D. (1997), *Has Globalization Gone Too Far?*, Washington, DC: Institute for International Economics.
Sachs, J.D and H.J. Shatz (1996), 'U.S. trade with developing countries and wage inequality', *American Economic Review*, **86** (2), 234–9.
Schott, J.J. (ed.) (1996), *The World Trading System: Challenges Ahead*, Washington, DC: Institute for International Economics.
The World Economy (1998), **21** (8).

Globalizing America

The USA in World Integration

Edited by
Thomas L. Brewer

Editor, Journal of International Business Studies *and Professor, Department of International Economics and Management, Copenhagen Business School, Denmark*

Gavin Boyd

Honorary Professor in the Political Science Department, Rutgers University, Newark, USA and Research Associate, Centre for International Business Studies (HEC), University of Montreal, Canada

NEW HORIZONS IN INTERNATIONAL BUSINESS

Edward Elgar
Cheltenham, UK • Northampton, MA, USA

Published by
Edward Elgar Publishing Limited
Glensanda House
Montpellier Parade
Cheltenham
Glos GL50 1UA
UK

Edward Elgar Publishing, Inc.
136 West Street
Suite 202
Northampton
Massachusetts 01060
USA

A catalogue record for this book
is available from the British Library

Library of Congress Cataloguing in Publication Data

Globalizing America : the USA in world integration / edited by Thomas L. Brewer, Gavin Boyd.
(New horizons in international business)
Includes index.
1. United States—Foreign economic relations. 2. International economic relations. I. Series. II. Brewer, Thomas L., 1941– III. Boyd, Gavin.

HF 1455.G58 2000
337.73 21—dc21 99–044832

ISBN 1 85898 981 7

Typeset by Manton Typesetters, Louth, Lincolnshire, UK.
Printed and bound by MPG Books Ltd, Bodmin Cornwall.