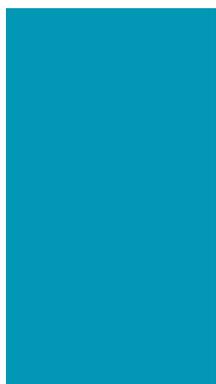


Center for Latin American Studies
University of California, Berkeley



Work, Development and Globalization

Professor Harley Shaiken

Class of 1930 Chair, Center for Latin American Studies
Graduate School of Education and Department of
Geography
University of California, Berkeley

February 2004

Paper No. 7

W
O
R
K
I
N
G

P
A
P
E
R

clas.berkeley.edu
2334 Bowditch Street
Berkeley, CA 94720

The Center for Latin American Studies (CLAS) at the University of California, Berkeley publishes working papers and policy papers relating to Latin America. This series represents the diverse and coordinated activities of faculty and affiliated scholars at CLAS. You may order papers from us by sending a check or money order for US \$5.00 made out to "UC Regents" along with the paper title and number to:

Working Papers Series
Center for Latin American Studies
University of California, Berkeley
2334 Bowditch Street
Berkeley, CA 94720

Work, Development and Globalization*

Professor Harley Shaiken

Class of 1930 Chair, Center for Latin American Studies
Graduate School of Education and Department of
Geography
University of California, Berkeley

February 2004

Paper No. 7

* I would like to thank Sara Lamson and Claudio Ferraz for superb research assistance and Catha Worthman, Stan Gacek, Alex Lantsberg and Lifang Chiang for their valuable comments on the paper.

CONTENTS

GLOBALIZATION AND THE NEW INTERNATIONAL DIVISION OF LABOR.....2

CHINA AND BRAZIL.....9

INTEGRATED PRODUCTION NETWORKS13

CHINA–BRAZIL TRADE17

MANUFACTURING, WAGES, AND PRODUCTIVITY.....19

 THE U.S. ECONOMY AS A POINT OF REFERENCE19

 LINKING PRODUCTIVITY AND WAGES21

LABOR STANDARDS24

BIBLIOGRAPHY35

At the heart of the global economy today is a troubling paradox: the productivity of advanced manufacturing promises to raise living standards while fierce world-wide competition for jobs threatens to undercut wages and working conditions. How does one resolve this paradox? The short answer is not easily! That said, my goals in this paper are more modest: to provide fresh perspectives on the tension between the promise of export-led growth and the pressures of globalization. Trapped in the midst of this conflict, social and economic policies related to work are often battered yet nonetheless remain central in strategies of development. In a rapidly evolving system of global trade and production, transnational firms can thrive in a variety of situations as long as political stability and protection for investment exist. For societies, however, a world of difference separates paths of development that lead to broadly-shared prosperity from those that result in high productivity poverty—*islands of competitive success that bypass workers and most everyone else.*

Firm strategies and government policies that foster social inclusion can spur economic growth. They can make possible steadily growing consumer demand and social stability that, in turn, attracts new investment. Is this virtuous circle really possible? Consider a new study of low-wage work in the U.S., some of it in the crosshairs of the global economy (Appelbaum et al 2003). The study highlights successful firms that invest heavily in training, experiment with new ways of organizing work, and motivate workers with shared productivity gains. Despite fierce competition, the authors found these firms could succeed compared to firms that sought to survive simply by slashing wages and cracking the whip. High-road employers, however, need innovative state support and new labor-market institutions in which firms cooperate to train workers, pool knowledge on new ways to

organize work, and set industry skill standards (Appelbaum et al 2003, Herzenberg 1998). Moreover, Appelbaum and her co-authors found that unions can be a central part of competitive success establishing “strong job quality and productivity norms” (2003, 25).

How then does one then take the high-road in the midst of intense pressures to take a short cut through the alley? Nowhere are these issues more important than in the case of Brazil. Defining the paths to the high-road requires examining the new challenges Brazil faces in an increasingly unforgiving global economy. In this paper, I explore four broad areas: first, globalization and the new international division of labor; second, the emergence of China as an export powerhouse and the implications this has for Brazil; third, the conundrum of rising productivity and depressed wages; and finally, the role of labor standards in the new global economy. While many have viewed labor standards as a point of contention between the industrialized economies of the north and the industrializing countries of the south, core labor standards increasingly may be most vital to countries of the south in shaping global labor markets. I argue that Brazil has the potential to play a pioneering leadership role by proposing labor standards that facilitate social inclusion at home while redefining the terms of competitiveness internationally.

GLOBALIZATION AND THE NEW INTERNATIONAL DIVISION OF LABOR

Globalization shapes the nature of work in Brazil from the shop floor in textile factories to the suites of computer programmers. Unfortunately, much of the discussion on globalization, to paraphrase former U.S. labor secretary Robert Reich, may have gone from obscurity to meaninglessness without much of an intervening period of coherence.¹ Whatever the shortcomings of the discourse, globalization combines the movement of ideas, the use of

information technology, and the far-flung location of factories and production networks. George Soros emphasizes the role of transnational companies in the process, defining globalization as “the development of global financial markets, the growth of transnational corporations, and their increasing domination over national economies” (Soros 2002, 1). He argues “most of the problems that people associate with globalization, including the penetration of market values into areas where they do not traditionally belong, can be attributed to these phenomena” (Ibid). Soros points out that “the salient feature of globalization is that it allows financial capital to move around freely; by contrast, the movement of people remains heavily regulated” (Ibid, 3). Giddens and the *New York Times*’ Thomas Friedman both emphasize information technology. Giddens maintains “in the new global electronic economy, fund managers, banks, corporations, as well as millions of individual investors, can transfer vast amounts of capital from one side of the world to another at the click of a mouse” (2000, 27). Friedman points out that “globalization enables each of us, wherever we live, to reach around the world farther, faster, deeper, and cheaper than ever before” (2002, 64). Echoing other analysts, he argues that the “process is almost entirely driven by technology” (2002, 64). Stiglitz highlights trade as a powerful force underlying globalization, defining it as “the closer integration of the countries and peoples of the world which has been brought about by the enormous reduction of costs of transportation and communication, and the breaking down of artificial barriers to the flows of goods, services, capital, knowledge, and (to a lesser extent) people across borders” (2002, 9). Dani Rodrik zeros in on social issues and asks a provocative set of questions in an article entitled “Globalization for Whom?” (Rodrik 2002). He observes that “globalization has brought little

but good news to those with the products, skills, and resources to market worldwide” and then poses one of the central questions defining the debate over globalization today “does it also work for the world’s poor?”

Missing from much of this literature is an awareness of how people make things, that is an analysis of the global production process itself. To fully understand globalization, one has to look beyond the wonders of financial flows—as critical as they are—to the new character of international trade and the emergence of a new, profoundly different international division of labor. Where and under what circumstances computers are engineered, pants are sewn, and automobiles are assembled has far-reaching implications for the direction of virtually all the economies in the global trading system. And here real choices are available that shape the answer to Rodrik’s pivotal question concerning which nations and people benefit from the process.

One measure of globalization is trade. World trade roared along through the 1990s, topping U.S. \$6.2 trillion in 2002 and outstripping growth in output by a significant margin (WTO 2003, 10; UNCTAD 2002b, V). Trade accounted for nearly 30 percent of world GDP in 2000, up from 20 percent in the early 1990s (WTO 2002, 1). In 2001, the collapse of the information technology bubble combined with the tragic events of September 11 and their aftermath caused this red-hot pattern of growth to cool although a modest recovery followed in 2002 (UNCTAD 2003, 41). At the end of the day, if global trade were a national economy, it would be the second largest economy in the world.

Not only has global trade soared, its character has shifted in two pivotal ways: first, transnational firms are more central and, second, manufacturing in general and high tech

manufacturing in particular are more important for developing economies. Transnational companies now account for two-thirds of global trade; half of this—that is one third of all global trade—takes place within the same firm (UNCTAD 2001, 56). This trade courses through complex sales and production networks that span the globe. In retail sales, for example, Wal-Mart alone accounted for \$12 billion in exports from China to the U.S. in 2002 or 10 percent of total Chinese exports to the U.S. (Miller et al. 2003, 34). In manufacturing, firms such as Maytag illustrate new production patterns. Its dishwashers are assembled in Tennessee with Chinese motors and Mexican wiring (Aeppel 2003, B1), providing an unprecedented span of production control for transnational firms.

Manufacturing accounted for 70 percent of developing countries' exports at the end of the 1990s, more than tripling its share of two decades earlier (UNCTAD 2001, xviii). Not only is the manufacturing share up, but these economies are exporting far more sophisticated products. High tech exports from emerging economies jumped by a factor of 12 from 1985 to 1998. As a result, office and telecom equipment shipments now account for a larger share of developing economy exports than either agriculture or mining (WTO 2002, 4).

Brazil is becoming more linked to the global economy. Its \$60 billion in exports in 2002 more than doubled the country's \$26 billion in exports in 1985 and total trade accounted for nearly one quarter of GDP in 2002 compared to 18 percent in 1985. Manufacturing, however, still accounts for only 55 percent of exports, a share almost exactly equal to what it was in 1985, and one that trails the global average of developing economies. In 2002, soybean exports still outpaced aircraft; "flour and residuals of soy oil extraction" was a larger category than vehicles.

At the cutting edge of this new international division of labor, firms in emerging economies are able to export at high levels of productivity and quality, converting low wages into low unit costs at world-class standards. These trends are particularly evident in the auto industry, which accounted for over \$4.5 billion of Brazil's exports in 2002. Ford executives maintain their new plant in northeastern Brazil is their lowest-cost plant in the world (Zaun 2002, A8). The star factory among European auto makers in 2002 was the BMW plant on the outskirts of Pretoria, South Africa which builds the popular BMW 3 series. The plant scored 85 defects per 100 autos, making its quality-rating second in the world after a Toyota plant in Japan (Zaun 2002, A1). The Mexican auto industry at times rivals its U.S. counterpart. "Mexico's auto assembly plants now are equal to those in the rest of North America in quality and labor productivity and sometimes better," Corbett et al have observed (2001). In an earlier study I found that quality on models produced in both the U.S. and Mexico was comparable, based on the number of defects per hundred vehicles after three months of service. In fact, of the ten models produced in both countries in 1999, quality was higher in six cases in Mexican plants (Shaiken 2001). Reflecting these kinds of results, Honda's chief executive told the Wall Street Journal, that adding plants in developing countries "will dramatically increase our competitiveness" (Zaun 2002, A1).

Some critics charge that this surge of high-tech production in developing countries is misleading because it is centered in "the low-skill, low-value-added assembly states of global production chains generally organized by [transnational firms]" (UNCTAD 2002b, 53). Although this critique captures a dimension of what is going on, it is nonetheless off the mark. While research and development are often scarce in offshore operations, production

processes such as assembling cars and machining engines are among the most demanding and technology-intensive of mass production operations. And, they are often paired with production engineering and design work that develops or adapts products to the market in which they will be sold.

These far-flung manufacturing networks rest on the emergence of a new comparative advantage in emerging economies. On what is this comparative advantage based? In the past, manufacturing firms have looked for areas with a pool of skilled and experienced workers, a strong industrial infrastructure of transportation and communication, and a solid educational system to train future workers (Cowie 1999; Shaiken 1994). These criteria remain critical for much of manufacturing, particularly clusters of high-tech research and development such as Silicon Valley. In the new global economy, however, some manufacturing firms have stood these priorities on their head: a solid educational system is at the top of the queue, the companies seek motivated rather than experienced workers, and a highly developed infrastructure is less critical. The net result is more flexibility as to where advanced production can be located. When the Ford Motor Company began a decade-long billion dollar investment in two plants in northern Mexico in the 1980s, the company placed a heavy emphasis on young, highly motivated workers with a strong basic education rather than seeking experienced veterans. Through extensive training and innovative work organization the company was able to train workers in a relatively short period of time to handle advanced manufacturing. In the case of the Hermosillo assembly plant, the factory matched the quality of a similar plant in the U.S. making a comparable vehicle in less than two years. Managers found that a strong basic education—somewhere between six and twelve years—was critical

for production assemblers and skilled repair workers. Post-secondary technical school and university degrees were necessary for factory managers and design and development work (Shaiken 1987, 1994). Reflecting the success of the first decade of the plant's operation, Ford announced plans in October 2003 to invest an additional \$1.6 billion in Hermosillo for the launch of one of the company's most critical future models in North America (Associated Press, 2003).

Within global production chains, developing economies in general and Brazil in particular have become important sites to experiment with new forms of work organization. Over the last hundred years, high volume production has seen the introduction of three interlinked methods: mass, lean, and modular production. In 1913 mass production came into its own with the introduction of the moving assembly line in the massive Ford Highland Park plant near the center of Detroit; four decades later lean production—just-in-time inventory married to employee involvement—began to emerge in Toyota plants in Japan, and now Volkswagen, Ford, and General Motors, among others, are pioneering modular assembly in factories in Brazil. Automakers are introducing both modularization—workers assemble groups of parts into modules which are then bolted onto the final vehicle—and a much heavier reliance on suppliers (Salerno and Dias, 2002, 61). The first plant to try these approaches was the Volkswagen truck facility in Resende. Although 1,100 workers were under the same roof, only 100 or so worked for VW with all the others employed by suppliers. General Motor's Blue Macaw project in the southern state of Rio Grande do Sul developed a variant on the "modular supplier" approach which was then adapted to GM factories throughout the world, including a new plant in Lansing, Michigan.² Reversing the

traditional order of things, a new form of work organization was pioneered in the South and then introduced in the North, underscoring the sophistication of the industrial base in Brazil.

CHINA AND BRAZIL

Manufacturing production in Brazil—both for the domestic market and for export—increasingly collides with manufacturing exports from other countries where wages are often lower and productivity comparable or even higher. Presently, nowhere is the challenge greater than from China. In 2002, China jumped into fifth place globally in merchandise exports after its trade grew at double-digit rates over the previous decade, twice the world average (UNCTAD 2002b, 141; WTO 2002). The growth rate of these exports—90 percent of which are in manufacturing—tripled in 2002 (UNCTAD 2003, 42). At the same time the ownership of export industries has shifted sharply: foreign funded enterprises jumped from less than 2 percent of exports in 1986 to almost half in 2000 (UNCTAD 2002b, 155). As the *Harvard Business Review* put it, echoing much of the business literature, “[China] is fast becoming the world’s factory and indubitably a factor in every global industry” (2003, 69).

China combines three key production advantages: a vast market, low labor costs, and a core of educated engineers and technicians. Consider first the large, rapidly growing market. It is particularly attractive to firms on its own and spurs a hub of manufacturing suppliers and subcontractors with world-class export potential. “It’s hard to serve Chinese customers in a lot of our businesses unless we manufacture there,” according to the CEO of 3M (Miller et al. 2003, 34). That said, the *Harvard Business Review* cautions that “hoped-for markets have turned out not to exist or to be too costly to develop profitably’ (2003, 69). Nonetheless, the magazine admits “it’s the yea-sayers who have won the day” (Ibid).

Second, wage rates are very low—a third of Mexico’s and 5 percent of those in the U.S—and a vast surplus labor force and repressive government policies virtually guarantee these low wages for years to come.³ Lieberthal observes that “Beijing expects to maintain its low-cost labor advantage” and that “migration from the interior is keeping low-end labor rates—even along the booming coast—very competitive” (2003, 72). Low wages also reflect the lack of labor rights in China. Organizing an independent union is viewed as comparable to organizing a political protest (Worthman 2003; Human Rights Watch 2002). Although Human Rights Watch (2002) points to some improvements in labor rights, the overall situation is grim. The structural reforms initiated in the late 1970s have squeezed if not strangled workplace rights enjoyed by Chinese workers since the 1950s and have resulted in record unemployment, skyrocketing poverty, and sharp increases in income inequality. The net result is millions of workers willing to accept virtually any conditions on the job mixed with severe labor tensions from those workers who are not. Estimates of strikes and worker protests in China range between official statistics of twenty five hundred (Blecher 2002, 285) to academic accounts of four thousand (Lee 2001, 5). The angriest workers come out of bankrupt or failing state-owned firms, which now account for about half of all state firms in the country (Ibid.). The lack of labor rights and independent unions contributes to an appalling workplace health and safety record. 140,000 people were killed in accidents related to work in 2002, a sharp jump from the 109,000 who died in 2000, according to the State Administration of Work Safety (Kahn 2003). “...in China’s emerging capitalist culture,” the *New York Times* reported, “high rates of injury and death are tolerated as the price of economic progress” (Kahn 2003).

Finally, China has a critical mass of educated workers and engineers who are the oil of the global information and manufacturing economy. In 2001, China had 743,000 researchers, the second highest number in the world, trailing the 1.3 million in the U.S. but ahead of the 648,000 in Japan (OECD 2003, 11). That year, 1 million engineers and technicians graduated, and this figure doubled in 2003 and is expected to rise again in 2004 (Lieberthal 2003, 72). In addition, research and development expenditures in China reached almost \$60 billion in 2001, behind the U.S. and Japan but ahead of Germany (OECD 2003, 10). The United Nations concludes that “China has the potential to leapfrog the industrialization process rather than continuing to rely on absorbing the surplus labour in relatively low value-added, labour-intensive manufactures” (UNCTAD, 2002, 167). The industrialization process is hardly trouble free and prone to potholes, detours, and stalls but the overall direction is unmistakable.

The mix of exports is becoming far more sophisticated, a Morgan Stanley economist argued in *Foreign Affairs*. “The once-simple integration strategies of firms, centered on the processing or assembling of manufactured goods, will become more complex as value-added manufacturing functions are increasingly transferred to Chinese affiliates” (Quinlan, 2002, 122). Already telecommunications equipment and computers account for 25 percent of total exports (UNCTAD, 2002b, 141). “China is becoming a manufacturing superpower,” according to Kenneth Courtis, Goldman, Sachs & Co’s vice-chairman for Asia, “...the momentum seems unstoppable” (Garten, 2002, 20). Four hundred of the Fortune 500 firms have already poured money into more than 2000 projects in China (UNCTAD, 2001, 26). The Chinese government is working overtime on all levels to attract this investment.

Shenzhen's provincial government has offered \$5 billion to advance its integrated-circuit industry. Although 65 percent of its export growth has come from transnational firms, China is seeking to go beyond this base and establish itself as a high-technology force. The emergence of Huawei Technologies symbolizes this trend. Writing about the corporation's headquarters, the *New York Times* observes that "the expanding campus houses many of the 10,000 engineers working to establish Huawei as China's first international player in the communications equipment business" (Buckley 2003, C1).

The auto industry may come to play a leading role in China, as it has in Brazil. China has long had auto factories oriented towards domestic production but they have been surprisingly high cost operations weighted down by an antiquated supplier base. The president of Volkswagen Asia-Pacific, the international automaker that currently has the largest share of the Chinese market, estimates that auto production costs in China are still about 18 percent higher than Germany. He feels, however, that this cost differential will be gone by 2006 and emphasizes that "our target is to become export ready as soon as possible" (Bradsher, 2003, 4). All five of the leading Japanese car companies, once reluctant to manufacture in China because of quality concerns, have announced extensive new plans (Brooke, 2002, W1). "Growth in China is absolutely amazing," according to the chairman of General Motors. "The Volkswagen brand sold more vehicles during the first quarter of 2003 in China than they did in Germany" (Landler 2003, W1). In fact, more light vehicles were sold in China than in Germany in 2003 and production topped South Korea (Bradsher 2003). Automobile production for the first eight months of 2003 rose by almost 90 percent to 1.25 million units, according to Reuters, and the chairman of Daimler Chrysler predicts that China

will be the world's second largest car market by 2013 (Ibid). Whether these predictions prove to be on the mark or over the top only time will tell, but current production and near term prospects are impressive.

INTEGRATED PRODUCTION NETWORKS

Foreign direct investment (FDI)—amounting to \$1.3 trillion globally in 2000—spurs global production (UNCTAD 2001, 9).⁴ Flows to developing economies—highly concentrated in relatively few countries—accounted for \$240 billion (UNCTAD 2001, xiii).⁵ FDI in China alone shot up by one third in 2001 compared to the previous year, (UNCTAD 2002b, 154) and jumped an additional 19 percent in 2002 to almost \$53 billion (WTO 2003, 7). An annual survey of senior executives of the world's largest firms conducted by AT Kearney, the consulting firm, reported that for the first time China edged out the U.S. as the most desirable site for foreign direct investment (Giles 2002). The upsurge in FDI to China has clearly impacted other developing countries. According to the United Nations Conference on Trade and Development report "... recent FDI flows to developing countries, notably to China, appear to aim at relocating production from other developing countries, including those in Central America, thereby diverting rather than creating North–South trade" (UNCTAD 2003, 49).

Within highly integrated production networks, fierce pressures exist to cut costs, often provoking the threat or the actual movement of production to lower-wage areas. These pressures are especially evident in union organizing campaigns in the U.S., as Bronfenbrenner has indicated. Employers threatened to shutter workplaces in close to 30

percent of all National Labor Relations Board (NLRB) organizing campaigns and actually carried out the threat in 5 percent of the cases in which the union was victorious (Bronfenbrenner 1997). By the late 1990s, with U.S. manufacturing hemorrhaging jobs, the threat rate had jumped to 70 percent in manufacturing and the actual plant-closing rate was 12 percent (Bronfenbrenner 2001). Clearly, the high threat rate is capable of exerting a major chilling effect both in organizing campaigns and in the collective bargaining process itself.

The drive for low wages in the global marketplace is increasingly a competition among low-wage economies. Ross and Chan argue that “this competition—particularly in labor-intensive commodities—is not so much North versus South but South versus South” (2002). They describe how countries in the global “South” bid against each other to attract investment by multinational firms, highlighting the example of China drawing manufacturing work away from Mexico. While Ross and Chan focus on industries such as garment and electronics assembly, the same South–South competition is occurring in higher-technology, higher-skilled work. Auto companies, for example, are expanding their production base in countries that used to be called third world. Hyundai is just one case and recently announced plans to establish a global production base for a new minicar in India. “We intend to shift the production base of Santro from South Korea in the last quarter of 2003 and base Hyundai Motor group’s exports from India,” B.V.R. Subbu, the president of Hyundai’s Indian subsidiary stated.

China’s role in a global labor market is particularly critical. China’s vast size and growing manufacturing potential raises the specter of workers in the global factories of multinational firms directly competing with Chinese workers in the same firms for the

location of future production and, more to the point, for jobs. *Automotive News* reports that Ford and General Motors have issued an ultimatum to their suppliers: “Suppliers must match a ‘world price’ that is increasingly set in China, or they must build factories in China” (Sherefkin and Sedgwick 2003, 1). *Automotive News* elaborates that “North American suppliers now are expected to match Chinese prices whether or not they have plants in China” (Ibid, 38). This ultimatum applies to megasuppliers such as Delphi and Visteon as well as smaller suppliers. According to *Automotive News* “if a supplier builds a factory in China, it can sell parts to a Ford or GM assembly plant in China, then export parts to the automaker’s North American assembly plants” (Ibid, 38). At an April 2003 briefing, General Motor’s executives informed suppliers that the corporation’s annual purchases of parts in China would soon jump to \$10 billion, up from \$1.1 billion in 2002 (Ibid, 38). Ford expects to hit the \$10 billion mark in 2010 (Ibid, 38).

Japanese and Taiwanese firms have also begun shifting production to China in a major way. In Japan, the highly-skilled tool-and-die industry has come under “pressure from increasingly savvy Chinese producers supported by a flood of foreign investment,” according to the *Los Angeles Times* (Iritani 2003). “It is quiet these days in Masao Namiki’s cluttered factory, which smells of machinery oil and metal shavings,” the *Times* reports. “When the phone does ring, the news is often bad: Cut your prices by half—or the order goes to China” (Ibid). In 2001 Taiwan-based firms—a major presence in the global personal computer industry—produced over 50 percent of all laptops and 25 percent of desktop PCs and an even larger percentage of many peripheral products such as monitors. As U.S. firms squeeze their Taiwanese suppliers on cost, the suppliers have shifted production to lower-cost sites. “The

obvious candidate is China, with its vast, cheap and increasingly educated labor pool. Add to that the low cost of power, water and easy financing by solicitous local governments, and Taiwanese companies say the cost of doing business in China is a fraction of that at home,” according to the *New York Times*. Indicative of China’s pull, Compal Electronics, Taiwan’s second largest laptop manufacturer, plans to move all its production to the mainland by 2004 (Landler 2002).

Firms across the globe are clearly exerting tough, direct pressure on their suppliers to match Chinese production costs in industries from automobiles to electronics. What is at stake, however, is not simply wage rates—obviously often lower in China—but working conditions as well. In the drive to cut costs, work speeds are often ratcheted upwards and health and safety standards flouted. If China becomes the standard for global manufacturing cost, then the work place standards of China and the industrial relations regime that governs them become the de-facto benchmarks as well.

Geography still matters, but low labor costs tend to shrink geographical distances. Describing the flight of *maquiladoras*—export-oriented assembly plants—out of Mexico, Jean Paul de Kervor, a Tijuana real estate specialist, comments: “As a general rule of thumb, anything smaller than a breadbox is going to come from Asia since it’s not too expensive to ship it across the Pacific” (Calbreath & Lindquist 2002, H1). “Anything bigger than a breadbox, such as TV sets or furniture, will probably continue to be made in Tijuana.” As the *Financial Times* puts it “companies must look for new sources of competitive advantage—and one of those is size. The bigger the product, the harder it is to substitute Asia for Mexico and bear the costs of transport across the Pacific” (Authers 2003). In fact, some *maquiladoras*

are seeking to survive in the shrinking price differential for shipping boxes and transportation between Mexico and China.

CHINA–BRAZIL TRADE

Looking at the trade numbers alone, China seems to have only a modest impact on Brazil today. Although Chinese exports to Brazil increased by almost a third over the last five years, they accounted for \$1.6 billion in 2002 or only about 3 percent of Brazil's total imports. During the same period Brazilian exports to China more than doubled reaching \$2.5 billion in 2002. What then is the problem? No problem at all for agriculture and mining. "Beijing's seemingly insatiable demand for iron ore, copper and soya beans is sucking in Latin American output and driving up prices," according to the *Financial Times*. (Authers et al. 2003). In fact, Brazil ships raw materials and commodities to China while China exports manufactured goods to Brazil. Brazil's top three exports—61 percent of the total—involved fruits, ores and wood in 2001.⁶ [See figures 1 and 2] China's top two exports to Brazil that year—41 percent of the total—involved electronic equipment and machinery. China's emergence as a manufacturing powerhouse poses a stiff challenge to both Brazilian firms and wages. As the *Financial Times* put it "cheap labour and the market access obtained through World Trade Organization membership is allowing Chinese manufacturers to undercut their Latin competitors in low value-added sectors such as shoes, toys and textiles" (Authers et al. 2003). What the *Financial Times* does not mention is the fact that China could prove as powerful a competitor in far more sophisticated manufacturing operations in the coming years. In bilateral and regional agreements, research indicates "wage changes should be linked to differences in factor endowments across partners, but the presence of other trading

associates external to the agreement may moderate the gains from trade.” This study goes on to conclude that in “ a preferential agreement between Canada and Brazil, the relative wage of less skilled in Brazil may rise to a lesser extent after the agreement if Canada has been trading with China” (278). Brazilian and Chinese exports potentially go head-to-head in the U.S. market. In 2002, 25 percent of Brazil’s exports (\$15 billion) went to the U.S. while 47 percent of China’s exports (\$125 billion) went to the same market. In a number of sectors Brazil has shown strong export growth in the last decade while Chinese exports have surged past. Consider two sectors, one high tech and one low tech. In footwear Brazilian exports rose modestly from \$1.5 billion in 1992 to \$1.7 billion in 2001; during the same period China’s exports more than doubled from \$4.2 billion to \$10.1 billion. In electrical and electronic equipment Brazil’s exports almost tripled from \$1.2 billion in 1992 to \$3.2 billion in 2001 while China’s exports jumped almost six fold from \$8.2 billion to \$51.3 billion. In aircraft, the shining star of Brazilian manufacturing exports, shipments jumped 10 fold from \$360 million in 1991 to \$3.5 billion in 2003; here Chinese exports remained flat at less than \$400 million. Slow-growing exports in this critical sector, however, are likely a temporary phenomenon. A Chinese aircraft consortium, AVIC 1, has plans to produce sophisticated regional jets. Research and development is expected to begin in 2003 and the first aircraft is scheduled to roll off production lines in 2007. The company forecasts a need for 500 jets domestically, laying the basis for a significant export potential (Goodman 2003). In fact, Embraer, Brazil’s showcase jet manufacturer, began a joint venture with China Aviation Industry Corporation in late 2002 and is scheduled to produce its first aircraft before the end of 2003 (Colitt 2003).

MANUFACTURING, WAGES, AND PRODUCTIVITY

THE U.S. ECONOMY AS A POINT OF REFERENCE

A number of recent studies have found a global decline in manufacturing jobs. Worldwide manufacturing employment dropped more than 11 percent—22 million jobs—between 1995 and 2002, according to Alliance Capital Management (Hilsenrath and Buckman 2003). Two important contributing factors have been the introduction of powerful new technologies and more efficient ways of organizing work. In China, the results have been mixed. That country added over 2.5 million manufacturing jobs between 2000 and 2003, an impressive gain (Ibid). Prior to the current surge, however, Chinese manufacturing employment plummeted from 98 million to 83 million from 1995 to 2002. In the earlier period, employment dipped as a result of a massive restructuring of the older, more inefficient state sector. Employment is now rising based on China's export success.

The U.S. workforce has been going through a far-reaching transformation for a long time prior to the emergence of globalization. In occupational terms, the shift has been from manufacturing to service sector jobs, reflecting some broad trends in other industrial economies as well. The popular image is one of workers moving from the shop floor to the knowledge economy. The reality is more complex. In his seminal book, *The Coming of Post Industrial Society*, published in the early-1970s, Daniel Bell forecast the continued decline of U.S. manufacturing (Bell 1999). Underscoring the trend, the U.S. Bureau of Labor Statistics (BLS) released its employment forecasts at the end of 2001, covering the decade between 2000 and 2010. At the start of this period the U.S. economy employed 124 million workers. The BLS projected employment in the service-sector would increase by 19 percent—20.5

million jobs—while manufacturing employment would inch up only 3 percent over the decade. Manufacturing's share of total employment will slip from 13 percent in 2000 to 11 percent in 2010, according to the BLS. In terms of occupations, the BLS expects major growth at both ends of the educational and income spectrum. Professional occupations will add 7.0 million jobs while service occupations will expand by 5.1 million. Not surprisingly the fastest growing occupations—eight of the top ten groups—are related to computers, in part, because they start with relatively small numbers. The fastest growing occupation—computer software engineers—doubles during this decade but still employs only 760,000 people. The ten occupations adding the most jobs come from a variety of areas, many of them low-wage work. Leading the list is food serving workers, a category that grows by 30 percent to 2.9 million in 2010.

In the weak recovery from the recession ending in 2001 the long term decline in manufacturing jobs accelerated sharply, declining from 17.3 million jobs in 2000 to 14.6 million in August 2003, or a drop of 2.7 million jobs. Manufacturing now represents only 11 percent of the U.S. workforce, seven years ahead of the BLS forecast. In terms of numbers, the U.S. hasn't employed this few manufacturing workers since the deep recession in 1958, 45 years ago. Productivity improvements—new technologies and new ways of organizing work—account for most of this job loss but the siting of production elsewhere in the world is a sizeable factor. While there is no agreed upon estimate of how many jobs have moved offshore, a high-end estimate posits that close to 1 million have moved since March 2001 (Uchitelle 2003). Most of this job loss has been in manufacturing, but 15 percent involves professionals with college degrees (Ibid). "...lately the work sent abroad has climbed way up

the skills ladder to include workers like aeronautical engineers, software designers and stock analysts as China, Russia and India, with big stocks of educated workers, merge rapidly into the global labor market,” according to the *New York Times* (Ibid.). The Chairman of Intel Corporation, a high-tech pioneer, recently warned that most information technology jobs in the U.S. were vulnerable to overseas competitors in the next ten years, principally China and India (Schroeder and Aeppel 2003). Needless to say, this job loss has sparked a strong political backlash on trade. “A new anti-free-trade movement is emerging in the U.S., comprising highly skilled workers who once figured they would be big winners in the globalized economy but now see their white-collar jobs moving overseas in growing numbers,” the *Wall Street Journal* reports (Schroeder and Aeppel 2003).

LINKING PRODUCTIVITY AND WAGES

The pressures of increasing globalization underscore a critical issue that the U.S. and other industrial societies have grappled with throughout the twentieth century and still struggle with today: insuring that productivity gains are broadly shared, and thus translating economic growth into social inclusion. The central place to address these issues is in national public policy, but three attempts to link rising productivity and wages provide some fascinating historical insight on a micro level: Henry Ford’s introduction of the five dollar day in 1914; a formula pioneered by General Motors and the United Auto Workers (UAW) union in 1948; and the social pact that linked job security and employee involvement in Japan and diffused throughout the world during the 1980s. These experiences are rooted in the specific social context and history of two industrial countries but the underlying themes remain relevant today. Management introduced all three efforts initially but unions were essential for forging

the link between rising productivity and improved wages over time. As a result, the firms themselves became more productive and the market grew providing broad benefits to the entire economy.

Henry Ford made the rather remarkable point that higher wages can mean higher profits. On January 5, 1914, he startled the industrial world, outraged fellow auto manufacturers, and elated his 12,000 or so employees by doubling the prevailing wage in the industry to \$5.00 a day. This precedent shattering moment followed the deployment of new technologies and ways of organizing work, culminating in the introduction of the moving assembly line in 1913. While there were numerous restrictions on who and under what circumstances a worker would receive the new wage, most Ford workers in fact did receive it. The projected cost for the first year was \$10 million dollars or half the company's estimated profits (Raff and Summers 1987, S68). In later commentary, Henry Ford was at great pains to insist that there was "no charity in any way involved." He emphasized that "a low wage business is always insecure" and that doubling the wage and reducing the work day "was one of the finest cost cutting moves we ever made" (Raff and Summers 1987, S59). Rather than the bankruptcy prophesized by his competitors, Ford's productivity shot up in the wake of the increase, the price of Model Ts plummeted, and the profits of the Ford Motor Company jumped 20 percent in the next year alone. Productivity soared, in part, because worker turnover and absenteeism declined and high morale translated into a strong commitment on the job. The soaring productivity made it possible to cut the price of the car and this in turn caused sales to skyrocket. The age of Fordism was born. That said, other manufacturers were slow to follow Ford's lead. Nonetheless, as the technologies he pioneered diffused through

the auto industry, wages did indeed rise and were 40 percent higher than the manufacturing average by 1928. The onset of the depression, however, caused these wages to severely erode.

The formation of industrial unions in the depth of the great depression forged anew the link between rising productivity and wages. As Henry Ford had shown, this could lay the basis not only for strong benefits for the workers directly involved but for the economy as well through stimulating purchasing power and demand. Nonetheless, the attempt to forge this link was turbulent and acrimonious. After a decade of tough bargaining and a series of long, bitter strikes, General Motor's president, Charles Wilson, proposed an approach to moderate the struggle over wages. He suggested wage setting based on two broad principles: first, an annual improvement factor (AIF) that would reflect the broad increases in productivity in the economy and a cost of living clause (COLA) that would protect workers from inflation. The UAW accepted and these principles were incorporated into the 1948 collective bargaining agreement. Although initially reluctant, the union later became far more enthusiastic and preserved these rules largely intact for the next three decades (Katz 1985, 16). Since then, the modifications have occurred particularly in times of economic crisis, but the underlying principles were still in place in the 2003 negotiations between the UAW and Ford, General Motors, and Daimler Chrysler. A critic might comment "Aha! We have found the culprit that has caused the U.S. based industry to drive off a cliff: bloated wages based on outmoded formulas!" But while Ford, General Motors, and Daimler Chrysler are hardly the picture of health, their far more successful Japanese and German competitors generally pay similar wages in their U.S. operations and compete effectively in the U.S. market.

Both these historical examples were forged in a period before globalization had the speed and reach that it does today. A third example is more recent and originated in Japan prior to diffusing to the U.S. in the 1980s: the social pact that guaranteed “lifetime” job security in exchange for worker involvement in raising productivity. The remarkable success of Japanese firms in the auto and electronics industry that employed this approach gave it visibility and cachet throughout the world. As it turned out, only about one third of the workers in an industry such as auto were covered by lifetime job security in Japan and even here economic crisis could unravel the guarantees. As one of the authors of the influential *The Machine That Changed the World* put it: “who would have guessed that the continuing stagnation in the Japanese economy through the 1990s would cause many firms in electronics and other sectors to retreat on the world stage while contracting out manufacturing operations on an arms-length basis at low-wage sites, just like weaker Western firms?” (Womack 2001, 3). Nonetheless, the emphasis on job security was real and layoffs or job cuts were generally the last resort rather than the first line of attack. With this emphasis on job security, workers were far more willing to contribute suggestions to improve the production process and raise productivity.

LABOR STANDARDS

Even while globalization presents the specter of downward pressure on wages and working conditions, the emergence of a new international division of labor paradoxically offers unique opportunities for Brazil: the development of more highly paid jobs and the possibility of broader social inclusion throughout the society. How can Brazil maximize the promise and minimize the perils? The challenge is to develop new strategies that reflect the new realities

of the global economy and Brazil's unique position within it. A key part of these strategies are rules of the game that steer competitiveness to a high road, not to a back alley, both domestically and internationally. As Dani Rodrik put it "turning away from world markets is surely not a good way to alleviate domestic poverty—but countries that have scored the most impressive gains are those that have developed their own version of the rulebook while taking advantage of world markets" (Rodrik 2002, 29). He also argues "there is a need to improve the channels through which non-elites (indigenous peoples, workers, farmers) can make themselves heard, and to bring them (or their representatives) into the decision making councils" (Rodrik 1997, 12). As a result, and as we have seen in the historical examples discussed earlier, "a widely-based trade union movement is a good thing, not a bad thing" (Ibid, 13). In other words, unions are not only important to have at the table but a vital component of solid economic performance and its translation into a more inclusive society. Aidt and Tzannatos (2003) in a recent World Bank report found a positive correlation between union representation and a less polarized earnings distribution and Alesina and Rodrik (2004) concluded that a solid correlation exists between a flatter income distribution and better economic performance.

Conscious if not transparent corporate decisions govern where production is sited, not simply the invisible hand of the market. Transnational executives weigh many factors in the decision as to where to locate production from access to markets to the ability to achieve targeted quality and productivity. Intelligent public policy can shift the incentives within this matrix by raising the educational level and providing a more effective infrastructure. Consider a talk earlier this year on "Global Sourcing Issues" to the European Academy of

Business Development by David Leggett, the managing editor of just-auto.com, a research organization in the auto industry. Leggett began his talk by asking “what attracts manufacturing industry capital?” At the top of the list he not surprisingly placed low input costs for raw materials and labor (2003). Later in the talk, however, Leggett advised “if you can, make it where you sell it.” He then argued that this would “keep transport costs down; spread exchange rate risks; avoid political hassles.” The firm would not be seen as an interloper, would more readily be able to integrate into the local supplier community, and would “create market perception of local product” (2003). Between “low input costs” and “making it where you sell it” there is an obvious tension. Consider a current North American example. The “low input costs” were no doubt important in attracting Toyota to build a new truck plant near Tijuana, Mexico. At the same time, Toyota is building an even larger plant in Texas to “create market perception of local product.” The company is willing to pay far higher labor rates, in part, to get a Texas stamp on its trucks—aiding marketing in the western United States and lessening trade tensions in Washington.

When a lack of labor rights or even outright repression translate into low unit costs, firms gain the option of circumventing higher standards and reaping bottom-line rewards, a particularly powerful lure in the short run. Those companies that choose not to follow this route are under fierce pressure from those who do. Workers in high-wage countries and workers in low-wage countries may have deep differences over many issues but they also have a common interest: seeking a high road to competitiveness and insuring that they share in the benefits that result. Moreover, as we have seen, the competition on wages is increasingly between workers in low-wage countries. As Freeman put it, “Initially, the

argument was that bad standards in LDCs [Less Developed Countries] would drive out good standards in advanced countries, but given the different goods produced between advanced countries and LDCs, it is more plausible to worry that bad standards in some LDCs might drive out good standards in other LDCs” (Freeman 2003, 22).

The new structure of international production adds another dimension to wage setting: a relatively small group of transnational corporations operate highly integrated global production networks. These networks achieve world-class results in linked plants scattered across the globe where trade consists of parts stamped in one country, machined in a second, and assembled in a third. Downward wage pressures in one country are transmitted through the same firm to workers and unions in other countries, often as these workers and plants bid for the same jobs. The result can be sluggish or even declining wages, severe burdens on collective bargaining, and further income polarization (Shaiken 2002).

The current institutions governing global trade provide scant recognition of these pressures facing workers on the ground and even fewer remedies. As a result, the status-quo—or worse—becomes the international standard. This approach severs the link between improved competitiveness and worker well-being and may limit firm performance as a result. By contrast, many corporations and governments view the investment status-quo as too weak when it comes to investment protections and act aggressively to change it. According to the World Investment Report “between 1991 and 2000, a total of 1,185 regulatory changes were introduced in national FDI regimes, of which 1,121 (95 percent) were in the direction of creating a more favorable environment for FDI” (UNCTAD 2001, xviii).

A key paradox of the global economy today is that the conditions of work in far-flung global production networks are governed by nationally-based labor relations systems (Cleveland 2002). The challenge is how to insure basic worker rights in this context, particularly given the powerful pressures to gut these rights. Broad consensus has emerged that the International Labor Organization's (ILO) five core labor standards—the right to organize and bargain collectively, freedom of association, nondiscrimination, and the prohibitions against both forced and child labor—define a set of fundamental human rights in the workplace that transcend levels of development. These rights are not quantitative floors that straightjacket a country's options but rather an approach that allows more democratic and inclusive decisions to be made by those most directly impacted by the result. Respect for these core rights is linked to the promise of genuine economic and social development. As Joseph Stiglitz put it, "Today, there is growing recognition that the objectives of development go beyond simply an increase in GDP: we are concerned with promoting democratic, equitable, sustainable development." He then adds that "if that is our objective, then it is natural that we should pay particular attention to the issue of how the plight of workers changes in the course of development" (Stiglitz 2000, 1). The final Declaration at the Singapore Ministerial meeting of the World Trade Organization (WTO) seemed to echo these sentiments by stating that "we renew our commitment to the observance of internationally recognized core labour standards" (Leary 2002, 15). Lest anyone get the idea, however, that the WTO itself might actually be thinking about dealing with these standards, the statement immediately emphasizes that "the International Labour Organisation (ILO) is the competent body to set and deal with these standards, and we affirm our support for its

work in promoting them.” The statement then continues “we reject the use of labour standards for protectionist purposes, and agree that the comparative advantage of countries, particularly low-wage countries, must in no way be put into question” (Leary 2002). The ILO is the preferred site because it lacks any enforcement powers.

Are labor standards, in fact, protectionist? The charge has been repeated so often that it has achieved legitimacy by force of repetition. The charge, however, is nonetheless misleading and unfair. As economist Richard Freeman put it “most advocates of standards want what they say they want: to guarantee as far as possible certain basic rights to workers around the world” (Leary, 2002). That said, aren’t labor standards subject to manipulation and what amounts to “shadow” protectionism? Absolutely, but so is virtually any global trade rule. Without question some protectionists hide behind worker rights but that does not mean that worker rights are protectionist or would be used that way in practice. It is possible to have an internationalist vision, support expanded trade, and be in favor of broader worker protections. In contrast, the most confirmed free traders can become protectionist overnight and hardly need worker rights to do so.

The argument that labor standards necessarily erode the advantage of less developed economies is also suspect. Consider the first core right— the right to organize and bargain collectively. This right is particularly fundamental because it is the foundation for independent unions and a free collective bargaining system. It lays the basis for translating democratic processes to the world of work. This right and the other four core rights are not tied to levels of development nor do they unfairly penalize poor countries. They allow the decisions to be made on the ways in which a country competes in a broader, more

participatory way. They can, in effect, channel competitiveness to the high road. As Stiglitz puts it, “inclusive democratic processes involving unions and other popular organizations make it more likely that [workers] legitimate concerns will be addressed” (Stiglitz 2000, 19). He makes this argument more specific by pointing out that “there is some chance that some of the disastrous economic decisions that were made in responding to the East Asian economic crisis would not have occurred had workers had a voice (let alone a voice commensurate with their stake in the outcome) in the decision making” (Stiglitz 2000, 19).

In practice, lower wages would remain a source of competitive advantage for developing countries even with strong labor standards in place. Many factors influence wage setting from the overall productivity of the economy to the number of people seeking work. Workers will not want to price themselves out of a job but also will want to ensure that they share in productivity gains and can reach for a decent life. Moreover, international labor standards require all countries to play by the same rules, minimizing the fierce pressures that allow productivity to rise while living conditions fall. Higher wages don't necessarily harm competitiveness; they can create a more stable and motivated workforce and enhance competitiveness.

Rather than throttling trade or penalizing low-wage countries, labor standards lay the basis for a healthier global economy and more robust trade. Labor standards offer three benefits: first, as we have seen, effective standards extend democratic processes to the world of work. Those who are most directly affected by economic change have a stronger voice in the direction of that change. Second, by laying the basis for a more effective collective bargaining system, standards can influence an economy towards a more demand-driven

growth. If workers can share in productivity growth, consumers and new markets are created, not throttled. This link has been the path to economic growth and the entry of workers into the middle class in industrial economies. Finally, by laying the basis for independent unions, standards add another mechanism to address the corroding income polarization that afflicts so many societies. This mechanism could reap important benefits in advanced industrial economies, creating new pressures to address the shortcomings of their own national labor relations systems.

While there may be a growing consensus on the value of these rights in the abstract, there is fierce division concerning enforcing these rights in practice. The objective should be compliance—the steady improvement of a country’s labor standards—not punishment. The goal is strong incentives to move towards the high road and in the direction of upward harmonization for the conditions of work on a global scale, a process that won’t take place overnight. Those companies that act responsibly and seek to compete based on innovation not repression are more able to set the standards rather than being pressured to abandon best practices. Nonetheless, strong penalties as the last resort are critical to ensure that standards are enforced. Ironically, the ability to impose sanctions when necessary in a direct and transparent way may insure that sanctions rarely if ever actually have to be used.

Despite the surge of manufacturing exports from developing countries, these economies as a group have been shortchanged in receiving the benefits of this trade. “While the share of developing countries in world manufacturing exports, including those of rapidly growing high-tech products, has been expanding rapidly,” the United Nations Conference on Trade and Development (UNCTAD) reported, “the income earned from such activities by these

countries does not appear to share in this dynamism” (UNCTAD 2002a, 1). The report finds that developing countries’ “share in value added is determined by the cost of the least scarce resource and weakest factor, unskilled labor; and with control over strategic productive assets even tighter under these arrangements, gains can be highly skewed in favour of the TNC [Transnational Corporation]” (UNCTAD 2002a, 3). Moreover, the report concludes “that middle-income Latin America and Asian economies are among the most vulnerable to these trends in the trading system” (UNCTAD 2002a, 4).

The real issue for many countries in the global economy concerns flawed development policies. Standards alone are hardly the solution to this fundamental problem. In fact, to work effectively in the long term, standards must be embedded in broader institutions and arrangements that foster development and global growth. International core labor rights are an important symbol and all too modest a substantive step. They provide a minimum level of protection to workers and unions and point in the direction in which globalization ought to go. The entire society benefits—workers, firms, and governments—through the healthier growth that can ensue. Standards themselves represent little more than a first step but a step long overdue.

Brazil has a window of opportunity to provide leadership for the global trading system. This window is defined by two factors: first, China is at the beginning of its trajectory as a manufacturing superpower and is not yet competing head-on with Brazil in higher end exports such as autos and aircraft; second, the leadership role Brazil has begun to play in other areas—underwritten by its economic weight and visibility—has created an important opening. Charlene Barshefsky, the trade representative in the Clinton administration, viewed

Brazil's leadership role as a logical development at the World Trade Organization meetings at Cancun, Mexico in 2003. She commented that the Brazilian-led coalition was "an additional power center, much better organized and more savvy," with a clear interest in world trade (Rother 2003).

China or any other country is hardly the enemy in this equation. Rather, labor standards benefit Chinese, or Guatemalan workers, or U.S. workers and firms as well as their Brazilian counterparts. It is far better for all concerned to compete based on who provides the best educational system, the most effective form of work organization, and the most creative innovations rather than the lowest wages and the most unsafe working conditions. At stake are sounder development strategies in the long run. Depressed wages can make firms competitive in the short run but they do not lay the basis for a socially inclusive society.

Figure 1.

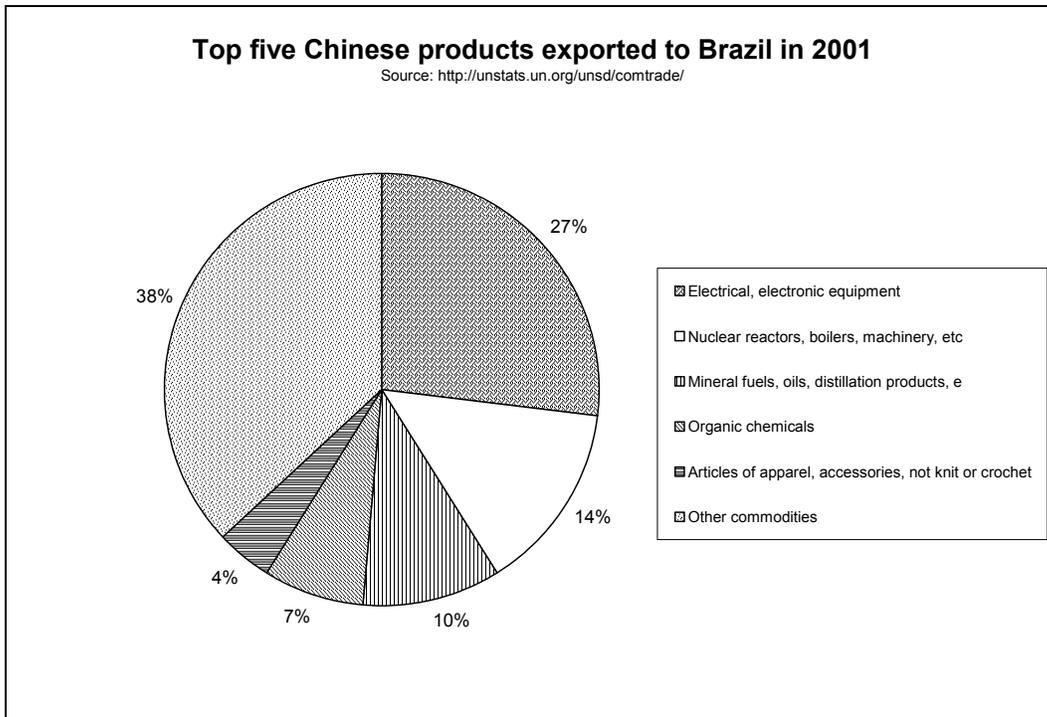


Figure 2.

Error! Not a valid link.

BIBLIOGRAPHY

- Aepfel, Timothy. 2003. Three Countries, One Dishwasher. *The Wall Street Journal*, 6 October.
- Aidt, Toke and Zafiris Tzannatatos. 2002. Unions and Collective Bargaining: Economic Effects in a Global Environment. Washington D.C.:World Bank.
- Appelbaum, E., A. Bernhardt, and R.J. Murnane, eds. 2003. *Low Wage America*. New York: The Russell Sage Foundation.
- Armstrong, Julie. 2003. Delphi unit goes bargain hunting. *Automotive News*, 7 July.
- Associated Press. 2003. "Government: Ford to Make 400,000 Futuras," *San Diego Union Tribune*, 6 October.
- Authers, John. 2002. Investors punish Mexican financial markets. *Financial Times*, 20 September.
- Authers, John. 2003. China begins to exert its influence on Latin America. *Financial Times*, 26 September.
- Authers, John. 2003a. Mexico learns only the biggest survive. *Financial Times*, 13 October.
- Bell, Daniel. 1999. *The Coming of Post-Industrial Society*. New York:Basic Books.
- Bivens, Josh and Christian Weller. 2003. Rights Make Might. Ensuring worker's rights as a strategy for economic growth. The Economic Policy Institute.
- Blecher, Marc. 2002. Hegemony and Workers' Politics in China. *The China Quarterly*, vol. 170: 283-84.
- Bradsher, Keith. 2003. China's Factories Aim to Fill Garages Around the World. *The New York Times*, 2 November.
- Bronfenbrenner, Kate. 1997. We'll close! Plant closings, plant-closing threats, union organizing and NAFTA. *Multinational Monitor*, vol 18(3).
- Bronfenbrenner, Kate. 2001. Impact of U.S. China Trade Relations on Workers, Wages, and Employment; Pilot Study Report. Submitted to the U.S.-China Security Review Commission/U.S. Trade Deficit Review Commission June 30. Available online at <http://www.ustdrc.gov/research/china1.pdf>
- Brooke, James. 2002. Japan carves out major role in China's auto future. *The New York Times*, 11 July.
- Buckley, Chris. 2003. Rapid Growth of China's Huawei Has Its High-Tech Rivals on Guard. *The New York Times*, 6 October.
- Bureau of Labor Statistics. 2001. *2000-2010 Employment Projections*. Washington D.C.: United States Department of Labor. Available at: <http://www.bls.gov/news.release/ecopro.nr0.htm>
- Bureau of Labor Statistics. 2003. Employees on nonfarm payrolls by major industry, 1952 to

- date. Bureau of Labor Statistics. Available online at:
<http://www ftp.bls.gov/pub/suppl/empsit.ceseeb1.txt>.
- Calbreath, Dean. 2002. Baja factory exodus raising alarm. *The San Diego Union Tribune*, 13 August.
- Calbreath, Dean and Diane Lindquist. 2002. The China Challenge – Maquiladoras in Mexico are facing intense competition from Far East counterparts. *The San Diego Union Tribune*, 25 May.
- Cleveland, Sarah. 2002. Why International Labor Standards? Paper presented at the International Labor Standards Conference, Stanford Law School, Palo Alto, CA, 19-21 May.
- Colitt, Raymond. Brazil's industries rush to export to China. *Financial Times*, 11 November.
- Corbett, Brian, Drew Winter, and Katherine Zachary. 2000. Aye Caramba! Mexico is heading into the automotive big leagues. *Ward's Auto World*, 19 May.
- Cowie, Jefferson. 1999. *Capital Moves*. New York: The New Press Economist, The. 2003. China and the world economy, Tilting at dragons. *The Economist*, 25 October.
- Freeman, Richard B. and Morris M. Kleiner. 1999. Do unions make enterprises insolvent. *Industrial & Relations Review* 52(4): 510-527.
- Freeman, Richard B. 2003. Trade Wars: The Exaggerated Impact of Trade in Economic Debate. Cambridge: NBER.
- Friedman, Thomas. 1999. *Lexus and the Olive Tree*. New York: Harper Collins.
- Friedman, Thomas. 2002. States of Discord. *Foreign Policy* (March/April): 64-70
- Galbraith, J., Pitts, J., Wells-Dang, A., Dollar, D., & Kray, A. 2002. Is inequality decreasing? *Foreign Affairs* 81(4) (July/August): 182-83.
- Garten, Jeffery. 2002. When everything is made in China. *Business Week*, 7 June: 20.
- Giddens, Anthony and Will Hutton, eds. 2000. *Global Capitalism*. New York: The New Press.
- Giles, Chris. 2002. China attracts more foreign investors than U.S. *The Financial Times*, 22 September.
- Goodman, Peter. 2003. China plans to purchase U.S. goods in a big way. *The Washington Post*, 28 October.
- Gross, James A., ed. 2003. *Workers' Rights as Human Rights*. Ithaca: Cornell University Press.
- Harvard Business Review. 2003. HBR Spotlight: China Tomorrow, October.
- Herzenberg, Stephen, John Alic and Howard Wial. 1998. New Rules for a New Economy: employment and opportunity in postindustrial America. Ithaca: IIR Press.
- Hilsenrath, Jon and Rebecca Buckman. 2003. Factory Employment is Falling Worldwide. *The*

- Wall Street Journal*, 20 October.
- Human Rights Watch. 2002. *Paying the price: Workers' unrest in Northeast China*, vol 14, no. 6(C). Available at <http://www.hrw.org>.
- Inter-American Development Bank. 2002. *Beyond Borders: The New Regionalism in Latin America*. Washington D.C.: IADB Publications.
- Iritani, Evelyn. 2003. In Japan, as in the U.S., companies fear China. *Los Angeles Times*, 2 November.
- Just-Auto. 2003. *China: Vehicle imports almost double in first eight months – report*. Available at http://www.just-auto.com/news_print.asp?art?=4 2222
- Kahn, Joseph. 2003. China's Workers Limbs in Export Drive. *The New York Times*, 7 April.
- Karp, Jonathan. 2003. Brazil Bounds Ahead on Trade Scene. *Wall Street Journal*, 24 September, Western edition.
- Katz, Harry. 1985. *Shifting Gears: Changing Labor Rights in the U.S. Automobile Industry*. Cambridge: The MIT Press.
- Kiesel, Ralph. 2003. Survey: India is top pick for outsourced tech work. *The Automotive News*, 13 October.
- Kunii, Irene. 2003. This time, Sony better finish the job. *BusinessWeek*, 3 November.
- Landler, Mark. 2001. Taiwan's PC Makers Shift Production to China. *The New York Times*, 29 May.
- Landler, Mark. 2003. Big Hopes for Filling China's Garages. *The New York Times*, 2 September.
- Leary, Virginia. 2002. Form follows function — Or does it? Formulations of International Labor Standards: Treaties, codes, soft law, trade agreements. Paper presented at the International Labor Standards Conference, Stanford Law School, Palo Alto, CA, 19-21 May.
- Leggett, David. 2003. Global Sourcing Issues. Paper presented at European Academy of Business Development – IPA Programme, 6 June, London.
- Lee, Ching Kwan. 2001. From the Specter of Mao to the Spirit of the Law: Labor insurgency in China. *Theory and Society*, vol. 00:5.
- Leiberthal, Kenneth and Geoffrey Leiberthal. 2003. The Great Transition. *The Harvard Business Review* (October):70-82.
- Lichtenstein, Nelson. 1995. *The Most Dangerous Man in Detroit—Walter Ruther and the Fate of American Labor*. New York, Basic Books.
- Lora, Eduardo. 2003. Viewpoint: Do unions help? *IDB America*, October. Available online at: <http://www.iadb.org/idbamerica/index.cfm? thisid=2485>
- Macintosh, James and Richard McGregor. 2003. Comment and Analysis: A leap over the cliff: Are the big profits to be made in China blinding foreign carmakers to the risks

- ahead? *Financial Times*, 25 August.
- Miller, R., P. Engardio, D. Roberts, and M. Arndt. 2003. The Job Drain. Is it China's Fault? *BusinessWeek*, 11 October.
- OECD. 2003. *OECD Science, Technology and Industry Scoreboard*. Paris: OECD Publications Service.
- Quinlan, Joseph. 2002. Ties that Bind. *Foreign Affairs*, 81(4) (July/August):116-126.
- Raff, Daniel M. and Lawrence Summers. 1987. Did Henry Ford Pay Efficiency Wages? *Journal of Labor Economics*, vol. 5.
- Rodrik, Dani. 1997. Globalization, Social Conflict and Economic Growth. Paper presented at Prebisch Lecture, 24 October, at UNCTAD, Geneva. Revised 11 December.
- Rodrik, Dani. 1999. Globalization and Labour, or: if globalization is a bowl of cherries, why are there so many glum faces around the table? In *Market Integration, Regionalism, and the Global Economy*. N.Y.: Cambridge University Press.
- Rodrik, Dani. 2002. Globalization for Whom? *Harvard Magazine* (July-August).
- Rodrik, Dani. 2002. After Neoliberalism, What? Remarks made at the Alternatives to Neoliberalism Conference, Washington, D.C., May.
- Ross, Robert and Anita Chan, 2002. From North-South to South-South. *Foreign Affairs* (September/October).
- Rother, Larry. 2003. New Global Trade Lineup: Haves, Have-Nots, Have-Somes. *The New York Times*. Nov 2.
- Salerno, Mario Sergio and Ana Valeria Carneiro Diaz. 2002. *Product Design Modularity, Modulat Production, Modular Organization: The Evolution of Modular Concepts*. Val d'Essonne: GERPRISA Réseau International.
- Schroeder, Michael and Timothy Aepfel. 2003. Skilled Workers Mount Opposition To Free Trade, Swaying Politicians. *The Wall Street Journal*, 10 October.
- Shaiken, Harley and Stephen Herzenberg. 1987. Automation and Global Production: Automobile Engine production in Mexico, the United States, and Canada. La Jolla: The Center for U.S.-Mexican Studies, University of California, San Diego.
- Shaiken, Harley. 1990. Mexico in the Global Economy: High Technology and Work Organization in Export Industries. La Jolla: Center for U.S.-Mexican Studies, University of California, San Diego.
- Shaiken, Harley. 1994. Advanced Manufacturing and Mexico: A New Division of Labor. *Latin American Research Review* 29(2).
- Shaiken, Harley. 2001. The New Global Economy: Trade and Production under NAFTA. *Journal Für Entwicklungspolitik*, XVII/3(4): 241-54.
- Shaiken, Harley. 2002. Mexico, Labor and the Global Economy. In *La Situacion del Trabajo*. México: Plaza y Valdez.
- Sherefkin, Robert and David Sedgwick. 2003. Ford, GM push vendors toward China.

- Automotive News*, 23 June.
- Soros, George. 2002. *George Soros on Globalization*. New York: Public Affairs.
- Stiglitz, Joseph. 2000. Democratic Development as the Fruits of Labor. Keynote address for the Industrial Relations Research Association, Boston, MA, January.
- UNCTAD. 2001. *World Investment Report 2001, Promoting Linkages*. New York: United Nations Publications.
- UNCTAD. 2002a. *Manufacturing Trouble: UNCTAD Report Examines Emerging Tensions in the Trading System*. (United Nations Publication No. TAD/INF/PR42). New York: United Nations Publications.
- UNCTAD. 2002b. *Trade and Development Report, 2002: Developing Countries in World Trade*. New York and Geneva, 2002: United Nations Publications.
- UNCTAD. 2003. *Trade and Development Report, 2003*. New York: United Nations.
- Uchitelle, Louis. 2003. A Missing Statistic: U.S. Jobs That Have Moved Overseas. *The New York Times*, 5 October.
- U.S. Census Bureau. 2003. FT900 U.S. International Trade in Goods and Services. Washington D.C.: U.S. Census Bureau Foreign Trade Division. Available online at http://www.census.gov/foreign-trade/PressRelease/current_press_release/exh18.pdf
- Trece, James and Alysha Webb. 2003. China takes off. *The Automotive News*, 20 October.
- Womack, James and Daniel T. Jones. 2001. *How the World Has Changed Since the Machine that Changed the World*. Brookline: The Lean Enterprise Institute (Summer).
- World Bank. 2002. *World Development Indicators*. Washington D.C.: World Bank.
- World Trade Organization (WTO). 2002. Trade to pick up slightly in 2002 after sharp drop in 2001. *The World Trade Organization*, 2 May.
- WTO. 2003. *World Trade Report 2003*. Geneva: WTO Publications.
- Worthman, Catha. 2003. *China vs. Mexico?* Master's thesis, University of California, Berkeley.
- Zaun, T., G. White, N. Shirouszu, and S. Miller. 2002. Two-Way Street: Auto Makers Get Even More Mileage From Third World. *The Wall Street Journal*, 31 July.

Notes

¹ Reich made this statement in the context of the then current debate over competitiveness in the United States and globally in the early 1990s.

² The modular approach introduced in Brazil was watered down somewhat in the face of strong United Automobile Worker (UAW) opposition in the U.S. which is likely one of the factors that led General Motors to develop the approach in Brazil.

³ Low wages do not necessarily mean stagnant wages. A considerable regional and industrial variation in wages already exists and some firms who have experienced upward wage pressures have threatened to move to lower wage regions within the country.

⁴ Three quarters of this investment flowed between developed economies, reflecting merger and acquisition activity that is overwhelmingly located in industrialized countries.

⁵ Only ten developing economies garnered 80 percent of the total FDI in the developing world in 1999 (Burke, 2001).

⁶ Brazil's fourth largest export to China in 2001 was vehicles (6 percent) and the fifth largest was machinery (5 percent). China's third largest export to Brazil in 2001 involved mineral fuels (10 percent), fourth largest was organic chemicals (7 percent), and fifth largest was apparel (4 percent).