Part 2 The Emerging Global Production System: Implications for Nations, Workers, and the Environment

Introduction

The links between the global movement of money, and goods, services, and people can best be understood by reviewing the development of a global production system. In previous eras, international trade was carried out by colonial and national private trading companies, nowadays trade and production is carried out by transnational corporations (TNCs). However, though critics charge that TNCs have no loyalty or ties to national states any more, that would be an exaggeration. Just thinking about the top global corporations, such as Microsoft; Toyota; General Motors; Samsung; Hyundai; and Wal-Mart reminds us of the strong ties between the national origins and main base of operation and these companies. This observation is backed by empirical research on the degree of transnationality of global firms (Dicken 2003) as well as the locus of production and consumption as we discuss below. Meanwhile, analysts dream of a global consumer market, including potentially millions in emerging markets such as India and China but essentially the US and the EU are the main markets for the world's production. By contrast, markets in much of Africa and other parts of the world are marginal at best, due to a lack of a solid middle class. While consumption and the operations of companies retain a distinctly national flavor at the same time, paradoxically, production has become global. The globalization of production has profound ramifications for the future of the quality of life of the globe's citizens, particularly those in the North, for the possibilities of solving emerging global dislocations, and the possibilities for ultimately creating a global middle class. There are 2 essential problems that need to be addressed. One is how to maintain the engine of the economy, namely American and European consumption, when their incomes and employment prospects move steadily downwards. Another is what happens to basic national safeguards, including the welfare system, worker and summarize this problematique in terms of 2 basic mismatches. The first mismatch is between the global consumer and production markets. The second is between labor market demands and labor market supply. Each of these mismatches is worsening over time as globalization proceeds, and the ramifications are profoundly negative for workers and citizens in terms of prospects for a good quality of life.

Mismatch Number 1: Global Consumption vs. Global Production

Where Global Consumers are Located

The best rough approximation of the overall size of markets available is to look at the overall size of the nation's economy. Table 3.1 demonstrates that the main purchasing power in the world is concentrated in the US, East Asia, Europe, and India. The US is by far the largest single market, though the European Union combined is larger. China's overall GDP indicates a market a little more than half the size of the US, while India's is less than half the size of China.

Table 3.1 Percentage of World Economy- By Share of GDP

Top Countries	GDP in US$	% of World GDP
United States	11,750,000,000,000	21%
China	7,262,000,000,000	13%
Japan	3,745,000,000,000	7%
India	3,319,000,000,000	6%
Germany	2,362,000,000,000	4%
United Kingdom	1,782,000,000,000	3%
France	1,737,000,000,000	3%
Italy	1,609,000,000,000	3%
Brazil	1,492,000,000,000	3%
Russia	1,408,000,000,000	3%
Canada	1,023,000,000,000	2%
Mexico	1,006,000,000,000	2%
Spain	937,600,000,000	2%
Korea, South	925,100,000,000	2%
Indonesia	827,400,000,000	1%
Australia & NZ	704,210,000,000	1%

Source: CIA World Factbook; Estimates from 2002-4

However, China's economy is expanding at a far faster rate than any other economy in the world, and so China will continue to increase in importance. Yet, it is also important to note that the overall size of an economy may miss the more relevant question of the size of the middle class that can purchase goods. We can use the most important electronics industry as an indicator of middle class purchases. Table 3.2 shows that most electronics purchases parallel the pattern given by our GDP analysis.

Table 3.2 Global Consumption of Electronics

	Total Spending		US$ per capita
US	48,347.30	UK	198.8
China	22,042.80	US	177.5
Japan	20,335.30	Germany	169.2
Germany	13,881.80	Japan	160.7
UK	11,793.30	Canada	158.2
France	7,878.20	Australia	136.6
Brazil	6,633.60	Taiwan	134.8
Italy	5,618.70	France	132.5
Canada	4,894.70	Spain	100.2
Russia	4,536.90	Italy	97.6
Spain	3,951.60	South Korea	72
India	3,897.80	Poland	56.2
South Korea	3,352.20	South Africa	46.2
Mexico	3,023.70	Brazil	38.5
Taiwan	2,962.70	Russia	30.9
Australia	2,641.50	Mexico	30.9

Poland	2,207.90	China	17.2
South Africa	2,167.20	India	4
	1999, $million		1999, $million

Source: Euromonitor

In the right column of Table 3.2, we see that while the overall size of the key emerging markets is significant, the per capita income indicates that a small percentage of the overall population is actually consuming on the same level as the North. This is not a surprise, however, given the differential rates of growth of different countries, it is important to keep in mind in terms of the consequences of growth, as we discuss below.

Where Global Production is Located

In the early decades of the 1900s, Henry Ford helped to move forward the mass production platform with his development of assembly line automobile manufacturing. Many academic critics have assailed the development of assembly line manufacturing as the curse of the 20th century, leading to "Taylorism" and "commodification" of workers. The critics' perspective is reflected in the Charlie Chaplin movie *Modern Times* in which a worker gets stuck in the cog of the machinery of a large factory. Workers lose connection with their products, and their rote tasks reduce them to mere commodities to be replaced as necessary. There is some truth to the difference between a craftsman doing his work, a la the guilds of medieval Europe and the satisfaction an assembly line worker may get from welding a particular part on an automobile. Certainly, a welder is more easily replaceable than a top craftsman as well. However, it is also vital to point out the other side of this story. Mass production techniques have helped to create a large middle class in the West, as well as products that they can afford. The combination of ever perfecting mass production techniques and of improving technology in both product development and production processes has steadily improved the quality and lowered the price of products to make them affordable. We only need to think about the few people who could initially afford autos, tvs, and vcrs and how much these products have improved and decreased in price over time to recognize the benefits of this system. So, despite the critics, this system of production is not going anywhere.

However, a new revolution in the production process has changed things considerably. Over the last 20 years, the steady movement towards global production platforms (or supply or commodity chains) has been unmistakable. Growth in globalization of production has gone hand-in-hand with the development of the global finance market as well as changes in international trade. We can now highlight some of these key changes. The Bretton Woods system on the financial side was accompanied by a blueprint for international trade as well. The US and Europe recognized the importance of not repeating the mistakes of the aftermath of World War I, when Germany was unable to pay off debts due to trade tariff hikes, leading spiraling inflation and contributing to the rise of Hitler and World War II. France and Germany began the process of a European common market with the development of the European Coal and Steel Community in 1952. The development of common interests in Europe coincided initially from the need for unity in the face of the Soviet threat- Europe and the US needed Europe to recover for security. In this context, the General Agreement on Tariffs and Trade (GATT) was set up to steadily negotiate lower tariffs on a *multilateral* basis in order to avoid the Smoot-

Hawley tariff wars of the 1930s.. As Europe and Japan recovered, global trade expanded to cater to these new quickly expanding markets. The 1970s witnessed the beginnings of détente between the US and the Soviet Union, and movement towards a European common market cooled. However, by the end of the 1970s, the strategic picture had changed considerably. Japanese automobile imports into Europe and the US took off in concert with huge hikes in oil prices. In addition, with the downfall of the dollar standard, and European unhappiness over the Viet Nam War, as well as détente, European drives towards a common EU market to better face both US and Japanese competition acquired a renewed vigor. The 1982 Single European Act was a milestone in pushing forward the common market idea. This idea accelerated with the fall of the Soviet bloc in 1989. The successive GATT rounds reflected both the success of previous rounds in reducing tariffs and the recognition of that the new level of competition between the US, Europe, and Japan (and subsequently the Asian tigers of S. Korea, Taiwan and now China) was being impeded by non-tariff barriers, such as subsidies and quotas. Most importantly, services became included along with goods in the Uruguay Round of 1986-93 (adding the GATS as a new agreement). Concerns about growing non-tariff barriers as well as a desire for more formal institutionalization of negotiation, especially important for the growing list of members of the GATT, led to the creation of the World Trade Organization (WTO) in 1995. Ironically, the vociferous critics of the WTO seem to miss the fact that its overall purpose was to increase transparency and accountability of trade negotiations and to generally to move closer to fair rules in trade. These facts were lost as the latest, Doha Round of negotiations began in 1999 at the Seattle Ministerial. The explosion of protest has been replicated at subsequent trade meetings. Trade negotiations in this round remain deadlocked over intellectual property and investment rights and agricultural subsidies, among other contentious issues.

With the deadlock of trade negotiations, and the development of a European common market, as well as the growing competitiveness of East Asian nations, the US turned southward to develop the North American Free Trade Agreement (NAFTA), building upon an earlier bilateral deal with Canada. The 1992 NAFTA treaty, which raised the ire of labor and environmental groups in the US, was set up to help expand US corporate access to cheap Mexican labor in order to better compete with the Asian tigers. Access to the Mexican market was an added bonus, but the development of auto and other assembly line factories along the northern border of Mexico reflected the true motivations behind this strategic move. The development of the NAFTA agreement as well as a wave of deregulation, privatization, and barriers to investment across the world, which led to a wave of mergers and acquisitions between European and US firms, accelerated the trends towards the globalization of production which had begun with the initial steps towards trade liberalization after World War II.

Globalization has been occurring in fits and starts since at least the creation of the Roman Empire. During the period of European colonization of around 1500-1930, the system meant European countries, the US, and Japan bought raw materials and exporting finished goods as well as ownership of agriculture, mines, infrastructure, and other key businesses in colonies. However, in the postwar period, along with the liberalization of the trade and financial regimes, the development of the assembly line was slowly transferred to a global scale. The product cycle (Vernon 1966) theory suggested that some globalization of production would take place as products matured, and the labor components of their costs became relatively more important. That seems to be reflected in the movement of production of basic clothing and shoes from the West to developing countries. However, the development of regional free trade agreements such as the NAFTA mirrored de facto changes in the production process in East Asia that forced a movement towards globalization of manufacturing in Europe and North America. In East Asia, the Japanese began to face rising labor costs by the 1990s which made them more uncompetitive. They responded with 2 strategies. The first was to move up to higher priced, value-added items, such as moving solely from fuel economy cars to luxury cars, such as the Lexus, or Sony from mass production electronics to higher end ones. The second was that they began to farm out parts of their production process to Korea, and later to Southeast Asia, in what they called the "flying geese" pattern of production, with Japan naturally as the leader. This helped them to maintain lower production costs and a competitive edge. US manufacturers saw NAFTA as a way to lower labor costs to match this change, just as EU expansion into Eastern Europe serves the same purpose. In parallel with these moves is the growing segmentation of production, which has led to a quickly accelerating share of trade among the triad of components or intermediate goods that are then assembled to create the final product (Yeats 2001). The globalization of supply chains has reached the point where intra-firm trade now constitutes one third of all world trade (Ietto-Gillies 2002). Therefore, it is no surprise that the growth of world trade has consistently exceeded that of world output (Dunning 2003).

Another factor in the acceleration of the globalization of production is important technological changes lowering costs of developing a global supply chain. Transportation costs have been lowered along with bureaucratic costs of moving goods across borders. The development of the internet has profoundly eased the ability for international financial transactions, as well as services such as computer programming and financial consulting (eg tax returns) to be sent across borders). The internet lowers costs of communication across borders to minimal amounts and allows for asynchronous coordination of production efforts. Computers have revolutionized inventory systems, allowing for quick changes in production and customization of products on a global scale. In other words, we live now in a world where the various components or parts of each product may be made in several different countries. Moreover, services as well as goods have become part of the global production system. Last but not least, the capabilities of developing countries, particularly the workforces and governments of India and China, have vastly improved their productivity and worker capabilities and maintain pro-active policies to actively woo TNCs and to enter new global markets (Hira 2005).

TNCs make strategic decisions about where to place this production. They play a crucial and beneficial role in moving international capital into production and in linking up and shifting the supply chains to consumer demands. The flexibility of where to place this production depends in part on the nature of the product. States compete for the jobs and income of the production, but not all goods can be produced anywhere. Products such as minerals and different types of agriculture obviously depend upon the presence of natural endowments and climate. High tech products such as computer chips depend upon the availability of a skilled labor force. Companies making profits in turn allow us to channel our savings into pension plans and to create new capital for investment. While all this makes sense from the point of view of lowering costs, increasing investment, and increasing world efficiency, there are important and increasing ramifications for these changes which have not yet been dealt with.

Problems of the Globalization of Production

The first problem as should be obvious to the reader now is the mismatch between global consumption and production centers. While the US, Europe and Japan are still the dominant markets, goods are increasingly produced in other places. This is not a bad thing in the short-run- China's phenomenal growth rate, lifting millions out of poverty, is based upon exports to the West. However, at the point where massive unemployment occurs in key industries in the US and Europe, the engines driving the world economy could break down. The loss of confidence in the US dollar would also lead to a massive crisis in international finance, upon which China equally depends for growth. Already thousands of workers in the IT, auto, and textile industries have been laid off. The toll is likely to grow worse, as Western workers in the present generation use up savings to maintain high living standards. The thus far feeble attempts to legislate trade adjustment assistance and retrain workers have not shown any promise of dealing with the massive dislocations of global trade.

Moreover, East Asia's admirable growth is not matched by developments elsewhere, where grinding poverty continues to be the norm. Peter Dicken points out that, as of 2001, the US produced 19% of world exports, received and produced 21% of foreign direct investment (fdi), (27% of manufacturing value added); the EU 35% of exports and 52% of fdi (and 28% of MVA); and East and Southeast Asia 26% (and 29% MVA), with Japan involved in 5% of fdi (Dicken 2003). Thus, analysts call the direction of world trade and finance, the triad. The rest of the world is simply not a significant part of this equation, left out of the internet and much of the other important developments of the past century that we take for granted, such as sanitation, women's access to education, health care, etc. The rest of the world does affect us, however. We rely upon governments in Africa, Latin America, and the Middle East for preciously scarce commodities, most importantly oil. This means our governments and companies cutting deals with corrupt or ineffective governments and political leaders, who create conflicts, famines and other crises which then impact us, because we feel that we have no say in their internal affairs. We are also affected through migration from these populations. Thus, the fact that these populations are negatively affected by these conditions leads to health and other human crises that then come back to haunt us as commerce and immigration brings these problems home to us.

Over the long-run, we can see that the locus of some of world consumption has to be moved to countries whose production is expanding and whose workers are consequently gaining purchasing power. However, this means that the locus of production and consumption will be in the same place, as there is no reason nor evidence to indicate that Western companies can dominate such markets. Countries such as

Canada and Chile may manage to do well as they have a strong commodity base, and China and India both lack key natural resources. However, other countries will likely struggle to maintain their standard of living unless they can quickly improve their national productivity and improve their institutions, something increasingly difficult in an increasingly competitive world when a country is caught in a downward spiral of corruption and ineffectiveness.

There are other serious problems with this movement of global production which need to be addressed. Quickly developing countries lack environmental and labor standards, have poor public services for health, and generally relatively low respect for democratic and gender-based rights. At the present, there have been an increasing level of reporting about existing environmental crises globally, and acute ones in the developing world. In general, developing countries have refused to include environmental and labor standards in trade agreements, as they seem them as internal matters and as imposing a competitive disadvantage. Global environmental crises such as the destruction of the Amazon and extinction of wild species seem to be out of the reach of both weak local governments and concerned foreign citizens, neither of whom have the authority or resources to deal with these problems. As with narcotrafficking controlling supply is impossible when demand is skyrocketing. As consumers in China and India start to purchase more automobiles and other goods, global environmental problems, given weak local capability and will, are bound to multiply. The thus far weak and vacillating attempts as represented by the Rio Summit and the Kyoto Protocol demonstrate a desire to do something on the part of some governments and many citizens at various levels, but an inability to make a dent in the problem on a global level. Let us now consider the double digit growth rates in China over the last decade and the near double digit growth rates in India more recently.

Table 3.3: Countries with the Most Autos and CO2 Emissions, 2000

Top Countries	Motor Vehicles in Use	Top Countries	CO2 Emissions
United States	212706	United States	5833528
Japan	52738	China	2771929
Germany	42840	Russian Federation	1446087
Italy	32584	Japan	1185879
France	28060	India	1160539
United Kingdom	25067	Germany	798972
Russian Federation	20247	United Kingdom	568498
Spain	17449	Canada	491845
Canada	16861	Italy	428887
Brazil	14820	S Korea	428005
Mexico	10985	Mexico	380399
Poland	9991	Iran (Islamic Republic of)	356664
China	8537	France	354761
India	6143	Australia	348339
Argentina	5387	Ukraine	342572
Portugal	5260	South Africa	327305
Ukraine	5250	Brazil	308024

Source: UNStats

Table 3.3 tells us that the level of automobile ownership, especially considering the overall size of the Chinese and Indian populations, is still quite low. This means that as these countries continue to grow, the environmental ramifications of not only automobile use but the wide variety of other pollutants that accompany economic growth are undoubtedly going to take a major toll on the environmental health of the planet.

The problems are similar in terms of the lack of basic labor rights. We are talking here not just about the ability to engage in collective bargaining, but more fundamental problems such as child workers, lack of worker safety standards, and discrimination along gender or other identity lines. The lack of worker standards not only diminishes the quality of life for all of us, but it also taints the global production system as being exploitative. If we are unwilling to allow such practices to occur in the production of goods in our own countries, we should feel the same way about goods created abroad. The problem is more profound than anti-corporate bashers contend. Companies, absent any overall global enforcement are faced with the need to gain access to production facilities in overseas markets; by themselves and in a competitive context they have little incentive or ability to create such standards. Yet, the obvious answer of creating a global welfare agency would still be ineffective without reckoning with the most profound challenge of all, namely a mismatch in global labor markets.

Mismatch Number 2: Labour Demands vs. Labour Supply

The North is facing a problem that more than doubles the difficulty of competing with rising Asian producers, and that is a demographic one. The population in the North is quickly graying. Across Europe, the US and Japan, the overall age of the population is increasing rapidly as the baby boom generation ages, lives longer, and has fewer kids.

Table 3.4: World Population: Distribution and Trends as of 2005

Top Countries	Total Population	Growth Rate	% of Population Under 14
China	1,306,313,812	1.72	21.4
India	1,080,264,388	2.78	32.1
European Union	456,953,258	1.47	n/a
United States	295,734,134	2.08	24.1
Indonesia	241,973,879	2.44	28.3
Brazil	186,112,794	1.93	27.9
Pakistan	162,419,946	4.14	38.3
Bangladesh	144,319,628	3.13	35.5
Russia	143,420,309	1.27	15.3
Nigeria	128,765,768	5.53	44.3
Japan	127,417,244	1.39	14
Mexico	106,202,903	2.45	31

Source: CIA World Factbook, UNStats

Table 3.4 shows that the huge majority of the population lives outside the North. In countries where rapid growth has taken place, namely China, birth rates have decreased as a percentage of total population to rates comparable to that of the North, but we have to remember that this is the same percentage on top of a base 4X the size of the US population. Moreover, other countries outside of the high growth areas have both high bases and populations. Sub-Saharan Africa has an average growth rate of over 5%. The fact that many of these countries in this same region now also have a 20+% infection rate of HIV, makes the mismatch between population growth among the poor and decline in the North a much starker problem (Craddock 2004). The signs are that AIDs is also under-reported in South and East Asia, where it there may be some 9.5 million infected with AIDs(Elbe 2005). In the North, health care and retirement home costs are skyrocketing in these countries. The transition to urban areas by retirees is closely tied to the current real estate boom in the US. In Japan, xenophobia has driven private companies to invest large sums into research and development of robots to monitor and care for aging parents.

The young people outside of the growth areas in China and India face meager prospects for jobs. They have little access to high quality education or health care. In short, they are desperate for achieving a decent livelihood. Not surprisingly, this desperation has led to the massive waves of illegal immigration into North America and Europe from developing countries. Illegal immigrants are vital cogs in Northern agricultural and low-level service positions. Yet their situation opens them up to abuses, including becoming involved in narco-trafficking, prostitution, and sometimes even slavery. By remaining illegal but necessary parts of our labor systems, they create huge drains on our health and education systems which are not equipped for their needs as they pretend to ignore their existence. For example, this leads to massive increases in emergency room hospital visits (instead of preventive actions if health insurance was available), and the mixing of English and non-English speaking students in the same classroom. The massive amounts of traffic of containers and people across our borders. According to the US Bureau of Transportation Statistics, from Jan 2004- Jan 2005, there were 66,752,000 passengers entering or departing in the US from international flights, and in 2001, 19 million containers entered into the United States. also expose us continually not only security risks such as drug trafficking and terrorists, but also to health risks such as Ebola, new strains of AIDs, and most recently SARS. Even if population begins to decline significantly with economic growth in China, this will not slow down the expanding population base in the rest of the world outside the triad, including the Arab World, Africa, and Latin America.

Therefore, illegal immigration is a de facto economic solution to the global mismatch problem. The International Office on Migration estimated that there were 175 million migrants worldwide in 2000, tripling over the last 30 years and with an increasing trajectory for the future. Yet, this migration still has a minimal impact on population growth in developing countries (International Office for Migration 2005, 379-83). Ideally, we could accelerate immigration from abroad and create greater access for them to health and education so that they could improve their own and social labor productivity in the North. In a global world, however, such activities would not be enough to resolve the problem. Part of the fear behind the vituperative debate over immigration in Europe and the US is that recognition that if we simply opened our borders we would face an incredible flood of people from all around the world, a tidal wave that might overwhelm our institutions. The US Census Bureau estimates, if present trends continue, that world population will be 9.2 billion people, up from 6.5 billion today. This will create unfathomable pressures on our quality of life in terms of health, environment, and working conditions. Evidently, the only way to solve such problems is by attacking the roots. Those roots are related as noted above, to the lack of services and opportunities in the home countries, and ultimately, to the huge levels of population growth, growth that overwhelms any reasonable ability to create good jobs globally and to maintain a high quality of life.

Conclusion: Domestic Responses are Inadequate

As noted above, the domestic responses to the issues arising from these global changes have been quite feeble and ineffective. Trade adjustment and efforts to build up competitiveness have not reduced the flight of jobs and production from the North to East Asia. Attempts to lower our production and labor costs through free trade agreements with Mexico or through tacit allowance of illegal immigration have similarly failed to change these trends, though immigrants have helped us enormously to maintain our current living standards. It is becoming increasingly difficult to attract the best and the brightest from Asia, as a reverse brain drain takes place in growth centers there. Our attempts to secure our borders from terrorist and health threats have fallen flat in the face of the size of the resources required and our organizational capabilities. As in the case of illegal immigration, such efforts on a national level, without attacking the foreign roots of the problem, are bound to fail. Labor and environmental standards continue to fall with negative ramifications for the quality of life of the globe. The reappearance of human slavery and prostitution rings on a global scale defies the efforts of national authorities in the same way that offshore financial centres do. Lastly, the explosive differentiation of population growth and between areas growing and those stagnating means an ever worsening gap between the haves and have nots on this planet, leading to a seemingly endless series of global crises for which we can only treat the symptoms. Ultimately, all of this brings us back to the question of how to create a global convergence at the top with high quality of life possible for everyone, rather than the bottom where no social protections or safety nets, let alone basic human rights exist. These problems have to be tackled on a global scale. Let us turn now to this problem.

Craddock, Susan. 2004. Introduction Beyond Epidemiology: Locating AIDS in Africa. In *HIV and AIDS in Africa: Beyond Epidemiology*, edited by E. Kalipeni, Susan Craddock, Joseph R. Oppong, and Jayati Ghosh. NY: Blackwell.

Dicken, Peter. 2003. *Global Shift: Reshaping the Global Economic Map in the 21st Century*. NY: The Guildford Press.

Dunning, John H. 2003. Location and the Multinational Enterprise: a neglected factor? In *The New Economic Analysis of Multinationals: An Agenda for Management, Policy and Research*, edited by T. L. Brewer, Stephen Young, and Stephen E. Guisinger. Cheltenham, MA: Edward Elgar.

Elbe, Stefan. 2005. HIV/AIDS: The International Security Dimensions. In *New Threats and New Actors in International Security*, edited by E. Krahmann. NY: PalgraveMacmillan.

Hira, Ron and Anil Hira. 2005. *Outsourcing America*. NY: Amacom.

Ietto-Gillies, Grazia. 2002. *Transnational Corporations: Fragmentation amidst integration*. NY: Routledge.

International Organization for Migration. 2005. World Migration 2005. Geneva, Switzerland: World Office for Migration.

Vernon, Raymond. 1966. International Trade and International Investment in the Product Cycle. *Quarterly Journal of Economics* 80 (2):190-207.

Yeats, Alexander J. 2001. Just How Big Is Global Production Sharing? In *Fragmentation: New Production Patterns in the World Economy*, edited by S. W. A. a. H. Kierzkowski. NY: Oxford U Press.