New divisions of labour in the global economy

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It has become a rarely challenged commonsense assumption that, as part of the globalisation process, there is an inexorable haemorrhaging of jobs from the "Global North" to the "Global South". China and other countries in Asia are cited as prime examples of new centres of accumulation, which are a magnet to foreign investment and employment at the expense of workers' jobs in more advanced capitalist economies. Transnational corporations are treated as juggernauts that can set down or uproot without impediment within a short time frame.

Offshoring production has featured in high-profile political debates.[1] It was a major issue in the 2012 presidential election when Barack Obama criticised Mitt Romney for investing in companies that sent jobs abroad when he worked for the private equity firm Bain Capital. Guy Standing claims in his book *The Precariat* that new divisions of labour within the firm and the shift of some activities overseas contribute to the division between "core" and "peripheral" workers and the increasing precarity of the latter.[2] The American Federation of Labor and Congress of Industrial Organizations (AFL-CIO)[3] peddle a particularly apocalyptic version of offshoring where China is "viewed as the most important source of downward pressure from trade with less developed countries, because it pays very low wages and because it is responsible for nearly 40 percent of US non-oil imports from less developed economies".[4]

John Smith claims that outsourcing has transformed the global working class and is a way that profits are extracted by transnational corporations from imperialist countries through the super-exploitation of workers in the Global South. He argues that:

The vast wave of outsourcing of production processes to low-wage countries…was a strategic response to the twin crises of declining profitability and overproduction that resurfaced in the 1970s in the form of stagflation and synchronised global recession, a course that was conditioned by the imperialists' reluctance to reverse the expensive concessions that have helped convert the workers of the "Global North" into passive bystanders, or even accomplices, to their subjugation of the rest of the world.[5]

From contradictory perspectives, workers in core capitalist economies are simultaneously victims of unfair competition (AFL-CIO) and bystanders/accomplices in the super-exploitation of workers in the Global South (Smith), while workers in the Global South are simultaneously perpetrators of unfair competition (AFL-CIO) and super-exploited in a race to the bottom (Smith). The arguments of both the AFL-CIO and John Smith are divisive, pitting the interests of workers in the core capitalist economies and developing countries against one another—in both accounts workers are powerless in the face of mobile capital.

The dynamic nature of capitalism is constantly changing the global division of labour, and there are undoubtedly significant shifts in the geography of production and accumulation.[6] However, accounts that treat capital as super-mobile, the haemorrhaging of jobs as inexorable and workers (both in the core capitalist economies and in the developing world) as passive victims of capital need to be challenged. This article is organised around three central arguments. The first proposition is that the mobility of capital (in aggregate) is exaggerated, and in particular that the state continues to play a critical role in the process of accumulation. The second argument is that contradictions in the process of accumulation make the movement of capital and jobs neither inevitable nor irreversible. Third, it is suggested that the empirical foundations on which some of the more apocalyptic claims are based are shaky and wherever capital settles it is met with resistance from workers. I start off by looking at the way in which stagnating profits and competition are an organisational headache for the owners and managers of capital.

Annihilating space with time: a challenge for capital

Throughout the history of capitalism, the drive to accumulate, compete and reduce turnover time has led to a reduction of the time and costs of production. In the 19th century the steamships, canals, railways and the telegraph revolutionised communication and the movement of raw materials and goods. In the 20th century the advent of the jet aircraft, computers and satellites dramatically reduced geographical barriers, while containerisation increased the efficiency of moving goods.[7] Marx understood the drive for new markets when he talked about the relentless expansion of the system:[8]

While capital must on the one side strive to tear down every spatial barrier…to exchange and conquer the whole earth for its market, it strives on the other side to annihilate this space with time, ie reduce to a minimum the time spent in motion from one place to another. The more developed the capital, the more it does strive simultaneously for an ever greater expansion of the market and for ever greater annihilation of space by time.[9]

From its inception capitalism has brought previously inaccessible destinations into the network of exchange through improvements in transport and technology, opening up new places of accumulation and new markets. This has been reinforced by the liberalisation of trade and investment as powerful capitalist economies have broken down barriers through their domination of international institutions such as the International Monetary Fund (IMF) and the World Trade Organisation (WTO). This intensifies competition between capitalists for favourable sites for both the relocation of production and the domination of markets.

Marx predicted that competition would lead to concentration as weaker capitals disappeared or were taken over by stronger capitals—a process intensified by periodic crisis. This is clearly evident in the gargantuan transnational corporations that have emerged in energy, finance, food and automotives. In the face of intense competition these firms (and smaller ones) are constantly engaged in organisational innovation to reconfigure their arrangements with other units of capital for producing goods and services in an attempt to steal advantage from their competitors. They are confronted with endless configurations of contractual arrangements with suppliers and competitors within a variety of geographical locations. This menu of arrangements includes segmenting tasks and moving functions or entire departments and sub-units to different locations. The result is intricate and increasingly extended chains of fragmented activities that make up the circuit of capital from extraction to realisation of surplus value.[10]

Where powerful firms dominate these complex value chains their purpose is to extract and appropriate a greater chunk of surplus value from weaker capitals which are their suppliers.[11] In the business jargon, firms concentrate on their "core competences" and spin-off or outsource tranches of their production process to other firms. The flexibility that they can gain from exerting pressure on suppliers enables them to reduce their turnover time to the minimum.[12] The more smoothly all parts of the production process can be synchronised with just-in-time methods and state of the art logistics, the faster the production and realisation of surplus value and the higher the rate of profit.

Huge supermarkets in the United Kingdom dominate food production and through competition, force processors and producers of food to drive down their costs. Sophisticated sourcing methods combine scouring the globe for food with the hyper-exploitation of (often migrant) workers in the domestic economy. Firms that produce branded clothing and footwear, and companies such as IKEA, are constantly reshaping their value chains to extract a disproportionate share of surplus value from their suppliers, who have much less power and who in turn are forced to squeeze their workers.

But these examples refer to specific transnational corporations and particular sections of capital. All too often these high profile and limited examples are generalised into an argument about the mobility of capital as whole, with scant attention paid to the specific nature of different capitals.

The limits to capital mobility

In the absence of countervailing forces that make production "sticky" in one place, "the individual search for excess profits would keep the [space] economy of capitalist production in a state that resembles an incoherent and frenetic game of musical chairs".[13] Therefore, it is important to understand the limits to and constraints on the mobility of capital.

First, only some sections of capital are mobile. For example, the whole swathe of activities associated with constructing and maintaining the physical and human infrastructure of capitalism is fixed. Whether provided by the public sector or commodified, education, care for the elderly and the majority of health provision are immobile. The capital associated with the physical infrastructure—airports, transport, energy, construction and telecommunications—are also fixed in one place.

Second, those sections of capital that are more mobile still face constraints on their ability to move production. The longer the turnover time, the less the geographical and temporal mobility of capital. Therefore, industries employing large quantities of fixed capital cannot relocate easily. In the case of automobiles, the constant costs such as building new plants and investing in machinery are high. In contrast, the clothing and shoe sector has low barriers to entry and low constant capital costs, which make it accessible to virtually any developing country.

But despite the hyper-mobility of the clothing industry, production has not relocated exclusively to low-wage sites. Since the liberalisation of the clothing industry in 2005,[14] China's share of world exports in clothing has risen from 18 percent to 34 percent,[15] but Europe's share has also increased from 28 percent to 31 percent in the same period. Networks of production in Europe have been restructured. Either suppliers are being drawn from low-wage European economies or firms are increasing their use of technology and automation.[16] The labour process and extraction of surplus value are one (important) point in wider circuits of capital, but proximity to markets and flexibility are important in reducing turnover time.

Clothing and electronics are high-profile sectors where capital is mobile, but there are few examples of sectors that have exhibited such a propensity to move between countries in a short time period. Automotive firms, for example, have relocated, but over a much longer period of time. Rather than seeking *absolute* low wages, they have built regional networks in adjacent *relatively* lower wage economies, for example American firms in Mexico, and German and Italian ones in Central and Eastern Europe. Japanese auto firms have exhibited a similar pattern in South East Asia with the outsourcing of components to lower cost countries such as South Korea and Taiwan initially, and more recently lower wage cost locations in Indonesia, Malaysia and the Philippines.[17]

In her study of restructuring the US auto industry Nicole Aschoff looks at the way that US firms have reorganised their operations almost continually since the 1980s.[18] She explains how, rather than the single trajectory of production moving to low-wage sites in the US South or Mexico, auto industry restructuring has resulted in an "auto alley" stretching from the Great Lakes to the Gulf of Mexico. She concludes that:

the restructuring of the auto industry over the past three decades is not a simple globalisation story of investment leaving for low-wage sites. Instead, it has been a story of constant restructuring with growth and decline occurring simultaneously in time and space.[19]

The same pattern is true of auto production in the European Union. The sites of production for Peugeot and GM show the core capitalist economies as the most important locations, followed by Spain with Central and Eastern Europe playing a peripheral role (see Table 1).

Where auto firms have moved into the markets of developing countries, this is to access rapidly expanding demand rather than low costs. According to Nicole Aschoff the so-called BRIC economies (Brazil, Russia, India and China) accounted for one third of global car sales in 2009.[20] And in the same year China was GM's largest market. So while new growth is concentrated in a handful of developing countries, the majority of sales and production takes place in North America, Western Europe and Japan.

Table 1: Peugeot and GM: countries of production

	Peugeot		General Motors
Country	Units of production (000s)	Country	Units of production (000s)
France	1,324	France	442
Spain	452	Spain	366
Slovakia	178	Slovakia	208
Portugal	50	Portugal	174

Source*:* Reed, 2012

From the perspective of different sections of capital, shares of world exports provide a crude indication of divisions of labour. Table 2 shows that China has made significant gains in capturing a share of world exports in iron and steel, clothing and integrated circuits and electronic components, but has had little penetration in medium technology (automotives) or high technology (pharmaceuticals), which remain in the core capitalist economies and Europe in particular.[21]

Third, and the most serious issue to address, are notions that shifts in capital are frictionless in a global economy where firms are free from the shackles of national states and can roam the globe in search of profits without impediment. Nigel Harris argues that since 1980 the world has been dominated by the transition to a single "economic globalisation", which:

increasingly imposes on the world a new pattern of territorial specialisation, organised by global markets, not as hitherto believed, by nation states… The free flow of the factors of production has created a single world economy.[22]

Table 2: Share in world exports for selected goods and countries

	Iron & steel	Integrated circuits & electronic components	Automotive products	Clothing	Pharmaceuticals
Europe					
2000	47.0	19.1	49.8	28.5	65.0
2009	38.5	13.5	49.7	30.7	67.0
China					
2000	3.1	1.7	0.3	18.3	1.6
2009	9.4	11.4	2.6	34.0	2.0
USA					
2000	4.4	20.4	11.7	4.4	12.1
2009	4.1	10.7	9.1	1.3	10.3

Source*:* Author's selected compilation from the WTO, 2010.

Accounts of highly mobile capital roaming the global economy unimpeded in search of lower wage costs ignore (or at best underplay) the role of states and their constant attempts to intervene and influence capital accumulation within their boundaries.

The state and the "frenetic game of changing destinations"

The territorial organisation of the state forms the fixed geographical environment in which investment processes operate that lead to interstate rivalry to provide the social, institutional and infrastructural conditions most propitious for capital.

The state secures the conditions for the accumulation of capital and for extracting (and realising) surplus value. It provides the physical infrastructure for capital (transport, energy) and the institutional architecture that governs the relationship between capitals (their size and potential for competition) and capital and labour (labour and employment law). In addition, states embrace a wide range of institutions concerned with the reproduction and enhancement of labour within their territory. Universities, for example, have been overtly marshalled to improve the competitive conditions for capital through their production of skilled workers and the focus on managerial and scientific know-how.

There is a whole machinery of regional development agencies that compete intensively to provide the best package of land, subsidies and institutional support. This is also manifest in the building of technology parks, which usually amount to little more than wishful thinking on the part of local ruling classes and their acolytes and rarely translate into attracting the high technology production to which they aspire.

But the state does not simply passively provide the conditions for capital—rather it actively seeks to attract capital in locational tournaments that pit country against country and regions and localities against other regions and localities, both within nation-states and in other nation-states. [23] For example, in the film industry subsidy wars abound. On a global level there is competition between North America, Europe, New Zealand/Australia and parts of the developing world. For example, the filming of the *Lord of the Rings* trilogy in New Zealand generated huge tax breaks for New Line Cinema—estimated by the OECD to be in the $300 to $400 million range.[24] In 2010 Warner Brothers and New Line threatened to pull out of filming in New Zealand until the government promised more subsidies and legislation that undermined union-negotiated contracts.[25] Even within countries there is intense competition. In the US film industry in 2008 40 states spent $1.4 billion on tax credits, write-offs and grants. Interstate competition for location shooting is especially intense, and as of 2009 only six states did not provide movie production incentives (MPIs).[26]

It is instructive that in the United States, where the rhetoric of the free market and a restricted role for the state is so strong, the reality could not be more different. Generous government incentives try to win capital to particular states, as the following quote shows:

The latest [2008] cheap manufacturing site for European companies is not in Asia or Eastern Europe but the US… The reason is less the value of the dollar…but rather the large number of incentives that some US states are offering companies to set up factories in their region… A senior executive of Fiat…said "with the amount of money US states are willing to throw at you…you would be stupid to turn them down at the moment"... Thyssen Krupp…is receiving more than $811 to build a steel mill in Alabama… The chairman of a large Swiss group said: "States are more willing to pay for new roads, re-train workers and offer huge tax breaks—that is a competitive package that not many parts of the world can match when you look at how productive US workers are and where the dollar is".[27]

Despite their size, global success and profits, producers of semi-conductors have hijacked and siphoned off significant public subsidies. For example, in Tennessee in 2008 Hemlock semiconductor group was offered $114 million in development and training grants, plus $74 million in local subsidies and 50 percent property abatement worth an estimated $40 million.[28] Similarly in biotechnology, viewed as the magic bullet of economic development, there is huge interstate competition for what were regarded as state of the art jobs. This includes not only subsidies to individual companies but also government funds to build research parks or to create public pools of venture capital.[29] In the car industry in the early 1990s global foreign car firms received massive state subsidies to locate in the southern states of the US. In 2008 VW, which had abandoned US manufacturing in 1988, announced plans to spend up to $1 billion on assembly operations in Chattanooga, Tennnessee. The state and local package was in excess of $400 million.[30]

There is a similar story of government support in individual European states and in the European Union as a whole. For example, in November 2012 the European Union launched a plan to bolster the "struggling" car industry. The strategy dubbed *Car 2020* includes a raft of proposals including promoting investment in new technology and green vehicles, streamlining regulations, supporting skills and training and helping make carmakers compete globally including through "balanced trade agreements".[31]

Beyond subsidies to attract and retain investment the representatives and owners of capital lobby states (and regional groups of states such as the EU) to organise the terms of trade in their interests. Marx's analogy of hostile brothers is a good description of how governments tussle over the rules of global competition. Governments protect their industries with, often, spurious claims that other countries are competing unfairly. The use of tariffs and quotas has declined as a result of tortuous rounds of negotiations through the WTO, and anti-dumping has emerged as the dominant form of trade protectionism. These anti-dumping duties allow a country to impose temporary duties on a good exported by a foreign producer that is accused of selling the good at a price below that charged in the foreign producer's home market. These laws were drafted initially by the US and European ruling classes to protect themselves from "low price competition". They were the first to take advantage of these laws and were the most active users of them, but more recently the dynamic has shifted. Over the last decade India and China have been aggressive users of anti-dumping laws as offensive weapons against their trading partners.

Table 3: Users and targets of anti-dumping, 1995-2011

Top three users of anti-dumping investigations	
India	656
China	853
US	458
Top three targets of anti-dumping investigation	
Korea	284
EU	437
US	234

Source*:* Wu, 2012

Another arena for battle is exchange rates. The aftermath of the economic crisis 2010 saw a round of currency wars—the main combatants were the US and China, with some emerging markets (Brazil in particular) joining in. There were accusations and counter-accusations that competitive devaluation had been used to boost exports and steal an unfair advantage.[32]

This is not a world in which the location and relocation of capital takes place on the basis of the careful calculations of the owners or managers of capital about how to maximise profits in some unfettered global market for trade and investment. National and local states constantly intervene to protect the capital in their territories and to enhance the structures for attracting new capital, and use the full range of legal weapons at their disposal to gain advantage over their competitors.

But there are also contradictions within the process of accumulation and expansion, which means that the movement of capital or employment to other countries is not inevitable, inexorable or irreversible.

The temporary "spatial fix" of relocation

Although capitalist production is subject to the law of value—external to the individual firm—capitalists have latitude to make individual decisions. In other words, capitalists have to manage large and geographically spread organisations in a context of increasingly intense competition. Transnational corporations search the globe for the best fit of skills, wages and regulatory frameworks before they commit to a location.[33] But managers make decisions without knowing what their competitors are doing with uncertainty hanging over the outcomes of their decisions. Firms try to assess the costs of competing destinations and then recalibrate their strategy as relative wages and other costs change. Managers are not the rational agents with perfect knowledge that are central to neoclassical economics. Richard Hyman points out that strategic decisions made by capitalists are an attempt to resolve a series of contradictions inherent in capitalist production:

Marx's whole analysis was an insistence on the tendential contradiction between forces and relations of production, between the production and realisation of surplus value. Monopolisation or state intervention alter the form of such contradictions but do not transcend them. For individual capitals—as for capital in general—there is no "one best way" of managing these contradictions, only different routes to partial failure. It is on this basis that managerial strategy can best be conceptualised: as the programmatic choice among alternatives none of which can prove satisfactory.[34]

Moving to new locations to produce (cost driven) or realise (market driven) surplus value in order to resolve the contradictions of capital is what David Harvey refers to as a "spatial" fix.[35] But moving to new locations, rejigging contractual arrangements with other capital and/or adopting new technology are only temporary fixes for individual capitals and the system as a whole. Competition drives other capitalists in the same sector to follow a similar strategy—in other words, if one capitalist expands output and shifts production then other capitalists are compelled to follow a similar strategy to defend their competitive position.

By relocating across national boundaries firms may be able to employ workers who they can hire for a lower wage or who they can compel to work longer and harder. This is one of the countervailing influences on the falling rate of profit identified by Marx.[36] However, the higher the rate of profit achieved in a particular sector, the more rapidly that exceptional rate of profit will be eroded by the entry of new capital into that sector (assuming that there are no barriers to entry). Competition on the labour market and the attendant rise in confidence of workers collectively or individually will push up wages and erode the differential. However, the fact that labour has less freedom to move across national boundaries than capital means that differences in the rate of exploitation may be sustained for long periods of time—depending on the strength and combativity of workers.

There is a complex interplay between the rate of exploitation and the level of investment per worker which means that the impact on profits cannot be simply read off the strategies of firms and sectors. However, the influx of investment to China on the basis of low costs does provide a clear example of the erosion of the success of a particular model of social relations.

China's eroding low-wage advantage

According to the CEO of Collective Brands, a US footwear company shifting some of its production from China to Indonesia, the "utopia for one stop sourcing for quality and low price has been China…but utopias never last".[37] The advantages that can be gained from a particular locality can only be temporary, and the opportunities for excess profits from location are eliminated by the mobility of capital. The advantages and excess profits to be extracted from China's regime of low-wage, labour-intensive production are being eroded. The meteoric rise of China's economy with average growth rates of 10 percent for the last 30 years was based on an endless supply of cheap migrant workers from inland China to the Special Economic Zones (SEZs) in the coastal regions. But there is no longer an endless stream of pliant migrant workers happy to accept monotonous and exhausting work. Labour markets have tightened with more vacancies than workers looking for work.[38] This has meant expectations of better working conditions, the possibility of trading jobs, a higher turnover of workers and upward pressure on wages. All of these reduce the level of profit that firms can make in a particular locality.

Some labour-intensive businesses are moving from the coastal regions to inland China. Nike used to make most of its trainers in China, but many of its big suppliers have moved elsewhere, and in 2010 Vietnam became the company's biggest global production base.[39] Hourly manufacturing wages average $1.80 in Thailand, 49 cents in Vietnam, 38 cents in Indonesia and 35 cents in Cambodia, and there has already been a significant transfer of work in apparel, footwear and sporting goods to South and South East Asia.

In 2011, citing many examples of companies moving their production back to the United States, the Boston Consulting Group (BCG) argued that the differential is closing between the opportunities offered in China and in the southern states of the United States. They concluded that China's overwhelming cost advantage over the United States is shrinking and that higher US productivity, a weaker dollar and other factors will close the cost gap between the United States and China. According to BCG:

Rising labour rates have been a fact of life in Chinese factories for years. Average wages leapt by 150 percent from 1999 through 2006…a period when China emerged as the workshop of the world for a range of industries. Those increases started from a low base, but now the tipping point is in sight. For one thing wage growth has accelerated much faster than productivity growth. From 2000 through 2005, pay and benefits for the average Chinese factory worker rose by 10 percent annually. From 2005 through 2010, wage hikes averaged 19 percent per year, while the fully loaded costs of US production workers only rose by only 4 percent… Minimum wages rose by more than 20 percent in 20 Chinese regions and up to 30 percent in Sichuan province.[40]

BCG specifically compares China with the southern states of Alabama, Mississippi and South Carolina, which have anti-union laws and lower wages. Further, the cost of industrial land is higher in China, ranging from $11.15 on the coast to $21 in Shenzhen (opposite Hong Kong) with a national average of $10.22 per square foot.[41] Compare this with industrial land in Alabama, which ranges from $1.10 to $7.43 per square foot; in Tennessee and North Carolina the price ranges from $1.30 to

$4.65. In this case capital returns, but on new terms, with poorer terms of employment and lower wages.[42]

Any differential is further eroded by the appreciation of the renminbi against the dollar, and the "costs and headaches"[43] of extended supply chains, as well as inventory expenses, quality control, unanticipated travel needs and the threat of disruption due to port closures and natural disasters. For US corporations, the possibility of intellectual property theft and trade disputes resulting in punitive duties reduce differentials even further.

This is not to suggest that all US production will leave China or that firms will cease to locate there—for some sections of capital it will continue to be advantageous for production and to access the vast market.[44] But the implications of this are that there is not an inexorable and irreversible flood of jobs from high to low wage economies in China and South East Asia. The laws of competition erode any initial advantage and this results in a new round of relocations either back to the home economy or, in the case of some capitals, to other cheaper destinations.

Substituting technology for workers

As some sections of capital reach the limits of operating in low-cost locations they may look to another strategy for staving off, limiting or temporarily resolving the aggregate crisis of accumulation by adopting more or newer technology.

The example of Foxconn illustrates the limits of low-wage production predicated on a particular set of social relations. Foxconn is a Taiwanese firm that has a gargantuan manufacturing operation in China as a subcontractor for large transnational corporations such as Apple and HP. It employs 1 million workers, many of who live in dormitories in factory towns. The monthly pay (Rmb1,800/$285) is higher than the minimum wage, but the work is repetitive and mind-numbingly tedious:

Most spend their days seated beside a conveyor belt, wearing white gowns, face masks and hair nets so that stray hairs and specks of dust won't interfere as they perform simple but precise tasks, again and again. Each worker focuses on a single action, like putting stickers on the front of an iPhone or packing a finished product into a box…it takes five days and 325 steps to assemble an iPad.[45]

This led to a spate of suicides in 2010, and in September 2012 there was a riot involving 2,000 workers. Based on a division of labour that involves a series of repetitive tasks, there is little room for any sort of enlightened work practice as this would undermine the basis of the model. Terry Gou (CEO of Foxconn) said: "As human beings are also animals, to manage 1 million animals gives me a headache".[46] Aside from the disgraceful reference to workers as animals, this remark reveals the limits of mass production. Foxconn has diversified its strategies. It plans to shift some of its production to Brazil, Mexico and Eastern Europe. Also, although Foxconn continues to build new plants and hire thousands of extra workers to make smartphones, it also plans to install a million robots inside of three years to supplement its workforce in China.

But the calculus of how to extract maximum surplus value can change, and an alternative strategy is to return some or all production to the higher labour cost home country and invest in new technology. At the Phillips Electronics factory on the coast of China electric shavers are assembled by hundreds of workers by hand. However:

At a sister factory…in the Dutch countryside, 128 robot arms do the same thing with yoga-like flexibility… One robot arm endlessly firms three perfect bends in two connector wires and slips them into holes too small for the eye to see. The arms work so fast that they must be enclosed in glass cages to prevent the people supervising them from being injured. And they do it all without a coffee break—three shifts a day, 365 days a year. All told, the factory here has several dozen workers per shift, about a tenth as many as the plant in the Chinese city Zhuhai.[47]

It is not suggested that all foreign firms will switch their production from China or that workers will be replaced by robots. Automating assembly lines would require the rejigging of entire manufacturing processes. Smaller firms cannot afford to invest in robotics. However, the point is that the technological capacity of capitalism changes incessantly and there will be developments in technology that will change how things are produced in incremental or revolutionary ways and which will alter the balance sheet of profits. How far and how quickly new technologies will be adopted is not predictable, and it will be uneven between firms. However, there will be a pressure on them to adopt these new technologies in order to keep pace with their rivals. The falling costs and growing sophistication of robots mean that individual firms may be able to steal an advantage over their competitors, but for the system as a whole it leads to falling profits.[48]

Shaky empirical foundations

The whole process of measuring offshoring and outsourcing is riddled with problems and imperfect statistics. I begin by looking at foreign direct investment (FDI) as a proxy for the extent to which capital is being internationalised. Table 4 shows that between 2006 and 2011 there was a shift towards China capturing an increasing share of global flows of FDI, but the majority of flows were concentrated in the core capitalist economies of the United States and Europe. Despite the hype about the BRICS (Brazil, Russia, India, China and South Africa), it is worth noting that Brazil, Russia and India accounted for only 10 percent of global FDI between them.

Table 4: Flows of foreign direct investment by selected region and country, 2006, 2009 and 2011, as a percentage of the world total

	Inflows	Outflows
Europe		
2006	39.9	48.0
2009	33.3	38.9
2011	27.8	38.4
USA		
2006	13.2	15.8
2009	11.9	22.7
2011	14.8	23.4
China		
2006	5.0	1.5
2009	7.9	4.8
2011	8.1	3.8
Brazil		
2006	1.3	2.0
2009	2.1	0.8
2011	4.4	0.06
Russia		
2006	2.0	1.6
2009	3.0	3.7
2011	3.5	3.9
India		
2006	1.4	1.0
2009	3.0	1.3
2011	2.1	0.8

Source: Adapted by the author from UNCTAD, 2012, pp169-176

However, FDI is a broad and imperfect measure. Subcontracting arrangements are not captured in these statistics and therefore they underestimate the linkages that exist between capital and fail to capture the complexity of value chains. The iPad, for example, is exported from Foxconn in China, but has components from the United States and several countries in South East Asia embedded in it and therefore without detailed information it is very hard to track value added.[49] Published information from companies is likely to be inaccurate, not least because of manipulations involving transfer pricing.[50] Finally, because the figures are aggregates for individual nation states, they do not give important information about the regional dynamics of changes in production, which masks the emergence of large centres of accumulation within national economies.

Notwithstanding all these problems, an analysis of UNCTAD data does raise important questions about the usefulness of dividing the global economy into the "Global North" and "Global South". It should be noted that swathes of the global economy receive very little foreign investment.[51] In 2011 the developing world (as defined by UNCTAD) received 45 percent of foreign investment flows, but this was highly unevenly distributed. Within the foreign investment going to developing countries, 30 percent of the total went to China and 62 percent went to Asia more broadly, while Latin America received 32 percent. The entire continent of Africa captured only 6.2 percent of the flows to developing countries, which translates as a mere 2.8 percent of the global total.

Therefore, beneath these broad observations a great deal of unevenness persists—the post-Communist economies of the European Union, for example, still lag significantly behind in their levels of foreign direct investment, despite some countries having pockets of success in the automotive sector.[52] In economic terms, to conflate China with the Global South overstates the extent to which many regions, or in the case of Africa entire continents, are locked into global flows of capital.

From the early 1990s outflows of jobs in business services have been high profile. Call centres generated widespread media coverage as well-known UK companies moved to India. Initially simplified and routinised tasks in production such as call centres or back-office functions were offshored to so-called emerging markets such as India and the Philippines. However, since 2004 there has been an acceleration in offshoring more skilled tasks such as research and development, sophisticated software development, design, mathematics-based finance and actuarial functions that require post-graduate or higher level skills.

But the hyperbole about the scale of offshoring back-office jobs, call centres and BPO (Business Process Outsourcing) has to be put into perspective. Offshoring has been hugely and intensively promoted by consultants for whom this is very lucrative business.[53] McKinsey, for example, promised "dramatic price reductions" because of mouth-wateringly low wages. "The enticement to companies of a worker who earns $2 an hour in India as against ten times that amount for a worker in the United States is obvious".[54] From being a win-win game, McKinsey is now generating more business by arguing that it might not be the panacea that was first suggested.[55]

There are no accurate statistics for the offshoring of business services because this is an amalgam of a range of activities that does not correspond to any existing classification scheme. Further problems exist with the lack of consistent data, which arises from non-reporting and double counting (due to re-export).[56] The scale of offshoring business services has been hyped, in some places at least. For example, Central and Eastern European economies have been promoted as new destinations for business services. However, this employment creation was estimated to amount to a total of 18,000 jobs in Hungary, the Czech Republic and Slovakia (combined) across the whole business sector in 2010.[57] This looks small compared with 70,000 call centre workers employed in the Greater Manchester area alone.[58]

There has also been little attention paid to "backshoring" as bosses rediscover lower wage costs on their own doorstep. In the United States they have "discovered" the phenomenon of "rural sourcing"—simply put, the idea that they can get away with paying less in small towns than in big cities. "Companies that make use of this rural outsourcing phenomenon can pay 25 percent to 50 percent less than they'd pay outsourcers in metropolitan areas".[59] Or in the case of the United Kingdom, "northsourcing" refers to jobs from overseas coming back to Britain or moving from what is regarded as the expensive south east. Overall the north west of the United Kingdom has 700 call centres (up from 521 in 2004) and employs 183,000 people (a 50 percent increase from 2004). So rather than all jobs "going to India"—new jobs have been created in or have returned to the United Kingdom.

There are few studies of backshoring, but one report on the activities of German companies found that 570 out of 1,484 companies surveyed had backshored part or all of their foreign production.[60] Therefore, for every third relocating company there is currently one backshoring company. The main reasons given were problems with quality, flexibility and delivery capability—all functions crucial to the annihilation of "time through space". Reinforcing earlier arguments, unexpected or increasing labour costs followed as the third motive, when promising calculations for relocating no longer appeared advantageous.

Where have the jobs gone?

The outward flow of jobs from outsourcing in the US has to be understood in the context of the labour market. A report from a US think tank points to an increase of 27.3 million jobs between 1990 and 2008.[61] This expanding labour force was absorbed almost exclusively by the service sector, with the biggest growth in government and healthcare (10.4 million). The government is the largest single employer, with a 20 percent increase in employment from 1990 to 2008, over half of which was in education.

According to the report there has been some loss of employment with the out-migration of functions in global value chains; however, this reduction has been to do with labour-saving technology rather than outsourcing.[62] In electronics, jobs have fallen by 650,000 over two decades, but value added has increased by 363 percent, by far the largest increase among all industries. In the US auto industry from 1990 to 2007, 172,000 jobs were lost as domestic industry declined, but the value added per job increased by 85 percent from 1990 to 2008. From mid-2009 to mid-2010, however, the auto industry gained more than 50,000 jobs, increased profits for the first time since 2005 and increased exports abroad as the US government bailed out and restructured General Motors and Chrysler.

The report goes on to point out: "Yet the economy did not have an unemployment problem, at least until the crisis of 2008".[63] Massive cuts in the public sector, as well as job losses in the private sector since the economic crisis have increased unemployment. To put this in perspective, 650,000 jobs have been lost in the electronics industry *in the last two decades* partly due to outsourcing, but also as a result of overproduction and the increased use of technology. Compare this with the 627,000 jobs lost *in the last three years* in the public sector from June 2009 to June 2012.[64]

Where there is capital there is conflict

Kevin Doogan points out that talking up offshoring by some who profess to have left wing sympathies is self-limiting and pessimistic.[65] These arguments coalesce around a view that workers in a single labour market are forced into competition with one another by perfectly mobile capital, and that the new organisational arrangements of capital, such as offshoring and outsourcing, bring competitive pressures on organised and unorganised workers and weaken their bargaining power in a race to the bottom. States use the spectre of this competition as a stick with which to beat workers and tell them that the wages, pensions and working conditions (and other market-distorting benefits) are barriers to competition.

Beverly Silver, in her book *Forces of Labor*, provides an excellent antidote to these defeatist views.[66] She argues that volume one of Marx's *Capital* can be read as "a history of the dialectic between workers' resistance to exploitation at the point of production and the efforts of capital to overcome that resistance by constantly revolutionising production and social relations".[67] These revolutions in the organisation of production and social relations may undermine some elements of the working class, in the short term at least, but new sites of accumulation will emerge along with new conflicts and forms of struggle. The cheap labour economic miracles of the 1970s and 1980s—ranging from Spain and Brazil to South Africa and South Korea—each created new working classes that produced militant labour movements in the expanding mass production industries. Not only were these labour movements successful in improving wages and working conditions, but they played a key role in the struggle for democracy in these countries.

Silver traces the high point of struggles as they followed the relocations and the growth of the auto sector—from the United States and Canada in the 1930s, to the United Kingdom in the 1950s, to France and Italy in the 1960s, to Germany and Spain in the 1970s and to Argentina, Brazil and South Africa in the 1980s and 1990s. More recently, as a chunk of European auto production has moved to the lower wage economies of Central and Eastern Europe, car factories have become sites of union revival in Poland.[68] Therefore, wherever capital flows, so-called spatial fixes have recreated similar working classes and class conflict. Far from the image of "Third World workers being on a hopeless treadmill without international protection",[69] the geographical relocation of production has strengthened and recreated new working classes and new struggles.

Conclusion

The internal dynamics of capitalism and the law of value are constantly shaping and reshaping the spatial distribution of production. From the perspective of capital, locations offer different opportunities for extracting and realising surplus value. The organisational challenges to the owners and managers of firms are immense in terms of their relationships with other capitals (competitors, collaborators and suppliers). But only some sections of capital are mobile, and then only to a limited degree. States intervene constantly to alter the conditions for accumulation in their territories, by reducing costs or trying to influence the rules of the game.

While an individual firm can steal an advantage on its competitors by moving to low-cost locations this can only be a temporary fix. Undoubtedly, China has become the workshop of the world in the last decade for a range of goods, reflected in its status as the largest global exporter. But its low-cost, low-productivity, mass production model has limits, particularly as it meets increasing passive and active resistance of workers. There has been a shift towards the production of certain goods in China, often as part of the long and complex chains of transnational corporations, but it is unlikely that this will continue with the same velocity, and in some cases is reversible.

There are no rigorous statistics to support an apocalyptic view of offshoring. Models that are peddled as "scientific" are not so; they have more to do with attempting to browbeat workers with threats of job loss and plant closure as well as creating lucrative contracts for consultants. Moreover, blaming other groups of workers for unfair competition deflects attention from a system that cannot provide jobs for everyone.

The obscene levels of unemployment in Europe—especially for young people—have nothing to do with the outsourcing or offshoring of jobs. Rather this is related to the long-term stagnation of capitalism, and more immediately the fallout from the 2007-8 crisis and the draconian austerity measures, which have slashed the living standards of workers. When workers accuse those in other countries of "taking their jobs", they are lining up with their own ruling class. It is only when workers understand their common cause across national boundaries that there can be a real defence of jobs and employment and the beginnings of a force that can challenge an anarchic system that regularly destroys the livelihoods and welfare of working class people.

Notes

1: The terms "outsourcing" and "offshoring" are used rather loosely and interchangeably in this article. Outsourcing is the process of contracting part of a firm's operation or value chain to a third party and therefore relates to ownership. Offshoring is a spatial concept to do with firms relocating part of their production to another country: this could be outsourced to a third party or kept in-house when a subsidiary is opened.
2: Standing, 2011.
3: www.aflcio.org/Issues/Jobs-and-Economy/Manufacturing/Outsourcing-Trade-and-Currency
4: Scott, 2008, p1.
5: Smith, 2012, p40.
6: Early significant works were Fröbel, Heinrichs and Kreye, 1981 and Huws, 1986.
7: Nayyar, 2006.
8: For an accessible account of Marxist economics, see Choonara, 2009.
9: Marx, 1973, p539.
10: Others, from both Marxist and non-Marxist perspectives, have looked at how unevenness is constructed through the intricacies of global value chains. See Coe, Dicken, and Martin, 2008, Rainnie, Herod, and McGrath-Champ, 2011.
11: Starosta, 2010.
12: Turnover time is given by the sum of production and circulation time-Marx, 1978, pp235-236.
13: Harvey, 2006, p393.
14: The Multi Fibre Arrangement (MFA) governed the world trade in textiles and garments from 1974 through to 2004. It imposed quotas on the amount that developing countries could export to developed countries. It expired on 1 January 2005.

15: WTO, 2011.
16: Pickles and Smith, 2011.
17: Moody, 1997.
18: Aschoff, 2012, p143.
19: Aschoff, 2012.
20: Ascoff, 2012.
21: See Hardy and Budd, 2012 for a discussion of the technological unevenness of China's production and its dependence on Western technology.
22: Harris, 2012, p138.
23: Dicken, 2011.
24: Van Biesebroeck, 2008.
25: 3News, 2010.
26: Good Jobs First, 2010a.
27: Dicken, 2011, pp227-228.
28: Good Jobs First, 2010b.
29: Good Jobs First, 2005.
30: Good Jobs First, 2010c.
31: Fontanella-Khan and Reed, 2012.
32: Beattie, 2012; Beattie and Ross, 2012.
33: Harvey, 2006.
34: Hyman, 1987, p30.
35: Harvey, 2006.
36: See Harman, 2007, and Choonara, 2009.
37: Brown, 2011.
38: Hardy and Budd, 2012; Hille and Jacob, 2012.
39: Markillie, 2012.
40: Sirkin, Zinser and Hohner, 2011, p7.
41: Sirkin, Zinser and Hohner, 2011, p7.
42: Sirkin, Zinser and Hohner, 2011, p7.
43: Sirkin, Zinser and Hohner, 2011, p11.
44: Markillie, 2012.
45: Larson, 2012.
46: Markoff, 2012.
47: Markoff, 2012.
48: See Harman, 2007, and Choonara, 2009.
49: Johns, 2006, concerns a study of value chains in the video games industry.
50: Simply put, when companies arrange their accounts to show that profits are made in countries with the lowest level of tax.
51: The following statistics are based on the author's calculations from UNCTAD, 2012.
52: Hardy, 2009.
53: Farrell, Agrawal and Remes, 2003.
54: Farrell, Agrawal and Remes, 2003, p1.
55: Goel, Moussavi and Srivatsan, 2008.
56: Sass and Fifekova, 2011.
57: Hardy, Fifekova, and Sass, 2011.
58: Bounds, 2012.
59: Carlson, 2010.
60: Kinkel, 2012. I have included some general observations whereas the article compares trends before (2004 and 2006) and after (2007 to 2009) the crisis.
61: Spence and Hlatshwayo, 2011. This is a useful and robust analysis drawing on historical time series data analysis from the Bureau of Labor Statistics and Bureau of Economic Analysis between 1990 and 2008.
62: Spence and Hlatshwayo, 2008.
63: Spence and Hlatshwayo, 2008, p31.
64: New York Times, 2012; Bivens, 2012.
65: Doogan, 2009.
66: Silver, 2003.
67: Silver, 2003, p19.
68: Hardy, 2009.
69: Greider, 1999, p5, cited in Silver, 2003, p168.

References

3News, 2010, New Zealand (28 October), www.3news.co.nz/How-The-Hobbit-came-to-stay-in-NZ/tabid/418/articleID/183575/Default.aspx

Aschoff, Nicola, M, 2012, "A Tale of Two Crises: Labor, Capital and Restructuring in the US Auto Industry", in Leo Panitch, Greg Albo and Vivek Chibber (eds), *Socialist Register*: *the Crisis and the Left* (The Merlin Press).

Beattie, Alan, 2012, "Tricks of the Trade Law", *Financial Times* (29 October).

Beattie, Alan and Alice Ross, 2012, "A Fragile Armistice", *Financial Times* (4 October).

Bivens, Josh, 2012, "Public Sector Job Losses: An Unprecedented Drag on the Recovery", Economic Policy Institute (5 April), www.epi.org/publication/public-sector-job-losses-unprecedented-drag

Bounds, Andrew, 2012, "Call Centres Come in from the Suburbs as the Trend for 'Northshoring Rises'", *Financial Times* (16 July).

Brown, Kevin, 2011, "Rising Chinese Wages Pose Relocation Risk", *Financial Times* (15 February).

Carlson, Caron, 2010, "Popularity of 'Rural Sourcing' Grows", FierceCio (10 July),

www.fiercecio.com/story/popularity-rural-sourcing-grows/2010-07-10

Choonara, Joseph, 2009, *Unravelling Capitalism*: *A Guide to Marxist Political Economy* (Bookmarks).

Coe, Neil, Peter Dicken and Martin Hess, 2008, "Global Production Networks: Realizing the Potential", *Journal of Economic Geography*, volume 8, number 3.

Dicken, Peter, 2011, *Global Shift*: *Mapping the Changing Contours of the Global Economy* (Sage).

Doogan, Kevin, 2009, *New Capitalism*: *The Transformation of Work* (Polity).

Farrell, Diana, Vivek Agrawal and Jaana Remes, 2003, "Offshoring and Beyond: Cheap Labor is the Beginning, Not the End", *The McKinsey Quarterly*, volume 4 (December),

www.mckinseyquarterly.com/Offshoring_and_beyond_1367

Fonantella-Khan, James, and John Reed, 2012, "Guarded Welcome for EU Drive to Help Struggling Car Industry", *Financial Times* (9 November).

Fröbel, Folker, Jürgen Heinrichs and Otto Kreye, 1981, *The New International Division of Labour* (Cambridge University Press).

Goel, Ajay, Nazgol Moussavi and Vats Srivatsan, 2008, "Time to Rethink Offshoring?", *McKinsey Quarterly* (September), www.mckinseyquarterly.com/Time_to_rethink_offshoring_2190

Good Jobs First, 2005, "Report on Biotechnology Subsidies", www.goodjobsfirst.org/corporate-subsidy-watch/biotechnology

Good Jobs First, 2010a, "Case Study: Film Production", www.goodjobsfirst.org/corporate-subsidy-watch/film-production

Good Jobs First, 2010b, "Report on Subsidies to Semiconductor Industry", www.goodjobsfirst.org/corporate-subsidy-watch/semiconductors

Good Jobs First, 2010c, "Report on Subsidies to Foreign Auto Plants", www.goodjobsfirst.org/corporate-subsidy-watch/foreign-auto-plants

Greider, William, 1999, "The Battle Beyond Seattle", *The Nation* (27 December).

Hardy, Jane, and Adrian Budd, 2012, "China's Capitalism and the Crisis", *International Socialism 133* (winter), www.isj.org.uk/?id=777

Hardy, Jane, 2009, *Poland's New Capitalism* (Pluto).

Hardy, Jane, Martina Fifekova and Magdolna Sass, 2011, "Impacts of Horizontal and Vertical Foreign Investment in Business Services: The Experience of Hungary, Slovakia and the Czech Republic", *European Urban and Regional Studies*, volume 18, number 4.

Harman, Chris, 2007, "The rate of profit and the world today", *International Socialism 115* (summer), www.isj.org.uk/?id=340

Harris, Nigel, 2012, "Characterising the Period", *International Socialism 135* (summer), www.isj.org.uk/?id=826

Harvey, David, 2006 [1982], *The Limits to Capital* (Verso).

Hille, Kathrin, and Rahul Jacob, 2012, "China: Beyond the Conveyor Belt", *Financial Times* (15 October).

Huws, Ursula, 2006, "Fixed, Footloose or Fractured: Work, Identity and the Spatial Division of Labor in the Twenty-First Century City", *Monthly Review*, volume 57, number 10 (March), http://monthlyreview.org/2006/03/01/fixed-footloose-or-fractured-work-identity-and-the-spatial-division-of-labor-in-the-twenty-first-century-city

Hyman, Richard, 1987, "Strategy or Structure? Capital, Labour and Control", *Work, Employment and Society*, volume 1, number 1.

Johns, Jennifer, 2006, "Video Games Production Networks: Value Capture, Power Relations and Embeddedness", *Journal of Economic Geography*, volume 6, number 4.

Kinkel, Steffen, 2012, "Trends in Production Location and Backshoring Activities: Changing Patterns in the Course of the Global Economic Crisis", *International Journal of Operations and Production Management*, volume 32, number 6.

Larson, Christina, 2012, "Migrant Workers in China Face Competition from Robots", *Technology Review*, www.technologyreview.com/news/428433/migrant-workers-in-china-face-competition-from-robots

Markillie, Paul, 2012, "The Boomerang Effect", *The Economist* (21 April), www.economist.com/node/21552898

Markoff, John, 2012, "Skilled Work, Without the Worker", *New York Times* (18 August), www.nytimes.com/2012/08/19/business/new-wave-of-adept-robots-is-changing-global-industry.html?pagewanted=all

Marx, Karl, 1973, *Grundrisse* (Penguin), www.marxists.org/archive/marx/works/1857/grundrisse/

Marx, Karl, 1978, *Capital*, volume 2 (Penguin), www.marxists.org/archive/marx/works/1885-c2/index.htm

Moody, Kim, 1997, *Workers in a Lean World: Unions in the International Economy* (Verso).

Nayyar, Deepak, 2006, "Globalisation, History and Development", *Cambridge Journal of Economics*, volume 30, number 1.

New York Times, 2012,"The road to more jobs" (11 July), www.nytimes.com/2012/07/12/opinion/the-road-to-more-jobs.html

Pickles, John, and Adrian Smith, 2011, "Delocalisation and Persistence in the European Clothing Industry: the Reconfiguration of Trade and Production Networks", *Regional Studies*, volume 45, number 2.

Rainnie, Al, Andrew Herod and Susan McGrath-Champ, 2011, "Global Production Networks and Labour", *Competition & Change*, volume 15, number 2.

Reed, John, 2012, "Carmakers Hope New Road is Way to Survival", *Financial Times* (25 October).

Sass, Magdolna, and Martina Fifekova, 2011, "Offshoring and Outsourcing Business Services to Central and Eastern Europe: Some Empirical and Conceptual Considerations", *European Planning Studies*, volume 19, number 9.

Scott, Robert, 2008, "The China Trade Toll: Widespread Wage Suppression, 2 Million Jobs Lost in the US", *Economic Policy Institute* (July), www.epi.org/publication/bp219

Silver, Beverly, 2003, *Forces of Labour*: *Workers' _Movements and Globalisation since 1870* (Cambridge University Press).

Sirkin, Harold, Michael Zinser and Douglas Hohner, 2011, "Made in America Again: Why Manufacturing Will Return to the US", Boston Consulting Group, www.bcg.com/documents/file84471.pdf

Smith, John, 2012, "Outsourcing, Financialisation and the Crisis", *International Journal of Management Concepts and Philosophy*, volume 6, numbers 1/2.

Spence, Michael, and Sandile Hlatshwayo, 2011, The Evolving Structure of the American Economy and the Employment Challenge, Working Paper from the Maurice R Greenberg Center for Geoeconomic Studies, Council of Foreign Relations.

Standing, Guy, 2011, *The Precariat*: *the New Dangerous Class* (Bloomsbury).

Starosta, Guido, 2010, "Global Commodity Chains and the Marxian Law of Value", *Antipode*, volume 42, number 2.

UNCTAD, 2012, *World Investment Report* (United Nations).

Van Biesebroeck, Johannes, 2008, "Policy Watch: Governments at the Bidding Table", Working Paper, University of Toronto and NBER, www.iscr.org.nz/f390,10883/jvb_110208_GOV_AT_THE_BIDDING_TABLE.pdf

WTO, 2011, *International Trade Statistics*, *2010*, www.wto.org/english/res_e/statis_e/its2011_e/its11_toc_e.htm

Wu, Mark, 2012, "Anti-dumping in Asia's Emerging Giants", *Harvard Law Journal*, volume 53, number 1.