ECN230 SRP session 17. Readings on International Labor and Capital

International Labor Mobility

Labour migration is an afterthought, in both practice and theory. In traditional trade models wages converge across trading partners with similar technologies even without migration, a phenomenon referred to as "factor-price equalisation". Sadly, factor-price equalisation is a real-world rarity. Nevertheless, the economic case for migration is similar to that for free trade. Trade allows workers to specialise in activities in which they are relatively more productive, raising output. Trade creates a larger market, spreading the fixed costs of innovation more thinly and encouraging the development of new goods and ideas [1].

However, labour is globalisation's missing link. The flow of workers across borders is heavily impeded, leaving the global market for labour far more distorted than those for capital or commodities. The world price of capital may be set in the US, and that of oil set in Saudi Arabia, but there is no such thing as a world price of labour [2]. Wages can differ by a factor of ten or more in the poor world and the rich, even for something as menial as clearing tables, dwarfing the gap between the prices of traded goods from different parts of the world [2][3]. The same worker can earn 15 times as much by moving from say, Yemen to the US. The wage gap between rich and poor countries is far wider than it was a century ago, during the great age of migration from Europe to the US [4].

Thus, the potential gains from liberalising migration dwarf those from removing barriers to world trade, but those gains can be made only at great political cost. The case for attracting highly skilled workers is becoming conventional wisdom. Governments realise that the market for top talent is global and competitive. Canada and Australia took the lead in redesigning migration policies not just to admit, but to actively recruit highly skilled immigrants [3]. The trend towards migration of highly skilled workers also reflects the interplay of regulation and economics. As multinational companies expand, they develop their own internal markets for skilled workers. Trade creates opportunities for skilled migrants, both directly (in trade-related occupations) or indirectly (by changing attitudes towards "abroad") [5].

The growth of the multinational enterprise is another development affecting migration. Big companies want the freedom to shift employees from country to country, and to use citizens of one country to alleviate skills shortages in another. This is not so much a quantitative change (which governments would resist) but a qualitative one—namely, greater migration of workers-plus-skills, or "human capital". If a truly global market for labour ever appears, it is likely to be for highly skilled workers only [5].

The thornier issue is what to do about the unskilled, where the difference in earnings is greatest but yet where the global economic gains are largest [3]. In 2000, for instance, a worker in Mexico earned a wage 40% that of a Mexican-born worker of similar education and experience working in the US. Most of this wage gap result from productivity differences, stemming from disparities in the quality of infrastructure, technology, institutions and skills [1]. "The problem," says Victor Trevino, Mexico's former deputy consul in the US border town of El Paso, "is [in 2002] the US minimum wage is $5.15 an hour, where as in Mexico, people earn $5 a day. A gallon of milk costs $3 in the US; in Juarez across the border it costs 10-15 cents more" [6].

Immigrants tend to cluster at the upper and lower ends of the skill spectrum. Immigrants either have university degrees or no high-school education. A longitudinal survey of recent immigrants to the US by James Smith of Rand, a Californian think tank, makes the point. Among immigrants to the US, the proportion with a postgraduate education, at 21% of the total, is almost three times as high as in the native population; equally, the proportion with less than nine years of schooling, at 20%, is more than three times as high as that of the native-born (and probably higher still among illegal Mexican immigrants). The problem is that the unskilled account for a growing proportion of the US's foreign-born, which is probably also the case in Europe [3].

Millions could move from the poor to the rich world without bidding down wages in the rich country relative to the developing one. A rapid burst of immigration might temporarily reduce wages, but if the pace of movement is slow enough to allow investment to adjust, borders could open without any wage dislocation in either origin or destination economies. However, migrants would benefit. John Kennan[1] of the University of Wisconsin-Madison estimated that opening borders could raise the average wage of workers from developing countries by $10,100 a year, or more than 100%, thanks to the large rise in the incomes of those opting to migrate [1].

Relaxing the movement of labour even a little could generate large efficiency gains. Lant Pritchett of Harvard University[2] estimated that just a 3% rise in the rich-world labour force through migration would yield $200 billion a year, an annual benefit bigger than that from eliminating remaining trade barriers. With such numbers, he and other economists wonder why so much energy is spent freeing trade and capital, and so little expended freeing labour [7].

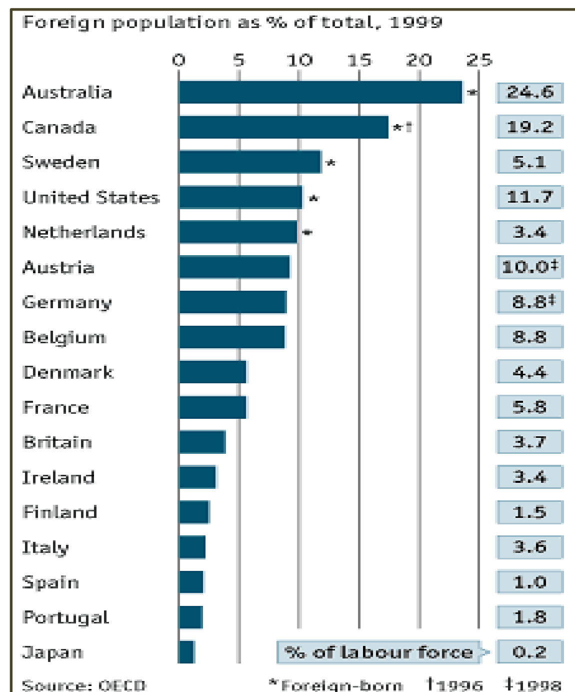
Those bigger incomes would swell global GDP. Sharun Mukand (2012)[3] of the University of Warwick calculated the effect of movement by half of the developing world's workforce to the rich world. Such a vast migration could never happen in practice, of course, but as a thought exercise it is instructive. If migration closed a quarter of the migrants' productivity gap with the rich world, their average income would rise by $7,000. That would be enough to raise global output by 30%, or about $21 trillion. Other studies find even bigger effects. Paul Klein (2007) at Simon Fraser University, and Gustavo Ventura, at Arizona State University, reckon that full labour mobility could raise global output by up to 122%.[4] Such gains swamp the benefits of eliminating remaining barriers to trade, which amount to just 1.8-2.8% of GDP, reckons Mr Mukand [1].

The incorporation of women into the rich-world workforce provides an analogy: this expanded the labour supply and the scope for specialisation without displacing the "native" male workforce [1]. Rich-world residents nonetheless worry that migrants will gain at their expense. Francesco D'Amuri of the Italian central bank and Giovanni Peri of the University of California, Davis found that immigration in western Europe encouraged natives to take more complex work. Such "job upgrades" led to a 0.6% increase in native wages for each doubling in immigrant labour-force share. Yet in a survey of research on the topic

[1] Kennan, J., "Open borders", NBER Working Paper no. 18307, Aug 2012.
[2] Pritchett, L., "Let their people come: breaking the gridlock on global labor mobility", 2006.
[3] Mukrand, S., "International migration, politics and culture: the case for labour mobility", Chatham House Policy Paper, Oct 2012.
[4] Klein, P and G. Ventura, "TRP differences and the aggregate effects of labor mobility in the long run", *Berkeley Electronic J. of Macroeconomics*, 2007.

Francine Blau and Lawrence Kahn of Cornell University[5] found that few studies turn up a negative impact on native wages. Where immigration disadvantages subsets of the population, Gordon Hanson of the University of California[6], San Diego reckons that charging an entry fee to migrants or their employers could help pay for training or benefits for those who lose out [1].

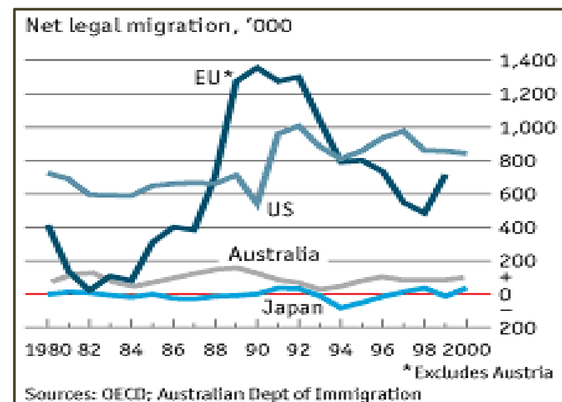
Official definitions of "migrant" vary, and counting migrants on any definition is difficult. However, a study by Peter Stalker, "The Work of Strangers", published by the International Labour Organisation, estimated that roughly 80m people lived in countries in which they were not born. Another 20m lived in foreign lands as refugees (from natural disasters or political oppression). Each year sees another 1,5m or so emigrate permanently, and perhaps another 1m seek temporary asylum abroad. By historical standards, these numbers are large in absolute terms, but small in relation to the larger populations of the receiving countries (see chart, foreign population as % of total) [3][5].



The US remains the world's biggest recipient, receiving about as many permanent immigrants as all other countries combined: 720,000 in 1995, down from a peak of nearly 2m in 1991. Germany, easily the main receiving country in Europe, had roughly 800,000 immigrants in both 1994 and 1995, but its definition of "immigrant" is much broader than the US' and includes many temporary workers [5].

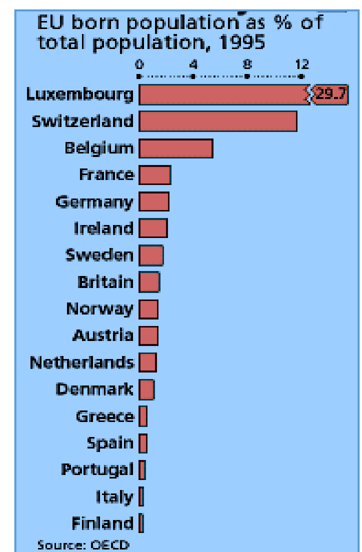
In the late 1990s, immigration into Europe and Japan was new, or felt new, and the societies older and less receptive to change. Even so, European governments accepted that there was an economic case for immigration. This striking change was apparent even in Germany, which received more foreigners, relative to the size of its population, than has the US. In 2001, a commission headed by a leading politician, Rita Süssmuth, began its report with the revolutionary words: "Germany needs immigrants." Legislation based on that report (and hotly attacked by the opposition) streamlined entry procedures [5].

Technology aids migration. Two underlying trends making economic migration easier are the reduction in the cost of travel and cheaper communications. The fall in transport costs makes it cheaper to risk a trip, and cheap international telephony allows a migrant to tip off relatives back home that there are jobs available. Despite the tightening of rules in many rich countries during the 1970s, immigration did increase somewhat during the 1980s and early 1990s. New restrictions slowed the expansion in the late 1990s (see chart, legal migration) [3][5].



Most migration takes place within countries, not between them, part of the great procession of people from country to town and from agriculture to industry. International migrants, defined as people who have lived outside their homeland for a year or more, account for under 3% of the world's population [8].

EU citizens are free to work anywhere within the EU. This presumably promoted the flow of economic migrants within the EU, but it is difficult to be sure of its effect (see chart, EU born population). The proportion of EU citizens in each member-country's foreign-born population varies widely—from 25% in the Netherlands to 89% in Luxembourg—and any tendency for this share to rise in the mid-1990s was overshadowed by the influx of new immigrants from Central and Eastern Europe [5].



Whether immigrants are bad for an economy depends on who you are

There are three big worries about the economic and fiscal consequences of immigration: (1) migrants steal (compete for) jobs which would otherwise have gone to nationals; (2) the increased pool of labour and competition for jobs lowers wages and worsens prospects for indigenous workers; and (3) they are benefit-scroungers, generating a net burden on taxpayers. Is the fear justified? [5][9]

The first is a myth. The accusation that migrants steal jobs is a version of the "lump of labour" fallacy—that there is only so much work to go around. In a flexible economy, the labour market adjusts to an increase in the supply of workers and more jobs are generated [9]. Immigrants are consumers as well as producers, so they create jobs as well as take them [5].

The effect on jobs depends partly on whether immigrants are complements or substitutes for native labour. Are the immigrants doing jobs that natives might have done, or would those jobs simply not exist if immigrants were not there? The work migrants do need not be at the expense of native workers. Immigrants often hold jobs (as domestic servants, cleaners or waiters, for instance) that natives are

[5] Blau, F. and L. Kahn, "Immigration and the distribution of incomes", NBER working paper no. 18515, Nov 2012.

[6] Hanson, G., "The economics and policy of illegal immigration in the US", Migration Policy Institute, 2009.

unwilling to accept at any feasible wage. Advertise for a cleaner in London at twice the minimum hourly wage, and there will be no responses from local school drop-outs or Liverpool's unemployed. More probable is the applicants will be from Ukraine, Colombia or Poland [6].

Immigrants can help to keep an industry viable (raising the return on capital) that might disappear otherwise. This preserves jobs. This was the conclusion of a study of the Los Angeles garment industry in the 1970s and 1980s. Thus, employers often favour more flexible policies on immigration. When immigrants working for low wages do put downward pressure on natives' wages, they may raise the (real) wages and living standards of natives by keeping prices lower than they otherwise would be, strengthening demand and consumer spending to create jobs [5][6].

Seasonal agricultural labour

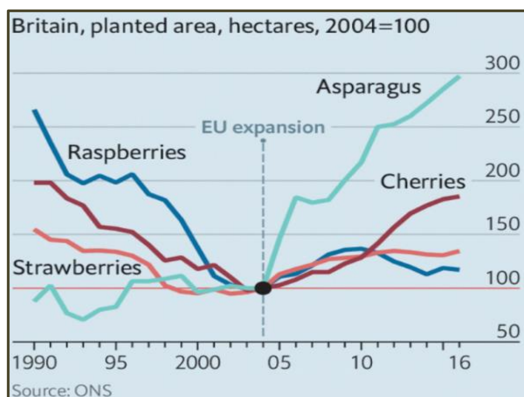
Hostility to migrants is on the rise, but farm hands keep coming. Locals once picked Poland's fruit and vegetables. That changed in 2004, when the country joined the EU, and Poles were permitted to work in the UK, Ireland and Sweden. Over the next seven years the rest of the EU opened its doors. Unemployment in Poland fell sharply and wages rose by 30% in real terms in 2004-17, according to the OECD. Field work seems less appealing to Poles these days.

Migrants from the east replaced the locals. In 2018, around 500,000 seasonal workers from outside the EU worked on Polish arms – up from fewer than 200,000 in 2014. They are the largest group of legal migrant farm workers in any rich country.

In 2013, the US government allowed farmers to fill 99,000 jobs with temporary foreign workers, most of whom came from Mexico. In 2018, 240,000 were on track to be let in. Even politicians who rail against immigration tend to make an exception for seasonal farm workers. Britain's government interprets the vote to leave the EU as a vote against open borders, but even those in favour of Brexit see fit to bring in seasonal farm workers from outside the EU.

Perhaps it is because farmers are good at lobbying politicians. Perhaps it is migrant farm workers go home in winter. Perhaps it is because many workers live in trailers on farms, where they are invisible to the general population. Whatever the reason, seasonal agricultural labour has become a big exception to the rule of ever-tightening borders and ever-harsher anti-migrant rhetoric in rich countries. And this global flow of workers has changed farming.

In the UK, asparagus and soft fruit are now planted more widely than in 2004, when the country opened its doors to Polish and other eastern European workers.



When the schemes are well run, seasonal migration transforms the workers' lives too. John Gibson of the University of Waikato and David McKenzie of the World Bank evaluated New Zealand's programme in 2014 and found huge effects. The average worker from Tonga or Vanuatu earned NZ$12,000 (about $7,900) in a season, of which NZ$5,000 was sent home. After two years, households with a migrant member had higher incomes and savings than households without one.

To prevent migrant workers from undercutting natives, New Zealand's farmers must show they have tried to hire local people, and must pay migrants more than the prevailing wage. These measures are probably pointless. In most rich countries, locals will not do repetitive farm jobs for the wages on offer. Since 1999, Germany has tried several times to restrict the number of foreign migrant workers to lure unemployed locals into the fields. These efforts have had little effect, partly because unemployment has been low in the areas where labour-intensive crops are grown.

If migrant farm workers impose a cost, it is probably in innovation forgone. Some farmers who employ lots of migrant labourers are keen on labour-saving machinery, but they are unusual. In general, a plentiful supply of willing workers appears to deter growers from investing in technology. That was clear in the US were the labour tap was turned off.

In the early 1960s President Kennedy abolished the *bracero* programme, which allowed almost half a million Mexicans to work on US farms. The aim was to boost employment and wages for native workers. That did not happen, according to research by Michael Clemens, Ethan Lewis and Hannah Postel. Farm wages rose after the Mexicans were sent back, but they went up at least as much in areas where there had been no *braceros*. Instead of hiring more Americans, farmers invested in things like tomato-picking machines and stopped growing crops that could not be mechanised.

"Seasonal agricultural labour: Here today, gone tomorrow", *Economist*, 20 Oct 2018, p. 55-6.

Immigrants also cluster in areas where the job market is tight. In Canada, half of them go to Toronto; in the UK, a higher proportion settles in London. The clustering of migrants could help to stop wages rising even further, allowing the entire economy to run at higher speed than might otherwise be possible. George Borjas of Harvard University points out that immigrants incur lower costs than natives when choosing to move to a particular place because they have already decided to uproot. Their gains are greatest moving to places where their skills are in greatest demand. Not surprisingly, he finds, that new immigrants cluster disproportionately in high-wage US states, where labour is scarcest. The finding has important consequences for Europe, with its lower geographical mobility and more inflexible job markets because immigrants are a more flexible workforce [6].

The relationship between immigration and wages is not clear-cut, even in theory because wages depend on the supply of capital as well as labour. Alone, an influx of immigrants raises the supply of workers and hence reduces wages. With cheaper labour, the potential return to employers of building new factories or opening new valet-parking companies increases. In so doing, they create extra demand for workers. Once capital fully adjusts, the final impact on overall wages should be a wash, as long as the immigrants have not changed the productivity of the workforce as a whole [10].

Empirical evidence[7] is as inconclusive as the theory. Professor Borjas teased out the effect of immigration from national wage statistics by dividing people into categories, according to education and work experience. He assumes that workers of different types are not easily substitutable for each other, but that immigrants and natives within each category are. By comparing wage trends in categories with lots of immigrants against those in groups with only a few, he derives an estimate of immigration's effect. He concludes that, between 1980 and 2000, immigration caused average wages to be some 3% lower than they would otherwise have been. Wages for high-school drop-outs fell by around 8% [10].

Immigration's critics therefore count Mr Borjas as an ally. But hold on. These figures take no account of the offsetting impact of extra investment. If the capital stock is assumed to adjust, Mr Borjas reports, overall wages are unaffected and the loss of wages for high-school drop-outs is cut to below 5%. Gianmarco Ottaviano, of the University of Bologna, and Giovanni Peri, of the University of California, Davis, argue that Mr Borjas's findings should be adjusted further.[8] Even within the same skill category, immigrants and natives need not be perfect substitutes, pointing out that the two groups tend to end up in different jobs. Mexicans do gardening, housework and construction, while low-skilled natives dominate other occupations, e.g. logging. Taking this into account, the authors claim that during 1980-2000 immigration pushed down wages of US high-school drop-outs by at most 0.4% [10].

Hence, in theory, then, the net effect of immigration on native wages is uncertain. Unfortunately, most of the empirical research on whether immigrants make natives worse off in practice is also inconclusive—except that the effect, one way or the other, seems small. Most of this research has been done in the US: if there were any marked influence on wages, that is where you would expect to find it, given the scale of immigration [and the relatively flexible labour market] and the tendency of the newcomers to concentrate in certain areas. Most studies find that the impact, if any, is very slight [5].

While it might hurt the affected workers, everybody else benefits. Consumers gain when they can buy services—like house-painting or takeaway meals—more cheaply. Domestic shareholders and employers benefit because returns on capital rise when wages are held down [9].

Another method is to compare wage and employment trends in cities with many immigrants, such as Los Angeles, with those in places with only a few, such as Indianapolis. If immigration had a big effect on relative pay, one would expect this to be reflected in differences between cities' wage trends. David Card, of the University of California, Berkeley,[9] has research suggesting that although there are big differences between cities' proportions of immigrants, it had no significant effect on unskilled workers' pay [10].

Not all are convinced by Mr Card's technique. Critics argue that the geographical distribution of immigrants is not random. Perhaps low-skilled natives leave cities with lots of immigrants rather than compete for jobs with them, so that immigration indirectly pushes up the supply of low-skilled workers elsewhere (pushing down their wages). Mr Card tested whether immigration displaced low-skilled natives and found scant evidence that it does [10].

For instance, a study of the impact of the sudden and notorious inflow of refugees to Miami from the Cuban port of Mariel in 1980 showed that 125,000 people had arrived, increasing Miami's labour force by 7%. Yet the study concluded that wages and employment among the city's natives, including the unskilled, were virtually unaffected. Another study examined the effect of immigration on wages and employment of those at the bottom of the jobs ladder—unskilled blacks and Hispanics. It found that a doubling of the rate of immigration had no detectable effect on natives (although the wages of the previous group of immigrants, presumably those in closest competition with the newcomers, saw their relative wages fall by 2.5%) [5].

Christian Dustmann at University College London found no evidence that migration in the 1980s and 1990s took jobs away from the existing UK population, nor materially affected wages of UK workers [9]. If anything wages rose. This conclusion, based on a small sample, runs counter to the general presumption, backed by empirical findings in the US, that immigration lowers wages (though the effect is quite modest). An authoritative study by the National Research Council (NRC) found that immigration in the 1980s cut the wages of competing workers by 1-2%. Those most affected were previous immigrants, because they tended to be in the low-wage jobs for which new immigrants were close substitutes who competed directly in the job market [9][6].

In addition, immigration seemed to account for almost half of the fall in wages of high-school drop-outs in the 1980s and 1990s. This is a small group, amounting to less than 10% of the US work force in 2000. US trade unions no longer called for a ban on immigration, realising that was a lost cause: instead, they prefer legalising undocumented workers, who are much more likely to undercut their less-skilled members than are unionised legal immigrants [6].

Research on the effects on wages, and especially on wage inequality using more detailed statistics and more sophisticated methods, show that immigrants' wages take longer to rise to the level of natives' wages than had been supposed. This implies a more persistent downward pressure on the host economy's labour market [5].

Typically, studies find that immigration depress unskilled natives' wages to a small extent, but even new results (which do not go unchallenged) need to be kept in perspective. Nearly all economists would agree that the effects of immigration are insignificant in relation to other influences. William Cline (1997) reviewed the literature on globalisation and wages in *Trade and Income Distribution*. By Mr Cline's estimates, which tend toward the pessimistic end of the range, immigration would by itself have accounted for a fall of 2% points in the ratio of unskilled to skilled wages in the US between 1973 and 1993. Technological change, reducing the demand for unskilled labour, and a category called "unidentified factors" pushing the same way each account for a much greater fall of nearly 30 percentage points. Nonetheless he found that of all the forces acting to lower unskilled wages relative to skilled, immigration was the weakest, suggesting that fears over immigration are exaggerated [5].

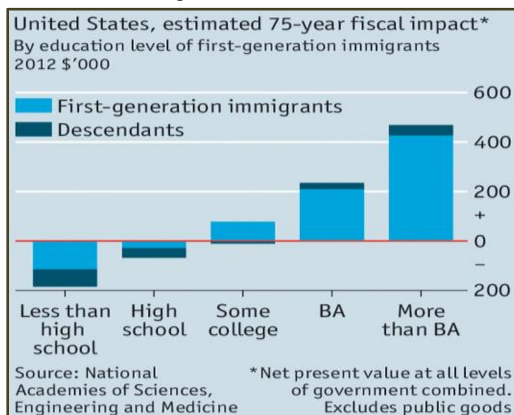
Finally, on the fiscal question of immigrants, the answer revolves around tax receipts and welfare benefits. That migrants benefit-scrounge is another myth. The vast majority come to work. At a given moment, migrants are generally net contributors to the public purse: they are

[7] Borjas, G.J., "The Labor Demand Curve Is Downward Sloping: Reexamining the Impact of Immigration on the Labor Market", *Quarterly Journal of Economics,* 2003.
Borjas, G.J. and L. Katz, "The Evolution of the Mexican-Born Workforce in the US". NBER Working Paper 11281, Apr. 2005

[8] Ottaviano, G. and G. Peri, "Rethinking the Gains from Immigration: Theory and Evidence from the US", Jan 2006.
[9] Card, D., "Is the New Immigration Really So Bad?", NBER Working Paper no. 11547, Aug 2005.

disproportionately of working age, and the receiving country has not had to pay for their education [9][6].

As with so many other aspects of immigration, skill levels affect costs. Migrants from poor countries are much more likely to claim benefits than migrants from rich ones; unskilled migrants are more likely than natives or skilled migrants to lose their jobs in a recession [6]. Between 2011 and 2015, nearly half of the immigrants who arrived in the US had college degrees. How educated immigrants are matters because, although the economic gains for low-skilled migrants of moving to the US are great, the benefits to the US economy are not clear (see chart, estimated fiscal impact). Highly skilled immigrants, by contrast, offer a lot to their adopted country. Education seems to matter much more than where people come from. Two-thirds of Nigerian immigrants have college degrees; consequently Nigerian-Americans have household incomes well above the national average [11].



Sari Pekkala Kerr of Wellesley College and William Kerr of Harvard University[10] found that immigrants can use social services more intensely than natives. Yet it is hard to argue that immigrants are a systematic drain on the public purse. Some newcomers contribute more in tax than they receive in services, offsetting much of the drag from those who are net recipients of public benefits [4].

Some immigrants contribute more than others. Those who come as students or relatives or asylum-seekers (as most do) may not even be allowed to work. Immigrants tend to have larger families, to be poorer and to be more often unemployed than the native-born. A report for Fondazione Rodolfo Debenedetti found that in some EU countries (e.g., Denmark and the Netherlands) welfare benefits were so generous that they could have distorted the inflow of immigrants and encouraged them to draw welfare [6].

Countries treat different classes of immigrants in different ways for welfare-benefit purposes. Asylum-seekers in the US cannot claim welfare during the six months in which their claim is normally determined. In Germany, by contrast, asylum-seekers can claim welfare benefits while their asylum claim is processed. That can take years, during which time they may not be allowed to work if they have been sent to live in an area of high unemployment [6].

The UK's Home Office estimated that the foreign-born population paid about 10% more in taxes than it received in expenditure. UK unemployment rates among immigrants—except for Chinese or Indians—were higher than among native-born persons, but this probably reflected difficulties in finding a job, such as poor language skills. Among those in work, immigrants were more likely to be self-employed than natives. Nor were they a net burden on taxpayers. The study calculated that in 1999 existing migrants contributed £2.5 billion ($4 bn) more in taxes than they received in benefits and services, e.g., education and health [9][6].

The US NRC report in 1997, by contrast, found that the picture changed when one looked across time instead of taking a snapshot in time. That is, immigration into the US initially results in a net cost to the taxpayer partly because of the expense of educating immigrants' children. In the longer term, that immigration generated a substantial budgetary gain [9]. The NRC found that first generation migrants imposed an average net fiscal cost of $3,000 at present discounted value; but the second generation yielded a $80,000 fiscal gain [6].

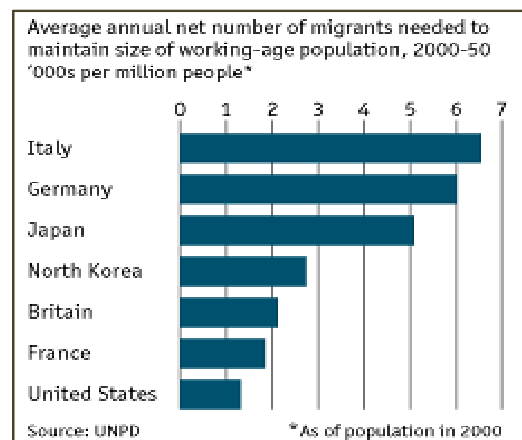
Even if immigrants pay more tax than they get back in public spending, they can create imbalances. The tax they pay might go to the national government whereas spending on housing or education is incurred by a city or state. The NRC study noted that the fiscal gain from immigrants was spread fairly evenly across the US, but that the burden on states varied, depending on the type of immigrants they attracted. In 1989-90, in New Jersey, where half of new immigrants are from Europe or Canada, native households paid a net $232 a year more because of immigration; in California, where more than half of all immigrants come from Latin America, they paid $1,178 a year more [6].

Demographic factors

Immigration can bring a variety of benefits to the receiving country, but an important one for ageing rich countries is demographic. The average age of the advanced economies' populations is rising, but because migrants tend to be young they can lower it. If it improves the ratio of active workers to retired people, taxes can be lower [5].

In 2000, the UN Population Division tried to establish the levels of immigration that are needed to prevent such a population decline, and what might be required to maintain the existing ratio of workers to those needing support. Its findings produced international uproar. Not only did the levels of migration needed to stabilise the working-age population turn out to be large, but the flows needed to stabilise the present support ratio proved to be immense, at least in Europe [6].

The EU requires an annual inflow of nearly 3m migrants a year, or roughly twice the present legal and illegal flow from outside the EU, to prevent the future support ratio (of those aged 15-64 to those aged 65 and over) dropping from about four at present to below three (see chart, annual number of migrants). In the US, where the support level is currently above five, it would take just under 1m immigrants a year (or about two-thirds the present inflow)

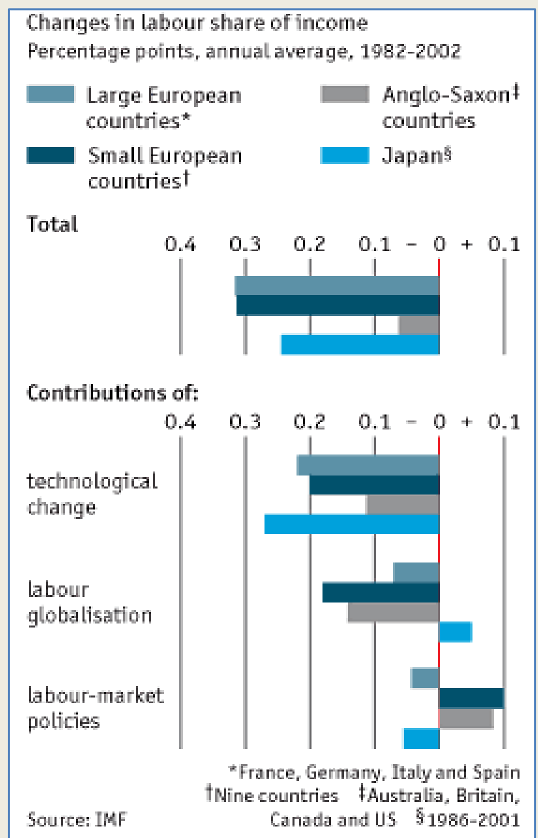


[10] Kerr, SP & W Kerr, "Economic impacts of immigration: a survey", Finnish Economic Papers, Spring 2011.

Has globalisation hurt workers in rich economies? In its semi-annual *World Economic Outlook*, the IMF (2007) examined how trade, technology and immigration stitched the world's labour markets together at an astonishing rate, leaving rich-country workers unsure of where they stand. Weighting each country's workforce by its ratio of exports to GDP, the IMF estimated that global labour supply, in effect, rose fourfold since 1980 as China, India and once-communist countries opened. Most of the extra workers got no further than secondary school (although the relative supply of graduates went up by 50%). With this surge of competition, you might expect labour's share of the pie to shrink.

In some cases, the competition is direct: workers cross borders to take jobs in rich countries. Immigrants' share of the workforce has risen a lot in some European countries (notably Britain, Germany and Italy) and in the US, where it is close to 15%. The more important channel, though, is trade: largely because of China, developing countries' share of rich countries' manufacturing imports has doubled since the early 1990s. "Offshoring"—shifting production, especially of intermediate goods and some services, abroad—has been on the rise, although the IMF noted that it grew more slowly than total trade.

Globalisation is not the only possible reason why labour's share has shrunk. New technologies have probably taken a few degrees off the workers' slice too. Several countries have also fiddled with labour-market regulation, pushing the wage share one way or the other. The IMF made perhaps the most valiant attempt so far to weigh these competing explanations. It is impossible to disentangle technology and globalisation entirely: advances in telecommunications, for example, are what enable Indian software engineers and call-centre workers to serve customers in the US and Europe. That caveat noted, the fund's results, for 18 countries split into four groups, are shown in the chart.



It finds that both technological change and the globalisation of labour markets have depressed labour's share in all four groups. For the 18 countries as a whole, reckons the IMF, technology has mattered more. However, there are marked differences among them.

Technological change had the biggest effect in Europe and Japan. In Anglo-Saxon countries (US, Australia, the UK and Canada) it was much smaller. In the US, technology seems to have raised labour's share. The fund thinks this may reflect the US's lead in using information technology. When a country first exploits IT, labour's share of the national cake goes down. As time goes by, though, workers adjust and learn. Once their skills match the technology better, their productivity and their share go up.

The effects of labour globalisation were most evident in Anglo-Saxon and small European countries. However, it has touched different places in different ways. In Europe the effects of offshoring and immigration have been more marked than in the Anglo-Saxon world; in Japan they have scarcely registered. The labour-intensive goods that rich countries import have fallen in price, pressing down on the workers' share. But this has been broadly offset by price falls in the capital-intensive goods they export. In Japan these prices fell by enough to yield an overall net gain in the labour share.

In Anglo-Saxon and smaller European countries, labour-market policies have partially offset the depressing effects of technology and globalisation on labour's share, mainly by shaving the tax wedge between what workers take home and what they cost to employ. In large European countries, increases in the ratio of unemployment benefits to wages have hurt labour's prospects, probably against policymakers' intentions.

Not all workers are equal. According to the IMF, globalisation has weighed more heavily on skill-intensive than on unskilled industries. This may be because of offshoring, which has probably intruded on the first lot of industries more than the second. But other factors have offset globalisation's effects. Indeed, the labour share in skilled industries has gone up overall, because of a shift of jobs from unskilled to skilled sectors.

Although globalisation has reduced labour's share of the pie, it has made the whole pie bigger, raising output and productivity and lowering the prices of traded goods and services. So are workers getting smaller shares but larger slices? Yes, concludes the fund: trade helps by making imports cheaper. Across 18 countries studied, changes in trade prices boosted average real pay by 0.24% a year. Labour is therefore getting some of the extra growth due to globalisation. However, that is unlikely to silence critics. Many people believe that most workers have not gained much from globalisation at all. The perception remains, especially in the United States, that people who already have plenty have enjoyed the bulk of the extra prosperity. To reach a judgment on that, you need to dissect neither the labour share nor average pay but the median wage—which the IMF's study does not do. Stand by for further argument.

"Economics focus: Smaller shares, bigger slices", *Economist*, 4 Apr 2007

to stabilise at three. Moreover, raising the retirement age to 75 would also be necessary [6].

For Europe, these calculations offer an uncomfortable reminder that its population may have peaked around 1997 and may now be declining. The US population, by contrast, will grow over the next half-century, perhaps by 40%—and four-fifths of that growth will be due to today's immigrants and their descendants. Numbers count, and Europe's resistance to immigration may count against it [6].

Certainly, ageing countries attract immigrants. Demand from older people for labour-intensive services drive up the wages of the unskilled. The choice for Europe's old may be between being cared for by legal migrants or illegal ones. However, immigration is not a solution to the strains that ageing bring. For one thing, by 2050 fertility rates will have dropped below replacement levels even in many traditional emigration countries, including Mexico, Egypt, Brazil, the Philippines and Indonesia. If young people continue to leave these countries in large numbers, supporting the elderly there will one day become an even bigger problem than in the rich world [6].

Ageing European countries face an unsustainable gap between future tax revenues and commitments to spend and service government debt. In Germany, the prospective gap is about 6% of GDP per year. If migrants make a net contribution to taxes over their lives, they reduce that debt. Even if they do not, argues DIW's Mr Brücker, they increase the number of future taxpayers. The same debt spread over more payers reduces the individual burden of future taxpayers. Migration cannot prevent ageing, but it significantly reduces its fiscal consequences [6].

How emigration affects those left behind

Some worry that emigration by talented people hurts the developing economies they leave behind. Migration creates incentives for people in emerging markets to invest in education, including among those who opt to stay put. Immigration generates remittance flows back home; and informal links facilitate trade and investment [4].

The losses are obvious. Those who leave are often the best-educated and most enterprising. Remzi Lani, director of Albania's Media Institute, bemoans the brain drain that has stripped his country. “All three AIDS experts have gone to Canada,” he says. “The best brains go and don't return. There are 8,000 Albanians studying in Italian universities—more than in Tirana University. How many will return? Not more than 5%” [12].

Not only does emigration deplete a country's intellectual capital and energy, it undermines the tax base too. A study of the fiscal impact of India's brain drain to the US, by Mihir Desai of Harvard University and two colleagues, found that the very best people were most likely to leave. There were 1m Indians living in the US in 2001, and more than three-quarters of those of working age had a bachelor's degree or better. The earnings in the US of a group that adds up to 0.1% of India's population are equivalent to an astonishing 10% of India's national income. The net fiscal cost to India of losing these prime taxpayers, say the authors, was 0.24-0.58% of GDP in 2002. If poor countries had a glut of overeducated, underemployed workers, then the loss of human capital might not matter much [12].

As rich countries compete for skilled immigrants, development experts worry about the implications. The UK's Department for International Development with the International Labour Office in Geneva, produced a report that found that some developing countries lost around 30% of their highly educated workforce. However, it argued, international migration generally benefits developing countries, as long as host countries take steps to reduce harm—by, for instance, encouraging migrants to return. And some developing countries are actually keen to have more skilled emigration, argues Allan Findlay of Dundee University, one of the authors of the report. Indeed, India, which produces more highly qualified people than it can employ, is campaigning for freer migration rules under the WTO General Agreement on Trade in Services [12].

How does migration benefit the sending countries? The most obvious way is through remittances. In Albania, receipts from remittances amount to 75% of its exports of goods and services (with the unwelcome result that its currency is one of Europe's strongest). IMF figures suggest that developing countries receive more than $60 billion a year in remittances, $6 billion more than net official aid from OECD countries (see chart, remittances) [12].

The families receiving remittances often spend them on housing, durable goods and health care. An economy gains if such goods and services are locally produced: on one estimate, each dollar sent home generates three to four dollars of economic growth. Sometimes immigrants from a particular village team up to pay for a septic tank or school. To channel remittances into government-approved development projects, countries try to lure the money into special bonds. Some money flowing back to Central America has gone to rebuild countries shattered by civil war or natural disasters [12].

Workers' remittances and net foreign aid, $m
selected countries

	1996		2000	
	Remittances	Aid	Remittances	Aid
Albania	500	228	531	319
Bangladesh	1,345	1,236	1,958	1,171
Brazil	1,866	288	1,113	322
Colombia	635	189	1,228	187
Croatia	603	133	531	66
Dominican Rep	914	100	1,689	62
India	8,453	1,897	9,034	1,487
Mexico	4,224	287	6,573	-54
Morocco	2,165	650	2,161	419
Sudan	220	220	638	225

Sources: IMF; OECD

Remittances tend to decline over time, but there are other, more subtle ways that emigrants can help those back home. Their departure changes relative wages. If the proportion of skilled people declines, the pay of those who remain can rise. Ioan Mihailescu, rector of Bucharest University and co-author of a UNESCO study on the impact of the brain drain on the academic labour market in south-east Europe, points out that in 1995-97 half his newly graduated physics class left the country, mainly for the US, whereas in 2001 fewer than 10% of physics graduates went. He thinks this is because jobs for the highly skilled have expanded as the economy prospered, and pay rates in Romanian companies for people with scientific and technological skills doubled or trebled in the 2000s [12].

Managing the market by legalising and regulating migration

Although many more immigrants arrive legally than hidden in trucks or boats, voters fret that governments have lost control of who enters their country. The result has been measures to tighten and enforce immigration rules to no avail. Immigration and immigrants are here to stay. Powerful economic forces are at work. It is impossible to separate the globalisation of trade and capital from the global movement of people [3].

How can governments develop immigration policies that reap the potential gains without incurring too many political costs? The challenge is to manage the market, rather than to shut it down. Voters may not like immigration any more than other aspects of globalisation, but they are more likely to tolerate it if policy appears to be orderly rather than chaotic. Legal immigration is easier to regulate than illegal, and more likely to bring long-term benefits. Illegal immigrates are condemned to a shadow world of lies, fear and powerlessness. No liberal democracy should tolerate that [13].

Winning consensus for an orderly policy may mean trying to pick the migrants most likely to bring economic and social gains. For the host country, this means choosing the skilled. It may also mean choosing those whose education and culture have prepared them for the societies in which they will live [13].

Policy should be guided by three main principles. First, it should be multilateral, or at least bilateral. Immigration policies drawn up by rich countries without the active co-operation of poor countries are unlikely to work. Second, it should apply economic instruments. Whereas trade restrictions have shifted from quotas and bans to more transparent tariffs, no such change has taken place in immigration policy. Third, it should aim for the maximum freedom of movement, but encourage temporary more than permanent movement [13].

Migration, like other aspects of globalisation, is more manageable when countries work together. Some argue that migration policy should resemble trade policy in other respects too: it should have a central rule-setting body, like the World Trade Organisation, and should be made on a most-favoured-nation basis, so that countries do not offer one partner concessions they are not prepared to extend to all. This would be hard for voters to accept. The experience of the EU shows that countries find it near impossible to arrive at common immigration rules, even when free movement of labour among their own citizens makes such rules essential [13].

Countries could make reciprocal concessions, such as removing all controls on the movement of labour among countries with similar levels of income per head. The fastest growth in foreign trade has been among countries with similar levels of income; the same may well turn out to be true of the movement of labour, although not of permanent migration. Certainly, it makes no economic or social sense for Canadians to stop Australians or New Zealanders from looking for jobs, or for Europeans or Japanese to put obstacles in the way of Americans. Nor does it make sense for developing countries to keep out each other's would-be workers. By removing travel and work restrictions on each other's citizens, developing countries would be enriched, not impoverished [13].

Wealthy host countries need to talk to their poorer neighbours whose workers try to cross their borders. Joint solutions have a better chance of success than unilateral ones. For example, one possibility that Mexico has discussed with the United States is that of imposing a fee on temporary workers: "Pay, and go legally," suggests Gustavo Mohar, former negotiator for US-Mexico labour relations for the Mexican Ministry of Foreign Affairs, pointing out that the services of a trafficker can cost up to $1,000. Mr Massey's book suggests a $300 fee per visa for a temporary worker. Financial incentives are rarely considered as part of migration policy. Yet the sums that people pay to travel illegally, and the fact that most benefits of migration accrue to the individual, strongly suggest that such devices should have a role [13].

Convincing voters of the benefits of migration

The rich world is gripped by a debate about newcomers from poor countries. In theory there are two completely separate categories: refugees from war or persecution, who have a right to a safe haven, and economic migrants, who do not. For voters, the two issues blur into one: they care about the number of foreigners arriving. Are there policies that would allow more long-term migration with the consent of native-born voters?

Take three rich places (the US, Sweden and the United Arab Emirates) as cases upon which to draw lessons from different policies and experiences. In the US, 13% of the population is foreign-born. In Sweden it is 18.5%. In both this is roughly three times as high as in 1970. In the UAE, nearly 90% of residents are foreigners.

Sweden attracts few highly skilled migrants from other rich countries. Half of its foreign-born population comes from outside Europe. Many locals fear that culturally distant newcomers do not adopt Sweden's liberal values and strain its generous welfare state. In 2014, the Swedish government would have prevented a skilled asylum seeker from contributing to society. Taxpayers gave him ample food and shelter, but he was barred from paying his way. And not working makes it difficult for an asylum seeker to integrate as well.

Emiratis have no such fears. It is virtually impossible for a foreign to become a citizen. Foreigners cannot drain their welfare state because they have no access to it. They come to work, and are thrown out if they stop working. Migrants in the UAE obviously pay their way. They fill 99% of the private-sector jobs. Porsche, a German firm, sponsors a school in Manila that teaches young Filipinos how to service its machines. When they qualify, Porsche offers them jobs in the Gulf. Such a worker can earn twice what he would in the Philippines and can send about 70% of his earning home.

The US has more foreign-born residents in total than any other country (43m)., but its share is lower than other more open countries, e.g., Australia, 28%, or Canada, 22%. The US' flexible labour market makes it easy for migrants to find entry-level jobs, and its meagre welfare state means they have to. The unemployment rate for immigrants is 4% compared with 16% in Sweden, where benefits are fatter and unions have negotiated industry-wide pay scales that price unskilled migrants out of jobs. The National Academies of Sciences found that even immigrants who drop out of high school are net contributors to the public purse if they arrive in the US before the age of 25. Migration has also made the US the innovation hub of the world. Immigrants are twice as likely as natives to start a company; more than 40% of the Fortune 500 were founded either by an immigrant or the child of one.

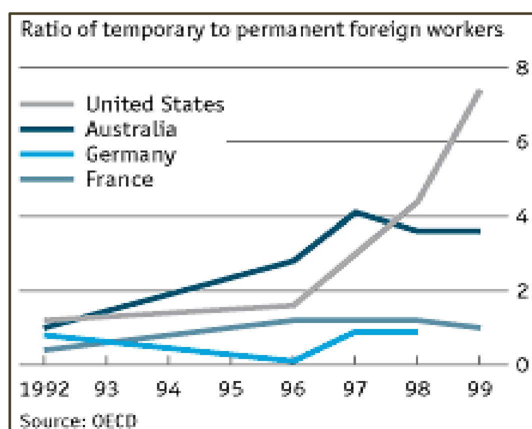
No country has a perfect system, but four policies help maximise the benefits of immigration, minimise its costs and boost public support for it. First, the influx must be orderly and legal. It is not just the rule of law that matters; the perception of disorder fuels anti-immigrant sentiment. Allison Harell of the University of Quebec and others found that a strong predictor of people's attitudes to migrants was whether they felt in control of their own lives and whether they felt their country was in control of its borders. The other three policies are all about integration. Migrants should be encouraged to work. They should be helped to fit in. And they should be seen to pay their way.

"Briefing on Immigration: Crossing continents", *Economist*, 25 Aug 2018, p. 14-6.

For instance, a fiscal instrument might replace the economic needs test, so often used to keep out immigrants whose skills are already available locally. That test, says Mr Winters in his paper for the Commonwealth Secretariat, is like the crudest form of protectionism: prohibiting imports of goods where local supplies are available. Given the lack of evidence that immigration harms jobs, such tests are pointless and cumbersome to administer [13].

In fact, the best judge of economic needs is the market. To reassure the hesitant, employers could be asked to pay a levy—perhaps in the form of a higher rate of payroll tax—to employ foreign-born workers. A scheme of this sort was suggested by Phil Gramm, a US senator, to pay for immigrants' health costs. Some money might equally well go into the social-security funds of immigrants' sending countries. After all, emigration leaves them with fewer workers to pay for supporting the elderly [13].

Many of the economic gains from mobility do not require migration to be permanent. If workers leave only temporarily, the sending country gains the stimulus that they bring on return; the host country avoids the fiscal and social costs of assimilating their families; and the migrants may be more likely to continue sending money home while they are away. The US H1-B visas for skilled workers might serve as a model: they can run for two three-year periods, giving both workers and employers time to decide whether they would prefer a permanent arrangement [13]. The chart (ratio of temporary to permanent workers) shows how the ratio of temporary to permanent foreign workers increased in the US in the 1990s.



Cheap international transport and communications make it easier for workers to go abroad for short spells. The example of Mexico's immigrants demonstrates that the tougher border controls become, the less likely migrants are to go home when their work is done, and to incur the expense and danger of another crossing. When governments design immigration controls, they should bear such perverse effects in mind [13].

How can governments ensure that guest workers do not overstay their welcome? In South Korea, temporary workers contribute to a special account that is refunded to them if they leave on time and forfeited if they linger [2]. The UK government is thinking of asking some migrants to post a bond—priced slightly above the smuggler's going rate—to enter the country legally, like a defendant on bail. The bond would be repaid to the migrant on return to his own country or lost if they choose not to return [2][13].

Some economists argue that governments should simply set a quota of visas and auction them. Alternatively, they could set a price for the permits designed to achieve more or less the same number of sales. The principal virtue of both schemes is that they allocate visas according to private perceptions of their worth, not government guesses about need [2]. The governments of sending countries might play a role too: Harvard's Mr Rodrik suggests giving them a quota for migrants that is reduced by the numbers that fail to return on time [13].

The economic case for temporary migration is compelling even if the historical record is less so

A Global Commission on International Migration, set up in 2003 by UN secretary-general Kofi Annan to inspire debate and reflection on all aspects of international migration and policy, delivered a report two years later on the movement of people around the world. [2][14] Of its 33 recommendations, the most consequential is indeed a call for more temporary migration from poor countries to rich ones. Guest-worker programmes would realise some of the efficiency gains identified by Mr Rodrik. Opening up new avenues of legal migration might also help reduce the flow of illegal migrants [14].

History lends little support to this optimism. The *Gastarbeiter* programme in Germany—which invited Turks, Yugoslavs and others needed at the time to fill the factory jobs created by the country's post-war economic miracle—failed. Many of Germany's "guests" never left, and their families soon arrived. The *bracero* programme in the US—which, from 1942 to 1964, recruited Mexican field hands to pick cotton and sugar beets in Texas and California—fared no better. The entry of hundreds of thousands of farm workers provided camouflage for a substantial flow of undocumented labour [14].

Nonetheless, the logic of temporary migration appears irresistible. Rich countries want migrants' labour, but do not want to look after the newcomers as they grow old. Rich countries would like a constant rotation of workers, arriving while they are young and active, leaving before they grow old and dependent. The commission argues that "temporary and circular migration" is also better for poor countries. One reason is remittances: the longer an immigrant stays away from home, the smaller the share of his wages he sends back [2].

Governments often claim they want to tailor rules on immigration to the needs of the economy, but the economy's needs also adapt to those rules. Philip Martin, of the University of California, Davis, and Michael Teitelbaum, of the Alfred Sloan Foundation, provide two striking examples. California's ketchup industry relied heavily on Mexican *braceros* to pick its tomatoes in the 1960s. The industry insisted it could not survive without these cheap hands. When the *bracero* scheme was ended in 1964, farmers replaced the migrants with machines. Engineers invented a harvester that could shake tomatoes from plants and distinguish red fruit from green. Crop scientists developed new, ovoid tomatoes that the machines found easier to handle. In Germany, Mr Martin and Mr Teitelbaum argue, the same phenomenon happened in reverse. The availability of cheap guest-workers in German factories slowed the adoption of new labour-saving technology. As the saying went at the time: Japan is getting robots while Germany gets Turks [2].

Illegal immigration is also a problem. The best way to deal with this is not just to ban smuggling of people, but also to undercut it. Governments, by selling temporary, two- or three-year visas in the smugglers' best markets, could do just this. The visas should be priced to compete with the smugglers' rates. One-third of the visa fee could be returned to immigrants when they depart the country, and anyone who had bought a visa in the past would be free to buy another one, provided they did not break the rules. These features would be powerful incentives not to

Case study: The role of diasporas

Migration in the internet age is changing business
Diasporas have been a part of the world for millennia. Two changes are making them matter much more important. First, they are far bigger now. The world has some 215m first-generation migrants, 40% more than in 1990. If migrants were a nation, they would be the fifth largest. Second, cheap travel and communications mean people can now stay in touch with the homeland. A century ago, a migrant might sail for the US and never see the homeland again. Today, migrants are in contact with home, wire back money in minutes, follow news from the homeland, and can fly home regularly to visit or invest earnings in a new business. Such migrants do not merely benefit from all the new channels for communication that technology provides; they fulfilling its potential to link the world together in a way that it never could if everyone stayed behind borders. No other social networks offer the same global reach—or commercial opportunity.

Diaspora networks have three lucrative virtues. First, they speed the flow of information across borders: a Chinese businessman in South Africa who sees a demand for plastic vuvuzelas will quickly inform his cousin who runs a factory in China. Second, they foster trust. That Chinese factory-owner will believe what his cousin tells him, and act on it fast, perhaps sealing a deal worth millions with a single Skype conversation. Third, diasporas create connections that help people with good ideas collaborate with each other, both within and across ethnicities. In countries where the rule of law is uncertain (most emerging markets) it is hard to do business with strangers. When courts cannot be trusted to enforce contracts, people deal with those they have confidence in. Personal ties make this easier.

The Chinese and Indian diasporas have long been commercially important. Both used to have closed economies, so overseas Chinese and Indian traders had to content themselves with linking foreign ports to each other (the Chinese in South-East Asia, and the Indians in parts of Africa). That completely changed. Overseas Chinese and Indians connect the world to China and India, respectively, and vice versa.

The government in Beijing set up a ministry to deal with the overseas Chinese. Most foreign direct investment (FDI) flowing into China is handled by the Chinese diaspora, loosely defined.

Of the $105 billion of FDI in 2010, some two-thirds came from places where the population is more or less entirely ethnic Chinese (see chart). That includes Hong Kong and Taiwan, which are officially part of China. These two places operate as if they are part of the diaspora. Citizens of Taiwan are entirely outside Beijing's control. Hong Kongers are not, but they enjoy secure property rights and the rule of law in much the same way that Chinese Americans and Chinese Singaporeans do.

China's top providers of foreign direct investment*
2010

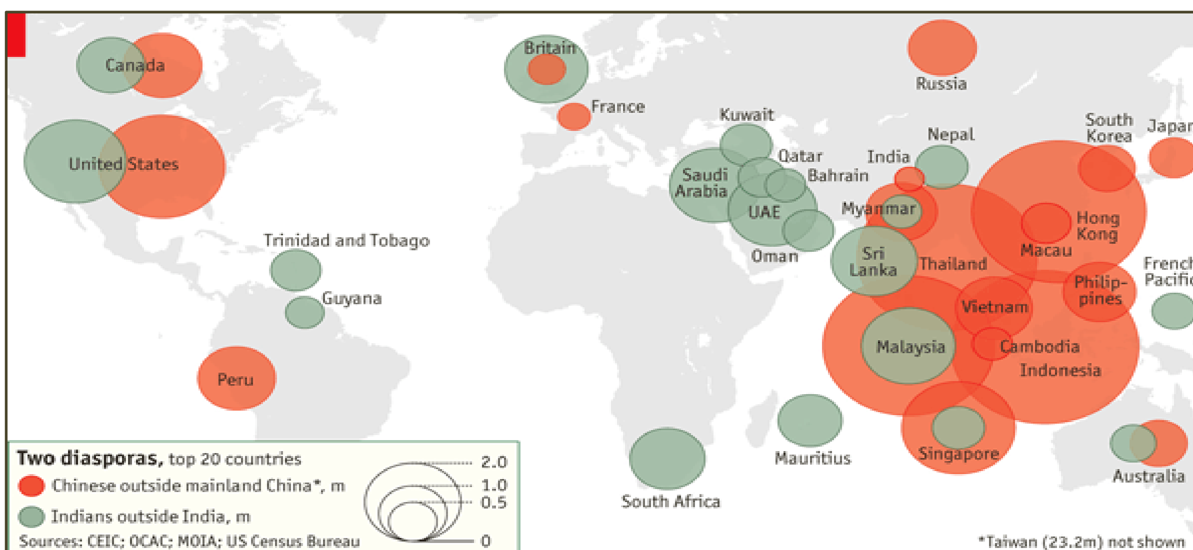
Country/territory	$bn	As % of total	Chinese residents, m
Hong Kong	67.5	63.8	6.58
Taiwan	6.7	6.3	23.16
Singapore	5.7	5.4	2.79
Japan	4.2	4.0	0.52
United States	4.1	3.8	3.46
South Korea	2.7	2.5	0.70
Britain	1.6	1.6	0.30
France	1.2	1.2	0.23
Netherlands	1.0	0.9	0.15
Germany	0.9	0.9	0.07
Others	10.2	9.6	31.88

Sources: CEIC; OCAC; US Census Bureau
*Including through tax havens

Ethnic Chinese are far more confident about investing in China than anyone else. They understand the local business culture and know whom to trust. This is why they also serve as a bridge for foreigners who wish to do business in China. William Kerr and Fritz Foley of HBS showed that US firms employing lots of Chinese Americans find it easier to set up operations in China without the need for a joint venture with a local firm.

"Hyperconnectivity", according to Carlo Dade, of the Canadian Foundation for the Americas, a think-tank, means "migrants are connected instantaneously, continuously, dynamically and intimately to their communities of origin...This is a fundamental and profound break from the past eras of migration." China's high-tech industry is dominated by returnees from abroad. N. Chandrasekaran, the boss of Tata Consulting Services, a big Indian IT firm, says all his top people worked or studied abroad.

"Weaving the world together", *Economist*, Brief on migration and business, 19 Nov 2011, p. 68-70.



overstay. Some fraction of the fee could also be refunded to immigrants who pay social-security taxes, giving them a reason to keep out of the underground economy [14].

If the economic gains to migration were not so great, the masses would not be so reluctant to leave the rich world when they get there. "There is nothing more permanent than temporary migration," cynics say. Equally persistent are the market forces and demographic pressures that make temporary migration worth considering [2].

Such policies may not end illegal immigration, although they would certainly remove some of the pressure. Nor will they stop all temporary workers from staying on. Past experiments with guest workers should restrain expectations: "I would be satisfied with a 65% return rate," says Mr Rodrik. Guest worker programs they offer hope. They hold out the possibility that the poor might earn money in the job markets of the rich, to the benefit of both, without creating all the social problems that the past half-century of immigration has entailed [13].

Just as reducing the constraints on trade in goods made the world richer in the second half of the 20th century, so reducing the constraints on the movement of people could be a powerfully enriching force in the first half of the 21st. But in democracies, governments cannot force policies on resistant citizens. Countries that accept change will be rewarded with a more vibrant and better-off society, even if they have to accept social changes that they may not welcome. Immigration is always a gamble. But when it goes right, everyone wins [13].

Pandemic's effect on European labor migration

In 2020 Europe saw a great reverse migration, as those who had sought work abroad returned home. Exact numbers are hard to come by. An estimated 1.3m Romanians returned—equivalent to three times the population of its second-biggest city. Perhaps 500,000 Bulgarians returned—a huge number for a country of 7m. Lithuania has seen more citizens arriving than leaving for the first time in years. Politicians in eastern Europe had long complained of a "brain drain" as their brightest left in search of higher wages in the west. Now the pandemic, a shifting economy and changing work patterns are bringing many of them back. A "brain gain" has begun [15].

Freedom of movement—the ability to move to any country in the EU—is among the most popular benefits of belonging to the club. It is especially cherished by citizens of former communist countries, who have grim memories of being prevented from travelling by their own rulers. However, although most Europeans believe in freedom of movement for themselves, some are less sure about granting it to others. (Hence Brexit.) And governments of countries that lose lots of clever, enterprising young people tend to lament this fact. Often, it is the most qualified. Doctors and nurses quitting Romania are a particular bugbear. Migration creates a clash of interests between individuals, who want to better their own lot, and governments, who would often prefer them to stick around and pay taxes [15].

Migration anywhere in the world is often temporary. In Europe several factors are pushing and pulling people homewards. Liam Patuzzi of the Migration Policy Institute Europe, a think-tank, notes that the economic gap between east and west is closing. Labour markets in eastern Europe are hot. Before the pandemic, the unemployment rate in the Czech Republic was about 2%, the lowest in the bloc, down from almost 9% when it joined in 2004. Wage gaps, though still large, are falling [15].

Remote working alters the calculation, too. A new grey economy has sprung up across the EU, with white-collar staff living in one country but illicitly working in another (and paying tax in the wrong place, as a result). Often these people are expats in their own country, physically at home, but telecommuting across a border. In the long run, even as wage gaps close, some people will always seek adventure in foreign lands. Open borders in Europe allow people to choose where to live, which inevitably means that less attractive places will lose population [15].

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International Capital Mobility

Under the Bretton Woods system of fixed exchange rates, set up after the second world war and lasting until the early 1970s, the international flow of capital was severely controlled. A UK investor, for instance, could not easily buy US stocks or bonds. Mainstream economic opinion felt that capital mobility was unnecessary and undesirable [1].

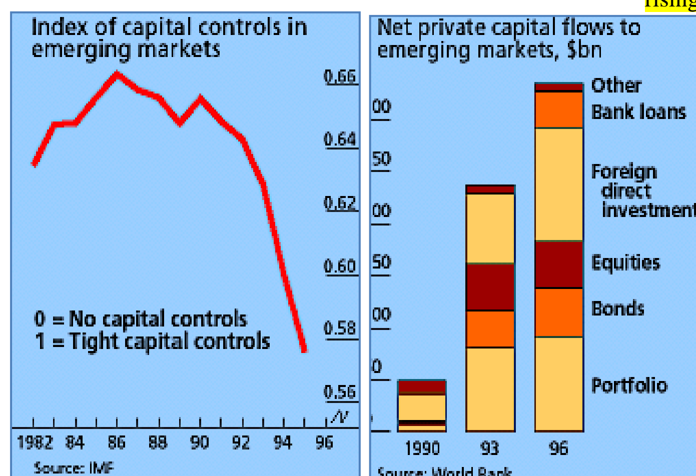
In the mid-1980s, capital mobility gathered pace. About $190 billion passed through the hands of currency traders in New York, London and Tokyo every day. By 1995 daily turnover had reached almost $1.2 trillion, roughly 50 times the value of world trade in goods and services. In the early 1970s, prior to liberalisation of world capital markets, the value of currency trading was only six times greater than the value of "real" trade. In 2013, $5trn in foreign exchange traded daily compared with about $50 bn in daily trade in goods and services (100 times) [1][2].

In theory, greater international capital flows should bring important benefits. Savings and investment are allocated more efficiently. Poor countries, with large investment needs, are less limited by a lack of capital. Savers, no longer confined to their home market, can seek investment opportunities that offer the highest returns around the world. Investors can diversify risk by spreading their portfolios more widely [1].

To sceptics, the integration of financial and capital markets is dangerous and can destabilise a country's macroeconomy and challenge its national sovereignty. Financial markets are said to be more volatile as money moves across borders. Hence, the case for opening up capital markets is less compelling than that for liberalizing trade. Such extremes of optimism and pessimism might both be misplaced. For, despite all the hyperbole, a global capital market does not really exist [1].

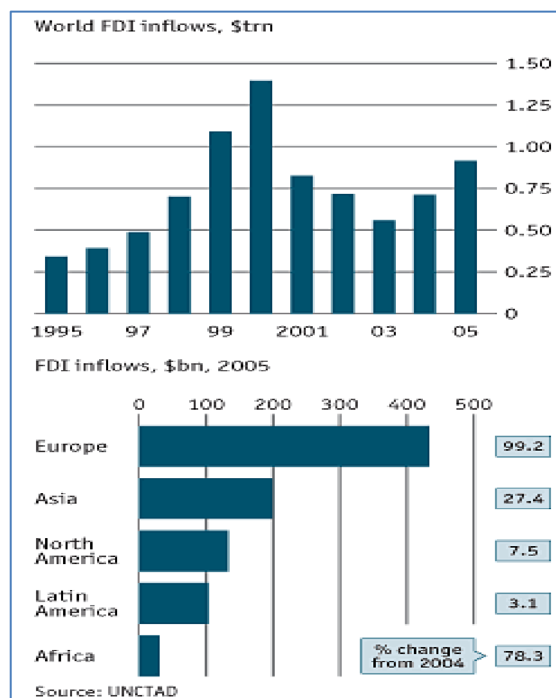
Any discussion on issues and trends in international capital requires recognition of the differences in the types of capital, e.g.: foreign direct investment (FDI) is foreign ownership of physical capital or assets (e.g., factory, plant and equipment); portfolio investment is financial capital of foreign investors who own domestic stocks and bonds; or foreign bank loans to local nationals. FDI, considered the least speculative, least mobile and more of a long-term commitment to the recipient country's productive capacity, is still able to rankle national sensibilities [1].

An index of capital controls in emerging markets compiled by the IMF (left-hand chart) shows that capital controls fell remarkably after 1990. With liberalisation came foreign financial flows into emerging economies. The chart on the right-hand side shows net private capital flows, of all types, flowing into emerging markets [1].



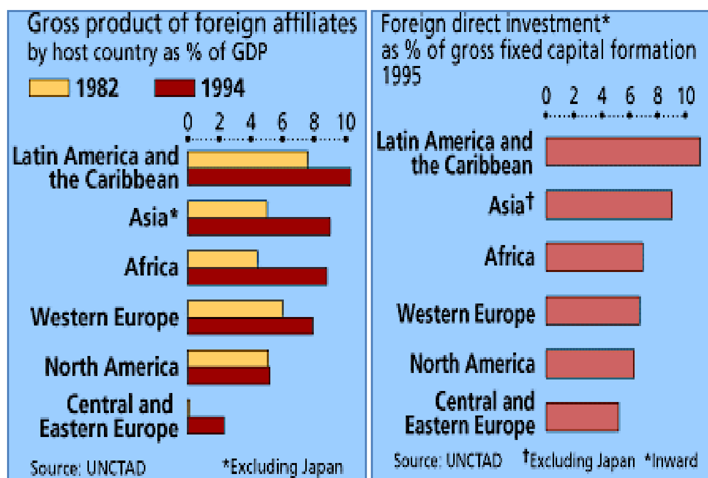
In 1990, $50 billion of private capital flowed into emerging markets; in 1996 that figure was $336 billion. These figures confirmed what every financier from Wall Street to Warsaw was saying: that the world's capital markets were being transformed. Ever larger sums of money move across borders, and ever more countries have access to international finance [1].

Between 1990 and 2000, total annual FDI inflows increased six-fold, to $1.4 trillion, before falling by half by 2002. By the mid-2000s, FDI was increasing again. Most FDI moves between rich countries, but absolute growth rates in investment in developing economies is rapid. Once, these countries were fearful of foreign investment. Then they embraced it with varying degrees of enthusiasm, but suspicion of foreigners remains [3]. In 2005, as for quite some time, roughly three-fifths of world FDI inflows (totalling $916 billion) went into wealthy countries and two-fifths into "developing" countries. The two fifths did not always flow into the same countries. China became the leading recipient of FDI among developing countries; in the 1980s it received almost none (see chart on FDI) [4][5].



A large share of FDI in developing countries went into the extraction of natural resources, especially oil, for shipment abroad. A bigger share now aims to tap local markets. As they become wealthier, people are able to buy more cars, computers and other consumer products. This is why car makers raced to build plants in countries such as Thailand and Brazil: not to export to Japan and the US, but to meet rising demand within South-East Asia and South America. MNCs are more prominent in these developing economies than in richer ones (see chart, Gross product of foreign affiliates) [4].

The flows to developing countries, therefore, are going directly to regions with the highest growth prospects (see chart, FDI as % of gross fixed capital). In 1996 Asia, excluding Japan, captured $80 billion, around two-thirds of the developing-country total; Latin America pulled in another $39 billion. In Eastern Europe, which enjoyed huge inflows in 1994-95, the tap was suddenly shut off in 1996, as governments sold fewer state-owned companies. Africa, despite its rich natural resources, received almost no FDI in the mid-1990s because few in the region could afford rich-world consumer products [4].



Globalisation requires examining the role played by multinational corporations in integrating economies
Multinational corporations (MNCs) stand at the heart of the debate over the merits of global economic integration. Their critics portray them as bullies, more powerful than nation states using their heft to destroy livelihoods, exploiters of workers as masters of sweatshops, extractors of natural resources and despoilers of the environment, who cripple left-wing political opposition and cosy up to dictators with no regard for the economic well-being of any country or community. Their advocates see MNCs as a triumph for global capitalism, spreading wealth and work, bringing advanced technology to poorer countries that raise living standards and low-cost products to the wealthier ones, and introducing better ways of doing business [4][6][3].

In the 1970s, MNCs were already widely denounced as big, irresponsible, monopolistic monsters. Then they went through a period of being sneered at as yesterday's clumsy conglomerates, before being lauded as the providers of capital, technology and know-how [6].

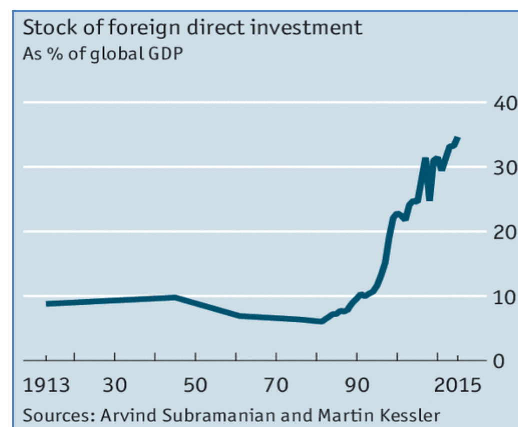
Both stereotypes hold some truth, but it would be wrong to portray the MNC as either good or evil [4]. One explanation for the return of hostility in the mid-2000s is the sheer speed at which MNCs expanded abroad. This made them the most visible aspect of globalisation, buying local firms and driving others out of business. Even to rich, well-run countries, their sheer size can seem threatening. The Irish sometimes fret about the fact that foreign firms account for almost half of their country's employment and two-thirds of its output; and Australians point nervously to the fact that the ten biggest industrial MNCs each has annual sales larger than their government's tax revenue [6].

Such clout requires caution, or it can be seen as threatening to national sovereignty or democratic accountability. For example, countries may feel that their freedom to set taxes is threatened by the ability of MNCs to shift profits, or operations to another country. MNCs in the natural-resource and mining business often cosy up to the regime in power, however nasty, to protect their investment. Those making consumer goods frequently flitted to whichever country offered the best deal on labour costs at the time [6].

Early established MNCs embodied an idea that would become incredibly powerful: global firms, run by global managers and owned by global shareholders, should sell global products to global customers. MNCs, for the purposes here (unless specified otherwise) are firms that make over 30% of their sales outside their home region. They direct the flows of goods, services and capital that brought globalisation to life. Though MNCs account for only 2% of the world's jobs (80m jobs on their payrolls), they own or orchestrate the supply chains that account for over 50% of world trade; they make up 40% of the value of the West's stockmarkets; have profits of about $1tr; and they own most of the world's intellectual property [11].

It all looked very different in 1990. With the Soviet Union collapsing and China opening up, a sense of destiny gripped Western firms. Some MNCs had long been established. Shell, Coca-Cola and Unilever had histories spanning the 20th century. But they had been run, for the most part, as loose federations of national businesses. The new multinationals sought to be truly global [11].

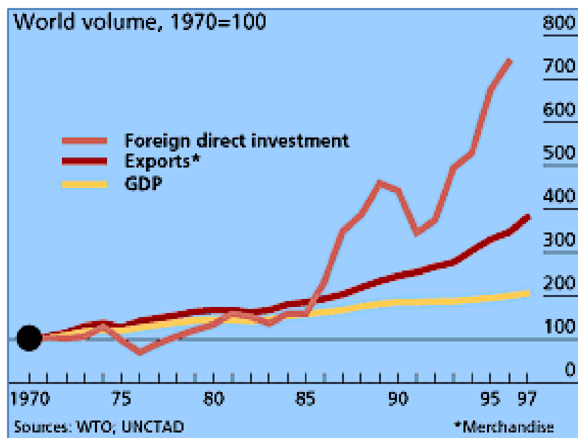
Companies became obsessed with internationalising their customers, production, capital and management. Academics draw distinctions between going global "vertically"—relocating production and the sourcing of raw materials—and "horizontally"—selling into new markets. In practice, many firms went global every which way at once, enthusiastically buying rivals, courting customers and opening factories wherever the opportunity arose. Though the trend started in the rich world, it soon caught on among large companies in developing economies, too. It was huge: 85% of the global stock of multinational investment was created after 1990, after adjusting for inflation (see chart, stock of FDI) [11].



Companies become MNCs in many different ways and for many different reasons. The world's largest 1,000 largest companies accounted for four-fifths of world industrial output in 2000 [6]. They were one of the main conduits through which globalisation took place. In 1995, MNCs generated $7 trillion in sales through their foreign affiliates—an amount greater than the world's total exports. MNCs' sales outside their home countries grew 20-30% faster than exports [4].

MNCs play an important role in global investment. At the end of 1996, the total stock of FDI stood at over $3 trillion. Worldwide, FDI has grown faster than merchandise exports and GDP (see charts, FDI, export and GDP, and domestic and FDI). Between 1980 and the mid-1990s, FDI grew at three times the pace as domestic investment, although it still accounts for only 6% of the annual investment of rich industrial economies [4][7].

Part of this trend reflected the changing structure of global manufacturing. Various stages of manufacturing were separable across national borders and dispersed, rather than being under one roof or inside one company. Whole industries no longer migrated, as shipbuilding did from Europe to Asia in the 1970s. Instead, *maquiladora* factories (i.e., assembly plants) in Mexico became a part of a network integrated with the US market, just as Hong Kong-based manufacturing is a network with other markets. Manufacturing is becoming a genuinely international affair



with more and more of the process handled by MNCs each with a link in the global supply chain [7].

The UN's 1997 World Investment Report estimated that 70% of all international royalties on technology involve payments between parent firms and their foreign affiliates, showing that MNCs play a key role in disseminating technology around the globe [4].

Nevertheless, few companies, even the most familiar household names (see table, top transnational corporations or TNCs), are truly global. The average MNC produces more than two-thirds of its output and locates two-thirds of its employees in its home country. Although both operate worldwide, the culture of General Motors is distinctively American, that of Volkswagen identifiably German. Yet there is no denying that MNCs are the main force behind worldwide flows of capital, goods and services [4].

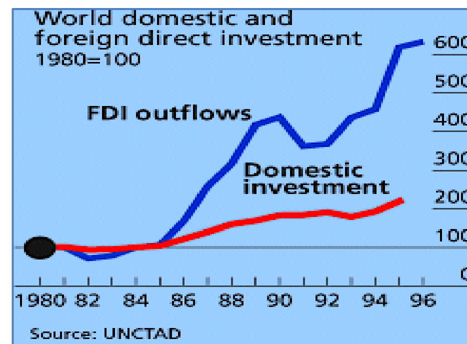
Top 15 TNCs by foreign assets, 1995

Company	Industry	Foreign assets as % of total	Foreign sales as % of total	Foreign employment as % of total
Royal Dutch/Shell	Energy	67.8	73.3	77.9
Ford	Automotive	29.0	30.6	29.8
General Electric	Electronics	30.4	24.4	32.4
Exxon	Energy	73.1	79.6	53.7
General Motors	Automotive	24.9	29.2	33.9
Volkswagen	Automotive	84.8	60.8	44.4
IBM	Computers	51.9	62.7	50.1
Toyota	Automotive	30.5	45.1	23.0
Nestlé	Food	86.9	98.2	97.0
Bayer	Chemicals	89.8	63.3	54.6
ABB	Electrical equipment	84.7	87.2	93.9
Nissan	Automotive	42.7	44.2	43.5
Elf Aquitaine	Energy	54.5	65.4	47.5
Mobil	Energy	61.8	65.9	52.2
Daimler-Benz	Automotive	39.2	63.2	22.2

Source: UNCTAD

In the public mind, globalisation and MNCs are closely related. The stereotype has giant companies shifting (manufacturing) production from one country to another in search of the cheapest labour, without regard for the well-being of either the high-wage workers who stand to lose their jobs or the low-paid ones who will be hired. Yet globalisation could just as easily make MNCs less necessary. Why? [4]

Falling transport costs and trade barriers makes serving foreign markets by exporting easier than establishing factories and research centres around the world. More integrated and liquid capital markets make it easier for single-country firms to raise money by selling bonds or shares. Big US, Japanese or European firms, which have benefited from their ready access to capital, should therefore be losing one of their main advantages [4].



Thus, the economic logic of the MNC lies elsewhere. Some explanations appear more valid than others, but none fully clarifies why MNCs became so prominent at the end of the 20th century. The most common explanation for MNCs' growth is economies of scale. In certain industries, the argument goes, firms can become more efficient by becoming bigger and producing more [4].

What better way to accomplish this than by serving a global market? Upon further inspection, however, the notion that economies of scale force companies to become MNCs does not hold up. Consider aircraft manufacturing, an industry in which a big producer has enormous cost advantages over a small one. This industry is dominated by two firms, Boeing and Airbus Industrie. Boeing assembles almost all of its aircraft in the US, although it buys components from subcontractors around the world. Airbus, made up of four separate firms in four different European countries, manufactured only in the home countries and relied on exports to sell its aircraft elsewhere. The mere existence of significant scale economies did not force either to become a true MNC [4].

Firms may find economies of scale at a level other than that of the factory floor. Coca-Cola is a case in point. Scale is not a huge advantage on the manufacturing side of its business, which involves blending water, gas and a special syrup. Scale economies come into play in other areas, such as reinforcing its brand by making a global marketing effort and helping its bottlers, most of whom are independent, learn from the experiences of their counterparts in other countries. These scale effects have driven Coca-Cola to become highly multinational [4].

Another explanation for the growth in MNCs is vertical integration. In some industries, the interdependence of suppliers and users of a particular resource makes it difficult for such firms to co-operate at arm's length, since there is always the risk that one will try to undermine the other. This is the reason many firms integrate vertically, buying up their suppliers or their customers. Sometimes, those suppliers or customers will be abroad, turning the acquiring firms into a MNC [4].

A third reason for the spread of MNCs is that they tend to be successful. In any business, inefficient firms will eventually fold, giving way to those that can earn higher profits. As the world economy becomes more integrated, it is to be expected that the companies most adept at crossing borders are those that prosper. It should come as no surprise that firms from richer countries do this best. As a rule, they have been exposed to more competition in their home markets and are therefore well equipped for international competitive battles [4].

There is yet one other reason for firms to operate as a MNC: because everyone else is doing it. Many companies exist to serve other companies, rather than household consumers. If multinational car manufacturers want to use

the same headlights in cars assembled in different countries, then headlight manufacturers must become multinational, too. This is why consulting firms and accountancies have been falling over one another to build seamless global networks. Although deregulation and privatisation have had a big effect on the telecoms industry, the demands of corporate customers are helping propel the globalisation of that industry [4].

Around half of all FDI involves mergers and acquisitions. These deals help companies to achieve economies of scale in marketing and distribution, for example, and they allow well-managed firms to take over poorly managed ones. Many of those mergers have also been between firms that supply other MNCs with professional services, telecommunications and air travel, in an effort to develop global networks. For all of these reasons, such cross-border merger and acquisition activity occurs disproportionately among firms based in rich countries. This is why, despite the interest in developing countries, the US is often the world's single biggest recipient of FDI [4].

In certain industries and for certain products, the importance of MNCs is increasing quickly, but the trend is easy to overstate. Most economic activity—cutting hair, driving taxi cabs, renovating a home—is still performed on a small scale. Most industries operate, if not at the level of the town or neighbourhood, then on a national basis. Even in manufacturing, speed, innovation and proximity to customers can matter more than sheer size. Being multinational is no guarantee of success [4].

The reasoning above suggests that the growth of MNCs is fairly benign. But that is not always the case. For one thing, MNCs' size and scale can make it possible for them to exert power in an exploitative way. A company whose facilities are located in a single country has no alternative but to comply with that country's laws and social norms, unless it wishes to import products made by others rather than making them itself. A MNC, however, can move production: if US worker-safety law is too restrictive, the company can move its factory to Mexico. It can also lower its tax bill by using internal pricing to shift profits from high-tax countries to low-tax ones [4].

This flexibility may make it harder for governments to raise revenue, protect the environment and promote worker safety. Critics fear an undesirable "race to the bottom", with governments reducing desirable social protections to attract investment by MNCs. Others point out that the race can be healthy insofar as it forces governments to be careful before imposing costly regulations and taxes. Certainly, many developing countries are eager to be "exploited" by as many MNCs as possible [4].

Another common criticism is that MNCs are exporting jobs to low-wage countries. This may be true in some industries, such as textiles and electronics, but in most cases it is exaggerated. Labour costs now make up only 5-10% of production costs in OECD countries, down from 25% in the 1970s. MNCs tend to be motivated more by the other considerations that have been mentioned, rather than simple wage-cutting exercises [4].

Although the social impacts are often misstated, some MNCs expansions are indeed unequivocally bad, with no offsetting benefits. Since most company bosses gain esteem (and, studies show, more pay) from operating a bigger outfit, it is no surprise that they expand at every opportunity, whether through a merger or a direct foray into a new market. As globalisation takes hold, these adventures are increasingly of a multinational nature. In some cases, they represent a wasteful use of shareholders' capital [4].

What most companies fear more than resentment abroad, though, is the protest at home. Typically, they still employ two-thirds of their workforce and produce more than two-thirds of their output in their home country which, in the case of 85% of multinationals, is one of the wealthy members of the OECD. They have been the easy targets of non-governmental organisations (NGOs), which understand perfectly well the value to themselves, in prestige and membership, of running a campaign which succeeds in humbling a mighty corporation [6].

Paradoxically, NGOs have been able to harness both the discontent of those who believe globalisation destroys jobs, and the ill-focused unhappiness felt by the children of the prosperous baby-boom generation. Just as John Kenneth Galbraith warned their parents that the world would soon be run by huge, unaccountable corporations, so this new generation seizes on the similar fears expressed in books such as Naomi Klein's "No Logo" [6].

Those who run MNCs are, at least, accountable (to their shareholders and the law) and a good deal more transparent than the average NGO. NGOs, as a class, often get their way. The campaigners need big business as a tic-bird needs a wildebeest. By alighting on big companies, they can often force through changes that would be hard to achieve through the political process alone. They can claim a seat at international negotiations, even though they represent nobody but their members. They can even influence what happens in distant countries: it is easier to change things in Nigeria by boycotting Shell than by lobbying the Nigerian government [6].

Individual firms are as capable of doing harm as is any other entity. As a class, the MNCs have a good story to tell. In the rich world, according to OECD research, foreign firms pay better than domestic ones and create new jobs faster. That is even truer in poorer countries: in Turkey, for example, wages paid by foreign firms are 124% above average and their workforces have been expanding by 11.5% a year, compared with 0.6% in local firms. Big foreign firms are also the principal conduit for new technologies, as is clear from the fact that 70% of all international royalties on technology involve payments between parent firms and their foreign affiliates. As for the environment, most research suggests that standards tend to converge upwards, not downwards [6].

More broadly, the balance of power is not what it seems. Big companies now come and go at lightning speed: one-third of the giants in the US's Fortune 500 in 1980 had lost their independence by 1990 and another 40% were gone five years later. Globalisation is as much of a threat to lumbering giants as to smaller folk, and often a boon for the nippy little firms that create most of today's new employment and wealth. The merger waves that attract so much attention, and fear, more often reflect defensive efforts by the corporate establishment than the predatory acts of world-dominating devils [6].

Are global companies too mobile for workers' good?

Are MNCs really any more fickle than purely local employers? Recent research suggests, in fact, that they tend to stick around longer than local firms—not because they are foreign, but merely because they tend to be bigger and more efficient than average. It has taken economists a surprisingly long time to look into this question in much detail [3].

Andrew Bernard of Dartmouth College's Tuck School of Business and Bradford Jensen of the Institute for International Economics studied how the ownership of US

manufacturing plants affects their chances of closing.[11] Their results show that some of the conventional concerns about MNCs are wrong. Their data show that plants set up and close down surprisingly often; there is lots of "creative destruction". Around 27% of all plants with more than ten employees shut during any five-year period. They also find that between 1987 and 1997 US factories owned by MNCs were less likely to close down than purely local firms [3].

Plants owned by MNCs last longer because of their greater average productivity, their heavier use of capital and their larger size. They tend also to have access to cheaper finance, either from the capital markets or from their internal cash hoard. In general, exporters are less likely to die than are factories that only produce for the domestic market, which also plays to MNCs' strengths. This does not support the idea that MNCs are especially guilty of "shipping jobs abroad". Indeed, say the authors, MNCs are more able to fend off competition from low-wage countries. So the MNCs' workers are better protected against cheaper foreign labour than workers at locally owned firms [3].

How about the record of global companies operating in poor countries? Mr Bernard and Fredrik Sjoholm, of the Stockholm School of Economics, consider the rate of plant closures in Indonesia, a country many activists regard as having been especially damaged by fickle foreign investors.[12] Over a 15-year period, closure rates for foreign-owned factories in Indonesia were 10 percentage points lower than for locally owned ones [3].

There is a catch. In both the US and Indonesia, the results are partly deceptive. In both countries, plants belonging to MNCs are much more efficient than their rivals. When the researchers compared factories owned by MNCs with factories of the same size and efficiency, however, their results were reversed: the probability of closure was 20 percentage points higher in Indonesia and three points higher in the US for MNCs than for local firms. Thus, MNCs of any given size and efficiency level are more likely to close their factories; but because their plants tend to be bigger and more efficient, on average, they are more enduring [3].

Up to a point, therefore, MNCs are footloose. Nonetheless, do their benefits outweigh their costs? It seems so. First, their greater scale and efficiency ought to be taken into account. Second, they often pay people more than they could earn at similar local plants. The authors, though, suggest that this might merely compensate workers for the greater risk of losing their jobs; but the evidence is still unclear. Third, the discipline provided by footloose investment might increase competition and thus spur on local firms to increase productivity [3].

Economists have other reasons for taking a more benevolent view of global firms than politicians or anti-globalisation activists. Not only do MNCs usually pay more, and sometimes much more, than indigenous employers, but their workplace conditions in poor countries tend to be better than at local firms, even if they are often far worse than in their home country. They transfer technology and know-how to their host economies. They provide access to foreign markets that local firms could never have penetrated [3].

For all that, it appears that MNCs of the same size and efficiency look more likely than comparable firms to shut their factories down. Critics of globalisation may call that a threat to sovereignty, but they should consider the possibility that the economic benefits exceed the drawbacks [3].

After decades of sending work across the world, firms are rethinking their offshoring strategies

Offshoring means moving work and jobs outside the country where a company is based. The original idea behind offshoring was that Western firms with high labour costs could make huge savings by sending work to countries where wages were much lower. Offshoring can also involve outsourcing, which means sending work to outside contractors. These can be either in the home country or abroad, but in offshoring they are based overseas. That strategy worked well for several decades, but firms now are rethinking their global footprints [8].

First, and most importantly, the global labour "arbitrage" that sent firms rushing overseas is running out. Wages in China and India have been going up by 10-20% a year since 2000, whereas manufacturing pay in the US and Europe has barely budged. Vietnam, Indonesia and the Philippines, still offer low wages, but not on China's scale, efficiency and supply chains. There are still big gaps between wages across the world, but other factors such as transport costs increasingly offset them and labour's share of total costs is shrinking anyway [8].

Second, many US firms realise that they went too far in sending work abroad and have brought bring some of it home again, a process termed "reshoring". Google, General Electric, Caterpillar and Ford Motor Company have

Reshoring, selection of companies

Company	What and where	Why
Chesapeake Bay Candle	Production was shifted from China to Maryland in 2011. The company will export to China from there	Rising labour costs in China; wanting to respond more quickly to customers
Ford Motor Company	Production of medium-duty trucks is moving from Mexico to Ohio, saving 2,000 jobs. Adding extra capacity to a Michigan plant will save another 1,200	Thanks to an agreement with the trade union, the firm can now hire new workers at $14 an hour
Otis Elevator	A factory is being moved from Mexico to South Carolina	To keep R&D closer to manufacturing and reduce logistics costs
General Electric	Production of large household appliances (eg, water heaters, fridges) is being shifted from China and Mexico to Kentucky	Having manufacturing, design and development close together; being more responsive to customers
Sleek Audio	Production of high-end earphones has moved from Dongguan in China back to Florida	Quality problems in China

Sources: Boston Consulting Group; PricewaterhouseCoopers; press reports; *The Economist*

[11] Bernard, A. and B. Jensen, "Firm Structure, Multinationals, and Manufacturing Plant Deaths". mba.tuck.dartmouth.edu/pages/faculty/andrew.bernard/deaths. pdf

[12] Bernard, A. and F. Sjoholm, "Foreign Owners and Plant Survival". NBER Working Paper No. 10039: www.nber.org/papers/w10039.

brought some of production or added new capacity back to the US (see chart, reshoring, selected companies). In December 2014, Apple said it would start making a line of its Mac computers in the US in 2015. Europe never showed as much enthusiasm for offshoring as in the US, and the small number of firms that did it are in no rush to return [8].

Choosing the right location for producing a good or a service is an inexact science, and many firms got it wrong. Michael Porter, Harvard Business School's guru on competitive strategy, said that just as firms pursued many unpromising mergers and acquisitions until painful experience brought greater discipline to the field, a lot of chief executives offshored too much and too quickly [8].

Firms have discovered the disadvantages of distance. The cost of shipping heavy goods halfway around the world by sea has risen sharply, and goods spend weeks in transit. Manufacturing somewhere cheap and far away but keeping research and development at home can have a negative effect on innovation. A solution is to move the R&D too, but that has other drawbacks: the threat of losing valuable intellectual property in far-off places looms ever larger. A succession of wars and natural disasters highlights the risk that far off supply chains may become disrupted [8].

Third, firms are moving away from manufacturing everything in one low-cost place to supply the rest of the world. China is no longer seen as a cheap manufacturing base but as a huge new market (see chart, manufacturing outsourcing cost index). Increasingly, the main reason for MNCs to move production is to be close to customers in big new markets. This is not traditional offshoring as in the past decades; instead, it is being "onshore" in new places. Peter Löscher, the chief executive of Siemens, a German engineering firm, recently commented that the notion of offshoring is in any case an odd one for a truly international company. The "home shore" for Siemens, he said, is now as much China and India as it is Germany or the US [8].

Firms want to be in, or close to, each of their biggest markets, making customised products and responding quickly to changing local demand. Pierre Beaudoin, chief executive of Bombardier, a Canadian aeroplane and train maker, says it used to focus on cost savings from sending jobs abroad; now Bombardier is in China for the sake of China. Lenovo, a Chinese computer maker, has factories in China, but it is moving some production to the US to be able to customise its computers for US customers and respond quickly to them. If it made them in China they would spend six weeks on a ship, says David Schmoock, Lenovo's North America president [8].

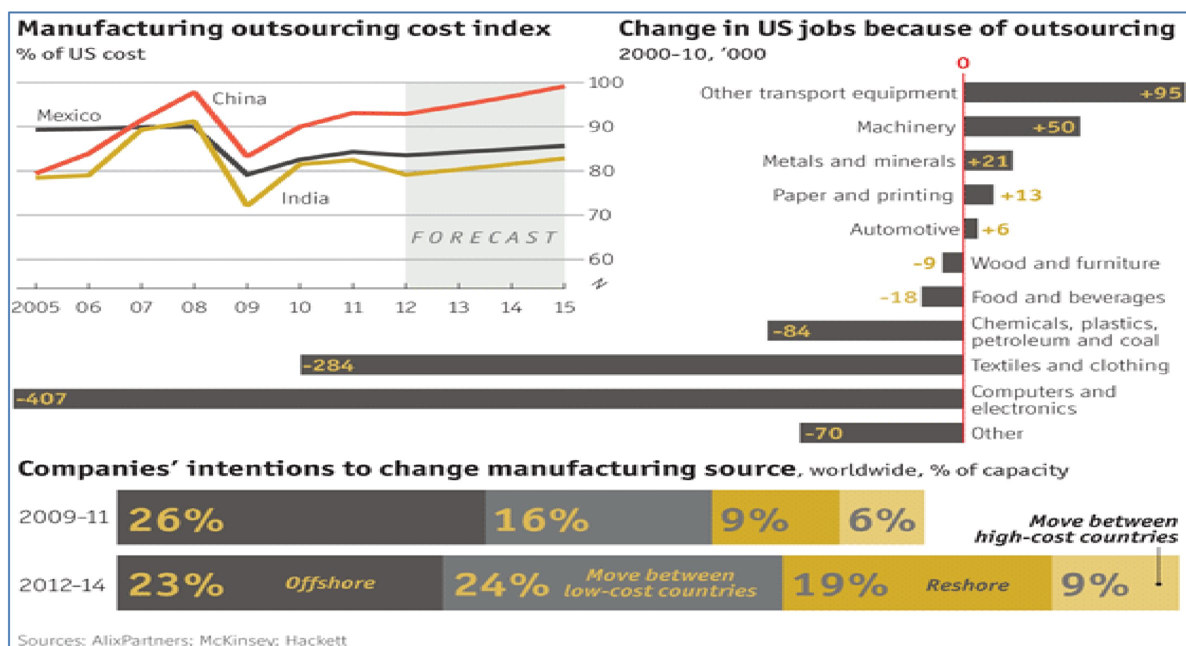
Under this logic, the US and Europe, with their big domestic markets, should be able to attract plenty of new investment as companies look for a bigger local presence in places around the world. It is not just Western firms bringing some of their production home; there is also a wave of emerging-market champions such as Lenovo, or the Tata Group, which is making Range Rover cars near Liverpool, that are coming to invest in brands, capacity and workers in the West (see the related case study at the end) [8].

Changes are happening not only in manufacturing but increasingly in services too. Firms can either outsource IT and back-office work to other companies, at home or abroad, or offshore it to their own centres overseas. Software programming, call centres and data-centre management were the first tasks to move, followed by more complex ones such as medical diagnoses and analytics for investment banks [8].

As in manufacturing, the labour-cost arbitrage in services is rapidly eroding, leaving firms with all the drawbacks of distance and ever fewer cost savings to make up for them. There has been widespread disappointment with outsourcing information technology and the routine back-office tasks that used to be done in-house. Some activities that used to be considered peripheral to a company's profits, such as data management, are now seen as essential, so they are less likely to be entrusted to a third-party supplier thousands of miles away [8].

Even General Electric is reversing its course in some important areas of its business. In the 1990s it pioneered the offshoring of services, setting up one of the very first "captive", or fully owned, offshore service centres in Gurgaon in 1997. Up until last year around half of GE's information-technology work was being done outside the company, mostly in India, but the company found that it was losing too much technical expertise and that its IT department was not responding quickly enough to changing technology needs. It is now adding hundreds of IT engineers at a new centre in Michigan [8].

Traditional offshoring, the search of cheaper labour anywhere on the globe, has matured, tailed off and to some extent has reversed. MNCs will certainly not become any less global as a result, but they will distribute their



activities more evenly and selectively around the world, taking heed of a far broader range of variables than labour costs alone. This offers a huge opportunity for rich countries and their workers to win back some of the industries and activities they recently lost. Paradoxically, the narrowing wage gap increases the pressure on politicians. With labour-cost differentials narrowing rapidly, it is no longer possible to point at rock-bottom wages in emerging markets as the reason why the rich world is losing out. Mature economies will have to compete hard on factors beyond labour costs, e.g., world-class skills and training, along with flexibility and motivation of workers, extensive clusters of suppliers and sensible regulation [8].

What and how much of its production to "offshore" to other countries is one of the most important choices a company can make. France's two big carmakers illustrate the point. PSA Peugeot Citroën, the younger of the two, has tried over time to find cheaper places than around Paris to make its cars. In the 1950s and 60s Citroën opened a factory in Brittany and started manufacturing in Spain and Portugal, the China and Vietnam of their time for offshoring. Nowadays it makes cars cheaply in Slovakia and in the Czech Republic. But two-fifths of its global production is still in France, where it has seven expensive factories. One reason is that the company is family-owned, and families tend to be particularly loyal to their countries of origin [9].

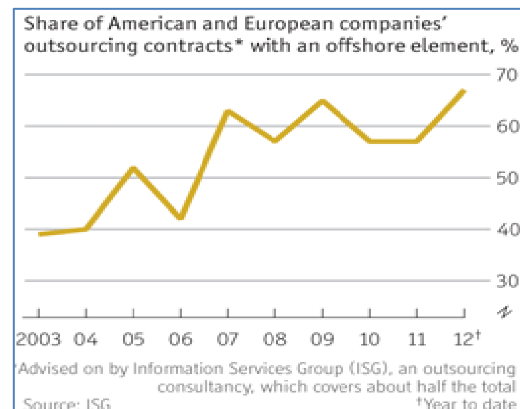
Renault, on the other hand, determinedly pursued a low-cost strategy, setting up factories in Morocco, Slovenia, Turkey and Romania, and now makes only a quarter of its cars at home. Unsurprisingly, it was Peugeot that was in dire financial straits. In the autumn of 2012, amidst a fierce political storm, the company announced plans to stop car production at one of its biggest French factories, at Aulnay-sous-Bois, just outside Paris [9].

Yet there are also examples of successful companies that choose not to offshore much, even in labour-intensive industries. Zara, the main clothing brand of Inditex, a Spanish textile firm, makes its high-fashion clothes in Spain, Portugal and Morocco. This costs more than it would in China, but a short, flexible supply chain allows the firm to respond quickly to changes in customer tastes. It sells the vast majority of its outfits at full price rather than at a discount. The decision to stay close to home is its main source of competitive advantage [9].

The practice of outsourcing, i.e., subcontracting work, is as old as business itself. A 19th-century manufacturing company might have owned its machines but not its own fleet of horse-drawn drays to distribute its wares. The thinking on what to subcontract and what to keep inside the firm has ebbed back and forth over time. Once, the conglomerate owning everything it could was the plan, but for the past few decades firms have outsourced ever more of their operations, in the belief that as long as they kept the "core" of their business in-house, the rest could safely be sent anywhere in the world [9].

That belief has not always turned out to be justified. After Boeing, an aeroplane-maker, outsourced 70% of the development and production work on its new 787 Dreamliner to around 50 suppliers, it suffered huge delays because its outsourcing partners failed to produce parts on time. In 2005 Deloitte Consulting looked at 25 big companies that had outsourced operations and found that a quarter of them soon brought them back "in-house" because they could do the work themselves better and cheaper [9].

Most companies do outsource to save money. Doing so has increasingly meant sending work to cheaper countries. In 2003, according to TPI, a company that advises on outsourcing, about 40% of all outsourcing contracts entered into by US and European firms involved offshore workers; that figure has since risen to 67%. In turn, companies that decide to offshore production often have little choice but to outsource as well. Since the early 2000s, US and European companies have increasingly used outsourcing contracts with an offshore element (see chart, US and European firms with outsourcing/offshoring) [9].



Local firms are often in a better position to operate in a particular environment, and they may control supply chains. Most of the US's and Europe's textile industry, for instance, subcontracts work to outside firms in China, Vietnam and Bangladesh. Production of consumer electronics is largely outsourced to huge contract manufacturers such as Taiwan's Foxconn and Quanta. This report concentrates on work that is done overseas, either inside the firm but in an offshore location or outsourced to foreign contractors, because this part of corporate globalisation is most controversial [9].

Most firms do not give enough thought to choosing where to produce. To an alarming degree, says McKinsey, "companies continue to indulge in herd behaviour" when deciding where to base their operations and how to arrange their supply chains. Many of them, says the consulting firm, simply follow each other around to low-cost countries or allow themselves to be drawn in by governments waving cash and other incentives [9].

David Arkless, head of government and corporate affairs for Manpower, which advises large companies on their locations, recalls the story of two rival technology firms from Idaho. One of them moved its production to the state of Penang in Malaysia. The other, having seen its foe reduce its labour costs by half and slash prices by 15%, pursued it to exactly the same place. The pair quickly started competing for labour with each other and local wages soared. Mr Arkless has seen whole clusters of industries move to Shenzhen in tandem. "Within a year or so the labour costs go up to near the level of the original place," he says. Manpower advises Western firms that if labour makes up 15% or less of their product's total cost, they would do better not to offshore. Even if the share is higher, there is usually scope for improvement at home. "Going somewhere else for the sake of cheaper labour is usually a quick fix and avoids the real problems," says Mr Arkless [9].

"Moving production a long way off and separating it from research and development risks harming a firm's long-term ability to innovate". Companies rarely analyse past location decisions to see whether they have proved right, note Michael Porter and Jan Rivkin of Harvard Business School (2012) in "Choosing the United States". One reason why companies rush into offshoring may be that they are looking for a quick solution to existing troubles. According to "The Handbook of Global Outsourcing and Offshoring",

by Leslie Willcocks, Julia Kotlarsky and Ilan Oshri, companies are most likely to consider offshoring their operations when their profits are already falling [9].

Two sets of strategic problems can arise from offshoring production to another part of the world, especially if it is poorly thought out. The first of these concerns the logistics of supply. The more that firms spread their operations around the globe, the more vulnerable they become to disruption from unexpected events such as natural disasters or political unrest. The second strikes at the heart of what companies try to do: sell more and better widgets to customers than their rivals down the road. Often, the more a firm offshores and outsources, the worse it will be at responding to customers quickly [9].

Over the past few decades it became conventional wisdom that factory jobs could be done cheaply in some far-flung corner of the world but more important innovation work should stay in-house in high-cost countries. Manufacturing was seen as just a cost centre, so it was often offshored. Now many companies reckon that production makes a big contribution to the success of research and development, and that innovation is more likely to happen when R&D and manufacturing are in the same place, so increasingly they want to bring manufacturing back in-house [9].

Foreign suppliers of parts can turn into competitors, and for many companies the risk of losing intellectual property, either through theft or imitation, in China and elsewhere remains high. Indeed, says Richard Dobbs of the McKinsey Global Institute in Seoul, big South Korean groups reckon that US and European companies are making a mistake in outsourcing as much manufacturing as they do, because this allows other firms a great deal of insight into their processes. They should know: Samsung, an electronics giant, was once an outsourcing partner for several Japanese firms but now dwarfs its former customers. South Korean firms offshore production to their own factories overseas, but they seldom outsource [9].

Many companies are rethinking the outsourcing of ever more important functions. Lenovo wants to own more of its capacity in China and elsewhere; it gets better results from its own facilities than from its outside contractors, says Gerry Smith, the firm's global head of supply chain. That often means taking the work back home [9].

The most prominent example of the opportunities and risks of offshoring is the relationship between Apple and Foxconn. From a strategic point of view the partnership could not be more successful. In 2010 Foxconn took a huge chance by investing billions of dollars in building enough capacity in China to manufacture Apple's iPhone on the scale required. It built a uniquely flexible and responsive supply chain for Apple. According to a *New York Times* report, Apple redesigned the iPhone's screen at the last minute. Foxconn woke up its workers in the middle of the night to get the job done. "The reason Apple is what it is today is Foxconn," says a consultant in Taipei. The two companies are inextricably bound to each other [9].

Apple might have wished it was not quite so dependent on Foxconn. After a spate of reports of poor working conditions for the firm's employees (including excessive hours), Apple's chief executive, Tim Cook, ordered an investigation, and Foxconn made a number of changes. Even so, the bad news did not stop. In September 2012 Foxconn had to close a factory for a while when a brawl among employees turned into a full-scale riot. In October the firm admitted that it had employed "interns" as young as 14 in its factories. In December, Mr Cook announced that Apple would bring some production of Mac computers back from China to the US. He said the aim was to create jobs in the US, but the move may also appease critics of Apple's partnership with Foxconn. The Taiwanese firm said that it, too, would expand its US operations, noting that important customers wanted more work done there [9].

> "'Made in Japan' builds momentum on weaker yen", *Fin Times*, 18 Sep 2015, p. 16
>
> **Robots helps reshoring initiative in Japan**
> After decades of pursuing cheaper manufacturing overseas, 'made in Japan products – from Honda scooters to Panasonic microwaves to Canon cameras – were back in vogue thanks to a weaker yen. Yet, reshoring is more about robots than human jobs and bigger factories – a far cry from the multibillion-dollar investments of the mid-2000s that soured in the wake of the global financial crisis. Expansion was largely aimed at local manufacturing goods serving the domestic market, rather than making goods for export or importing them from overseas.
>
> Canon aimed to fully automate the production of digital cameras by 2018, lifting its domestic production ratio to 60%, from 43% in 2014. Installing more robots in its factories would lower manufacturing costs, while easing Japan's deepening labour shortage. Levels of employment could be maintained by shifting workers to roles that cannot be replaced by machines. The lower manufacturing costs in Japan coincided with rising labour costs in China and other emerging markets where Japanese firms shifted their production in the strong yen era.

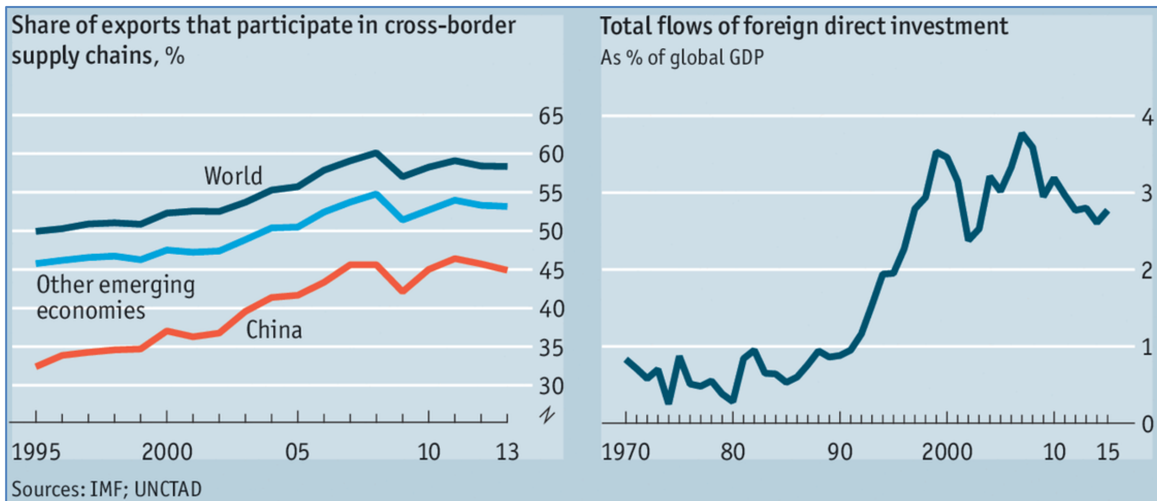
The End of the MNC as it was

In 2006 Sam Palmisano, the boss of IBM, argued that the "globally integrated enterprise" run as a unitary organisation, rather than as a federation, would transcend all borders as it sought "the integration of production and value delivery worldwide". The spree that ensued from that logic could not last forever; an increasing body of evidence suggested that it ended by 2017. In 2016 MNCs' cross-border investment fell by 10-15%. Impressive as the share of trade accounted for by cross-border supply chains was, it had stagnated since 2007 (see left-hand chart, share of exports). The proportion of sales that Western firms made outside their home region shrunk. MNCs' profits fell and the flow of new multinational investment was in decline relative to GDP. The global firm was in retreat [11].

To understand this, consider the three parties that made the boom possible: investors; the "headquarters countries" in which global firms are domiciled; and the "host countries" that received multinational investment. For their different reasons each thought that MNCs would provide superior financial or economic performance [11].

Investors saw a huge potential for economies of scale. As China, India and the Soviet Union opened up, and as Europe liberalised itself into a single market, firms could sell the same product to more people. As the federation model was replaced by global integration, firms would be able to fine-tune the mix of inputs they got from around the world—a geographic arbitrage that would improve efficiency, as Martin Reeves of BCG, a consultancy, put it. From the rich world they could get management, capital, brands and technology. From the emerging world they could get cheap workers and raw materials as well as lighter rules on pollution [11].

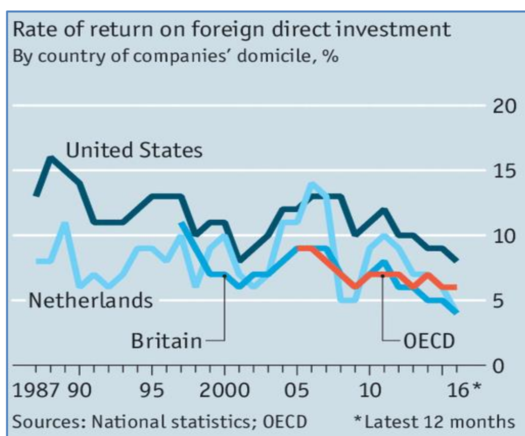
These advantages led investors to think global firms would grow faster and make higher profits. That was true for a while, but it was not true in 2017. The profits of the top 700-odd MNCs based in the rich world dropped by 25%



during 2012-17, according to FTSE, an index firm. The weakness of many currencies against the dollar is part of the story, but explains only a third of the fall. By contrast, the profits of domestic firms rose by 2% [2011].

A complementary measure comes from the foreign profits of all firms as recorded in balance-of-payments statistics. Though the data refer to firms of all sizes, big ones dominate the mix. For companies with headquarters in the OECD, a club of mostly rich countries, foreign profits were down by 17% over five years. US firms suffered less, a 12% drop, partly because of their skew towards the fast-growing technology sector. For non-US firms the drop was 20% [11].

Profits should be compared with the capital sunk. The return on equity (ROE) of the top 700 MNCs dropped from a peak of 18% in 2007 to 11% a decade later. The returns on the foreign operations of all firms fell, too, based on balance-of-payments statistics. For the US, UK and the Netherlands, the three countries that historically hosted the most and biggest MNCs, the ROE on foreign investment shrunk to 4-8%. The trend was similar across the OECD (see chart, rate of return on FDI).

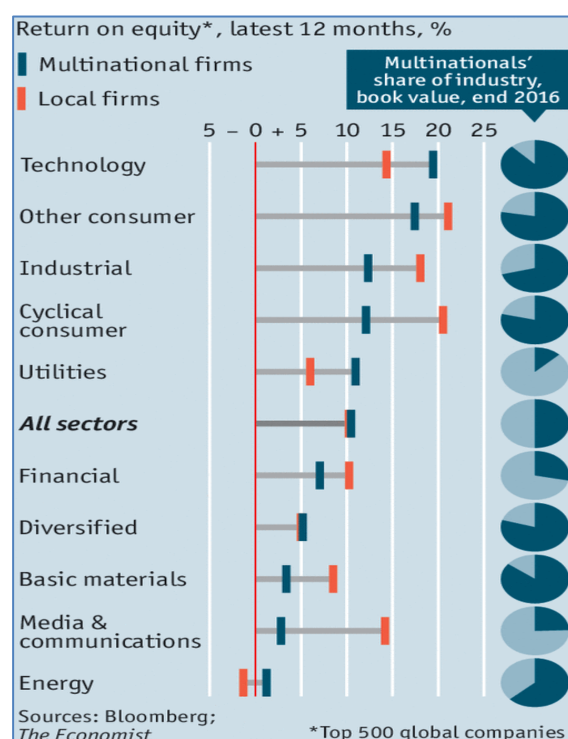


MNCs based in emerging economies, which accounted for about a seventh of global firms' overall activity, fared no better: their worldwide ROE is 8%. Several supposed champions—such as Lenovo, the Chinese company which bought IBM's PC business and parts of Motorola—have been financial flops. China's biggest completed cross-border acquisition was of Nexen, a Canadian oil firm, in 2012. In 2016 the buyer, CNOOC, a state-owned energy firm, wrote a chunk of it off [11].

About half of the deterioration in MNCs' ROE over the past 5-10 years is explained by the slump in commodity prices, and thus the profits of oil firms, mining firms and the like. Another 10% of the deterioration is due to banks. Firms that provided the specialist services behind globalisation were also hammered. Profits dropped by over 50% from their peak at Maersk, a Danish shipping line, Mitsui, a Japanese trading house, and Li & Fung, a supply-chain agent for retailers [11].

The pain extended beyond these core industries, however. Half of all big MNCs saw their ROE fall in the past three years; 40% failed to make an ROE of over 10%, widely seen as a benchmark of whether a firm is creating any value worth speaking of. Even at powerhouses such as Unilever, General Electric (GE), PepsiCo and Procter & Gamble, foreign profits were down by a quarter or more from their peak. The only bright spot was the technology giants. Their foreign profits comprised 46% of the total foreign earnings of the top 50 US MNCs, up from 17% a decade ago. Apple made $46bn abroad in 2016, more than any other firm and five times more than GE, often seen as the US' bellwether [11].

These figures mean MNCs no longer achieved superior performance. *The Economist* examined the record of the 500 largest firms worldwide. In eight out of ten sectors, MNCs expanded their aggregate sales more slowly than their domestic peers. In six out of the ten sectors they had lower ROEs (see chart, ROE). For US firms, returns were now 30% higher in their home market, where cosy oligopoly has become more enticing than the hurly-burly of an unruly world [11].



Individual bosses often blame one-off factors: currency moves, the collapse of Venezuela, a depression in Europe, a crackdown on graft in China, and so on. But the deeper explanation is that both the advantages of scale and those of arbitrage have worn away. Global firms have big overheads; complex supply chains tie up inventory; sprawling organisations are hard to run. Some arbitrage opportunities have been exhausted; wages have risen in China; and most firms have massaged their tax bills as low as they can go. The free flow of information means that competitors can catch up with leads in technology and know-how more easily than they used to [11].

As a result firms with a domestic focus are winning market share. In Brazil two local banks, Itaú and Bradesco, have trounced global lenders. In India Vodafone, a Western mobile-phone operator and Bharti Airtel, an Indian multinational active in 20 countries, are losing customers to Reliance, a domestic firm. In the US, shale firms stole a march on the global oil majors. In China, local dumpling brands are eating into KFC's sales of fried chicken. A blend of measures for listed firms shows that MNCs' share of global profits, 35% a decade ago, is now only 30% [11].

So much for the investors. What about the second constituency for MNCs, the "headquarters countries"? In the 1990s and 2000s they wanted their national champions to go global to become bigger and brainier. A study by McKinsey, a consultancy, based on 2007 data, outlined the sort of benefits they were after. MNCs operating in the US accounted for 19% of private-sector jobs, were responsible for 25% of private wages, 25% of profits, 48% of exports and 74% of research and development [11].

The mood changed after the financial crisis. MNCs started to be seen as agents of inequality. They created jobs abroad, but not at home. Between 2009 and 2013, only 5%, or 400,000, of the net jobs created in the US were created by MNCs domiciled there. (Although preliminary figures suggest that job creation picked up sharply in 2014). The profits from their hoards of intellectual property were pocketed by a wealthy shareholder elite. Political willingness to help MNCs duly lapsed [11].

Global accounting, antitrust, money-laundering and bank-capital rules splintered into US and European camps. Takeovers of Western firms now often come with strings attached by governments to safeguard local jobs and plants. Two US-led trade deals, known as TPP and TTIP, that gave protection to intellectual property, flopped. The global tribunals that MNCs use to bypass national courts have come under attack [11].

The deep roots of globalisation mean that trying to favour domestic companies by erecting tariffs no longer works as once it did. Over half of all exports, measured by value, cross a border at least twice before reaching the end-customer, so such tariffs hurt all alike. This does not mean that the inept or ignorant will not try them. But it does encourage the use of other avenues to try and right perceived wrongs, such as the tax system and good old political muscle [11].

A typical MNC has over 500 legal entities, some based in tax havens. Using US figures, it pays a tax rate of about 10% on its foreign profits. The European Union (EU) is trying to raise that figure. It cracked down on Luxembourg, which offered generous deals to MNCs that parked profits there; it also hit Apple with a $15bn penalty for breaching state-aid rules by booking profits in Ireland, with which it had a tax deal. The US, for its part, barred big firms from using legal "inversions" to shift their tax base abroad, most notably in the case of Pfizer, a pharmaceutical company that is the US's third-largest foreign earner [11].

Congress debated changes to the tax code which would see exporters and firms bringing profits home pay less than before, while firms shifting production abroad would face levies. Meanwhile, some firms were browbeaten into outsourcing decisions about where to base factories by then US president Donald Trump. On January 2017, Ford, a carmaker, agreed to cancel a new plant in Mexico and invest more at home. Mr Trump also wanted Apple to shift more of its supply chain home [11].

Of all those involved in the spread of global businesses, the "host countries" that receive investment by MNCs remain the most enthusiastic. The example of China, where by 2010 30% of industrial output and 50% of exports were produced by the subsidiaries or joint-ventures of MNCs, is still attractive. Argentina's government was keen to draw in foreign firms. Mexico sold stakes in its oilfields to foreign firms, including ExxonMobil and Total. India had a campaign called "make in India" to attract multinational supply chains. An index through which the OECD sought to gauge the openness of host countries showed no overall deterioration since the financial crisis [11].

There were, however, gathering clouds. China turning the screws on foreign firms in a push for "indigenous innovation". Bosses said that more products had to be sourced locally and intellectual property handed over to local partners. Strategic industries, including the internet, were out of bounds to foreign investment. Many fear that China's approach would be mimicked around the developing world, forcing MNCs to invest more locally and create more jobs—a mirror image of the pressures placed on them at home [11].

Host countries might also become less welcoming as activity shifts towards intangible services. For the top 50 US MNCs, 65% of foreign profits now come from industries reliant on intellectual property, such as technology, drug patents and finance. A decade ago it was 35%, and the share is still rising. (It is much lower in Europe and Japan, which do not have big technology firms.) There is no serious appetite among MNCs to recreate in Africa or India the manufacturing centres they spurred on in China, which removes a reason for those host countries to welcome them. The jobs and exports that can be attributed to MNCs are already a diminishing part of the story. In 2000 every billion dollars of the stock of worldwide foreign investment represented 7,000 jobs and $600m of annual exports. In 2017, $1bn supports 3,000 jobs and $300m of exports [11].

Silicon Valley's latest stars were already controversial abroad. In 2016 Uber sold its Chinese operations to a local rival after a brutal battle. In December India's two digital champions, Ola, a ride-hailing firm, and Flipkart, an e-commerce site, said the government should protect them against Uber and Amazon. They argued that their rivals would build monopolies, create few good jobs and ship the profits to the US [11].

The last time the MNC was in trouble was in the aftermath of the Depression. Between 1930 and 1970 their stock of investment abroad fell by about a third relative to global GDP; it did not recover until 1991. Some firms "hopped" across tariffs by building new factories within protectionist countries. Many restructured, ceding autonomy to their foreign subsidiaries to try to give them a local character. Others decided to break themselves up [11].

Today MNCs need to rethink their competitive advantage. Some of the old arguments for going global are obsolete—in part because of the more general successes of globalisation. Most MNCs do not act as internal markets for trade. Only a third of their output is now bought by affiliates in the same group. External supply chains do the

rest. MNCs no longer have a lock on the most promising ideas about management or innovation. Where they have enforceable patents over valuable brands they are still at an advantage, as they are in products, such as jet engines, where economies of scale are best created by spreading costs over the entire world. But those benefits are less than they were [11].

The lack of advantage is revealed in the amount of activity that yields little value. Roughly 50% of the stock of FDI makes an ROE of less than 10% (40% of the stock if you exclude natural-resources firms). Ford and General Motors make 80% or more of their profits in North America, suggesting their foreign returns are abysmal [11].

Many industries that tried to globalise seem to work best when national or regional. Retailers such as Britain's Tesco and France's Casino have abandoned many of their foreign adventures. The US's telecoms giants, AT&T and Verizon, have put away their passports. Financial firms are focusing on their "core" markets. LafargeHolcim, a cement maker, plans to sell, or has sold, businesses in India, South Korea, Saudi Arabia and Vietnam. Even successful global firms are dieting. P&G's foreign sales dropped by almost a third since 2012 as it closed or sold weak businesses [11].

In the future, it seems, the global business scene will have three elements. A smaller top tier of MNCs will burrow deeper into the economies of their hosts, helping to assuage nationalistic concerns. General Electric is localising its production, supply chains and management. Emerson, a conglomerate that has over 100 factories outside the US, sources about 80% of its production in the region where it is sold. Some foreign firms will invest more deeply in US-based production to avoid tariffs, if Mr Trump imposes them, much as Japanese car firms did in the 1980s. This is doable if you are large. Siemens, a German industrial giant, employs 50,000 in the US and has 60 factories there. Midsized industrial firms will struggle to muster the resources to invest more deeply in all their markets [11].

Politicians will increasingly insist that companies buying foreign firms promise to preserve their national character, including jobs, R&D activity and tax payments. SoftBank, a Japanese firm that bought ARM, a British chip company, in 2016, agreed to such commitments. So has Sinochem, a Chinese chemicals firm that is buying Syngenta, a Swiss rival. The boom in foreign takeovers by Chinese firms, meanwhile, may fizzle out or explode. Many such deals, reliant on subsidised loans from state banks, probably make little financial sense [11].

The second element will be a brittle layer of global digital and intellectual-property MNCs: technology firms, such as Google and Netflix; drugs companies; and companies that use franchising deals with local firms as a cheap way to maintain a global footprint and the market advantage that brings. The hotel industry, with its large branding firms such as Hilton and Intercontinental, is a prime example of the tactic. McDonald's is shifting to a franchising model in Asia. These intangible MNCs will grow fast, but because they create few direct jobs, often involve oligopolies and do not benefit from the protection of global trade rules, which for the most part only look after physical goods, they will be vulnerable to nationalist backlashes [11].

The final element will be perhaps the most interesting: a rising cohort of small firms using e-commerce to buy and sell on a global scale. Up to 10% of the US's 30m or so small firms already do this to some extent. PayPal, a digital payments firm, says its cross border transactions, which include activity from such multinationalettes, are running at $80bn a year, and growing fast. Jack Ma, the boss of Alibaba, a Chinese e-commerce firm, predicts that a wave of small Western firms exporting goods to Chinese consumers will go some way to reversing the past two decades of massive US firms importing goods from China [11].

The new, prudent age of the MNCs will have costs. Countries that have grown used to global firms throwing cash around may find that competition abates and prices rise. Investors, who all told have a third or more of their equity portfolios tied up in multinational firms, could face some unpleasant turbulence. Economies that rely on income from foreign investments, or capital inflows from new ones, will suffer. The collapse in profits from the UK's MNCs is the reason why Britain's balance of payments looks bad. Of the 15 countries with current-account deficits of over 2.5% of GDP in 2015, 11 relied on fresh multinational investment to finance at least a third of the gap [11].

The result will be a more fragmented and parochial kind of capitalism, and quite possibly a less efficient one—but also, perhaps, one with wider public support. The infatuation with global companies will come to be seen as a passing episode in business history, rather than its end [11].

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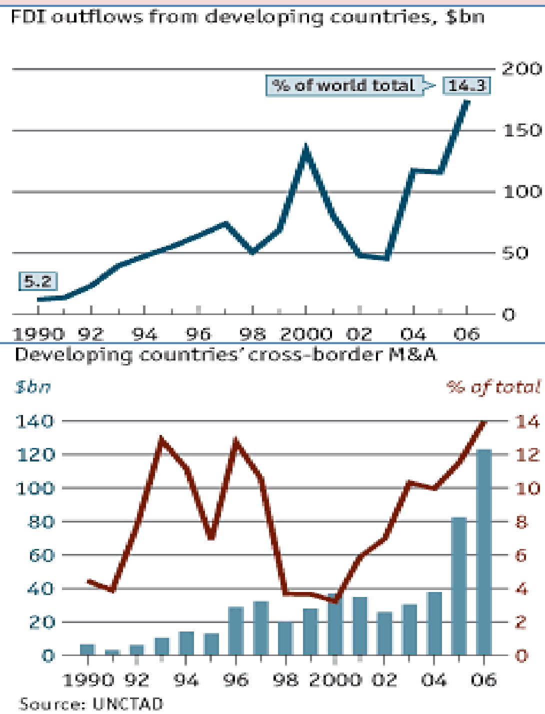
A new breed of multinational firm emerges

In 2006, Boston Consulting Group (BCG) found 100 firms from emerging markets with total assets of $520 billion, exceeding the top 20 car companies. By 2004, the UN Conference on Trade and Development noted, five emerging Asia firms were among the 100 biggest MNCs measured by overseas assets; ten more from emerging countries made the top 200. By 2006 FDI (including mergers and acquisitions) from developing economies reached $174 billion, 14% of the world's total, giving such countries a 13% share (worth $1.6 trillion) of the stock of global FDI. In 1990 emerging economies accounted for just 5% of the flow (see chart 1) and 8% of the stock. Their slice of global cross-border M&A has climbed, reaching 14% in value terms in 2006 (chart 2), costing $123 billion in more than 1,000 cross-border deals.



In the 1970s, UNCTAD raised concern about the power wielded by rich-world MNCs. In a more open world, a new, fundamental shift has emerging economies spawning their own giants. UNCTAD's attention is on the new shape of global business: increasing south-north and south-south investment flows, as emerging economy firms invest abroad.

Besides big deals, MNCs from developing countries have grown organically and through smaller deals. The Indian trio of Infosys, Tata Consultancy Services and Wipro, built an IT outsourcing industry that went upmarket, global and is chasing rich-country leaders, Accenture and IBM. China's Lenovo bought IBM's PC business. The Haier and Hisense groups lead in domestic appliances and consumer electronics. BYD is the largest maker of nickel-cadmium batteries.

Chery Automobile, China's leading car exporter, has plans for plants in E. Europe, the Middle East and South America. Johnson Electric, Hong Kong, has half the world market for tiny electric motors cornered. Cemex, a Mexican cement firm, took over a big UK group, RMC. Brazil's Embraer is the third-largest aircraft firm, specialising in regional jets. Half the $6 bn sales of Sadia and Perdigão, two Brazilian food companies, are exports.

Firms like these are expanding sales and production internationally. Their home markets offer several advantages. Rapid growth gave firms scale and cash to invest abroad. Costs are low. Difficulties with operating in an emerging market may make managers adaptable and resilient. Gradual liberalisation in the home market—as in India since the early 1990s—exposed them to competition from MNCs. The threat to their domestic dominance encouraged managers to hone their skills, exposed them to best international practice and spurred them to seek growth abroad to compensate for lost domestic market share.

The new emerging market MNCs are fanning out globally through five strategies, according to BCG:

(1) Taking brands from local to global. China's Hisense, a $3.3 billion consumer-electronics group, with over 10% of the market for TV sets at home, it turned its attention to global markets with a product range that included air conditioners, PCs and telecoms equipment. It manufactures in Algeria, Hungary, Iran, Pakistan and South Africa, selling these in more than 40 countries. The Chinese market gave the company a vast, cheap manufacturing base, to which it adds other advantages such as design and world-class R&D.

(2) Turning local engineering excellence into innovation on a global scale. Supported by the Brazilian government and later largely privatised, Embraer overtook Canada's Bombardier to become the world's leading maker of regional jets. It is one of Brazil's biggest exporters, combining low-cost manufacturing with advanced R&D. Embraer has a joint venture with China Aviation Industry Corp. II. In this, it was even ahead of Boeing and Airbus, both now scrambling to transform themselves from rich-world exporters into global producers, with long, difficult-to-manage global supply chains.

(3) Leadership in a narrow product category. China's BYD, a battery-maker, uses more labour-intensive production than its Japanese competition, taking advantage of low-cost labour. Johnson Electric, based in Hong Kong produces chiefly in mainland China, making tiny electric motors for cameras or cars. Once US or EU industries are now Chinese. Johnson built its strength partly through well-timed acquisitions of plants in markets closer to customers and R&D centres in Israel, Italy, the US and Japan.

(4) Using local resource advantages with world-class marketing and distribution. Brazil's Sadia and Perdigão built sales organisations globally to make the most of the abundant natural resources to produce pork, poultry and grain in Brazil, complemented by ideal growing conditions and low labour costs. Vale, a Brazilian firm, exploited its home country's cheap iron ore supplies to become a world-leading supplier.

(5) Rolling out to many different markets. Mexico's Cemex is one of the biggest suppliers of ready-mixed concrete (annual sales of $18 billion in 2006). Cement and building materials are "territorial goods", i.e., too bulky, basic and expensive to transport long distances. It may not be worth shipping cement from Mexico to Europe, but know-how and investment can be done in any market. Rich-world firms, such as Lafarge and Saint-Gobain, invest in developing countries to increase sales of their cement and building products; Cemex shows that the same thing can flow in reverse.

Other distinct advantages include being family-owned or -controlled (even if public companies), helping them to make quick decisions; and having access to cheap finance from state banks [10].