The Economist

China and Russia: unlikely friends

Poland's challenge to the EU

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JULY 29TH–AUGUST 4TH 2017

Venezuela in chaos

What the world should do

The Economist

2017-07-28

The world this week

Politics this week

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America imposed sanctions on 13 Venezuelan officials ahead of a planned election to a constituent assembly, which will have the power to rewrite **Venezuela's** constitution. The sanctions freeze the American assets of the army chief, the interior minister and the head of the electoral commission among others and bar American companies from doing business with them. Critics of the Venezuelan regime say it will use the proposed constituent assembly to snuff out democracy. The opposition called a 48-hour strike to protest against it.

A show of force

Chinese and **Russian** warships staged a joint exercise in the Baltic Sea, their first together in those waters. Their navies have stepped up co-operation in recent years. They have also staged war games in the South China Sea and the Mediterranean. China wants to show that its navy can operate far afield; both countries also share a resentment of American naval power. See article.

Hong Kong said that officials from mainland China will enforce immigration law inside a new railway station in the city that is due to open late next year. The move was condemned by pro-democracy campaigners, who fear it is a further encroachment on the territory's autonomy.

Martial law in Mindanao, the second-largest island in the **Philippines**, was extended until the end of the year. The army is battling insurgents linked to Islamic State in the city of Marawi. Meanwhile, Rodrigo Duterte, the country's fiery president, said he was calling off peace talks with Maoist rebels. He has threatened to launch air strikes at schools that teach children from the Lumad tribe. He said the schools were a breeding ground for communists.

The Taliban claimed responsibility for a bombing in Kabul in which at least 31 people died. The insurgents also killed dozens of soldiers in an attack on an army base near Kandahar. Over 1,600 civilians were killed in **Afghanistan** in the first half of the year.

Australia's minister for resources stepped down after learning that he holds dual nationality, which the constitution forbids for legislators. Matthew Canavan said he had no idea he was also an Italian citizen: his mother registered him in 2006. Two Green party senators recently resigned because they also hold dual nationality.

Honourable worship

Israel's government tried to diffuse tension over access to the al-Aqsa mosque in Jerusalem by removing metal-detectors it had installed there. But their replacement by high-tech cameras is not likely to prove acceptable to **Palestinians**.

The European Court of Justice ruled that **Hamas**, an Islamist group that runs the Gaza Strip, should remain on the European Union's terrorist list.

Libya's two internal rivals, the UN-backed prime minister in the west and the military commander of the east, met in Paris and agreed to a ceasefire. See article.

Ntabo Ntaberi Sheka, a warlord accused of overseeing mass rape in the **Democratic Republic of Congo**,gave himself up to UN peacekeepers in the east of the country.

They'll see you in court

Following a week of street protests against planned changes to the judiciary, **Poland's** president, Andrzej Duda, vetoed two of three bills seeking to limit the independence of the courts. Despite the veto, the European Commission issued a formal warning, giving Poland one month to address concerns over the government's efforts to nobble the judiciary. See article.

Sweden's government faced a political crisis following a data breach at the transport agency. Leaders from the centre-right opposition called for a no-confidence vote against three ministers from the ruling Social Democratic Party.

The European Court of Justice's adviser recommended that it should dismiss a legal case brought by Hungary and Slovakia against **refugee quotas**. The European Commission sent a formal request to Poland, Hungary and the Czech Republic to respect the quotas, which aim to ease pressure on Greece and Italy.

The EU rejected **Turkey's** request for new accession talks. The EU has condemned the Turkish government's security crackdown following an attempted coup in July 2016. A trial of 17 journalists on terrorism-related charges and the detention of Amnesty International activists have only fuelled tensions with Brussels over human rights.

The separation of power

The House of Representatives voted by 419-3 to impose new **sanctions** on Russia, Iran and North Korea and to give Congress the power to thwart any attempt by the White House to ease sanctions against Russia. The bill now moves to the Senate where it has a similar level of support: enough to override a veto by Mr Trump. See article.

At a closed-door meeting in the Senate, **Jared Kushner**, Mr Trump's son-in-law, who is a senior adviser to the president, denied collusion between the Trump campaign and Russian officials.

With much of Washington consumed by the Republicans' wrangling over a **health-care** bill and amendments to pass a "skinny" repeal of Obamacare, Mr Trump took to Twitter to announce a ban on **transgender** people serving in the armed forces. See here and here.

After just six months in the job, **Sean Spicer** quit as White House press secretary in a disagreement over Mr Trump's appointment of a new communications director. Mr Spicer's tenure was a troubled one. He had a feisty relationship with the media from the start, defending Mr Trump's exaggerated claims about the size of his inauguration crowd. But he was shut out of the president’s inner circle; the appointment of Anthony Scaramucci, a financier and broadcaster known as “The Mooch”, to the top communications job was the final straw.

A seminal study

Research led by American and Israeli scientists suggested that **sperm counts** among men in rich countries have fallen by around 50% in four decades. Other studies have made similar claims in the past, but have been criticised for being unreliable. The latest analysis combines results from 185 other papers and strongly suggests that the trend is real. Scientists do not know what is causing the decline: one candidate is hormone-disrupting chemicals used widely in industry.

Business this week

Jul 27th 2017

It was an eventful week for the **European car industry**. The British government announced that it would ban the sale of new cars that run only on diesel or petrol by 2040. France made a similar pledge recently. Meanwhile, BMW said it would build its new fully electric version of the Mini in Britain. It had considered other sites in Europe.

A car cartel?

The European Commission confirmed it was looking into allegations that **German carmakers** colluded to reduce the costs of parts and diesel emission-treatment systems. The commission was responding to a tip-off, and stressed that it was "premature at this stage to speculate". See article.

GrabTaxi, a ride-hailing firm based in Singapore and operating in seven countries, raised $2.5bn to up its competition with Uber. SoftBank, a Japanese tech giant, and Didi Chuxing, a Chinese version of Uber, provided most of the financing. It was the largest fundraising round for a startup in South-East Asia to date.

Google's parent company, Alphabet, reported a 28% drop in quarterly profit as it absorbed the cost of the $2.7bn fine levied against Google by the EU for anti-competitive practices. Alphabet's net income for the second quarter came in at $3.5bn; revenues rose by a fifth to $26bn.

Foxconn confirmed that it is to build a factory in Wisconsin, its first big investment in the United States. The Taiwanese contract electronics manufacturer assembles the iPhone and other gadgets at its plants in China and elsewhere. The factory in Wisconsin will produce LCD displays for cars, smartphones and TVs.

At **OPEC's** meeting in St Petersburg there were tough words, but little action, directed at member states lagging in their commitment to reduce oil supply in order to boost the commodity's price. OPEC and Russia agreed to lower output last year, but Ecuador recently became the first country to renege on the pledge. Without naming any country directly, Saudi Arabia's energy minister vowed there would be no more "free rides".

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A study by the Global Infrastructure Hub, an organisation backed by the G20, found that $97trn is needed in global **infrastructure** investment by 2040, but that there is an $18trn shortfall between current investment projections and the spending that is required. China will have the greatest demand at $28trn, but America has the biggest predicted shortfall: $3.8trn. Poorer countries have larger proportional investment gaps. Egypt, Nigeria and South Africa, for example, are forecast to meet only 69% of their infrastructure needs.

The bullish mood in American stockmarkets was unaffected by the **Federal Reserve's** statement at its latest policy meeting that it would start to unwind the portfolio of assets it accumulated during the financial crisis "relatively soon". The Fed left interest rates on hold, but did nothing to suggest it won't raise rates one more time before the end of the year.

The IMF cut its forecast for growth this year in America to 2.1% and in Britain to 1.7%. Right on cue, official figures showed that **Britain's economy** grew by 1.7% in the second quarter year on year. Languid growth in the manufacturing and construction industries was offset by a robust services sector, notably the booming film-production industry. A handful of recent blockbusters have been wholly or partially shot in Britain, including "Beauty and the Beast".

The **euro zone's economy** was projected by the IMF to grow slightly faster than it had previously expected. It now thinks the currency bloc's GDP will expand by 1.9% this year. But in a separate report the fund warned that the level of public debt was still too high in some countries and that governments should do more to "repair the pre-crisis erosion of competitiveness".

Greece sold its first government bonds on international markets for three years. There was heavy demand for the five-year note, though half the buyers had been offered an incentive to switch from bonds that are due to pay out in 2019. Still, the prime minister hailed it as a big step towards finishing the "unpleasant adventure" of restrictive bail-outs.

Britain's Supreme Court ruled that fees imposed on workers who want to take their employer to a **tribunal** are unlawful. The fees were introduced in 2013 by the government to deter unscrupulous claims. The number of cases has plunged since then. The court found people could not afford the fees.

There's a takeover afoot

Having put itself up for sale after a run of bad results, **Jimmy Choo** found a buyer. The upscale British shoemaker is being bought by **Michael Kors**, an

American fashion house at the lower end of the luxury market, for $1.2bn.

KAL’s cartoon

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Leaders

Coping with catastrophe

How to deal with Venezuela

Sanctions should target officials, not the country

Jul 29th 2017

VENEZUELA claims to have more oil than Saudi Arabia, yet its citizens are hungry. An astonishing 93% of them say they cannot afford the food they need, and three-quarters have lost weight in the past year. The regime that caused this preventable tragedy professes great love for the poor. Yet its officials have embezzled billions, making Venezuela the most corrupt country in Latin America, as well as the most ineptly governed. It is a textbook example of why democracy matters: people with bad governments should be able to throw the bums out. That is perhaps why President Nicolás Maduro is so eager to smother what little is left of democracy in Venezuela.

On July 30th, barring a last-minute change of mind, Mr Maduro will hold a rigged election to rubber-stamp the creation of a hand-picked constituent assembly whose aim is to perpetuate his unpopular state-socialist regime (see article). It will complete the destruction of the powers of parliament, now controlled by the opposition, and wreck the integrity of a presidential election due next year, which, if it were free and fair, Mr Maduro would surely lose. Opponents say the assembly will install Cuban-style communism. At the very least, its creation will provoke more violence in a country where the streets are already choked with tear gas and littered with buckshot from police shotguns. In almost four months of protests, more than 100 people have died; hundreds more have been locked up for political reasons. All this infuriates Venezuelans. It should alarm the outside world, too.

The clueless caudillo of Caracas

By the end of this year Venezuela's economic collapse since 2012 will be the steepest in modern Latin American history. Income per person is now back where it was in the 1950s. The main cause of this calamity is ideological. Following the lead of his late mentor, Hugo Chávez, Mr Maduro spends public money lavishly, especially on his supporters. Weak oil prices and inept management mean he cannot pay his bills. So he prints money and blames speculators for the resulting inflation, which is expected to exceed 1,000% this year. The black-market price for US dollars is now about 900 times the official rate. Price controls and the expropriation of private firms have led to shortages of food and medicine. With hospitals bare of supplies, the maternal mortality rate jumped by 66% last year. Officials flagrantly profiteer from their access to hard currency and basic goods. Venezuela has become a favoured route for drug-trafficking and is awash with arms.

Some left-wingers, such as Britain's Jeremy Corbyn, imagine that Venezuela's "Bolivarian revolution" is a promising experiment in social justice. Tell that to the tens of thousands of Venezuelans who have fled to neighbouring countries. As the crisis worsens, their number will rise. That makes Venezuela's government a threat to the region as well as its own people.

What can be done? The best solution would be a negotiated transition. Mr Maduro would finish his term but would respect the constitution and parliament, free political prisoners and guarantee that overdue regional elections, and the presidential contest next year, take place fairly. However, an attempt at such a negotiation failed last year, and there is no sign that Mr Maduro and his cronies will voluntarily surrender power.

Those who want to save Venezuela have limited influence, but they are not helpless. The opposition, a variegated alliance long on personal ambition and short of cohesion, needs to do far more to become a credible alternative government. That includes agreeing on a single leader. Some in the opposition think all that is needed to trigger the regime's collapse is to ramp up the protests. That looks fanciful. Mr Maduro can still count on the army, with which he co-governs. In Venezuela's command economy he controls such money as there is, and retains the backing of a quarter of Venezuelans—enough to put his own people on the streets. And he has the advice of Cuba's security officials, who are experts in selective repression.

Aim at the regime, not its victims

Latin America has at last woken up to the threat. Venezuela is far more isolated than it was, having been suspended from the Mercosur trade group. But it was able to avoid a similar suspension from the Organisation of American States (OAS) last month with the backing of its ideological allies and some Caribbean island-states to which it offers cheap oil. The United States should have applied more diplomatic muscle to sway the vote at the OAS. President Donald Trump is now considering broad sanctions such as barring the import of Venezuelan oil, or banning American companies from working in Venezuela's oil industry. That would be a mistake: Mr Maduro would find new buyers for his oil within months. In the meantime, ordinary people would suffer more than the regime's loyalists. And broad sanctions might strengthen the regime, because Mr Maduro's empty claim that he faces "economic warfare" from "imperial" America would at last have some substance.

More promisingly, on July 26th the Trump administration announced individual sanctions on a further 13 Venezuelan officials involved in the constituent assembly, or suspected of corruption or abusing human rights. These officials have had visas withdrawn, and American banks and firms are barred from doing business with them. This effort could be intensified by pressing banks to disclose embarrassing information about officials who have stashed stolen public funds abroad. The European Union and Latin America should join this effort.

It will not, in itself, force the regime to change. But the stick of individual sanctions should be combined with the offer of negotiations, brokered by foreign governments. Any final deal may have to include legal immunity for senior Venezuelan officials. That is distasteful, but may be necessary to achieve a peaceful transition back to democracy.

The alternative could be a slide into generalised violence, for which Mr Maduro would be squarely responsible. Already there are signs of anarchy, with radicals on both sides slipping loose from their leaders' control. Rather than a second Cuba or a tropical China, *chavista* Venezuela, with its corruption, gangs and ineptitude, risks becoming something much worse.

Blue-water reds

The West need not fear China’s war games with Russia

In fact, America’s navy should co-operate more with China’s, too

Jul 29th 2017

RARELY in times of peace has a country acquired naval power at such a rate as China has in recent years. Three decades ago its warships were clapped out, capable of operating only close to shore. Now its shipyards are churning out state-of-the-art combat vessels at a furious pace. Some experts believe it could have as many warships as America within a few years. China’s navy is also developing global range: this week three of its ships have been staging war games in the Baltic Sea with the Russian navy, the first joint exercises by the two countries in those waters. The intended message to the West is clear. China and Russia, united in their resentment of American power, are thumbing their noses at NATO on its doorstep.

China’s naval build-up worries American officials. Hardly a week goes by without some new development that troubles them. In April the country launched its first domestically built aircraft-carrier, and then in June its first

10,000-tonne destroyer—similar in size to the ones America deploys in the region. This month Chinese ships filled with troops sailed for Djibouti to set up the country's first overseas military base. China's naval build-up is giving it the wherewithal to seize and hold disputed territory to which it lays claim in the East and South China Seas, and to threaten Taiwan. In the event of a conflict, America could be drawn in. This week's exercises with Russia in the Baltic, meanwhile, suggest not only a shared enmity towards the West but also mutual admiration of each other's thuggish political systems. President Xi Jinping has turned a blind eye to Russia's land-grab in Ukraine, and President Vladimir Putin to China's in the South China Sea.

Yet there is far less to the Russia-China relationship than meets the eye (see article). Russian officials worry about China's growing economic and military might almost as much as their American counterparts do. Russia sells China a lot of weapons, but sells similar stuff to India, China's rival. True, Mr Xi ignores the West's sanctions on Russia—but that is mainly because he wants a stable relationship with a huge neighbour which China has come close to fighting in living memory.

Exercising responsibility

As for China's naval muscle-flexing in the Baltic, that is a development that should, in several respects, be welcomed rather than feared. If China wants to show that its warships can operate in distant seas, there is nothing wrong with that. Indeed, it is entirely right that China, as a global economic power, should play a larger part in providing the maritime security on which global trade depends. It is already taking part in anti-piracy operations in the Gulf of Aden—something for which its base in Djibouti will play a useful supporting role.

Deploying its navy far beyond its own waters might also help China understand that America, too, has good reasons for doing so. China frequently huffs about American warships in the western Pacific, refusing to accept one of the Pentagon's main reasons for deploying there: that America has a vital stake in the security of Asian trade.

Rather than fretting about joint exercises like those taking place this week, America should encourage China to participate in more of them, including the biennial multi-country RIMPAC manoeuvres, to be held off Hawaii next year. In May the Pentagon invited China to join in, for what would be the third time. Some American politicians grumble about the involvement of a navy so unfriendly to the West. But they are wrong to do so. Such exercises are an important way to prevent confrontation triggered by misunderstanding. And China’s inclusion would help ensure that its increasing naval assertiveness bolsters global security, rather than threatens it.

Trade deals

Britain and America suffer from similar delusions on trade

A special relationship with reality

Jul 27th 2017

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NO TWO countries are doing more to strain the fabric of modern trade than America and Britain. President Donald Trump wants to rewrite the terms of America's trade relationships with everyone from Mexico to South Korea. After its vote to leave the European Union, Britain faces having to negotiate fresh trade deals with both the EU and countries beyond.

The pair's tone on trade is different: one wants to put "America First", the other to create a "global Britain". But both visions are predicated on the idea of striking swift, bilateral deals, and each has identified the other as the perfect partner. At a meeting of G20 leaders this month, Mr Trump spoke of a "powerful deal, great for both countries", which would be done "very, very quickly". On July 24th Liam Fox, Britain's international trade secretary, met his American counterparts to start talks about a post-Brexit agreement. A day later the president tweeted his excitement: "Working on major Trade Deal with the United Kingdom. Could be very big & exciting. JOBS!"

An agreement between Britain and America would be a good thing in principle. Tariffs are already pretty low, although Mr Trump may have his eye on a 10% tariff on cars imported from America. But differences in rules and standards impede the flow of goods and services, worth $227bn in 2016, between the two countries. In practice, however, Mr Trump and, especially, the Brexiteers suffer from several profound delusions.

The first concerns speed. Mr Trump's desire to move fast is all very well, but no deal can get done without the say-so of Congress. The American legislature has already slowed him down on plans to renegotiate the North American Free Trade Agreement (NAFTA), and an agreement with Britain is not on its agenda. Much more binding are the constraints on Britain—its government is not legally allowed to sign anything until it leaves the EU. Mr Fox can swan around the world as much as he likes, but there can be no real negotiations with third countries before Britain has worked out such fundamental questions as whether it is part of a customs union with the EU.

Politics will also slow things down. Mr Trump seems to have little understanding that other countries have voters; as a slogan, "America First" tends to resonate less with non-Americans. Brexiteers have been equally complacent about what the British public is prepared to swallow to strike new deals. Mr Fox spent much of this week fending off questions about whether Britain would end its ban on chlorinated chicken in order to satisfy America's farmers.

A second delusion common to both countries concerns the value of bilateralism. The big barriers to trade are regulatory: for EU-American trade as a whole, differences in rules on business and financial services have a trade-dampening effect equivalent to a tariff of 30%. In general, the most efficient way to dismantle such barriers is by harmonising rules, not multiplying them. In some cases Britain will have to choose between freer trade with America and unimpeded access to Europe. If Britain were to deviate from EU norms in a deal with America on genetically modified foods, for example, it would risk tougher customs checks with Europe, including at the border with Ireland. More limited access to the EU would also diminish its appeal to America. Until Britain has settled on a new regulatory relationship with the EU, what might seem like a bilateral negotiation will in practice be a multilateral one.

Don’t count your chlorinated chickens

Finally, both sides seem to have forgotten how much geography matters to trade. The EU accounts for 44% of Britain’s exports, America for just 19%. Economists have estimated that a hard Brexit would hammer exports to the EU by 25%. To offset this loss, those to America would need to rise by an improbable 58%. Similarly, it would be bizarre for America to prioritise Britain given the renegotiation of NAFTA. Mr Trump says of Britain that “there is no country that could possibly be closer than our countries”. American firms, whose supply chains weave across Canada and Mexico, may beg to differ.

Plenty of people in Britain and America understand all this, of course. It suits Mr Trump and the Brexiteers to show that they have choices of trade partner. But the inconvenient facts are these: trade deals take time and have most impact when they involve lots of countries or ones that are right next door. A UK-US agreement is neither imminent nor a priority.

Code red

Why China's AI push is worrying

State-controlled corporations are developing powerful artificial intelligence

Jul 27th 2017

IMAGINE the perfect environment for developing artificial intelligence (AI). The ingredients would include masses of processing power, lots of computer-science boffins, a torrent of capital—and abundant data with which to train machines to recognise and respond to patterns. That environment might sound like a fair description of America, the current leader in the field. But in some respects it is truer still of China.

The country is rapidly building up its cloud-computing capacity. For sheer volume of research on AI, if not quality, Chinese academics surpass their American peers; AI-related patent submissions in China almost tripled between 2010 and 2014 compared with the previous five years. Chinese startups are attracting billions in venture capital. Above all, China has over 700m smartphone users, more than any other country. They are consuming digital services, using voice assistants, paying for stuff with a wave of their phones—and all the while generating vast quantities of data. That gives local firms such as Alibaba, Baidu and Tencent the opportunity to concoct best-in-class AI systems for everything from facial recognition to messaging bots. The government in Beijing is convinced of the potential. On July 20th it outlined a development strategy designed to make China the world's leading AI power by 2030.

An AI boom in the world's most populous place holds out enormous promise. No other country could generate such a volume of data to enable machines to learn patterns indicative of rare diseases, for example. The development of new technologies ought to happen faster, too. Because typing Chinese characters is fiddly, voice-recognition services are more popular than in the West; they should improve faster as a result. Systems to adjust traffic lights automatically in response to footage from roadside cameras are already being tested. According to the McKinsey Global Institute, a research arm of the consultancy, AI-driven automation could boost China's GDP growth by more than a percentage point annually.

Yet the country's AI plans also give cause for concern. One worry is that the benefits of Chinese breakthroughs will be muted by data protectionism. A cyber-security law that came into force in June requires foreign firms to store data they collect on Chinese customers within the country's borders; outsiders cannot use Chinese data to offer services to third parties. It is not hard to imagine tit-for-tat constraints on Chinese firms. And if data cannot be pooled, the algorithms that run autonomous cars and other products may not be the most efficient.

A second area of unease is ethics and safety. In America, the technology giants of Silicon Valley have pledged to work together to make sure that any AI tools they develop are safe. They will look at techniques like "boxing", in which AI agents are isolated from their environment so that any wayward behaviour does not have disastrous effects. All the leading AI researchers in the West are signatories to an open letter from 2015 calling for a ban on the creation of autonomous weapons. If it happens at all, the equivalent Chinese discussion about the limits of ethical AI research is far more opaque.

Chinese AI companies do have incentives to think about some of these issues: rogue AI would be a problem for the planet wherever it emerged.

There is a self-interested case for the formulation of global safety standards, for example. But a third concern—that AI will be used principally to the benefit of China's government—is a less tractable problem.

Autocratic intelligence

The new plan is open about AI's value to the state. It envisages the use of the technology in everything from guided missiles to predictive policing. AI techniques are perfect for finding patterns in the massive amounts of data that Chinese censors must handle in order to maintain a grip on the citizenry. It is easy to imagine how the same data could boost the country's nascent plans to create a "social-credit" system that scores people for their behaviour. Once perfected, these algorithms would interest autocratic regimes around the world. China's tech firms are in no position to prevent the government in Beijing from taking advantage of such tools. Baidu, for example, has been appointed to lead a national laboratory for deep learning. Chinese AI will reflect the influence of the state.

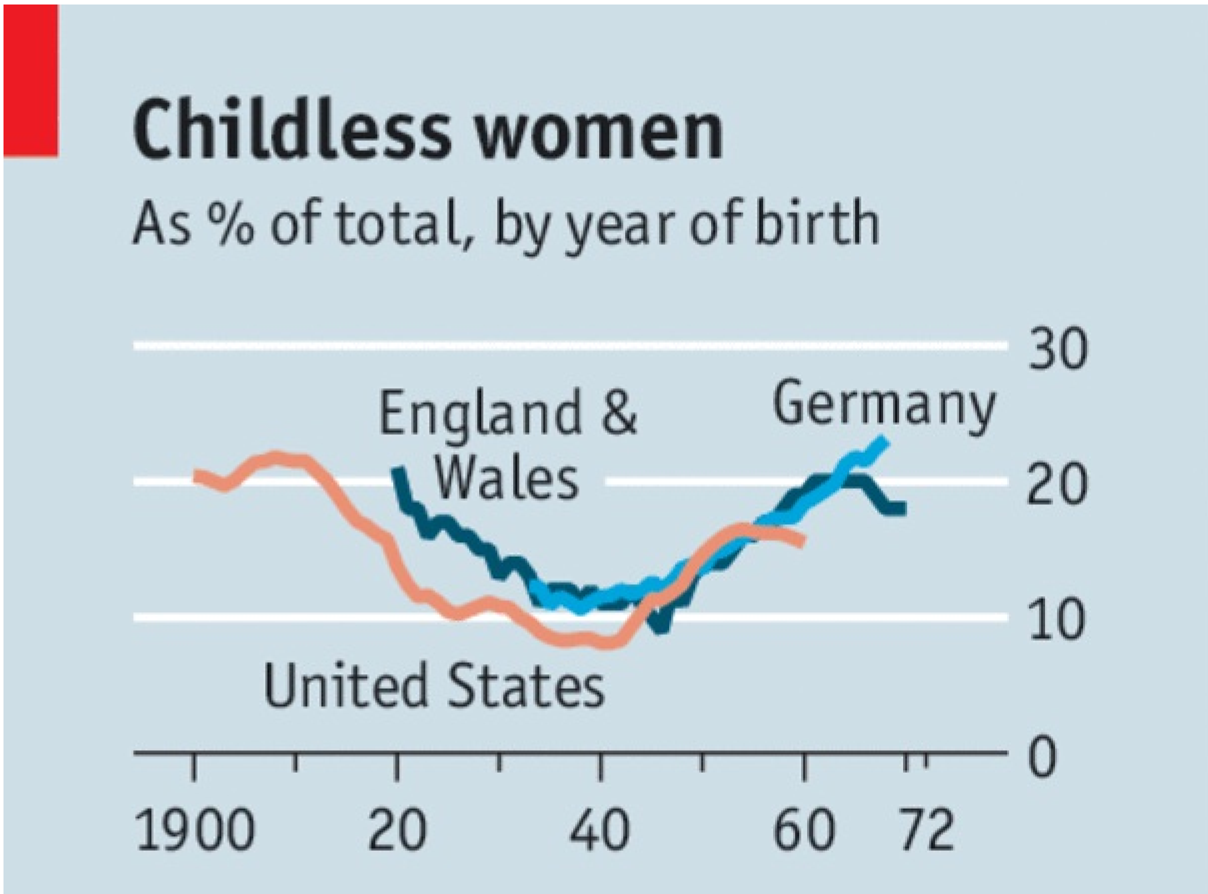
Western firms and governments are no angels when it comes to data collection and espionage. But Western companies are at least engaged in an open debate about the ethical implications of AI; and intelligence agencies are constrained by democratic institutions. Neither is true of China. AI is a technology with the potential to change the lives of billions. If China ends up having most influence over its future, then the state, not citizens, may be the biggest beneficiary.

No kidding

In defence of the childless

More and more Westerners have no kids. They should not be criticised for it

Jul 29th 2017



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ONE by one, prejudices are tumbling in the West. People may harbour private suspicions that other people's race, sex or sexuality makes them inferior—but to say so openly is utterly taboo. As most kinds of prejudiced talk become the preserve of anonymous social-media ranters, though, one old strain remains respectable. Just ask a childless person.

They are not subject to special taxes, as they were in Soviet Russia; nor are they driven from their homes, as they still are in some poor countries. The childless nonetheless come in for a lot of criticism. “Not to have children is a selfish choice,” Pope Francis has intoned, perhaps forgetting what the Bible says about motes and eyes. Others point out that non-parents are failing to produce the future workers who will pay for their pensions. Childless politicians are charged with not having a proper stake in society. “He talks to us about the future, but he doesn’t have children!” complained Jean-Marie Le Pen, co-founder of the National Front party, of Emmanuel Macron, who went on to win the French presidency. Similar attacks on Theresa May and Angela Merkel also failed—but researchers find that many voters quietly agree.

The charges against the childless should be thrown out, along with other social calumnies. In many rich countries, between 15% and 20% of women, and a slightly higher proportion of men, will not have children. The share is rising (see article). Some have medical problems; others do not meet the right person in time; still others decide they do not want them. Falling sperm counts in rich countries may play a role, too. Whatever the cause, the attacks on the childless are baseless.

If non-breeders are selfish, they have an odd way of showing it. They are more likely to set up charitable foundations than people with children, and much more likely to bequeath money to good causes. According to one American estimate, the mere fact of not having children raises the amount a person leaves to charity by a little over $10,000. The childless are thus a small but useful counterweight to the world’s parents, who perpetuate social immobility by passing on their social and economic advantages to their children.

The fact that so many senior politicians lack offspring ought to put to rest the notion that they do not care for society. Five of the G7 countries are led by childless men and women. Mr Macron, Mrs May, Mrs Merkel, Shinzo Abe and Paolo Gentiloni have their faults, but they are not notably less able than Justin Trudeau (who has three children) let alone Donald Trump (who has five). Their opportunities for nepotism are limited. And they spare their countries the spectacle of dynastic politics, which can lead to mediocrity. The BJP in India has a brighter future because Narendra Modi is childless; for proof, look at what has happened to the Congress party.

No kidding

The charge that childless people fail to pull their weight demographically is correct, but is less damning than it appears. Those who do not have children do put pressure on public pension systems. Faced with a deteriorating ratio of workers to pensioners, governments have to do unpopular things like making pensions less generous, as Japan has done, or accepting more immigrants, as some Western countries have done.

But to sustain public pensions in the long term, countries do not actually need more parents. What they need instead is more babies. It is possible to combine a high rate of childlessness with a high birth rate, provided people who become parents have more than one or two children. That was the pattern in many Western countries a century ago. Ireland, yet another country with a childless leader, still manages it today.

The childless also do everyone else a favour by creating wonderful works of art. British novelists have been especially likely to have no progeny: think of Hilary Mantel, P.G. Wodehouse and the Brontë sisters. In September Britain will put Jane Austen on its ten-pound note. That decision has been controversial, though it is hard to see why. Few people have written as shrewdly about money or about families—even though Austen did not marry, and had no children.

Letters

- **On the German economy: Letters to the editor** [Fri, 28 Jul 14:42]

Letters

Letters to the editor

On the German economy

Jul 27th 2017

Letters are welcome and should be addressed to the Editor at letters@economist.com

The German problem

Regarding your argument that Germany's current-account surplus is damaging the world economy ("Vorsprung durch Angst", July 8th), we should explore multilateral ways to put pressure on surplus countries to reduce their surpluses, so that not all the adjustment pressure falls on the deficit countries. It is much easier for surplus countries to spend down their surpluses (such as by importing more) than for deficit countries to squeeze the living conditions of their populations sufficiently to cut their deficits without the boost that would come from selling more to the surplus countries.

This is hardly a new idea. The British delegation at the Bretton Woods conference in 1944 proposed an "international clearing union", in which symmetrical adjustment pressure could be applied, such as interest charges on countries' surpluses. America, which had a large surplus at the time, rejected it out of hand. The European Payments Union, from 1950 to 1958, put the international clearing-house idea into practice, though without the added function of encouraging surplus countries to cut their surpluses. Today we can draw inspiration from the earlier experience and start to explore a multilateral mechanism for applying more symmetrical pressure on surplus and deficit countries. The idea is not pie-in-the-sky.

ROBERT WADE
Professor of global political economy
London School of Economics

You start from the assumption that the rest of the world would benefit if Germany were to spend more. This holds true only in a world which is demand constrained. But this is less and less the case since the global output gap has already fallen below 0.5% of potential output and is projected to disappear within a year or two. You also acknowledge that a number of smaller northern European countries run large surpluses as well. The sum of the surpluses of these countries is actually about $230bn, similar to that of Germany, so they do as much damage as Germany. Their surpluses hold a wider lesson: the attempt to pin underspending on some "Germanic" features is misleading.

The current-account numbers have to be taken with a pinch of salt. Mother Earth is running a current account of about $300bn with the rest of the universe. In judging the German surplus one should keep in mind that within the EU, and especially within the euro area, international transactions can no longer be measured with precision.

DANIEL GROS
Director
Centre for European Policy Studies
Brussels

What is wrong with a balanced budget when the economy is expanding nicely? Isn’t that exactly what John Maynard Keynes would have recommended? Germany could usefully spend more on infrastructure, the digital economy, defence, and child and nursing care. However, Berlin is already doing this.

Stepping up such spending gradually over years rather than in a sudden surge has two advantages. First, it doesn’t bust the budget, as it can be financed by rising tax receipts from strong gains in employment. Second, the money is more likely to be spent well if projects are examined on their merit, instead of being approved simply because the extra outlays would help to attain the fiscal deficit that *The Economist* deems so dearly desirable.

HOLGER SCHMIEDING
Chief economist
Berenberg
London

This is not the first time such imbalances have caused trouble in Europe. In the decade after the first world war, France eventually rejoined the gold standard, but with the franc at an artificially low peg. Its suppressed exchange rate should have been a temporary problem since convention dictated that higher exports would lead to gold inflows and thus inflation (internal adjustment). However, France sterilised these inflows and its share of the world’s gold reserves swelled from 7% in 1927 to 32% in 1932 without any increase in its price level.

Germany’s excess savings could be seen as a similar sterilisation. In the case of the 1920s, France was widely blamed for contributing to the Depression by exporting deflation to those countries sharing gold as currency. Its neighbour should take note.

HALLAM DIXON

Bedrock Asset Management
London

In terms of gross pay (not net) the OECD has found that Germany is only second to Belgium in taxing wages: 49% of German wage income goes to income tax and social security. With the government running fiscal surpluses and increasingly spending tax money on social transfers instead of investments, the obvious and fast solutions are significant tax cuts, both on income and consumption, and changes to an outdated pension system.

ULRICH VOSS
Kronberg, Germany

* You argue that through its trade surplus, Germany exerts a negative external effect on the world economy. But since the German economy is not big enough for that, you have to invoke the argument that this undermines arguments for free trade. You fail to mention that without the euro as a single currency, the Deutschmark would have appreciated long ago, making German exports pricier and her imports cheaper. Readers learn that the decisive reason for the German trade surplus is wage restraint, which reflects workers' preferences tilted in favour of job security rather than wage increases. Therefore, your argument boils down to accusing the Germans of having the wrong preferences. How far from economics can you stray?

PETER ZWEIFEL
Professor of economics emeritus
University of Zurich

The structural features of Germany's labour market are vastly distorted. Although real hourly wages have risen slightly, the growing share of atypical employment, especially at the bottom end of the labour market, is partially offsetting this gain. The importance of collective bargaining is diminishing, as fewer workers participate and the number of households living at or below the poverty threshold has reached an all-time high. Furthermore, the productivity-pay gap is ever widening.

Waiting for an automatic stabilising mechanism to gain traction might prove prohibitively costly. Swift and decisive action is what economic sanity demands.

CARSTEN SCHNEIDER, MdB
Responsible for budget, finance and euro policy in the Social Democratic

Party (SPD)
Berlin

The largest, long-term structural driver of Germany's continued trade surplus and prosperity is the euro. As long as Germany continues to have an artificially low exchange rate it will never again be the "poor man" of Europe.

GREGORY ALEXANDER MARKS
New York

The surpluses you identify coincide with the advent of the euro, which undervalues the German currency by some 40%. This undermines the whole European project. How long will the rest of Europe tolerate the benefits of the euro going mainly to Germany?

GUY HALLOWES
Sydney

There is also an emotional aspect attached to German exports. Germans tend to see their leading role in trade as a source of national pride.

MARTIN HOCK
Dresden, Germany

Germany has 1% of the world's population and produces 3% of the world's PPP GDP. Its current-account surplus is less than 0.5% of world GDP. Is that truly "damaging"? Germans, like the Swiss and the Dutch, prefer to invest abroad where they expect better returns. *The Economist* traditionally has favoured open markets and the free movement of capital. No longer?

G.H. KETELS
Munich

* Letters appear online only

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Briefing

- **Venezuela: The mess tropical Marxism makes** [Fri, 28 Jul 14:42]

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The mess one Marxist makes

Nicolás Maduro tries to make thugocracy permanent in Venezuela

An unpopular regime’s attempt to impose dictatorship could end bloodily

Jul 29th 2017 | CARACAS

IT COULD almost be a piece of contemporary art, rather than a tool of political struggle. Overlooked by a mango tree heavy with blushing fruit, a rope is strung across Avenida Sucre as it climbs through a comfortable middle-class area towards the forested slopes of Monte Ávila overlooking Caracas. Arranged beneath it are two distressed wooden beams, two pallets placed vertically, a wheel hub, a rusting metal housing for an electric transformer and several tree branches. They form a flimsy barricade watched over by a couple of dozen local residents.

Why are they blockading their own street? “Because we want this government to go,” explained María Antonieta Viso, the owner of a catering firm. They were taking part in a 24-hour “civic strike” on July 20th, called by the opposition coalition, Democratic Unity (MUD, from its initials in Spanish). Down the hill, across innumerable such roadblocks, the sting of tear gas signalled clashes between demonstrators and the National Guard, a militarised police force. The strike, repeated this week, was part of "Zero Hour"—a campaign of civil disobedience aimed at blocking a plan by Nicolás Maduro, Venezuela's president, to install a constituent assembly with absolute powers.

Mr Maduro claims that the assembly is the "only way to achieve peace", to provide Venezuelans with social welfare and to defend the country against what he claims is an "economic war" launched by America (though he provides no evidence of this). "What they are trying to do is to install the Cuban model in this country," retorts Ms Viso. "We will all be screwed even if we take to the streets. There won't be private property, my business will go to the state." The long battle over power and policy in Venezuela that began when Hugo Chávez was elected president in 1998 has reached a critical point. Both government and opposition believe that they are fighting for survival against a backdrop of a failing economy, rising hunger and anarchy.

Chávez, a former army officer, proclaimed a "Bolivarian revolution", named for Simón Bolívar, South America's Venezuelan-born independence hero. He, too, summoned a constituent assembly, which drew up a new constitution and which he used to take control of the judiciary and the electoral authority. For much of his 14 years in power he had the support of most Venezuelans, thanks partly to his charismatic claim to represent a downtrodden majority and to the flaws of an opposition identified with an uncaring elite. But above all the soaring price of oil gave him an unprecedented windfall, some of which he showered on social programmes in the long-neglected *ranchos* (shantytowns). A consumption boom, magnified by an overvalued currency, kept the middle class quiescent. He governed at first through a broad coalition of army officers, far-left politicians and intellectuals.

Angered by opposition attempts to unseat him and influenced by Fidel Castro, Chávez pushed Venezuela towards state socialism after 2007. Economic distortions accumulated, along with corruption and debt. Before he died of cancer in 2013, Chávez chose Mr Maduro, a former bus driver and pro-Cuban activist, as his successor.

From Chávez to Maduro

Mr Maduro, however, lacks Chávez's political skills and popular support. And he has had to grapple with the plunge in the oil price. Years of controls and the takeover of more than 1,500 private businesses and many farms mean that Venezuela now produces little except oil, and imports almost everything else. The government is desperate to avoid defaulting on its debt, since that would lead to creditors seizing oil shipments and assets abroad.

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Rather than reform the economy, Mr Maduro has simply squeezed it, applying a tourniquet to imports (see chart 1). The government has no clear strategy for external financing, and the fiscal deficit, mainly financed by printing money, is out of control, says Efraín Velázquez, the president of the National Economic Council, a quasi-official body. The result: “you can’t have growth and will have a lot of inflation.” Between 2013 and the end of this year, GDP will have contracted by more than 35% (see chart 2). What this means for most Venezuelans is penury.

Near Plaza Pérez Bonalde, a leafy enclave in the gritty district of Catia in western Caracas, 100 or so people, mainly women, queue up outside a bakery. They hope to get a ration of eight bread rolls for the subsidised price of 1,200 bolívares (less than $0.15 at the black-market exchange rate). "At least it's something, because everything else is so expensive now," says Sol Ciré, a mother of two. She is unemployed, having lost her job at a defunct government hypermarket. Her fate stems from a change of government strategy.

Generalised price controls had generated widespread shortages and embarrassingly long queues. Instead, the government has put the army in charge of a subsidised food-distribution system, known as CLAP and modelled on Cuba's ration book. Up to 30% of families get this dole of staple products regularly, reckons Asdrúbal Oliveros of Ecoanalítica, an economic consultancy. They are chosen not according to need but according to their political importance to the government.

On the breadline

At the same time, the government has relaxed price controls (bread is an exception). In Catia's main market, which spills into the surrounding streets, food is abundant, but pricey. A chicken costs 7,600 bolívares and bananas 1,200 a kilo. Most people don't have dollars to change on the black market: they must live on the minimum wage of 250,000 bolívares. The result is that four out of five households were poor last year, their income insufficient to cover basic needs, according to a survey by three universities. Medicines remain scarce. Walk down many streets in Caracas and you may be approached by a beggar.

All this has taken a heavy toll on the government's support. Mr Maduro won only 50.6% of the vote in a presidential election in 2013, a result questioned by his opponent, Henrique Capriles. In a parliamentary election in December 2015 the opposition won a two-thirds majority—enough to censure ministers and change the constitution.

In the government's eyes, the opposition is bent on overthrowing an elected president—the aim of protests in 2014, after which Leopoldo López, an opposition leader, was jailed on trumped-up charges. In response, it has resorted to legal chicanery. If Chávez often violated the letter of his own constitution, Mr Maduro tore it up.

Before the new parliament took over, the government used the old one to preserve its control of the supreme court by replacing justices due to retire. The court then unseated three legislators, eliminating the opposition's two-thirds majority. Mr Maduro has ruled by decree. The tame electoral tribunal quashed an opposition attempt to trigger a referendum to recall the president —a device Chávez put in the constitution. It postponed regional elections due to take place last December.

In March the court issued decrees stripping the parliament of all powers. That seemed to be because foreign investors take more seriously than the government a constitutional provision under which only the parliament can approve foreign loans. Although partially withdrawn, the decrees were the trigger for a confrontation that continues. They opened up fractures in *chavismo*—notably the public opposition of Luisa Ortega, the attorney-general since 2007 (who had jailed Mr López). Mr Maduro's announcement on May 1st that he would convene the constituent assembly intensified both trends.

Chávez's constitution was drawn up by a democratically elected constituent assembly, convoked by referendum. Mr Maduro is following a script from Mussolini. He has called the assembly by decree. It will have a "citizen, worker, communal and peasant-farmer" character, he said. What this means is that 181 members will be chosen by government-controlled "sectoral" groups such as students, fishermen and unions. Another 364 members will be directly elected, but in gerrymandered fashion: each of Venezuela's 340 municipalities will choose one. Small towns are under the government's thumb; cities, where the opposition is a majority, will get only one extra representative.

Datanálisis, a reliable pollster, finds that two-thirds of respondents reject the constituent assembly, more than 80% think it unnecessary to change the constitution and only 23% approve of Mr Maduro. At just two weeks' notice, on July 16th almost 7.5m Venezuelans turned out for an unofficial plebiscite organised by the opposition. Almost all of them voted to reject the assembly, to call on the army to defend the constitution and for a presidential election by next year (when one is due).

Few doubt that the assembly will be a puppet-body and the vote on July 30th, which the opposition will boycott, will be inflated. The government counts on the 4.5m people who are employed in the public sector or in communal bodies. Those who fail to turn out risk losing not just their job but their CLAP food rations. Additional pressure to vote in *chavista* neighbourhoods comes from the *colectivos*—regime-sponsored armed thugs on motorbikes. Officials have said the assembly will not only write a new constitution but will assume supreme power, sacking Ms Ortega and replacing the parliament, whose building it will occupy. It will give Mr Maduro a slightly larger figleaf than the supreme court for a dictatorship of the minority.

Yet the president will find it hard to make this stick. “How do you govern the country with 75% against you?” asks Mr Capriles. “I think he’s trapped.” For the past four months the opposition has held almost daily protests. These have a ritual quality. To prevent demonstrators reaching the city centre, or blocking the main motorway through Caracas, the National Guard fires volleys of tear gas, buckshot—and occasionally bullets. Younger radicals, known as the “Resistance”, press forward, throwing stones from behind makeshift shields. Similar scenes take place across the country. Looting is commonplace. In these clashes, over 100 people have died. More than 400 protesters are now prisoners, including several opposition politicians. After the parliament named 33 justices to a rival supreme court on July 21st, the government arrested three of them.

Resistance isn’t futile

Mr Maduro has more worries. The first is his own side. *Chavista* strongholds are wavering. In the bread queue in Catia, several people say they are against the assembly. The opposition managed to set up voting stations for its plebiscite there: at one, a woman died when a *colectivo* fired on voters. “Some people have left us and gone over to the other side,” admits a local official. “But it’s very difficult for a *chavista* to support the opposition,” she adds. Chávez is still viewed favourably by 53% of Venezuelans, according to Datanálisis.

Rather, a new movement of “critical” or “democratic” *chavistas*, including Ms Ortega, several former ministers and recently retired generals, has publicly called for the scrapping of the assembly and the upholding of the constitution. When they held a press conference at a modest hotel on July

21st, some 300 regime supporters outside tried to drown them out with loud music and chants of “traitors”.

Then there is the army. The regime has co-opted it, turning it into a faction-ridden, politicised and top-heavy moneymaking operation, with more than 2,000 generals (where 200 used to suffice). Mr Maduro has given them control over food imports and distribution, ports and airports, a bank and the mining industry. Many generals have grown rich by buying dollars at the lowest official exchange rate of $1=10 bolívares, intended for food imports, and selling them at the black market rate of 9,000. Others smuggle petrol or drugs.

Murmuring in the ranks

An “undercurrent of muttering” among junior officers is checked by a network of political commissars and snoops installed by Chávez, says José Machillanda, of Simón Bolívar University in Caracas. At the top, several thousand Cuban security personnel guard Mr Maduro and the 30-40 leaders who form the regime’s core.

But the assembly has tested the army’s loyalty to Mr Maduro. He twice reshuffled senior ranks in the past two months. Caracas is alive with rumours of an impending *pronunciamento*, in which the army withdraws its support for the regime.

Another acute threat to Mr Maduro is the economy. The rot has spread to the oil industry, Venezuela’s mainstay. According to OPEC, since 2015 the country’s oil output has fallen by 400,000 barrels per day (or around 17%). This is the long-term price of Chávez’s decision to turn PDVSA, the once efficient state oil company, into an arm of the welfare state.

Foreign-exchange reserves hover around $10bn, according to the Central Bank. Economists expect the government to make $3.5bn in debt payments due in the autumn, but it will struggle to find the $8.5bn it needs to avoid default next year. China, a big paymaster, is reluctant to lend more. Russia may be Mr Maduro’s best hope, but it worries about getting entangled in possible American sanctions against Venezuela.

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The fourth problem Mr Maduro faces is that the region has become less friendly to him. Chávez enjoyed the solidarity of other left-wing governments in Latin America. Many are no longer there, or have distanced themselves. Venezuela has been suspended from Mercosur, a trade group; it could be expelled if the assembly goes ahead, says Argentina's foreign minister. The regime showed that it cares about its standing in the region by the big diplomatic effort it made in June to prevent its suspension from the

Organisation of American States.

Many in Caracas assumed that Mr Maduro intended the assembly as a bargaining chip, to be withdrawn in return for concessions by the opposition. If so, he may be trapped by the forces of radicalisation he has unleashed. Diosdado Cabello, a retired army officer who is his chief rival within the regime, appears to see the assembly as his route to power. Back down now, and Mr Maduro risks losing face among his hard-core supporters.

Venezuela thus stands at a junction. One road involves a negotiation that might either fix a calendar for a free and fair election, or that might see Mr Maduro and other regime leaders depart. The opposition is mistrustful after talks brokered by the Vatican and José Luis Rodríguez Zapatero, a former Spanish prime minister, broke down last year when it quickly became clear that the government was not prepared to restore constitutional rule. Mr Zapatero was a conduit for a move that saw Mr López transferred from prison to house arrest this month. He is in Caracas again this week.

The city hums with rumours of a new mediation effort led by a shifting kaleidoscope of foreign governments. But conditions do not yet seem ripe. “The government sees the cost of leaving power as very high, that they would be destroyed and persecuted,” reckons Luis Vicente León of Datanálisis. The opposition is suspicious, too. “To return to political negotiations we have to have real signs that the government is prepared to change,” observes Freddy Guevara, the deputy leader of Mr López’s party.

Can anyone stop Mr Maduro?

That probably requires a military *pronunciamento*. But the army "looks at the opposition and doesn't see any guarantees that they would be able to run the country", says a foreign diplomat. The MUD has worked well as an electoral coalition, and its plebiscite was impressive. It has published a programme for a government of national unity. But, crucially, it lacks an agreed leader with a mandate to negotiate. “The opposition is stuck together with chewing gum,” says Mr León.

Anomie and anarchy

Barring a negotiation, the other route looks bleak. There is a growing sense of anomie and anarchy. On the opposition side, there is desperation in the self-barricading of its own neighbourhoods, an action which does little to hurt the government. Social media have been vital in undermining the regime’s control of information. But they also spread rumours and undermine moderation. Middle-class *caraqueños* are reading books on non-violent resistance. But on the streets many protesters express mistrust for the MUD. The “Resistance” is well-organised and trained. It would not be hard for it to take up arms.

For its part, the *chavista* block is splintering. The National Guard now raids properties in *chavista* areas at night, because they are being fired on by disgruntled residents. “There’s a growing attitude of ‘don’t mess with me’,” says Mr Machillanda.

Mr Maduro and his core of civilian leftists admire Cuba but they do not command a disciplined revolutionary state, capable of imposing its will across Venezuela’s vast territory. The 100 or so dead in the protests are fewer than are killed each weekend in lawless poor neighbourhoods. The “Bolivarian revolution” has created a state run by rival mafias and undermined from within by corruption.

“They could try to Cubanise the country,” says Mr Capriles. “But whether Venezuelans accept that is another matter.” Given the intensity of Venezuela’s confrontation, it has suffered remarkably little political violence. Sadly, that may now change. If Mr Maduro shuts down all hope of political change, it may take many more deaths to break the deadlock.

United States

The market for lemons

If America is overrun by low-skilled migrants…

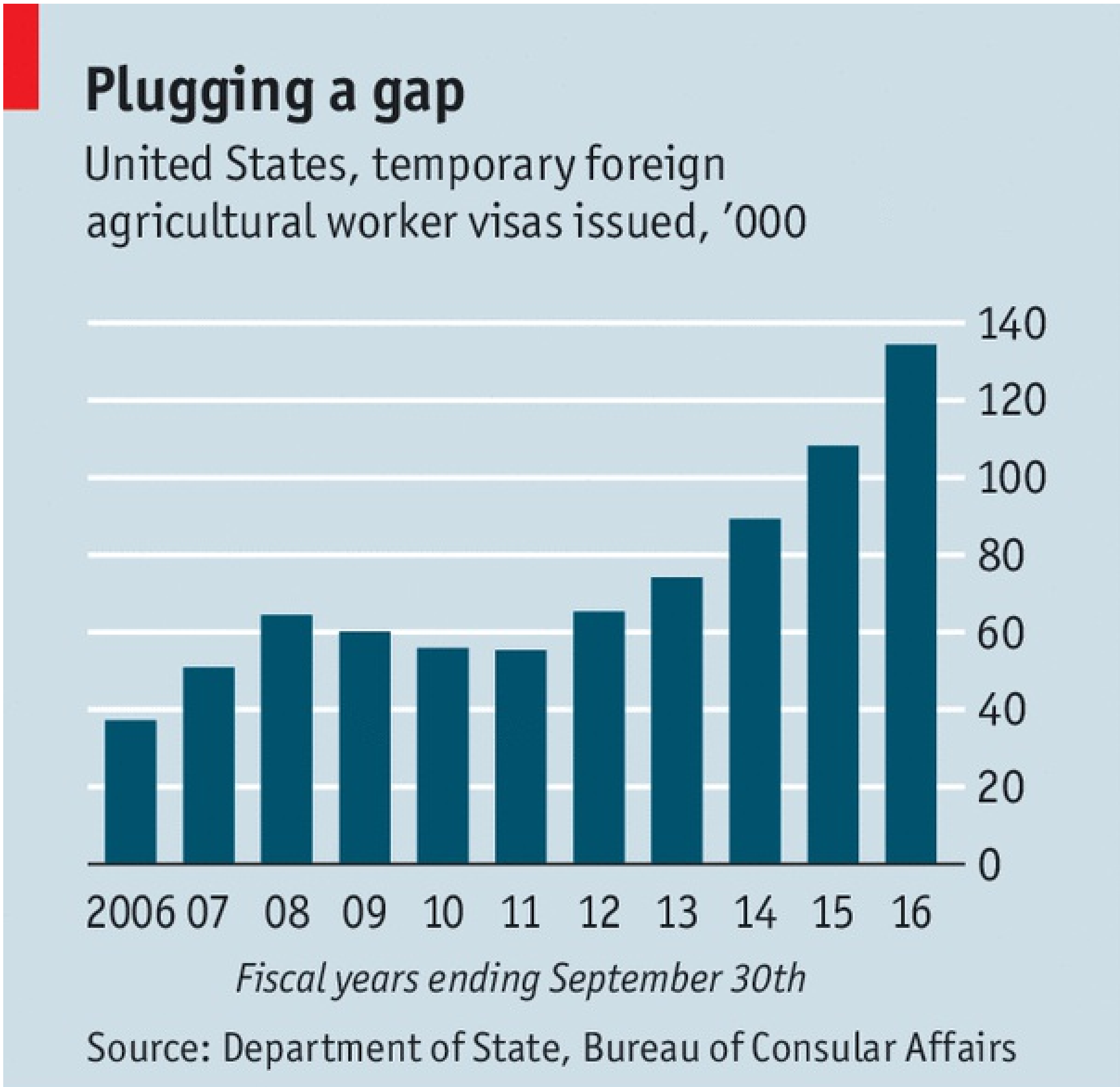
…then why are fruit and vegetables rotting in the fields waiting to be picked?

Jul 27th 2017 | SANTA PAULA, CALIFORNIA

NEAR the massive packing warehouse at the headquarters of Limoneira, one of America's largest lemon producers, sits a row of small white clapboard houses with neat front lawns and American flags flapping over their doorways. The homes are rented to farm workers at 55% below the market rate in Santa Paula, California, a fertile farming area not far from the seaside homes of Malibu. From their front doors, workers can stroll to a *bocce* court, a credit union and a park where family reunions and birthdays are celebrated. These perks, along with competitive pay, used to be enough to keep Limoneira's fields of lemons and avocados full of workers. Not any more, says Alex Teague, the company's senior vice-president. Though labour has long been tight, "I have never seen it this bad," Mr Teague sighs from a chair in his office whose walls are covered in company memorabilia, including Limoneira's first cheque from 1893.

Across America, farms are experiencing similar troubles. In May Tom Nassif, the president of Western Growers, a farming association representing family farmers in Arizona, California, Colorado and New Mexico, travelled to Washington, DC, with 25 farm-owners. When Senator Dianne Feinstein of California asked how many were experiencing labour shortages, they all raised their hands. Although official data from the Department of Agriculture show a slight fall in the number of farm workers between 2000 and 2012, the New American Economy (NEA), a group which advocates immigration reform, reckons that on a more realistic count, from 2002 to 2014 the workforce actually shrank by 20%. Bob Young, the chief economist for the American Farm Bureau Federation, a lobby group, thinks official numbers underestimate the extent of the shortfall since they ask how many workers a farmer has, not how many he wanted but could not find.

Farms are feeling this effect. According to the NEA, the farm-labour shortage accounted for $3bn in lost annual revenue between 2002 and 2014. Partly because production cannot keep up with demand, Americans are eating a lot more imported food (an increased appetite for fruit and vegetables plays a big part, too). Between 1998 and 2012, the share of America’s fresh produce that was imported increased by 80%; the NEA attributes a chunk of the decrease in American farmers’ share of the domestic produce market to the labour shortage.



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California, which produces a third of America's vegetables and two-thirds of its fruits and nuts, has been particularly affected. The Farm Labour Survey and US Census of Agriculture record that the state lost nearly 40% of its agricultural workforce between 2002 and 2014. According to the Grower-Shipper Association of Santa Barbara and San Luis Obispo Counties, $13m-worth of fruit and vegetables had to be ploughed under in 2015 because of the lack of pickers—up from $11m in 2014. At Limoneira, overripe lemons litter the ground under the trees.

Farmers blame the labour shortage on a variety of factors. Fewer Mexicans are coming north to America, the result of a combination of improved border security, an increasingly robust economy in Mexico and a lower birth rate. Analysis by the Pew Research Centre in 2015 found that net migration to America from Mexico was 2.3m between 1995 and 2000. Between 2005 and 2014, more Mexicans left America than arrived. Such dynamics have been tough for farmers. According to the most recent data from the Department of Labour, 70% of farm workers are Mexican; in California that number is closer to 90%.

A generally tight labour market does not help either. Harvesting is gruelling work, says Stewart Lockwood, the director of field operations at Limoneira, as he walks through one of the company's lemon groves. With the Californian sun beating down on them, labourers crouch to pluck lemons off low branches and strain to grab them from high ones, carefully placing the fruit in satchels that weigh 65lb (30kg) when full. With a state unemployment rate of 4.5%, manual labourers can afford to be choosy. "If these guys can get a job in construction, they might do that instead," Mr Lockwood says.

Farmers have responded to the labour shortage in three main ways. The first is by paying better. Since 2000, the average hourly wage of crop workers has risen from $8 to $12. In California it has jumped even more, from about $7 in 2000 to $13 today. At Limoneira, workers are paid an average of about $19 an hour—which is 30-35% higher than three or four years ago, says Mr Teague. Still, his workers sometimes get poached by nearby farmers willing to pay more so that their fruit and vegetables do not rot in the field.

Another response to the shortage is to hire workers through the H-2A visa programme. Since 1986, the H-2A programme has allowed farmers struggling to find labour to hire foreign guest-workers temporarily. It is cumbersome to apply for and expensive: farmers must provide H-2A workers with free housing, food and transport to work. Even so, 134,000 H-2A visas were granted nationally in 2016, up from 55,000 in 2011. (Despite the president's directive to companies to "hire American", Eric Trump, the president's second son, has requested 29 H-2A workers to prune vines at the family's winery in Charlottesville, Virginia, since December 2016.)

Limoneira's adjustment has been smoother than most. The company already owned a huddle of trailers that dates back to the *bracero* programme, when Mexican farmworkers came north across the border to replace Americans fighting in the second world war. These have been refurbished to house migrant workers. Other companies have rented, bought or even developed property to house workers. Bonipak, a company based in Santa Maria, bought and renovated an old motel to house farm labourers, spending more than $1m to bring the building up to H-2A standards. A couple who owned a strawberry farm in Nipomo built a series of houses for H-2A workers in 2016, only for arsonists to burn one down in protest.

Farmers are considering ways to substitute machines for human hands, too. Machinery is already used to shake almonds from trees and pluck tomatoes from their stalks. Vineyards are using more machines to pick their grapes, a process which once seemed too fiddly to be mechanised. Squishy crops that grow close to the ground, such as strawberries, will be the last to go. Many machines do still require humans to operate them. But farmers believe it is only a matter of time until the harvesting of most crops is automated.

Sanctions against Russia

Congress does not trust the president

The vote by Republicans to bind the hands of a president from their own party is extraordinary

Jul 27th 2017

MEMBERS of Congress do not agree on much, but on July 25th, after a bipartisan deal, the House of Representatives voted by 419 votes to three for a bill that toughens sanctions on Russia. This is punishment both for Russia's meddling in the election that brought President Donald Trump to power, and for its continuing aggression in Ukraine. (The bill also includes new sanctions against Iran and North Korea.) As *The Economist* went to press, the Senate was expected to follow suit: senators endorsed a similar bill 98-2 in June. The aim is to get the legislation passed before the summer recess and sent to the president for his signature.

The implications are momentous. Mr Trump had hoped to lift the existing package of sanctions on Russia at some point. Now he has been stripped of his presidential authority to do so. Since the vote was almost unanimous, he may have no option but to accept it with as much good grace as he can muster. He could veto it, but presidential vetoes can be overridden by a two-thirds majority in both chambers, which in this instance could be achieved.

The bill both locks in and extends previous sanctions aimed at Russia's energy firms and banks. It also now targets any entity that does business with Russia's defence or intelligence sectors—a measure that could threaten buyers of Russian weapons with secondary sanctions. This is a blow to Mr Trump, who made it clear during his campaign that he wanted improved ties with Moscow. It now appears that many of the undeclared meetings that have subsequently come to light between Mr Trump's inner circle of advisers—Michael Flynn, Jared Kushner and Donald Trump junior—and an assortment of Russians with links of various directness to the Kremlin, most notably Sergey Kislyak, the ubiquitous and gregarious former Washington ambassador, were aimed at thawing relations.

Vladimir Putin—who, beyond the reasonable doubt of America's intelligence agencies (if not its president), authorised the election-hacking operation—may have had reason to believe that Mr Trump, once in the White House, would find a way to relax sanctions. American and European Union sanctions have dragged down Russia's economy, which, already reeling from low energy prices, contracted sharply in 2015 and has stagnated since.

By overreaching, Mr Trump and Mr Putin have made the relaxation of sanctions politically toxic. That is bad enough for Mr Trump, but his humiliation does not end there. The Republican majority in Congress has, in essence, declared that it does not trust a president from its own party to serve the national interest when it comes to dealing with Russia. There is no other way to interpret the provision in the legislation to prevent the president from suspending sanctions by executive order, in the absence of congressional approval, as Barack Obama did in order to secure the nuclear deal with Iran.

To lift Ukraine-related sanctions, Mr Trump would have to certify by letter that the conditions which had led to them no longer applied—in other words, that Russia's annexation of Crimea and its support for separatists in the east had ceased. Similarly, the new sanctions brought in to punish Russia for its cyber-attacks could be eased only if Mr Trump could show solid proof that Russia was actively and successfully clamping down on such activities. After receiving such a letter, Congress would then have 30 days to decide whether the president had made his case convincingly. Tellingly, the same conditions do not apply to the sanctions on North Korea and Iran.

Foreign-policy practitioners, including Mr Trump's secretary of state, Rex Tillerson, have warned that this creates a potentially damaging precedent. By deliberately tying this president's hands over Russia, albeit with good reason, Congress risks undermining the ability of future administrations to conduct diplomacy, which often requires flexibility in light of changing circumstances. The bar for eventually removing sanctions will be so high that, in effect, they become permanent.

America's European allies are worried too, both about the longer-term effects of this bill and the immediate impact of some of the new measures contained in it. The penalties that could be levied on European firms taking part in the controversial Nord Stream 2 pipeline project, which on present plans will start pumping gas from Russia to Germany in 2019, have already raised concerns in Berlin and Brussels. Those qualms are not shared by all EU countries, especially former members of the Soviet bloc, such as Poland and the Baltic states, who want to reduce their dependence on Russian energy.

How might Mr Trump respond to such a setback to his ability to conduct foreign policy on his own terms? One possibility is that it will increase his determination to find a way out of the Iran nuclear deal, which, like Obamacare, he once pledged to scrap. For America's nuclear-related sanctions on Iran to remain suspended—a key condition of the 2015 agreement—the State Department must inform Congress whether it believes Iran to be in full compliance every 90 days. So far, Mr Trump has twice reluctantly agreed to certify and thus renew the presidential sanctions waiver. But when he did so on July 17th, it was only after kicking back hard against the recommendation of most of his senior foreign-policy and national-security team.

The White House now seems to be looking for a way to get out of certifying the Iran deal when it comes up for renewal in October. To that end, the president has ordered White House staffers to bypass Mr Tillerson and to come up with the evidence and arguments he needs to undo the deal that the State Department has failed to provide. Mr Tillerson is reported to be fed up with his lot.

It is still not clear whether Mr Trump wants to kill the Iran deal or try and renegotiate it—something that the other parties to it (Britain, France, Germany, Russia, China and the EU) have already ruled out. But on Iran, unlike Russia, Mr Trump can almost certainly rely on the support of Republicans in Congress for whatever he decides to do. After the ignominy of losing control over sanctions against Russia, the urge to appear decisive and in control may be hard for Mr Trump to resist.

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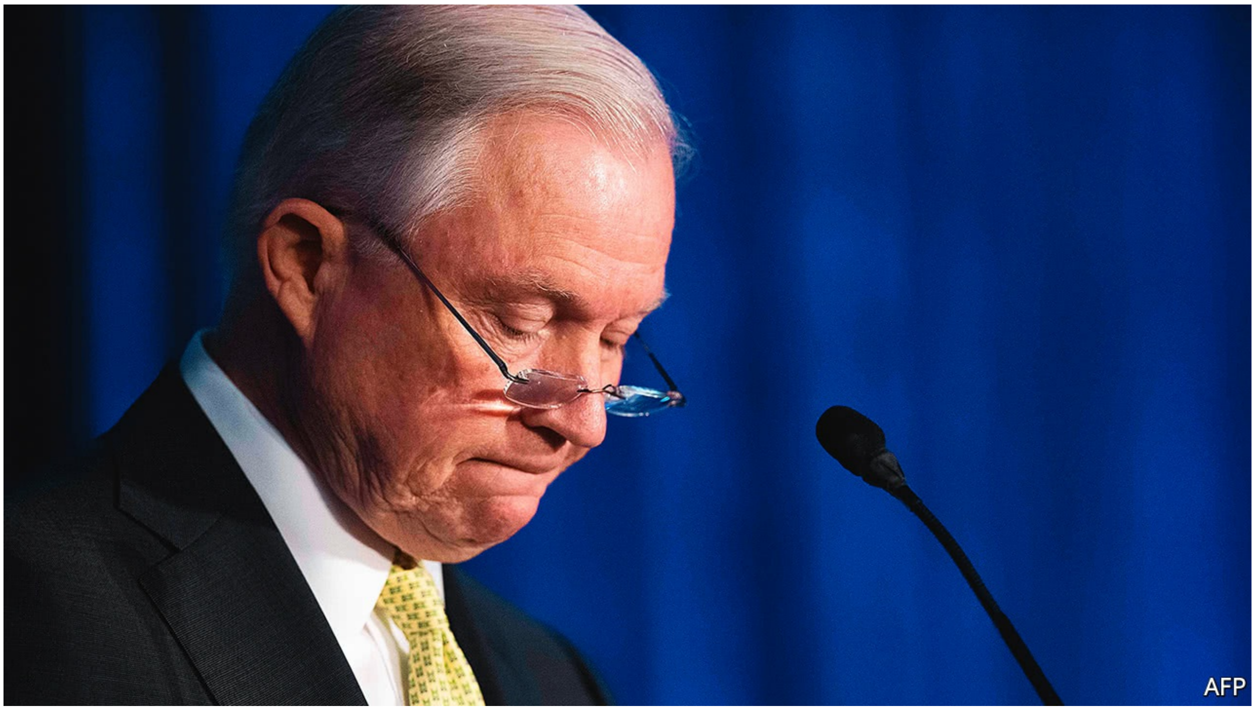
Pondering the next big crisis

Jeff Sessions is in peril; so is America

What could happen if Donald Trump sacks his attorney-general



Jul 27th 2017 | WASHINGTON, DC

PERHAPS the only reason to doubt Donald Trump is contemplating sacking his attorney-general, Jeff Sessions, in order to protect himself and his associates from the counter-espionage investigation being run by Robert Mueller, is that the president has been so astonishingly upfront about it. On July 25th he tweeted that the attorney-general, one of his earliest and most influential supporters, was "VERY weak". Asked whether he intended to sack him, he replied: "Time will tell." Yet Mr Trump's history of rule-breaking suggested he was indeed weighing a measure that would pitch his scandal-plagued presidency into its biggest crisis yet.

Mr Trump said he was angry with Mr Sessions because he had recused himself from an FBI investigation into Russia's efforts to fix the election in Mr Trump's favour, with possible assistance from members of the Trump campaign team. Mr Sessions announced that decision in March, after it was revealed that he had withheld details of meetings with a Russian diplomat, Sergey Kislyak, during his Senate confirmation hearings.

The indirect cost to Mr Trump of Mr Sessions's recusal is that the FBI probe has now been passed to an independent counsel, Mr Mueller, a former FBI director with a reputation for probity and rigour earned under both Republican and Democratic administrations. His investigation, which is more public and high-powered than the FBI's, was launched by Mr Sessions's deputy, Rod Rosenstein, after Mr Trump fired James Comey as FBI director in May. According to Mr Comey, he was axed after he denied a request from the president to drop part of his investigation—into another arch-Trump supporter, Michael Flynn.

It seems unlikely that Mr Sessions, had he not recused himself, would have launched the independent probe into Russia and the Trump campaign; as the first senator to endorse Mr Trump, he played a lead role in that campaign. Given that Mr Mueller was hired over two months ago, it is also reasonable to assume that the president's problem with Mr Sessions does not really concern the fact that he let the probe happen so much as that, because of his recusal, he cannot end it.

Unlike the more powerful office of the independent counsel, which was scrapped in 1999 after plaguing the presidency of Bill Clinton, a special counsel can be sacked, for due cause, by the attorney-general (or, in the current situation, by Mr Rosenstein). The president, as head of the executive branch, can legitimately demand such a step, provided he also identifies due cause. And there is little doubt that the president wants to see the back of Mr Mueller, who is reported to have begun investigating Mr Trump's financial affairs. The president has suggested some members of the counsel's team of a dozen top-notch investigators are "conflicted", perhaps because of past donations to Democrats (though Mr Trump was once a donor to them too).

Mr Trump and his family are also feeling the heat from three congressional inquiries, after revelations that the president's eldest son, Donald Trump junior, son-in-law Jared Kushner and then campaign boss, Paul Manafort, met a party of Russians during the campaign to discuss possible dirt on his Democratic rival, Hillary Clinton. Mr Kushner was interviewed about the meeting, behind closed doors, by the Senate intelligence committee on July

24th and the House intelligence committee the next day. In a pre-released statement, he denied having colluded with any foreign power. Mr Manafort, who is separately reported to have owed pro-Russia Ukrainians $17m shortly before he was hired by Mr Trump, testified in private to the Senate intelligence committee. Both he and Donald junior are expected to appear before the judiciary commitee.

After a slow start, there are signs that all three congressional committees are starting to take their investigations seriously. They are unlikely to reach any conclusion before Mr Mueller does. Yet as Congress represents by far the most important potential check on Mr Trump's rule, the president will understand that sacking Mr Mueller, after first sacking Mr Sessions, would spark a backlash. How seriously he is contemplating it must therefore depend on how worried he is about what Mr Mueller might find.

Getting thinner

To pass health-care reform, Republicans may strip it down

A “skinny repeal” of Obamacare threatens the stability of health-insurance markets

Jul 27th 2017 | WASHINGTON, DC

IT HAS become a fool’s errand to try to predict when the Republicans may give up trying to reform health care. On July 25th Vice-President Mike Pence broke a tie in the Senate to pass a motion to start debate on a health bill, only a week after it had looked dead (and not for the first time). To win the vote Mitch McConnell, the leader of the Senate, had to water down its significance, portraying it as merely a procedural step that had no bearing on what might subsequently pass. (“Everybody will get a vote on everything they want to vote on,” said Senator John Cornyn, Mr McConnell’s number two). Even then, the motion passed only because Senator John McCain, just out of surgery for brain cancer, rushed back to Washington to vote yes.

The result is a mad rush to rewrite the bill on the Senate floor. The starting point is the version passed by the House in May. After voting to start debate, nine Republicans rebelled to defeat an amendment turning the bill into the "Better Care Reconciliation Act", the reform Mr McConnell had painstakingly crafted. (In any case, the Senate's rules expert had declared that parts of the BCRA needed 60 votes, and hence Democratic support, to pass.) The next day, seven Republicans helped Democrats reject the Obamacare repeal bill that Congress passed back in 2015 (it was vetoed then by Barack Obama). Moderate Republicans oppose total repeal because it would deeply cut Medicaid, health insurance for the poor, and abolish the tax credits which help low- and middle-income people buy insurance on online marketplaces, or exchanges.

As a result, Republicans may resort to what has been dubbed "skinny repeal". This amendment would take a scalpel, rather than an axe, to Obamacare. Medicaid expansion would stay, as would the law's regulations and tax credits. Instead, the bill would probably repeal only those parts of Obamacare Republicans dislike most: its "mandates". These impose fines on people who choose not to buy health insurance, and on large employers who do not provide insurance for their staff.

Moderate Republicans may find skinny repeal easier to support, because it would leave Medicaid intact. But failing to replace the individual mandate would greatly threaten the stability of the market serving 18m Americans who buy insurance for themselves. The Congressional Budget Office has suggested that killing the mandate would increase the number of people without health insurance by 15m by 2018. Nonsense, say conservatives. But without the mandate, it would certainly be easier for people to flee the individual market's high premiums, caused by Obamacare's ban on insurers discriminating against buyers who are already ill. The likely result would be more premium increases, a still smaller market, and the very "death spiral" that Republicans say they want to stop.

A collapse of the individual market would hardly look good for those in power (although President Donald Trump has spoken of his desire to kill off Obamacare in an attempt to force Democrats to support a replacement). More likely is that the bill gets rewritten again in the committee that would have to reconcile the bills passed by the House and the Senate. Health reform could seem to die, only to be resurrected, a few more times yet.

Army dreamers

Why the president wants to ban trans people from serving

It has nothing to do with money and everything to do with politics

Jul 27th 2017 | WASHINGTON, DC

FOR a man late to politics, President Donald Trump has a master's feel for divisive "wedge issues"—as gay and transgender Americans are learning to their chagrin. In 2016 Mr Trump delighted gay Republicans by hailing "LGBTQ citizens" at his nominating convention. In part this reflected a Manhattanite's relaxed worldview. It was also a bid to divide gays from his Democratic rival, Hillary Clinton, accused by Mr Trump of planning to open borders to homophobic followers of radical Islam.

This year, on July 26th, Mr Trump unexpectedly tweeted that after consulting "my Generals" he will ban transgender individuals from military service, reversing an Obama-era decision from 2016. Mr Trump cited the "tremendous medical costs and disruption" of allowing such troops to serve.

His intervention was timely. With public opinion growing ever more tolerant towards gay Americans, partisans on right and left are making the once-obscure field of transgender rights a place for culture-war battles. Republicans in the Texas legislature have spent months debating how to police transgender users of public lavatories. In Washington this July, conservatives in the House of Representatives narrowly failed to bar the Pentagon from funding gender-related medical treatments. Exposing intra-party divisions, more than 20 Republicans joined Democrats in opposing that ban.

A study for the Pentagon issued last year by the RAND Corporation, a research group, estimated that there are between 1,320 and 6,630 transgender servicemen and women on active duty, of whom at most 270 might seek gender-transition hormone treatments or surgeries in a year, adding up to $8.4m to annual military health costs of around $6bn. For perspective, in 2015 the Pentagon spent $437m on military music.

Earlier this summer James Mattis, the defence secretary, gave commanders until January 2018 to weigh whether admitting transgender recruits would harm force "readiness and lethality", delaying an Obama-era deadline by six months. Advocates note that 18 countries allow transgender troops, from Britain to Israel. Mr Trump's political calculations are easier to follow. Just as Democrats ponder how to win back blue-collar voters, they find themselves defending transgender rights. A neat wedge.

Detroit, the movie

How the riots of 50 years ago changed Detroit

The city’s decline began before 1967, but the violence then made it worse

Jul 27th 2017 | DETROIT

FIFTY years ago, Detroit lived through one of the worst riots in American history. So painful were the memories of the five days of killing, looting and arson that during previous anniversaries of the uprising, which started on July 23rd 1967 when police busted a “blind pig”, an unlicensed gambling and drinking joint, Detroiters largely avoided talking about it.

Many believe the riots marked the beginning of the city’s decline, culminating in its bankruptcy in 2013. This anniversary is different. Around 100 institutions, including the Charles H. Wright Museum of African American History and the Detroit Institute of Art, are reflecting on 1967 with books and booklets, exhibitions, documentary films, lectures and concerts. The effort has its own fancy logo and slogan (“Looking back to move forward”).

On July 25th Hollywood descended on Detroit for the red-carpet premiere of "Detroit". The film dramatises one particularly violent incident during the riots, at the Algiers motel on Woodward Avenue, when several young black men and two white women were forced to line up in the hallway with their hands up. Their interrogation by the police ended in violence and murder. Dressed to the nines, an audience of around 2,200 filled the venue. They clapped loudly when Michael Eric Dyson, a local historian, introduced the director, Kathryn Bigelow, as "a white woman cleaning up the mess white people made".

A few days after the uprising, which left 43 dead, more than 7,000 in jail and thousands of uninsured businesses destroyed, the *Detroit Free Press* and the Urban League of Detroit surveyed 437 people who lived around 12th Street and Grand River Avenue, the epicentres of the riots. They blamed police brutality first for the trouble, followed by overcrowded living conditions, poor housing, a lack of jobs and poverty. Although around 40% of the city's residents were black at the time, 95% of the police force was white. "If you were a black man in the wrong part of town at night, police would frisk you, hurl epithets and often beat you," says Thomas Sugrue, author of a book on race and inequality in post-war Detroit.

The unrest in 1967 did not mark the turning point in Detroit's fortunes. That came earlier, in the 1950s, when carmakers and their suppliers moved production out of the city to places with cheaper labour and land and automation replaced low-skilled jobs. According to Mr Sugrue, the city's east side lost ten plants and 71,137 industrial jobs between 1953 and 1960. The plant closings affected shops and housing stock. Once vibrant neighbourhoods and commercial arteries started to decay.

Sadly, by most measures black Detroiters are considerably worse off today than they were in 1967. Then, 19% lived below the poverty line. Today 40% of the city's residents live at or below it. The city is still segregated, with many more houses vacant or derelict than 50 years ago. The rates of violent crime and unemployment are higher. Public schools are in much worse shape. Even so, the relationship between the police and the community has much improved. The police force today is 58% black in a city that is 80% so. James Craig, the police chief, wants as many of his 2,400 officers to see the film as possible.

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Harlem shuffle

Naming New York's neighbourhoods

Some names stick. Others are too silly

Jul 27th 2017 | HARLEM

HARLEM'S Apollo Theatre, where Ella Fitzgerald first sang, and the Hotel Theresa, which counted among its guests Josephine Baker, Muhammad Ali and Fidel Castro, are landmarks. Malcolm X, who called Harlem "Seventh Heaven", preached on the corner of 116th Street. Stretching further back, in the 1920s and 1930s the Harlem Renaissance gave rise to an outpouring of literature, art and music. Harlemites are proud of this history, and proportionately upset that estate agents are trying to rebrand the southern part and call it SoHa.

Such rebranding is nothing new: New York was once called Nieuw Amsterdam and before that Mannahatta. Pigtown, in central Brooklyn, is now called Wingate. Gas House District is now Stuyvesant Town. Yellow Hook became Bay Ridge after a yellow-fever outbreak. Bloomingdale became the Upper West Side. Neighbourhoods can be fluid, with vague borders. Some have disappeared. Shapes change: in Brooklyn, Park Slope keeps getting bigger and Flatbush keeps getting smaller. Chinatown has been taking over Little Italy.

SoHo, so-called because it is south of Houston Street, was better known until the 1960s as Hell’s Hundred Acres. It was the first to use an acronym, and has spawned imitators. Tribeca (triangle below Canal Street) emerged in the 1970s. Despite, or perhaps because of, its silly name, Dumbo (Down Under the Manhattan Bridge Overpass) is one of the most sought-after areas in the city. NoHo (north of Houston) and NoLita (North of Little Italy) are now on maps. Others, like SoBro (south Bronx), BoCoCa (Carroll Gardens, Cobble Hill and Boerum Hill, which is in fact flat) and Rambo (Right after the Manhattan Bridge Overpass), mercifully did not stick. “None of these worked,” says Philip Kasinitz, a sociologist at City University of New York. “At a certain point they got too silly.”

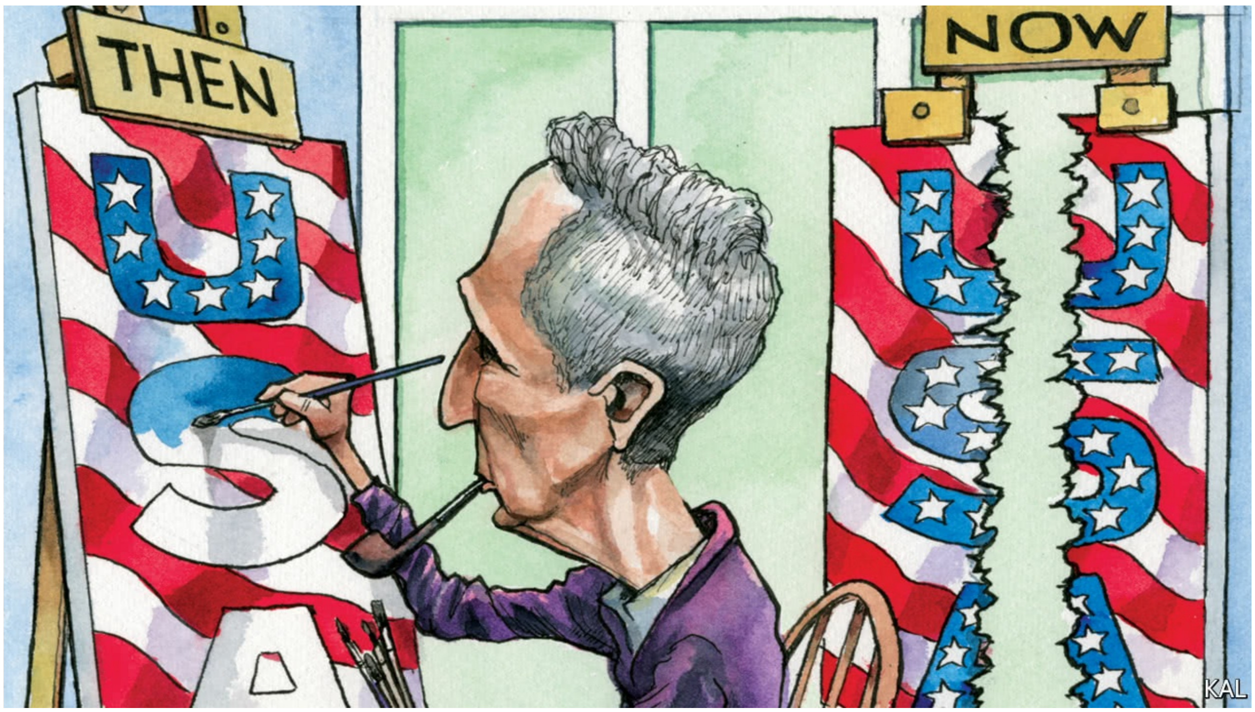
They also didn’t work, he says, because their residents objected. ProCro, a rebranding of Crown Heights, another historically black neighbourhood in Brooklyn, did not take either. Hell’s Kitchen is equally resilient. Attempts to change the name to the generic Clinton have not been successful. It is a lot easier to rebrand when there are few residents, as was the case in SoHo. Brokers also rely on recent arrivals not knowing the city well.

“You can’t talk about this without talking about race,” says Amy Plitt of Curbed, a property blog. Affluent white New Yorkers have flocked to Harlem, followed by restaurants, bars and shops. The stock of cheap housing has dwindled. Longtime residents, already feeling financial pressure, resent what they see as a deliberate move to erase their history. “It’s about identity,” said Brian Benjamin, a Harlem-born state lawmaker. He recently introduced legislation in Albany requiring estate agents to consult the community on any name change, or face a fine. Others see a clumsy attempt to link SoHa to SoHo in the minds of would-be buyers, making it cooler and justifying higher prices. But nowhere is cooler than Harlem.

Lexington

Why everybody liked Norman Rockwell

And why it is probably impossible for a visual artist to have such broad appeal in America now



Jul 27th 2017

WILL a truce ever be declared in America's culture wars? One way to tackle that puzzle involves considering all-American icons of the past—figures who bridged social and political divides—and asking how they did it. That mission led Lexington to Stockbridge, Massachusetts, and the Norman Rockwell Museum. Modelled on a New England town hall, it is a handsome shrine to an artist whose work has hung in the Oval Offices of the past four presidents (though a Rockwell painting of the Statue of Liberty's torch seems to have vanished from Donald Trump's).

Rockwell lived from 1894 to 1978 and enjoyed popular acclaim for 60 of those years. He honed an image as an apolitical advocate of Yankee civic virtues, at one remove from the sordid business of party politics, even as he painted every major presidential candidate from Eisenhower to Nixon. His biographer, Laura Claridge, records his belief that the best way to reach a large audience was “to let people hope he voted their way”.

When Ronald Reagan, late in his presidency, explained how Rockwell’s art had captured America’s heart and soul, he might have been describing himself. The Great Communicator hailed the artist for portraying the country with compassion, humour and goodwill and for cherishing the values that give Americans strength, namely: “love of God and Country, hard work, neighbourhood, the family”.

Other Republicans have seen the same in Rockwell’s idealised paintings, full of roguish boys and pious grandparents, baseball games, kindly policemen, daydreaming adolescents, heroic workers and self-important intellectuals. Interviewed in 1994, on the brink of his elevation as Speaker of the House of Representatives, Newt Gingrich called his congressional district in suburban Georgia a “sort of Norman Rockwell world”, whose prosperity and safety reflected the worldview of the weekly magazine that made Rockwell’s name, the *Saturday Evening Post*. The artist himself could sound rather conservative, as when he recalled why he shunned New York city, his childhood home, for a succession of towns in rural New England. Rockwell cited “the American nostalgia for the clean, simple country life”.

Yet plenty of Democrats, too, see their principles reflected in Rockwell’s work. In 2011 Barack Obama offered a wall in the West Wing to display “The Problem We All Live With”, a painting from the civil-rights era depicting a young black girl, Ruby Bridges, being escorted to a newly integrated school by federal marshals. The image provoked shock when it was published in *Look* magazine in 1964, in part because it was so recognisably a Rockwell: the same precise brush-stokes depict the girl’s dress, her solemn expression and the racist graffiti behind her. The Rockwell museum’s archives hold a letter from a reader in New Orleans, accusing the artist of abetting the “vicious crime of racial integration” with the illustration. Another letter, from Chattanooga in Tennessee, thanks him for opening the eyes of “this White southerner”.

As social and political tensions roiled America in the late 1960s, Rockwell edged away from his studied neutrality. He chafed at editorial guidelines that non-white figures could not take centre stage in illustrations, unless they were portrayed as train stewards or in other service jobs. He urged Middle America to see the good in civil-rights workers, Vietnam war opponents and long-haired hippies, assuring fans that the young were "doing great, you just give them a chance". This Rockwell is revered by such Democratic-leaning Hollywood types as the film directors Steven Spielberg and George Lucas, both of them Rockwell collectors. Mr Lucas, creator of the "Star Wars" films, also recalled his childhood as a "Norman Rockwell world" of Saturday morning bonfires in the back yard and long hours lost in books.

For those dreaming of bipartisan comity, the Rockwell museum is a bittersweet place. Distinctly 20th-century forces helped the artist rise, and are not coming back. Rockwell worked when illustrated magazines enjoyed vast market power and were trusted to help turn readers—whether residents with deep roots or new immigrants—into confident, robust, modern Americans. His covers were seen by millions, some of whom framed and hung them on their walls. In today's fragmented media environment, says Stephanie Haboush Plunkett, chief curator at the museum, never again will "so many people see the same thing at the same time".

Vote for Rosie the Riveter

The *Saturday Evening Post* was proudly middlebrow. Its editor scorned elites and worried that Franklin Roosevelt's New Deal safety-nets and public works might sap the country's capitalist ethos. But the *Post* had the swagger to commission fiction from F. Scott Fitzgerald and William Faulkner. It also carried Rockwell's paintings of the "Four Freedoms" that FDR vowed to defend in 1941 as he prepared public opinion for entry into the world war. Rockwell depicted a New England town meeting for "Freedom of Speech", heads bowed in prayer for "Freedom of Worship", a Thanksgiving meal for "Freedom from Want" and parents watching children sleeping in "Freedom from Fear". A national tour of the paintings drew huge crowds in 16 cities and raised $133m in government war bonds, the equivalent of $2bn today.

Rockwell had to work at staying neutral during the class-tinged culture clashes of his day. He winced, discreetly, when his works were called intelligible and homely, unlike modern art. He confided to his youngest son: "Just once, I'd like for someone to tell me that they think Picasso is good, and that I am too." He was attacked by highbrow critics as a sentimentalist and as a sell-out for taking advertising jobs. But crucially, cultural camps did not yet bear fixed ideological labels. This was a time of Eisenhower Republicans who took a liberal line on racial or social issues, and of conservative Democrats in Middle America. Deep down, Rockwell was a Yankee progressive whose work was loved by conservatives. Today’s partisans expect heroes to take sides.

The Americas

Fewer rivers to cross

Mexico becomes a destination for migrants

As Donald Trump hardens the United States' border, more asylum-seekers opt to stay in Mexico

Jul 27th 2017 | CIUDAD HIDALGO, CHIAPAS

THE Suchiate river is the southernmost stretch of Mexico's border with Guatemala. At Ciudad Hidalgo there are two ways to cross it. You can use the bridge, which guarantees an encounter with an immigration official. Or you can walk down to the river bank, hire a raft (planks tied to the inner tubes of two tractor wheels) and get yourself punted across. Many passengers are Guatemalans who want to shop in Ciudad Hidalgo, where goods are cheaper. The Mexican border guards ignore the flotilla below them and its duty-dodging cargoes; they bring the town a lot of business.

Such rafts are also popular with Central Americans heading farther north, to the United States. But their number has dropped in recent months, says Alexander, who has piloted a raft for four years. Occupancy at the Casa del Migrante in nearby Tapachula has fallen by more than a third since 2016, says Julver Gordillo, who works at the hostel. Immigration police are catching far fewer Central Americans without the right documents this year (see chart).

The deterrent is Donald Trump. His administration's temporary ban on refugees, increase in the deportations of unlawful migrants and plans to build a border wall have put off would-be migrants. "He's been good at scaring people," says Gustavo Mohar, a former Mexican undersecretary for migration, population and religious affairs. Since Mr Trump took office arrests of migrants at the United States' southern border, half of whom are Central Americans, have dropped dramatically.

But some people from Central America's poor and violent "northern triangle"—El Salvador, Guatemala and Honduras—dare not stay at home, regardless of the frosty reception that would await them in the United States. For some of those, Mexico is a destination rather than a corridor. Maria (not her real name), who is living at a migrant hostel in Mexico City, fled Guatemala with her two children early this year after her husband, who has gang connections, nearly killed her. He was sent to prison, but Maria fears he will carry out his threat to try again. She will not attempt to enter the United States. "As long as I feel safe we'll stay here," she says.

Central Americans are making that choice in growing numbers. To stay in Mexico legally, most have to apply for asylum. In the first six months of this year 7,000 migrants, almost all Central Americans, requested asylum. That compares with 9,000 for all of 2016. Liduvina Magarín, El Salvador's deputy minister for Salvadoreans living abroad, says that around 90% of countrymen whom she met on a recent tour of Mexican migrant shelters were planning to request asylum there.

Mexico faces nothing like the influx that Europe has recently experienced. Germany, whose population and territory are much smaller, had 750,000 asylum requests in 2016. In theory, Mexico is just as welcoming. It grants asylum to people persecuted for their race, religion, nationality, gender, membership of a social group or political views. But it thinks of itself as a source of migrants rather than a magnet for them. So the rise in the number of refugees is causing consternation.

Typical of the river-crossers who now propose to stay in Mexico is "Carlos", who fled Honduras after refusing to carry out a "mission" for a gang. He wants to find work in northern Mexico but has taken shelter in Tapachula while he awaits a decision on his asylum application. A decade ago such fugitives were almost all men, but as gangs increasingly threaten their enemies' relatives, women and children have joined the exodus. Under Mexican law, a member of a family that has been threatened by a gang may qualify as belonging to a persecuted social group.

Mexico's attractions include a shared language and communities of compatriots. Perhaps 300,000 Central Americans live in Mexico (compared with more than 3m in the United States). Mexico processes asylum requests much faster than the United States and Canada do.

But its welcome is cooler than that suggests. Speedy asylum decisions are not necessarily fair. "The government has prioritised detaining and deporting migrants as soon as possible—and is not ensuring they get properly screened," says Maureen Meyer of the Washington Office on Latin America (WOLA), an NGO. In 2014 Mexico deported 77 out of every 100 unaccompanied children it caught; in the same year the United States sent back just three. Migrants encounter discrimination and are often robbed. Violence against migrants is "chronic" and is rarely punished, says a recent report by WOLA. According to some estimates, more than half of female migrants from Central America are victims of sexual assault.

The country has not always been hostile terrain for outsiders. In the mid-19th century it admitted thousands of fugitive slaves from the United States; under the constitution of the time they became free when they set foot on Mexican soil. From 1939 to 1942, when Britain and France turned away some refugees from Spain's civil war, Mexico let 25,000 in. But by the 1970s the government, worried about unemployment, restricted entrance to "useful" migrants and made it a criminal offence both to enter and to stay in the country without authorisation. (In the United States, entering the country illegally is a crime but staying there is a civil offence.) In 2014, with encouragement and cash from the United States, Mexico stepped up its efforts to catch migrants headed north. Mexico deports children of migrants born in the country, in violation of its own laws, says Salva Lacruz of the Fray Matías de Córdova human-rights centre in Tapachula.

Under pressure from activists and from migrants themselves, Mexican attitudes are softening. The attorney-general's office has established a unit to investigate crimes against migrants. The country's president, Enrique Peña Nieto, has promised to promote refugees' integration into society and to increase the staff of COMAR, the commission that is responsible for the welfare of asylum-seekers and rules on their applications. Entering and staying in the country without papers stopped being a crime in 2008. The success rate for asylum claims rose from 40% in 2014 to 63% last year.

Even with these improvements, the government pays too little heed to migrants' rights, says Mr Lacruz. He says it should start by complying with its own laws, including the one allowing children born in the country to stay.

Mr Trump's harder border, and the flow of refugees across Mexico's southern one, will force the government to pay more attention to Central America. During Barack Obama's presidency, the United States increased its spending on projects in the region that aim to reduce violence and improve job prospects, especially for young men. As Mr Trump turns his back on the United States' southern neighbours, Mexico may become more active. Central America should be Mexico's "top foreign-policy concern", says Mr Mohar. That is unlikely to happen: the United States is plainly more important. But as rafts continue to cross the Suchiate river, the northern triangle and its woes will move up the diplomats' agenda.

Capitalism 101

Colombia’s banks open accounts for fighters who once robbed them

Many ex-guerrillas have never handled any form of money but cash

Jul 27th 2017 | BOGOTÁ

DURING their decades-long war against the Colombian state, the supposedly pro-peasant guerrillas of the FARC were fond of bombing and torching branches of Banco Agrario in remote parts of the country. A state-owned bank lending to farmers and rural-development projects, it was a tempting target on two counts: attacks were a blow against the state, and they often yielded sackfuls of cash.

With the ratification of a peace accord between the government and the FARC last year, the terrorist-target relationship is becoming more of a customer-company one. After laying down their arms, more than 7,000 FARC guerrillas are opening bank accounts and picking up debit cards, many for the first time. As part of their integration into law-abiding society, they are to receive from August a monthly stipend of 663,945 pesos ($220). Each person will also get a one-time payment of 2m pesos to start a business. The government has designated Banco Agrario, which has reopened dozens of bombed-out branches over the past decade, to take the lead in opening accounts for the ex-fighters.

Colombian banks have experience of catering to reformed irregulars. They opened accounts for 30,000 right-wing paramilitary fighters who demobilised between 2003 and 2005. But many of these were city-based and had banking histories. Most FARC fighters, by contrast, have never left Colombia's backwaters or handled money other than cash. Banco Agrario is leading workshops to teach them the basics of personal finance.

The FARC's new bankers have to be careful. Unsurprisingly, the country that provides the setting for "Narcos", a television series about the drug kingpin Pablo Escobar, has an elaborate system for detecting money-laundering and the financing of terrorism. Banks are obliged to know if their clients have criminal records. And accounts opened by ex-combatants are subject to a greater level of scrutiny.

The FARC are thought to have amassed a fortune during their half-century of war through such activities as drug-trafficking, wildcat gold-mining, kidnapping, extortion and raiding branches of Banco Agrario. Estimates of the group's annual income at the height of its power in the 1990s range from $200m to $3.5bn. The FARC say they have no fortune, and have promised to pay out whatever money they do have in reparations to their victims.

If banks come across tainted money, they must report it. Some of the FARC's leaders will remain unbanked. At least 90, including some of the governing secretariat, are still on the US Treasury Department's list of drug-traffickers. Any bank that does business with them risks having its assets frozen in the United States.

Rank-and-file fighters are another matter. Banco Agrario has permission from the banking regulator to ignore the part of the account application that asks about their criminal past. Eventually, the new customers will be able to move their accounts to other banks, including private ones, as long as they declare that their money comes from legal sources.

The profit in catering to relatively poor ex-guerrillas is unlikely to be spectacular, but it could open up other opportunities. There is scope to expand in regions once cut off by war, and to finance reconstruction in such areas. The FARC's political party, to start work on September 1st, will need a place to park its cash. Banks will gladly take it, as long as the accounts are not controlled by the blacklisted criminals of the recent past.

Asia

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Powering ahead

India’s once-shoddy transport infrastructure is getting much better

But it has a long way to go to catch up with China

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Jul 27th 2017 | DELHI

JUST after 1pm on July 31st 2012 lights blinked out across northern India. It was the world’s biggest-ever blackout, affecting more than 600m people. It was also a swingeing blow to a transport system that had struggled to cope at the best of times. Hundreds of trains came to a halt in open country and in the tunnels of Delhi’s underground railway. Some passengers had to wait for hours in shirt-drenching heat.

Five years on, India’s famously creaky transport infrastructure is starting to look strong. The power on which parts of it depend has also become far more reliable. The embarrassing system-wide collapses of 2012, and an earlier one in 2001, are now scarcely conceivable. A rush to expand the electricity supply has been so successful that analysts now warn of a looming excess of generating capacity.

On paper, India has long claimed some of the world's most extensive road and rail networks. That belied reality: roads were twisting, bumpy, crowded and dangerous. Railways were largely single-track, which caused delays, or narrow-gauge, which limited their ability to carry large loads. By car or train it was rare to sustain speeds of more than 50kph (30mph). Puzzled tourists wondered why distances that looked small on a map took forever to traverse. The rail network had barely expanded since the days of the British Raj, despite having to handle some 8bn passengers a year. India's remoter corners were tied to the centre by the thinnest of infrastructure threads. Snows blocked passage to Kashmir for days at a time in winter; floods regularly cut off much of the north-east.

That is changing, too. In recent months Narendra Modi, the prime minister, has inaugurated India's longest road tunnel and longest bridge. The tunnel slashes driving time between Jammu and Srinagar, the winter and summer capitals of the state of Jammu & Kashmir, by two hours. It also makes the route passable all year round. The new bridge (pictured when it opened in May) spans the vast and moody Brahmaputra river, a once-formidable barrier running through the north-eastern state of Assam. Another one nearing completion will, for the first time, link Kashmir by rail to the rest of India. Rising a dizzying 359 metres (1,178 feet) over a gorge, it is the world's tallest railway bridge.

China does it quicker

With less drama, transport networks are being overhauled. The central government has doubled budgets for both road- and rail-building since 2012, to a combined total of close to $30bn a year at today's exchange rate. Progress on building expressways has been unimpressive. Unlike in China, where the government has been able to build big roads at astonishing speed thanks, not least, to its ability to kick farmers off their land at will, in India a more litigious system makes it harder to appropriate land. India's government is also more sensitive than China's to farmers' political opinions (in India they can vote in proper elections). Building roads from which their animals and tractors are excluded is unpopular in the Indian countryside. But local governments are paving and widening rural roads at a rate of 117km a day.

On the railways, better signalling and tracks have pushed up the speed of faster trains to a respectable 140kph. Work is about to start on India's first dedicated high-speed rail link, a 500-km track between the western city of Ahmedabad and the commercial capital, Mumbai. When the first line of the Delhi Metro opened 15 years ago, many passengers were surprised by its fast, clean and efficient service. India's capital now has six such lines, some running below ground. Seven cities have such rapid-transit systems. Eight more are building them.

More striking still is the growth in air traffic. Domestic passenger numbers have doubled since 2010, to nearly 100m a year. Last year alone the number surged by 23%. Indian airlines are snapping up new aircraft, with some 450 in operation and more than 1,000 on order. Mr Modi's government has brought cheer to fast-growing private airlines. It plans to privatise much or all of the loss-making national carrier, Air India, and has also pushed through an ambitious scheme to encourage the use of smaller airports. Through a mix of subsidies and guarantees to airlines, plus ticket-price caps for passengers, the scheme aims to put 31 unused airports into passenger service and boost connectivity to 12 more that are reckoned to be underserved.

There will be plenty of power to operate them. Installed generating capacity has more than doubled since 2007. The capacity of power projects now being built should double it again from the present level, assuming they are all completed. Improvements to transmission are no less impressive. "We have a more advanced, more flexible grid than Europe's," enthuses Vinayak Chatterjee, an infrastructure consultant. He says the country can now more easily transmit power over long distances, such as from the north-east (which has a surplus) to the often undersupplied south.

The boost to India's infrastructure has not been problem-free. An exuberant rush into public-private partnerships for big projects a decade ago left many private firms taking on bigger financial risks than they could manage. Many ventures stalled. Infrastructure-related deals are reckoned to account for around 10% of the nearly $200bn in non-performing loans that currently bog down India's financial system.

The government's own projects have not all run smoothly, either. A grim report by the state's main auditing agency earlier this year painted a picture of incompetence and corruption in the Indian army's Border Roads

Organisation, which is responsible for building strategic roads along India's mountainous border with China (see Banyan). Out of 61 roads that the agency was supposed to have built between 1999 and 2012, only 36% had been completed by 2016, the report revealed. Some of the unfinished ones came to a dead end in impassable gorges, or were abandoned because different stretches turned out to be impossible to join.

That is galling for India, which often rates its progress by comparing itself with China. Having spent three decades beefing up its own infrastructure before India began to get in on the act, the northern giant has set standards that India will still take decades more to match.

A dogfight

Shinzo Abe's ratings are tumbling amid allegations of wrongdoing

A planned cabinet reshuffle may not help him much

Jul 27th 2017 | TOKYO

AFTER winning election for Japan's premiership four times in a row, Shinzo Abe has a reputation for arrogance. Before parliament broke up in June for the summer he jeered his opponents and called their questions "stupid". At one point he told ministers to read newspaper articles on his policies instead of bothering him for an explanation. A noticeably humbler Mr Abe was grilled this week in both houses of the Diet, Japan's parliament, over allegations—which he denies—that he abused his office to grant a favour to a chum. Amid the furore, his popularity has plummeted.

His troubles were evident earlier this month when his Liberal Democratic Party (LDP) suffered its worst result ever in an election for Tokyo's regional assembly. On July 24th a poll by the *Mainichi*, a liberal newspaper, put support for Mr Abe at 26%, the lowest since his stunning return to power in 2012 after years in the political wilderness, and ten percentage points lower than in late June. His stumbling performance at the Diet hearings on July 24th and 25th—called during the legislature's holidays to clear up the alleged scandal—did little to help.

Few politicians were convinced by Mr Abe's insistence that he played no part in nudging officials to help the Kake Educational Institution open a college for veterinarians in western Japan, says Takao Toshikawa, an analyst. Mr Abe said that he and Kotaro Kake, the institution's director, "go way back". But the prime minister insisted they had never discussed the application to build the college. The approval was worth millions of dollars in free land and grants, and seemed curious: demand for vets in Japan is declining, along with the number of pooches and other pets.

Mr Abe's unusually long tenure as prime minister followed years of rapid turnover in the job. At least until this scandal, he appeared on course to become Japan's longest-serving post-war prime minister in November 2019. Last year the LDP acknowledged his popularity by changing its rules to allow him to seek a third term next year as the party's president. With the LDP and like-minded parties in control of both houses of the Diet, the way seemed clear for Mr Abe to achieve his goal of amending Japan's pacifist constitution to end the ambiguous status of the armed forces. That plan is not popular, but it would boost his standing among conservatives who think the American-drafted constitution unfairly restricts Japan's ability to defend itself.

Mr Abe's re-election as the LDP's leader now looks in doubt. On August 3rd he is expected to attempt to reboot his fortunes by sacking his most unpopular ministers. Among the likely casualties are Tomomi Inada, his gaffe-prone defence minister, and Katsutoshi Kaneda, the justice minister, who was accused of trying to stifle Diet debates on a bill, passed in June, concerning conspiracy to commit terrorism and other serious crimes. Critics of the legislation said it would infringe civil liberties.

The reshuffle will give the prime minister breathing space but will not end his difficulties. Government auditors are due to publish a report soon on another alleged sweetheart deal, this one involving claims that Mr Abe secretly helped with the opening of an ultranationalist kindergarten (he has denied these allegations, too). Mr Abe will probably survive, says Mr Toshikawa, the analyst. But for the first time since 2012, he is looking very vulnerable.

Endo without end

In the Philippines, Duterte breaks his vow to reform labour laws

That may be good for the country’s economy, but workers will not thank him

Jul 27th 2017 | SINGAPORE

AS A presidential candidate, Rodrigo Duterte had strong views about “contractualisation” and “endo”—big firms’ habit of hiring employees indirectly, via temping agencies, often on renewable five-month contracts. He agreed with labour activists that corporate giants use these practices to avoid providing health care and other benefits, and said they should be banned. Indeed, he promised to lean on Congress to ban contractualisation in the first week of his presidency. “Pay the benefits,” he growled on the campaign trail. “Don’t wait for me to catch you because I will be unforgiving. You will not only lose your money, you will lose your pants.”

Over a year into Mr Duterte’s term, employers remain clothed. In March Silvestre Bello, Mr Duterte’s labour secretary, signed an order that sets stricter guidelines about when firms can hire temporary workers through employment agencies. But banning third-party hiring entirely would require action from Congress, Mr Bello explained. In a speech on May Day Mr Duterte promised to sign an order outlawing contractualisation, but has not yet done so. “Give me more time,” he pleaded to the crowd. In a state-of-the-nation address on July 24th, he failed to mention the topic.

According to the most recent data (from 2014), around 30% of Philippine workers are on temporary contracts. They include apprentices and people hired for seasonal or project-based work such as construction labourers. That is in line with some rich countries that have highly regulated labour markets: around 30% of Spanish workers are on fixed-term contracts, for example. Sacking workers with open-ended contracts is difficult in the Philippines.

Labour groups accept that some jobs demand some flexibility. But about half of temporary workers are hired through labour agencies—and therein, say activists, lies the potential for abuse. Rene Magtubo, a spokesman for Nagkaisa, a Philippine labour coalition, contends that jobs that are “necessary and desirable” to a company’s core business should be filled by regular workers hired by the company, with benefits, not temporary workers hired through staffing agencies. Mr Magtubo says he is willing to help the president draft an executive order to end contractualisation, and that it could be done within three months. “But if there’s no action on the part of the president,” he warns, “we’re open to mass actions to pressure him.”

Businesses remain worried. One representative of a big conglomerate says that a ban would cause firms to hire fewer people. They are also likely to pass on higher costs to their customers. That would trim the spending power of Filipino consumers, the engine of the economy, in two different ways. But the Employers’ Confederation of the Philippines can live with the labour secretary’s order in March. The organisation predicts that hiring will increase despite it. In the long run, that may do more for Mr Duterte’s popularity.

A place out of hair

How wigs tell the story of modern South Korea

South Korean-run factories make the majority of those sold worldwide


David Parkins

Jul 27th 2017 | SEOUL

“SELL your hair,” clamoured sweet-sellers in Seoul in the 1950s. The capital of South Korea had been pulverised by a three-year war with North Korea. Southern women were cutting off and selling their tresses, typically worn in a long plait or a low bun, for dollars, rice and rubber shoes.

The hawkers sold the jet-black locks to wigmakers in Guro, a district of south-western Seoul that was home to the first industrial complex built in South Korea after the war for the export market. (A year into the fighting, half of the country’s factories were in ruins.) In the 1960s thousands of female labourers soaked, stitched and styled the hair of their destitute countrywomen in Guro’s factories.

The wig industry in South Korea has proved remarkably resilient. Today it is South Korean women who are its fastest-growing source of demand. They snap them up for $1,000 apiece from Hi-Mo, a maker of custom wigs that began business in 1987 as an exporter and now dominates the domestic market. Hi-Mo Lady, a sister business, began five years ago. Its wigs and toupees are made in China with Chinese hair, mixed with a durable synthetic fibre of Hi-Mo’s own called NEXART. Demand from other countries remains huge. Fifty years after exporting their first hairpieces, South Korean-run factories, almost all of them abroad, still weave the majority of the world’s wigs, says Lee Hyun-jun of the Korean Wig Association.

The wig business in South Korea has played a lustrous role in the country’s development. By the end of the 1960s, wigs made up roughly one-tenth of South Korea’s total exports by revenue. In the next decade they became its third-most-exported product, after textiles and plywood. One-third of the wigs worn by Americans in those years are thought to have been made in South Korea (it benefited from an anti-communist ban on Chinese hair in 1965). It was then a state-sponsored industry—an emblem of dirigisme under Park Chung-hee, a dictator who seized power in a coup in 1961 and ruled for 18 years. .

Wigs turned into a symbol of South Korea’s struggle to put an end to rule by such strongmen. Among Park’s cheerleaders was YH Trade, a wigmaker that was founded in 1966 with ten workers and expanded to 4,000 within four years. It quickly earned a state prize for "Excellence in Exports". In 1979, due to heavy debts, it sacked hundreds of workers. Around 180 of them staged a sit-in to demand compensation; police stormed the factory, and a 21-year-old protester died from beatings. Among the demonstrators was Kim Young-sam, a legislator who let them use his party's offices. In 1993 he became South Korea's first civilian president in the democratic era.

Kim Kyung-sook, the protester who died, was like millions of others who left the countryside in the 1970s for Seoul; she began factory work straight after primary school. Her wages, which she sent home, helped put her younger brother through secondary school. She often stitched wigs until 4am. One of her co-workers says they were "worked like machines". Some became addicted to the stimulants that they were given to stay awake.

Part of the reason that YH closed was that the wig industry was growing new roots. In the 1980s, as South Korea grew richer and wages soared, plants were moved to China and South-East Asia.

In today's South Korea, the ordeal of workers like Kim now seems other-worldly. The country's GDP per person is roughly that of Italy; over two-thirds of its youngsters go to university. Democracy is entrenched; protests are routine. (In January a court cleared four YH protesters who had been prosecuted for those early demonstrations at the factory.) Yet South Koreans still lead stressful lives: they work among the longest hours in the rich world, at school and in the office. Local trichologists say that changing diets and air pollution also help to explain why a quarter of South Koreans are losing their hair.

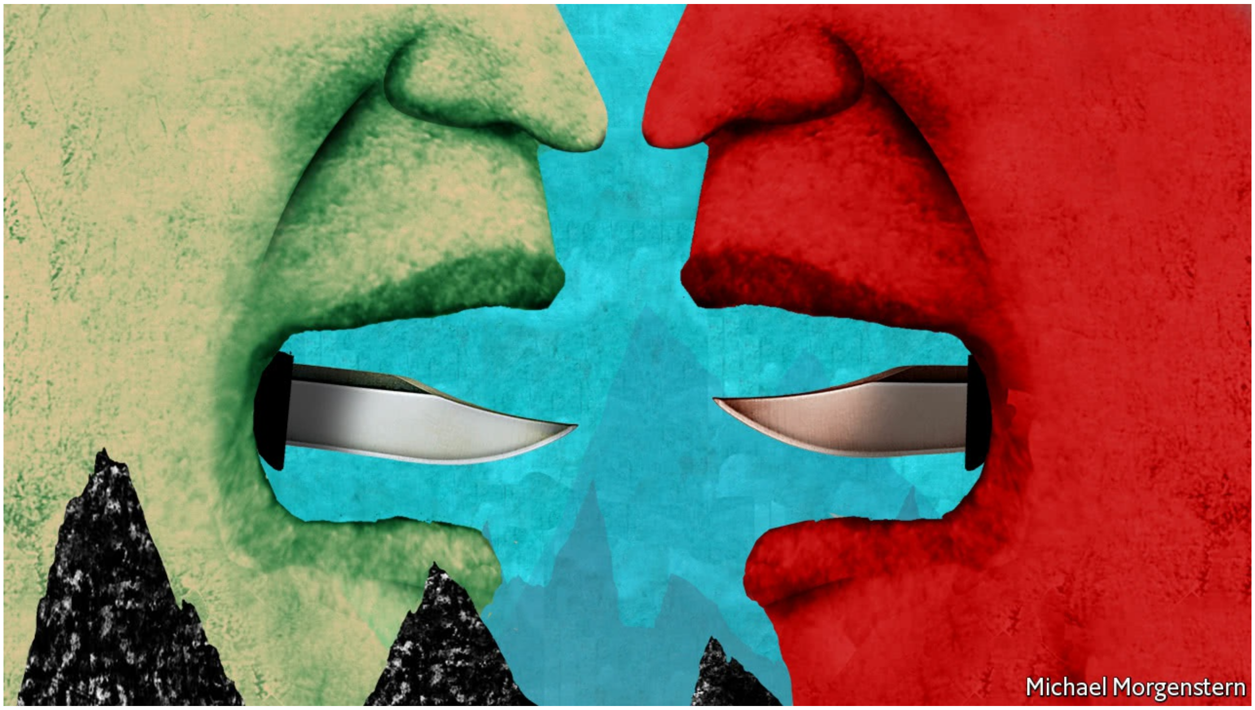
In South Korea, products to combat hair loss have become a multi-billion-dollar market. Magnificent mops are a marker of professional success. A man was recently fired on his first day of work at a hotel after bosses uncovered his hair loss (he appealed to the country's human-rights committee). Manufacturers have taken note: last year, to promote its wares, Hi-Mo offered free rentals of wigs or toupees to graduates for their job interviews. Women, shunning domesticity to stay longer in the workforce, have become new buyers.

Hi-Mo says the market is growing more luxuriant across a broad range of age-groups. Its sales have risen by over 40% since 2010, and its first-time buyers are becoming younger: over a quarter of its male users are in their 30s. Those whose custom Hi-Mo manages to secure often stick with the company's hairpieces for a lifetime, it says. If used daily, they last about a year: in a country with one of the world's longest life expectancies, that is a head-spinning prospect for wigmakers.

Banyan

A Himalayan spat between China and India evokes memories of war

Xi Jinping and Narendra Modi must tread warily



Jul 27th 2017

FOR nearly six weeks, armed contingents of two of the biggest military forces in the world have faced off in a high-altitude game of chicken in the Himalayas. Roughly 300-400 Indian soldiers and an equal number of Chinese border guards are stuck glowering at one another over a scrubby patch of land at a “tri-junction”, where the two countries and the tiny kingdom of Bhutan all meet. Analysts cannot see how either side might easily stand down. Memories of a bloody border war fought between China and India in 1962 are all too easily evoked.

That war, which saw India humiliated, began after the Chinese built a road across disputed territory in the far west of the two countries’ 4,000km-long, disputed border. The latest problems began when Chinese border guards were spotted moving road-making equipment onto the Dolam plateau, a flat spot in the slightly larger region known as Doklam (or Donglang in Mandarin) which all three sides patrol. On June 18th Indian troops moved onto the plateau to prevent the resurfacing of a dirt track. No shots were fired, though a shoving match was captured on video. Doklam is the subject of a long-standing territorial dispute, one of many in the region. What makes India’s actions extraordinary is that the dispute is not between India and China, but rather between China and Bhutan. India makes no claim to the plateau, which it says it has moved onto on Bhutan’s behalf. What is less clear is whether Bhutan, an ally which India has in the past treated as a vassal, really wanted Indian help.

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The Chinese government claims that India's incursion is a black-and-white instance of breach of sovereignty—and it has a case. Chinese officials cannot appear soft, for fear of ridicule at home. The more rabid parts of their media are already rattling sabres. The defence ministry has vowed to stand firm in Doklam, warning that it is "easier to move a mountain than to shake the People's Liberation Army". The government says the Indians must withdraw entirely before the matter can be discussed.

Some historical context is in order. The 1962 war was fought on multiple fronts all along the Himalayan range. Before it was over, the Chinese had surged through the eastern Himalayas down into India's isolated north-east (they later withdrew). Now, as Chinese might grows, Indian strategists worry that the north-east is becoming ever more imperilled. As it is, a jagged cartographic dagger from Tibet points southward, separating most of the Indian state of Sikkim, to the west, from Bhutan, to the east. Were China to extend a road system south to the full extent of its claim, it would reach a ridge that is just 100km north of a vulnerable point on the Indian plains below: the "chicken's neck", a 21km-wide corridor connecting mainland India to the eight states of its north-east. India has a metaphorical pinched nerve too: China's annual defence spending dwarfs India's, $215bn to $56bn.

A solution may be hiding in misty Bhutan, a Buddhist country that has far more in common culturally with the neighbouring Chinese region of Tibet than it does with India. It finds its relationship with its neighbour to the south increasingly embarrassing—a legacy of days when Bhutan was a protectorate of British India. Its foreign relations are still handled by diplomats in Delhi, albeit unofficially. That means it can get caught up in Indian spats with China that have nothing to do with it. In May, India decided to snub China by staying away from an international summit in Beijing to discuss China's "Belt and Road Initiative"—a scheme to link China to its neighbours and countries beyond with a splurge of spending on infrastructure and power projects. The point of India's gesture was to show its anger at China's extension of the scheme into the part of Kashmir that is controlled by Pakistan but claimed by India. Struggles over Kashmir do not affect Bhutan's gross national happiness index, its much-vaunted means of measuring its progress. But Bhutan, presumably under orders from India, stayed away from the gathering in Beijing, too.

Some politicians in Bhutan would like their country to pursue a more independent policy, and China is keen to encourage that. Having Bhutan as a friend would make it all the easier for China to control that strategic swathe of the Himalayas and cause India to squirm. Why then move troops into an area claimed by Bhutan? It could make sense, says Bérénice Guyot-Réchard, a historian at King's College London and author of "Shadow States: India, China and the eastern Himalayas". The message China may be trying to send to India's protégé is: if you deal with us directly instead of through Delhi, we might be more sympathetic to your border claims and walk quietly out of Doklam.

Glacial change

But Bhutan cannot turn its back on India so easily. It is the biggest single recipient of Indian aid. India is the main market for its glacier-melt hydropower. India supports Bhutan's puny army. And India's prime minister, Narendra Modi, is conscious of China's designs: his first trip abroad after taking office in 2014 was to Bhutan. The kingdom's fear of changing the status quo may explain why the stand-off in the Himalayas has persisted far longer than previous surges of tension between China and India along their border in recent years. It becomes all the more worrying when you consider that Mr Modi and China's president, Xi Jinping, are nationalists who want to be seen as strongmen.

Fortunately, however, there is one thing that matters more to Mr Xi than praise for defending China's border claims. That is stability. In the build-up to a sweeping reshuffle of the leadership expected this autumn, he is preoccupied with political struggles at home: a shooting match with India that risked escalating into war would be a dangerous distraction. As for Mr Modi, a conflict ending in the kind of defeat that India suffered in 1962 would be ruinous for his country and might finish his political career. Both countries are far more powerful than they were 55 years ago. It can only be hoped that they do not misjudge their strength.

China

- **China and Russia: Unlikely partners** [Fri, 28 Jul 14:42]

Unlikely partners

Xi Jinping and Vladimir Putin behave like the best of buddies

But suspicion between Russia and China runs deep

Jul 27th 2017 | BEIJING, MOSCOW AND VLADIVOSTOK

ON JULY 21st three Chinese warships sailed into the Baltic Sea for China's first war games in those waters with Russia's fleet. The two powers wanted to send a message to America and to audiences at home: we are united in opposing the West's domination, and we are not afraid to show off our muscle in NATO's backyard. The war games were also intended to show how close the friendship between China and Russia has become—so much has changed since the days of bitter cold-war enmity that endured between them from the 1960s to the 1980s.

There has been an abundance of such symbolism in recent weeks. On his way to this month's meeting in Germany of leaders from the G20 group of countries, China's president, Xi Jinping, stopped off in Moscow. There his Russian counterpart, Vladimir Putin, hung an elaborate medallion around his neck: the Order of St Andrew, Russia's highest state award. At the G20 (where they are pictured), “only two leaders in the world exuded calm confidence,” Dmitry Kiselev, a cheerleader for the Kremlin, said on his television show in reference to Mr Putin and Mr Xi. “Russia is pivoting to the east. China is turning to the west—towards Russia,” he crowed.

Since he became China’s leader in 2012, Mr Xi has visited Moscow more than any other capital city. In 2013, during a meeting in Indonesia of leaders from the Asia-Pacific region, he even attended a private birthday party for Mr Putin. Over vodka and sandwiches they talked about their fathers’ experiences in the second world war—Mr Putin’s against Germany and Mr Xi’s against Japan. In 2015 Mr Xi was the guest of honour at a military parade in Moscow that was held to mark the 70th anniversary of the war’s end, and was boycotted by Western leaders because of Russia’s war in Ukraine. Four months later Mr Putin attended a parade in Beijing celebrating China’s victory in the war against Japan. South Korea’s then president, Park Geun-hye, was the only leader of an American ally who showed up.

Fellow autocrats

Mr Xi and Mr Putin take comfort in each other’s authoritarian bent. China has copied Russia’s harsh laws on NGOs; the Kremlin has been trying to learn how China censors the internet. During Mr Xi’s recent visit to Moscow, the two leaders listened to a speech by Margarita Symonyan, the boss of Russia Today, the Kremlin’s foreign-language television channel. Ms Symonyan told them that Russia and China were victims of “information terrorism” by the Western media. She said the two countries must help each other because “we alone stand up to the mighty army of Western mainstream journalism.”

Mr Xi has been obliging. Russia’s Channel One—its main television channel, which has been whipping up anti-American fervour and support for Russia’s land-grab in Ukraine—has obtained permission to launch a cable service in China, called Katyusha, with subtitles in Chinese. Appropriately for the propaganda counter-attack that the two leaders see themselves as waging, Katyusha is the name of a Soviet rocket-launcher.

The breakdown of Russia’s relationship with the West as a result of the conflict in Ukraine has driven it further towards China. But the camaraderie masks fundamental differences. Russia needs China far more than China needs Russia. And Russia feels uncomfortable about such an unbalanced relationship that highlights a flaw in the Kremlin's claim of Russian greatness. Russia is wary of its far more populous and economically potent neighbour, which is rapidly gaining in military power.

For its part, China worries about Russia's willingness to challenge the post-cold war order. It has benefited from globalisation far more than Russia, and so is less inclined to disrupt the status quo.

Take China's response to Russia's intervention in Ukraine. Leaders in Beijing have turned a blind eye to it (just as Russia has to China's seizing of disputed shoals in the South China Sea). But China has not formally recognised Russia's annexation of Crimea. Chinese officials are fearful of how some people in China might interpret events there. After Crimea voted in a bogus referendum to join Russia, censors in China ordered media to play down the event. They did not want people in Taiwan, Tibet or the far western region of Xinjiang to think about determining their own future through such means. They also did not want Chinese nationalists to clamour for bolder moves to annex Taiwan.

For China, economic ties with America, and therefore political ones, are hugely important. By comparison, Russian trade with America is negligible (see chart). In its trade with Russia, China is mostly interested in Russian oil and gas. Last year Russia overtook Angola and Saudi Arabia as the country's biggest supplier of crude oil. In 2014 Russia and China signed a deal worth an estimated $400bn to pump natural gas to China from two fields in eastern Siberia via a new pipeline. The deliveries are set to start in December 2019. But negotiations over energy supplies are often bitter. Russia would like to divert to China oil and gas that is currently piped to Europe from western Siberia. But the two countries have not agreed on the funding of new pipelines that would be needed. Given the current low price of natural gas, China is reluctant to invest in building them.

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Ready to play with Russia

The only other exports from Russia that matter to China are arms. Since the collapse of the Soviet Union in 1991, Russia has sold China $32bn worth of them, amounting to nearly 80% of all China's arms imports. It has recently supplied China with advanced S-400 surface-to-air missile systems, and state-of-the-art Sukhoi SU-35 fighter jets. The Kremlin used to worry about China's efforts to reverse-engineer them. But Alexander Gabuev of the

Carnegie Moscow Centre says that Russia now recognises that China's technological advance is unstoppable. Russia might as well make money from selling arms to China while China still has an interest in buying them from abroad rather than making them itself. Russia's interests are mercenary rather than strategic: it also sells arms to China's rivals, India and Vietnam.

The allure of silk

With Russia's access to international capital markets now severed as a result of sanctions, China has become Russia's main source of funds. Friends of Mr Putin, shunned by the West, are the main beneficiaries. One of them is Gennady Timchenko ("our man in China", as Mr Putin describes him). Along with a son-in-law of Mr Putin, Mr Timchenko is a co-owner of Sibur, a petrochemical firm. In December 2015, Sibur sold 10% of its shares to Sinopec, China's largest state-owned oil refinery, for $1.3bn. Last year Sibur sold another 10% of its shares to China's state-backed Silk Road Fund, which invests in infrastructure.

As Chinese leaders see it, helping such people is a price worth paying in order to keep the supplies of energy and weapons flowing. But they see little prospect of Russia's economy yielding any more than that. "For China, Russia matters first and foremost as a security issue, not as an economic one," says a Chinese expert.

For that to change would require fundamental economic reform in Russia. Under Mr Putin, there is no prospect of that. Private investors in China shy away from Russia for the same reasons that their Western counterparts do: the lack of a robust legal system and clearly defined property rights. A senior Russian banker in China says a deep-rooted contempt for China in the Kremlin also gets in the way. "Russia's biggest problem is that it does not know what it wants from this relationship. Our government wants Chinese money without the Chinese," he says.

China has no illusions about Russian power. It sees it as weak and in decline. Successive American governments have reached the same conclusion. But whereas American leaders have tended to react by ignoring Russia, Chinese ones have done the opposite. They believe that an angry, declining power with nuclear arms requires more, not less, attention. Having watched Russia become a growing problem for the West, they do not want it to become a headache for China, too.

They know from history what a problem Russia can be for China. The “unbreakable friendship” between Russia and China that was declared by Stalin and Mao in 1950 nearly ended in a war between the two countries less than 20 years later. Fu Ying, a former Chinese diplomat who is now a legislator, remembers her fear as a teenager living close to China’s 4,200km (2,600-mile) border with Russia where hundreds of thousands of Soviet and Chinese troops faced off and the risk of war seemed very real. “The fact that we can be friends and no longer fear each other is significant in itself,” says Ms Fu.

Russia is also nervous of China. Despite this week’s war games in the Baltic Sea (and other joint ones in the past two years in the South China Sea and the Mediterranean), Russia stages exercises in preparation for a possible conflict with China. It fears that its densely populated neighbour may one day decide to grab sparsely populated lands in Russia’s east. Russian military planners are conscious of history: although China’s government is too polite to say so, ordinary Chinese recall that parts of that region, including Vladivostok, were China’s until the 19th century.

Ready to play with Russia

The two countries spar for influence in Central Asia, where China has become the leading trading partner for all the former Soviet republics (apart from Uzbekistan), as well as the region’s largest investor. Russia likes to think of itself as being the paramount military and political power in Central

Asia, while China focuses on the economy. Yet as Bobo Lo, an Australian expert on the relationship, argues in a recent book, this arrangement is unsustainable. Mr Xi's "Belt and Road Initiative", aimed at linking China with Central Asia and countries beyond through infrastructure and energy projects, will give China much political clout in the region.

The asymmetry between Russia and China is particularly evident in Russia's east. A few years ago residents there were spending their fast-rising incomes in China. But the rouble has become much weaker, and so has Russia's economy. They now look to high-spending Chinese as their saviours. The numbers of such visitors are rapidly growing (though few venture there a second time). In Vladivostok, a travel agent says the city does not have enough decent rooms to accommodate them. On the streets, young Russians try to sell them old Soviet coins and banknotes.

Residents' sense of shame at their country's decline relative to China is palpable. In one hotel, Chinese visitors fill a stuffy restaurant where they watch scantily dressed dancers and women singing Russian folk songs. A performer walks out for some fresh air. Her face shows pain and humiliation. Chinese ships in the Baltic Sea (one is pictured), eight time zones away, will not make her feel any better.

Middle East and Africa

The heft of Khalifa Haftar

After conquering Benghazi, what will Libya’s new strongman do next?

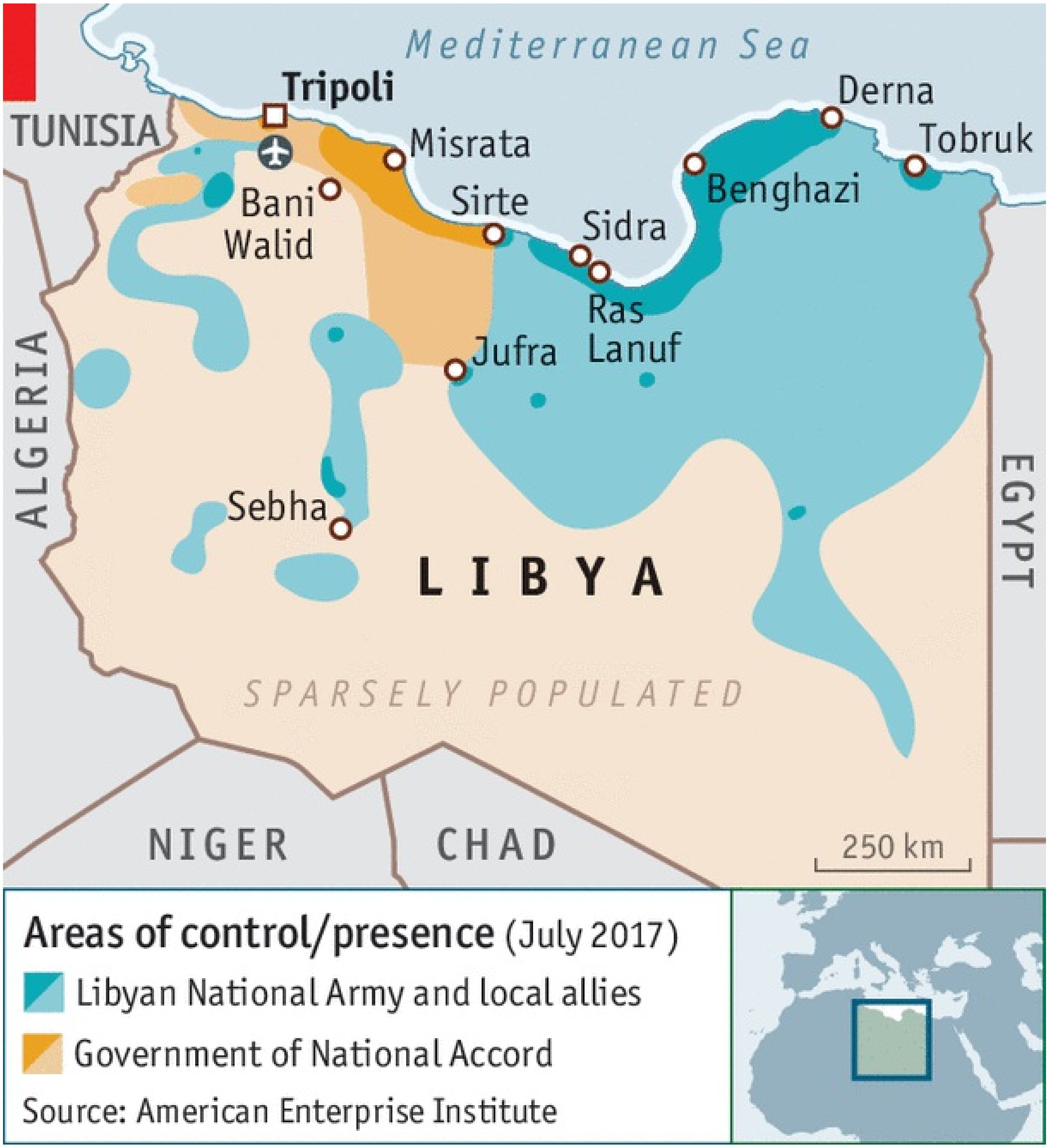
A new peace deal lends legitimacy to Libya’s most powerful general

Jul 27th 2017 | CAIRO

STUBBORN and self-serving, Khalifa Haftar has long been seen as a spoiler of efforts to end the conflict in Libya. The forces under his command in the self-styled Libyan National Army (LNA) have mostly added to the chaos, not helped to resolve it. Yet General Haftar was greeted like a statesman by Emmanuel Macron, the French president, in Paris on July 25th. There he encountered Fayez al-Serraj, a rival who leads the UN-backed government based in Tripoli, the capital. Their first meeting, three months earlier, produced nothing. So it came as something of a shock when the two leaders announced a ceasefire and their intention to hold elections in 2018.

“The cause of peace has made great progress,” declared Mr Macron. In fact, the deal is but a small step. More agreements are needed before elections can be held and the fighting, which now involves myriad groups, is likely to continue. As it is, the LNA, which backs a separate government in the east, rarely battles the forces aligned with Mr Serraj. But General Haftar is free to keep pummelling terrorists, which is what he labels most of his opponents. The country's powerful militias were left out of the talks in Paris, which were chaired by the newly appointed UN envoy for Libya, Ghassan Salamé. So like previous deals brokered by the UN, this one lacks widespread support, at least for now.

The outcome in Paris is an acknowledgment that the previous deal, which installed Mr Serraj as prime minister in 2015, has not united the country as planned. It also lends more legitimacy to General Haftar, who has tightened his grip on the east and used his territorial gains to increase his stature. With Egyptian and Emirati support his forces captured the important oil ports of Sidra and Ras Lanuf (see map) in September. More recently, they have gained ground around Jufra and Sebha. And on July 6th, after years of fighting and false promises, General Haftar claimed to have liberated Benghazi, Libya's second city, from various Islamist and rebel militias, though pockets of resistance remain.



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With Europe gripped by concerns over migrants and terrorists streaming out of Libya, some European officials now see an ally in General Haftar. He has already been embraced by the Russians and seems to be Donald Trump's kind of guy. But as more countries pay him heed, they risk empowering a would-be strongman who has cracked down on dissent and squeezed civil liberties in the areas under his control. His forces have been accused of abuses, such as killing prisoners. And although the deal in Paris calls for placing all armed groups under one command, it is far from clear that General Haftar would allow anyone but himself to lead a truly national army. Many analysts reckon that he will run for president if an election is held.

As General Haftar's power has waxed, Mr Serraj's has waned. He and the other members of his presidency council inspired much hope when they arrived in Tripoli in 2016. But three of the council's original nine members have either resigned or are boycotting the body. The rest do more bickering than governing. Some of them resent Mr Serraj for his outsized role in negotiations with foreign powers. "Several members think he is not fit to lead—that he does not have the knowledge, charisma or decision-making capability," says Claudia Gazzini of the International Crisis Group, a Brussels-based think-tank. "That opinion is shared by a lot of people in the pro-Tripoli camp."

If the agreement in Paris is to lead to more substantive progress, Mr Serraj, who commands no fighting force of his own, will need to convince the various militias aligned with his government to lay down their arms. Relations are already strained. Those fighting the so-called Islamic State (IS) complain of a lack of support from the administration, even after they kicked the jihadists out of their stronghold in Sirte last year. (They are now bracing themselves for a counterattack.) An Islamist government that preceded Mr Serraj's outfit is still supported by some of the militias in Misrata and Tripoli, which continue to cause trouble, even in areas under the control of the presidency council.

Mr Serraj has also failed to win over the public. His government, though it has been in Tripoli for over a year, still provides few public services, even in the capital. Its limited authority is highlighted by the fact that human traffickers are thriving in western Libya, to the disquiet of the Europeans. The economy has contracted for the past four years, with rising prices and a falling dinar adding to the misery. People must queue for hours to get money from banks, and on top of that limits on withdrawals make it difficult to get enough. The hardship is contributing to a sense that things are better in the east, where General Haftar at least provides security.

General Haftar can also claim to have helped increase Libya's oil exports.

Since he secured the ports at Sidra and Ras Lanuf, production has roughly tripled to over 1m barrels per day. But Mustafa Sanalla, the head of the national oil company, gets most of the credit. “He sees how to bring in investment and expertise, despite the complex patchwork that exists,” says Jason Pack of the US-Libya Business Association. Even so, oil production has yet to reach the levels seen before the revolution in 2011, leaving the central bank, which uses the oil revenue to finance both halves of the country, short of cash.

With its large oil interests and colonial history in Libya, Italy had seen the country as its diplomatic responsibility, especially as interest from America declined under Mr Trump. So the French effort has led to some consternation in Rome. Yet Mr Macron, confident though he is, may be underestimating the difficulty of the road ahead. The agreement reached in Paris says that only a political solution should end the fighting. But Mr Serraj may not be strong enough to implement one, and few observers think that General Haftar is done with the battlefield.

Open Sesame

Morocco and Algeria keep building more barriers

Fences make neighbours poorer

Jul 27th 2017 | MARSA BEN MHIDI

HAD Algeria and Morocco honoured their agreement back in 1989 to form an economic union, along with Tunisia, Libya and Mauritania, they would be among the Middle East's largest economies. Their poor border regions would be booming crossroads. Over the decade to 2015, reckons the World Bank, their two economies would each have almost have doubled in size.

Instead, Algeria grew only by 33% and Morocco by 37%, as both governments instead reinforced their barricades. Their north-west corner of Africa remains "the most separated region on the continent", says Adel Hamaizia, an Algerian economist. While sub-Saharan countries agree common currencies and trade zones, Algeria digs deeper ditches. Morocco revamps its berms and renews its razor wire. Concrete walls rise on both sides. Frustrated families shout greetings across the divide. Tantalisingly, both have built hundreds of kilometres of east-west highways which stop short of their common border.

Islamic empires once spanned the Maghreb, the land of the setting sun, as Arabs term north-western Africa. Both countries share a common history, cuisine, architecture, strand of Islam and an Arabic dialect mashed with Berber and French. But in 1957 colonial French generals erected an electrified barrier, the Morice Line, along the border to keep out arms-traffickers and guerrillas based in newly independent Morocco. Bar five paltry years in between, the border has been closed ever since. In 1963 the two countries fought a brief war. Skirmishes are now rare, but fighting words are common. Algerian republicans deride Morocco’s monarch as feudal, and because of the kingdom’s land-grab of Western Sahara call him the world’s last colonial ruler. Their neighbours cannot help sniggering at Algeria’s latest prime minister, whose name, Tebboune, is Moroccan slang for “vagina”.

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Their prospects should be brighter. Both countries have largely avoided the upheavals of the Arab spring. They are almost homogeneously Sunni, free of the region's sectarian divides. They have the advantage of cheap labour, and offer Europe a bridge to Africa. Algeria has had the edge. It produces copious oil and gas. And it developed a programme of mass industrialisation and agrarian reform after independence, while King Hassan II, who died in 1999, preserved his ancient kingdom like a museum. Algerians spend twice as long in school as Moroccans, and with so much oil, they earn almost twice as much.

Yet Morocco is catching up fast, thanks to its greater economic openness under Hassan's son, Muhammad VI. The kingdom ranks 68th on the World Bank's measure for ease of doing business—88 places above Algeria.

Exporting goods from Algeria takes six times as long as from Morocco, and costs almost four times as much. Algerian businessmen complain that centralisation, corruption and red tape have crushed local production. Investment is deterred by a law that limits foreign shareholders to 49% of any concern. Look at Renault, they say. Its production line in Tangiers, in Northern Morocco, is the largest car manufacturer in Africa to be sourced from locally made parts. But its plant in Oran, Algeria's second city, is little more than an assembly line. Algeria's beaches can rival Morocco's for beauty. The coves at Marsa ben Mhidi next to its sandbank with Morocco are enchanting. But tourism on its coast remains state-run and spartan, while Morocco's are considered some of Europe's premier escapes.

The time was when smuggling at least provided Algerians near the border with a living. Trucks and donkeys hauled subsidised basics like fuel, flour and sugar to Morocco, and returned with hashish from Morocco's mountainous Rif. But the latest fortifications have put paid to that. Young men who once plied the routes now fill the mosques with their frustration. Unfinished villas line the roads, abandoned. Officials say the new defences will keep out the drug barons and the risk of a spillover of Morocco's growing Berber unrest. But locals suspect that at a time of falling oil revenues, the army is simply diversifying its revenues by hogging the smugglers' take. For $80, they say, soldiers will open the gates of army border crossings at night to those without papers.

For five brief years it was all so different. In 1989 both countries removed visa controls as part of a new Maghreb Arab Union. Trade moved freely. Algerians went west on holiday. The two countries parked their squabble over Western Sahara. Then in 1994 a bomb went off in Marrakesh, and King Hassan, nervous that the civil war in Algeria was heading his way, accused Algeria of involvement and chased out its nationals. Algeria's generals responded by closing their borders, battening down the edges, and retreating into huffy isolation. As with the Gulf Co-operation Council, another trading bloc that has failed to deliver at the other end of the Arab world, practice rarely matches fraternal ideals.

In deep water

Israel’s submarine scandal

Israel’s most revered institution is under scrutiny

Jul 27th 2017 | JERUSALEM

IN A police guesthouse somewhere in Israel, a retired naval captain is writing his explosive memoirs. Michael Ganor’s story will not dwell on his exploits on the high seas. It will talk of bribe-trousering generals and politicians. Mr Ganor was the representative in Israel of ThyssenKrupp, a German industrial firm, and the middle-man in some of the largest arms deals in recent years between Israel and Germany. On July 21st he signed a state’s witness arrangement with Israel’s justice ministry, agreeing to serve a reduced sentence of a year in prison and to pay a 10m-shekel ($2.8m) fine in return for disclosing all that he knows.

Corruption in public life is far from unknown in Israel. A former prime minister, Ehud Olmert, went to prison last year for accepting bribes. Yet this case is different. The Israel Defence Forces (the IDF) come first in surveys of Israel’s most respected institutions, and IDF commanders are household names. So details of how millions of shekels changed hands in the purchase of submarines and surface ships are galvanising the country. Along with Mr Ganor, a celebrated former commander of the navy and a former brigadier-general have also been arrested as prime suspects. More generals will be questioned in the coming weeks.

Mr Ganor is part of an industry in which former IDF officers represent Israeli and foreign companies, all competing to win contracts for which their old comrades have drafted the specifications. This revolving door often allows officers to work on the systems they use on their frequent reserve stints back in uniform. The blurred lines between Israel's armed forces and arms industry are a strategic advantage, some claim. They allow Israel, facing multiple enemies on rapidly evolving battlefields, to develop and adapt unique tailor-made weapons, such as advanced missile-defence systems and "killer drones", unusually quickly. But it also opens the door to corruption.

"When a general leaves the military and is hired by an arms company, they're being hired for their connections as well. It leads in many cases to an ethical grey zone," says Yaakov Katz, the author of "The Weapon Wizards", a book about Israel's arms industry.

The investigation is not only shaking the defence establishment. It is also piling pressure on the prime minister, Binyamin Netanyahu. Another of the main suspects is the prime minister's personal lawyer of four decades (and second cousin) David Shimron, who was also Mr Ganor's lawyer and allegedly involved in many of his business dealings. Another of the submarine suspects, former Brigadier-General Avriel Bar-Yosef, long served Mr Netanyahu on Israel's National Security Council, and was appointed by him as its head, resigning before the scandal broke.

Mr Ganor would undoubtedly have received hefty commissions from Israel's submarine and corvette deals with ThyssenKrupp. Mr Netanyahu did push for the purchase of more submarines than the defence chiefs had recommended, but the prime minister has denied any knowledge of his lawyer's involvement in the arms deals and, according to the justice ministry, is not a suspect in the case.

Nonetheless, he has faced other investigations for a year now. Police have recommended indicting him for fraud and breach of trust for accepting expensive gifts from business folk he claims are "close friends", but the decision to prosecute rests with the attorney-general. The prime minister strenuously denies wrongdoing; his allies say he would remain in office even if he were indicted. Then, though, the question would become not just "What did he know or gain?" but "How can he continue to govern?"

For whom Bell Pottinger toils

The perils of lobbying in Africa

Working for African governments is lucrative, but increasingly risky, for Western PR firms

Jul 27th 2017 | NAIROBI

THE first rule for public-relations firms is not to become the story. In South Africa Bell Pottinger, a British firm, has done just that. In May, e-mails between one of the firm's employees and Duduzane Zuma, a son of President Jacob Zuma, were leaked to South African newspapers. Bell Pottinger had been hired by a company owned by the Gupta family, a trio of Indian businessmen brothers who are chummy with the president, to bolster their image.

One can see why they might seek such help. A report by a former public protector last year accused them of orchestrating "state capture" on behalf of the president, and their names have become a campaign slogan for the opposition. The e-mails showed how the firm had proposed to push the idea that criticism of the president—and the Gupta family—was intended to perpetuate “economic apartheid”, an incendiary claim in South Africa.

After a barrage of criticism, on July 6th the firm apologised and said it had sacked one of its partners. Their critics are not satisfied. The Democratic Alliance, South Africa’s main opposition party, continues to organise protests outside Bell Pottinger’s offices. Lord Bell, the firm’s founder (who left last year), told a magazine that he always thought the work in South Africa was “smelly” and that the chief executive must have known what his firm was doing.

Western firms have long offered help to shady leaders wanting to gild their reputations overseas. Increasingly, however, they are being drafted to run domestic political campaigns too—spreading deft propaganda via social media. Bell Pottinger is far from the only firm spinning south of the Sahara. In Kenya, Cambridge Analytica, a firm credited with helping Donald Trump become president, is working to help President Uhuru Kenyatta get re-elected. In Gabon last August, a country with a population of less than 2m, your correspondent encountered no fewer than three firms working on the re-election campaign of President Ali Bongo Ondimba.

This work is lucrative. In America, lobbying firms working for foreign governments must submit details of their deals under the Foreign Agents Registration Act (FARA). These show, for example, how Moïse Katumbi, an exiled politician from the Democratic Republic of Congo, paid $350,000 for the services of Akin, Gump, Strauss, Hauer & Feld. The Congolese government, too, has its own firm. FARA returns show that 15 countries have contracts with American lobbying firms. There is no equivalent disclosure in Europe.

The work is also controversial. “Those who succeed are the ones doing the dark arts,” says one consultant. Cambridge Analytica refuses to say what it is doing this year in Kenya, but many Kenyans suspect it is helping to craft a vicious campaign. In the 2013 Kenyan election, it claims its research made it “able to draft an effective campaign strategy” for Mr Kenyatta. That election was widely suspected of having been rigged. During the campaign Mr Kenyatta’s team seemed to suggest, absurdly, that the British government was planning to use military force to stop him winning.

Bell Pottinger is not the only firm to be embarrassed. On December 26th last year, in Congo-Brazzaville, state media jubilantly announced that the president, Denis Sassou-Nguesso, would be one of the first world leaders to meet president-elect Donald Trump in Florida. One TV channel even showed a fake picture of the pair embracing. A FARA file showed that the coup was the work of a Romanian PR firm, Global Structures Group, hired to "improve Congo's image abroad". Sadly for Mr Sassou-Nguesso, after a storm of criticism, the White House denied that it had ever agreed a thing.

Is operating in Africa worth it? For Bell Pottinger the answer seems probably not. But few African countries have as energetic an opposition or press as South Africa; in other countries, it is easier to stay in the shadows. Perhaps the bigger question is whether it is worth it for the people paying. Nicholas Cheeseman of the University of Birmingham reckons that a lot of firms are selling snake oil. "I have yet to meet many consultants [who] actually understand how African elections work," he says. Perhaps the best hope is that they change how the outcomes are perceived abroad: no small thing on a continent where campaigns are often bitter and results often disputed. Your correspondent will do his best to avoid being influenced.

An end to goat plague?

How to tackle one of Africa’s nastiest problems

Eradication is possible—with just a bit of help

Jul 27th 2017 | MERU NATIONAL PARK

IN A clearing close to the entrance of Kenya’s Meru National Park, a bronze statue of a buffalo can be seen standing on a plinth. Despite the best efforts of local elephants who occasionally mistake it for a real buffalo and attack it, it is there to commemorate the site of the final outbreak of rinderpest, a cattle disease similar to measles, which was eradicated in 2011.

Rinderpest has plagued Africa and other parts of the world ever since cattle were domesticated. In the 1980s an outbreak, originating in Sudan, killed millions of bovines across the continent. Eradication was a triumph of veterinary medicine, as rinderpest became only the second disease, either animal or human, to be wiped out, the first being smallpox.

It is exciting, therefore, that a team of scientists at a research institute in Kenya think *peste des petits ruminants*, or “goat plague”, could be eradicated too, thanks to their new vaccine. The disease kills up to 70% of the herds of sheep or goats it infects, animals vital to the survival of many of Africa's poorest people.

"The vaccine was created using a process called lyophilisation, or freeze-drying," says Phil Toye, a scientist who worked on the goat-plague team at the International Livestock Research Institute in Nairobi. Although a vaccine has been around for years, it goes off, like milk, if taken out of the fridge. Vaccinators have to set up "cold chains", transporting it to its destination in cans of liquid nitrogen between refrigeration units. This is cumbersome enough in easy-to-reach places, and almost impossible in more remote ones where roads and electricity are scarce. The new freeze-drying process creates a thermostable version of the vaccine which doesn't deteriorate in hot climates.

Still, eradication will be hard. The Kenyan government has sometimes offered free vaccinations, but these tend to happen only in response to an outbreak, not as a means of preventing one. Firms that sell vaccines complain that farmers refuse to buy them, hoping that a government freebie will come along.

This is a shame. There is no treatment for goat plague once the virus has taken hold. The financial benefits of eradicating it far outweigh the costs. According to the UN, the first steps towards getting rid of the disease in Africa would cost only $65m each year.

Vaccination can also reduce the likelihood of famine, and the damage it causes. A farmer with a healthy herd of goats is less likely to need emergency aid if his crops fail. As well as being a buffer against hunger, goats and sheep can provide a way out of poverty, as their milk and wool can be sold.

Europe

Objection sustained

A veto gives the rule of law in Poland a reprieve

But the governing Law and Justice party still aims to nobble the judiciary

Jul 29th 2017 | WARSAW

FROM the mountain resort of Zakopane in the south to the Hel peninsula in the north, tens of thousands of Poles took to the streets last week in protest against proposed reforms that would have sacked all of the members of the Supreme Court and politicised the legal system. In Warsaw thousands marched night after night, holding candles and chanting *"konstytucja!"* (constitution). Even in the eastern city of Lublin, where the inhabitants tend to support the nationalist Law and Justice (PiS) government, the rallies drew hundreds of people. By one count, there were protests in over 220 cities.

They appear to have worked. On July 24th Andrzej Duda, the president and a trained lawyer, vetoed two of the three most controversial laws, saying they "would not strengthen the sense of justice". But the threat to the rule of law in Poland is far from over. The proposed laws were only one part of a larger plan developed by PiS and its increasingly authoritarian chairman, Jaroslaw

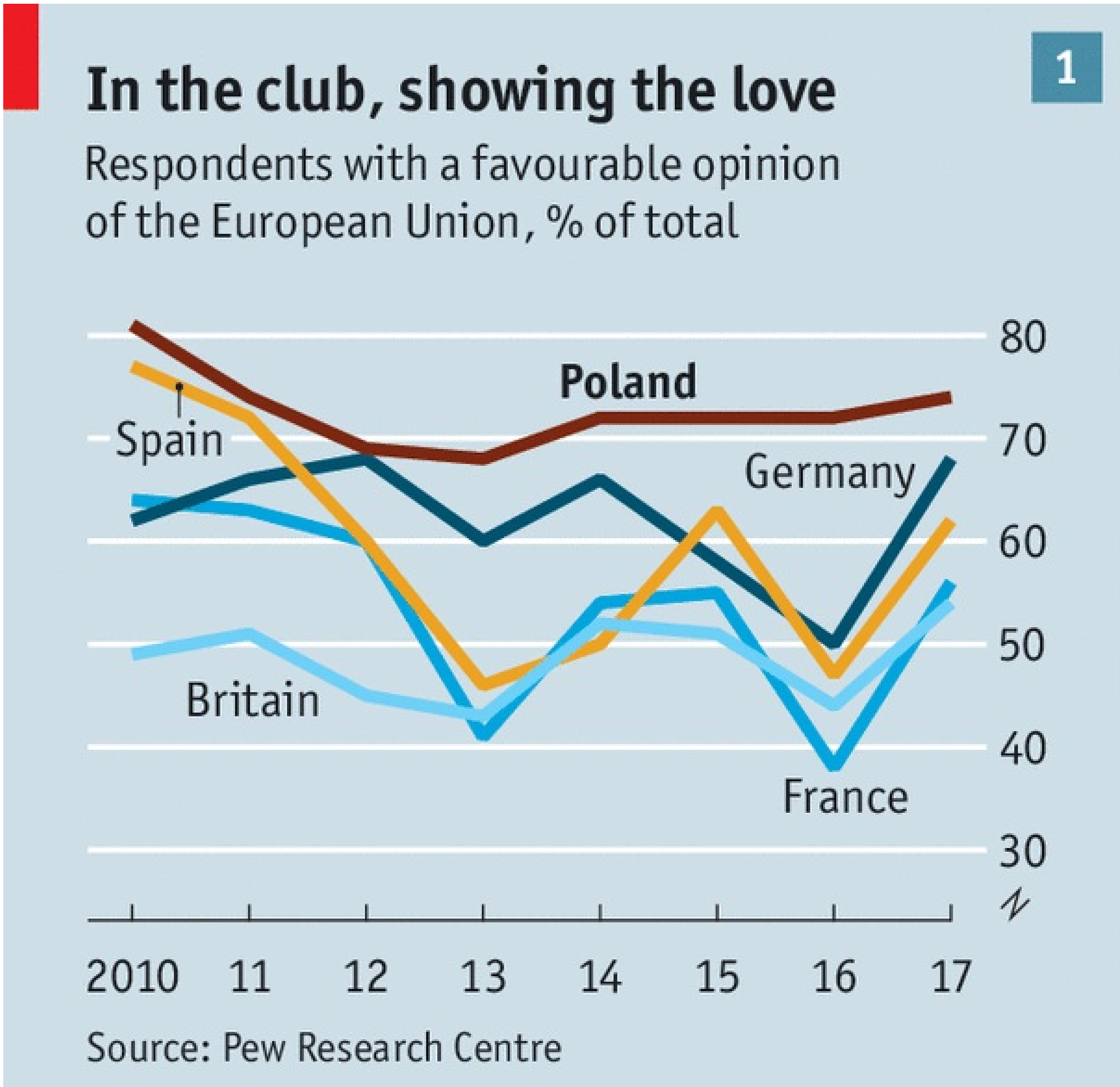
Kaczynski.

Since coming to power in November 2015, PiS has consolidated its support through a combination of unaffordable handouts, nationalist propaganda and fake news. (Polish state television declared the protests to be part of a plot to admit Muslim migrants, and linked them to George Soros, a Hungarian-Jewish philanthropist and bugaboo of European nationalists.) The party has also radically reshaped the Polish state, placing its cronies in the military, the civil service, state-owned companies and the constitutional tribunal. If it continues to do so unchecked, Poland, once seen as the most promising of the European Union's new members, will emerge with its democracy weakened and its position in the EU isolated and fragile.

Unexpected comeback

PiS's win in 2015 took many by surprise. Although it won only 38% of the vote, it gained the first outright majority of seats in Poland's post-communist history. The party previously led a coalition government between 2005 and 2007, but its confrontational politics put many Poles off. So did its desire for a set of populist reforms which it calls the "Fourth Republic". (Poles think of their current democratic state as the third in the country's history.) According to Aleks Szczerbiak of the University of Sussex, the centre-right Civic Platform party won the subsequent election by framing it as "a choice between support for and opposition to the 'Fourth Republic'."

Civic Platform governed for eight largely successful years, but it underestimated a growing divide between haves and have-nots, or what locals term "Poland A" and "Poland B". The latter is more nationalist, more populist and less Europhile. Overall, 72% of Poles are favourable towards the EU, the highest figure in Europe (see chart 1). But many have reservations. Fully 48% of PiS supporters think the EU should hand back some powers to the national government. Young people are more sceptical than older ones: one poll showed 27% of 18-29 year-olds favour "Polexit", compared with 9% of those over 60.



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PiS is not openly Eurosceptic, but it accuses the EU of discriminating against Poland in favour of longer-standing members, especially Germany. Since accession in 2004, about 2m Poles have emigrated to other EU countries, including many of the more cosmopolitan citizens. That has helped shift the balance towards PiS's conservative, less urban voters. Although their towns have benefited from EU money—Poland is the largest recipient of EU structural funds—they are much poorer than thriving cities like Warsaw.

The economic divide has helped fuel a turn towards nationalism. In the countryside, bumper stickers on cars bear the “PW” symbol of the Polish home guard in the second world war, a symbol banned during the Communist regime. Many people express exaggerated fears of Muslim migrants, although the only immigrants from outside the EU in most areas are Ukrainians. Some 66% of Poles view Muslims unfavourably, compared with 35% of Dutch and Swedes. PiS’s rejection of the EU’s demands to accept a few Syrian refugees plays well with these voters.

Redoing the foundation

Nationalist support has given Mr Kaczynski the leeway to try to build his “Fourth Republic”. Even before the proposed changes to the judiciary, his government was accused by the European Commission of undermining the rule of law by trying to pack the country’s constitutional tribunal and refusing to execute its decisions. The heads of the state-run media outlets have been replaced by PiS loyalists. The civil service has been purged, and the top jobs at several state-owned companies have gone to PiS supporters.

Meanwhile, Mr Kaczynski has made Polish politics toxic. He spouts conspiracy theories that the Civic Platform government caused the death of his twin brother Lech, who was president when he died in a plane crash in 2010 in Smolensk. (On July 18th, he shouted at the opposition in parliament: “You destroyed him. You murdered him.”) He launched a hopeless effort to block Civic Platform’s former leader, Donald Tusk, from being re-elected as president of the European Council in March. No other government went along.

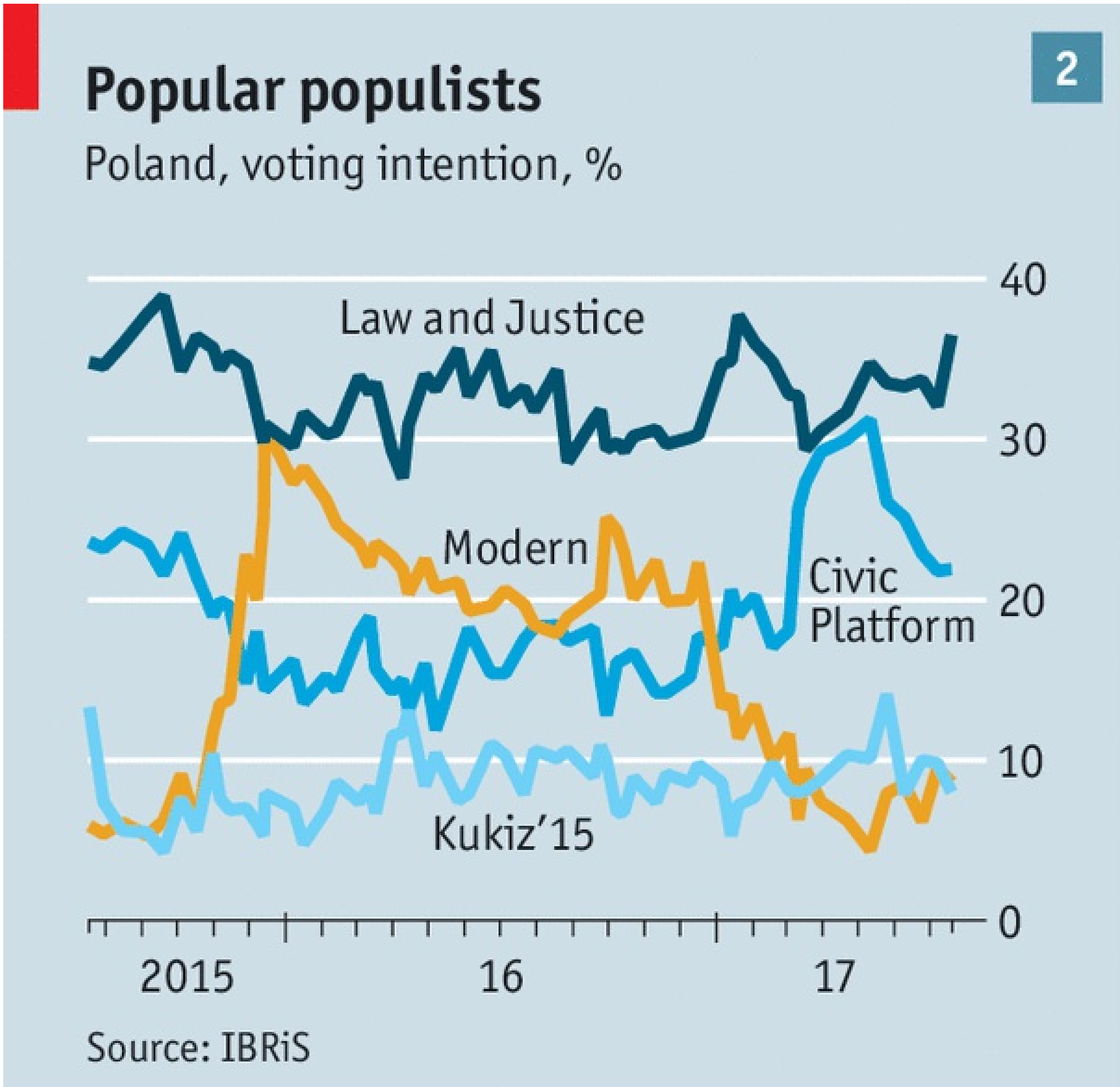
Like its attacks on Civic Platform, PiS’s judicial reforms seem partly rooted in paranoia. Mr Kaczynski and his followers hold to an absurd theory that Poland’s liberals, along with opposition parties and other institutions, are secretly a continuation of the former communist *nomenklatura*. A centralised school-reform drive, which has generated strong resistance, shows Mr Kaczynski’s authoritarian streak too. Julia Pitera, a Civic Platform MEP who has known the PiS leader for three decades, says he was already a critic of the judiciary in the 1990s. “He is clearly irritated that there is some part of power not subordinate to him,” she says.

PiS argues that its proposed judicial system would be little different from other European ones in which justice ministers can nominate judges. The comparison is misleading. No European democracy would let the government sack and replace the entire supreme court, and the powers PiS proposes for the justice ministry are far greater than in other countries. “We have nothing near the [political] influence which the adopted law would have given in Poland,” says Werner Kannenberg of Neue Richtervereinigung, an association which campaigns for more judicial independence in Germany.

PiS also points to low public trust in courts, some of which are corrupt. Yet Poles trust their courts more than they do the government, albeit less than the EU or the Catholic church. “In almost all post-communist countries, lower courts are not models of efficiency and transparency,” points out Kim Lane Scheppele, an expert on eastern Europe at Princeton University. Poland’s may need gradual reform, but they do not need a sudden purge.

They may get one anyway. Although Mr Duda promised to veto and revise the two laws concerning higher courts, he signed a third one giving the government more control over ordinary courts. The justice minister will be able to sack their presiding judges. Lower mandatory retirement ages will allow the government to install more new judges. As for the other two laws, Mr Duda may simply make “cosmetic changes”, says Krystian Markiewicz, the head of the largest judges’ association.

The protests this month might seem encouraging to opposition politicians. Yet the protests strove for political neutrality; there were virtually no party banners. PiS is still well ahead in the polls (see chart 2).



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Much of its popularity is due to the so-called "500+" policy. Soon after coming to power PiS introduced a cash handout to families (ostensibly to boost birth rates) of 500 zlotys ($137) per month for every child beyond the first one. It is the "first time since the decline of communism that we have had an effective social policy", boasts Zdzislaw Krasnowdebski, a PiS MEP. Unsurprisingly, the free money is extremely popular. Poor parts of Poland have grown visibly wealthier, says Igor Czernecki, who runs an educational charity for hard-up children.

This, along with record-low unemployment and GDP growth of 4% in the first quarter of this year, has bolstered PiS's support. The subsidy may be causing Polish women to leave the workforce, worsening a deep gap in labour-force participation. But that does not worry PiS, which has a traditional view of the family. Opposition politicians have belatedly tried to co-opt the policy. Civic Platform's leader, Grzegorz Schetyna, promises to make the subsidy even more generous.

For the EU, Poland's growing illiberalism presents a grave dilemma. It makes a mockery of the union's democratic accession criteria if countries can ignore them once admitted. The EU can invoke Article 7 of its treaty to punish member states that violate its fundamental values (see article). Frans Timmermans, the vice-president of the European Commission, says it will do so if Poland again tries to limit the independence of its judiciary. But with Hungary committed to protecting Poland in the European Council, sanctions are unlikely. Germany and other member states hesitate to press the case, for fear of triggering a nationalist backlash.

So it is up to the Poles to defend the rule of law. Moderate politicians who hail from PiS, including Mr Duda, afford some hope: they are less bewitched by conspiracy theories, and may see less need to impose party control on the justice system. But it will be critical to see how the government treats the president after his vetoes. When he went on television after announcing them on July 24th, the state broadcaster put Beata Szydlo, the prime minister, on at the same time, as if to undercut him. There may be some diversity in the party. But as in any autocratic system, one man, Mr Kaczynski, is ultimately in charge.

Policing the club

What can the EU do to punish Poland?

Its options are limited

Jul 27th 2017

IN THE mid-1990s, as the European Union began expanding eastwards, its politicians faced a tricky question. To join the bloc, countries had to commit to democratic standards, human rights and the rule of law. The EU had a lot of leverage over aspiring members. But what if a country turned its back on those values once it got in?

Article 7 was the EU’s answer. A version of it first appeared in the Treaty of Amsterdam in 1999. Governments that violated the union’s fundamental values would be threatened with sanctions, including the suspension of voting rights. Austria had been one of the most vocal advocates for introducing Article 7. But in 2000, when Jörg Haider’s far-right Freedom Party was included in a coalition government, it found itself threatened with the measure it had helped draft. The EU did not suspend Austria’s voting rights, but it did impose some (mostly symbolic) sanctions. They didn’t work, and

Mr Haider remained popular.

After the Haider affair, the EU tweaked Article 7, adding a warning stage before sanctions could be imposed. The formal warning requires a four-fifths majority of the European Council; it sends a strong signal that there is a “clear risk of a serious breach” of EU values. Imposing sanctions then requires the unanimous backing of all member states.

Ever since Poland’s nationalist Law and Justice (PiS) party won a narrow parliamentary majority in 2015 and set about dismantling checks on its power, talk of Article 7 has grown. Viktor Orban, Hungary’s prime minister, who has had his own brushes with Article 7, has called the EU’s criticism of Poland an “inquisition”; he will doubtless veto any attempt to invoke sanctions. Still, according to Daniel Kelemen, an expert on EU law at Rutgers University, merely invoking the formal warning, an unprecedented step, would pile the political pressure on PiS.

On July 26th the European Commission announced that it will trigger the first part of Article 7 if the Polish government resumes efforts to dismiss judges from its Supreme Court, which it dropped this week. On the same day, the commission launched an infringement procedure against Poland for a third law, signed by Andrzej Duda, the president, which gives the government more control over ordinary courts. Besides invoking Article 7, in future the EU could attach conditions to the aid it gives Poland. But it would help if the union’s national governments spoke out, too. So far Angela Merkel, Germany’s chancellor, and Emmanuel Macron, France’s president, have barely said a word.

Seasons of discontent

Moderate unions may help Emmanuel Macron pass labour reforms

But expect France’s left-wing radicals to hit the streets come the autumn

Jul 27th 2017 | PARIS

FRENCH reformists have promised for decades to streamline the country’s 3,000-page labour code, only to be stymied by the country’s mighty trade unions. Emmanuel Macron has vowed to break the jinx, and is likely to face the same sort of resistance. The conventional wisdom holds that the showdown will come in September, once the government publishes details of its plans. These include limiting the ability of courts to order lavish compensation for sacked workers, simplifying worker councils inside firms and making it possible to negotiate more issues at the company level rather than in national sector-wide agreements. Parliament’s lower house voted on July 13th to let the government pass the reforms by ordinance, without much further debate.

That will let Mr Macron deliver faster on his promise to free up the jobs market. But his leftist opponents call the process undemocratic. Jean-Luc

Mélenchon, a far-left leader whose bloc has 17 MPs, calls it a "social coup d'état". He promises big demonstrations on September 23rd, centred on Paris. The most hardline union, the Confédération Générale du Travail (CGT), also vows to make a rumpus.

The CGT will be cheered by signs that the president's popularity is sliding. Mr Macron's finance minister, Bruno Le Maire, is set on cutting taxes while keeping the fiscal deficit under 3%. But that means cuts to public spending. The chief of the armed services quit in a huff on July 19th over budget cuts, and civil servants, teachers and recipients of housing benefits are angry too. The president's popularity has fallen by ten percentage points in the past month, to 54%, according to Ifop, a pollster. That is the fastest decline for a new president in two decades.

Supporters of the *syndicats* (unions) hope to force Mr Macron to repeat the script followed by earlier presidents. Last year his predecessor, François Hollande, softened planned changes to labour laws after strikers disrupted railways and barricaded fuel depots. In 2010 millions of strikers and other demonstrators shut down schools, the Paris metro, railways and more, objecting to plans by Nicolas Sarkozy to raise the retirement age. He lost the will for more reforms. Those strikes harked back to even larger mass protests in 1995 and, of course, in 1968.

France is less radical these days. Levels of union membership are lower than in most of Europe, at about 8% of the workforce (and only 5% in the private sector). Strikes are less debilitating than before, though still worse than elsewhere. The International Labour Organisation says over 1m working days were lost to strikes in France in 2014, to just 155,000 in Germany.

Mr Le Maire argues that French politics has changed. Unlike his predecessor, Mr Macron campaigned on labour reform and a smaller state. Having smashed traditional parties on both the right and left, he has a unique electoral mandate. His unorthodox rise shows he is bold enough to face down demonstrations.

Others are sanguine, too. "I'm much more confident of the government's ability than I was in the spring. The prospects for protests have diminished," says a company chief who had earlier predicted union upheaval. Guy

Sorman, a business pundit, says the labour reforms will be insufficiently radical, but that unions will mostly shrug them off because they mainly affect the private sector.

Crucially, the unions themselves are changing. The government is pinning its hopes on a better relationship with them: since June the labour ministry has held at least 56 meetings with workers and bosses. The most important is Laurent Berger, head of the CFDT, a moderate union. This spring its size passed that of the CGT, which had been the biggest labour confederation since the 19th century.

“France has progressed since the bitter union clashes of a few years ago,” says Mr Berger. He wants more consensual labour relations, like those in Germany. Capping the maximum severance pay that courts can impose could be acceptable if the basic level goes up instead, he says, and he does not expect to join big protests in September. France’s third-largest union, Force Ouvrière, has sent similar signals.

Unions may be growing more conciliatory as their membership declines. They may also fear the government could retaliate for strikes by reducing their role in managing public funds for worker training. Michel Wieviorka, a sociologist, notes that the CGT has become less unified than it once was, and its old political ties with the Communists are less relevant. And the unions do not see their exhausting clashes with the government in 2016 as successes. After “such a gruelling social conflict”, says Stéphane Sirot, a labour expert at l’Université de Cergy-Pontoise, it would be hard to mobilise members on a large scale. Many workers are open to the message that the goal of the reforms is to create jobs. The autumn will no doubt bring some sort of confrontation, but if Mr Macron can keep Mr Berger and his allies onside, he has a good chance to get his reforms through.

Absurdity in power

Turkey’s latest trial of journalists is surreal even by its own standards

Ahmet Sik and 16 others are accused of aiding the subversive movement they helped to expose

Jul 27th 2017 | ISTANBUL

THRONGS of relatives and lawyers pushed their way past a metal barrier manned by security guards, fighting for a spot in the crowded courtroom. The area where the accused sat was crowded, too. The 17 journalists whose trial began on July 24th were the core of the editorial staff of *Cumhuriyet*, Turkey’s oldest newspaper and one of the few media outlets that has refused to play by the rules of Recep Tayyip Erdogan, the country’s autocratic president. In a case widely considered a perversion of justice even by Turkish standards, they face prison terms of up to 43 years for “assisting an armed terrorist organisation”.

For one of the accused, Ahmet Sik (pictured on poster), this is far from his first trial. Mr Sik has been a thorn in the side of the state for decades. In the 1990s he investigated disappearances in the Kurdish south-east, torture in prisons and killings of journalists (including that of a friend, Metin Goktepe, by police officers). He was prosecuted for defaming the military, the government and individual politicians. In the 2000s he was one of the first to document the penetration of Turkey's security forces by an Islamist brotherhood known as the Gulen movement. When he tried to publish his findings in 2011, police seized copies of his book; prosecutors linked to the Gulenists had him thrown in prison. He stayed there for over a year.

At the time, Mr Erdogan's government, which had made common cause with the movement, defended his arrest. "Sometimes a book is more dangerous than a bomb," Mr Erdogan said. Mr Sik's warnings turned out to be prescient. The government and the Gulenists fell out in 2013. Gulen followers in the army are widely believed to have spearheaded an attempted coup in July last year.

Mr Sik's foresight did not spare him from Mr Erdogan's subsequent wrath. Over 50,000 people have been jailed in the purges that followed the attempted coup. In January Mr Sik found himself back in the same prison where he was held years ago, joining ten colleagues from *Cumhuriyet*. They are allowed only an hour a week with their lawyers, says his wife, Yonca Verdioglu, and the meetings are recorded by camera and overseen by a guard. Mr Sik cannot send or receive letters. Absurdly, the journalists are accused of abetting the Gulen movement, the very group many of them helped expose.

Akin Atalay, the paper's CEO, who has spent nearly nine months in detention, says the trial is intended both to silence *Cumhuriyet* and to intimidate others. The indictment, written in the kind of newspeak increasingly popular with Turkish officials, claims that the *Cumhuriyet* journalists prepared the ground for the coup by turning public opinion against the government. A former editor is alleged to have done so by documenting covert arms shipments to Syrian insurgents by Turkey's intelligence agency. A veteran columnist is accused of "attempting to create the impression of the existence of an authoritarian government in Turkey".

The bulk of the evidence against the journalists consists of their writing. Many are accused of corresponding with people who had downloaded a messaging app popular with Gulen supporters, known as ByLock. Simply receiving text messages from people who subsequently turned out to be

ByLock users is treated as evidence of guilt. Users of the app have been sacked and arrested en masse. In a twist no longer considered out of the ordinary, one of the prosecutors behind the *Cumhuriyet* investigation has turned up as a Gulenist suspect in a separate case.

Ruling-party officials who once ignored warnings about the Gulenists now complain that the world does not take their concerns about the group seriously. They are not doing themselves any favours. In recent weeks Turkish police have detained at least 15 people for wearing T-shirts with the word “Hero”, on suspicion that this was a secret message of support for the Gulenists. They have also arrested ten human-rights activists, including the head of the Turkish branch of Amnesty International, Idil Eser, and a German national, Peter Steudtner, on terrorism charges.

That prompted a huge row with Germany. Germany’s foreign ministry warned against travel to Turkey, proposed freezing EU assistance and suggested rolling back credit guarantees to companies doing business in Turkey. Officials in Berlin revealed that their Turkish counterparts had asked them to probe nearly 700 German companies, including Daimler, Siemens and Volkswagen, for links to terrorist groups. Turkey has since withdrawn the demand.

Mr Sik’s opening statement at the *Cumhuriyet* trial was a blistering counter-indictment of Mr Erdogan, whom he accused of a “pogrom” against freedom of thought. It was also an ode to journalism’s power. “I have managed to offend the judiciary of every government and of every period,” he said, continuing: “The irreconcilable contradiction between us [journalists] and those who want to drown the truth will never end.” Observers see the trial as a chance for the justice system to assert itself against an authoritarian government. Mrs Verdioglu sees little hope of that. “There is no law left in this country,” she says.

Charlemagne

A summer reading list for Brussels's bureaucrats

The future of Europe in one giant pile of beach reading

Jul 27th 2017

"HOW hard it is to escape from places," Katherine Mansfield, an author from New Zealand, once wrote to a friend. She had a point, but long paid holidays and low-cost airlines do help. To judge by the tumbleweed blowing through the offices and halls of Brussels this week, the wallahs of the European Union have not found fleeing town too much of a wrench.

Recent summers have been marred by crises perfectly timed to ruin officials' holiday plans. In despair at the turn Europe seemed to be taking, some turned to gloomy tomes by Joseph Roth or Stefan Zweig to explain the atavistic nationalism they feared was taking hold. This year's vacationers leave town in brighter spirits. Relieved from concerns over the EU's imminent collapse, many will indulge in chick lit or crime novels, to be devoured and discarded as swiftly as the latest Greek economic forecast. But for those looking to understand the current European moment, Charlemagne offers an alternative reading guide.

Two years ago visitors to some Aegean islands found themselves sharing beaches with thousands of refugees streaming across from Turkey. This year they are less likely to bear witness to Europe's immigration problem: there are fewer arrivals, and most are rescued at sea before being brought to Italy by coastguards or NGOs. That gives our readers time to hold their noses and dip into "Camp of the Saints", a revoltingly racist French book from the 1970s (strapline: "A chilling novel about the end of the white world") that describes a European surrender before third-world immigrants bearing names like Turd-Eater who descend upon Mediterranean shores in their hundreds of thousands. The novel is known only to nerdish nationalists; Stephen Bannon, Donald Trump's *consigliere*, is a fan. Yet one hears echoes of its apocalypticism in the forecasts of some Europeans that Africa's high birth rates and weak labour markets guarantee an endless stream of migrants heading Europe's way. Migration experts say this is unlikely, so a cheap fantasy novel may be just the place for it.

The man most responsible for this year's sunny European mood is Emmanuel Macron. Fans of France's new president may have been spooked by his early wobbles on tax policy and a spat with the military top brass. If so, they might remind themselves of how lucky they are by revisiting Michel Houellebecq's "Submission" (any serious follower of French politics will have gobbled it up on publication in 2015). Mr Houllebecq depicts France under *sharia*, after a supine political establishment backs a mild Islamist presidential candidate to keep out the xenophobic Marine Le Pen. Fortunately, Mr Macron beat her instead. Now the worst Europeans have to worry about is his tendency to pomposity. Those troubled by his promise of a "Jupiterian" presidency may want to peruse Robert Graves's retellings of the Greek myths. (Though, of course, conflating Jupiter and Zeus risks incurring the wrath of the scholar-president.) A copy of Charles de Gaulle's war memoirs might also come in handy, if best enjoyed on an e-reader: the collected edition weighs in at 1,056 pages.

Some Eurocrats will spend their holidays obsessing over the increasingly illiberal democracies of Poland and Hungary. Once they have consigned to memory the full wording of Article 7 of the EU treaty, they can turn to Tony

Judt's "Europe: The Grand Illusion". This short, pessimistic take on the EU's future was published in 1996, just as Western European leaders were drawing up plans for a common currency and enlargement to include the freshly liberated countries of the east. Today, with east-west fractures growing along several dimensions, some will see vindication in Judt's warning that the EU could not hope both to maintain its values and to spread them eastwards.

Others will see that as an unfair slur on those eastern countries that have slotted smoothly into the European family. Better to concentrate on books that can help Europe navigate a world troubled by strongmen such as Vladimir Putin and Recep Tayyip Erdogan, and mercurial leaders such as Donald Trump. Here the classics offer fresh inspiration. Suetonius's "The Twelve Caesars" warns of the dangers posed by greedy, nepotistic political elites to themselves and others, and will console those who value the rule of law. Failing that, there is always Shakespeare.

What about Brexit-watchers? One EU official cheekily suggests they pack a box set of "Star Trek: Deep Space Nine", set on an outpost at the edge of the civilised universe. For the long view, add the late Hugo Young's "This Blessed Plot", the best chronicle of Britain's historical agonies over Europe. Another option might be Voltaire's "Candide": Theresa May's government often seems to be influenced by Dr Pangloss, finding cause for cheer amid catastrophe. The qualities of some of Mrs May's ministers, meanwhile, are captured well by Roger Hargreaves's series of ultra-slim paperbacks, the Mr Men. Charlemagne recommends Mr Muddle, Mr Daydream and Little Miss Whoops. Readers can decide for themselves which cabinet members each resembles.

You have to want to change

Books can help with the business of Brussels, too. EU antitrust officials battling American tech giants can gird their loins with Dave Eggers's "The Circle," a glimpse into a dystopian future where the tentacles of social media extend into every facet of personal life. Colleagues preparing for the gathering scandal over possible collusion among German carmakers (see article) might try JG Ballard's classic of psychotic autophilia, "Crash".

One final suggestion for Europe's bookworms. Mr Macron's ascent has revived confidence that Europe can finally solve perennial problems like the euro's half-built architecture, or the EU's asylum system. "If we want things to stay as they are, things will have to change," warns a Sicilian nobleman in Giuseppe di Lampedusa's "The Leopard," a study of 19th-century aristocracy in decline. For Europeans jolted out of complacency by the shocks of the last few years, that familiar line finally resonates.

Britain

Brexodus?

Britain’s car industry gets a Mini boost but faces major problems

BMW announces a welcome investment. But the road ahead looks bumpy

Jul 27th 2017

BRITAIN’S car industry has been running at high revs. Over 1.7m vehicles rolled off production lines last year, the most since 1999. If growth continued at recent rates, the all-time record of 1.9m, set in 1972, would be broken within a couple of years. On July 25th BMW, which owns the Mini brand, announced that it would build an all-electric model of the compact car in Oxford from 2019, rather than making it in the Netherlands, as it had threatened in the wake of the Brexit referendum.

Yet the mood among British carmakers is a mixture of nervousness and gloom. In spite of BMW’s announcement, few feel reassured about the long-term future of the industry. Indeed, some fear that last year’s vote to leave the European Union could run them off the road.

Manufacturers are aware that it was joining the EU that helped to rescue carmaking in Britain. The amalgamation of various car brands under British Leyland had been a catastrophe. Competition was stifled, investment faltered and labour relations soured to the extent that managers straying onto the shop floor had to dodge flying bolts. Production plunged until Japanese carmakers, led by Honda in 1979, sought a base for exporting to Europe. Britain's accession in 1973 to what was then known as the EEC gave such firms access to a giant market. Britain's flexible labour laws and engineering expertise were added enticements.

The worry is that Brexit will make foreign firms think again. The official line from Toyota, Nissan, Honda and most other carmakers is that they will wait for the outcome of the negotiations in Brussels next autumn. Businessfolk report that since she lost her majority in an election in June, Theresa May has become more willing to listen to them. The cabinet seems at last to have recognised that a transition period will be necessary after Britain leaves the EU in March 2019. But the country is still heading for a "hard Brexit", leaving the EU's single market. And the instability of Mrs May's minority government could yet lead to no deal at all.

The uncertainty has already taken a toll. Investment in carmaking plunged to £322m ($406m) in the first half of 2017, compared with £1.7bn in all of 2016 and £2.5bn in 2015. Production has dipped. One boss thinks the chances of getting special single-market access for cars, as Mrs May once hinted that she wanted, are "zero". Mike Hawes of the SMMT, an industry body, says that even if there is a deal it is certain to be on worse terms than the current one.

In the worst-case scenario, with no trade deal reached, World Trade Organisation rules would mean tariffs of 10% on vehicles and 4.5% on parts. That would hurt: the average British-made car has 60% of its components imported from the EU; some parts travel several times between Britain and Europe during a car's manufacture.

Overcoming tariffs would be difficult for mass-market carmakers, says Mr Hawes. Margins in Europe average 5-10%. Heavy investment has made most plants in Britain highly efficient, so there is little scope to cut costs. One hope is that firms are willing to gamble that Brexit will bring a permanent devaluation of sterling to offset tariffs; since the referendum, the pound has fallen by 15% against the euro.

Yet tariffs may not be the worst problem. The introduction of customs controls would hold up the flow of parts across the English Channel in a way that hampered factories' planning. Wafer-thin inventories keep costs down. Stocks of many parts cover just half a day of production, so a predictable flow is vital. Some deliveries to Nissan's plant in Sunderland are scheduled to within 15-minute time slots. Allowing for customs inspections would mean keeping bigger stocks, at higher cost.

Will other carmakers follow BMW and invest in Britain despite these snags? BMW is not the only one to have announced new projects since the referendum. In October Nissan said it would make the next generation of its Qashqai and X-Trail SUVs in Sunderland. In March Toyota said it would invest £240m in a factory in the Midlands. Brexiteers cite these as evidence that the industry will rumble on regardless.

That is optimistic. One reason for the recent investments is that the timescale of the car industry is long: five years may pass between inception of a new model and production, so decisions are taken far in advance. Nissan had intended to invest in Sunderland for some time. BMW's other option, in the Netherlands, would have meant using a contract manufacturer rather than a BMW-owned factory—a risky option for an important model.

And making a new version of an existing model—such as the electric Mini—makes sense if a factory is already churning out cars of that variety. When it comes to building all-new models from scratch, carmakers may be more likely to look overseas. There is already a hint of that in BMW's plans. Although the Minis will be assembled in Oxford, the batteries and motors, containing all the clever new technology, will be developed in Germany.

Another factor in the post-referendum announcements is intensive lobbying by the government. Nissan and Toyota received unspecified "assurances" from ministers that their commitments would not leave them out of pocket after Brexit. The government has declined to say exactly what was promised; whatever it was, it is unlikely that there will be enough of it to go round for every prospective investor, nor every industry, nor indefinitely.

Some factories face more immediate peril. The takeover in March of Opel, which makes Vauxhalls in Britain, by France's PSA Group could be bad news for Vauxhall’s workers. PSA will look for costs to cut to justify the takeover, and Vauxhall’s two factories could be on the list.

Not all carmakers would quit. As Andy Palmer, the boss of Aston Martin, points out, his expensive luxury sports-cars are not for the price-sensitive. The same is true of Rolls-Royce, also owned by BMW, Bentley, owned by Volkswagen, and McLaren. Jaguar Land Rover, Britain’s biggest carmaker, exports just 20% of its output to the EU. The domestic market is big enough to sustain some local production.

Nonetheless, hefty tariffs would cause a “slow, inexorable migration”, says Nick Oliver at the University of Edinburgh Business School. Even a deal that reduced or abolished them would damage competitiveness. Carmakers would find it harder to source parts as the network of domestic suppliers shrank with the rest of the industry. And without big investments in new technologies such as electric power and self-driving, British assembly plants would become more reliant on imported components. Car crashes happen in the blink of an eye. Brexit could have a slow-motion impact that will be no less harmful.

Medical ethics

An end at last to the Charlie Gard case

A protracted legal case closes as the parents of a desperately ill child agree to let him die

Jul 29th 2017

AFTER five months of agonising court battles, on July 24th the parents of Charlie Gard, an 11-month-old boy suffering from a rare genetic disorder, ended their fight to keep their son alive. They had wanted to take him to America to receive an experimental treatment that his doctors in Britain argued was not in his interests. The case has raised intense debate around the world about the limits of the power of parents and the state.

Charlie suffers from encephalomyopathic mitochondrial DNA depletion syndrome, a condition that causes the body’s cells and then its organs to shut down. It has resulted in severe brain damage. He is unable to breathe unaided. His doctors at Great Ormond Street hospital (GOSH) in London say that, as far as they can tell, he has no awareness.

Connie Yates and Chris Gard, his parents, wanted him to receive nucleoside bypass therapy, which they believed could repair his damaged DNA. No one with Charlie's condition has ever received it. His doctors argued that he had suffered irreversible neurological damage and any chance of the therapy helping had passed. They said he should instead receive palliative care. Doctors providing second opinions agreed. In April a judge, Mr Justice Nicholas Francis, ruled that GOSH could stop providing life-support treatment. The Court of Appeal, the Supreme Court and the European Court of Human Rights each upheld the decision.

A neurologist at Columbia University, Michio Hirano, offered to carry out the experimental treatment and Charlie's parents crowd-funded £1.3m ($1.7m) to pay for it. The pope and Donald Trump voiced their support; Congress granted the baby residence in America. The ruling, however, stopped these offers being taken up.

The case returned to court to examine new evidence about the potential of the therapy, but on July 24th the court heard that, after seeing scans of Charlie's brain, Dr Hirano had said he was no longer willing to carry out the treatment, and so Charlie's parents ended their legal fight. In a statement, GOSH said that Dr Hirano had been invited to examine the baby months earlier but had not done so; nor had he viewed previous scans, read all of Charlie's notes or the original judgment.

Hospital staff have received death threats. Mr Justice Francis lamented the interventions by "those who know almost nothing about this case but who feel entitled to express opinions." Mike Pence, America's vice-president, had said that Charlie's was "a story of single-payer health care". He and others decried the judge's decision as evidence of the rationing of care by Britain's state-funded National Health Service. Yet the judgment was made not on the basis of the cost of the treatment—which the parents were willing to fund themselves if needed—but on the basis of what was in the interests of a patient who could not decide for himself.

In Britain adults have the right to consent to experimental therapies with little chance of success, just as they may refuse treatment. If doctors do not deem a treatment to be in a patient's interests they may refuse to give it, but a court cannot prevent an adult from seeking (and paying for) such care elsewhere. In the cases of children or others who lack the capacity to decide for themselves and have not previously made their wishes clear, courts can overrule the wishes of families.

In America courts have been reluctant to go against parents' requests for treatment, even when the chance of success is vanishingly small, says Dominic Wilkinson of Oxford University. That can mean doctors having to provide care which they think is against the interests of their patient. Under Texas's "futile care law", if medics feel that a treatment requested by a family will be of no benefit they can go before an ethics committee. If the committee agrees that the treatment is futile, the family may seek another doctor to provide it, within a time limit. In the Canadian province of Ontario a tribunal hears cases where doctors challenge families' decisions. It often rules in favour of clinicians.

Disagreements between parents and doctors over end-of-life decisions involving children are uncommon. One Dutch study suggested that they occur in about 10% of cases involving severely ill babies. Even then, in all those instances, consensus was eventually reached. Cases that reach a court are the exceptions. They are, by their nature, the hardest of all.

New tricks

The schools that teach parents as well as children

Tempting mum and dad into the classroom may improve pupils' results

Jul 29th 2017

LESSONS start early at John Perryn, a state primary school in west London. From the day children arrive, parents are brought in for classes on how to teach phonics and even how to play (counting sandcastles helps the tiddlers grasp numbers, for example). As children get older, the workshops become more formal. All sessions are voluntary. But parents who attend win points for their child's house—and the top house wins a cinema trip at the end of term.

It is an increasingly common approach. Schools with pupils from troubled families have long had little choice but to care about what goes on at home (and the pressure is rising with cuts to social services and mental-health support). But they and others often now look to make a difference before things reach breaking point.

New interventions range from the confiscation of video-game consoles belonging to naughty children to programmes to improve the literacy of parents. The Education Endowment Foundation, a government-funded charity, has run trials to improve parental engagement in 133 schools.

Part of the explanation for the focus on parents is that poverty is no longer seen as a good excuse for bad exam performance, says Barnaby Lenon, author of “Much Promise”, a book on English schools. Since much of the gap between rich and poor pupils emerges in the home, schools see changing parents’ behaviour as a way to boost pupils from poor families. That is true at John Perryn, where half of pupils qualify for funding top-ups for low-earning families. Many arrive aged three with the vocabulary of a child half that age, says Branwen Hywel, the school’s head.

There is plenty of evidence that parents make a difference. One recent analysis published by the Social Market Foundation, a think-tank, unsurprisingly found that children whose parents read to them, make sure they do their homework and turn up to parents’ evening do better in exams aged 11. Yet how to encourage parents to get involved is less clear. A report from the Nuffield Foundation, another think-tank, looked at 68 studies designed to improve engagement. None conclusively showed a positive impact on results.

It is nevertheless too soon to write off such efforts, says Stephen Gorard, one of the Nuffield report’s authors. The most promising interventions brought parents, young children and teachers together; the least effective ones merely urged parents to do more. Involving parents, some of whom have had a bad experience of education, may have the additional benefit of making school a less threatening place for their children, he says.

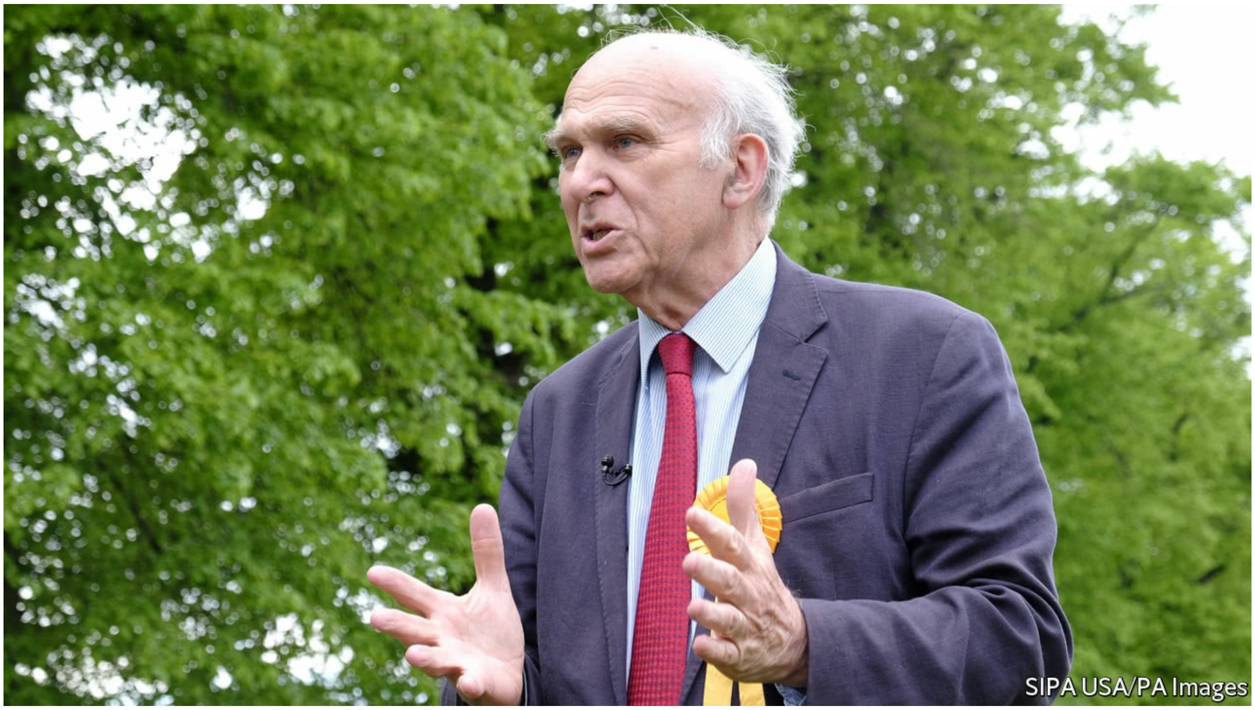
The main barrier to success is getting parents on board. One American study in 2015 found that paying parents to attend training, to make sure homework was completed and for their children’s good test results led to better outcomes. English schools have tried other ways to get parents through the door. One in east London seeks to build trust by first helping them with issues like visas and health problems. Others notify parents of forthcoming tests with texts or e-mails.

For now, English children can be grateful that schools have not gone as far as their counterparts in Japan. There, notes Lucy Crehan of the Education Development Trust, a consultancy, children sometimes come home for the holidays with detailed instructions regarding when they should wake up and how much exercise they ought to get. By contrast, the summer holiday is still a time for rest in England.

Gerontocracy

Britain’s party leaders are the oldest in more than 60 years

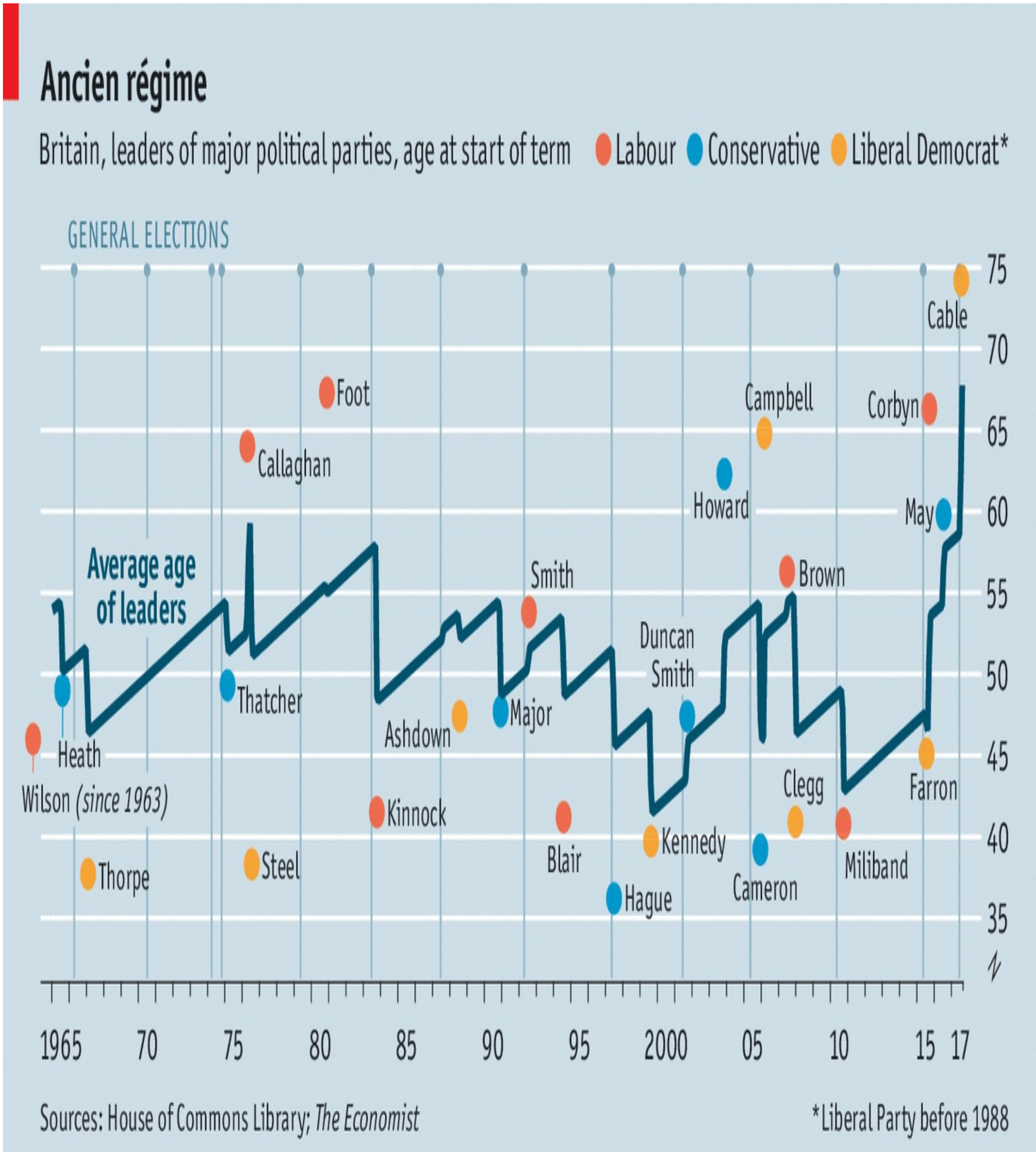
Watch out, whips: older MPs tend to be the most rebellious



Jul 29th 2017

FOR the first time in a generation a groundswell of youthful enthusiasm is gripping British politics. A high turnout among the under-25s helped to rob the government of its majority in June. But it had another, curious outcome: the young voters ended up electing the oldest crop of MPs and party leaders in decades.

Sir Vince Cable, a sprightly 74-year-old, was crowned leader of the Liberal Democrats on July 20th after Tim Farron, a whippersnapper of 47, stepped down. Sir Vince joins Theresa May (60) and Jeremy Corbyn (68) to complete a trio of senior citizens at the heart of Westminster. With a combined age of 203, the three main parties’ leaders are the oldest since 1954, when an 80-year-old Winston Churchill led the Tories. None is long in the job, but history suggests they should make the most of it. Since 1960 the average tenure of party leaders appointed in their 60s has been two-and-a-half years, against eight years for those under 50.



Economist.com

Across Westminster, MPs are greying. The current crop has an average age of 51, which makes it the oldest, by a whisker, of the past ten parliaments. In the 1992 election—the last time the youth turnout was as high as it was this

June—only three candidates aged over 70 were elected. This year there were 28.

That might spell trouble for the whips, because older MPs tend to be more rebellious. During sittings of the 2010 and 2015 parliaments, MPs aged 65 and over were twice as likely as their younger colleagues to vote against the party line. They may be less anxious for promotion. They also have more room for manoeuvre, enjoying majorities in their constituencies that are 17% higher, on average, than those of other MPs.

With 18 years' experience in the Commons Sir Vince, who was previously chief economist at Royal Dutch Shell, is a relative novice among his septuagenarian colleagues. The current "Father of the House" is Kenneth Clarke, a 77-year-old Tory who made his debut in 1970. The two share a fondness for Europe. Sir Vince argues for an "exit from Brexit" after the Article 50 negotiations. Perhaps old oaks can seed new debates.

Northern uproar

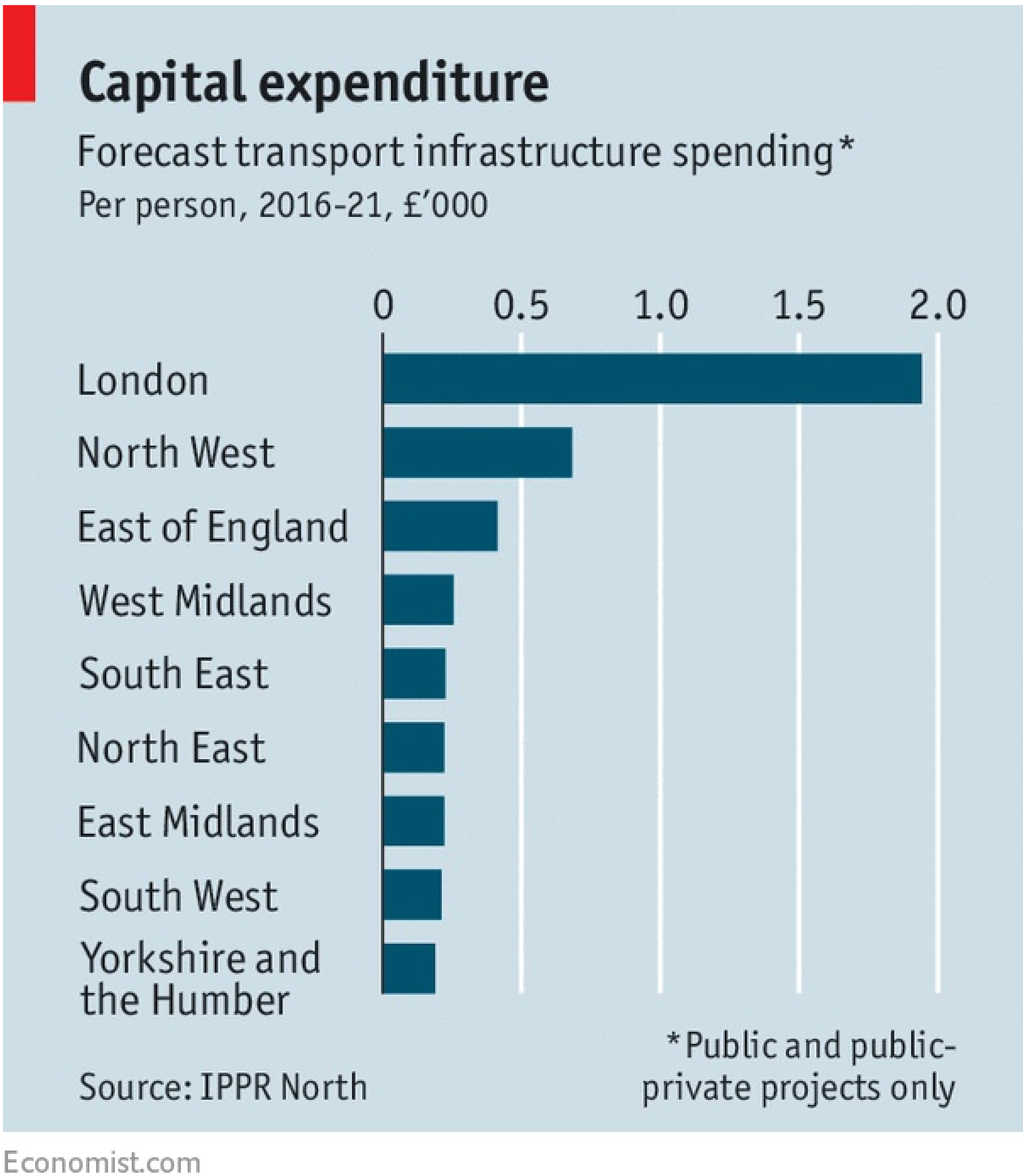
Does London get a better deal than the regions?

Londoners get twice as much public spending on transport as those elsewhere in Britain

Jul 29th 2017

THIS summer visitors to London will enjoy smart passenger carriages on HS1, Britain's only high-speed line, which runs from the Channel Tunnel to the capital. They can then travel to the city's exurbs in new trains thanks to the Thameslink programme, a £6.5bn ($8.5bn) publicly funded project. Next year London's east-west Elizabeth line, costing £15bn, will open. But if they venture far beyond the capital they will discover infrastructure that looks like it is from another, much poorer country. Many local railways are still operated by noisy and bumpy Pacer trains, converted from bus shells on the cheap in the 1980s.

The divide was highlighted this week by a series of ill-timed official announcements. On July 20th Chris Grayling, the transport secretary, unveiled plans to cut back projects to electrify railways in south Wales, the east Midlands and the north of England. Just four days later he gave his support to Crossrail 2, yet another new underground line in London, which may cost as much as £31bn. That prompted howls of indignation outside the capital. Andy Burnham, the newly elected mayor of Manchester, said he could "simply not accept" that spending billions more on transport in London was the "highest priority".



The moans are understandable (see chart). Between 2016 and 2021, over four times as much per person will be spent on transport capital projects in London as on those in northern England, according to IPPR North, a think-tank. Include day-to-day spending and the divide is still there, adds Luke Raikes of IPPR North. Since 2005 there has been twice as much public spending on transport per person in London than for Britain overall.

Things are not quite as unfair as these figures may suggest, says Paul Swinney of the Centre for Cities, another think-tank. Although public spending per person is 12% higher overall in London than Britain as a whole, the capital pays so much in tax that it heavily subsidises everywhere else. In 2015/16, people in London and the south-east paid £42bn more in tax than they got back in spending. The rest of the country received £114bn more than they paid in tax, thanks in part to government borrowing.

The reason for much of the imbalance is that the way the government decides how to allocate money tends to favour London, argues Transport for the North, a consortium of local authorities. The Treasury has used cost-benefit analysis since the 1960s to work out which projects are most worthwhile. The current version values highly the time saved by travellers. This benefits schemes in London—densely packed with high-earning workers—against projects elsewhere. Civil servants tried to scupper a project to replace the north's ageing Pacer trains, for instance, as it delivered only 35p in benefit for each £1 of cost. Crossrail 2, by contrast, is forecast to generate £2.10 per pound spent.

This approach risks being circular: better-off places attract more transport cash, boosting their economies further—and making the benefit-cost ratios look even better for future projects. Poor places, meanwhile, cannot demonstrate much bang for each investment buck, and so are passed over, with the consequence that they fall still further behind.

The dilemma of whether to spend money where it is most needed or where it will have most impact is an old one. But the balance could be tipped by the new regional mayors, such as Mr Burnham, who can bring more attention to the divide between London and the rest. Most are Labour and vocal in their criticism of the Conservative government.

Transport for the North now hopes to persuade the Treasury to consider the wider productivity benefits of new infrastructure in its cost-benefit calculations. As the devolution revolution takes off, expect more noise about this down the line.

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Did the taking part count?

Assessing London’s Olympics, five years on

A corner of east London has been rejuvenated, but wider benefits are hard to detect

Jul 29th 2017

MO FARAH will chase a long-distance running double and Usain Bolt will seek sprinting gold next week at the World Athletics Championships in London. Five years earlier, the opening ceremony of the 2012 Olympic games was held in the same stadium. Little has changed inside the arena—even some of the stars pounding around its track are the same—but the neighbourhood outside is transformed.

The athletes’ village now belongs to parents wheeling pushchairs through leafy squares. The press centre is these days a hub for digital businesses. University College London is planning a campus near the stadium, where the Victoria and Albert Museum and Smithsonian Institution are looking to build galleries. Sports facilities bustle with children. The greatest risk of old Olympic parks is that they turn into deserts, but London’s is humming.

Britain’s bid for the Olympics in 2004 promised to boost nationwide participation in sport and regenerate the run-down East End of London. The athletic gains have been uneven. Britain’s elite competitors have set post-war medal records at the last three Olympic games—pipping China to second place in Rio in terms of gold medals—after state funding for top-flight athletes tripled to £60m ($78m) a year. There have been other sporting successes, particularly by women. But it has proved hard to shift the public from the sofa. Despite an extra £300m being pumped into community sports since 2012, the share of adults playing sport weekly hasn’t budged, according to data from Sport England, the agency in charge of getting people moving.

The economic legacy of the games is similarly mixed. The Olympic park replaced what was once a polluted wasteland of industrial rubbish and abandoned sofas. In 2010 the three main local boroughs—Hackney, Tower Hamlets and Newham—had the highest share of deprived neighbourhoods in England, with Waltham Forest, the fourth district, in 13th place. By 2015 only Tower Hamlets was left in the bottom ten.

Not all of this is because of the games. East London’s regeneration began with the rebirth in the 1980s and 90s of its disused docklands as a financial centre, complete with upgraded air and rail links. Yuppies had colonised Hackney long before the Olympics. Westfield, which runs a giant shopping centre on the edge of the park, was sussing out the land in 2004, when London was still considered an outsider to host the games.

Before the bid Tessa Jowell, the minister for sport (who is now on the board of the Economist Group), told a parliamentary committee that regenerating the area without staging the games would cost about £300m. Nonetheless, the committee recommended that the bid proceed, with a budget of £2.4bn. That had ballooned to £9.3bn by 2007. Measuring the return on this big investment is tricky. A report last year by the mayor and the central government predicted national increases in output within the wide range of £28bn-41bn by 2020. Wolfgang Maennig, an economist at Hamburg University (and rowing gold medallist in the Seoul games of 1988), notes that such official forecasts have a tendency drastically to overestimate the benefits of hosting. He says that no recent independent quantitative study of the London games’ impact has been published.

The available data are sobering. The annual rate of economic growth in the four Olympic boroughs was one percentage point greater than the London average between 1997 and 2005, but only 0.6 points greater than average during the following decade. And although the legacy plan has contributed to regeneration, the "games themselves are but a dot in that transformation," says John Biggs, the mayor of Tower Hamlets. Of the 21,000 new homes built in the four boroughs since 2012, 3,000 are in the park.

Cranes overhead promise more flats and offices; the park's developers say that 15,000 new jobs will be created in the area by 2025. Yet the lack of an obvious jump in output so far is consistent with the experience of previous games. Mr Maennig has found that host countries fare no better than those that bid unsuccessfully. Indeed, those that bid do no better on average than countries with similar economies. Most academics agree that the Olympics offer no long-term boon. Voters seem to agree. Los Angeles and Paris are the only candidates to host the 2024 and 2028 games, after popular dissent forced Hamburg, Rome and Budapest to withdraw.

But Britons have no regrets. Londoners reported a spike in happiness during the games. And according to a poll in 2013, 69% of the country still believed that hosting the Olympics had been a good use of public funds, even during a time of austerity. The park is relatively free of the disused, white-elephant structures that have embarrassed cities such as Athens and Beijing. The worst offender is probably the ArcellorMittal Orbit, an unloved 115-metre-high sculpture. But park managers found a use even for that, bolting a giant slide onto it, down which people whoosh for £16.50 a go. Paris and Los Angeles, take note.

Pushing boundaries

From 4,000 spectators to 100,000,000: the rise of women's cricket

A World Cup win marks a double victory for England's female athletes

Jul 27th 2017

"LADIES playing cricket—absurd. Just like a man trying to knit." So once said Len Hutton, who captained England's men's team in the 1950s. Only 20 years ago members of England's women's team were unpaid, had to buy their own kit—compulsory skirts and long socks—and were banned from the members' pavilion at Lord's, the country's most venerable cricket club.

So they had two reasons to celebrate on July 23rd. One was that they won the World Cup, thrillingly defeating India by nine runs. The other was that they did so before a record-breaking international audience. More than 25,000 spectators packed the stands at Lord's (where the members' pavilion was noticeably quiet), beating the stadium's previous record of 4,426 for a women's game, set when England won the World Cup final in 1993. A global television audience of 50m tuned in to the tournament, 80% more than the last one, in 2013. Preliminary estimates are that over 100m, mainly from

India, watched the final.

These numbers vindicated recent investment in women's cricket in England (which introduced professional contracts in 2014) and around the world. The International Cricket Council, the sport's governing body, increased prize money for the World Cup from $200,000 in 2013 to $2m this year; it aims to match the men's tournament, which most recently awarded $10m, within 15 years. Daily expenses for players were equalised this year.

The success of women's cricket is part of a larger story. England's Football Association banned women from using its facilities until 1971 because the game was deemed "quite unsuitable for females". This summer the opening game of England's women in the European football championships was watched by over 2m, compared with 840,000 four years ago. The Women's Rugby World Cup, due to be staged in Belfast and Dublin in August, is also expected to break viewing records.

The next challenge for women's team sports is to develop an audience that follows all year round, and watches club matches as well as internationals. Many sports receive plenty of coverage during big tournaments but are virtually ignored in between.

A reminder of the work ahead came the day after the Lord's final, when it was announced that the contracts of England's women's 15-a-side rugby squad would not be renewed after the World Cup—even though they enter the tournament as defending champions.

Bagehot

Ruth Davidson, the Conservatives’ northern star

The Scottish Tories’ leader is an antidote to much that is wrong with the Conservative Party

Jul 27th 2017

THERE are lots of good arguments for devolution, such as bringing power closer to the people and providing a voice for cultural minorities. But one of the best is that it increases the supply of talent, not just in terms of quantity but also variety. Ruth Davidson, the leader of the Scottish Conservative Party, is as good an example of this as you can get: both a standing indictment of the current state of her party in the south and proof that there is still hope for Conservatism.

Ms Davidson is the polar opposite of Theresa May. Most obviously she is a winner: under her leadership the Scottish Tories increased their number of MPs from one to 13 while Mrs May lost her overall majority. Mrs May is mind-bogglingly inarticulate for someone who has been in politics all her life—all formulaic phrases and woolly banalities. Ms Davidson is a great talker.

But the most important contrast is not between Ms Davidson and Mrs May, who is on the way out, but between Ms Davidson and the Conservative Party as a whole. The party often seems to be out of touch with modern Britain. Several cabinet members might have been frozen in the 1950s. Jacob Rees-Mogg, a backbencher who is being touted as a future leader by the party's kamikaze wing, might have been frozen in the 1850s.

By contrast, Ms Davidson is a citizen of modern Britain. Her father lost his job in a textile mill in one of the endless downsizings that have left industrial Scotland a hollow shell. She went to what she describes as a "proper comprehensive" in Fife with 1,500 pupils of varying abilities. Much is made by profile writers of the fact that she is both a lesbian and a kick-boxer (though in fact she gave up kick-boxing years ago). Just as important in defining her as a modern citizen is that, at 38, she is only now getting round to buying her first house with her partner.

Because it is so out of touch, the Tory party can seem frivolous. Politics is a game played by chums who have known each other since school or Oxbridge and spend their lives alternately knifing each other and making up. Though not as dour as Gordon Brown, Ms Davidson exudes an admirable disdain for such southern decadence. She points out that these are serious times: Britain is in danger of crashing out of the European Union and a dangerous populist tide is rising across the West.

The Conservative high-command is intellectually dead. The party fought this year's election on an interesting manifesto which tried to define the role of the nation-state in a volatile and globalised world. But Mrs May proved incapable of explaining it. And then the entire thing blew up because of an ill-thought-out section on paying for elderly care. Since then the party has been out of ideas. Mrs May lacks the ability to craft a new philosophy. Ministers can't fill the void because they are bound by collective responsibility. The result is drift and factional infighting. Jeremy Corbyn, Labour's hard-left leader, sets the agenda because he at least has something to say; the Tories obsess over who should lead them because they have nothing to say.

Ms Davidson is well-positioned to fill this void. She is not bound by cabinet responsibility nor subject to whipping (she is a member of the Scottish

Parliament, not the House of Commons). But she also possesses the authority of a politician who has fought several elections and two referendum campaigns in the past five years. And she has plenty to say: in an article for a new website, UnHerd, she proposes a radical reboot of capitalism.

Ms Davidson starts off with a paradox: the world as a whole has never been richer but the consensus for free markets has never been more fragile. The reason for this is that the very process that has enriched the emerging world —globalisation—has hollowed out the old industrial world. Young Britons face a dismal prospect. If they stay in their home towns, they can't find any jobs. If they move to the big city, they can't afford anywhere to live. The very least the Tories can do is to address the housing problem. But they need to go much further: attacking crony capitalism, even if it means biting the hand that feeds them, closing tax havens and breaking up over-mighty companies.

Ms Davidson's ideas are sketchy. She doesn't say anything about the financial crisis, which precipitated the current era of stagnation, or address Britain's lousy record on productivity. It nevertheless points in the right direction: if the Tories aren't willing to take on their own constituents, particularly in the business world, they will deliver the country to Mr Corbyn. Ms Davidson says that she will have much more to say in the future. Having been immersed in day-to-day politics for years she wants to spend more time thinking big thoughts.

Tae think again

She is inevitably dogged by the leadership question: has she any plans to run for a seat in Westminster and make a bid to succeed Mrs May? A growing number of Tories see her as a saviour, believing that, given the party's toxic reputation with the young, the only chance it has of reviving its fortunes is to choose a leader who is young and different. Ms Davidson retorts that she is completely focused on building the party in Scotland and eventually replacing Nicola Sturgeon as first minister.

This is not just spin. Abandoning the leadership of the Scottish Conservatives for a seat in Westminster would not only be a gamble for Ms Davidson personally but would also reinforce the Scottish National Party's claim that the local Tories are no more than the tail of the English dog. But remaining in Scotland doesn't prevent her from helping to reshape the national party. The Tories need to decide what they stand for if they are to have any chance of acting as an effective government or holding back the tide of Corbynism. They also need to define themselves if they are not to be defined by their enemies. Ms Davidson's brand of Conservatism—open but pragmatic, forward-looking and flexible—is exactly what the party needs.

International

Demography

The rise of childlessness

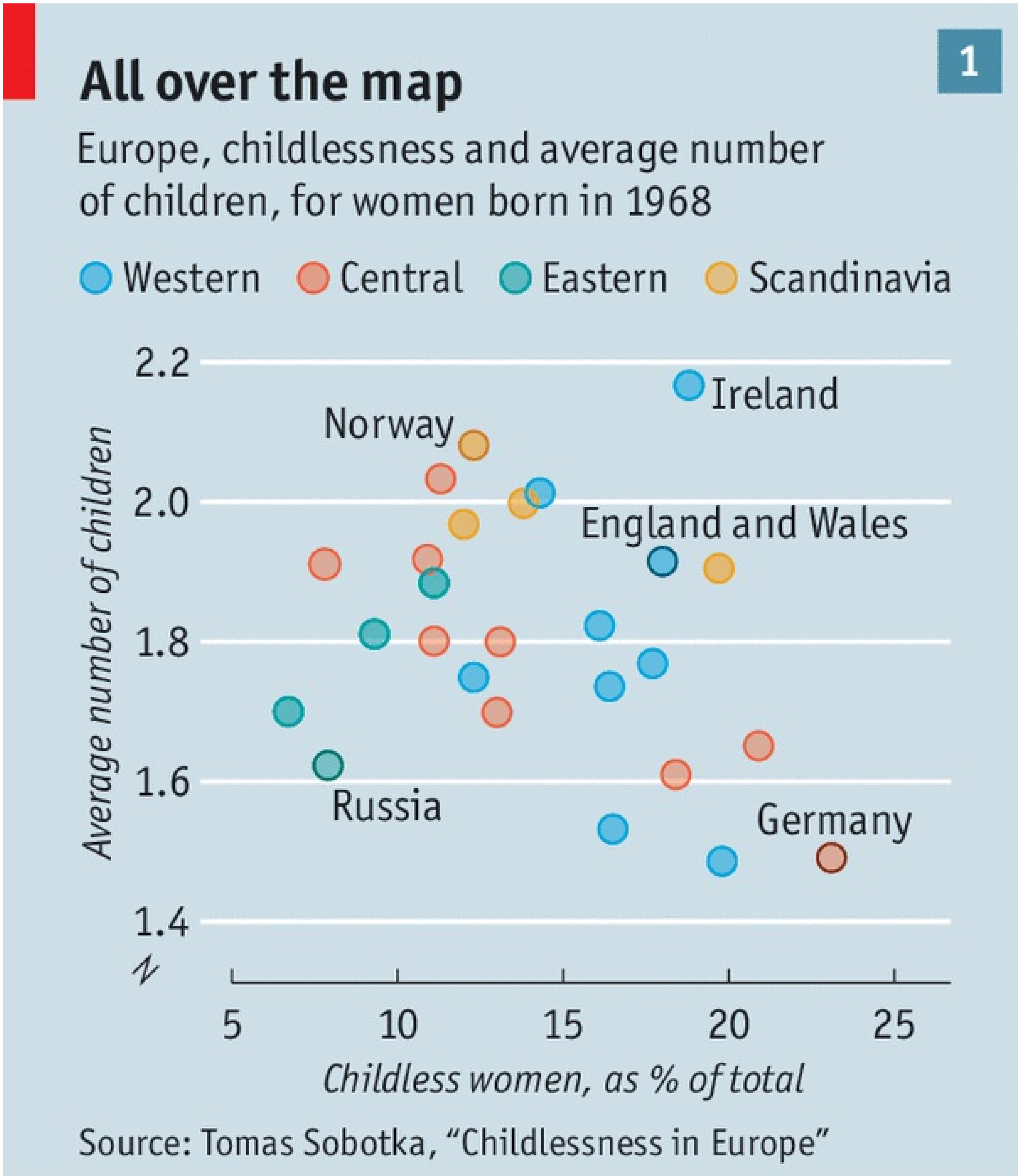
More adults are not having children. That is much less worrying than it appears

Jul 27th 2017 | TOKYO

POCKET LIVING has been building and selling small flats in London since 2005. The flats have many of the things that young, single people want, such as bicycle storage, and lack the things they do not, such as large kitchens and lots of bookshelves. At first, Pocket expected that most buyers would be in their late 20s, says Marc Vlessing, the firm's boss. Instead the average age is 32, and rising. It is not that many buyers are yet to have children, speculates Mr Vlessing; rather, they probably will never have them.

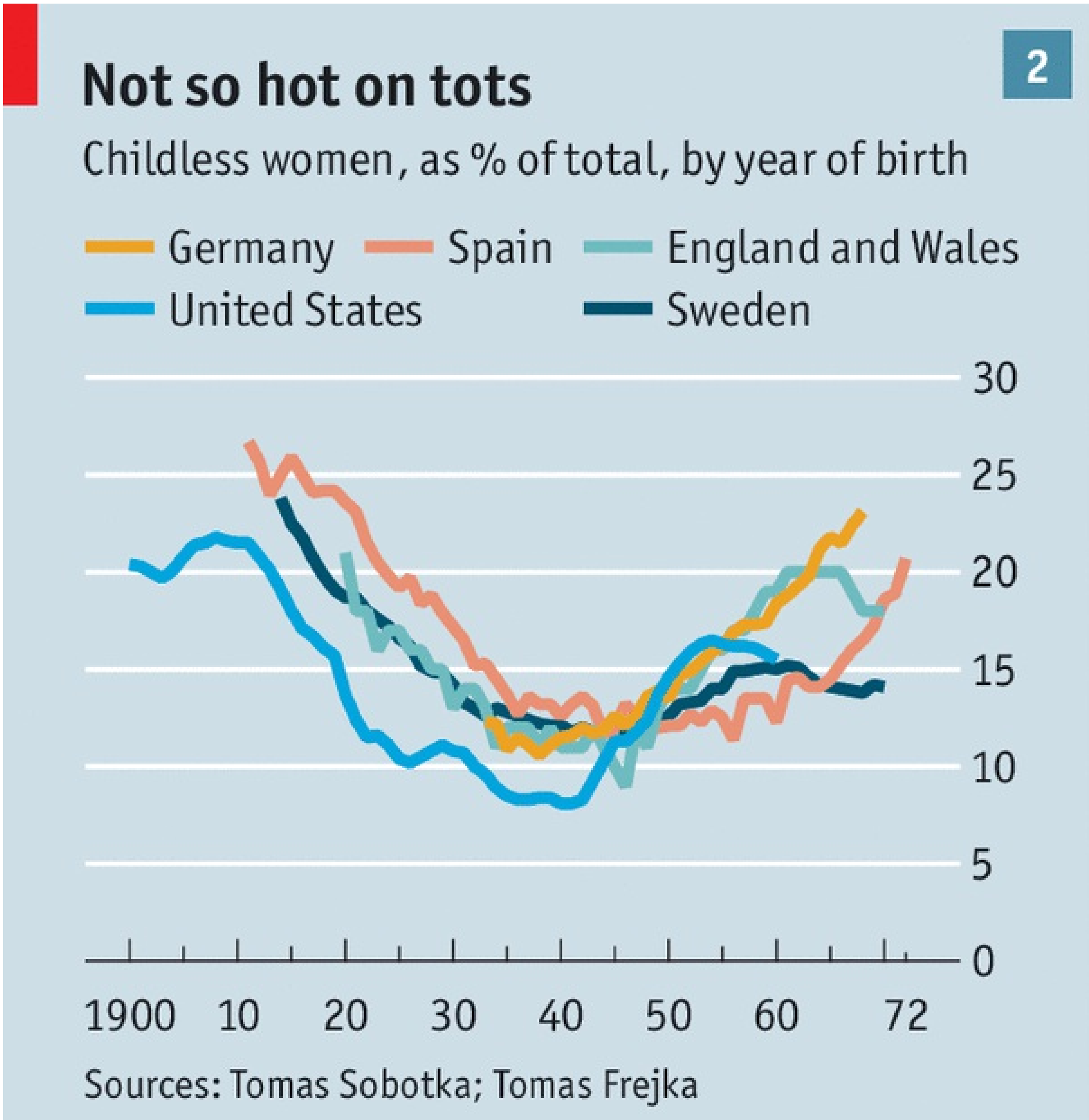
A growing number of city-dwelling Europeans are in the same situation. Just 9% of English and Welsh women born in 1946 had no children. For the cohort born in 1970—who, barring a few late surprises, can be assumed to be done with babies—the proportion is 17%. In Germany 22% of women reach their early 40s without children; in Hamburg 32% do.

All of which might seem to suggest that Europe is bent on self-erasure. Childlessness is “a symptom of a feeble and terminally ill culture” that has lost touch with its heritage, according to Iben Thranholm, a conservative Danish journalist. The suggestion is misleading, however. Mass childlessness is not a sign of demographic collapse, nor is it remotely novel. It would be more accurate to say that rich countries are updating a long tradition.



Economist.com

In some European countries, such as Germany and Italy, the overall birth rate is low and childlessness is common. But other countries, such as Britain and Ireland, combine a high birth rate (by European standards) with a high rate of childlessness. And in still other countries, especially formerly communist ones in eastern Europe, childlessness is rare but birth rates are low, because many women have one child. Overall, there is surprisingly little correlation between childlessness and fertility (see chart 1).



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Many countries that have lots of childless women today had even higher rates in the early 20th century. Indeed, the baby-filled late 20th century looks like a blip (see chart 2). That reflects deep-rooted social norms. In pre-industrial western Europe, men and women did not marry while they were maids or apprentices, but only when they could set up households of their own. To stay unmarried and childless was a sign of economic failure. But it was not shameful in itself. “It is poverty only which makes celibacy contemptible,” explained the heroine of Jane Austen’s novel, “Emma”.

The attitude lingers. In western Germany, people without children tend to feel only mild social stigma. “It’s something that requires an explanation, but not a lengthy one,” says Tanja Kinkel, a successful novelist who did not have children because she did not find a suitable partner. And western Germany combines a forgiving attitude to childlessness with a harsh view of working mothers. Until recently, nurseries were rare; a woman who put her child in one might be abused as a “Rabenmutter” (raven mother). Many happily working women simply opt out.

Childlessness is becoming more common in countries like Italy and Spain, which also squeeze working mothers. But perhaps the best example is Japan. Even if Japanese mothers were not pressed to stop working (which they are) they would be pushed into it by a brutal office culture. In a Japanese firm everybody is responsible for everything, complains one woman, an architect who lives in Tokyo. As a result, nobody dares to leave work early, which makes parenthood almost impossible. She delayed having children and is undergoing fertility treatment at the age of 41. Japan’s childless rate has shot up from 11% for women born in 1953 to 27% for women born in 1970.

The reasons why people do not have children are varied, complex and often overlapping. A few (but, pollsters find, not many) never wanted them. Others do not meet the right person. Some fall in love with people who already have children, and feel satisfied. Others suffer from medical problems. A great many fall into a group that Ann Berrington, a demographer at the University of Southampton, calls “perpetual postponers”. Waiting to start a family until they are finished with education, until they have a stable job and a house, they find it is too late.

Almost everywhere, the most educated women are least likely to have children. And the highest rates of childlessness are found among women who pursue degrees in non-vocational subjects. Researchers at Stockholm University have found that 33% of Swedish women born in the late 1950s who studied the social sciences did not have children, compared with 10% of primary-school teachers and just 6% of midwives. It may be that teaching and midwifery attract women who strongly desire children, or that these jobs offer more parent-friendly hours and conditions. But the difference is probably also down to job security. A trained teacher can expect to find a stable job at a younger age than a trained anthropologist can.

The charitable childless

Although childlessness makes some people utterly miserable, that is not the case for most. One multi-country study by two demographers, Rachel Margolis and Mikko Myrskyla, suggests that childless people aged 40 and over in formerly communist eastern Europe are a little unhappier than people with children, once you control for things like wealth and marital status. That might reflect the stigma against childlessness in those countries. In liberal Anglo-Saxon countries, though, middle-aged childless people appear to be slightly happier than parents. The same demographers find that young parents are gloomier than childless youngsters.

Amazing as it may seem to parents who spend their evenings and weekends traipsing to football training and piano lessons, childless people find plenty of things to do with their time. Among these are good works. One German study found that 42% of charitable foundations were created by childless people. Ms Kinkel started a charity called Bread and Books, which operates mostly in Africa. She describes it as her way of nurturing the next generation.

People without children are far more likely to bequeath money to charity, points out Russell James, an expert on philanthropy at Texas Tech University. In 2014 fully 48% of married childless people aged at least 55 who had written wills or will-like documents committed to giving something to charity. That was true of only 12% of parents and a mere 8% of grandparents. Knowing this, American universities have become acutely interested in whether their alumni have offspring, says Mr James.

That question is easier to answer for women than for men. Men’s fertility declines with age, but less predictably than women’s fertility. So, whereas demographers and fundraisers can reasonably assume that a 45-year-old woman will have no more children, they cannot assume the same for a man. Worse, men sometimes forget their children when filling in census forms—

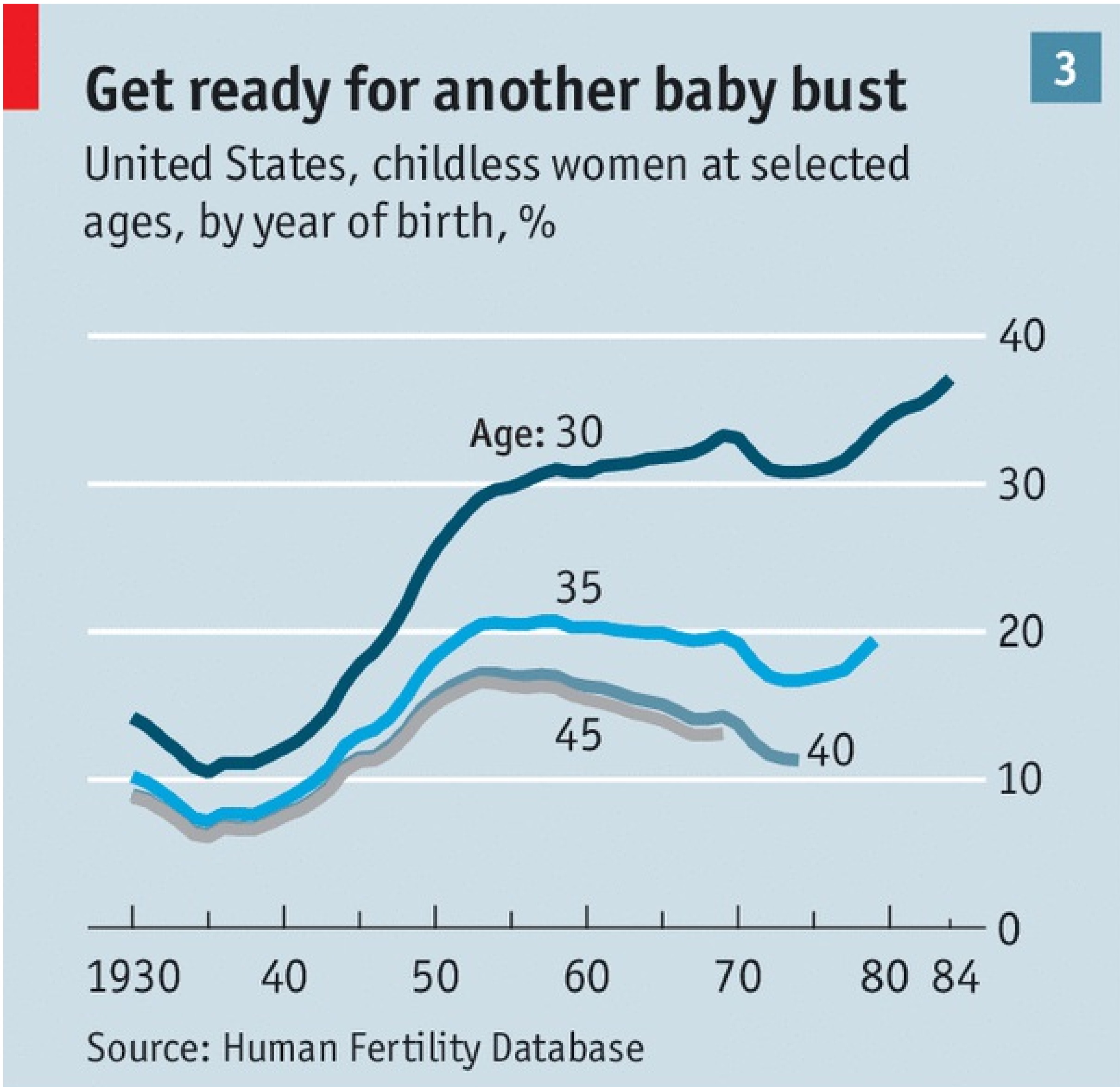
and may have fathered children they do not know about. Still, two things are clear. Childless men are numerous, and quite different from childless women.

Men are erratic. Some are reproductive prodigies, having many children with more than one partner. Others—more than is the case for women—have none at all. Ms Berrington finds that 22% of British men born in 1958 were childless at the age of 46, compared with 16% of women. And in many countries childless men are disproportionately working class. French men who have never worked are about twice as likely to have no children as men who hold good white-collar jobs. Michaela Kreyenfeld, a demographer at the Hertie School of Governance in Berlin, finds that 36% of west German men without university degrees born in the early 1970s were childless in their early 40s. Among men with degrees, the rate was 28%.

That suggests men and women end up childless for quite different reasons. Women often have no children because they have prioritised education or work in their 20s and 30s. Men are more likely to remain childless because women do not view them as good boyfriend material—let alone good husband or father material. “They have a problem finding partners,” suggests Ms Kreyenfeld.

The distinction might be disappearing, however. In western Germany, childlessness is rising among less educated women, who are converging with their highly educated peers. In Finland, a switch has already occurred: women with only a basic education are the most likely to remain childless. It may be that, as two-earner households become more common, men have taken to judging women as women have long judged men. Those who fail to land dependable jobs might not be given a good opportunity to have children.

Nobody knows whether childlessness will rise further. It has been going up in most European countries, but not all: the rate has fallen in Switzerland, for example. One possibility is that childlessness will veer up and down, mirroring the economic cycle. As the average age of marriage rises and couples push childbearing into their mid- or even late 30s, they become increasingly vulnerable to shocks. A bad recession or a mortgage-lending squeeze will encourage couples to pause—and, because many now give themselves only a narrow window before their fertility drops, some will be knocked out of childbearing altogether.



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That seems to be happening in America, points out Tomas Sobotka, of the Vienna Institute of Demography. The proportion of 45-year-old American women without children has fallen steadily since the turn of the century. Following the financial crisis of 2007, though, childlessness among 30- and 35-year-old women shot up (see chart 3). No matter what their intentions, many of these women are likely to remain childless.

That will not be such a terrible fate. Childlessness is often undesired, but in rich Western countries it is hardly calamitous. As the peculiarly procreative generation born around the middle of the 20th century passes away, it will come to seem ever more normal.

Internship

Jul 27th 2017

The Economist is looking for an intern to work on our news desk. The position is based in London and the pay is £2,000 a month. The deadline is August 13th. Full details of how to apply are available at economist.com/newsintern

Business

The Priceline party

The world’s largest online-travel company

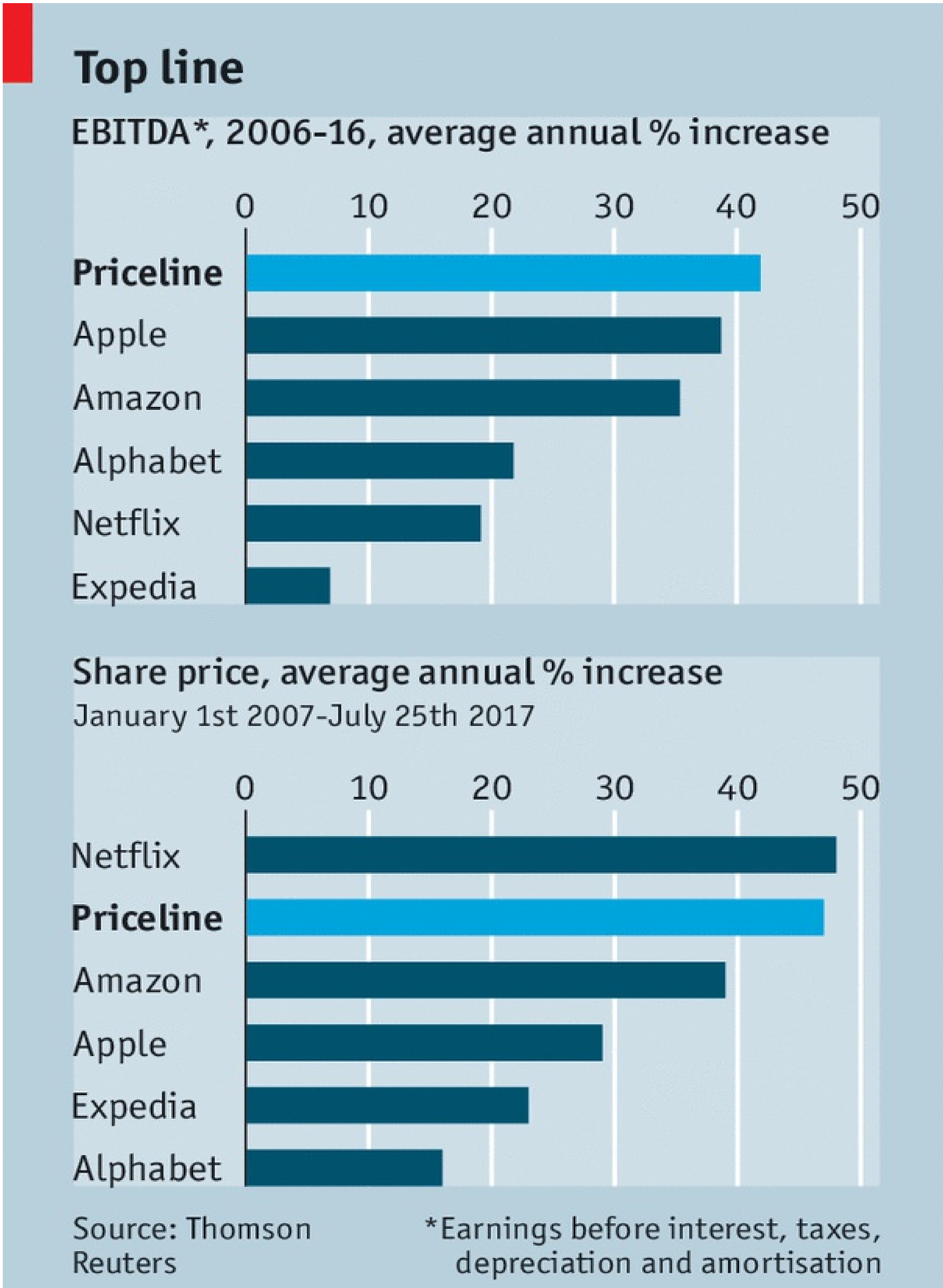
And the best-run internet firm after Amazon?

Jul 29th 2017 | SAN FRANCISCO

NOT since the dotcom boom at the turn of the century have technology shares been on such a tear. On July 19th the S&P; 500 index of information-technology stocks hit a record high, closing above its previous peak in March 2000 (see Buttonwood). As titans like Google, Facebook and Amazon hog the limelight, other firms can go unnoticed. One that deserves more attention is Priceline, the world’s largest online-travel company.

Those old enough to remember the dotcom boom may still associate Priceline, which was founded in 1997, with its “name your own price” feature, which let consumers bid for hotel rooms and flights. Today it is a Goliath. Its stable of online sites for booking hotels, cars, flights and restaurants spans the world and includes Booking.com, Kayak, Agoda and OpenTable. Over the past decade Priceline’s pre-tax earnings have grown at a compound annual rate of 42%, faster than Apple, Amazon, Netflix and

Alphabet (see chart). It also boasts a 96% gross margin. Its share price has risen by more than 50% over the past 12 months, about four times faster than the broader stockmarket. On July 26th the firm’s market value rose above $100bn.



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Perhaps because Priceline is based in Connecticut, not Silicon Valley, it is often overlooked by geeks and technology investors, who revere Airbnb, a platform for booking overnight stays in other people's homes which is valued at around $30bn. Ask an entrepreneur in San Francisco about Priceline, and you are likely to get a blank stare. Insiders know better. "There's nothing you can point to and say, 'That's something no one else could have done'," says Adam Goldstein of Hipmunk, another online-travel firm. "It's just that Priceline did everything better in every way."

The most important reason for Priceline's success is shrewd dealmaking. In 2005 it paid around $135m to buy Booking.com, a Dutch website that aggregates hotel inventory, and merged it with another acquisition, a British travel site called Active Hotels. Today Booking.com has the world's largest supply of hotel accommodation and accounts for the lion's share of Priceline's revenue and market value. Booking.com was one of the best deals "in the history of the internet", says Mark Mahaney of RBC Capital, an investment bank.

Priceline's focus on accommodation helps explain why it is more profitable and more highly valued than Expedia, a rival online-travel company that operates sites such as Orbitz, Travelocity, Trivago and Hotels.com. Expedia does more business booking flights, but these are not as lucrative. Online-travel firms take a meaty commission of 15-18% of a hotel room's price, compared with a slim 3-4% for airfares, according to Brian Nowak of Morgan Stanley, another investment bank.

Unlike Google and Amazon, Priceline does not aim to be on the cutting edge of technology, but it does make clever use of it. Booking.com excels at bidding for online-search keywords. It is rumoured to be the world's top spender on Google: last year it spent $3.5bn on "performance marketing", which is mostly related to search advertising. Booking.com is also constantly trying new features: it runs around 1,000 tests a day to see what makes users more likely to click "book". Some of these experiments, such as free cancellations and ranking hotels by the strength of their Wi-Fi, have become permanent features.

Steady management has helped the company, too. Glenn Fogel became

Priceline's boss in January, after the previous boss, Darren Huston, resigned for having an affair with an employee. But Mr Fogel, a former investment banker and trader, has worked at Priceline for 16 years and is credited with initiating the Booking.com deal. Asked about his firm's success, he attributes some of it to letting acquired firms go about their business. Kayak, an aggregator of travel listings that Priceline purchased for $1.8bn in 2012, for instance, still retains separate headquarters in Connecticut, six miles away from Priceline.

And then there are the lessons of the firm's own history. One is not to try too many things at once. During the dotcom boom the firm took the "name your own price" concept to extremes, allowing people to bid on petrol, groceries and even mortgages. The ensuing bust was bleak: Priceline's market value dropped by more than 99%, to $190m (the share price is up by 30,000% since that trough). That experience taught management to prize discipline and profitability. The corporate ethos today is one of a "workhorse, not show-pony", says one person close to the firm.

If analysts have their numbers right, the future looks bright for Priceline. Last year travel accounted for an estimated 10% of global GDP, or $7.6trn. But only around a third of that is booked online. This share is expected to rise by a couple of percentage points a year over time, about the same pace as e-commerce more broadly. And as people become wealthier, they tend to travel more; many in emerging markets are venturing abroad for the first time.

New markets beckon, too. The concept of "alternative accommodation"—rentals of apartments, villas and homes—was popularised by such firms as Airbnb, HomeAway and VRBO (the last two are both now owned by Expedia). But Priceline is bulking up in this area: last year it offered 568,000 "alternative accommodation" listings on Booking.com, nearly 50% more than a year earlier. Airbnb lists 3m, but many of those are individual rooms for rent in a larger home, whereas Priceline mostly offers entire properties, many of them professionally managed.

Mr Fogel argues that Priceline's approach of offering both hotels and other accommodation makes sense, because people like having a variety of choices available in one place. But Priceline will increasingly compete with Airbnb, which is expected to go public next year and is hungry for growth. Airbnb is said to have plans to add more listings of boutique hotels and bed-and-breakfasts to its own service and has suggested it could offer flights, although it has not offered any details.

Priceline and Airbnb will also compete over more of consumers’ budgets when they travel. Earlier this year Airbnb started selling local “experiences” with guides. Booking.com is experimenting with selling tours and other on-the-ground activities in several cities. The idea is to offer a “holistic system” for travel, says Mr Fogel, so people can use the Booking.com app to check into hotels without queuing, enter their room by swiping their phone as they do to board an airline, and make dinner reservations through OpenTable. Such features are meant not only to increase the company’s share of consumer spending, but also to ensure that customers continue to book on Priceline’s sites rather than directly with hotels and restaurants.

But becoming a one-stop-shop for all travel needs won’t be easy. Priceline’s least successful acquisition was OpenTable, for which it spent $2.6bn in 2014. Last year Priceline wrote down around a third of its value, acknowledging that the restaurant-booking service was not expanding as quickly as had been expected. This suggests that consumers may be comfortable using all-purpose sites to book hotels and flights, but still want to use real-life concierges for local recommendations.

Airbnb is not the only rival Priceline has to worry about. Technology firms will launch more pointed attacks. Google already offers consumers the ability to research flights and routes, directly taking on Priceline’s Kayak. The search giant can use its vast trove of data on consumers to push more deeply into the travel business.

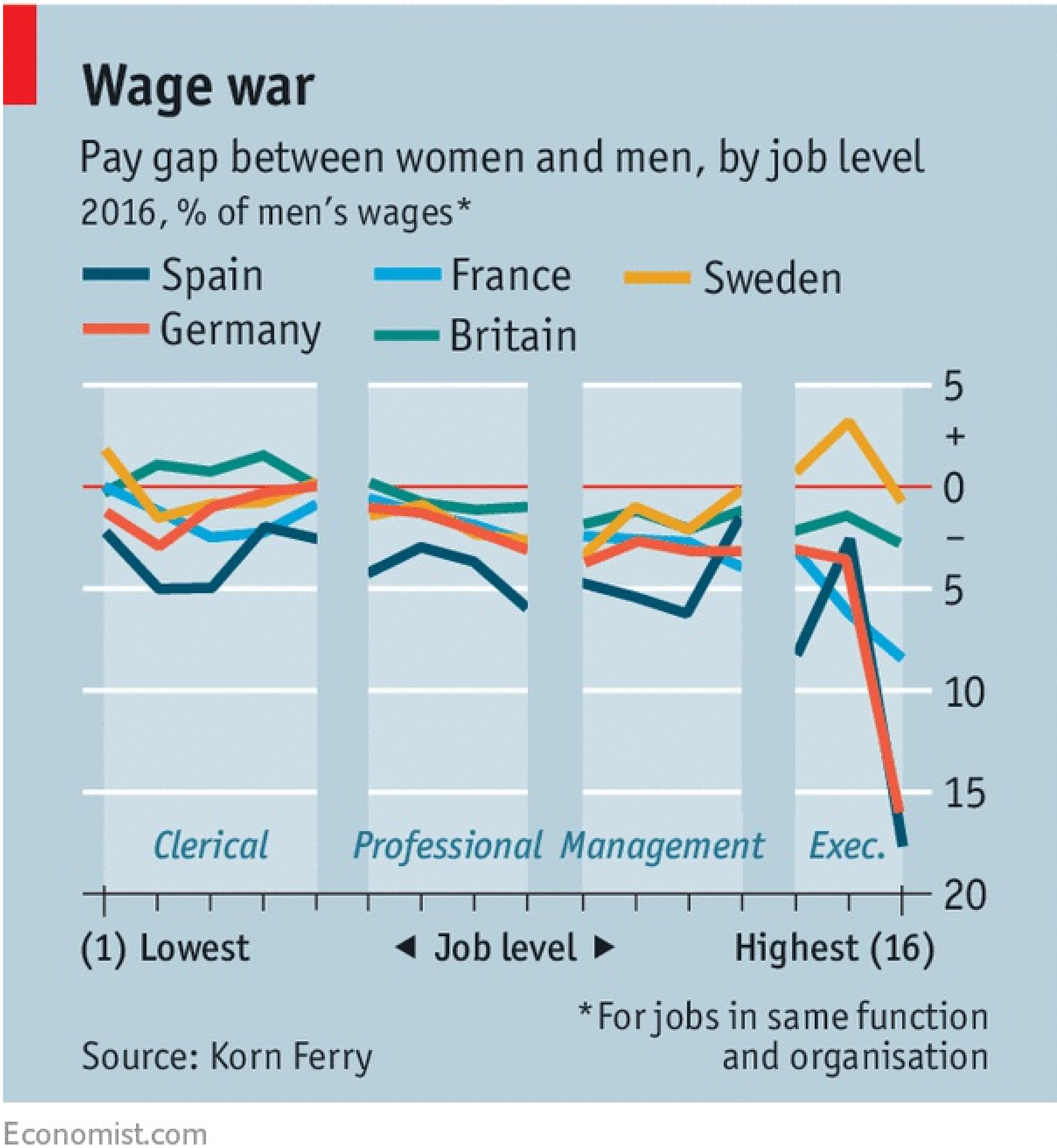
The most dangerous rival, however, may well come from somewhere else entirely. “We’re all waiting for the moment when a big Chinese company comes in and tries to take market share,” says Erik Blachford, a former boss of Expedia. Ctrip, a giant based in Shanghai and worth an estimated $30bn, is the obvious candidate. But if it indeed makes a move, Priceline will not necessarily suffer. Not only is its Chinese business growing nicely, but it has also invested nearly $2bn in Ctrip’s debt and equity. Small wonder that some analysts consider Priceline the best-run internet company after Amazon.

The gender pay gap

The wage gap between men and women varies depending on job types

Wider at the top, narrower at the bottom

Jul 27th 2017



IT HAS been a turbulent few days for the BBC, Britain's public broadcaster. On July 19th it published the names of those to whom it pays £150,000 ($195,000) or more a year. The ensuing furore was less over the level of pay, but the differences between men and women. Some female presenters discovered that they earned much less than their male peers. Of the 96 people listed, two-thirds are men; across the BBC, just over half are.

In a petition, female presenters said this was evidence that women at the BBC are paid less than men "for the same work". Although this may be true for people on the BBC's list, it is much less clear for the rest of its 9,000 female employees: a gender pay gap at the top of an organisation does not necessarily mean that similar gaps exist at lower levels.

In Britain, as in other European countries, the average gap in pay between men and women in exactly the same jobs is tiny or non-existent, according to data for 8.7m employees worldwide gathered by Korn Ferry, a consultancy. The difference is also narrow in each of the 16 job levels in the database—except, crucially, in the highest one, in which men in some countries are indeed paid a lot more than women (see chart).

This pattern partly reflects the well-known problems that women have in advancing to senior positions, whether because of old boys' networks or familial divisions of labour. But it is also reflective of how job markets work. For rank-and-file jobs, requirements and pay scales are largely standardised; both vacancies and candidates are plentiful. The hiring of chief executives, television stars or top footballers, however, is a different matter. These are in limited supply; paying up to outbid competitors is not unusual.

Lack of clear-cut rules and secrecy about pay for top jobs mean that candidates have lots of leeway to negotiate, says Benjamin Frost of Korn Ferry. Research shows that women do worse than men in negotiating salaries. Bias is partly to blame: surveys suggest that when women put their hands up for a promotion, they are more likely to be viewed as pushy, whereas men are viewed as ambitious. In 2014 hacked e-mails revealed that Jennifer Lawrence, an Oscar-winning actress, was paid less than her male co-stars in "American Hustle". She later said that she had not bargained harder because of expectations to act nicely.

A new law in Britain requires all biggish employers to publish, by April 2018, data on the pay gap between their male and female employees. The reactions to the BBC's list suggest they would be wise to break these data down for comparable jobs. That will show more precisely where the problem lies.

Cloudy skies

A bad week for Germany’s carmakers

They should respond to the bad news by dumping diesel

Claudio Munoz

Jul 29th 2017 | PARIS

STRENGTH and reliability were once the watchwords of Germany’s carmakers. Tardiness and scheming seem more apt terms now. Nearly two years after Volkswagen (VW) was caught rigging emissions tests, the difficulties continue to pile up. Europe is turning against diesel, and even petrol. And German firms are facing accusations of collusive behaviour, including claims of more widespread rigging of emissions tests for diesel engines.

Diesel’s days look numbered. Sales in Europe are falling fast. Before VW’s misdemeanours came to light, they accounted for over half the market in large European countries. No longer: Morgan Stanley, a bank, notes that diesel passenger cars took less than 39% of sales in Germany in June. Another bank predicts that diesel’s share will soon drop to 30% across Europe.

Dismay over premature deaths caused by pollution is one reason. The European Environment Agency says smog causes nearly half a million early deaths in Europe annually. Diesel engines are a big contributor to local pollution levels because of the nitrogen oxide they emit. Restrictions loom in cities across Europe: diesel cars are likely to be banned in Paris, London, Oslo and even perhaps in some German cities such as Stuttgart, home of Daimler.

P oliticians, who once applauded diesel engines for emitting less carbon dioxide than petrol ones, are also getting tough. Taxes on diesel cars and fuel are rising, eliminating the cost advantage to motorists. Doubt over the fuel's future is starting to hit resale values. Some countries are putting the internal combustion engine itself on notice. France's government said this month that sales of new petrol or diesel cars will end by 2040. This week Britain launched a "clean air strategy" with the same goal. Norway is aiming for 2025.

Carmakers are responding with promises to make only hybrids or electric cars within a few years. Volvo says it will do so by 2019. Daimler and VW have plans to make large numbers of battery-powered cars. Yet the German giants still say that diesel has a future. Their argument that an all-out war on diesel would deprive them of much-needed money to invest in new cleaner technologies has won backing in Brussels. The EU's industry commissioner, Elzbieta Bienkowska, recently warned against a "rapid collapse of the diesel market" as a result of local driving bans.

Rapidly collapsing reputations present a different set of problems, especially after new allegations of underhand practices. A report on July 21st in *Der Spiegel*, a magazine, said that Germany's big carmakers—Daimler, BMW and VW—had indulged in anti-competitive behaviour since the 1990s. The most damning claim has echoes of "dieselgate": that the firms agreed in 2008 to install inadequately small tanks of urea, used to cut nitrogen-oxide emissions from diesel engines, in order to save cash.

Der Spiegel's report is based on information that VW volunteered to authorities last July, in reaction to a separate probe into a steel cartel. European rules on prosecuting cartels give firms an incentive to blab: the first to admit wrongdoing is typically exempt from fines (the second gets a discount). Press reports suggest that Daimler sent information, too.

The allegations are striking. More than 60 committees stand accused of working together to fix standards and share technical information during 1,000 secret meetings. It is unclear if price-fixing took place—usual practice for a cartel. And rivals are often yoked together in alliances aimed at saving money by sharing costs for things such as engines. But internal e-mails, mentioned by *Der Spiegel*, suggest that managers and lawyers may have been aware they might be breaking antitrust rules. The meetings' secrecy looks suspicious, as does the exclusion of foreign rivals.

German and EU antitrust regulators are investigating. Some politicians fret for the industry's future, amid speculation of fines running to billions of euros. That looks premature. Confirmed facts are few. And despite the EU fining five lorrymakers €2.9bn ($3.4bn) for collusion a year ago, penalties typically fall far below the maximum permitted.

Investors are not panicking: the firms' share prices have fallen, but only slightly. BMW has denied collusion and dodgy emissions. Daimler and VW have not commented, although they discussed the matter at swiftly arranged meetings of their supervisory boards on July 26th. But German carmakers are under more pressure than ever to dump diesel, accelerate a shift to battery-powered vehicles and quell concerns about their governance. They will have to adopt two new watchwords—nimbleness and openness.

A pirate's life no more

Thanks to streaming services, China's consumers have begun paying for music

The market is dominated by one company: Tencent, the biggest of the country's online giants

Jul 29th 2017 | BEIJING

HONEST souls intent on paying full whack for the music they listen to used to have a hard time in China. In the era of compact discs, rare was the shop which did not sell counterfeits. The same held true when discs turned into downloads and online streams of songs: hardly any service charged money.

Slowly but surely, China is becoming a market where people pay for music. Over the past five years, digital-music revenues for the recording industry nearly quadrupled, to $195m; most of that amount comes from music streaming (see chart). That sum may still be a tiny fraction of the global total of $7.8bn, but streaming has clearly taken off in China.

Economist.com

Not everybody is paying: of the 600m Chinese who listen to music online only 20m have a paid subscription, which costs between 8 and 12 yuan (between $1 and $2) a month. The rest tune in for nothing, but many do so on legal, advertising-supported services—Chinese equivalents of the free option on Spotify, the world's biggest streaming service (which is not available in the country). "Piracy is collapsing," says Ed Peto of Outdustry, a firm in Beijing offering services to the music industry.

If Chinese consumers have developed a liking for legal listening, it is for a combination of reasons. Smartphones, which have become ubiquitous in recent years, make it easy to subscribe to streaming services. Widespread use of apps such as Alipay and WeChat Pay mean that younger Chinese, in particular, are now used to making small purchases digitally. And, to take advantage of the commercial opportunities in music, China's big internet platforms have begun to fight piracy.

Not all is rosy, however. The streaming market is dominated by one player: Tencent, the largest of China's online giants, which is best known for its WeChat messaging service. According to some estimates, its market share in music streaming exceeds 70%. Each of the firm's two leading streaming brands, QQ Music and KuGou, claims hundreds of millions of users.

One cause of this market concentration is acquisitions: last year Tencent bought two big competitors. More importantly, however, it has paid three international record labels—Warner Music Group, Sony Music and Universal Music Group—a big, but unknown, sum for the exclusive right to stream their music in China. This means that Tencent gets to decide which songs rivals are allowed to play.

Tencent says that it needs such exclusivity to ensure the legitimacy of streaming services and to reduce piracy further. But having one firm with so much power "is never healthy", says an executive at a rival firm. Xiami, a service owned by Alibaba, another Chinese internet giant, has lost lots of ground largely because it has failed to strike a deal with Tencent. With the market growing quickly, the labels may reconsider their deals with Tencent when they come up for renewal.

Artists also still have gripes. Many services built their businesses on pirated music before they started licensing it. Even today unlicensed "indie" music is pervasive; independent labels and artists still get paid little in royalties, if anything at all, because of their feeble leverage in negotiations with the streaming services. In contrast, stars such as Katy Perry, whose new album "Witness" surged on its release to number one on NetEase Cloud Music, a Tencent competitor, are sure to get their fair share of revenue. Even so, the overall picture is one of progress. "We are going in the right direction," says Mathew Daniel of NetEase Cloud Music.

AI la mode

Can data predict fashion trends?

Technology may be disrupting a peculiar business

Jul 27th 2017

IN THE film “The Devil Wears Prada”, the character of Miranda Priestly, whose role is based on a feared *Vogue* editor, scolds her new assistant for not understanding fashion. Fashion, she tells her, is whatever a select group of designers and critics says it is. What she does not say, however, is that their judgments are themselves often influenced by another group: fashion forecasters, who predict what will be “in”. Might these seers of style in turn be undone by artificial intelligence (AI)?

Fashion forecasting has always been a peculiar profession. The business came into its own in Paris in the 1960s when agencies began releasing “trend books”, collections of fabrics and design ideas. Retailers use these books for inspiration as they put together designs.

The biggest of these forecasting firms is WGSN, with a market share of 50%.

It employs 150 forecasters who scour the world's catwalks, bars and clubs to spot the next big thing. Their findings are then combined with other data, from economic indicators to political sentiment. Petah Marian, a senior editor at WGSN, is confident that the methodology works. She says her colleagues often exclaim "I forecast that!" when visiting clothing shops.

Ms Marian's confidence may seem surprising, given the lack of clear correlations between fashion and macroeconomic data. Not much evidence supports the theory of George Taylor, an economist, that hemlines rise with stocks, and Leonard Lauder's suggestion that lipstick sales increase during a downturn. Even the co-founder of WGSN, Marc Worth, who sold the firm to set up a rival service, once stated: "Nobody can really predict or forecast trends." If forecasters can claim accuracy rates of up to 80%, it is because their predictions are often self-fulfilling. Most major retailers buy trend books. For designers, they are a form of insurance: as long as they are widely used, the risk of being wildly out of step with the market is modest.

The business of forecasting is menaced by data-driven analysis, however. The clothing industry's supply chain is becoming more digital and more flexible: Inditex and H&M;, for example, aim to take an idea and turn it into a finished product ready for mass production in two weeks. In response, forecasting agencies are making use of data collated from retailers' IT systems and have added short-term predictions to their portfolio of services. In 2013 WGSN launched INstock, a retail-analytics service, which uses past sales figures to predict upcoming bestsellers. EDITED, a competing service, provides "solid metrics" in fashion, claiming to use machine learning, an AI technique, in order to predict short-term sales trends.

Such offerings notwithstanding, the marriage of AI and fashion is still in its infancy. A study in 2014 found that the best predictive models get it wrong nearly half the time. But forecasters are likely to face rising competition as technology firms enter the market. Google, an online giant, now has a "Trendspotting" division. It releases a regular "Fashion Trends Report" based on the firm's vast trove of search data. So far the results are basic: in 2016 slim "mom jeans" were on the rise while baggier "boyfriend jeans" were on the way out. But Olivier Zimmer, the project's data scientist, says that the goal is to produce more sophisticated combinations of search and other data.

The dull edge of intelligence

Whether AI will ever truly replace the woolly methods of fashion forecasting remains to be seen. Some worry that using AI may dull design. The business has already become “pedantic” and a matter of percentages, says Michael Bennett, a former forecaster. But Julie King, a fashion expert at the University of Northampton, expects the ingenuity of exciting couturiers to prevail over the homogeneity of data-driven algorithms. If so, the Miranda Priestlys of the world won’t stop dictating what’s hot and what’s not.

Schumpeter

Foreign executives need to get their feet dirty to succeed in Africa

Life beyond the lobby

Jul 27th 2017

NAIROBI, Kenya’s capital, is also known as the “Green City in the Sun”. It might as well be called the city of malls: it has never had such a wide choice. The newest outlet, named Two Rivers, sits on a road near the American embassy and contains no less than three different malls in the space of a square mile or so. Here, you can scoff a Burger King before wandering around a huge new Carrefour supermarket to stock up on French cheese, British-made breakfast cereals and Turkish-made clothes. The owners proudly proclaim that it is sub-Saharan Africa’s biggest mall. It is certainly among the glitziest.

And yet walking into Two Rivers is an odd experience. The scale is huge, but the place is eerily quiet. More than a few shopfronts are empty, with hoardings instead of windows. Those that are occupied have a mere trickle of customers, and the goods they sell—furniture, clothes, electronics—are ambitiously priced. Two Rivers feels a bit like a Potemkin village, projecting an illusion of affluence. The reality is that most Nairobians do not go anywhere near big supermarkets, where many of the products on sale cost more than they earn in a day. Nor will they buy the new clothes in the fancy boutiques. Instead, they purchase processed food in tiny quantities at kiosks, and buy clothes and fresh produce at open-air markets under plastic awnings.

Two Rivers is a project of Centum, a Kenyan firm; a large chunk of the funding comes from Avic International, a firm based in Hong Kong, as well as from Old Mutual, a South African insurer. It is one of dozens of such projects across Africa, whose aim is to capitalise on the rise of the African consumer. Malls are not the only things that can weirdly feel out of place. In Niamey, the capital of Niger, a landlocked swathe of desert that is one of the poorest countries in the world, huge billboards advertise first-class airline tickets. In Kinshasa, the capital of the Democratic Republic of Congo, they promote big-screen televisions.

Some of these ventures will make money. But as rich-world firms pull out the stops to sell their wares to Africans, they risk being blinded to two facts. Only a tiny minority of locals has the means to pay for them. According to the African Development Bank, just 13% of Africans earn more than $4 a day. And in the rush to cater to a continent of emergent consumers, foreign investors are missing real opportunities to use Africa as a production base.

For much of the past two decades, a bet on the African consumer seemed safe enough. As the turmoil caused by the end of the cold war faded, the continent entered into a period of vibrant economic growth. With the median African under the age of 20 in almost all countries south of the Sahara, the potential seemed limitless. Beer, mobile phones, washing powder, processed food: all of these products would sell in huge quantities to a fast-growing, youthful population. GDP was soaring, with growth of around 5% across the region from 2003 onwards and faster in many countries.

Yet this blessed era is over. Nigeria, which was proclaimed the continent's largest economy in 2014, has probably lost its title again, to South Africa, after five consecutive quarters of negative growth. South Africa's economy is also in recession, not least thanks to worries about corruption under President Jacob Zuma. According to the World Bank, the continent's economy grew by just 1.5% last year, the slowest rate in two decades. This year growth will tick up slightly, but hardly by enough to keep pace with the expected increase in population.

The cause is the collapse of the commodities boom. Take trade with America as an example. In 2007 the world's biggest economy imported around $90bn-worth of goods from Africa; 90% of that amount was spent on oil. By last year the figure had fallen to just $26.5bn, in large part because of the rise of America's shale industry. China, which drove much of the boom, has cut its purchases too: in 2015 it imported less from Africa than it did in 2010. That means less money for Africans to spend. In many countries the fastest-growing source of foreign exchange is their diaspora. Perhaps a little more than 1m Nigerians living abroad (nobody is sure) remit nearly $20bn per year. That is 40 times what Nigeria's biggest non-oil export, cocoa beans, brings in.

Sand in the gears

At the annual Africa conference of the World Economic Forum in Durban in May, the prevailing view among investors was that they just had to wait. "If you're really playing in Africa, this is a glitch," said one smartly suited partner from a private-equity firm. Having pinned their hopes on a rising African middle class, the vice-presidents of big Western firms assume that this is a blip. The sheer scale of urbanisation and population growth, their thinking runs, will be enough to make the numbers work.

With little prospect of a new commodities boom, the wait could be a long one. But executives willing to get their feet dirty and take a few more risks will find there is money to be made in other ways. Manufacturing in Africa is tough, thanks to costly power and poor logistics. Yet it is not impossible. In Ivory Coast, Olam, a Singaporean agribusiness firm, has opened a $75m factory, which will turn the world's biggest cocoa producer into its biggest processor, too. Across the continent, Chinese entrepreneurs are finding profitable things to export—from donkey meat in Kenya to canned fish in Senegal.

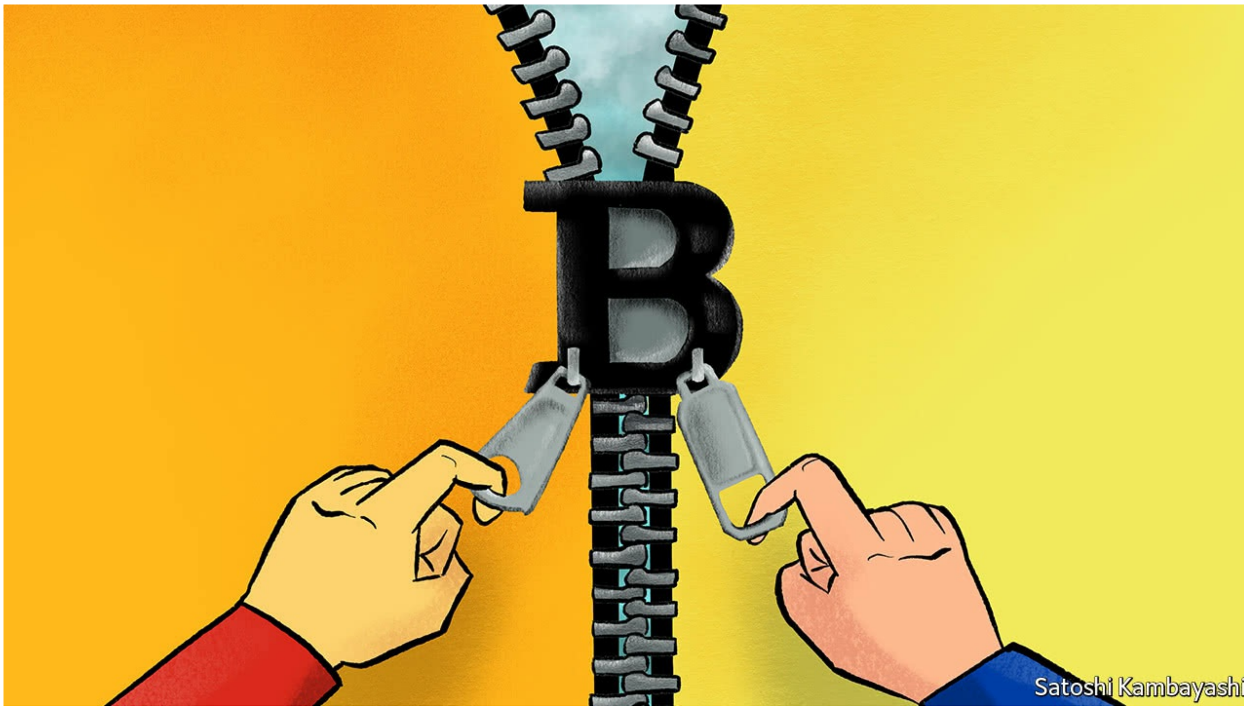
Whether the multinational executives who jet into international conferences, imbibing good wine and bad speeches, are well-placed to spot such opportunities is questionable. Many seem unwilling to move much beyond their comfort zones, preferring to think of sub-Saharan Africa as little more than a storefront. According to one survey by Infomineo, a research company, after Johannesburg, the two biggest cities for the African headquarters of big multinational firms are Paris and London. Much good can they do from there.

Finance and economics

A crypto-currency civil war

Making Bitcoin work better

A compromise over the currency's future may not last

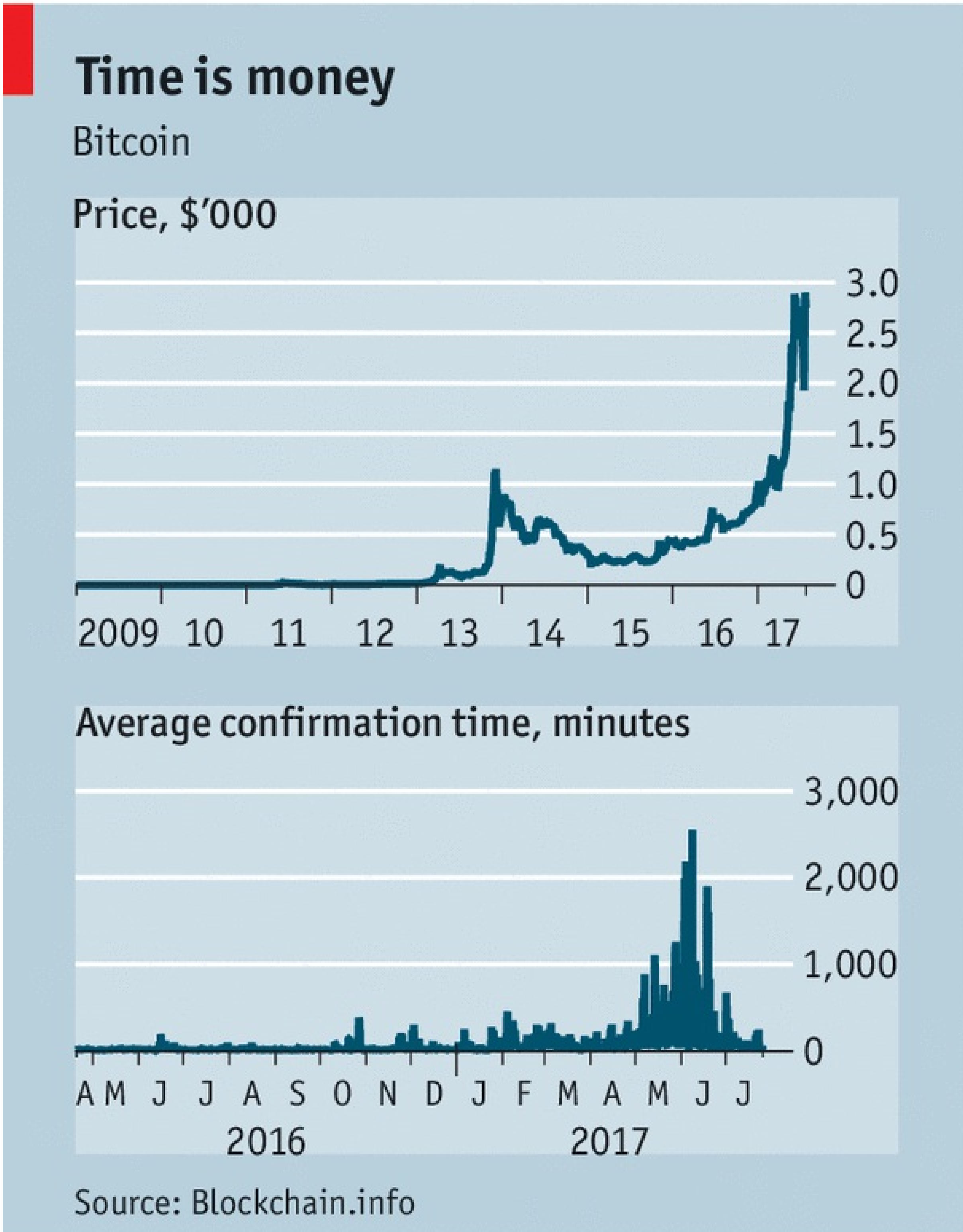


Jul 27th 2017 | BEIJING AND LONDON

IN DIFFERENT circumstances the two people could be good friends. Each is rather shy and very smart. And each is passionate about bitcoin, a digital currency. One invented hashcash, which foreshadowed components of the crypto-currency; the other is the author of the first Chinese translation of the white paper in which Satoshi Nakamoto, the elusive creator of bitcoin, first described its inner workings.

Adam Back is the chief executive of Blockstream, a British startup, which employs some of the main developers of the software that defines bitcoin's inner workings. Jihan Wu is the boss of Bitmain, a Chinese firm, which makes about 80% of the chips that power "miners", specialised computers that keep the bitcoin network secure, confirm payments and mint new digital coins. But far from being fellow-travellers, each represents one of the two main camps in what has come to be called a "bitcoin civil war", fought over how, if at all, the system should grow.

The worst seems to have been avoided. On July 21st a large majority of miners signalled their support for a compromise, reducing the risk of a split of bitcoin into different currencies and driving its price back up towards $3,000 (see chart). But a “fork”, as some call this possible split, may only have been delayed: the issues underlying the dispute have not been truly resolved.



Economist.com

At issue is the size of a "block", the name given to the batches into which bitcoin transactions are assembled before they are added to a decentralised digital ledger, called “blockchain”, that contains the payment history of all bitcoins in circulation. Mr Nakamoto limited the block size to one megabyte, meaning that the system can only handle a maximum of seven transactions a second. Payment systems like Visa can process thousands in that time. With demand growing steadily, the system started to slow; users had to offer miners fees of several dollars a pop to get their transactions processed speedily.

The answers seem obvious: make the blocks larger or pack transactions more densely. Yet bitcoin’s growing pains are less technical than political. “The big question is who gets to lead an organisation that is supposed to be leaderless,” says Jeff Garzik, the boss of Bloq, a bitcoin startup.

Bitcoin is big business: the combined value of coins in circulation is now $40bn. The number of transactions a day is approaching 300,000 on average, generating a trading volume of $1.5bn. And bitcoin has become a global platform for hundreds of startups, offering services from trading the currency to providing market data and operating bitcoin ATMs.

As bitcoin’s ecosystem has grown, however, so have the divisions within it. Many stem from a fundamental difference in vision: whether bitcoin should be more like gold or more like cash. This echoes a dichotomy between two schools of thought on the nature of money: whether, as “metallists” argue, it is more of a bottom-up affair, emerging naturally as a medium of exchange and a store of value in the same way as gold; or whether, as “chartalists” say, money is mostly a top-down creation by a government to enable it to collect taxes and provide citizens with a user-friendly way to settle their debts.

Unhelpfully, bitcoin is a bit of both. It is bottom-up: people freely opt into the system, to speculate or make payments that governments cannot block. But it is also top-down: Mr Nakamoto set not only the block size but other technical parameters, including the stipulation that there would only ever be 21m bitcoins in circulation.

Mr Back says it all comes down to a trade-off: let bitcoin grow too large too quickly and it will turn into a more centralised payment system that governments can interfere with. That is because, if the blockchain becomes too big, individual holders will no longer be able to use their own computers to check whether a transaction is valid. Consequently, Mr Back wants to keep the blocks relatively small and change the system in other ways, such as bundling smaller transactions before they are confirmed (an approach known as “lightning”). To alleviate the system’s congestion, Mr Back and other leading coders, collectively called “Bitcoin Core”, have developed a solution to pack blocks more densely, using a technique known as “segregated witness”, or SegWit.

If Mr Black is the theorist, Mr Wu is the pragmatist. He sees no trade-off between scale and security, at least not in the foreseeable future. To him, bitcoin is held back by a decision on block size that Mr Nakamoto only made for practical reasons. Not changing it would “kill the golden goose”. He has thrown his weight behind those who want to double the block size as quickly as possible and increase it even more later on.

Behind these differences in philosophy lurk divergent economic interests. Bitmain is not only selling mining hardware, but minting bitcoin for its own account (Mr Wu claims he controls about 10% of the system’s computing power). It also operates big “mining pools”, to which smaller operators can connect. He is also said to have amassed a sizeable amount of bitcoins. All these assets provide a strong incentive for him to keep the system growing but intact.

In the case of Mr Back and his fellow coders the mix of interests is more complex. Blockstream is not the same as Bitcoin Core: only a few of the group’s developers work for the firm. They are in it partly for the intellectual challenge and because of their libertarian ideology. But Blockstream, as well as the venture capitalists backing it, would clearly benefit if bitcoin develops in the way preferred by Mr Back. It wants to make money from versions of lightning and other blockchain-scaling software.

In its early days the internet itself saw similar fights. It developed institutions to overcome them, such as the Internet Engineering Task Force. Bitcoin has an IETF-like “improvement process” of its own, but agreeing on changes to a protocol that directly manages billions of dollars has proved hard. The growing power of the miners had added to the difficulty in reaching a consensus. Their main source of revenue is the “block reward”: every ten minutes miners engage in a race over who gets to update the blockchain; the winner is awarded 12.5 bitcoin, about $30,000 at the current exchange rate.

Mr Nakamoto had planned for mining to be a very fragmented activity, done by individual bitcoin holders. But because bigger mining operations have an advantage over smaller ones, the industry has quickly become highly concentrated. More than 60% of mining power is thought to be generated in China, where electricity is cheap and data centres easy to build. This gives their operators a veto: only if enough of them implement changes do they become the rule.

The dispute over how to scale bitcoin is now best described as a conflict between Chinese miners and Western developers. Whereas Mr Wu and Mr Back are surprisingly polite when talking about each other, the foot-soldiers in this fight haven't pulled punches: mining farms have been attacked and the bitcoin system spammed to worsen congestion. Several attempts have been made to force the issue to a vote, using blocks as ballots.

This wrangling could have gone on for ages. But bitcoin is no longer the only kid on the crypto block; it is facing competition, in particular from Ethereum, a new type of blockchain. It was launched only a couple of years ago, and has grown fast. It has also given rise to a wave of "initial coin offerings" (ICOs), a novel way of crowdfunding. "While bitcoin is stuck in a stalemate, the competition has moved on," says Emin Gun Sirer of Cornell University.

Worries about competition prompted the July 21st decision. A group of bitcoin activists earlier this year launched what was, in effect, an attempt to fire miners if they don't implement SegWit. In response, Mr Wu in June released a "contingency plan" that amounts to getting rid of the developers: should the other side force his hand, he would extend a blockchain of his own and move to a block size of two megabytes—which would have led to a bitcoin split.

To avert that outcome, a group of bitcoin businesses came up with a compromise called "SegWit2x", which provided for the implementation first, in mid-August, of SegWit and then, three months later, a block size of two megabytes. It is this compromise that won the official support of almost all miners.

A split has been averted—for now. Whereas SegWit seems a given, it is not clear whether the second step will be taken. Developers have already said that the timeframe is too ambitious—a deadline of 12-18 months is more realistic. If things drag on, a schism could become inevitable. And if that happens, expect an epic battle over who can lay claim to the bitcoin brand.

Whatever the outcome, one lesson of this conflict is clear. Decentralised crypto-currencies and other blockchain-based systems need robust governance mechanisms if they want to be able to evolve and stay relevant. Otherwise they risk ossification. Since crypto-currencies "were created to replace institutional decision-making," argues Andreas Antonopoulos, the author of "Mastering Bitcoin", they will have to find other ways to evolve.

Tezos, another blockchain, will soon test one such mechanism: it will not only have regular votes on competing proposals for how to change the system, but a more scientific approach to evaluating them and a way to compensate the developers for coming up with ideas. If their proposals are accepted, they will get paid in Tezos coins. The approach appears to have resonated within the crypto world: when Tezos closed its ICO earlier this month, it had raised a record $232m.

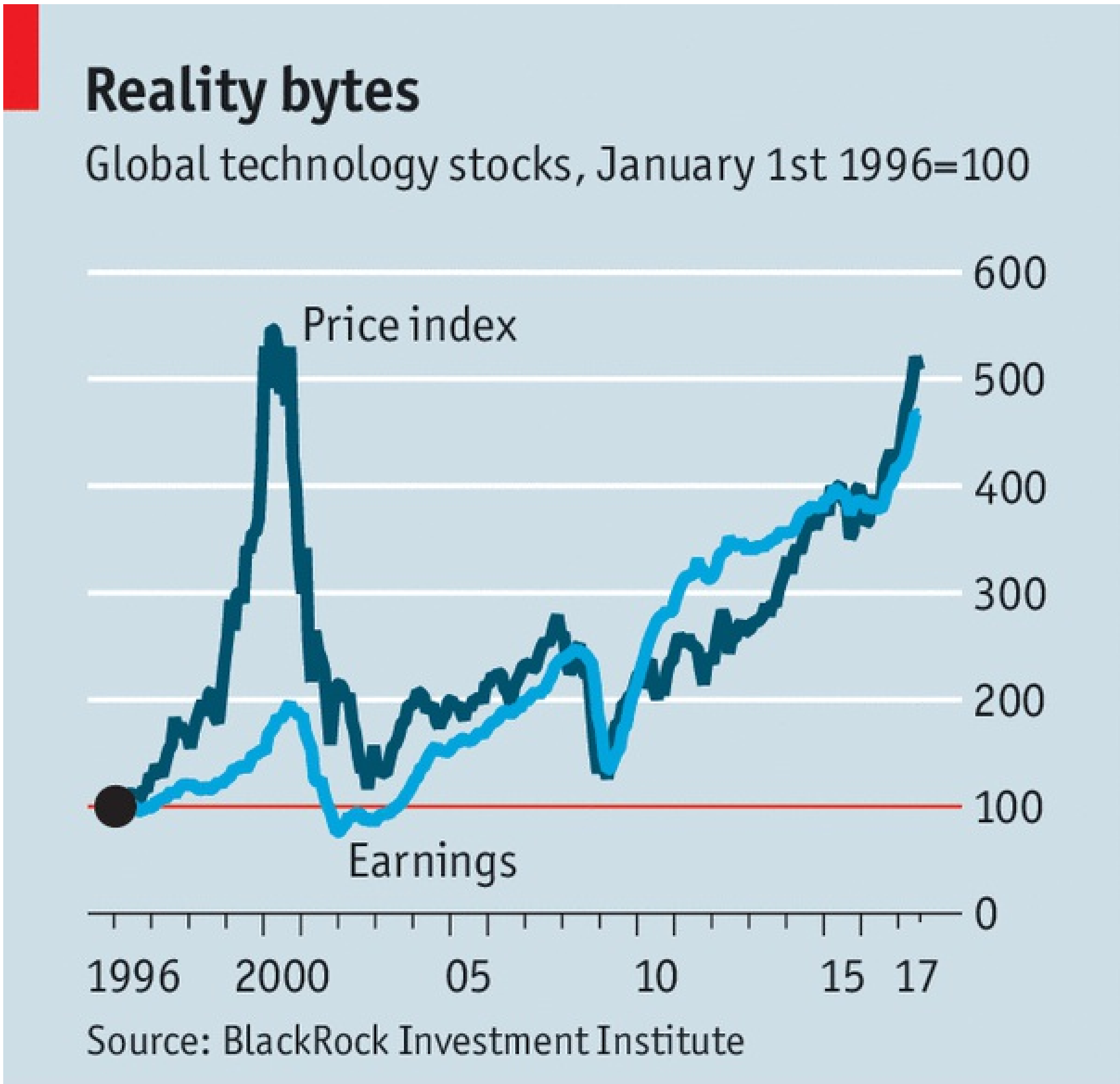
Even if bitcoin does not split, therefore, the fight over block sizes marks a fork in the road for crypto-currencies. The era of bitcoin's dominance is ending; the future belongs to many competing digital monies. And the winners among them will be those currencies that can adapt their rules without having strong rulers.

Buttonwood

Tech stocks have regained their dotcom-era highs

But the sector has changed a lot since the last peak

Jul 27th 2017



Economist.com

CAST your mind back to when Bill Clinton was president, Tony Blair and Vladimir Putin were fresh-faced new leaders and tweeting was strictly for the birds. That was when technology stocks, as measured by the S&P; 500 tech index, last traded at their current levels.

The horrendous decline in share prices that followed the peak in 2000 was the first financial calamity of this millennium. The dotcom crash had much less impact on the broader economy than the mortgage and banking crisis of 2007-08. Nevertheless, the tech revival has caused some twitchiness among investors. Might history be repeating itself?

In the intervening years the world, and the tech industry, have changed a lot. In the late 1990s enthusiasm for tech shares was so great that the sector's market value rose far faster than its earnings. The gap is nothing like as great today (see chart). Back then, leading firms like Microsoft and Oracle were valued at more than 20 times their annual revenues, let alone earnings. This time around, with the exception of Facebook, price-to-revenue ratios are much less stretched.

What boosted tech businesses in the late 1990s was that everyone was discovering the internet at the same time. Both companies and consumers were buying computers and associated items like modems. That led to rapid revenue growth. But the sudden enthusiasm for tech was also its greatest weakness; every college graduate seemed to have a plan to start a dotcom company. The market became overcrowded. Investors struggled to tell the long-term winners from the losers.

Since then, investors have focused their enthusiasm on companies that can exploit "network effects" and become dominant in their sector—Google in internet search, for example. The latest rally has been led by a small number of stocks, sometimes dubbed the FAANGs (Facebook, Amazon, Apple, Netflix and Google's parent, Alphabet) and sometimes FAAMG (replacing Netflix with Microsoft). In June Goldman Sachs said this latter group had been responsible for 40% of the S&P; 500 index's gains in the year to that point. The tech industry was Wall Street's best performer in the first half of the year.

Eddie Perkin of Eaton Vance, a fund-management company, says that investors started the year with too much enthusiasm for the "Trump trade", the idea of owning stocks that might benefit from the new president's policies. Companies with high tax bills, and those exposed to infrastructure spending, were two examples. As hopes for action from the new administration faded, enthusiasm for tech stocks surged; this industry can generate profits growth regardless of the economic outlook. Tech companies in the S&P; 500 are likely to record double-digit year-on-year profits growth in the second quarter.

Earnings expansion on that scale means that few investors can afford to ignore tech stocks. Since 2009 the industry has been the most favoured by global fund managers for 80% of the time, according to a regular survey by Bank of America Merrill Lynch. But the latest survey reflected fears that the enthusiasm may have gone too far: 38% of managers thought that betting on tech stocks was the "most crowded trade"; a net 9% had cut their exposure in the previous month.

The risks facing the tech industry now are rather different from those that surfaced in 2000. Then, it became clear that many companies would burn through their cash long before they made a profit. This time, the industry is more mature; Apple's fastest growth is surely behind it, for example. Whereas the sector was generally held in high regard in 2000, it is now the object of more suspicion, whether it is public concern about individuals' privacy, Donald Trump's anti-Amazon tweets or EU fines against American tech giants. Regulation may yet prove a barrier to tech's long-term growth.

So, history isn't repeating itself exactly. There is nothing like the same stockmarket euphoria as there was at the turn of the century. Few people are trying to day-trade their way to riches or setting up a dotcom franchise to sell dog food. And tech stocks are not as much of an outlier as they were (along with media and telecoms firms) in 2000, when many investors abandoned "old economy" companies in retailing and heavy industry.

But there is still plenty that can go wrong. The overall market is on a cyclically adjusted price-earnings ratio of 30—a level surpassed only in 1929 and the late 1990s. If the Federal Reserve tightens policy too aggressively, or the American economy slips into recession (or both), tech investors will get that sinking feeling again.

Economist.com/blogs/buttonwood

Economics and ethnic conflict

The link between poor harvests and violence

Historically there were more anti-Semitic attacks when crops failed

Jul 27th 2017

LAST year over 102,000 people died in nearly 50 armed conflicts across the world, according to the Peace Research Institute Oslo, a think-tank. Much of this violence is caused by tensions between ethnic groups—two-thirds of civil wars have been fought along ethnic lines since 1946. Yet historians differ over whether cultural differences or economic pressures best explain how tensions explode into violence.

A new study* by Robert Warren Anderson, Noel Johnson and Mark Koyama suggests that, historically, economic shocks were more strongly associated with outbreaks of violence directed against Jews than scholars had previously thought. The authors collected data for 1,366 anti-Semitic events involving forced emigration or murderous pogroms in 936 European cities between 1100 and 1800. This was then compared with historical temperature data from a variety of sources, including tree rings, Arctic ice cores and contemporary descriptions of the weather.

Cold spells hit medieval agriculture hard: a one-degree Celsius fall in temperatures reduced the growing season by up to four weeks. Lower yields caused widespread economic pain: up to 57% of people relied on farming for work in medieval England, for instance. The authors find that a fall in average temperatures of only a third of a degree increased the probability of a pogrom or expulsion by 50% over the next five years. They argue that violence against Jews was not simply caused by religiously-motivated anti-Semitism: “The Jews were convenient scapegoats for social and economic ills.”

The authors find that economic shocks had greater effects where soils were less suited to farming or where governments were weaker, and so less able to stop violence. A fall in anti-Semitic attacks in the 17th and 18th centuries was due to the emergence of strong nation-states able to smooth out economic bumps and protect minorities during periods of strain, the paper concludes.

Echoes of these patterns are discernible today. Many economists have linked the weather—particularly droughts and heatwaves in agricultural economies—to outbreaks of intercommunal violence in developing countries. Another paper** published last year, by Carl-Friedrich Schleussner and his colleagues, found that between 1980 and 2010 23% of civil wars coincided with climate-related disasters in countries with deep ethnic divides. Global warming may worsen this problem further. The lesson of history is that better political institutions can help soothe tensions. But these institutions take decades to develop. A quicker solution—insurance that pays out in years of bad weather—may not just be a boon for farmers, but for the world’s ethnic minorities, too.

** Jewish persecutions and weather shocks:1100–1800, Robert Warren Anderson et al. The Economic Journal (see link)*

*** Armed-conflict risks enhanced by climate-related disasters in ethnically fractionalized countries, Carl-Friedrich Schleussner et al. Proceedings of the National Academy of Sciences (see link)*

Withdrawal symptoms

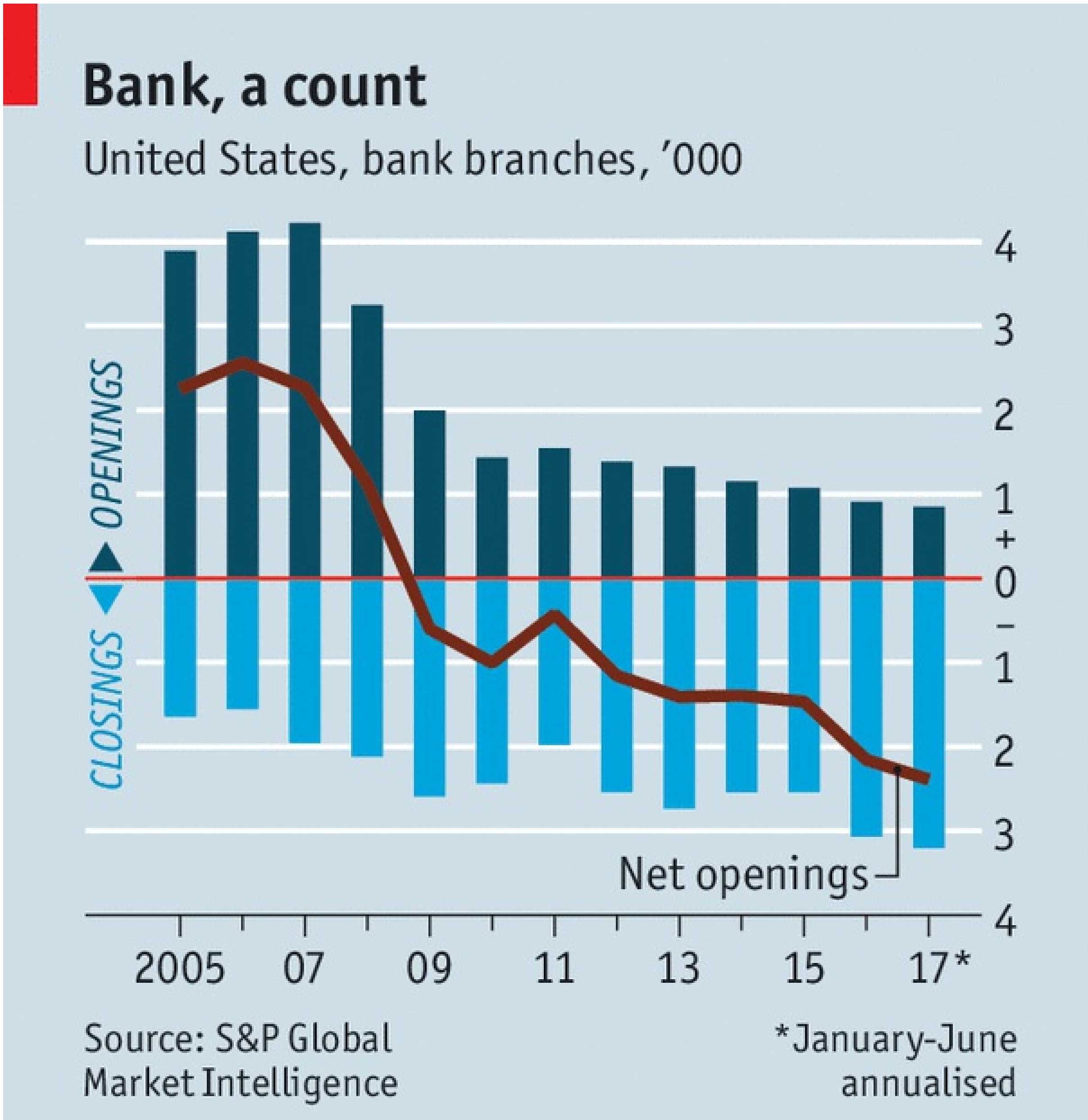
The closing of American bank branches

Banks have shuttered over 10,000 since the financial crisis

Jul 27th 2017

WINDSOR, a community of 6,200 people two hours outside Albany in New York state, offers many of the amenities commonly found in a small town, including a bakery, a car-repair outfit and several restaurants. There is just one thing missing: a bank. The town's only financial institution, First Niagara Bank, shut its doors in October.

Towns like Windsor are becoming ever more common in America. Since the financial crisis, banks have closed over 10,000 branches, an average of three a day. In the first half of 2017 alone, a net 869 brick-and-mortar entities shut their doors, according to S&P; Global Market Intelligence, a research firm. Some fret that branch closures risk turning poorer neighbourhoods into "banking deserts", cut off from current accounts, loans and other basic services.



Economist.com

Not long ago, the notion that Americans might lack sufficient access to bank tellers would have seemed absurd. In the years leading up to the crisis, bricks-and-mortar branches grew by about 200 each month. By 2009, according to the World Bank, America had 35 branches for every 100,000 adults, twice as many as Germany. Since then, however, ultra-low interest rates and thickets of new regulations have squeezed bank profits. They have responded by trimming branches from a peak of about 100,000 to roughly

90,000.

Bank bosses maintain that they are “optimising” their branch networks to fit changing customer habits. But the cuts have not been made evenly. Data from the Federal Deposit Insurance Corporation (FDIC) show that the top fifth of all postal codes by household income lost around 3% of their branches between 2009 and 2016. During this period, the bottom fifth saw their branch numbers decline by 10%.

Community organisations worry that if branches continue to close in poor areas, many neighbourhoods could become reliant on payday lenders and cheque-cashing stores. In June the Federal Reserve Bank of St Louis estimated that there are now more than 1,100 banking deserts—defined as census areas at least ten miles from a bank—in America. That figure could easily double if small community banks continue to close. In May the National Community Reinvestment Coalition, a non-profit group, published a report showing that the number of banking deserts in rural areas has increased by 86 since the crisis.

The situation may be less dire than it seems. An analysis of FDIC data by *The Economist* shows that banking deserts, using the Fed’s definition, are home to just 1.7% of the population. For most of the country, banks are still within easy reach—typically just two miles away. Nine out of ten Americans live within five miles of a bank; half live within one mile.

Even if banks remain accessible to most, branch closures can take a heavy toll. “The loss of a bank has a significant impact on communities,” says James Chessen of the American Bankers Association. The cost is greatest for small businesses, which often lack audited financial statements and other information that can be analysed remotely. “At the local community level, so much of that business is driven by relationships,” says Chris Vanderpool of S&P; Global Market Intelligence. “The farther out you are, the harder it is to manage those relationships.” A study in 2014 by Hoai-Luu Nguyen, now at the University of California, Berkeley, estimates that when branches close, new small-business lending falls by 13% in the surrounding area. In low-income neighbourhoods, such lending contracts by nearly 40%.

Even if financial regulation loosens and interest rates rise, branches are likely to thin further. JLL, a property firm, reckons that by 2027 the number of bricks-and-mortar branches could have declined by another 20%. The risk of widespread banking deserts may be a mirage. But small-business lending could still suffer.

Fighting disease with finance

Pandemic bonds, a new idea

The World Bank creates a new form of finance

Jul 27th 2017

WHEN the Ebola virus hit west Africa in 2014, it took months to get together the money needed to combat the outbreak. Donors ended up committing more than $7bn. But the money came too late and too inefficiently, says Tim Evans, who directs the World Bank's global health practice. Lives that could have been saved were lost. The bank estimates that GDP in Guinea, Liberia and Sierra Leone was reduced by $2.8bn.

Such outbreaks are likely to become more common: they have increased in frequency and diversity over the past 30 years, in step with the increased mobility of people, products and food. The World Bank says the probability of another pandemic in the next 10 to 15 years is high. That is why it has issued $425m in pandemic bonds to support its new Pandemic Emergency Financing Facility (PEF), which is intended to channel funding to countries facing a deadly disease.

The bonds cover six viruses likely to spark outbreaks: new influenza viruses, coronaviruses (like SARS and MERS), filoviruses (like Ebola), Lassa fever, Rift Valley fever and Crimean Congo fever. Investors forgo their principal when a virus reaches a predetermined contagion level, based on rate of growth, number of deaths and whether it crosses international borders. The facility covers 77 of the world's poorest countries.

Using bonds to insure against crisis is not a new idea. Catastrophe bonds, a $29bn market, provide coverage against hurricanes and earthquakes. But this is the first time that pandemic risk has been transferred to financial markets. Michael Bennett, head of derivatives and structured finance in the World Bank's treasury department, says demand was unexpectedly high: the transaction was oversubscribed by 200%. Buyers ranged from specialised catastrophe-bond investors to pension funds.

But what if the pathogen is unknown, as SARS was in 2002? The bank has created a second financing pool for that. Designed to be more flexible, it is not linked to bond markets but relies on money from bilateral donors. Germany has provided an initial €50m ($59m).

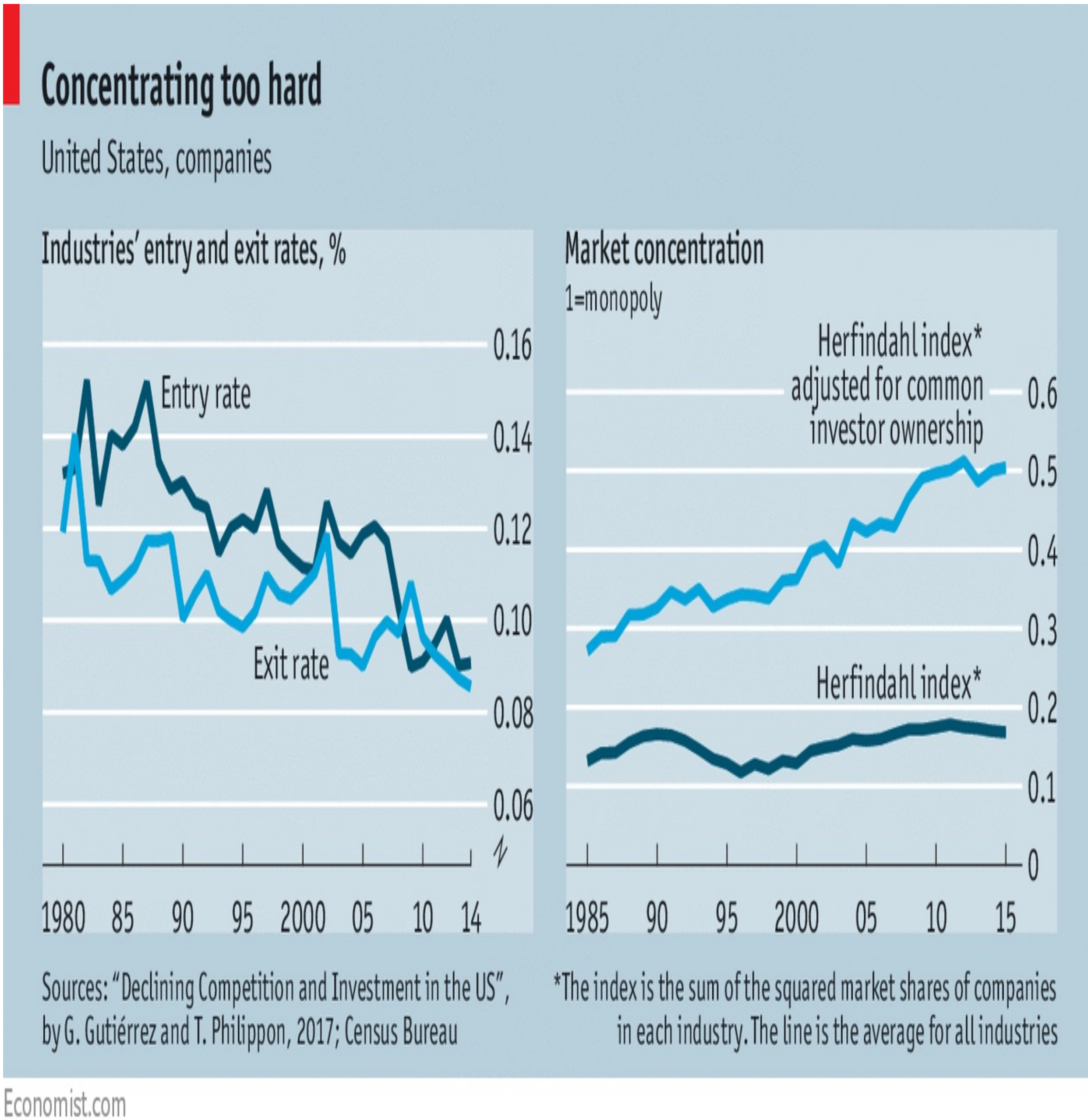
Whether or not the new facility ushers in a market for pandemic insurance, it is already spurring more advanced planning on the part of governments and international responders. Rightly so. "Moderately severe to severe" pandemics cost an average of $570bn annually, or 0.7% of global GDP, according to the bank. One as severe as the 1918 Spanish flu could cost 5% of global GDP.

Free exchange

America’s uncompetitive markets harm its economy

New research suggests that too little competition deters investment

Jul 27th 2017



“THE best of all monopoly profits is a quiet life,” wrote Sir John Hicks, a

British economist. Without competitors breathing down their necks, monopolists find it easy to make large profits: just ask the 46m American households served by only one fast-broadband provider, who pay high prices for poor service. As a result, trustbusting is one of those rare causes that can unite raging populists with sober academics. So the wonks may well have agreed with the sentiment, if not the fine detail, when Senate Democrats unveiled a fresh pledge on July 24th to make America competitive again as part of their economic agenda. “This economy is rigged,” insisted Senator Elizabeth Warren of Massachusetts. It is not quite that bad. But more than three-quarters of industries are more concentrated than they were two decades ago, and the economy is also seeing less turnover of firms (see charts).

It is easy enough for consumers to see the consequences when monopolists entrench themselves in one industry. A recent study found that American consumers would gain $65bn a year if they paid the same as Germans do for mobile-phone contracts. But when competition ebbs across the economy as a whole, what broader costs does that impose? New research by Germán Gutiérrez and Thomas Philippon of New York University (NYU) gives an answer. Growing market power, they argue, has contributed to a dearth of business investment that started in the 2000s and worsened after the financial crisis of 2007-08.

The promise of monopolies can encourage investment. The lure of temporary exclusivity makes it worthwhile for the pharmaceutical industry to research new drugs, which can sell for next to nothing once patents expire. Silicon Valley investors burn huge piles of cash in pursuit of “network effects” and a user base that might allow them to dominate markets later. Yet, once a firm wins a power struggle, it can, like a medieval king, sit back and get fat on the proceeds.

Messrs Gutiérrez and Philippon benchmark investment against “Tobin’s Q”, the ratio of a firm’s market value to its book value. A high Q signals that an industry is earning a lot from its assets, which, all else being equal, suggests it should invest more. The authors show that America’s investment has fallen most substantially, relative to Q, in concentrated industries. In these sectors, investment has also fallen more than in Europe.

To explore the issue further, the authors draw a distinction between “laggards” and “leaders”, defined as firms comprising the top third and bottom third, respectively, of an industry’s market value. Laggards, they reason, are more likely to wither in the face of competition, so their investment might be expected to fall. Leaders, though, should be up for a fight if rivals challenge them; their investment should rise. They find it is leaders, not laggards, who are responsible for the bulk of the investment slowdown, suggesting a lack of competition.

These trends are only circumstantial evidence. To show that competition causes higher investment, Messrs Gutiérrez and Philippon appeal to two natural experiments. First, they study manufacturers that were exposed to unexpected competition from China as it gained a large share of world trade in the 2000s. They find that the “China shock” caused an investment gap to open between leaders and laggards, as some firms tried to fight off the surge in imports and others folded. (Overall investment fell; Messrs Gutiérrez and Philippon concede that this can happen when competition originates abroad.)

Next they examine a domestic shock—a wave of startups founded during the 1990s tech boom. Amid the euphoria, new firms giddily entered some industries at a rate that could not be justified by economic conditions. The authors find that the added competition associated with “excess entry” did indeed spur investment during the subsequent decade.

These results suggest that Hicks was right. Declining competition does more than harm some consumers; it makes firms lazy. The authors calculate that if leading firms had maintained their share of overall investment since 2000, the American economy would have 4% more capital today, an amount roughly equivalent to two years’ investment by non-financial companies. That would have been good in itself, but more investment might also have jolted the economy out of its slump after the financial crisis. From 2009 until the end of 2015, American interest rates were at rock bottom. In another recent paper, Mr Philippon and Callum Jones, also of NYU, argue that if competition had not declined after 2000, investment spending would have lifted interest rates off the floor fully four years earlier.

All firms aren’t created equal

Concentration may also hurt workers. Recent research by David Autor of

MIT and four co-authors finds that "superstar" firms pay out less of their profits in wages. As these firms have grown in importance, labour's overall share of GDP has fallen. Other research suggests that these firms nonetheless pay more, in gross terms, than ordinary firms, so their rise has directly contributed to inequality. This does not chime exactly with what Democrats claimed this week—that America's firms have too much power over workers—but the end result, greater inequality, is similar.

The answer may seem obvious: toughen antitrust law. That would indeed be welcome. But policymakers must also realise where they need to regulate less. Matthew Rognlie, now of Northwestern University, has shown that returns to capital have gone up in large part because investing in housing has been so lucrative. That has a lot to do with constraints on development near successful cities—a government barrier to entry. Messrs Gutiérrez and Philippon find evidence that concentration has risen most in industries that have become more regulated. America must promote more competition. But it should also remember that nobody has more power to rig an economy than the government.

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Economics brief

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Six big ideas

Coase's theory of the firm

If markets are so good at directing resources, why do companies exist? The first in our series on big economic ideas

Jul 27th 2017

ONE morning, an economist went to buy a shirt. The one he chose was a marvel of global production. It was made in Malaysia using German machines. The cloth was woven from Indian cotton grown from seeds developed in America. The collar lining came from Brazil; the artificial fibre from Portugal. Millions of shirts of every size and colour are sold every day, writes Paul Seabright, the shirt-buying economist, in his 2004 book, "The Company of Strangers". No authority is in charge. The firms that make up the many links in the chain that supplied his shirt had merely obeyed market prices.

Throwing light on the magic of market co-ordination was a mainstay of the "classical" economics of the late-18th and 19th centuries. Then, in 1937, a paper published by Ronald Coase, a British economist, pointed out a glaring omission. The standard model of economics did not fit with what goes on within companies. When an employee switches from one division to another, for instance, he does not do so in response to higher wages, but because he is ordered to. The question posed by Coase was profound, if awkward for economics: why are some activities directed by market forces and others by firms?

His answer was that firms are a response to the high cost of using markets. It is often cheaper to direct tasks by fiat than to negotiate and enforce separate contracts for every transaction. Such “exchange costs” are low in markets for standardised goods, wrote Coase. A well-defined task can easily be put out to the market, where a contractor is paid a fixed sum for doing it. The firm comes into its own when simple contracts of this kind will not suffice. Instead, an employee agrees to follow varied and changing instructions, up to agreed limits, for a fixed salary.

Coase had first set out his theory while working as a lecturer in Dundee, in 1932, having spent the prior academic year in America, visiting factories and businesses. “The nature of the firm”, his paper, did not appear for another five years, in part because he was reluctant to rush into print. Though widely cited today, it went largely unread at first. But a second paper, “The problem of social cost”, published in 1960, by which time he had moved to America, brought him to prominence. It argued that private bargaining could resolve social problems, such as pollution, as long as property rights are well defined and transaction costs are low (they rarely are). He had been asked to expound his new theory earlier that year to a sceptical audience of University of Chicago economists. By the end of the evening, he had won everyone around. Coase was invited to join the university’s faculty in 1964; and there he remained until his death in 2013 at the age of 102.

In 1991 Coase was awarded the Nobel prize for economics, largely on the strength of these two papers. But as late as 1972, he lamented that “The nature of the firm” had been “much cited and little used”. In a strange way, Coase himself was partly to blame. The idea of transaction costs was such a good catch-all explanation for tricky subjects that it was used to close down further inquiry. In fact, Coase’s paper raised as many difficult questions as it answered. If firms exist to reduce transaction costs, why have market transactions at all? Why not further extend the firm's boundaries? In short, what decides how the economy as a whole is organised?

Almost as soon as Coase had wished for it, a body of more rigorous research on such questions began to flourish. Central to it was the idea that it is difficult to specify all that is required of a business relationship, so some contracts are necessarily "incomplete". Important figures in this field include Oliver Williamson, winner of the Nobel prize in economics in 2009, and Oliver Hart and Bengt Holmstrom, who shared the prize in 2016. These and other Coase apostles drew on the work of legal theorists in distinguishing between spot transactions and business relations that require longer-term or flexible contracts.

Spot markets cover most transactions. Once money is exchanged for goods, the deal is completed. The transaction is simple: one party wants, another supplies. There is little scope for dispute, so a written contract can be dispensed with. If one party is unhappy, he will take his business elsewhere next time. Spot markets are thus largely self-policing. They are well suited to simple, low-value transactions, such as buying a newspaper or taking a taxi.

Things become trickier when the parties are locked into a deal that is costly to get out of. Take a property lease, for instance. A business that is evicted from its premises might not quickly find a building with similar features. Equally, if a tenant suddenly quit, the landlord might not find a replacement straight away. Each could threaten the other in a bid for a better rent. The answer is a long-term contract that specifies the rent, the tenure and use of the property. Both parties benefit.

But for many business arrangements, it is difficult to set down all that is required of each party in all circumstances. In such cases, formal contracts are by necessity "incomplete" and sustained largely by trust. An employment contract is of this type. It has a few formal terms: job title, work hours, initial pay and so on, but many of the most important duties and obligations are not written down. It is thus like a "mini-society with a vast array of norms beyond those centred on the exchange and its immediate processes", wrote Mr Williamson. Such a contract stays in force mostly because its breakdown would hurt both parties. And because market forces are softened in such a contract, it calls for an alternative form of governance: the firm.

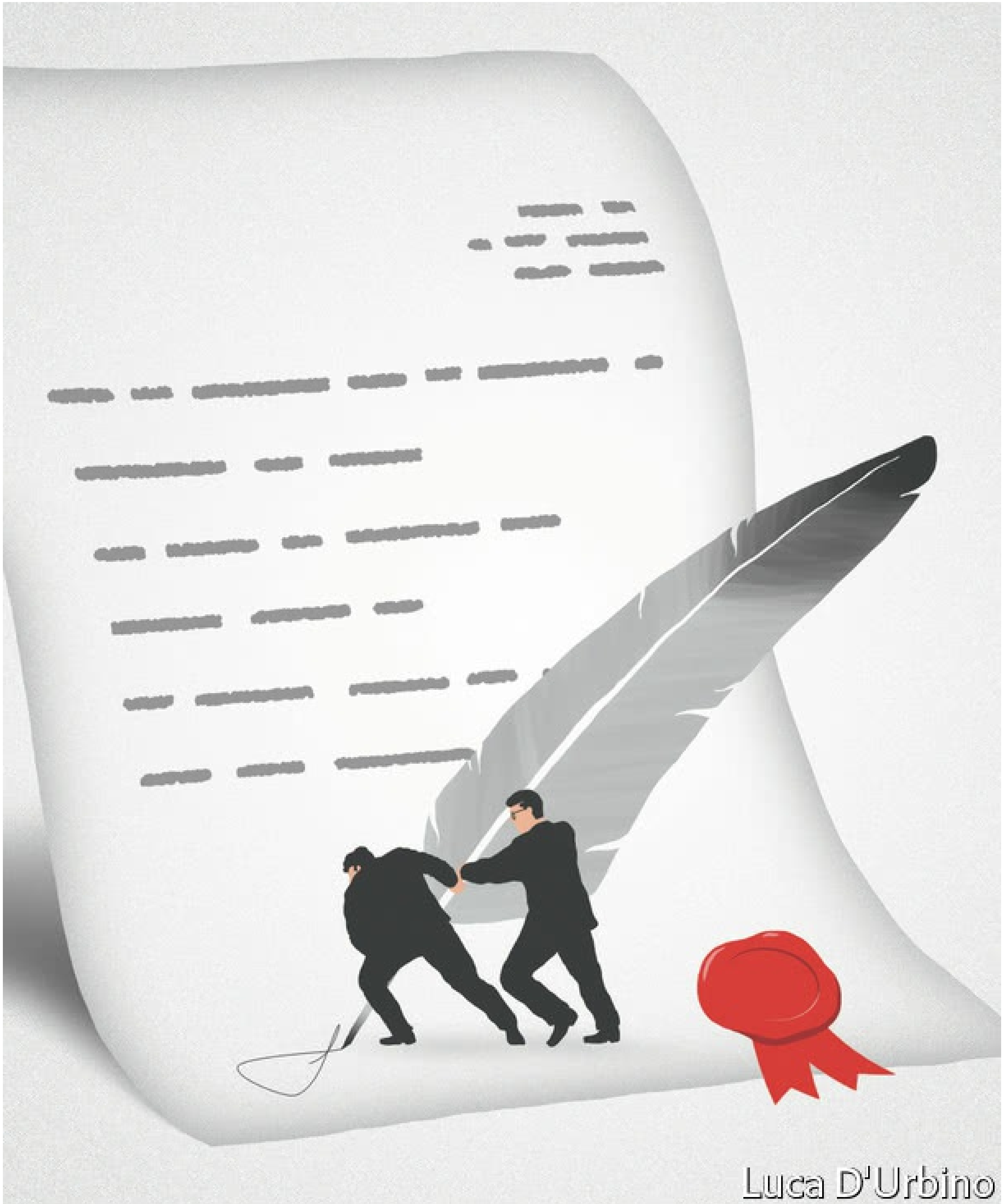
One of the first papers to elucidate these ideas was published in 1972 by Armen Alchian and Harold Demsetz. They defined the firm as the central contractor in a team-production process. When output is the result of a team effort, it is hard to put the necessary tasks out to the market. That is because it is tricky to measure the contribution of each member to the finished work and to then allocate their rewards accordingly. So the firm is needed to act as both co-ordinator and monitor of a team.

Chain tale

If a team of workers requires a firm as monitor, might that also be true for teams of suppliers? In some cases, firms are indeed vertically integrated, meaning that suppliers of inputs and producers of final goods are under the same ownership. But in other cases, suppliers and their customers are separate entities. When is one set-up right and not the other?

A paper published in 1986 by Sanford Grossman and Mr Hart sharpened the thinking on this. They distinguished between two types of rights over a firm's assets (its plant, machinery, brands, client lists and so on): specific rights, which can be contracted out, and residual rights, which come with ownership. Where it becomes costly for a company to specify all that it wants from a supplier, it might make sense to acquire it in order to claim the residual rights (and the profits) from ownership. But, as Messrs Grossman and Hart noted, something is also lost through the merger. The supplier's incentive to innovate and to control costs vanishes, because he no longer owns the residual rights.

To illustrate this kind of relationship, they used the example of an insurance firm that pays a commission to an agent for selling policies. To encourage the agent to find high-quality clients, which are more likely to renew a policy, the firm defers some portion of the agent's pay and ties it to the rate of policy renewals. The agent is thus induced to work hard to find good clients. But there is a drawback. The insurance firm now has an incentive of its own to shirk. While the agent is busting a gut to find the right sort of customers, the firm can take advantage by, say, cutting its spending on advertising its policies, raising their price or lowering their quality.



There is no set-up in which the incentives of firm and agent can be perfectly aligned. But Messrs Grossman and Hart identified a next-best solution: the party that brings the most to any venture in terms of “non-contractible” effort should own the key assets, which in this case is the client list. So the agent ought to own the list wherever policy renewals are sensitive to sales effort, as in the case of car insurance, for which people tend to shop around more. The agent would keep the residual rights and be rewarded for the effort to find the right sort of client. If the insurance firm shirks, the agent can simply sell the policies of a rival firm to his clients. But in cases where the firm brings more to the party than the sales agent—for example, when clients are "stickier" and the first sale is crucial, as with life insurance—a merger would make more sense.

This framework helps to address one of the questions raised by Coase's original paper: when should a firm "make" and when should it "buy"? It can be applied to vertical business ties of all kinds. For instance, franchises have to abide by a few rules that can be set down in a contract, but get to keep the residual profits in exchange for a royalty fee paid to the parent firm. That is because the important efforts that the parent requires of a franchisee are not easy to put in a contract or to enforce.

The management of ties between a firm and its "stakeholders" (its customers, suppliers, employees and investors) is another variation on this theme. A firm often wants to put restraints on the parties it does business with. Luxury-goods firms or makers of fancy sound equipment may ban retailers from discounting their goods as a way to spur them to compete with rivals on the quality of their shops, service and advice.

Inside the cubicle

If one of the challenges set by Coase was to explain where the boundary between firms and markets lies, another was for economic analysis not to cease once it reached the factory gate or office lobby. A key issue is how agreements are structured. Why, for instance, do employment contracts have so few formal obligations? One insight from the literature is that a tightly specified contract can have perverse outcomes. If teachers are paid according to test results, they will "teach to the test" and pay less regard to other tasks, such as inspiring pupils to think independently. If chief executives are paid to boost the firm's short-term share price, they will cut investment projects that may benefit shareholders in the long run.

Mr Holmstrom and Paul Milgrom established that where important tasks are hard to monitor, and where a balance of activities is needed, then a contract should shun strong incentives tied to any one task. The best approach is to pay a fixed salary and to leave the balance of tasks unspecified. A related idea developed by Mr Hart and John Moore is of a job contract as a "reference point" rather than as a detailed map. Another insight is that deferred forms of pay, such as company pension schemes and promotions based on seniority, help cement long-term ties with employees and reward them for investing in skills specific to the relationship.

Coase noted in 1937 that the degree to which the mechanism of price is superseded by the firm varies with the circumstances. Eighty years on, the boundary between the two might appear to be dissolving altogether. The share of self-employed contractors in the labour force has risen. The "gig economy" exemplified by Uber drivers is mushrooming.

Yet firms are unlikely to wither away. Prior to Uber, most taxi drivers were already self-employed. Spot-like job contracts are becoming more common, but flexibility comes at a cost. Workers have little incentive to invest in firm-specific skills, so productivity suffers. And even if Mr Seabright's shirt was delivered by a set of market-based transactions, the supply chains for complex goods, such as an iPhone or an Airbus A380 superjumbo, rely on long-term contracts that are often "incomplete". Coase was the first to spot an enduring truth. Successful economies need both the benign dictatorship of the firm and the invisible hand of the market.

Coase's theory of the firm: a reading list

1 "The Nature of the Firm" by R H Coase, Economica, 1937

2 "The Problem of Social Cost" by R H Coase, Journal of Law and Economics, 1960

3 "Industrial Organisation: A Proposal for Research" by R H Coase, NBER, 1972

4 "Production, Information Costs and Economic Organisation" by Armen A Alchian and Harold Demsetz, American Economic Review, 1972

5 "Transaction-Cost Economics: The Governance of Contractural Relations" by Oliver E Williamson, Journal of Law and Economics, 1979

6 "The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration" by Sanford Grossman and Oliver Hart, Journal of Political Economy, 1986

7 "Multitask Principal-Agent Analysis: Incentive Contracts, Asset Ownership and Job Design" by Bengt Holmstrom and Paul Milgrom, Journal of Law, Economics and Organisation, 1991

8 "The Firm as Sub-economy" by Bengt Holmstrom, Journal of Law Economics & Organisation, 1999

9 "The Theory of the the Firm as Governance Structure: From Choice to Contract" by Oliver E

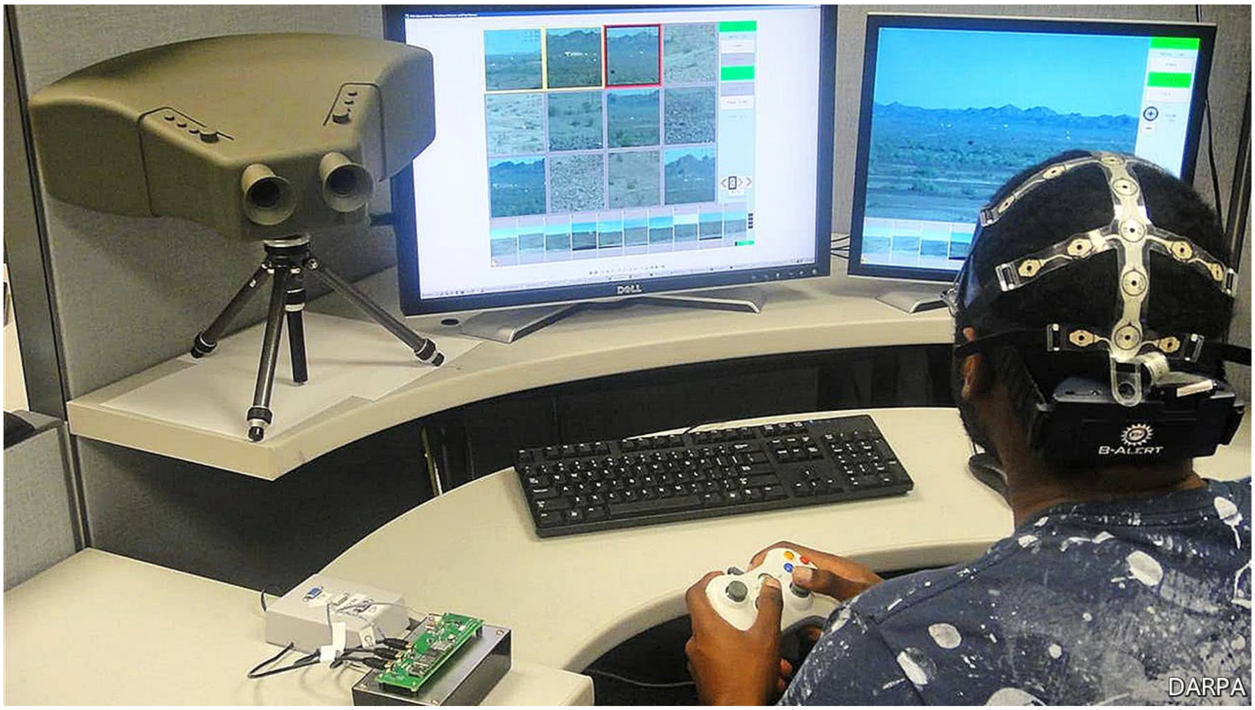
Williamson, 2002
10 “Contracts as Reference Points” by Oliver Hart and John Moore, Quarterly Journal of Economics, 2008

Science and technology

Know your enemy

How to make soldiers' brains better at noticing threats

Target recognition in warfare



Jul 27th 2017

TWO millivolts is not much. But it is enough to show that someone has seen something even before he knows he has seen it himself. The two millivolts in question are those associated with P300, a fleeting electrical signal produced by a human brain which has just recognised an object it has been seeking. Crucially, this signal is detectable by electrodes in contact with a person's scalp before he is consciously aware of having recognised anything.

That observation is of great interest to DARPA, the Defence Advanced Research Projects Agency, one of America's military-research establishments. DARPA's Neurotechnology for Intelligence Analysts programme is dedicated to exploiting it in the search for things like rocket launchers and roadside bombs in drone and satellite imagery. To that end it has been paying groups of researchers to look into ways of using P300 to cut human consciousness out of the loop in such searches.

Among the beneficiaries are Robert Smith's group at Honeywell Aerospace, in Phoenix, Arizona, and Paul Sajda's at Neuromatters, in New York. Both of the "image triage systems" designed by these groups require the humans in them to wear special skull-enclosing caps (see picture). Each cap is fitted with 32 electrodes that record the brain's electrical responses to whatever stimuli it is subjected to. Wearers have pictures flashed before their eyes at the rate of ten a second. That is too fast for conscious recognition, because the brain's attention will have moved on to the next image before consciousness can come into play. It is not, though, too fast for the initial stages of recognition, marked by a P300 signal, to occur when suspicious items are present. Images that provoke such a signal are then tagged for review. According to Dr Sajda, this triples the speed with which objects of interest can be found.

Speed is important, of course. But in matters such as this, accuracy matters more. And some people think they can improve that, too—not by reading the brain, but by stimulating it. Many studies have shown that zapping the brain with a weak electric current, a procedure called transcranial neuronal stimulation, enhances what is known as "fluid intelligence". This is the ability to reason, as opposed merely to recall facts. Another American military-research establishment, the Intelligence Advanced Research Projects Activity (IARPA), hopes to exploit this phenomenon for the purpose of target identification.

The notion of bathing brains in electricity spooks some. But with a current of just two milliamps, the stimulation is painless and safe, says Vincent Clark, a neuroscientist at the University of New Mexico. In a project paid for in part by IARPA, he and his team have stimulated the brains of more than 1,000 volunteers using a 9V battery connected to electrodes on the scalp. After half an hour of stimulation, volunteers spot in test photographs 13% more snipers, makeshift bombs and the like than do volunteers given a "sham" current of 100 microamps (5% of the experimental current) that mimics the skin-tingling induced by the experimental current.

Placing one of the electrodes on a volunteer's arm boosts the phenomenon still further, according to Andy McKinley, head of brain stimulation at the American Air Force's Human Effectiveness Directorate at Wright-Patterson, an air base in Ohio. This way, current travelling from one electrode to the other passes through more brain tissue than it otherwise would. Six hours after about 25 minutes of such stimulation, those so treated spot twice as many tanks, missile launchers and other targets in images as control groups manage to.

Nor do volunteers in these sorts of experiments seem to suffer ill effects. According to Dr Clark, the stimulation he uses makes a few feel drowsy, but most enjoy “a very deep mindful state”. Curiously, Dr McKinley reports almost the opposite. He says of his volunteers that when deprived of sleep they stay alert and cheerful longer. Some, he says, “feel like they’ve just had a bunch of caffeine”.

May the Force be with you

Sitting in a comfortable chair watching a computer screen, albeit while wearing a device that looks as if it was invented by a mad hairdresser, is one thing. Doing something similar while on patrol or dug into a foxhole is quite another. Yet this, too, is on DARPA’s metaphorical radar screen. The Cognitive Technology Threat Warning System, known to its friends as “Luke’s binoculars” (a reference to Luke Skywalker, a character in the “Star Wars” movies), is an attempt to take the idea of boosting target recognition into the field.

Luke’s binoculars, developed as part of a joint venture between Boeing and General Motors, combine image triage with 360° vision. Once again, participants must wear electrode skull caps. Actual binoculars are not involved, though. Instead, the cap-wearer looks at a screen which is being fed, in rotation and every tenth of a second, the images from six cameras, 60° apart, surrounding his position. If one of these images stimulates a P300 signal in his brain the system alerts him and lets him look properly at the image in question. In tests, people using Luke’s binoculars spot nearly twice as many threats as those scanning their surroundings with conventional field glasses.

Reading brain signals might also help prevent the misidentification as targets of troops that are on the same side as the cap wearer—and thus reduce incidents of death by “friendly fire”. In conjunction with the Australian and

British defence ministries, America’s Army Research Laboratory, in Maryland, is analysing the brain’s alpha, beta, delta and gamma waves. These, unlike P300, are always running. But their strengths and frequencies vary according to what the brain is up to.

After deciding that he has seen an enemy, a soldier with his finger on the trigger takes between 400 and 450 milliseconds to pull it. But what if he changes his mind during that period? According to Jean Vettel, a neuroscientist who is working on the project, brainwave data can indicate that he has realised he has made a mistake in as little as 200 milliseconds. This should be enough time for a shot to be blocked by disabling the firing mechanism automatically, and for a comrade’s life thus to be saved. That idea really is a brainwave.

Underground adventures

The search for quicker, cheaper ways of tunnelling

Boring technology gets interesting

Jul 27th 2017

A BIG hole in the car park at SpaceX's headquarters in Los Angeles is the first visible evidence of another of Elon Musk's ventures. Mr Musk who, besides leading SpaceX, a rocket company, also runs Tesla, a maker of electric cars, is going into the tunnelling business. The goal of the Boring Company, as he dubs his new enterprise, is to dig tunnels faster and more cheaply than is possible at the moment.

Apart from the pit in the car park, Mr Musk says he has also begun a series of test tunnels for a project that will, if it comes to fruition, carry cars under Los Angeles on high-speed sledges, in order to avoid the dreadful traffic jams above. More ambitiously, he claims to have official support for a 320km (200-mile) tunnel that would, in half an hour, whisk people between New York and Washington, DC, in magnetically propelled capsules, using a technology he has dubbed the hyperloop.

Loopy these ideas may sound, but Mr Musk is surely right about one thing—that tunnelling, which is currently slow and expensive, is a technology ripe for innovation. And he is not the only one who thinks so. In Europe, things are also stirring beneath the surface. In January a consortium of academic and commercial researchers began work on a project called BADGER. This is intended to develop a robot tunnelling machine (albeit one for tunnels much smaller than Mr Musk has in mind) that can detect and avoid obstacles such as pipes, cables, the foundations of buildings and even buried boulders.

Existing tunnel-boring machines are, in effect, building sites on rails. At the front, a cutting wheel with a diameter a little larger than that of the final tunnel (to allow for the thickness of the lining) is pushed forward by pistons and chews away at soil and rock as it travels. The spoil from this excavation is then taken to the surface by conveyor belts. Once enough material has been cleared, the borer is stopped and the newly exposed section is lined with precast concrete sections.

Slow, this process certainly is. The boring machines employed to construct the tunnels for Crossrail, a new railway under London which should open next year, cut through the strata they were faced with at a rate of around a metre an hour—literally a snail's pace. As to expense, Crossrail required eight boring machines, each of which cost around $15m in 2012, when tunnelling started. Each also needed to be supervised by a gang of up to a dozen people on board, adding to costs. The total bill for Crossrail's tunnelling was £1.5bn ($2.4bn). This bought 42km of tunnels (21km each for the eastbound and westbound tracks); the longest individual tunnels (8.3km each) took 2½ years to dig.

The Boring Company thinks it can speed this sort of operation up, and also cut costs. To do so it plans to make boring machines more powerful, so that they can cut through material faster. It also wants to automate things, to reduce labour costs, and to line the tunnel as the machines progress, instead of stopping excavation when linings are added. One idea is to compact the spoil into bricks and use those as lining material. Reducing the diameter of tunnels would also help. That is part of the reasoning for putting cars on sledges. A two-lane road tunnel needs to be about 8.5 metres wide. Crossrail, at around seven metres, is slightly narrower. But a sledge tunnel could be a single lane, because the sledges can be packed close together and so do not need as much space. It could thus work with a diameter of four metres, cutting costs by as much as three-quarters.

No one could ever accuse Mr Musk of not thinking big. But tunnels do not necessarily need to be big to be useful. BADGER is being designed specifically for small-diameter tasks, such as digging conduits for cables and pipes. The initial plan, according to the project's co-ordinator, Carlos Balaguer of Carlos III University, in Madrid, is for the machine to burrow at depths of up to four metres, at speeds of around two metres an hour. If that works, it should then be possible to increase both speed and scale.

BADGER's face will combine a conventional rotary cutting head with an ultrasonic drill, which will pulverise rock with high-frequency sound waves. As with existing machines, the spoil will then be sent to the surface. Unlike existing machines, however, BADGER will move forward not as a rigid unit, but like a worm. The rear section will clamp itself to the wall of the newly cut tunnel and push the front section forward. The forward section will then clamp itself and pull up the rear. And so on. As it advances, BADGER will line the tunnel behind it using a 3D printer. One idea is to print the wall with plastic, so that the result resembles a conventional pipe.

BADGER will navigate using various sensors including, crucially, ground-penetrating radar. This will enable it to operate autonomously and detect potential obstacles before it reaches them, so that it can steer around them. The great benefit of BADGER is being able to excavate tunnels below busy cities without closing roads to dig trenches—thus avoiding making the traffic jams about which Mr Musk complains even worse. Whether the tunnels are straight or loopy, though, the future of tunnelling will be anything but boring.

Unexpected protection

A chance finding may lead to a treatment for multiple sclerosis

A neat example of the role of serendipity in science

Jul 29th 2017

EXPERIMENTS that go according to plan can be useful. But the biggest scientific advances often emerge from those that do not. Such is the case with a study just reported in the *Proceedings of the National Academy of Sciences*. When they began it, Hector DeLuca of the University of Wisconsin, Madison, and his colleagues had been intending to examine the effects of ultraviolet (UV) light on mice suffering from a rodent version of multiple sclerosis (MS). By the project's end, however, they had in their hands two substances which may prove valuable drugs against the illness.

Multiple sclerosis is an autoimmune disease. This means it is caused by a victim's immune system turning on and destroying parts of his own body. In the case of MS the targets of these attacks, which may continue for years, are the fatty sheaths that insulate nerve cells and thus help nervous impulses to propagate. People suffering from MS are often weakened, and sometimes physically disabled by it, and may also become blind.

What drives the immune system to behave in this way remains mysterious, but in the 1970s researchers uncovered a promising clue when they noticed that MS is rarer near the equator than it is at high latitudes. The first hypothesis proposed to explain this observation was that vitamin D (a substance created by sunlight's action on precursor molecules in the skin) might be helping to prevent MS. That made sense, since those living in the tropics receive more sunlight than do those in temperate zones. Sadly, follow-up experiments failed to support the notion. Those experiments did, though, lead Dr DeLuca to discover that the preventive effect is associated with a particular sort of sunlight—UV with a wavelength of between 300 and 315 nanometres (billionths of a metre).

His latest experiment was intended to dig deeper into this observation, by using this type of light to irradiate mice that had been injected with chemicals known to cause the rodent equivalent of MS. In a preliminary study he and his colleagues therefore shaved the backs of 12 of these mice and exposed them to UV of the appropriate wavelength every day for a month. To be useful, an experiment like this needs controls with which its results can be compared. Dr DeLuca devised three of these. In one, he applied one of six types of sunscreen to a dozen other shaved mice before exposing them to the ultraviolet rays. To another dozen he applied the sunscreen but not the ultraviolet. And a final 12, though also shaved, were neither exposed to UV nor slathered with sunscreen. He then monitored all four groups for signs of murine multiple sclerosis, such as loss of tail tone, unsteady gait and limb paralysis,

When the experiment began, he and his colleagues expected that the disease would progress more slowly in the experimental group than in the control groups, and that its rate of progress in all three control groups would be the same, since any effect of exposure to ultraviolet would be negated by the sunscreen. But that was not what happened. Instead, three of the six types of sunscreen served to suppress the disease's progression by themselves—that is, even in animals not exposed to UV. Indeed, one of them, Coppertone, was as effective at doing so as ultraviolet light alone.

In light of this Dr DeLuca and his colleagues carried out further experiments, which confirmed the initial findings. They also studied the ingredients lists of the three protective sunscreens and tested each of the compounds therein, one at a time, on other batches of mice. This revealed that two of these compounds, homosalate and octisalate, were particularly effective at keeping the rodent version of multiple sclerosis in check.

Why these particular substances suppress MS remains to be discovered. Dr DeLuca suspects that it has to do with their ability to inhibit production of cyclooxygenase, an enzyme commonly found in the lesions characteristic of multiple sclerosis. But regardless of the mechanism, if homosalate and octisalate, or other molecules similar to them, can suppress the progression of the disease in people as effectively as they do in rodents it will be a signal example both of the role of serendipity in science and of the crucial importance of doing proper controls.

Books and arts

Dinner in black and white

Cooking in the American south

Two new books tackle race and American history around the table

Jul 27th 2017

The Cooking Gene: A Journey Through African-American Culinary History in the Old South. By Michael Twitty. *Amistad; 464 pages; $28.99.*

The Potlikker Papers: A Food History of the Modern South. By John Edge. *Penguin Press; 384 pages; $28.*

SOUTHERN American food's most famous ambassador is Harland Sanders, the white-coated, goateed marketing genius whose recipe for pressure-fried chicken became Kentucky Fried Chicken. Sanders hated the chain's food, calling its heavily breaded birds a "damn fried doughball put on top of some chicken". What he loved was the chicken of his youth, which had almost certainly been prepared by black hands. Southern food, explained Edna Lewis, America's most lyrical cookery writer, is "mostly black, because blacks—black women and black men—did most of the cooking in private homes, hotels and on the railroads."

Michael Twitty runs with this thesis in "The Cooking Gene", a sprawling blend of culinary history, memoir, travel writing and personal narrative. Mr Twitty contains multitudes: he is a gay, African-American convert to Judaism who taught Hebrew to white children from suburban Washington, DC. He is a prolific blogger and tweeter, and he stages historical cooking demonstrations, dressing in "transformative historical drag" and using 18th- and 19th-century recipes and cooking methods.

The book's central argument is Lewis's, but extended: Southern cuisine's roots are not merely African-American, but African. Africans imported some of its defining ingredients—okra, peanuts and sorghum, for instance—and African skills and labour produced the crops. He structures this story as a series of chapter-length digressions on themes—his conversion to Judaism, his search for his white ancestors, the crops that slaves farmed—rather than as a straightforward, historical narrative.

He has the autodidact's love of learning; throughout the book he scatters extended explanations of agricultural processes—how rice is cultivated, how sorghum is processed, how it feels to pick cotton. His research into his family is intensive, and he offers vivid portraits of his forebears throughout—none more so than his great-grandfather Joe Todd, a Virginian who used to cock his shotgun at intimidators from the Ku Klux Klan. ("If they come to kill me", his daughter recalls him saying, "I'll take them to hell with me, but as for me and my house, we shall not live in hell").

This book is deeply personal, so Mr Twitty himself—his voice, concerns, quirks and thoughts—is a dominant presence. Fortunately, he is engaging, wry and fizzingly curious. And he is a well-trained showman. His path to writing began with his "Southern Discomfort Tour", a series of live cooking demonstrations around the South; he knows how to hold an audience. At times the book threatens to dissolve into discursive chaos, but American culinary history and race relations are messy subjects, and Mr Twitty deserves credit for diving headlong into both of them.

John Edge's work, "The Potlikker Papers", is a far tidier affair. Divided into five sections, it uses food to tell the history of the American South from the mid-1950s, when the bus boycotts began in Montgomery, Alabama, to today. He paints a wonderfully vibrant portrait of Gloria Gilmore, who fed early civil-rights leaders out of her kitchen, and explains how Lyndon Johnson used to describe the toilet arrangements that segregation imposed on his cook, Zephyr Wright, to make the indignities of segregation vivid to his white interlocutors.

Writing in the late 20th century, Lewis worried that homogenisation would eventually destroy southern cuisine. Mr Edge's later chapters dispel such fears. Driven by immigrants, five of America's ten fastest-growing cities are in southern states. The incomers are building on the African and African-American foundation that Lewis and Mr Twitty delineate. Indian-Houstonians serve grits spiked with coriander and across southern Louisiana, *banh mi* (Vietnamese pork pâté sandwiches on baguettes) are sold as "Vietnamese po' boys". Meanwhile, the Buford Highway in Atlanta, once a poky road of car-repair shops dwindling into farmland, is now lined with restaurants from dozens of countries. Inevitably, they are leaving their mark on regional cuisine. Some may howl, but as Mr Edge writes, "Southern food has never been static…[Traditionalists] feared for the 'southern way of life', then stammered when asked to define it."

White nights, dark history

The bloody founding of St Petersburg

In furthering his dream of a Russian Versailles, Peter the Great had no regard for human life

Jul 27th 2017

St Petersburg: Three Centuries of Murderous Desire. By Jonathan Miles. *Random House; 488 pages; £25. To be published in America by Pegasus in March 2018.*

ANNA AKHMATOVA, one of Russia's finest 20th-century poets, once described St Petersburg as being "particularly well suited to catastrophes". Founded in 1703, the city went on to experience two historical traumas—the Russian revolution and the siege of Leningrad, as it was known under the Soviets. In his new biography of the tormented delta, Jonathan Miles, a British cultural historian, manoeuvres swiftly through these tragedies, devoting the bulk of his attention to the social and cultural life beneath the city's "spiders' webs of tramlines".

By almost every measure St Petersburg is a haunted metropolis. The windswept city built on the mouth of the Neva is prone to flooding, as is vividly described in Pushkin's "The Bronze Horseman", the greatest literary tribute to Peter the Great's austere and splendid creation. The city stands as a testament to the manic ambitions of a ruthless and visionary tsar who showed no regard for human life in his bid to westernise Russia.

At the end of the 17th century Peter travelled to several European capitals, including Riga and London. He also went to the Netherlands to learn at first hand about Dutch shipbuilding techniques—part of an effort to strengthen his naval campaign against Russia's Ottoman neighbours. He returned home determined to build a new capital city of harbours and canals in the mould of Amsterdam which, unlike landlocked Moscow, could welcome ships from across the world. St Petersburg would be Peter's "window to Europe".

Mr Miles estimates that 30,000 people died, many of them succumbing to malaria, scurvy and dysentery, during the initial construction, while others were torn apart by packs of wolves in broad daylight. It is unlikely that such suffering bothered the tsar, who enjoyed executing criminals and traitors in public. Peter coerced wealthy Muscovites to move to his new capital, threatening them with the loss of their titles if they did not comply. European art, culture and trade were in vogue, but European liberalism was kept at arm's length and would remain so for hundreds of years to come.

Rather than focus on the revolution, the centenary of which falls this year, Mr Miles writes mostly of its effects on people. Between 1917 and the early 1920s, as Lenin moved the government back to Moscow, the population of the city, now renamed Petrograd, fell from 2.5m to 740,000 as food became scarce and violence and killing spread as a result of the revolution and the ensuing civil war.

The decision to relocate the capital was vindicated when the Nazis laid siege to the city, which had been renamed Leningrad in 1924. Hitler was determined to wipe from the map this cradle of communism: it was a base for the Baltic Sea fleet and one of the most important industrial centres in the Soviet Union. The 900-day siege led to mass starvation so severe that some people began to eat the flesh of the dead. In just one month towards the end of 1941, 50,000 people starved to death. The city where Shostakovich composed his famous “Leningrad Symphony” became a symbol of resistance and the strength of the human spirit—something that Stalin and subsequent Soviet rulers deeply feared. Indeed, when a museum dedicated to the suffering of the besieged opened up, it was immediately shut down and its directors arrested. The city was subjected to one of the worst post-war purges by Stalin and was sidelined economically and politically for years afterwards.

St Petersburg today is as paradoxical as it has ever been. As the childhood home of Vladimir Putin, it has been promoted by the Kremlin as a symbol of Russian imperial splendour and ambition. At the same time it has also become a centre of resistance to the Kremlin’s attempt to impose its will and subvert the city’s independence and spirit. Mr Miles’s affectionate history serves as a lively contribution to perceptions of the city’s allure.

Dalits in India

A memoir of the lowest caste

How India's untouchables are fighting to overcome grinding poverty and social ostracisation

Jul 27th 2017

Ants Among Elephants: An Untouchable Family and the Making of Modern India. By Sujatha Gidla. *Farrar, Straus and Giroux; 320 pages; $28.*

ONE in six Indians is a Dalit, which means "oppressed" in Sanskrit. That is to say, 200m Indians belong to a community deemed so impure by the scriptures that they are placed outside the hierarchical Hindu caste system and are commonly called "untouchable". Upper-caste Hindus traditionally treated untouchables as agents of pollution. To come into contact with them was to be defiled, they believed. Indian villages depended on untouchables to provide field labour and clear away human waste. Yet untouchables were excluded from village life. They could not—and often still cannot—enter Hindu temples, draw water from common wells, touch caste Hindus or even live inside the village. Punishments for breaching caste boundaries are severe.

Many untouchables, lured by Western missionaries, embraced Christianity. But they remained poor and socially ostracised. Caste, far from being purged, became a characteristic of Indian Christianity and Buddhism. Indeed, no religion in India was able fully to transcend the social divisions entrenched by Hinduism. Consequently, almost every religion in India cultivated its own caste system. Dalits, regardless of their religion, were expected at all times to appease caste Hindus by acting out their lowly status. Every aspect of their demeanour, from posture to speech, had to be modulated to convey unstinting subservience to the upper castes.

As a young girl, in Andhra Pradesh, Sujatha Gidla remembers adult members of her educated Christian untouchable family “scrambling to their feet” whenever a Hindu materialised before them. India’s constitution, drafted in 1947 by B.R. Ambedkar, a formidably educated Dalit lawyer, outlawed caste-based discrimination and made provisions for the advancement of untouchables through affirmative action. “Ants Among Elephants”, Ms Gidla’s stirring memoir, chronicles her family’s experience of the contest between modern India’s civilising aspirations and the savagery of a decaying but persistent old India.

Ms Gidla’s grandfather had been educated by Canadian missionaries. But when driven from his village on account of his untouchability, he enlisted in the British Indian Army and in the early 1940s was dispatched to Iraq. The author vividly reconstructs the early lives of the children her grandfather left behind. They grew up against the backdrop of the nationalist clamour for freedom. Satyamurthy, the eldest son, welcomed India’s independence from Britain. But his belief in democracy was short-lived. Satyamurthy was a brilliant but restless man. In his college library he discovered Telugu poetry, which was known for its rousing and romantic qualities. He became a propagandist for communists, venerated Chairman Mao and yearned for revolution.

In telling Satyamurthy’s story, Ms Gidla recounts the history of India from the viewpoint of the very bottom of society. Satyamurthy, fully radicalised by middle age, disappeared into the dense jungles of central India. From there he co-directed an armed insurgency aimed at overthrowing the Indian state. Eventually he learned that his upper-caste Maoist comrades had all along been uncomfortable at being led by an untouchable. He was expelled when he raised the issue.

Ms Gidla at times devotes pages to domestic squabbles, but she is also capable of hauntingly evocative images. Consider her description of the final parting of Satyamurthy and his wife Maniamma: “She came to see him off at the station. As the train pulled away, she stood under a lamp in a blue sari with the flowers he’d bought her in her hair. Under the dim light she waved to him with a smile on her lips”.

Satyamurthy is the main subject of this book. But it is Ms Gidla’s mother (and Satyamurthy’s younger sister), Manjula, who is the true heroine of the story. She faced discrimination on two counts: caste and sex. Yet she put herself through university, put up with a repressive husband, became a lecturer and brought up three children. Satyamurthy, having retreated into the jungle, returned with little to show for his years of violent campaigns. The family he left behind, enduring hardships but nonetheless engaging with the world around them, inched forward. The Gidla family now includes professionals trained at India’s finest public institutions (the author was a research associate at the acclaimed Indian Institute of Technology Madras, the Indian equivalent of Caltech; her sister was a medical student.)

Ms Gidla herself, having once been arrested and tortured by the Indian police for taking part in student politics, disavows her uncle’s methods in the book’s epilogue. She spent years at the Bank of New York, but was laid off during the financial crisis and now works as a conductor on the New York subway. “Ants Among Elephants” is an arresting, affecting and ultimately enlightening memoir. It is quite possibly the most striking work of non-fiction set in India since “Behind the Beautiful Forevers” by Katherine Boo, and heralds the arrival of a formidable new writer.

Creature consorts

The consolation of animals

Two memoirs ask how intimately we understand our favourite fauna

Jul 27th 2017

Big Pig, Little Pig: A Tale of Two Pigs in France. By Jacqueline Yallop. *Fig Tree; 240 pages; £14.99.*

As Kingfishers Catch Fire: Birds and Books. By Alex Preston and Neil Gower. *Little Brown; 200 pages; £25.*

DO PEOPLE really know the animals they love? The question gnaws at a pair of memoirs published this month: "Big Pig, Little Pig", Jacqueline Yallop's account of raising two porkers in rural France, and "As Kingfishers Catch Fire", a meditation by Alex Preston on a lifelong obsession with birds. Both authors are lecturers in creative writing and each has produced three novels. They are beady-eyed observers of their chosen creatures, the landscapes they occupy and their historical importance to humans. Their stories, however, are strikingly different.

Ms Yallop’s tale begins on her 40th birthday, as she and her husband put the finishing touches to a pig shelter near their house in Aveyron, a rugged part of France. Her interest in animals is a new one. She grew up without them in the suburbs of northern England, and moved to the farmhouse in the Languedoc only in her 30s, after realising that her books and her husband’s journalism could support a life in the countryside. Their hogs are a project in authenticity, a commitment to a land in which there are supposedly more villages named after pig farming than anything else. That means killing them, too.

Tending to the pigs, two *gascon noir* boars that eventually bulk up to 170kg, is like “an executioner falling for someone on death row”. Their names are simply “Big Pig” and “Little Pig”, to avoid too much attachment, but Ms Yallop soon recognises their distinct personalities. Big Pig is loyal, sensible and stately, whereas Little Pig is scatty, selfish and lazy. The 12 months of their lives are narrated with interludes about the Learned Pig, a mind-reading performing animal that became a celebrity in the 1780s, and vignettes of rustic France, where “the old pig-keeping ways” are dying out. Ms Yallop’s main theme, however, is “the puzzle of anthropomorphism” and “how much animal instinct can look like human thought or emotion”. Only after sombrely slaughtering her beloved oinkers and turning them into sausages does she truly understand that each pig is “an intelligent, sentient, unique animal, but an animal, nonetheless”.

Mr Preston’s book is, in his own words, as much an anthology and work of criticism as a memoir. His fascination with birds began at the age of seven, upon seeing a peregrine swoop “like the head of a shovel flung from the heavens”. That description has the freshness of a child looking to the skies, but the author quickly comes to rely on the words of others for his essays. Each of his 21 chapters is devoted to one species—beautifully illustrated by Neil Gower—which is helpful for those with a limited knowledge of ornithology. Most have an anecdote about the bird’s place in the author’s life: the starlings that swarmed over childhood games of cricket, the swifts that soared above a teenage flat in Paris, the goldfinches in Notting Hill that twittered on the tired walk home from his work as a banker. But these are snippets among a nest of literary clippings, pecked from 25 years of notes. If a memorable line has been written about a bird, it is probably in this book.

The best avian writers “brighten birds in our minds, adding new layers of feeling, of understanding, of love”.

The title itself comes from a sonnet by Gerard Manley Hopkins, a Victorian poet of God-in-Nature, which asserts that each created thing has an individual self, “that being indoors each one dwells”. Mr Preston shows that the sharpest birdwatchers capture that individual spirit, which Hopkins called an “inscape”. John Clare, D.H. Lawrence and Ted Hughes are among the most prominent examples. Yet he also says that these feathered friends resist anthropomorphism, since they are skittish and nomadic. Among the odes to their allure is a fear of “the ultimate meaninglessness of the birds”, and “how little they care about the men who pin their hopes on mere song”. These books are as much about human nature as animal spirits.

Contemporary choreography

A British dance impresario in search of ideas

Wayne McGregor is determined to bring new meaning to dance

Ravi Deepres

Jul 27th 2017

THE Wellcome Genome Campus, the Sanger Institute and the European Bioinformatics Institute are unlikely places to find a choreographer at work. But such research hubs turn out to be a natural habitat for Wayne McGregor. For more than two decades, the British choreographer has been using dancers to explore cognition, mathematics, neuroscience, astronomy, even modernist literature. ("Woolf Works", a recent award-winning triptych for the Royal Ballet, was based on three novels by Virginia Woolf.)

Mr McGregor's distinctive work can do grandeur and it can do melancholy. It can do mischief and it can do heartbreak. But he always tackles big ideas head-on. Having his genome sequenced in order to turn the data into dance might sound strange. For Mr McGregor, it is a logical next step.

"Autobiography" will be unveiled at Sadler's Wells in London later this year.

It is a co-production with Les Théâtres de la Ville de Luxembourg, the Edinburgh International Festival and Festspielhaus St Polten in Austria. Mr McGregor, who has been resident choreographer at the Royal Ballet since 2006 and is also an associate artist at Sadler's Wells, regularly works with the Bolshoi and the New York City Ballet, as well as the Royal Danish, San Francisco and Paris Opera ballet companies. He has, in other words, his pick of the finest dancers from around the globe. But perhaps appropriately, for a subject so close to home, "Autobiography" is being brought to life by his own troupe, Company Wayne McGregor.

It is the first piece Mr McGregor has started to develop since moving his company into its spectacular new home in east London. On a balmy recent evening the still-boyish 46-year-old was brimming with enthusiasm. The vast, cathedral-like studio represents a landmark achievement for the previously itinerant company. First, there is the holistic (and rare) luxury of having everything under one roof: the dancers arrive early, use the gym, take a company warm-up class and move seamlessly into one of the three capacious studios to start work. Watching Mr McGregor in action as a choreographer is educative. Rather than dictate a move or a step, he works closely with the dancer's body or "physical signature", and communicates his ideas using a vocabulary of fluid physical gestures and expressive but non-linguistic noises—such as "shway" or "buuu"—that are all but unintelligible to the uninitiated, yet comprehensible to the company themselves.

Then there are the neighbours. The soaring white spaces of Studio Wayne McGregor are housed within Here East, a complex that measures 1.2m square feet (111,484 square metres). Built in the former press and broadcasting centre of the 2012 Olympics, it now plays host to start-ups and established companies from the worlds of science, technology and sport, as well as academe. It is unusual for an arts ensemble to sit cheek-by-jowl with such organisations, but the proximity serves Mr McGregor's restless curiosity. It is, he says proudly, the most "technologically literate" building in Europe, and is already giving rise to new partnerships. The company recently finished filming his ballet "Atomos", using the state-of-the-art studios of one of their housemates, BT Sport (and with the dancers sporting wearable technology developed by another). In the autumn, when University College London opens its new campus in the building, Mr McGregor will take part in a lecture series about architecture and robotics. And so on.

These are rich pickings for a man who has always placed unexpected collaboration at the centre of his artistic practice. Across ballet, modern dance, theatre, opera and video, Mr McGregor's many co-conspirators include pop singers, composers, fashion designers, novelists—even wizards; Mr McGregor was the choreographer for the film of "Harry Potter and the Goblet of Fire".

Eyebrows were raised when he was first appointed to the Royal Ballet: he had never had a day's classical training in his life, and rather than insist on traditional ballet steps, he demands that his dancers contort themselves into improbable, sculptural shapes to achieve the breathtaking effects they do. But even the purists of Covent Garden have embraced Mr McGregor as a hero. He has transformed the energy of the company over the past decade, and the dancers revere him. Some Royal Ballet members have even chosen to spend the summer hanging out at Studio Wayne McGregor.

No wonder. The choreographer has long believed in "colliding different sorts of intelligence in one place". Increasingly, academic research suggests that creative imagination is impossible without collaboration: such findings are being embraced by organisations such as Second Home, which offers cross-disciplinary co-working opportunities in London and Lisbon (and claims its businesses grow ten times faster as a result) or Pioneer Works in Brooklyn, whose international residency programme provides free space to creators across the arts, science and technology. Radically for London, a city where studio rents can run to £2,000 ($2,604) a week, Studio Wayne McGregor is offering free space for up to five weeks for around 25 artists a year, in exchange for working on local education and outreach projects. With creative artists being priced out of the capital every day, this idea offers an important opportunity for emerging artists, and also represents good news for dance's future.

"Autobiography" will incorporate one of the hottest technologies of the moment: artificial intelligence. Mr McGregor is working with Google to explore how advanced machine learning can create a "living archive", which mines all his choreographic steps, going back more than a quarter of a century, even to childhood, "to see what happens when a machine learns your choreography and how it may predict what happens next". He is intrigued, he says, by the idea of an archive "as a living and breathing asset, one that incorporates the past but looks to the future". It is hard to think of a better definition of Mr McGregor himself.

Obituary

- **Irina Ratushinskaya: Written on soap** [Fri, 28 Jul 14:42]

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Writing verses on soap

Obituary: Irina Ratushinskaya died on July 5th

The Russian dissident poet was 63

Jul 29th 2017

FOR her whole life, so it seemed to Irina Ratushinskaya, people had been trying to make her something she wasn't. They stopped her jumping around in her parents' flat in Odessa, or sliding down the iron bannisters, in case the neighbours complained. She jumped and slid anyway, scabs all over her legs. They tried to turn her into a little Communist by making her join the Komsomol and wear a red scarf. She was disruptive all the time, her head buzzing with silly rhymes. They forced her to go to school and learn English, when she wanted to go to the beach and race around by the untamed sea, like the ownerless dogs. She yearned to fly, but they wouldn't let her try for a pilot's licence—a weak reflex in an ankle, they said. A lie, of course! So many lies! She flew in her dreams, though as she grew older she tended to crash disconcertingly into high white cliffs.

They tried to make her a patriotic citizen of the Soviet Union, but how could she be? It wasn't her motherland. Her parents were Polish, though they hid it; mustn't speak the language, mustn't practise that subversive Christianity! Her home was Ukraine, though she could not speak Ukrainian. Visiting Russia for the first time, quite grown-up, she found the much-sung birch trees didn't move her. But the language did, and had from childhood, as she ran ravenously through Dostoevsky, Tolstoy, Chekhov, Pushkin. And though she would never, never be a Soviet, what joy to be a compatriot of Pasternak, Mandelstam and Akhmatova! When she first read their poems she was knocked off her feet, delirious, almost as if it was April again:

> and here I go flying down the steps—
> almost in somersaults—as in a dream.
> And the day is springlike to the point of madness,
> …bluer than blue…

She could not possibly be a Soviet poet. A contradiction in terms! They tried to make her one: if she wrote a poem in praise of the party and another in praise of Lenin, she could win her official laurels. She wasn't interested. Her themes were freedom and oppression: growing by breathing, as she put it, daring to say her verses out loud, even though "It's a family trait/of Russian poets to be shot at". She talked to God, too; having been told to be an atheist, she was naturally the reverse, because with faith her soul could never be manipulated. Defiantly, she and her husband Igor Geraschenko got these pernicious things published in *samizdat* and abroad, spreading evil propaganda and weakening the regime. In 1983 she was sentenced to a labour camp for seven years and internal exile for five, as a very dangerous criminal.

Cowed now? Of course not! She wrote more than ever, scratching poems with charred matches into bars of soap, crowding tiny letters on to cigarette paper to roll up and smuggle out, hiding scraps under the piles of gloves she spent her days sewing. Her best work was inspired by a regime of gruel and black bread, of beatings and freezing cold in isolation cells, where she would huddle in her thin useless dress against the icy pipes. In all she spent four months in isolation, and many weeks on hunger strike, rather than wear a badge with her name and number on it. That she utterly refused to do!

Indomitable as she was, she found plenty to delight her in prison. She cherished the other brave, resourceful women in the camp's "Small Zone" (“our little ship…an eggshell/covered in patches and scars”), who improved the stomach-turning food with clippings of chives from the plot they carefully tilled, who sewed their rags to look presentable for visitors, and who sustained each other. She celebrated Nyurka, the prison cat, who brought her an especially plump mouse when she was on hunger strike, meaning her to eat it. When she asked a junior guard to sharpen her pencil, was she not a queen? Queen of tiny things. One small pane of glass, covered in frost, produced a blue radiance of trees and flames more beautiful than she had ever seen. One caramel, stealthily slipped into her pocket by some other prisoner, was the best she had ever tasted.

Nonetheless, she got weak and ill, and because the world cared about her she was released on Mikhail Gorbachev’s orders after three years, on the eve of the Reykjavik summit. Brought to the West for medical treatment, she and Igor ended up staying 12 years in Britain, still campaigning.

Sparrows in the frost

For the first time in her life, she could be herself. Yet as the invitations came in—to write, to lecture, to teach at Northwestern University in Illinois—she felt forced into a template again, the celebrity dissident abroad. It didn’t suit her. For all its horrors, the Soviet Union had nourished her poetry. She needed to return, even though

> The angels of Russia
> Freeze to death towards morning
> Like sparrows in the frost
> Falling from their wires into the snow.

Besides, she wanted her twin sons to be brought up as Russians, in the beauty of the language. And so they went back.

Life was comfortable enough. But she reflected that the most vivid dreams she had ever had, full of delicious aromas and wonderful music, were those that came to her in the isolation cell. And there, too, she really flew! As effortlessly as a bird.

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https://www.economist.com/news/obituary/21725541-russian-dissident-poet-was-63-obituary-irina-ratushinskaya-died-july-5th/print

Economic and financial indicators

Output, prices and jobs

Jul 29th 2017

Output, prices and jobs

% change on year ago

	Gross domestic product				Industrial production	Consumer prices			Unemployment rate, %
	latest	qtr*	2017†	2018†	latest	latest	year ago	2017†	
United States	+2.1 Q1	+1.4	+2.2	+2.3	+2.0 Jun	+1.6 Jun	+1.0	+2.0	4.4 Jun
China	+6.9 Q2	+7.0	+6.7	+6.3	+7.6 Jun	+1.5 Jun	+1.9	+2.0	4.0 Q1§
Japan	+1.3 Q1	+1.0	+1.3	+1.1	+6.5 May	+0.4 May	-0.4	+0.6	3.1 May
Britain	+1.7 Q2	+1.2	+1.6	+1.2	-0.3 May	+2.6 Jun	+0.5	+2.7	4.5 Apr††
Canada	+2.3 Q1	+3.7	+2.3	+2.0	+5.7 Apr	+1.0 Jun	+1.5	+1.8	6.5 Jun
Euro area	+1.9 Q1	+2.0	+1.9	+1.7	+4.0 May	+1.3 Jun	+0.1	+1.6	9.3 May
Austria	+2.3 Q1	+5.7	+1.8	+1.6	+3.6 May	+1.9 Jun	+0.6	+2.0	5.4 May
Belgium	+1.6 Q1	+2.6	+1.6	+1.6	+2.0 May	+1.6 Jun	+2.2	+2.2	7.6 Mar
France	+1.1 Q1	+1.9	+1.5	+1.6	+3.2 May	+0.7 Jun	+0.2	+1.2	9.6 May
Germany	+1.7 Q1	+2.4	+1.8	+1.7	+4.9 May	+1.6 Jun	+0.3	+1.7	3.9 May‡
Greece	+0.8 Q1	+1.8	+1.0	+1.8	+5.4 May	+1.0 Jun	-0.7	+1.3	21.7 Apr
Italy	+1.2 Q1	+1.8	+1.1	+1.0	+2.8 May	+1.2 Jun	-0.4	+1.4	11.3 May
Netherlands	+3.2 Q1	+1.7	+2.2	+1.9	+3.8 May	+1.1 Jun	nil	+1.2	6.0 Jun
Spain	+3.0 Q1	+3.3	+2.9	+2.4	+4.6 May	+1.5 Jun	-0.8	+2.0	17.7 May
Czech Republic	+4.0 Q1	+6.3	+3.0	+2.6	+8.1 May	+2.3 Jun	+0.1	+2.3	3.0 May‡
Denmark	+3.6 Q1	+2.5	+1.6	+1.6	+6.2 May	+0.6 Jun	+0.3	+1.2	4.3 May
Hungary	+4.2 Q1	+5.4	+3.6	+3.4	+6.0 May	+1.9 Jun	-0.2	+2.6	4.4 May§††
Norway	+2.6 Q1	+0.9	+1.8	+2.0	-1.4 May	+1.9 Jun	+3.7	+2.4	4.6 Apr‡‡
Poland	+4.4 Q1	+4.5	+3.6	+3.3	+4.5 Jun	+1.5 Jun	-0.8	+2.0	7.1 Jun§
Russia	+0.5 Q1	na	+1.4	+1.7	+3.6 Jun	+4.4 Jun	+7.5	+4.2	5.1 Jun§
Sweden	+2.2 Q1	+1.7	+2.6	+2.4	+8.0 May	+1.7 Jun	+1.0	+1.6	7.2 May§
Switzerland	+1.1 Q1	+1.1	+1.4	+1.6	-1.3 Q1	+0.2 Jun	-0.4	+0.5	3.2 Jun
Turkey	+5.0 Q1	na	+3.4	+3.2	+4.1 May	+10.9 Jun	+7.6	+10.2	10.5 Apr§
Australia	+1.7 Q1	+1.1	+2.4	+2.9	-0.8 Q1	+1.9 Q2	+1.0	+2.2	5.6 Jun
Hong Kong	+4.3 Q1	+2.9	+3.0	+2.2	+0.2 Q1	+2.0 Jun	+2.5	+1.6	3.1 Jun‡‡
India	+6.1 Q1	+7.2	+7.1	+7.6	+1.7 May	+1.5 Jun	+5.8	+4.2	5.0 2015
Indonesia	+5.0 Q1	na	+5.2	+5.4	+4.0 May	+4.4 Jun	+3.5	+4.3	5.3 Q1§
Malaysia	+5.6 Q1	na	+5.2	+4.8	+4.6 May	+3.6 Jun	+1.6	+4.0	3.4 May§
Pakistan	+5.7 2017**	na	+5.7	+5.3	+6.3 May	+3.9 Jun	+3.2	+4.8	5.9 2015
Singapore	+2.5 Q2	+0.4	+2.9	+2.0	+13.1 Jun	+0.5 Jun	-0.7	+1.3	2.2 Q1
South Korea	+2.7 Q2	+2.4	+2.6	+2.5	+0.1 May	+1.9 Jun	+0.7	+1.9	3.8 Jun§
Taiwan	+2.6 Q1	+3.8	+2.4	+1.2	+3.1 Jun	+1.0 Jun	+0.9	+0.5	3.8 Jun
Thailand	+3.3 Q1	+5.2	+3.4	+2.5	+1.4 May	nil Jun	+0.4	+0.7	1.3 May§
Argentina	+0.3 Q1	+4.3	+2.5	+2.9	-2.5 Oct	+21.9 Jun‡	na	+24.2	9.2 Q1§
Brazil	-0.4 Q1	+4.3	+0.6	+1.9	+3.9 May	+3.0 Jun	+8.8	+3.8	13.3 May§
Chile	+0.1 Q1	+0.7	+1.5	+2.7	+0.1 May	+1.7 Jun	+4.2	+2.8	7.0 May§‡‡
Colombia	+1.1 Q1	-0.9	+2.0	+2.6	-0.6 May	+4.0 Jun	+8.6	+4.1	9.4 May§
Mexico	+2.8 Q1	+2.7	+2.0	+2.1	+1.0 May	+6.3 Jun	+2.5	+5.4	3.3 Jun
Venezuela	-8.8 Q4~	-6.2	-7.0	-3.0	+0.8 Sep	na	na	+568.7	7.3 Apr§
Egypt	+4.3 Q1	na	+3.5	+4.2	+25.1 May	+29.8 Jun	+14.0	+22.5	12.0 Q1§
Israel	+4.0 Q1	+1.4	+4.1	+4.4	-1.5 May	-0.2 Jun	-0.8	+0.5	4.5 May
Saudi Arabia	+1.7 2016	na	-0.5	+2.3	na	-0.4 Jun	+4.1	+2.2	5.6 2016
South Africa	+1.0 Q1	-0.7	+0.7	+1.4	-1.9 May	+5.1 Jun	+6.3	+5.5	27.7 Q1§
Estonia	+4.4 Q1	+3.3	+4.1	+3.5	+12.6 May	+2.9 Jun	-0.4	+3.2	5.6 Q1§
Finland	+3.8 Q1	+4.7	+2.1	+1.7	+4.2 May	+0.7 Jun	+0.4	+0.9	8.9 Jun§
Iceland	+5.0 Q1	-7.2	+4.6	+3.2	na	+1.8 Jul	+1.1	+2.2	1.8 Jun§
Ireland	+6.1 Q1	-10.1	+4.5	+3.2	+6.0 May	-0.4 Jun	+0.5	+0.5	6.3 Jun
Latvia	+4.0 Q1	+7.6	+3.4	+2.8	+9.9 May	+3.0 Jun	-0.5	+3.0	9.4 Q1§
Lithuania	+3.9 Q1	+5.8	+3.3	+3.2	+10.0 Jun	+3.6 Jun	+0.7	+3.2	7.3 Jun§
Luxembourg	+4.0 Q1	+0.4	+4.1	+4.3	-3.4 May	+1.5 Jun	nil	+2.3	5.6 Jun§
New Zealand	+2.0 Q1	+0.9	+2.8	+2.5	+1.9 Q1	+1.7 Q2	+0.4	+2.2	4.9 Q1
Peru	+2.1 Q1	-0.4	+2.3	+3.0	-2.3 Apr	+2.7 Jun	+3.3	+3.1	6.6 May§
Philippines	+6.4 Q1	+4.5	+6.5	+5.6	+5.8 May	+2.7 Jun	+1.9	+3.0	5.7 Q2§
Portugal	+2.8 Q1	+4.1	+2.4	+1.7	+2.4 May	+0.9 Jun	+0.5	+1.4	10.1 Q1§
Slovakia	+3.1 Q1	+1.9	+3.1	+3.5	+5.1 May	+1.0 Jun	-0.8	+1.5	6.9 Jun§
Slovenia	+5.3 Q1	na	+2.9	+2.3	+8.5 May	+0.9 Jun	+0.2	+1.9	9.4 May§
Ukraine	+2.5 Q1	-3.8	+1.7	+1.4	+3.8 Jun	+15.6 Jun	+6.9	+13.9	1.3 Jun§
Vietnam	+6.2 2016	na	+6.3	+6.5	+8.6 Jun	+2.5 Jun	+2.4	+3.4	2.3 2015

Source: Haver Analytics. *% change on previous quarter, annual rate. †*The Economist* poll or Economist Intelligence Unit estimate/forecast. §Not seasonally adjusted. ‡New series. ~2014 **Year ending June. ††Latest 3 months. ‡‡3-month moving average.

Trade, exchange rates, budget balances and interest rates

Jul 29th 2017

Trade, exchange rates, budget balances and interest rates

	Trade balance	Current-account balance		Currency units, per $		Budget balance	Interest rates	
	latest 12 months, $bn	latest 12 months, $bn	% of GDP 2017†	Jul 26th	year ago	% of GDP 2017†	3-month latest	10-year gov't bonds, latest
United States	-779.8 May	-449.3 Q1	-2.6	-	-	-3.5	1.32	2.32
China	+456.0 Jun	+169.5 Q1	+1.6	6.75	6.68	-4.1	4.25	3.58§§
Japan	+49.5 May	+188.6 May	+3.6	112	105	-5.1	-0.01	0.07
Britain	-177.9 May	-99.8 Q1	-3.1	0.77	0.76	-3.6	0.32	1.21
Canada	-12.1 May	-48.4 Q1	-2.6	1.25	1.32	-2.4	1.20	1.97
Euro area	+267.4 May	+388.6 May	+3.1	0.86	0.91	-1.4	-0.33	0.55
Austria	-5.3 Apr	+6.4 Q1	+2.3	0.86	0.91	-1.1	-0.33	0.66
Belgium	+25.6 May	-4.2 Mar	+0.3	0.86	0.91	-2.3	-0.33	0.82
France	-64.5 May	-22.4 May	-1.2	0.86	0.91	-3.1	-0.33	0.81
Germany	+270.0 May	+272.4 May	+8.0	0.86	0.91	+0.5	-0.33	0.55
Greece	-19.5 May	-0.9 May	-1.2	0.86	0.91	-1.3	-0.33	5.34
Italy	+51.8 May	+48.6 May	+2.1	0.86	0.91	-2.3	-0.33	2.12
Netherlands	+58.7 May	+68.4 Q1	+9.4	0.86	0.91	+0.7	-0.33	0.68
Spain	-24.0 May	+21.1 Apr	+1.8	0.86	0.91	-3.3	-0.33	1.59
Czech Republic	+18.2 May	+1.4 Q1	+0.9	22.4	24.6	-0.5	0.30	0.90
Denmark	+9.4 May	+26.1 May	+7.7	6.39	6.77	-0.6	-0.25	0.68
Hungary	+10.7 Apr	+6.3 Q1	+3.4	263	285	-2.5	0.15	3.11
Norway	+20.0 Jun	+22.4 Q1	+7.6	7.99	8.58	+4.2	0.83	1.71
Poland	+2.9 May	-2.2 May	-0.8	3.65	3.97	-2.8	1.53	3.34
Russia	+104.5 May	+33.6 Q2	+2.2	59.9	66.2	-2.1	11.3	8.13
Sweden	-1.1 Jun	+22.0 Q1	+4.8	8.23	8.65	+0.3	-0.44	0.66
Switzerland	+37.8 Jun	+73.6 Q1	+9.9	0.96	0.99	+0.2	-0.73	0.04
Turkey	-58.9 Jun	-35.3 May	-4.4	3.55	3.05	-2.3	13.1	10.6
Australia	+17.3 May	-25.0 Q1	-1.6	1.26	1.33	-1.8	1.87	2.68
Hong Kong	-57.7 May	+14.8 Q1	+5.8	7.81	7.76	+1.7	0.77	1.55
India	-127.4 Jun	-15.2 Q1	-1.2	64.4	67.3	-3.2	6.09	6.44
Indonesia	+13.0 Jun	-14.6 Q1	-1.7	13,337	13,168	-2.2	6.89	6.79
Malaysia	+19.7 May	+6.6 Q1	+3.6	4.28	4.06	-3.0	3.42	3.98
Pakistan	-32.8 Jun	-12.1 Q2	-3.6	105	105	-4.5	6.14	8.10†††
Singapore	+47.4 Jun	+59.0 Q1	+19.1	1.36	1.36	-1.0	0.38	2.11
South Korea	+86.2 Jun	+88.3 May	+6.0	1,122	1,135	+0.9	1.37	2.25
Taiwan	+15.2 Jun	+69.1 Q1	+12.8	30.4	32.1	-0.9	0.66	1.07
Thailand	+15.5 Jun	+45.1 Q1	+11.5	33.5	35.0	-2.3	1.27	2.37
Argentina	-1.2 Jun	-16.8 Q1	-2.8	17.5	15.0	-5.9	18.7	na
Brazil	+60.3 Jun	-14.3 Jun	-1.0	3.17	3.28	-7.8	8.85	9.39
Chile	+3.9 Jun	-5.0 Q1	-1.4	649	662	-2.7	0.31	4.28
Colombia	-11.8 May	-11.9 Q1	-3.6	3,033	3,075	-3.2	5.60	7.01
Mexico	-9.6 May	-22.0 Q1	-2.2	17.8	18.8	-1.9	7.38	6.83
Venezuela	-36.2 Oct~	-17.8 Q3~	-1.1	10.2	9.99	-19.5	14.7	11.0
Egypt	-32.9 May	-18.0 Q1	-5.8	17.9	8.88	-10.8	19.4	na
Israel	-12.4 Jun	+11.7 Q1	+4.1	3.57	3.84	-2.6	0.16	1.90
Saudi Arabia	+43.4 2016	-1.0 Q1	+1.3	3.75	3.75	-7.4	1.80	3.68
South Africa	+2.5 May	-7.9 Q1	-3.2	13.0	14.4	-3.2	7.08	8.54
Estonia	-2.0 May	+0.6 May	+1.7	0.86	0.91	-0.5	-0.33	na
Finland	-2.6 May	+1.6 May	nil	0.86	0.91	-1.6	-0.33	0.55
Iceland	-1.1 Jun	+1.6 Q1	+7.5	105	122	+1.0	4.90	na
Ireland	+52.8 May	+11.1 Q1	+4.6	0.86	0.91	-0.7	-0.33	0.87
Latvia	-2.3 May	+0.4 May	-0.3	0.86	0.91	-1.0	-0.33	na
Lithuania	-2.5 May	nil Q1	-1.6	0.86	0.91	-1.0	-0.33	0.85
Luxembourg	-6.7 May	+2.7 Q1	+4.3	0.86	0.91	+1.2	-0.33	na
New Zealand	-2.7 Jun	-5.8 Q1	-3.0	1.35	1.42	+0.6	1.93	3.00
Peru	+3.9 May	-3.8 Q1	-1.8	3.25	3.37	-2.7	1.39	na
Philippines	-27.1 May	-0.4 Mar	+0.4	50.7	47.2	-2.8	2.15	5.03
Portugal	-13.2 May	+1.4 May	+0.1	0.86	0.91	-1.8	-0.33	2.97
Slovakia	+3.7 May	-0.3 May	-0.2	0.86	0.91	-1.6	-0.33	0.92
Slovenia	nil Apr	+2.3 May	+5.2	0.86	0.91	-1.6	-0.33	na
Ukraine	-3.5 May	-3.1 Q1	-3.8	25.9	24.8	-3.1	12.5	na
Vietnam	-2.1 Jun	+8.5 2016	-0.9	22,732	22,305	-5.5	4.80	5.28

Source: Haver Analytics. †*The Economist* poll or Economist Intelligence Unit estimate/forecast. ~2014 §§5-year yield. †††Dollar-denominated bonds.

The Economist commodity-price index

Jul 29th 2017

The Economist commodity-price index

2005=100

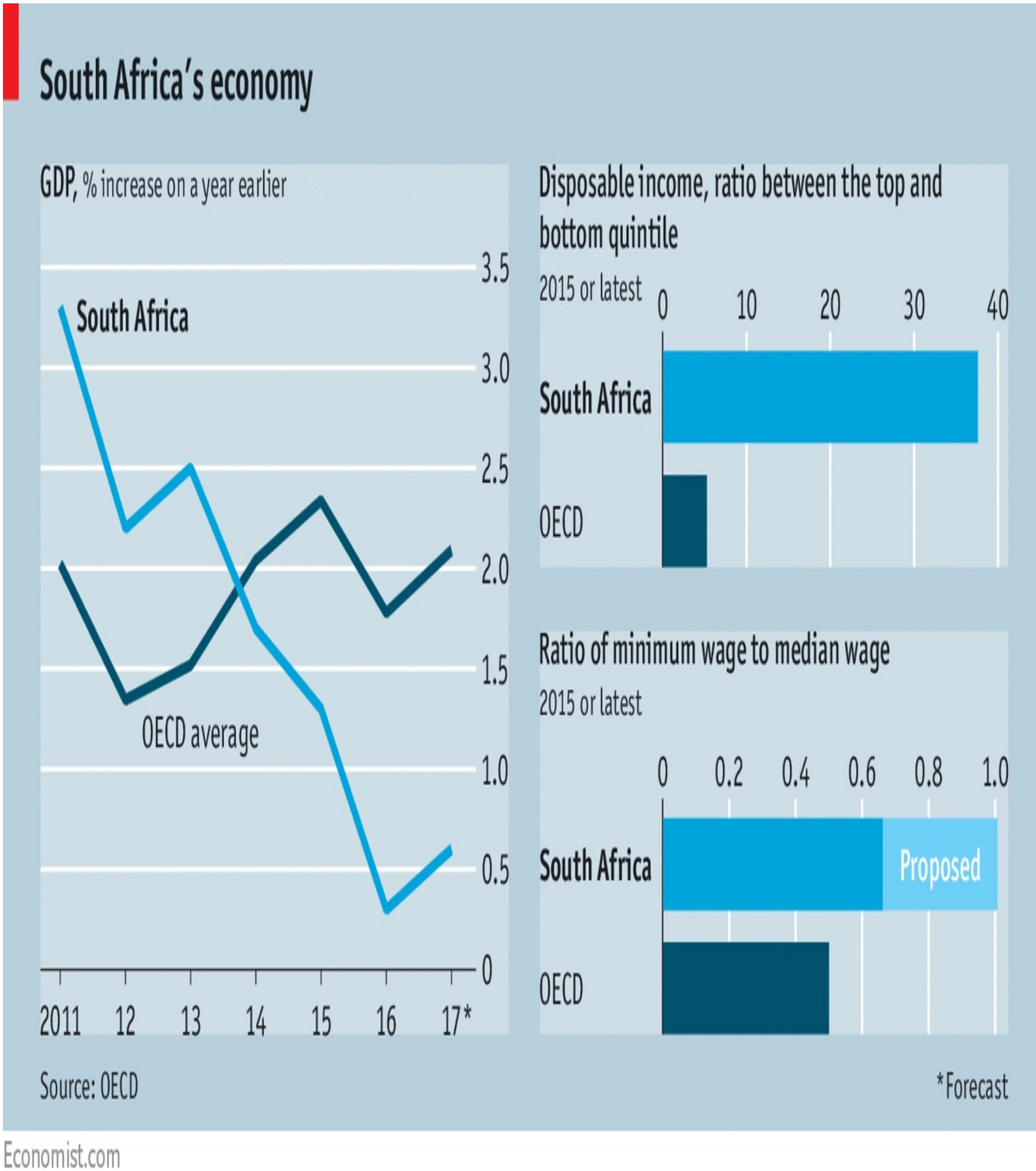
	Jul 18th	Jul 25th*	% change on one month	% change on one year
Dollar Index				
All Items	144.4	144.8	+3.4	+6.2
Food	156.6	154.4	+3.1	-0.9
Industrials				
All	131.7	134.8	+3.7	+16.2
Nfa†	131.5	133.3	+2.0	+5.9
Metals	131.8	135.4	+4.5	+21.2
Sterling Index				
All items	201.7	201.8	+1.2	+6.8
Euro Index				
All items	155.0	154.4	nil	+0.1
Gold				
$ per oz	1,242.0	1,250.6	+0.3	-5.3
West Texas Intermediate				
$ per barrel	46.4	47.9	+8.3	+11.6

Sources: Bloomberg; CME Group; Cotlook; Darmenn & Curl; FT; ICCO; ICO; ISO; Live Rice Index; LME; NZ Wool Services; Thompson Lloyd & Ewart; Thomson Reuters; Urner Barry; WSJ. *Provisional
†Non-food agriculturals.

Economist.com

South Africa's economy

Jul 29th 2017



GDP growth has plummeted over the past six years. Despite significant social transfers, which accounted for 16% of government spending in 2016, inequality is rife. The top income quintile earns almost 40 times more than the bottom. A proposed increase in the minimum wage should reduce poverty among low-skilled workers. But the impact it will have on employment is unclear.

Markets

Jul 29th 2017

Markets

	Index Jul 26th	one week	% change on Dec 30th 2016 in local currency	in $ terms
United States (DJIA)	21,711.0	+0.3	+9.9	+9.9
United States (S&P 500)	2,477.8	+0.2	+10.7	+10.7
United States (NAScomp)	6,422.8	+0.6	+19.3	+19.3
China (SSEA)	3,401.4	+0.5	+4.7	-7.7
China (SSEB, $ terms)	329.8	+0.3	-3.5	-3.5
Japan (Nikkei 225)	20,050.2	+0.1	+4.9	+9.3
Japan (Topix)	1,620.9	-0.1	+6.7	+11.2
Britain (FTSE 100)	7,452.3	+0.3	+4.3	+10.2
Canada (S&P TSX)	15,171.4	-0.5	-0.8	+6.2
Euro area (FTSE Euro 100)	1,196.7	-0.3	+7.6	+18.7
Euro area (EURO STOXX 50)	3,491.2	-0.3	+6.1	+17.0
Austria (ATX)	3,243.1	+1.6	+23.9	+36.6
Belgium (Bel 20)	3,952.7	+1.3	+9.6	+20.9
France (CAC 40)	5,190.2	-0.5	+6.7	+17.7
Germany (DAX)*	12,305.1	-1.2	+7.2	+18.2
Greece (Athex Comp)	830.2	-2.7	+29.0	+42.2
Italy (FTSE/MIB)	21,577.6	+0.5	+12.2	+23.7
Netherlands (AEX)	527.7	+0.7	+9.2	+20.4
Spain (Madrid SE)	1,065.9	nil	+13.0	+24.6
Czech Republic (PX)	1,011.9	+0.4	+9.8	+25.8
Denmark (OMXCB)	902.4	-1.1	+13.0	+24.6
Hungary (BUX)	35,564.9	-0.6	+11.1	+23.8
Norway (OSEAX)	803.4	+0.9	+5.1	+13.2
Poland (WIG)	62,362.3	-0.3	+20.5	+37.6
Russia (RTS, $ terms)	1,020.6	-2.2	-11.4	-11.4
Sweden (OMXS30)	1,580.2	-1.8	+4.2	+15.0
Switzerland (SMI)	8,990.3	-0.4	+9.4	+15.9
Turkey (BIST)	107,206.1	-0.2	+37.2	+36.0
Australia (All Ord.)	5,823.3	+0.8	+1.8	+13.0
Hong Kong (Hang Seng)	26,941.0	+1.0	+22.5	+21.5
India (BSE)	32,382.5	+1.3	+21.6	+28.2
Indonesia (JSX)	5,800.2	-0.1	+9.5	+10.6
Malaysia (KLSE)	1,766.0	+0.5	+7.6	+12.6
Pakistan (KSE)	45,908.4	+1.1	-4.0	-4.8
Singapore (STI)	3,336.7	+0.4	+15.8	+22.9
South Korea (KOSPI)	2,434.5	+0.2	+20.1	+29.3
Taiwan (TWI)	10,419.1	-0.8	+12.6	+19.5
Thailand (SET)	1,583.2	+0.5	+2.6	+9.7
Argentina (MERV)	21,202.9	-1.2	+25.3	+13.5
Brazil (BVSP)	65,010.6	-0.3	+7.9	+11.0
Chile (IGPA)	25,190.4	+0.2	+21.5	+25.4
Colombia (IGBC)	10,913.9	+0.3	+8.0	+6.9
Mexico (IPC)	51,600.3	+1.0	+13.1	+31.1
Venezuela (IBC)	134,583.5	+2.5	+324.5	na
Egypt (EGX 30)	13,797.3	+0.7	+11.8	+13.2
Israel (TA-125)	1,303.6	-0.3	+2.1	+10.1
Saudi Arabia (Tadawul)	7,200.4	-0.4	-0.5	-0.5
South Africa (JSE AS)	54,836.2	+1.4	+8.3	+13.6
Europe (FTSEurofirst 300)	1,504.0	-0.6	+5.3	+16.1
World, dev'd (MSCI)	1,961.9	+0.2	+12.0	+12.0
Emerging markets (MSCI)	1,062.3	+0.2	+23.2	+23.2
World, all (MSCI)	477.6	+0.2	+13.2	+13.2
World bonds (Citigroup)	932.8	+0.2	+5.5	+5.5
EMBI+ (JPMorgan)	823.7	-0.3	+6.7	+6.7
Hedge funds (HFRX)	1,246.3§	+0.2	+3.6	+3.6
Volatility, US (VIX)	9.6	+9.8	+14.0	(levels)
CDSs, Eur (iTRAXX)†	51.8	-1.7	-28.2	-20.8
CDSs, N Am (CDX)†	56.3	-2.1	-16.9	-16.9
Carbon trading (EU ETS) €	5.3	-0.9	-20.1	-11.9

Sources: IHS Markit; Thomson Reuters. *Total return index.
†Credit-default-swap spreads, basis points. §Jul 25th.

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