The rise of the superstars

A small group of giant companies—some old, some new—are once again dominating the global economy, says Adrian Wooldridge. Is that a good or a bad thing?

ON AUGUST 31ST 1910 Theodore Roosevelt delivered a fiery speech in Osawatomie, Kansas. The former president celebrated America's extraordinary new commercial power but also gave warning that America's industrial economy had been taken over by a handful of corporate giants that were generating unparalleled wealth for a small number of people and exercising growing control over American politics. Roosevelt cautioned that a country founded on the principle of equality of opportunity was in danger of becoming a land of corporate privilege, and pledged to do whatever he could to bring the new giants under control.

Roosevelt's speech sounds as fresh today as on the day he made it. A small number of giant companies are once again on the march, tightening their grip on global markets, merging with each other to get even bigger, and enjoying vast profits. As a proportion of GDP, American corporate profits are higher than they have been at any time since 1929. Apple, Google, Amazon and their peers dominate today's economy just as surely as US Steel, Standard Oil and Sears, Roebuck and Company dominated the economy of Roosevelt's day. Some of these modern giants are long-established stars that have reinvented themselves many times over. Some are brash newcomers from the emerging world. Some are high-tech wizards that are conjuring business empires out of noughts and ones. But all of them have learned how to combine the advantages of size with the virtues of entrepreneurialism. They are pulling ahead of their rivals in one area after another and building up powerful defences against competition, including enormous cash piles equivalent to 10% of GDP in America and as much as 47% in Japan.

In the 1980s and 1990s management gurus pointed to the "demise of size" as big companies seemed to be giving way to a much more entrepreneurial economy. Giants such as AT&T were broken up and state-owned firms were privatised. High-tech companies emerged from nowhere. Peter Drucker, a veteran management thinker, announced that "the *Fortune* 500 [list of the biggest American companies] is over." That chimed with the ideas of Ronald Coase, an academic who had argued in "The Nature of the Firm" (1937) that companies make sense only when they can pro- ▸▸

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vide the services concerned more cheaply than the market can.

But now size seems to matter again. The McKinsey Global Institute, the consultancy's research arm, calculates that 10% of the world's public companies generate 80% of all profits. Firms with more than $1 billion in annual revenue account for nearly 60% of total global revenues and 65% of market capitalisation.

The quest for size is producing a global bull market in mergers and acquisitions. In 1990 there were 11,500 M&A deals with a combined value equivalent to 2% of global GDP. In the years since 2008 the number has risen to 30,000 a year, worth about 3% of global GDP. America's antitrust authorities have recently given Anheuser-Busch InBev, one of the world's biggest drinks companies, the all-clear to buy SABMiller, another global drinks firm, for $107 billion.

The superstar effect is most visible in America, the world's most advanced economy. The share of nominal GDP generated by the *Fortune* 100 biggest American companies rose from about 33% of GDP in 1994 to 46% in 2013, and the *Fortune* 100's share of the revenues generated by the *Fortune* 500 went up from 57% to 63% over the same period. The number of listed companies in America nearly halved between 1997 and 2013, from 6,797 to 3,485, according to Gustavo Grullon of Rice University and two colleagues, reflecting the trend towards consolidation and growing size. Sales by the median listed public company are almost three times as big as they were 20 years ago. Profit margins have increased in direct proportion to the concentration of the market.

Startups, meanwhile, have found it harder to get off the ground. Robert Litan, of the Council on Foreign Relations, and

What goes around

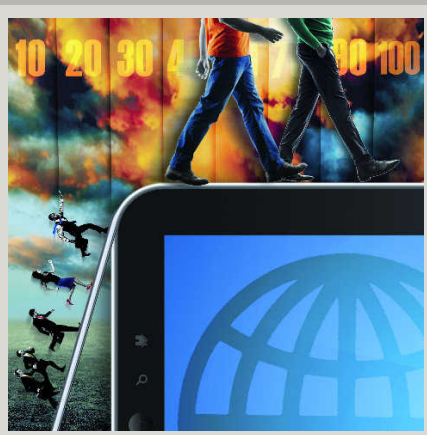
America's corporate world alternates between competition and consolidation

ALFRED CHANDLER, AMERICA'S leading business historian, once summed up the history of American business after the civil war as "ten years of competition and 90 years of oligopoly". American business history has been defined by periods of intense competition followed by long periods of consolidation. The digital revolution is likely to repeat that pattern, but on a global scale.

The decades after the civil war saw bursts of intense competition in America's two leading industries, oil refining and steelmaking, in which the robber barons quickly built up giant companies. Economies of scale and technological innovation caused productivity to rise and prices to fall, allowing the robber barons to present consolidation as the friend of the common man.

The same thing happened in retailing and consumer products as a handful of companies established a lead over less agile competitors. Sears, Roebuck and Company set up a giant mail-order operation in Chicago that crushed smaller rivals, as did Procter & Gamble, Heinz, Philip Morris, Ford and General Motors as they worked to become national brands. The first Dow Jones Industrial Average index in 1896 included 12 leaders of the emerging industrial economy. Ten years later two-thirds of the names had changed. Another 20 years on, the list had begun to settle down and the same names appeared again and again.

J.P. Morgan, America's most powerful banker, increased the pace of consolidation by buying Carnegie Steel from Andrew Carnegie, combining it with dozens of smaller steel firms he already owned and selling the resulting company to the public at a valuation of $1.4 billion, a vast sum at the time. Naomi Lamoreaux, of Yale University, studied 93 such consolidations between 1895 and



1904 in detail and found that 72 of them created companies that controlled at least 40% of their industries, with 42 controlling at least 70%. These 42 included General Electric and American Tobacco, each of which dominated 90% of its respective market. The people who controlled these giant companies accumulated money and power on an unprecedented scale. The Senate was so full of them and their placemen that it was known as "the millionaires' club".

Americans grew uneasy as their faith in business clashed with their faith in equality of opportunity. The Sherman Act of 1890 tried to tackle monopolies. The 16th amendment to the American constitution introduced an income tax and the 17th decreed that US senators should be elected by popular vote, not by local legislatures.

But the backlash remained relatively mild. Periods of anti-corporate sentiment such as the 1910s and 1930s were invariably followed by periods of pro-corporate policies such as the 1920s and 1950s. And whichever way the wind blew, big companies showed a genius for turning federal regulations into barriers to entry. By 1930 most big companies were run by professional managers and owned by small shareholders. In the 1950s the giant corporations formed half a century earlier consolidated their position. Every industry was dominated by a small group of companies, such as Ford, General Motors and Chrysler in cars and General Electric and Westinghouse in electrical goods, all of which had a close relationship with government. In the 1980s deregulation and globalisation helped unpick corporate America. But the digital revolution seems likely to bring another about-turn.

Like the robber barons, the captains of new technology are replacing a freewheeling culture with the rule of a handful of corporations. They dominate a growing share of their respective industries. Google controls 69% of the world's search activity; Google and Apple between them provide the operating systems of 90% of smartphones. They both grab market share by cutting prices and eliminating competitors, often buying them.

Tech titans such as Mark Zuckerberg, Sergey Brin and Larry Page are expanding into more and more industries as technology transforms everything that it touches. Just as General Electric diversified into everything electrical, so Google is diversifying into everything to do with information.

Yet there are also striking differences between the big companies of yesterday and today. Today's giants have fewer assets and fewer roots in local society. They are also much more global. In the second Industrial Revolution politicians used the power of national governments to tame their corporations. Taming highly agile global corporations is much more difficult.

Ian Hathaway, of the Brookings Institution, note that the number of startups is lower than at any time since the late 1970s, and that more companies die than are born, pushing up their average age. American workers are also changing jobs and moving across state borders less often than at any time since the 1970s.

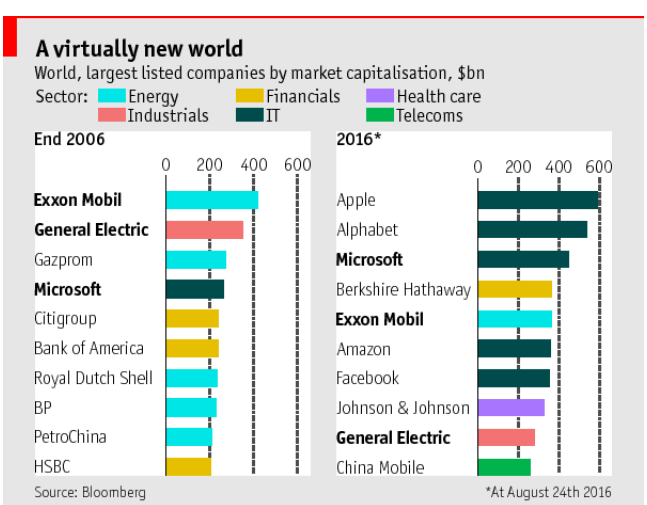
Competition is for losers

The superstar effect is particularly marked in the knowledge economy. In Silicon Valley a handful of giants are enjoying market shares and profit margins not seen since the robber barons in the late 19th century. "Competition is for losers," says Peter Thiel, a co-founder of PayPal, a payments system, and the first outside investor in Facebook. On Wall Street the five largest banks have increased their share of America's banking assets from 25% in 2000 to 45% today.

The picture in other rich countries is more varied. Whereas in Britain and South Korea the scale of consolidation has been similar to that in America, in continental Europe it has been much less pronounced. In a list of the world's top 100 companies by market capitalisation compiled by PwC, an accountancy firm, the number of continental European firms has declined from 19 in 2009 to 17 now. Still, in most of the world some consolidation is the rule. The OECD, a club of mostly rich countries, notes that firms with more than 250 employees account for the biggest share of value added in every country it monitors.

There are good reasons for thinking that the superstar effect will gather strength. Big and powerful companies force their rivals to bulk up in order to compete with them. They also oblige large numbers of lawyers, consultancies and other professional-services firms to become global to supply their needs. Digitisation reinforces the trend because digital companies can exploit network effects and operate across borders.

James Manyika, of the McKinsey Global Institute, points out that today's superstar companies are big in different ways from their predecessors. In the old days companies with large revenues and global footprints almost always had lots of assets and employees. Some superstar companies, such as Walmart and Exxon, still do. But digital companies with huge market valuations and market shares typically have few assets. In 1990 the top three carmakers in Detroit between them had nominal revenues of $250 billion, a market capitalisation of $36 billion and 1.2m employees. In 2014 the top three companies in Silicon Valley had revenues of $247 billion and a market capitalisation of over $1 trillion but just 137,000 employees.



Yet even "old" big companies employ far fewer people than they used to. Exxon, the world's most successful oil company, has cut back its workforce from 150,000 in the 1960s to less than half that today, despite having merged with a giant rival, Mobil. At the same time "new" big companies are becoming more like the corporations of yore. High-tech companies often give senior jobs to former Washington insiders and employ armies of lobbyists. Many modern superstar companies park their money in offshore hideaways and devote considerable efforts to keeping down their tax bills. Superstar companies tend to excel at everything they do—including squeezing as much as they can out of government while paying the lowest possible taxes.

This special report will explain why the age of entrepreneurialism, ushered in by Britain's Margaret Thatcher and America's Ronald Reagan, is giving way to an age of corporate consolidation even as most companies are becoming more virtual. It will examine the forces behind the rise of the superstars and reveal their managerial secrets. And it will attempt to answer the question that Roosevelt raised in Osawatomie: are such corporate giants a cause for concern or for celebration? ■

Driving forces

Why giants thrive

The power of technology, globalisation and regulation

ACROSS NORTHERN CALIFORNIA the world's best-known tech companies are engaged in a construction contest. Facebook got off to an early start with a building of 430,000 square feet (40,000 square metres) that looks like a giant warehouse. It is said to be the largest open-plan office building in the world. Google is hard at work on a new headquarters to replace its Googleplex: a collection of movable glass buildings that can expand or contract as business requires. Samsung and Uber, too, are in construction mode. But the most ambitious builder is Apple, which is spending $5 billion on something that looks like a giant spaceship.

Silicon Valley is a very different place from what it was in the 1990s. Back then it was seen as the breeding ground of a new kind of capitalism—open-ended and freewheeling—and a new kind of business organisation—small, nimble and fluid. Companies popped up to solve specific problems and then disappeared. Nomadic professionals hopped from one company to another, knowing that their value lay in their skills rather than their willingness to wear the company collar. Today the valley has been thoroughly corporatised: a handful of winner-takes-most companies have taken over the world's most vibrant innovation centre, while the region's (admittedly numerous) startups compete to provide the big league with services or, if they are lucky, with their next acquisition.

Tech aristocracy

The most successful tech companies have achieved massive scale in just a couple of decades. Google processes 4 billion searches a day. The number of people who go on Facebook every month is much larger than the population of China. These companies have translated vast scale into market dominance and soaring revenues. The infrastructure of the information economy is increasingly controlled by a handful of companies: Ama-

zon has almost one-third of the market for cloud computing, and its cloud-services division has grown by more than half over the past year. The world's three most valuable companies at present are all tech companies, and Amazon and Facebook come in at number six and seven (see chart, previous page).

In the industrial era companies used economies of scale to become giants: the more a steel company could produce, the more it could cut its unit costs, driving its smaller competitors to the wall, and the more money it had to invest in research, marketing and distribution. The same applied to any other physical product. Tech companies have reinvented this principle for the virtual age by shifting their attention from the supply side (production efficiencies) to the demand side (network effects). Just as the old industrial giants used technological innovations to reduce their costs, the new tech giants use technological innovations to expand their networks.

Powerful connections

Network effects have always been powerful engines of growth: not only is success self-reinforcing but it follows the law of increasing returns. Some network companies even pay people to become customers in order to achieve scale. And those effects become even more powerful if networks connect with each other to produce multi-sided versions. Most of the new tech firms are "platforms" that connect different groups of people and allow them to engage in mutually beneficial exchanges. Older tech companies too are putting increasing emphasis on the platform side of their business. Everyone wants to sit at the heart of a web of connected users and devices that are constantly opening up further opportunities for growth.

In some ways these tech giants look not so much like overgrown startups but more like traditional corporations. The open-plan offices and informal dress codes are still there, but their spirit is changing. They are investing more in traditional corporate functions such as sales and branding. This corporatisation is one reason for the companies' success. Startups are increasingly willing to sell themselves to established companies, which can provide everything from legal services to quality control. Whereas most startups are happy to get things right 90% of the time, customers demand perfect products.

The most powerful force behind the rise of the new giants is technology. But two other forces are pushing in the same direction: globalisation and regulation.

The biggest beneficiaries from the liberalisation of the global economy from 1980 onwards have been large multinational companies. An annual list of the world's top multinationals produced by the United Nations Conference on Trade and Development (UNCTAD) shows that, judged by measures such as sales and employment, such companies have all become substantially bigger since the mid-1990s. They have also become more and more complex. UNCTAD points out that the top 100 multinationals have an average of 20 holding companies each, often domiciled in low-tax jurisdictions, and more than 500 affiliates, operating in more than 50 countries.

Big companies have reaped enormous efficiencies by creating supply chains that stretch around the world and involve hundreds of partners, ranging from wholly owned subsidiaries to outside contractors. Companies are chopping their businesses into ever smaller chunks and placing those chunks in the most cost-effective locations. They are also forming ever more complicated alliances. Pankaj Ghemawat, of the Stern School of Business at New York University and the IESE Business School at Navarra, Spain, calculates that America's top 1,000 public companies now derive 40% of their revenue from alliances, compared with just 1% in 1980.

Multinationals are increasingly focusing on building up knowledge networks as well as production networks. Strategy&, the consulting arm of PWC, an accountancy giant, produces an annual survey of the world's 1,000 most innovative companies. It found that last year those that deployed 60% or more of their R&D spending abroad enjoyed significantly higher operating margins and return on assets, as well as faster growth in operating income, than their more domestically oriented competitors. Global companies can buy more innovation for their money by doing their R&D in cheaper places. They can also tap into local innovation resources. General Electric develops more than a quarter of its new health-care products in India to take advantage of the country's frugal innovation. Its revenues outside America have risen from $4.8 billion in 1980 to $65 billion in 2015.

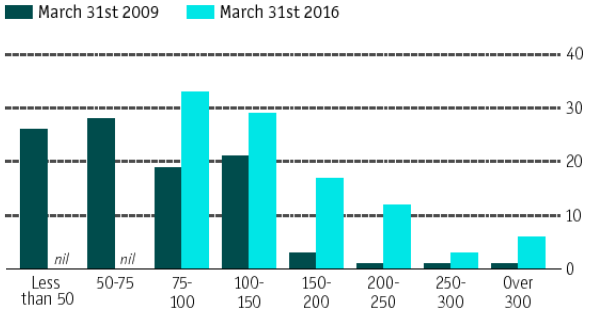
Such companies are starting to be challenged by non-Western competitors. *Fortune* magazine's annual list of the world's 500 biggest companies now features 156 emerging-market firms, compared with 18 in 1995. McKinsey predicts that by 2025 some 45% of the *Fortune* Global 500 will be based in emerging economies, which are now producing world-class companies with huge domestic markets and a determination to invest in innovation. China's Tencent rolled out its mobile text and messaging service, WeChat, to 700m customers in just a few years. At China's Huawei, which makes networking and telecommunications equipment, half the staff of 150,000 works in the research department. If Western companies are to survive against such competition, they have to become even bigger and more innovative.

Most of the new tech firms are "platforms" that connect different groups of people

The growth in regulation has also played into the hands of powerful incumbents. The collapse of Enron in 2001 arguably marked the end of the age of deregulation, which began in the late 1970s, and the beginning of re-regulation. The financial crisis of 2008 served to reinforce that trend. The 2002 Sarbanes-Oxley legislation that followed Enron's demise the previous year reshaped general corporate governance; the 2010 Affordable Care act re-engineered the health-care industry,

Shifting weight

Distribution of top 100 companies worldwide by market capitalisation, $bn



Source: PwC

which accounts for nearly a fifth of the American economy; and in the same year the Dodd-Frank act rejigged the financial-services industry.

Regulatory bodies have got bigger. Between 1995 and 2016 the budget of America's Securities and Exchange Commission increased from $300m to $1.6 billion. They have also become much more active. America's Department of Justice has used the Foreign Corrupt Practices act of 1977 to challenge companies that have engaged in questionable behaviour abroad. The average cost of a resolution under this act rose from $7.2m in 2005 to $157m in 2014.

Regulation inevitably imposes a disproportionate burden on smaller companies because compliance has a high fixed cost. Nicole and Mark Crain, of Lafayette College, calculate that the cost per employee of federal regulatory compliance is $10,585 for businesses with 19 or fewer employees but only $7,755 for companies with 500 or more. Younger companies also suffer more from regulation because they have less experience of dealing with it. Sarbanes-Oxley imposed a particularly heavy burden on smaller public companies. The share of non-executive directors' pay at smaller firms increased from $5.91 out of every $1,000 in sales before the legislation to $9.76 afterwards. The JOBS act of 2012 exempted small businesses from some of the more onerous requirements of the legislation, but the number of startups and IPOs in America remains at disappointingly low levels.

Too much to read

The complexity of the American system also serves to penalise small firms. The country's tax code runs to more than 3.4m words. The Dodd-Frank bill was 2,319 pages long. Big organisations can afford to employ experts who can work their way through these mountains of legislation; indeed, Dodd-Frank was quickly dubbed the "Lawyers' and Consultants' Full-Employment act". General Electric has 900 people working in its tax division. In 2010 it paid hardly any tax. Smaller companies have to spend money on outside lawyers and constantly worry about falling foul of one of the Inland Revenue Service's often contradictory rules.

Both Sarbanes-Oxley and Dodd-Frank set the tone for legislation in Britain and mainland Europe. China has also become more zealous about regulation, partly in order to pursue nationalist and political goals and partly because of worries about conflicts of interest. But different regions have adopted different approaches to regulation, exacerbating the problem of complexity. As a result, in many markets all but the most sophisticated companies can find it impossible to do business.

An additional problem that companies have to face today is disappointing economic growth, particularly in the West, at a time of widespread technological disruption. This paradox is easier for big companies to deal with. Martin Reeves, of BCG, a consultancy, argues that such companies are good at "buffering". They have enough spare resources to absorb external shocks or ride out temporary downturns, and they can move operations from one part of the world to another if the political climate turns against them. Mr Reeves points out that the mortality rate for all American listed companies over a five-year period is as high as 36%, but for companies worth more than $1 billion it is only half that.

Slow growth also plays into the hands of incumbents. Joseph Gruber and Steven Kamin, two economists at the Federal Reserve, find that big companies are increasingly saving more than they spend. Apple, for instance, holds about a quarter of its market capitalisation in cash. These huge cash piles allow leading companies to consolidate their position by buying startups and hoovering up the most talented employees.

The superstar companies, then, seem to have all the advantages. But two arguments are being advanced to suggest that their success may not last. One is that the forces speeding up creation, which currently work in their favour, could also speed up destruction. The other, more fundamental one is that these companies are merely holdouts against a general trend towards a more fluid economy. The next article will consider these objections. ■

Misconceptions

The new Methuselahs

Superstar companies are far more resilient than critics give them credit for

IN SEPTEMBER 2009 *Fast Company* magazine published a long article entitled "Nokia rocks the world". The Finnish company was the world's biggest mobile-phone maker, accounting for 40% of the global market and serving 1.1 billion users in 150 countries, the article pointed out. It had big plans to expand into other areas such as digital transactions, music and entertainment. "We will quickly become the world's biggest entertainment media network," a Nokia vice-president told the magazine.

It did not quite work out that way. Apple was already beginning to eat into Nokia's market with its smartphones. Nokia's digital dreams came to nothing. The company has become a shadow of its former self. Having sold its mobile-phone business to Microsoft, it now makes telecoms network equipment.

There are plenty of examples of corporate heroes becoming zeros: think of BlackBerry, Blockbuster, Borders and Barings, to name just four that begin with a "b". McKinsey notes that the average company's tenure on the S&P 500 list has fallen from 61 years in the 1958 to just 18 in 2011, and predicts that 75% of current S&P 500 companies will have disappeared by 2027. Ram Charan, a consultant, argues that the balance of power has shifted from defenders to attackers.

Incumbents have always had a tendency to grow fat and complacent. In an era of technological disruption, that can be lethal. New technology allows companies to come from nowhere (as Nokia once did) and turn entire markets upside down. Challengers can achieve scale faster than ever before. According to Bain, a consultancy, successful new companies reach *Fortune* 500 scale more than twice as fast as they did two decades ago.

They can also take on incumbents in completely new ways: Airbnb is competing with the big hotel chains without buying a single hotel.

Next in line for disruption, some say, are financial services and the car industry. Anthony Jenkins, a former chief executive of Barclays, a bank, worries that banking is about to experience an "Uber moment". Elon Musk, a founder of Tesla Motors, hopes to dismember the car industry (as well as colonise Mars).

It is perfectly possible that the consolidation described so far in this special report will prove temporary. But two things argue against it. First, a high degree of churn is compatible with winner-takes-most markets. Nokia and Motorola have been replaced by even bigger companies, not dozens of small ones. Venture capitalists are betting on continued consolidation, increasingly focusing on a handful of big companies such as Tesla. Sand Hill Road, the home of Silicon Valley's venture capitalists, echoes with talk of "decacorns" and "hyperscaling".

Second, today's tech giants have a good chance of making it into old age. They have built a formidable array of defences against their rivals. Most obviously, they are making products that complement each other. Apple's customers usually buy an entire suite of its gadgets because they are designed to work together. The tech giants are also continuously buying up smaller companies. In 2012 Facebook acquired Instagram for $1 billion, which works out at $30 for each of the service's 33m users. In 2014 Facebook bought WhatsApp for $22 billion, or $49 for each of the 450m users. This year Microsoft spent $26.2 billion on LinkedIn, or $60.5 for each of the 433m users. Companies that a decade ago might have gone public, such as Nest, a company that makes remote-control gadgets for the home, and Waze, a mapping service, are now being gobbled up by established giants.

Buying up smaller companies is usually part of a wider strategy: investing in their proprietary technologies. The tech giants climbed to the top of the pile because they were significantly better than their rivals at what they did. Amazon, for example, offered a choice of millions of books when local booksellers had just thousands. Their success provided them with piles of cash that they could invest in improving their own ideas and protecting them with armies of lawyers, and buying other people's ideas in the market. Google purchased Motorola Mobility for $12.5 billion in order to acquire the company's portfolio of patents. These tech giants relentlessly extend their businesses into adjacent areas: thus Amazon expanded from books and retailing generally into internet servers, and Google is expanding into everything to do with information.

In praise of asymmetries

Derek Kennedy, of BCG, a consultancy, says that one of the tech companies' most powerful defences in the long term will be their ability to combine "asymmetries of information" with "asymmetries of execution". These companies have unmatched stores of information, as well as an unmatched ability to use that information to reshape their existing businesses or create new ones. Not only do they know what you want before you know yourself but they can also deliver it to you. Companies can use these combined asymmetries to shift into new areas.

The rise of the internet of things (IoT) will give a powerful push to consolidation. Gartner, a research firm, predicts that the number of products connected to the internet will increase from 6.4 billion today to 21 billion by 2020 as companies discover the power of software. The process has already begun. Coca-Cola uses microchips to track the whereabouts of its bottles. Tesla improved its cars' uphill starts by transmitting a software update. General Electric thinks that the IoT will be the biggest revolution of the coming decades.

The increasing convergence of hardware and software lets companies establish much closer relations with their customers. They can gather up-to-the-minute information on the response to their products and use it to make improvements. They can tailor products to the needs of individual customers. Sonos, a maker of music systems, produces speakers that can tune themselves to the acoustic qualities of the room they are placed in. They can sort out problems before they arise. Diebold monitors its cash machines for signs of trouble, either fixing problems remotely by means of a software patch or sending a technician. They can also branch out into delivering services. John Deere, a maker of heavy machinery, is building sensors for tractors that can receive data on weather and soil conditions, enabling farmers to make more informed decisions on the use of their land.

Older companies such as GE and Caterpillar may well have a fight on their hands with born-digital companies such as Google and Amazon that try to extend their empires into the physical world. But the overall effect will be consolidation. Only companies that can afford to make substantial investments in both the physical and virtual worlds will prosper. And once companies have established strong relationships with their customers, they will have a good chance of keeping them regardless of price. The more that things are connected to each other and to the companies in charge of the networks that control them, the harder it will be for insurgents to get a foothold in the market.

A symbiotic relationship

Most management gurus have a Manichean view of the relationship between big companies and startups: the more you have of one, the less you have of the other. They also add an evolutionary twist: the more advanced a society becomes, the better small organisations will do in relation to big ones. Gerald Davis, of the University of Michigan's Ross School of Business, has just published a new book, "The Vanishing American Corporation", in which he points out that the classic argument for the existence of corporations—that the cost of doing things through them is lower than through the market—has lost its force because advances in technology (of the sort that Silicon Valley has pioneered) have slashed the cost of doing things through the market.

Likewise, he says, limited-liability companies replaced other corporate forms because firms in capital-intensive industries such as steel needed to raise a lot of capital, but software companies typically do not need to raise much money. Mr Davis argues that in future companies are likely to become much more fluid: entrepreneurs can raise money from Kickstarter, rent employees from Upwork, computer power from Amazon cloud and tools from TechShop, register their companies in Liberia and still reach a global audience thanks to cloud computing. There are also ever more ways of organising co-operation; Wikipedia has already produced the world's biggest encyclopaedia by using volunteers. "The Web and the smartphone allow pervasive markets and spontaneous collaborations at minimal cost. They make institutions like the modern corporation increasingly unsustainable," he explains.

RocketSpace, which makes its living by looking after startups, at first sight looks like an example of what Mr Davis had in mind. Its basic business is to sell space in its nine floors of offices in the heart of San Francisco, though it does a lot more than that. Starting a company can be lonely as well as gruelling, and working in RocketSpace provides you with an instant network and access to good advice. The company has been so successful that it turns away 90% of companies that apply for accommodation. As a result, being admitted provides instant cachet (former occupants include Uber and Spotify).

But look again, and a more complicated picture emerges. RocketSpace is increasingly acting as a middleman between startups and big companies. The IPO market has shrunk into insignificance; about 90% of today's successful startups "exit" by selling themselves to an established company. RocketSpace makes that easier by introducing them to the right partners. Big companies outside the tech industry, in turn, benefit from RocketSpace helping them understand the tech world.

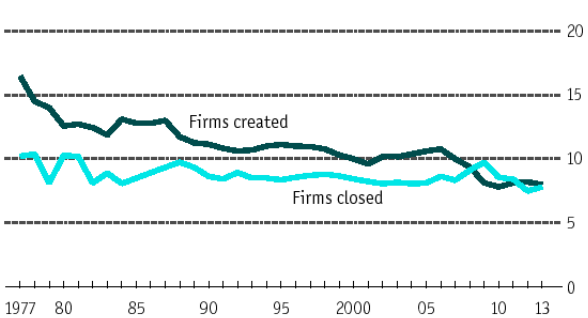
The story of RocketSpace suggests that big and small organisations have a symbiotic relationship. Duncan Logan, RocketSpace's founder, argues that corporations are, in effect, outsourcing some of their tech R&D to the startup world. This is true not only of non-tech companies that do not understand the tech world but also of big tech companies that do some of their R&D in-house but leave some of it to the market to get the best of both worlds. Big companies have much to gain from contracting out their R&D to startups. They can make lots of different bets without involving their corporate bureaucracies. But startups also have a lot to gain by selling themselves to an established company that can provide stability, reliability and predictability, all of which can be hard to come by in the tech world. Big companies have phalanxes of lawyers to protect intellectual property, bureaucrats to make sure that the t's are crossed and the i's dotted, and slick marketing machines.

Mr Davis is right that it is getting easier to put together a company from a variety of components, but he is wrong to conclude that big companies are in retreat. The "virtualisation" of some sectors of the economy and the "corporatisation" of others are going hand in hand. Superstar companies try to keep their costs under control by contracting out any functions they regard as non-core. Startups try to reach global markets with the help of platforms such as eBay and Alibaba. The upshot is the development of a multi-tiered economy. The commanding heights of the global economy may be dominated by familiar companies: a premier league of superstars that constantly jostle to avoid relegation, and a first division of less stellar performers that struggle to be promoted. But the lower rungs are studded with large numbers of Mr Davis's pop-up companies.

If corporatisation and virtualisation can coexist, two of the basic tenets of modern management theory need to be rethought. The first is that corporate man (and woman) is a thing of the past, and that the only way to succeed in business is to turn yourself into an entrepreneur. The reality is more nuanced. Big companies are certainly cutting back on long-term employees. Dan Kaminsky, chief scientist and a co-founder of White Ops, one of RocketSpace's startups, recalls that, in a previous corporate job, he filled out a form in which a "mid-career worker" was defined as someone who had been in the same post for two

The wheels of corporate life

US firms created and closed, % of total



Source: CEA

or three years. And employment patterns are becoming much more varied. Lawrence Katz, of Harvard, and Alan Krueger, of Princeton, calculate that the proportion of American workers engaged in "alternative work arrangements" (working as freelancers, temporary contractors and the like) increased from 10.1% in 2005 to 15.8% in late 2015.

But big companies nevertheless preserve a core of employees who help maintain a long-term institutional memory and a distinctive culture. Strategy& has been collecting data on the chief executives of the world's top 2,500 public companies for more than 15 years. The consultancy's Per-Ola Karlsson notes that more than 80% of these companies' CEOs are internal appointments. Almost two-thirds of them have spent 12 years or more climbing up the corporate hierarchy. They are drawn from a large cadre of long-term employees who dominate the upper ranks of the organisation and usually outperform external recruits because they have far more company-specific knowledge.

Conversely, entrepreneurship is not necessarily a road to success. Reid Hoffman, the co-founder of LinkedIn, a social-networking company, and author of "The Start-Up of You", may have made $2.8 billion by selling his own startup to Microsoft, but the coffee shops of San Francisco are full of middle-aged hopefuls scratching a living without a pension.

The second idea that needs overhauling is the transaction-cost theory of the firm formulated by Ronald Coase 80 years ago: that firms are worth having only if they can do things more cheaply than the market can. Since firms continue to occupy a central place in the modern economy despite the enormous advances of the market in recent years, there must be other factors at work. Companies are not just a way of keeping transaction costs to a minimum. They are proof that when people are trying to solve common problems, they are wiser collectively than they are individually. Such collective wisdom can accumulate over time and be embodied in corporate traditions that cannot be bought in the market. ■

Key attributes

The alphabet of success

Superstars need a dazzling range of qualities

GENERAL ELECTRIC, THE product of an alliance between Thomas Edison, America's greatest inventor, and J.P. Morgan, its greatest banker, was the technology superstar of the early 20th century. Edison's patents have long since expired and electricity has become a commodity, but GE remains a commercial empire, the only intact survivor of the companies that made up the original Dow Jones index. GE employs 330,000 people in 180 countries, owns $493 billion-worth of assets and earned $117 billion in 2015. It has survived where other technology stocks have faded because it has fully mastered the art of management. Its slogan, "Imagination at work", could just as easily be "Management at work".

Every superstar company is a superstar in its own way. Great companies have distinctive cultures and traditions that are all their own and inhabit well-defined market niches. But they also share a set of common characteristics. The first is an obsession with talent. The only way to remain on top for any length of time is to hire the right people and turn them into loyal corporate warriors. GE spends a billion dollars a year on training. Its success has been such that between 2003 and 2011 about 40 GE vice-presidents have become CEOs of other major companies. Google, which is doing for information what GE once did for electricity, is similarly obsessed with training.

Superstar companies tend to be unashamedly elitist. GE fast-tracks its most promising employees. Hindustan Unilever compiles a list of people who show innate leadership qualities (and refers to them throughout their careers as "listers"). Laszlo Bock, Google's head of human resources, argues that a top-notch engineer "is worth 300 times more than an average engineer".

Such companies keep a watchful eye on their high-flyers throughout their careers. Jeff Immelt, GE's boss, prides himself on his detailed knowledge of the 600 people at the top of his company, including their family circumstances and personal ambitions. Hindustan Unilever's managers constantly test potential leaders by moving them from one division to another and subjecting them to "stretch assignments". Procter & Gamble talks about "accelerator experiences" and "crucible roles".

The second obsession superstar firms share is with investing in their core skills. Corning, the company that made the glass for Edison's first light bulb, started life producing the raw material for bottles and windows. It now manufactures the glass used in the majority of the world's electronic devices. Its fibre optics carry information around the world. Its "Gorilla" glass helps prevent your iPhone from shattering when you drop it, and is starting to be used in cars. Next will be huge glass screens that cover entire walls, flexible ones that can be rolled up like scrolls and windows that operate like giant sunglasses for the office. The company's R&D centre in upstate New York resembles a university campus. Its best scientists have the equivalent of academic tenure (some stay around into their 90s), publishing academic papers and notching up scientific breakthroughs.

The same obsession can be found in all successful tech companies. Amazon sacrificed dividends for years in order to establish its mastery of online shopping. Today it is taking an equally long-term view of the computer cloud by pouring money into servers. Google is putting the riches generated by its search engines into more adventurous technologies. BMW is investing in new materials such as carbon fibre and enhancements such as parking assistance.

Remaining focused on the long term is difficult in a world

Do you blitzscale?

How superstars are made

SUPERSTAR COMPANIES CAN create powerful barriers to entry. Their success allows them to generate huge piles of cash, and that cash allows them to attract talent and buy up competitors. So how do aspiring companies break into the magic circle? The answer depends very much on the industry.

High-tech companies rely on discovering niche markets and scaling up as fast as possible. Peter Thiel, the co-founder of PayPal, points out that almost all successful startups begin by dominating a niche market. Facebook dominated social networking at Harvard University before branching out to other universities and then to social networking in general. Reid Hoffman, who at one time was PayPal's COO, has coined the phrase "blitzscaling" to describe the road to success. The term refers to the Blitzkrieg (lightning war) that Germany pioneered in the second world war. Software allows companies to advance rapidly because the marginal costs of adding new customers is more or less zero. Globalisation has a similar effect because it lowers the barriers to entry across countries. Facebook's old motto, "Move fast and break things", captures the spirit of the Blitzkrieg perfectly.

Blitzscaling is necessary for both offensive and defensive reasons. Offensively, software businesses become valuable only once they have acquired lots of customers. Markets like eBay are not useful until they have both buyers and sellers. Defensively, businesses have to scale faster than their customers because the first to reach those customers often end up owning them.

Blitzscaling initially burns through a lot of cash quickly without producing much revenue. To attract people to a firm with an uncertain future, you have to generate a buzz in the tech world and offer your staff generous stock options. You also have to subordinate everything to immediate problem-solving. Mr Hoffman says that every blitzscaling organisation he has worked in seemed close to collapsing in chaos. "The thing that keeps these companies together—whether it's PayPal, Google, eBay, Facebook, LinkedIn or Twitter—is the sense of excitement about what's happening and the vision of a great future."

The dangers of blitzscaling will become much clearer as technology transforms wider areas of the economy. Theranos, a company that claimed to have invented a new way of testing blood, expanded at breakneck speed before the *Wall Street Journal* revealed that its tests were unreliable.

There are some echoes of this strategy in the emerging world. Emerging-market companies establish a fortress in their domestic markets before invading foreign markets. Grupo Bimbo, which started out as Mexico's biggest baked-goods company, has since become the biggest baker in the United States as well, through a combination of exporting its goods and buying bits of famous American brands such as Weston Foods and Sara Lee. Such emerging-market champions frequently advance at great speed, often buying in more sophisticated skills like branding and R&D by acquiring Western companies. For example, Lenovo, a Chinese computer company, bought Microsoft's ThinkPad division in order to break into foreign markets.

Some of the brightest rising stars are emerging-market tech companies. China's Alibaba, an e-commerce firm, raised $25 billion when it went public on the New York Stock Exchange in 2014, the largest IPO in history. Didi Chuxing, a Chinese taxi service, this summer merged with Uber, which took a 20% stake in the combined company, valued at $35 billion, after a prolonged battle.

Outside the tech industry and away from emerging markets, rising stars often sparkle by consolidating existing markets and squeezing out costs. A prime example is 3G Capital, a Brazilian-rooted company that specialises in taking over mature companies and bringing in its own managers to streamline them. It forces firms in its portfolio to justify their spending afresh every year, consolidate their product lines and trim excess brands. 3G is exceptionally stingy with its managers, making them share rooms on business trips, but also motivates them by giving them stock options. Having started off small in Brazil, it has taken over a succession of beer giants, including Anheuser Busch and SABMiller. Its acquisitions have given it control of a third of the world's beer market and several large food companies, including Heinz, Burger King and Kraft.

Some of the world's most successful family companies practise a gentler version of consolidation, buying up smaller family companies to add scale but allowing them to keep their names and identities. The luxury and drinks sectors excel at this. LVMH, a French luxury-goods company, has acquired a succession of other family companies such as Bulgari, Dior, Krug and Dom Perignon, as has Estée Lauder with Tommy Hilfiger, Bumble and Bumble and Jo Malone.

where public companies are answerable to the stockmarket every quarter, and it turns out that a remarkable number of superstar companies have dominant owners who can resist the pressure for short-term results. According to one study, more than one in ten of tech companies that went to the market between January 2010 and March 2012 had dual voting structures giving their founders extra rights. Both Facebook and Google explicitly justify such structures by the need to pursue long-term projects.

Family companies frequently punch above their weight because their dominant owners are free to think about the long term. Companies in emerging countries typically put more emphasis on long-term growth than on short-term results. The best widely held companies have developed formidable skills at managing the financial markets and making the case for long-term goals.

But investors cannot be expected to be patient for ever; they need a mechanism to tell them when they are pouring money down the drain. Striking the right balance between the long and the short term is the first on a long list of balancing acts that superstar companies have to perform in order to earn their laurels.

All of them set themselves extravagant goals. Coca-Cola does not just want to sell a lot of fizzy drinks, it wants to put a can of Coke within easy reach of everyone on the planet. And when they have achieved those goals, they move the goalposts. Google has expanded its vision from "just" wanting to organise the world's information to wanting to use that information to reinvent transport, beside a host of other things. Amazon, having become the world's biggest bookstore, now wants to be the world's biggest everything store.

At the same time they all pay endless attention to detail. When Steve Jobs was in charge of Apple, he agonised over every tiny detail, down to the exact shade of grey to be used for the signs in its stores' lavatories. Ingvar Kamprad, the founder of IKEA, a homeware giant, continually toured his stores until well

into his 80s (he is now 90). Superstar companies are particularly good at establishing a link between their strategic vision and their everyday operations. Disney, for instance, is utterly committed to projecting wholesomeness.

Great companies combine a strong sense of identity with a fierce hostility to groupthink. Andy Grove, a CEO of Intel, advised CEOs to balance the sycophants they inevitably attract by cultivating "Cassandras" who are "quick to recognise impending change and cry out an early warning". These Cassandras are often middle managers who "usually know more about upcoming change than the senior management because they spend so much time 'outdoors' where the winds of the real world blow in their faces". GE insists that its high-flying executives, most of whom are engineers by training, take courses in painting in order to "loosen them up" a little.

Such companies also regularly reassess their investment decisions in the light of changing markets. McKinsey measured the agility of more than 1,600 companies by looking at how much of their capital they reallocated every year, and found a strong positive correlation between the companies' willingness to move their capital around and the total return to shareholders.

How to stay lithe

Superstars do everything they can to remain agile despite their size. They fight a constant war against bureaucratic bloat, unnecessary complexity and overlong meetings. They often locate themselves in the latest tech hotspot in order to absorb its ideas and energy. In 2014 Pfizer opened an R&D facility with 1,000 employees near MIT in Cambridge, Massachusetts. Apple and Intel have set up R&D labs in Carnegie Mellon's Collaborative Innovation Centre in Pittsburgh. Every car company worth its salt has opened an office in Silicon Valley. They also form close relationships with startups. In 2012 GE launched GE Garages, a lab incubator, to provide startups with access to its experts and to equipment such as 3D printers and laser cutters.

Successful big companies strike a balance between global scale and local roots to become "rooted cosmopolitans". LG, a South Korean conglomerate, can tailor its products for specific markets: microwave ovens destined for east India, for example, have an autocook option for Bengali fish curry. Kraft has re-engineered the Oreo biscuit for Chinese taste buds, using less sugar and more familiar flavours such as green tea.

Such companies also understand that they need to keep undergoing radical changes in order to survive, as companies such as Google and Facebook have done on several occasions. They are even willing to disrupt their own core businesses before someone else does. Netflix disrupted its video-delivery business by embracing streaming. China's Tencent disrupted its own social-media business by introducing WeChat, a platform that allows users to book taxis, order food and so on. Again, GE was a trailblazer. In the 1980s and 1990s its then boss, Jack Welch, decreed that it should be among the world's top three in all the businesses it was involved in, or get out. Now Mr Immelt is restructuring the company for the digital age, selling off GE appliances, buying France's Alstom, investing heavily in the internet of things and moving the company's headquarters to Boston to be closer to the heart of high-tech.

Thanks to all these changes, even the classic companies are becoming more asset- and employment-light. In 1962 Exxon, one of the world's most durable and financially successful corporations, had 150,000 employees; today it has half as many. As for the new breed of tech firms, they typically employ as few people as they possibly can.

But for all their virtues, superstar companies, both old and new, have their dark sides. ■

Downsides

The dark arts

Superstar companies are good at everything, including pushing the boundaries

COMPANIES ARE BY nature competitive. That is mostly to be welcomed, but sometimes their competitive instincts play out in less welcome ways as they engage in some of the darker arts of management. The two most obvious ones are to pay as little tax as is legally possible, and to lobby governments and a variety of other bodies to gain an advantage over rivals. To a greater or lesser extent all companies do this. The big difference is that the superstar companies, being good at everything they do, are also much better than the rest at practising these dark arts and taking them mainstream.

This raises three worries. The first is that they will keep getting better at them, applying the same creative excellence to rule-bending as they do to running their business in general. Second, superstars might use the combination of these and other skills to build up impregnable advantages, giving them growing monopoly power. Third, as their businesses become more mature, they may come to rely increasingly on those dark arts.

Multinationals routinely use foreign direct investment (FDI) in order to reduce the amount of tax they have to pay. They create holding companies to keep their corporate assets in low-tax jurisdictions. These holding companies in turn put their subsidiaries in the most tax- and regulation-efficient jurisdictions, creating a constant cascade of ownership and control. The volume of money moving through such havens on the way to their final destination has risen sharply since 2000 and currently makes up about 30% of all FDI. In 2012 the British Virgin Islands were the world's fifth-largest recipient of FDI, with an inflow of

$72 billion. Britain, with an economy 3,000 times larger, had an inflow of only $46 billion. The Netherlands and Luxembourg also attracted big inflows, and there are many more such hubs.

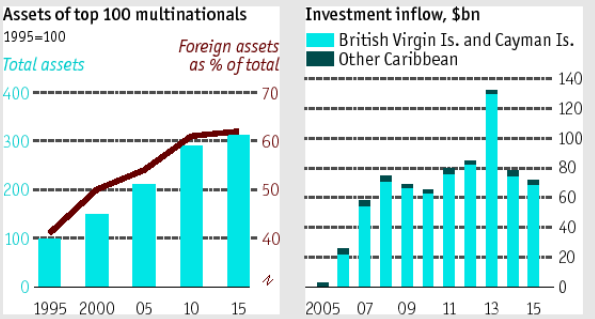
Superstar companies are naturally better at tax and regulation shopping than the rest, partly because of their size and partly because they can afford to employ the best managers and professional advisers. According to UNCTAD, the world's 100 most globalised companies each have an average of 20 holding companies that in turn sit on top of a complicated chain of ownership, part-ownership and co-ownership. More than 40% of foreign affiliates have several national identities because they are co-owned by companies from different countries. The ownership structure of new high-tech multinationals is often particularly convoluted, often more so than that of low-tech companies that have been around for a century.

Such companies have pioneered two highly successful techniques for exploiting differences in tax codes. One is transfer pricing, or charging one affiliate for using intangible assets (such as brands, intellectual property or business services) said to originate in another part of the company. The more that companies rely on knowledge rather than physical assets to make their money, the greater their opportunities for shifting profits from one jurisdiction to another. Apple established a cosy deal with Ireland that allowed it to channel most of its non-American sales and profits through special corporate entities, saving itself €13 billion in taxes over ten years, the European Commission has recently claimed. Google achieved an effective tax rate of 2.4% on its non-American profits in 2007-09 by routing profits to Bermuda, via Ireland and the Netherlands (known as a double Irish).

Another technique is "inversion", or buying foreign companies and shifting nominal headquarters to the junior partner in the acquisition. Pfizer, one of America's leading pharmaceutical companies, contemplated engaging in a giant inversion by buying Allergan for $160 billion and moving its headquarters to Ireland, but retreated in the face of strong political pressure.

Superstars are also devoting increasing resources to lobbying, an industry that is at its most advanced in America. Companies and their associations are easily America's biggest lobbyists, accounting for over 70% of all expenditure on lobbying. And the biggest companies are pulling ever farther ahead of their smaller rivals in getting their voices heard. Lee Drutman, of New America, a think-tank, points to a paradox. The past 20 years have seen an enormous increase in lobbying, with more than 37,700 interest groups now saying they are active in the field, but a handful of organisations seem to dominate the conversation. They are having to spend ever more to retain their position. Back in 1998, the minimum an organisation had to shell out in order to be included among the top 100 spenders was $2.4m. By 2012 that sum had nearly doubled, to $4.4m.

Sunny dispositions



Sources: UNCTAD

Friends in Washington

Superstar firms will generally keep a dozen or more full-time registered lobbyists of their own on Capitol Hill, but also use a couple of dozen lobbying firms to be called upon as and when needed. This allows them to keep constant pressure on lawmakers to advance their cause, as well as to flood Congress with extra hired hands in the event of a crisis.

Tech giants have been particularly successful in getting their voices heard. They were originally reluctant to play the lobbying game, but soon realised that was a mistake: Microsoft's prolonged legal battle with the Department of Justice over whether its was abusing its dominant position in the software market, which was finally settled in 2001, persuaded the whole industry that it pays to have friends in Washington. Since then tech companies have turned into some of America's most assiduous lobbyists and most enthusiastic employers of Washington insiders. Barack Obama's former press secretary, Jay Carney, now works for Amazon and his former campaign manager, David Plouffe, has joined Uber.

Investment in lobbying is paying bigger dividends than in the past as the federal government extends its power over economically sensitive areas such as health care and financial services. Lobbyists can earn their keep by influencing the direction of the debate. For example, back in 2003 the pharmaceutical industry pushed successfully for a revision of America's Medicare health-insurance programme for older people. This included a new prescription-drug benefit but no measures to control the costs of that benefit through means-testing or bulk-buying. John Friedman, an economist at Brown University, estimated the resulting benefits to drugmakers at $242 billion over ten years, a healthy return on the $130m the industry spent on lobbying in the year the law was passed.

The American government has also got into the habit of producing open-ended pieces of legislation such as the Dodd-

Frank financial-reform bill, which ran to 2,319 pages. Again, lobbyists can earn their keep by writing bits of the legislation, as they clearly did with Dodd Frank, or by lobbying Congress over its interpretation.

Companies are also becoming more ambitious in what they are trying to achieve. In the past they put most of their effort into heading off tax increases or regulatory changes that might damage them; today they are trying to boost their profits and shape future markets. In his book, "The Business of America is Lobbying", New America's Mr Drutman shows that companies are increasingly using lobbyists to set the terms of the debate by funding Washington's innumerable talking-shops, then putting pressure on politicians and officials to ensure that the legislation works to their advantage.

Habit-forming products help companies squeeze even more money out of their customers

The same pattern is being repeated in the European Union. The Corporate Europe Observatory, an NGO, calculates that Brussels is home to at least 30,000 lobbyists, almost the same number as the staff employed by the European Commission. These official lobbyists are part of a large army of people who try to influence legislation and regulation for more than 500m European citizens.

The revolving door

Superstar companies are hiring the best lobbyists and employing the most prominent politicians. In July this year José Manuel Barroso, until recently president of the European Commission, joined Goldman Sachs, a bank, as the non-executive chairman of its international arm, replacing Peter Sutherland, a former EU trade commissioner. Mr Barroso's appointment has caused widespread protests. Such high-profile recruits not only give big companies access to information about past policy-making, they allow them to influence serving politicians who would like to join the board of a big company when they retire.

Superstar companies are also particularly good at getting inside their customers' skin and shaping their habits. Great companies have excelled at doing this since the birth of mass advertising in the 1890s, but today's superstars are using modern science to push advertising into areas that have not been tried before, raising difficult ethical questions about what "free choice" means in a capitalist economy.

Many of the new tech giants are at heart advertising companies: they persuade customers to give away personal details (for instance, by allowing them to Google something or Facebook a friend without charge) and then selling that information, duly anonymised, to their clients. These internet services are not really free. Users are paying for them indirectly by allowing the companies that provide them to gather information about their online behaviour through cookies (small pieces of code) lodged in their computers.

Professional data-miners use this information to build up detailed pictures of what people have bought in the past ("history-sniffing"), and how they have gone about it ("behaviour-sniffing"). They can use this information to draw people's attention to products they might want to buy in the future or to bargains that are on offer. They are getting increasingly sophisticated about predicting users' behaviour, working from hidden signals. For example, when people are depressed, they tend to post darker pictures online than when they are feeling cheerful.

Tech companies take advantage of the fact that a large number of tech products are habit-forming. A typical user reportedly checks his smartphone at least 150 times a day. This is mainly because many tech products are interactive. In his book, "Hooked: How to Build a Habit-Forming Product", Nir Eyal points out that services such as Facebook and Twitter are constantly being adjusted according to what users put into them and comments from their friends. Internet entrepreneurs devote a lot of thought to getting users hooked on their products, providing them with endless feedback (such as beeps and pings) in order to keep them coming back. Habit-forming products help companies weave their devices into their customers' daily routines and squeeze even more money and information out of them.

That pervasive influence is now being extended into new parts of the economy. Google is using its mastery of information to work on interactive "smart homes" that can be controlled from afar. It may not be long before the company starts suggesting what people need to put in their fridge and where they can get the best deal on their groceries. Amazon, meanwhile, is relentlessly extending its retail empire, drawing on its command of information and logistics. Apple and other companies are trying to anticipate what consumers might want before they know they want it, and then co-ordinate networks of app-makers to ensure that their devices arrive fully loaded with those apps.

This has produced an extraordinary situation. Tech companies have persuaded their customers to carry devices in their pockets that can constantly nudge them in some direction or other. Seventy years ago Vance Packard wrote a bestseller called "The Hidden Persuaders" which revealed some of the sophisticated psychological techniques advertisers then used to persuade consumers to buy their stuff. Today billions of people voluntarily carry around their own private "hidden persuaders" that allow global behemoths to monitor their behaviour and influence their choices. "We know where you are," says Eric Schmidt, the chairman of Alphabet, Google's holding company. "We know where you've been. We can more or less know what you're thinking about."

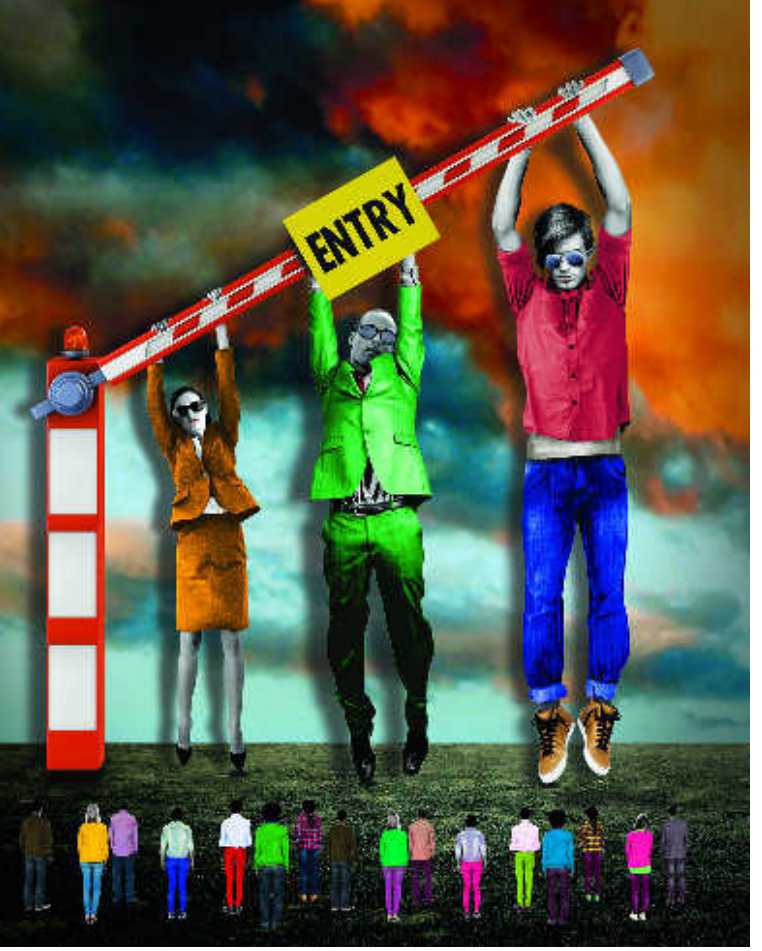
But increasing numbers of consumers are becoming disillusioned with big and powerful companies. That is generating a growing backlash. ■

Future policy

A delicate balance

How to keep the superstars on their toes without making them fall over

ARTHUR SCHLESINGER, A historian, claimed that American history moves in 30-year cycles, with each period responding to the excesses of the previous one. The laissez-faire Gilded Age that ended around 1900 led to the progressive era, when government stepped in to regulate business and create a social safety net. That was followed by the laissez-faire roaring 20s, which in turn led to the New Deal and then the pro-business Eisenhower era, followed by the progressive 1960s and the laissez-faire Reagan era. Schlesinger's theory of 30-year cycles doesn't quite work: the roaring 20s, when President Calvin Coolidge pronounced that "the business of America is business", interrupted a long cycle of pro-government progressivism. But his



point about each era reacting to the excesses of the previous one is surely right. The long pro-business era that began under Ronald Reagan in the 1980s and continued under Bill Clinton in the 1990s is giving way to a much more anti-business mood.

The Republican Party, the traditional party of business, now has a presidential candidate who fiercely rejects corporate America's two most cherished policies, free trade and liberal immigration. "I am not going to let companies move to other countries, firing their employees along the way, without consequences," Donald Trump warned in his acceptance speech for the presidential nomination in July.

His Democratic opponent, Hillary Clinton, bruised by a powerful challenge from Bernie Sanders, has chastised big companies for "using their power to raise prices, limit choices for consumers, lower wages for workers and hold back competition from startups and small businesses". The share of Americans who hold "very" or "mostly" favourable opinions of corporations has fallen from 73% in 1999 to 40% today, according to the Pew Research Centre. Surveys by Gallup of views on big business show less extreme swings, but point in the same direction (see chart). Over 70% of America's population believes that the economy is rigged in favour of vested interests.

Such growing hostility to business is in evidence across the rich world. Britain's decision in June to leave the European Union was driven in part by popular discontent with big business, which had lobbied heavily to remain. Many continental Europeans are becoming ever more vocal in expressing their long-standing doubts about "Anglo-Saxon capitalism".

This backlash against big business is already having an impact on policymakers. The antitrust division of America's Department of Justice says that under President Obama it has won 39 victories in merger cases—deals blocked by courts or abandoned in the face of government opposition—compared with 16 under George W. Bush. Those victories included a string of blockbuster deals such as Comcast's proposed bid for Time Warner Cable and Halliburton's planned takeover of Baker Hughes. The European Union has launched a succession of tough measures against Silicon Valley's tech giants, such as asking Apple to stump up billions of euros in allegedly underpaid taxes in Europe, and allowing European news publishers to charge international platforms such as Google that show snippets of their stories. Britain's new prime minister, Theresa May, has said that she may cap CEO pay and put workers on boards. Governments worldwide have started co-operating to curb the use of tax havens.

This special report has shown that there are good reasons to worry about corporate consolidation. The age of entrepreneurialism that started in the early 1980s is giving way to a new age of corporatism. This has been particularly true in the world's most advanced economy, America, and in the world's most knowledge-intensive industries. Big companies have been getting bigger and putting down deeper roots. In the technology industry a handful of companies have grown into giants in a couple of decades and are now making sure they stay on top, hoovering up talent, buying up patents and investing in research. At the same time the rate of small-business creation is at its lowest level since the 1970s.

The perils of consolidation

Such consolidation is worrying for lots of reasons. Overmighty companies exacerbate inequality because they reap abnormally high profits and allow senior managers to pocket an unseemly share of them. The proportion of corporate income going on the pay of the top five executives of large American public companies increased from an average of 5% in 1993 to more than 15% in 2013, even though research has shown that there is a negative relationship between CEO pay and performance (see chart on the next page).

Such companies also create political problems by concentrating power in the hands of fewer people. The more entrenched companies get, the more unhealthy their relations with government are likely to become as they employ large numbers of lobbyists and put former politicians on their boards. The tech companies have added a new concern by amassing unprecedented volumes of information on ordinary people.

But a great deal of anti-business sentiment is also being driven by xenophobia, protectionism and resentment. Utopian socialists such as the leader of Britain's Labour Party, Jeremy Corbyn, dislike business in any shape or form. Right-wing nationalists such as Donald Trump and France's Marine Le Pen dislike foreign business giants rather than business giants as such. The European Union's crusade against America's tech giants is partly based on protectionism.

Reputational damage

How much faith do you have in big business, % responding in US

Source: Gallup

As the backlash against big business mounts, three things need to be kept in mind. First, the superstar companies at the heart of the current consolidation of capitalism are for the most part forces for progress. Apple's iPhones and iPads have become people's constant companions because they are portable miracles. In disrupting many industries, tech giants are changing them for the better. Uber provides a service superior to that of established taxi companies, and is forcing them to improve. Airbnb offers a cheap and convenient alternative to hotels. Some high-tech companies, such as Amazon and Uber, exert downward pressure on prices. Others, such as Google and Twitter, provide services without charge. McKinsey calculates that consumers in America and Europe alone get about $280 billion-worth of "free" services—such as search or directions—from the web that would once have cost their users a significant amount of money or time.

Vijay Govindarajan, of the Tuck School of Business at Dartmouth College, points out that big companies can solve economic and social problems that are too big for small companies and too complicated for governments. They have the financial muscle to make long-term investments, the global scale to mobilise resources across borders and the management skills to deliver on their promises. They can use their expertise in supply-chain management to get resources to the poor or teach governments and NGOs how to do it. They can use their scale and management expertise to co-ordinate many different resources, spread best practice across the world and scale up clever ideas.

Don't overdo it

The second point is that government intervention can easily backfire. The European Union's hard line on American tech companies such as Apple or Google threatens to provoke a trade war between the world's two biggest trading blocks, partly because the EU's rhetoric is so fierce and partly because its methods, such as trying to force Apple to pay taxes retrospectively, are so questionable. Regulation that is supposed to promote competition can often have the opposite effect, killing off small companies and protecting big ones by raising barriers to entry. Regulation meant to prevent companies from getting too rich can sometimes discourage them from making long-term investments in research. Policymakers need to balance consumers' preference for lots of competition against businesses' legitimate desire to reap appropriate rewards from their investments.

In his book, "Capitalism, Socialism and Democracy" (1942), Joseph Schumpeter argued that concentration is both a cause and a consequence of success. Successful companies race ahead of their rivals in order to enjoy the advantages of temporary monopolies. They invest the super-profits that they gain from those temporary monopolies in more R&D in order to stay ahead in the race. Great firms "largely create what they exploit", as he put it. Rob them of the chance of exploiting what they create, and they will stop investing.

The third point is that the decline in entrepreneurialism is more often the fault of bad government than of big business. In the European Union the proposed single market in services is being strangled by national regulation. Even in supposedly freewheeling America, regulation has quietly become more obtrusive. The share of jobs that require licences has increased from 5% of the total in the 1950s to more than 25% today, including occupations such as hair-braiding and interior design. Doctors who want to be reimbursed by medical insurers have to fill in a form with 140,000 coding categories, including 23 different codes for spacecraft-related injuries. Firing a worker who is not pulling his weight is an invitation to file a lawsuit.

The great policy challenge of the coming years is to deal with legitimate worries about business concentration without succumbing to anti-business sentiment that will punish success and reduce overall prosperity. Policymakers will need to become more vigilant about preventing business concentrations from developing in the first place. In the 1980s and 1990s, when many markets were opening up, antitrust authorities were probably right to give the benefit of the doubt to business, but now they will need to think again in the face of so much more concentration.

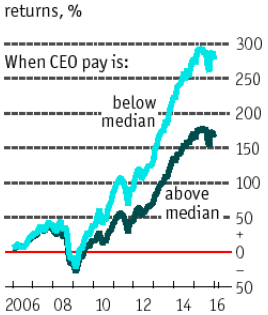
Above all, policymakers need to revamp antitrust policy for a world based on information and networks rather than on selling lumps of stuff. Up to now companies such as Uber have focused on running ahead of regulators, quickly building up a body of loyal customers and then daring the regulators to challenge them. Antitrust authorities need to start setting the agenda by examining the ways that digital companies are using network effects to crowd out potential competitors, or inventing new ways of extracting rents by repackaging other people's content. But the regulators must also beware of trying to load too much onto the rules: the point of antitrust policy is to promote competition and hence economic efficiency, not to solve problems such as inequality.

Policymakers also need to get much tougher on the dark arts of management such as tax-dodging. Superstar companies are already making impressive returns; there should be no need for fancy tax-avoidance schemes that undermine the legitimacy of the system in the eyes of the public. But any moves to discipline companies need to be made multilaterally in order to prevent potential trade wars. And excessive government is as problematic as excessive corporate power.

This special report started by quoting Theodore Roosevelt thundering about the evils of giant corporations before a crowd in Kansas. Once again, the world needs some thunder about the excesses of giant companies, which are beginning to produce a popular backlash that threatens the success of the global economy. But there is a need for subtlety too, so that consolidation is challenged without discouraging innovation, and excesses are curbed without overregulation. Policymakers must aim to promote vigorous competition so that the world keeps existing superstars on their toes but also continues to create new ones. ■

Perverse incentives

Cumulative total US shareholder returns, %



Source: MSCI ESG Research