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Helen Barrett

Red carpet award



Merit seems a sound basis for financial help – but what does it mean for social mobility?

Business school is beyond the means of most and a stretch for many. According to research by my FT colleagues who specialise in data analysis, the average total cost of a full-time MBA programme at a top 100 school is about \$200,000.

Not only do most courses come with a hefty price tag, they also carry an opportunity cost as students forego salaries. Bundle those opportunity costs with tuition fees and living expenses and that \$200,000 figure looks daunting to all but the wealthiest prospective students.

Schools recognise this and most offer all manner of financial help across their programmes, such as grants, bursaries, scholarships and stipends. Some are merit-based, others are allocated on the basis of need to those with limited resources — and some schools and awards are more generous than others.

A few students get a business education free of charge. Whether or not you think that is fair, often depends on how likely you are to benefit. Recently, the focus at the top schools seems to be on merit rather than just need. Deans I talk to are increasingly competing to offer free everything to the brightest students.

Paulo Manoel is a good example. When he enrolled as a PhD student at Haas School of Business at University of California Berkeley in the US, he was granted a fellowship that covered tuition fees and a stipend for living expenses. The package meant Manoel chose Haas over its rivals.

All PhD students at Haas receive tuition fees and a stipend. This perhaps explains how the school runs a hyper-competitive PhD programme, admitting only 7 per cent of applicants.

Haas is quick to point out that it is not just stars who receive at least partial financial aid — about 50 per cent of its MBA class receives scholarships. This academic year, it has spent \$3.5m



In US business schools, those subsidised students are expected to give back in the form of donations after they graduate

on full-time MBA awards. But it must compete with other leading US schools to attract the brightest, which is why its offerings are so eye-catchingly generous.

Dean Richard Lyons told me that generous assistance is not only for PhD students. “We’re seeing a dynamic at the top end, where the effective price of an MBA is going to zero,” he says.

Why would schools subsidise resourceful students to the point where they receive an elite education at a discount and in some cases free of charge? In US business schools, and

increasingly in European schools, those students are expected to — and will — give back in the form of donations after they graduate, with tax incentives on top. So the financial logic is sound.

Besides, it makes sense to reward the best — elite schools are all about excellence after all. And why should business schools concern themselves with helping only the less well-off? The average age of an MBA student is 28 — surely the benefits of wider social mobility programmes should have kicked in long before students arrive at business school?

But even if the arguments for merit-based rewards are sound, an increased emphasis could fall out of step with broader concerns about social mobility. Critics may say the focus on merit does not spread the advantages of cost relief widely enough. Students who receive an elite business education free of charge do so regardless of how wealthy they may have been to start with. Those who do not, must make ends meet the best way they can, whether that includes a contribution to their costs or not.

Top schools compete fiercely to stay at or near the top of rankings such as the one we publish today. The most important factor in our rankings is alumni salaries three years after graduation — and the brightest students are likely to earn the most. So it is wise for schools to concentrate resources on those with the potential to buoy their position. And everyone, faculty and alumni, will benefit from a school’s continued high rank for years to come.

As it happens, Paulo Manoel is not wealthy. Quite simply, the Brazilian’s award made study at Haas possible. “My savings would not have been enough to pay for the costs,” he says.

For him, a free elite business education has transformed his life and his career, and he and his school will reap the benefits for years to come. **B**

Della Bradshaw on MBA rewards, p18

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Rebuilding the brand

With competition increasing in the MBA market, business schools are rethinking their courses to attract the top students, writes Jonathan Moules

Bhavik Trivedi's job as director of MBA admissions consultancy Critical Square creates a delicate relationship with business schools.

"They know what we do, helping people find the best schools, but then insist on our clients signing things saying they have not had any outside help with their application," he explains.

This year, however, the schools have been sending letters to Trivedi's office, not to complain but to make sure that he is well informed about the attractions of their MBA programmes. "They want to make sure we are sending them the right kinds of candidate," Trivedi says.

Competition is increasing in the MBA market. Attracting the best candidates is an issue even for the top business schools. Harvard Business School has a 10 per cent acceptance rate because it filters out so many applications, but still worries about finding the elusive group of top candidates, according to Trivedi.

Most MBA providers would dearly love to be in this position. The latest

survey of business schools by the Graduate Management Admission Council, which oversees the GMAT application exam, found that for the first time since 2012 less than half of all institutions saw an increase in applications.

In the US, 53 per cent of schools running full-time two-year MBA courses reported a decline in application numbers in 2016, while 40 per cent had growth. The percentage of business schools worldwide reporting growth in applications fell for a third year running, from 61 per cent in 2014 to 57 per cent in 2015 to 43 per cent in 2016.

The figures hint at a flight to quality, where the highest ranked



Finding the best: Bhavik Trivedi is director of MBA admissions consultancy Critical Square

The highest-ranked schools, with strong global brands, are seeing record numbers of applications. But even they are fighting for the best candidates

ILLUSTRATION: NICK LOWDNES





schools, which have built strong global brands, are seeing record numbers of applications. But even these schools are fighting for the best candidates because the top students are not always to be found in the traditional pipelines of management consultancies and investment banks.

The full-time MBA at Chicago's Booth School of Business has been in the top 10 of the FT's ranking for several years. Applications were up more than 20 per cent this year and the school also saw an increase in female candidates.

However, Douglas Skinner, Booth's dean, acknowledges that even his school is caught in a battle for the best applicants. "Our answer to that is we need to keep developing new programming to keep students interested in being on campus and to increase the value for them," he says.

A gift of \$5m from an alumnus enabled the school to offer workshops for recent graduates interested in developing start-ups to address social problems. The school has also introduced additional practical courses aimed at students interested in entrepreneurship, including a class on how to find and acquire small businesses with the aim of growing them.

Highly ranked schools are showing signs of pulling further ahead of the pack, helped by increased applications and their appeal to desirable employers. This is leading to greater disparity of resources between the top institutions and those further down league tables. There is a place for some schools to compete on price, but this leaves a large number of middle-ranking schools stranded in between.

Location remains an important factor for applicants. Vlerick Business School in Belgium last year relocated its MBA programme from Leuven, a provincial capital, to its new campus 25km away in Brussels. A year later applications were up 25 per cent. Four fifths of Vlerick's MBA class was born outside Belgium.

"For these people studying in an international city is important," says Yolanda Habets, head of Vlerick's MBA programme. "For those looking beyond graduation, Brussels is able to provide connections both on a professional and government level."

Rotterdam School of Management (RSM) has several factors in its favour. It is a highly ranked school, its full-time MBA takes only a year and the programme is taught in English. The school has marketed itself widely internationally and only 5 per cent of this year's 98 successful applicants are Dutch. Despite all of this, applications for 2017 were down slightly.

TOP RANKING SCHOOLS

The FT top 25 full-time MBAs in 2017

Rank	School name	Weighted salary (\$)*
1	Insead	167,657
2	Stanford Graduate School of Business	195,322
3	University of Pennsylvania: Wharton	181,634
4	Harvard Business School	178,113
5	University of Cambridge: Judge	164,462
6	London Business School	154,567
7	Columbia Business School	172,624
8	IE Business School	168,923
9	University of Chicago: Booth	168,200
10	Iese Business School	147,596
11	Ceibs	159,870
12	Northwestern University: Kellogg	164,326
13=	MIT: Sloan	165,716
13=	University of California at Berkeley: Haas	168,163
15=	HKUST Business School	149,538
15=	Yale School of Management	158,206
17	Esade Business School	146,127
18	Dartmouth College: Tuck	165,414
19	New York University: Stern	150,859
20	HEC Paris	132,073
21	IMD	154,511
22	SDA Bocconi	129,064
23	University of Michigan: Ross	149,728
24=	Duke University: Fuqua	150,212
24=	Nanyang Business School	126,218

* The average salary three years after graduation, with adjustment for variations between industry sectors.

Full ranking on pages 30 to 35

Brandon Kirby, RSM's head of MBA applications, attributes the fall to declining demand from Europe and the US. It would have been worse, he adds, had applications from Latin America and Asia not risen in the past year.

"Given all that is going on around the world, with Donald Trump's election and Brexit, there are a lot of people waiting on the sidelines to see how things play out," Kirby says.

Schools at the top of the table are highly selective, have invested significant resources into their image and have secured top-quality academic faculty teams to create the best research and teaching materials.

Prof Skinner at Chicago Booth defends the traditional campus-based two-year degree model against shorter or online courses, claiming that the face-to-face elements of learning are what Booth students value the most.

"Students love coming to class because they enjoy the interaction with each other and the facilities available,"



Prof Skinner says. "I don't see campus teaching going away."

Only a handful of the top schools in the FT ranking also offer a well-respected online MBA.

Online course material is useful for teaching standardised elements of the MBA, such as the basic microeconomics course, Prof Skinner says. He dismisses online teaching using downloadable videos and other formats, known as massive open online courses, or Moocs, as a mere digitisation of textbooks.

"I probably worry less about the threat of those courses than [other schools do] because it is the top faculty like ours who are the people developing this content," he says. "People come to us to meet the professor in person, who can then open up the subject in the classroom."

One big change is MBA students' destinations after graduation. The top employment route for Chicago Booth is management consultancy posts, but investment banking has been replaced as the number two choice by roles in technology businesses such as Amazon

and Google. This creates a pressure to add new classes to the core MBA course, such as coding. However, Prof Skinner would rather make such subjects optional electives, noting that fashions change remarkably quickly.

"I remember circa 2000, when a lot of business schools were looking to hire [specialist] faculty and deliver case studies on dotcoms, but this proved very transitory," he says. "You have to be cautious about how you change."

While some US business schools are struggling, many of their European counterparts, which offer 12-month MBAs, are seeing more applicants. Imperial College Business School in London is among the schools enjoying an increase in applications this year, something Diane Morgan, Imperial's associate dean of programmes, attributes to the school's location and heritage. "It attracts students who want to be at the centre of finance, innovation and London's arts and social scene," she says.

The advantage for European schools is that the market is less mature than the US, which means that people are still discovering the qualification, according to Morgan. "We find students who are looking for a one-year masters degree then find the MBA a better option," she says.

The MBA market may be increasingly tough for many schools, but there are still opportunities for those institutions in the right place with the right brand. **B**

A big change is where MBA students go after graduation. Investment banking has been replaced by technology

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Delivery problem



Technology's impact on the way we work creates insecurity and fuels angry politics

Born in rationality, management has always welcomed science and technology as allies in its struggle to increase predictability and limit risk. The more variables that can be captured in data or embedded in code, the assumption runs, the smaller the margin left to chance and fallible human guesswork.

But in recent years, technology has itself become a source of work-related uncertainty, rather than reducing it, as tech-fuelled industries undermine old ones. Concern about jobs and security has fuelled the angrier politics that have come to the UK and US in the forms of Brexit and Donald Trump and threaten to do so elsewhere. The apprentice is running the show and the sorcerer is scrambling to know what to do.

Management is caught in the crossfire. The technological faultline ran right through proceedings late last year in Vienna at the Global Peter Drucker Forum, named after the father of modern management. Prominent thinkers gathered to thrash out their concerns.

Some techno-optimists welcome the deepening of the information era. They do not see big data, robotisation, machine learning and artificial intelligence as harbingers of a workless future. Rather, aided by the internet of things and 3D printing, these developments will end corporate wage slavery and enable an entrepreneurial society in which a skilled worker can act as an enterprise of one.

They argue that as software eats the world, use of data will strip away inefficiencies. "The society of entrepreneurs will come about — it's inexorable," said one speaker. "Artificial intelligence will take over our jobs. Organisations will shrink as transaction costs diminish... There's a fabulous opportunity with great technology to transform the world of work."

In the other corner are those who worry that while science is a boon, the reductiveness and hubris it can



bring are not. Why should technology automatically rank economics above human desires? A speaker noted that a poll by Gallup found that what most people now want is not peace, family and security, as in the past, but a good job with a pay packet. This is a remarkable shift. When regular employment is statistically linked by Gallup to higher GDP per capita and more speculatively by other researchers to lower inequality, who is to say the respondents are wrong?

A panel chair illustrated the fork in the road with two companies: Analogic and Deliveroo. Both are valued around £1bn, but that is about all they have in common. Analogic is 40 years old, modestly profitable and employs 1,500 people making advanced medical and security equipment. Deliveroo is a three-year-old loss-making UK internet start-up delivering restaurant meals to home diners. Its couriers are not employees but independent contractors. Some, alleging "Slaveroo" conditions, are campaigning for union rights and the minimum wage.

The jobs people want are Analogic. Those they will get are Deliveroo. Luminaries in Vienna lamented that established companies no longer do innovation or entrepreneurship. All the incentives — direct cost, tax, preferences of the capital markets — favour offloading responsibilities once borne by companies on to individuals.

That might matter less if the entrepreneurial economy was taking up the slack. But the forum heard that the US economy was ageing, with more companies dying than being born, and that the rate of new business formation had fallen by about half since the 1970s. There were "thousands of \$1bn opportunities" going begging, insisted Curt Carlson, an innovation consultant. "But we're doing a pretty terrible job at exploiting them."

Meanwhile, companies such as Uber and Deliveroo are disrupters, but they shake up industries rather than create new ones. They redistribute value rather than generate it. What people gain from efficiencies as consumers they lose as workers, which makes this kind of innovation a zero-sum game. Some at the forum saw in these companies the beginnings of a customer- rather than shareholder-focused economy. From evidence so far, this may not be much of an improvement for wider society.

Technology is not destiny, a White House report on automation and artificial intelligence reminded readers. "The direction of innovation is not a random shock to the economy but the product of decisions made by firms, governments, and individuals." In other words, it can and should be shaped, to amplify the best effects and temper the worst.

Peter Drucker himself would surely have agreed. Deliveroo or Analogic? Are managers taking the historic responsibility for using technology to augment and complement humanity, he might have asked. Or, by increasing insecurity, are they widening the gap for populists and worse to fill? **B**

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Judy Olian Frontier fighter



Martine Rothblatt has leapt boundaries in science, technology and gender

Entrepreneurs who beat the odds and build a single strong business intrigue me. Successful serial entrepreneurs, those who create multiple pioneering businesses, amaze me. Only a handful qualify as members of that exclusive club.

Steve Jobs and Elon Musk are two, and the list has to include Martine Rothblatt, a brilliant innovator and leader who has defied many odds and conventions. Rothblatt is chairman and chief executive of United Therapeutics, a biotech company she founded in 1997 that makes drugs for rare pulmonary diseases and is valued at \$6bn. (Full disclosure: I serve on the company's board of directors.) She also founded Sirius Satellite Radio, now SiriusXM.

Rothblatt is many people. She is a lawyer, an MBA and a PhD in bioethics. She is the author of six books, among them *The Apartheid of Sex*, *Unzipped Genes* and *Virtually Human: The Promise — and the Peril — of Digital Immortality*. She is transgender: she attended UCLA Law and UCLA Anderson in the late 1970s to early 1980s as Martin and some 10 years later transitioned to become Martine. Her wife then and now, Bina, and their four children, are a close-knit, loving family.

When she was an MBA student, Rothblatt realised that by creating more powerful satellites, shrinking receiving antennas and digitally strengthening the audio signal, a nationwide satellite broadcast radio system could be created in a specific band of radio frequencies. She persuaded the authorities to shift the use of these valuable frequencies from other industries to her new concept of satellite radio. That became Sirius Satellite Radio.

Several years later her eight-year-old daughter, Genesis, developed a lung disease that was usually fatal. Rothblatt learned of a potentially useful drug compound, deployed researchers to develop it, took it through clinical trials

and approval and commercialised it and related therapies. Today, her daughter is thriving in her 30s and thousands of others also benefit from the drugs.

Rothblatt's next frontier is the development of regenerative organs. She is experimenting with growth of kidneys, hearts and ultimately lungs in laboratories for transplant, in an attempt to solve the problems of supply and rejection. She is also creating an electric helicopter for organ delivery that is non-polluting, safer and quieter. There's more: "Bina48" is an example of her exploration of machine-based human consciousness, an attempt to ensure that an individual's thoughts, emotions and mannerisms live on after death. The first model for this proof of concept robot is Bina, her wife.

What is the essence of this renaissance thinker, trailblazing innovator and very successful doer? I think of four qualities. None is unique, but the combination is inimitable. First, she is a pragmatic problem solver, but the problems she chooses are "big, hairy and audacious" in the words of business strategist Jim Collins. Yet she does not see herself as a

dreamer; she dives into a challenge and learns about it from the bottom up. She is resilient, too — setbacks are expected, an invitation to approach a challenge from another angle.

Second, she is a leader who inspires others with her authenticity. The workforce of 750 at United Therapeutics feels her integrity and belief in her work. She articulates clarity of purpose — employees know that her daughter's life and others have been transformed. They see a person who is open and honest, who has confronted her own gender identity questions, who is open to differences of all kinds. It is no accident that her company is scored highly by Just Capital, which ranks businesses on their "just" policies and practices.

Third, her curiosity and hunger for creative ideas are evident in every conversation. She insists on a culture of exploration and experimentation. Her life is about crossing boundaries and she sees them as unnecessary constraints, both personally and intellectually. I believe her drive to transcend boundaries has been essential to her success as a pioneering innovator.

Fourth, Rothblatt is a powerful communicator. She can speak to scientists, regulators, a TED audience or a group of sales employees and explain complex concepts in ways that suit each. Because of her communication style, her ideas have bred loyalty within the company and attracted business and regulatory partners who have been essential to her entrepreneurial successes.

Rothblatt's life story is remarkable. It is inseparable from the qualities that have taken her on a journey of pragmatic problem solving, authentic leadership, boundless experimentation and powerful communication. She will continue to beat the odds. Trust me, she will upend and improve the world — again. **B**

Judy D Olian is dean and John E Anderson chair at UCLA Anderson School of Management

Boundless ambition: Martine Rothblatt of United Therapeutics has repeatedly defied convention





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The next stage

BY JOANNA SKAO
PHOTOGRAPHS BY PASCAL PERICH

Impresario Jordan Roth landed one of the top jobs on Broadway halfway through his MBA

Jordan Roth's office, in the heart of Broadway, is not a stereotypical executive's lair. There is a large illuminated "THEATRE" sign instead of conventional office artwork; white walls bear no trace of memorabilia from his education or career; and a rectangular conference table that seats eight. "The only thing a desk is good for is collecting stuff and separating people," says the president of Jujamcyn Theaters, one of New York's three big multi-theatre owners.

Nor is Roth a stereotypical executive. Now 41, he is the youngest theatre owner on Broadway by more than a decade. He produced his first Broadway show at the age of 25 and became president and co-owner of Jujamcyn Theaters in 2009 aged 33 (he is now the majority shareholder). He oversees 500 employees and five of Broadway's 40 theatres in addition to producing several shows and being involved in non-profits and personal projects.

Roth does have a small standing desk next to a set of drawers where Tony and Olivier awards and photographs of his family are displayed. Above it



Leading role:
Jordan Roth
in his office

Roth was announced as president of Jujamcyn Theaters on the first day of his third term

is a whiteboard showing no hint of use. Clutter is not in his vocabulary. Roth calls his room's look an "edited palette", an aesthetic that has evolved over time.

"There's a time in your life where you want to see the physical representation of everything that you've ever done or touched," he says. "You may come to that part of your life midway, or later down the road, or you may start there and want to evolve to an edited palette," Roth says. "I'm in edited palette phase. Welcome."

Reflection and evolution, from office aesthetics to lifestyle to leadership style, are important parts of what has made Roth successful. He has a quick wit and speaks with bursts of energy when inspiration hits. But for a man juggling many roles, he is anything but frenetic. Taking time to think through changes in life seems to be his constant. "I enjoy the grapple," he says. "You know what? It doesn't even matter if I enjoy it. It is who I am. It is how my brain works, it is how my heart works."

Roth grew up in New York City attending Broadway shows. It is a family tradition — his mother, Daryl Roth, is a Tony award-winning Broadway producer. (His father, Steven, is a billionaire property investor.) Roth knew early in life that he wanted to work in the theatre, but it was not until after college that he considered going into the business side of the industry instead of performing.

A friend invited him to a workshop about an adaptation of Shakespeare's *A Midsummer Night's Dream* told entirely through disco music that was showing in New York at the time. "I went to check it out, fell in love and started imagining it in a different space with enhanced costumes and a larger cast and I realised I was producing it in my head," Roth says. "Soon I was producing it in reality and that became my first show, *The Donkey Show*." It ran for six years.

Roth knew he wanted to go to business school at some point, given his longtime interest in the nexus of art and commerce. While he had experienced success as a resident producer at Jujamcyn before going to Columbia Business School in New York, he felt like he was missing some "hard skills".

Roth started at Columbia in 2009, while vice-president at Jujamcyn. Many

in his position would have chosen to do an executive MBA, but he decided to do the full-time MBA programme to get the complete experience. He wound down his projects and worked out a schedule so that he could spend blocks of time in class.

But while Roth had plans to keep his work and school schedules manageable, not everything can be predicted. After the first of the two years, Roth's predecessor at Jujamcyn was tapped to run the National Endowment for the Arts, the funding body, expediting the process in which Roth would take over the company. He was announced as the president of Jujamcyn on the first day of his third term at business school.

"We sent out the release, I did a bunch of interviews and then I went to class," he says. "That actually turned out to be insane, but perfect."

Being president of a company while an MBA student meant that Roth could take concepts from the classroom and use them in the office right away. He credits business school with shaping his leadership style, entrepreneurship and role at Jujamcyn. "The big win for me was time and input around what is it to lead — what are each of our individual points of view about the kind of leader we want to be," he says.

He asked himself: "What kind of a culture do I want to work in and how do I create it if I'm not working in it right now? These are not the everyday 15 meetings and 17,000 emails and 400 phone calls kinds of thoughts.

"They require time and guidance and input — input from others and input from readings, from lectures, from 'let's look at other companies,' input from peers. And then all of that is funnelled into your own head and heart and soul and self."

One aspect which Roth started to work on almost immediately after graduation was transforming the company into a service business and perfecting the "kerb to kerb" experience. "It's everything that happens, starting down the street as you approach this building and what it looks like and the lights that are shimmering and the energy under the marquee," Roth says. "You can take that journey and you can feel horrible, you can feel neutral or you

CV

1975 born to Steven and Daryl Roth in New York

1993-97 Princeton, degrees in philosophy and theatre

1999 produces first show — *The Donkey Show* (off-Broadway), ran for six years

2000 first Broadway show as producer (*The Rocky Horror Show*)

2006 resident producer at Jujamcyn Theaters, bringing in Tony-winning shows including *Spring Awakening* and *Hair*

2007 vice-president of Jujamcyn Theaters

2009 president and co-owner of Jujamcyn Theaters

2009-10 MBA at Columbia Business School

2012 first Tony Award as lead producer (*Clybourne Park*)

2012 marries Richie Jackson

2013 majority shareholder at Jujamcyn

July 2016 son born (Roth and Jackson also share in the care of Jackson's 16-year-old son from a previous relationship)

Transformation: business school gave Roth the tools to lift his company and its employees



can feel like 'Wow... this is special. I'm about to see something extraordinary because I feel like I am in the place to be.' That's a business that delivers experience."

Roth says that transforming the company to think of itself as a service business and getting everyone to think that way was a big lift, and business school gave him the tools to make it happen. "I thought [I went to business school] for the hard skills. As it turns out, what I most value are the soft



skills,” Roth says, though he quickly adds that he hates categorising skills as “soft” because they can be both important and difficult to master.

Roth says that while his personal projects were not ideas from his time at business school, there is something of his MBA education and the entrepreneurial spirit it fostered in everything he does. In 2014, he launched Culturalist, a website where users can create, debate and share top 10 lists. Last year, after live-streaming app Periscope began

gaining popularity, he launched #MakingMondays, an online show (now also on Facebook Live) at his West Village home in New York, where viewers can help Roth and his artist friends create spontaneous and ephemeral performances and artworks in real time. He is also about to launch and star in

‘I went to business school for hard skills. It turns out what I most value is the soft skills’

an online “cultural commentary comedy show” called *The Morning After with Jordan Roth*.

As well as his entrepreneurial pursuits, most recently Roth’s life has been in transition again. He and his husband, Richie Jackson, have a new baby boy, Levi, who was born last July. Since then, his life has changed “a ton”. “By design,” Roth says. But just like business school almost a decade ago, Roth prepared early and is embracing the new. ¹²

How to ensure your MBA is noteworthy

It will cost time and money but the rewards can outdo both. By Della Bradshaw

Matt Bulloch had already set up his company, TentCraft, when he decided to apply to study for an MBA at Stanford Graduate School of Business, the California institution renowned for creating entrepreneurs.

At the time he was toying with the idea of leaving the world of promotional tents for consumer electronics, but realised after completing an internship with Apple that consumer electronics was not for him. "It took me taking a step back from my company to realise what I had," he says.

Yet Bulloch has no regrets about investing the time and money needed to get a Stanford MBA — on average students on the Stanford programme can expect to pay more than \$218,000 to study for two years at the school, and to forgo \$200,000 in lost earnings.

"I was inspired to grow my business faster, which is what I have done," he says, noting that when he started his degree five years ago TentCraft had 15 employees; today it has 85.

But as well as the classes, it was networking that really paid off, he says, bringing more than just an address book of good friends. "One of my classmates is one of our biggest

customers," he points out, and revenues from that one client covered the costs of the degree.

Fees and living costs are more than \$100,000 a year at a top US programme such as Harvard in Boston, nearby MIT Sloan or Wharton in Pennsylvania. For many of those thinking about a full-time MBA, money will be one of the biggest considerations, including the opportunity cost of leaving the workplace for one or two years. Potential future earnings will be critical.

For those who graduated in 2013 and who responded to the FT alumni survey, increased earnings were as important as management skills as a reason for studying for an MBA. For most, the outlook is rosy.

On average, those who studied on one of the world's top 100 MBA programmes doubled their pre-MBA salaries within three years of graduation, though



Unexpected benefits: Matt Bulloch found his Stanford MBA inspired him to grow his business faster

salary figures vary enormously.

Alumni from Bulloch's alma mater, Stanford, second in the 2017 ranking, report that although they gave up salaries of more than \$100,000, on average, to take the MBA, three years after graduation they now earn close to \$200,000.

By comparison, alumni from Tippie College of Business in Iowa, ranked 84th, report that they now earn a little more than \$100,000 — the starting point for Stanford candidates, yet for Tippie alumni an increase of 130 per cent on their pre-MBA salaries of just five years ago, which were on average more than \$45,000.

In spite of the large salary rises enjoyed by MBA graduates, it is often a change in job sector or a rapid promotion that spurs many managers to apply for an MBA, says David Deyak, assistant dean at Tippie. He points out that about two-thirds of applicants are looking for a career change.

"The return on investment is part of the discussion, but students lead with 'can you help me achieve my dreams,'" he says.

Kyle Bogler worked in the US in operations management





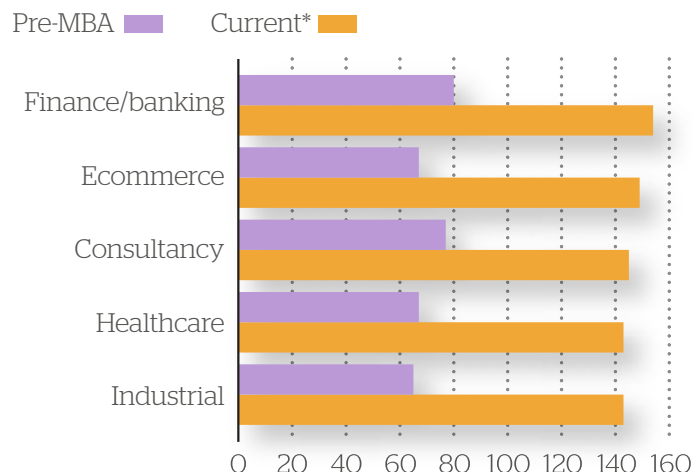
in a logistics company before returning to Tippie for his MBA in 2011. Today, he works in internal audit in a garment company in Hong Kong, having achieved the “triple hit” of changing job, sector and country often craved by MBA students.

“It set me back \$60,000 and two years of salary but I am now on a full expat package in Hong Kong,” says Bogler. He believes the MBA helped him get his job five to 10 years sooner than he would have done without it.

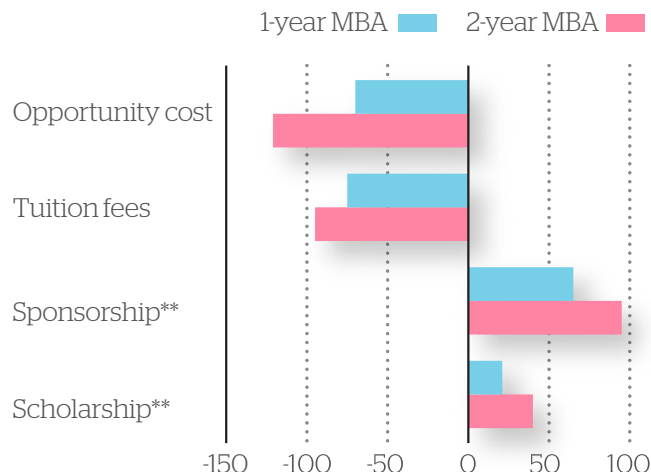
“I got my job by sticking out my

‘Both the value and the cost are more than monetary’
Prof Yossi Feinberg,
Stanford GSB

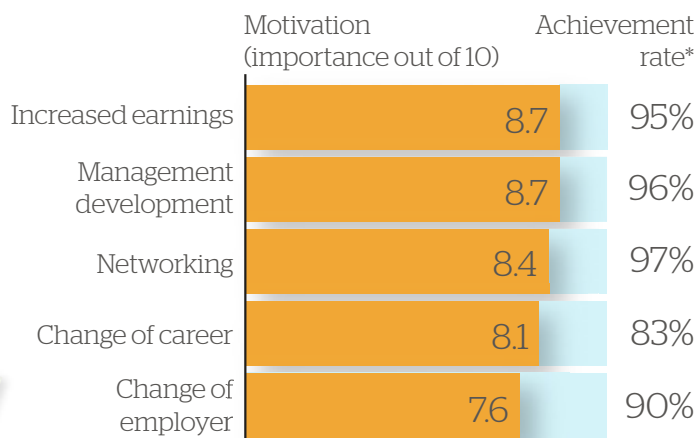
Average salaries (\$'000)



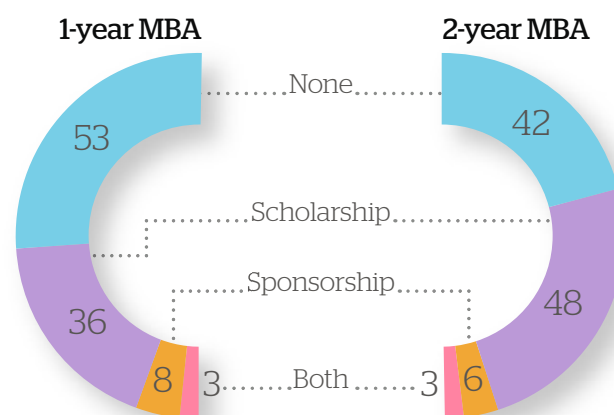
MBA costs and financial help (\$'000)



Aims achieved



Financial help breakdown (%)



Source: FT research

* Three years after graduation

** Recipients only

hand and networking," he says, a skill he admits he did not have before his MBA. "To me that is worth its weight in gold."

It is a view shared by many of the respondents to the 2017 FT MBA ranking survey, who listed networking as among the top three reasons for joining an MBA programme.

"Both the value and the cost [of an MBA] are more than monetary," says Yossi Feinberg, senior associate dean for academic affairs at Stanford.

He notes that the opportunity cost of an MBA can also include missing out on the latest developments in a fast-moving industry, such as technology, and the resulting uncertainty that brings.

Such concerns have led to many students deciding on shorter one-year programmes, says Virginie Fougea, admissions director at Insead, the

In the US, 53 per cent of schools running two-year MBA courses report a decline in applications

world's highest-ranked one-year MBA.

In 2016, applications for one-year MBAs increased at 57 per cent of the schools that offer them worldwide, according to the latest figures from the Graduate Management Admission Council, the owner and administrator of the GMAT admission exam.

Those studying on two-year degrees are more likely to receive scholarships — 48 per cent of those who took two-year degrees and responded to the FT survey received such funding compared with 36 per cent of their peers on

one-year degrees. However, the shorter programmes still offer greater value for money. Only five of the best value for money MBAs in the 2017 ranking are two-year programmes (see table).

Even so, Fougea says value for money is not central to the decision-making process. "The cost is factored in but it is not one of the first elements."

For Mike Abare, an American Insead alumnus from the class of 2013, it was the international nature of the programme that was the particular attraction. Following a US undergraduate degree, "I really wanted to experience Asia," he explains. He studied on Insead's Singapore campus and is now back in the US with plans to work for the FBI.

Carlos García Pont, director of the MBA programme at Iese Business

Value for money: top 25 MBAs in 2017

Calculated using salary today, course length, fees and costs including lost income

Value for money rank	School name	Weighted salary (\$)*	Overall rank
1	University of Cambridge: Judge	164,462	5
2	ESMT Berlin	108,360	70
3	Edhec Business School	113,502	74
4	University of Strathclyde Business School	98,105	80
5	Incae Business School	90,584	89
6	Lancaster University Management School	114,220	42
7	Durham University Business School	104,321	75
8	IMD	154,511	21
9	Cranfield School of Management	123,773	53
10	HKUST Business School	149,538	15
11	Insead	167,657	1
12	Vlerick Business School	97,960	99
13	University of Texas at Dallas: Jindal	96,900	93
14	Rotterdam SoM, Erasmus University	120,625	31
15	Mannheim Business School	113,829	54
16	University College Dublin: Smurfit	113,094	70
17	Brigham Young University: Marriott	127,420	65
18	The Lisbon MBA	118,442	70
19	University of St Gallen	119,861	59
20	Warwick Business School	112,702	44
21	Birmingham Business School	99,765	97
22	University of Oxford: Saïd	139,235	33
23	University of Iowa: Tippie	103,916	84
24	IE Business School	168,923	8
25	Wisconsin School of Business	117,284	65

* Average salary three years after graduation, with adjustment for variations between industry sectors.

Full ranking pages 30-35.

School in Barcelona, one of the few European business schools that run a two-year MBA programme, says that those who choose a two-year degree do so for specific reasons. A one-year programme will suit those who already know what they want to do, he says. "What we're trying to do is open windows into their lives, so they can learn to know what they don't know."

Demand is growing at Iese, which in 2016 added a fifth section of 70 students to its programme.

Betsy Ziegler, chief innovation officer at the Kellogg School at Northwestern University in Illinois, which runs a traditional two-year MBA and a shorter programme without a summer internship, says the accelerated programme is geared to those who are returning to their companies or going

into an industry such as management consultancy, which requires no internship.

"The hard one is moving from general management into finance; finance requires an internship," she adds.

While time is a greater consideration than cost for most who apply for MBA programmes, all agree that applicants are a self-selecting group and many young managers will opt not to even apply for an MBA because of the cost. "The big issue is awareness. How do we influence the funnel, not just accept it?" asks Prof Feinberg. If applications to two-year degrees fall, it will be a question more and more business schools will have to ask. **B**

See Communities, p61: Was your MBA worth the price — and why?



Geared up: Betsy Ziegler, the Kellogg School's chief innovation officer, says its accelerated programme is for those returning to their companies



Growing concerns

Students are helping to make urbanisation in Ethiopia a little greener. By Rebecca Knight

For Ria Tobaccowala, a Chicago native studying in New York, arriving in the fast-growing southern Ethiopian city of Hawassa was a revelation.

“The first plants are going up, the first airport is being constructed and the first non-dirt roads are being built,” she says. “Seeing how that’s impacting people’s lives was eye-opening.”

Tobaccowala, who is studying for a dual MBA/MFA (Master of Fine Arts) degree at New York University, had spent the previous three months working with four classmates on a strategic plan to protect a swath of land in Hawassa, 175 miles south of Addis Ababa, the capital. Their objective was to shield Hawassa’s lake from dangerous pollutants, create a public park and bolster local infrastructure to support the city’s expansion.

When the team arrived in April, Tobaccowala and her teammates had just a week to finish their proposal before sharing their ideas with Pewodros Gebiba, the city’s mayor.

The group’s biggest priority, though, was to “get an understanding of what it’s like to live in a place that’s going through such rapid economic growth”.

As MBA programmes around the world attempt to impart a global outlook to their students, such

understanding is precisely the goal. “I came to business school to become a well-rounded, empathetic global leader,” Tobaccowala says. “I want to understand the changes taking place in the global economy, not just what’s going on in downtown Manhattan.”

At the end of the project, the students presented their proposals to the mayor. Their plan involves the creation of an environmental buffer zone to preserve Lake Hawassa and the large expanse of land that surrounds it, and the development of a commercial boulevard to increase access to the city.

Sarada Anne, an MBA student from Hyderabad, was part of the team. “In the beginning, we didn’t know what was possible,” she says. “But by the end of our time there, we all felt incredibly invested in the city. We provided a forward-thinking plan for this city to save its beautiful lake and set itself up for sustainable industrialisation.”

Yimegnushal Tadesse is Hawassa’s city manager and worked with the group. “I am really impressed by the students’ work,” she says. “They grasped almost all the challenges that our lake is facing.”

‘I want to understand changes in the global economy, not just downtown Manhattan’



Wide horizons: ‘I came to business school to become a well-rounded, empathetic global leader,’ says Ria Tobaccowala



In 2011, NYU’s Stern School of Business launched a series of “signature projects” — experiential learning courses on which MBA students work closely with faculty members to tackle complex challenges. Over the past five years, more than 100 students have taken part in 25 projects in countries including Israel, Haiti, Columbia and Mexico.

Participation in the projects “widens students’ perspective of humanity”, says Shlomo “Solly” Angel, a professor at NYU’s Marron Institute of Urban Planning. “Projects like this have nothing to do with making money,” he



Expansion: Hawassa (left) is growing rapidly; the NYU Stern students (above) aimed to shield the nearby lake from harmful pollutants and bolster local infrastructure

says. “They have to do with students getting acquainted with people who are so different from them in terms of culture, income and outlook.”

Immersing students in unfamiliar, challenging situations provides a stark contrast to the traditional MBA curriculum, he says, adding that even today some business education can be “fairly theoretical.” “Even the case studies are at arm’s length. We want them to be involved in something real that has real consequences and that affects people’s lives.”

The growth of such projects comes at a time of changing priorities in

business education. Some MBA students are rejecting the conventional post-business-school career path in favour of professional lives that involve “giving back” and greater work-life balance. A study of MBA students and graduates conducted last year by Bain & Company, the consultancy, found that more than half said they intended to prioritise social “impact” over prestige and financial benefits in their jobs.

In response, business schools are embracing the mantra of “doing well by doing good”.

“The millennials, whether they articulate it or not, want to be part of something larger than themselves,” says Prof Angel. “And we [as schools] are not just about creating the next generation of profit-maximising business leaders.”

Located in the Great Rift Valley, Hawassa has seen a swift rise in population as it changes from a rural region to an industrial city. Local officials estimate that the number of residents reached 351,000 in 2016. Its growth rate between 2000 and 2010 is estimated at more than 6 per cent annually, though officials believe this has accelerated since.

The aim of the project was to propose ways the city could balance the competing priorities of conservation

and economic growth, says Prof Angel. “We wanted to build the capacity and knowledge” of Hawassa’s modestly sized team of city planners and “help them gain control over an environmentally sensitive area so that it doesn’t get run over by developers”, he adds.

Before the students arrived in Ethiopia, they researched local business practices studied the city’s policies on land use and zoning. The team also explored the ways in which other municipalities have dealt with similar issues and prepared a preliminary budget for their proposal.

Communication with and inside Ethiopia can be difficult. Internet penetration in the country hovers around 11 per cent, according to UN data. “There was limited information, which made the research extremely tough,” says Patrick Lamson-Hall, an urban planner and research scholar at the Stern urbanisation project who advised the students. “It was hard to identify how realistic [the students’ initial ideas] were.”

But that is the nature of real-world learning, he says. “In a project like this one the outcomes are not predetermined.”

Students quickly work with the ambiguity of the situation, adds Lamson-Hall. “International development work requires a strong





stomach for uncertainty,” he says. “For the students, that caused a bit of anxiety at first. But once they got on the ground in Ethiopia, saw the lake, walked on the land and met the people that wanted the park... their trepidation and anxiety subsided.”

Yimegnushal Tadesse, the city manager, says there is a high probability that the proposal will be implemented, provided the city can raise the necessary funding.

“The regional government, the city administration and the city’s residents have a great concern to protect the lake and its ecosystem. If we can integrate these collective efforts, we can make the project real,” she says, adding that, “access to international environmental funds is very crucial.”

For Ria Tobaccowala, an aspiring filmmaker, the experience in Hawassa was different from most MBA projects. “We weren’t just doing this for our careers or so that it could be on our résumés. We were doing the project because we wanted to do good,” she says.

“When you have that mindset it helps you stay dedicated.” **B**



Town planning: the MBA team, along with Mayor Pewodros Gebiba (above), proposed creating an environmental buffer zone around Hawassa and its lake (top)

Why employers want ‘magic sauce’

Business schools are increasing their emphasis on rigorous field experiences in response to what employers are looking for in job candidates, according to Martin Plumlee, an MBA recruiter who runs a boutique executive search company.

“Companies want critical thinkers and problem solvers – folks that know how to take a complex problem and come at it from a different perspective,” says Plumlee. Doing real-world projects in business school is an opportunity for students to practise those skills.”

Organisations are also seeking employees who are adept at navigating the public and private sectors. “Clients tell me that they want candidates who have that magic sauce of private sector experience and public sector knowledge,” the MBA recruiter says.

A demonstrated ability to work across business, government and non-profits provides an edge in today’s job market, he adds.

“They’re seen as the people who can drive sustainable change and be the best stewards of resources.”

– RK



connection

noun \ kə-ˈnek-shən \

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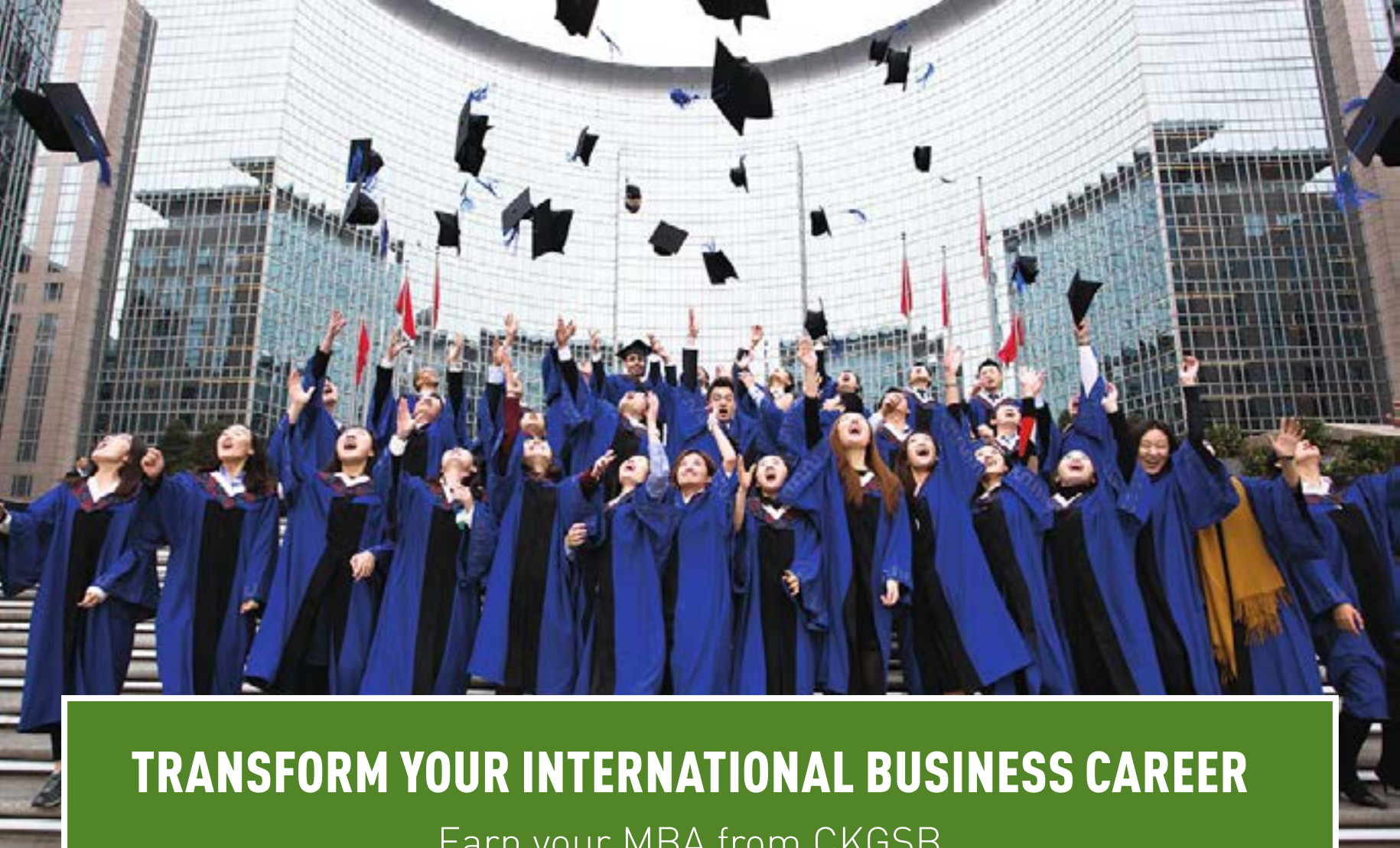
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37% overseas students

46% women

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Average GMAT score: 680

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CHEUNG KONG GRADUATE
SCHOOL OF BUSINESS

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Full tables of
the top schools

Methodology p34

How the ranking
is compiled

Global MBA ranking 2017



The top full-time programmes and how they compare

ILLUSTRATION: ADRIAN JOHNSON

Rankings

Tough at the top

Insead retains the number one spot but its elite rivals jockey for position. By Laurent Ortmans

Insead is top of the 2017 Financial Times global ranking of the best 100 MBA programmes. It is the second year that the multi-campus international business school has taken the number one spot, after claiming it for the first time last year.

Stanford Graduate School of Business in California rises from fifth place in 2016 to second, a position it last held in 2014. The Wharton School of the University of Pennsylvania is in third place.

Harvard Business School, London Business School (LBS) and MIT Sloan School of Management, three of the MBA ranking's longstanding heavyweights, all lost ground to their competitors. Harvard drops two places to fourth, the first time in nine years that the Boston school has been outside the top three. London Business School falls three places to sixth, its lowest position in 14 years. MIT Sloan School of Management falls to 13th place, the first time in 10 years that it has been outside the top 10.

Judge Business School at the University of Cambridge jumps five places to fifth. Not only is it the first time it has broken into the top five, but it is also the first occasion that LBS is not the top-placed UK school in the MBA ranking.

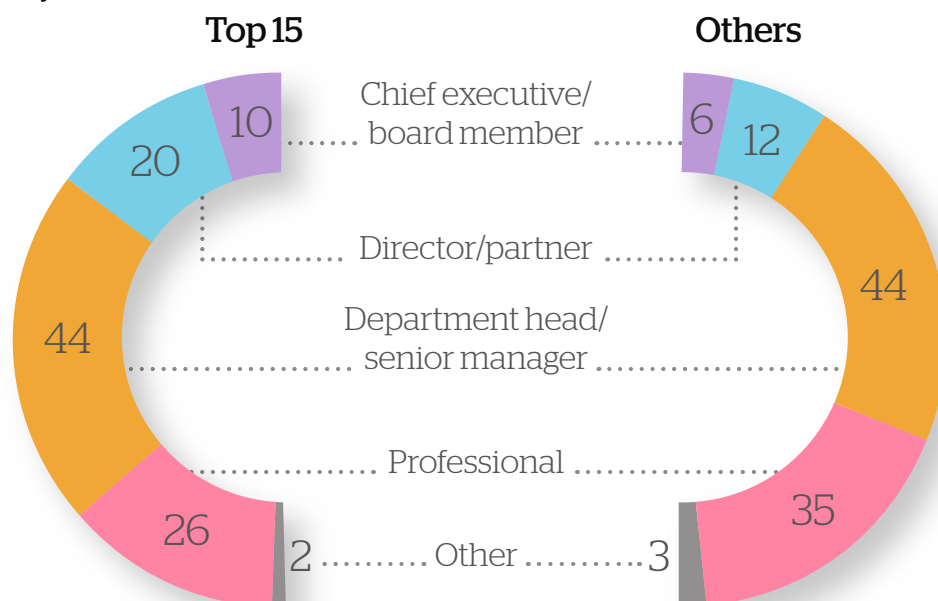
The ranking is based on surveys of the business schools and their graduates of 2013. MBAs are assessed according to the career progression of alumni, the school's idea generation and the diversity of students and faculty.

Stanford's alumni have the highest salary on average at \$195,000 but overall the top 15 MBA programmes are closely matched in terms of income, career progress and satisfaction. All but one have average alumni salaries greater than \$150,000, with a pay increase of about 100 per cent compared with their pre-MBA income.

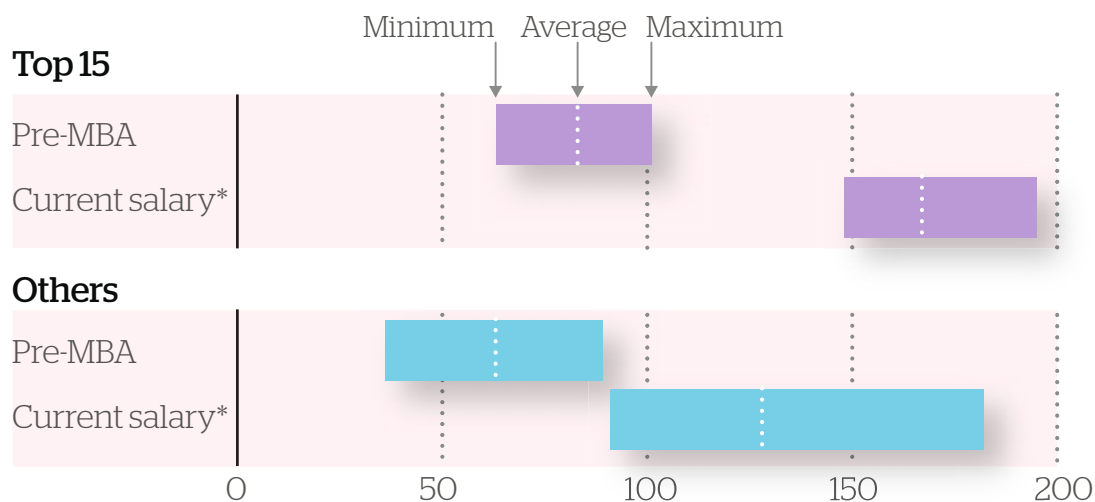
Insead is distinguished not only by its one-year programme but also a strongly

How the top 15 compare with other ranked business schools (class of 2013)

Seniority* (%)



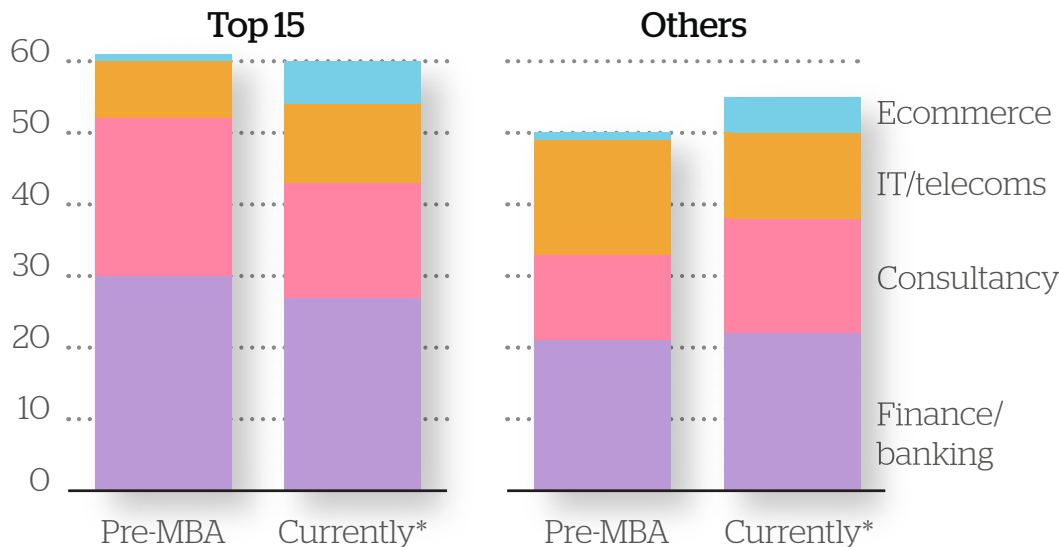
Average salaries (\$'000)



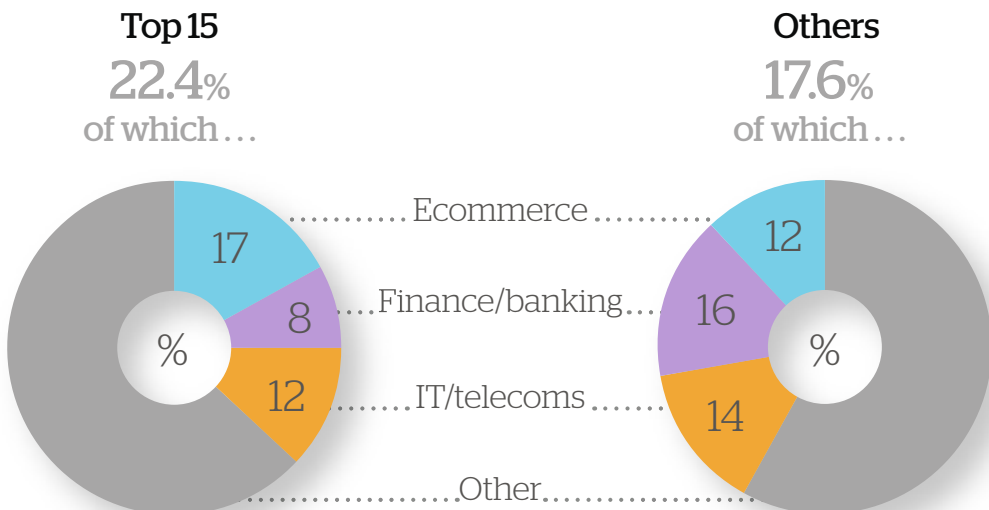
Source: FT research

* Three years after graduation

Employment in selected sectors (%)



Proportion of entrepreneurs*



international culture, based upon its two campuses, and one of the most extensive and diverse alumni networks. The programme is ranked third for the international mobility of its alumni and sixth for international course experience.

“Insead enormously boosted our intercultural experience,” said one alumni survey respondent from Switzerland. “It is a place to learn global culture better than anywhere else.”

The wealth and depth of knowledge from around the world adds tremendous value to the course, wrote another graduate from the US, adding that “with so many cultures and experiences represented, a classroom ethics discussion about bribery is not your typical boring USA version”.

US schools are rebuilding their strength in this ranking, with their number increasing to 51. This had dropped below 50 for the first time in 2016, down to 47. Six of the eight new or returning schools are from the US.

Among these six US schools, Rutgers Business School in New Jersey is the highest new entrant at 70. WP Carey School of Business at Arizona State University is the highest returning school at 57. Moore School of Business at the University of South Carolina returns at 77. Moore stands out for being top overall for international course experience. Its students spend from several months to a year overseas.

Canadian schools continue to lose ground. Only three remain in the ranking compared with five last year and all fall about six places. Among these, Rotman School of Management at the University of Toronto is the highest ranked at 65, while Smith School of Business at Queen’s University is bottom of the table in 100th place.

Australian and Spanish schools are doing well, however. Each country’s three representatives have risen up the ranking. Sydney’s Macquarie Graduate School of Management is Australia’s top placed institution at 49 and Spain’s IE Business School moved up four places to eighth, the first time since 2012 that the Madrid school is back in the top 10. **B**



Top school: Insead

For the second year in a row Insead tops the FT Global MBA ranking. The school was the first to have two campuses with permanent faculty. The first campus was established in Fontainebleau, France, in 1957 and the second in Singapore in 1999. Its MBA is one of the most internationally diverse and about 95 per cent of its faculty and students are international. Its alumni are ranked third for their mobility and the programme is ranked sixth for its international course experience. — **Laurent Ortman**



Top for career progress: Stanford

Stanford Graduate School of Business is back at number two, up three places from the previous year. Its alumni have the highest salary on average at \$195,000. Graduates also have the best career progression. About 42 per cent of alumni hold positions at director level or above three years after graduation, compared with 22 per cent on average for ranked programmes. "Stanford GSB is both a long-term investment and a personal self-investment," said one graduate from the class of 2013. "The results put me on a path to achieve full career satisfaction." — **LO**

FINANCIAL TIMES GLOBAL MBA 2017

The top full-time global MBA programmes (continued overleaf)

							Alumni career progress								
Rank in 2017	Rank in 2016	Rank in 2015	3-year average rank	School name	Country	Audit year*	Salary today (US\$)	Weighted salary (US\$)	Salary percentage increase	Value for money rank	Career progress rank	Aims achieved (%)	Careers service rank	Employed at three months (%)	Alumni recommend rank
1	1	4	2	Insead	France / Singapore	2015	167,305	167,657	95	11	30	85	58	82 (97)	6
2	5	4	4	Stanford Graduate School of Business	US	2015	193,534	195,322	93	74	1	85	19	82 (99)	2
3	4	3	3	University of Pennsylvania: Wharton	US	2013	180,512	181,634	92	99	24	85	22	95 (92)	4
4	2	1	2	Harvard Business School	US	2013	177,541	178,113	97	87	10	86	24	91 (100)	1
5	10	13	9	University of Cambridge: Judge	UK	2017	164,714	164,462	107	1	18	89	7	89 (88)	43
6	3	2	4	London Business School	UK	2015	155,183	154,567	92	84	5	88	30	94 (99)	5
7	6	6	6	Columbia Business School	US	2014	172,678	172,624	103	91	40	86	12	92 (90)	8
8	12	12	11	IE Business School	Spain	2014	168,920	168,923	108	24	4	85	61	89 (88)	26
9	8	9	9	University of Chicago: Booth	US	2017	171,094	168,200	110	80	22	86	1	95 (99)	9
10	16	7	11	Iese Business School	Spain	2014	146,108	147,596	133	85	12	85	52	92 (94)	20
11	17	11	13	Ceibs	China	2014	156,023	159,870	155	39	26	82	57	93 (99)	35
12	11	14	12	Northwestern University: Kellogg	US	2014	165,038	164,326	96	92	13	87	16	95 (100)	7
13=	9	8	10	MIT: Sloan	US	2014	165,365	165,716	88	98	19	86	46	92 (99)	3
13=	7	10	10	University of California at Berkeley: Haas	US	2017	167,458	168,163	94	72	25	87	14	90 (100)	10
15=	14	14	14	HKUST Business School	China	2016	149,496	149,538	103	10	38	84	91	90 (93)	39
15=	18	17	17	Yale School of Management	US	2013	159,149	158,206	110	79	27	86	40	90 (99)	16
17	23	19	20	Esade Business School	Spain	2014	144,768	146,127	116	62	2	85	50	86 (96)	31
18	22	23	21	Dartmouth College: Tuck	US	2013	166,722	165,414	105	88	45	86	8	96 (100)	13
19	19	18	19	New York University: Stern	US	2014	151,067	150,859	102	95	20	86	5	92 (97)	14
20	15	16	17	HEC Paris	France	2014	132,188	132,073	99	35	37	85	79	91 (90)	24
21	13	20	18	IMD	Switzerland	2015	156,648	154,511	81	8	31	87	48	79 (100)	17
22	25	26	24	SDA Bocconi	Italy	2014	129,064	129,064	120	30	42	82	60	86 (91)	53
23	20	24	22	University of Michigan: Ross	US	2014	151,941	149,728	105	78	75	87	13	92 (87)	12
24=	21	21	22	Duke University: Fuqua	US	2017	149,738	150,212	96	96	44	86	26	92 (99)	11
24=	29	40	31	Nanyang Business School	Singapore	2016	126,218	126,218	138	26	64	77	85	100 (100)	68
26	32	31	30	National University of Singapore Business School	Singapore	2016	133,152	131,760	136	33	67	82	86	96 (95)	40
27=	31	28	29	Cornell University: Johnson	US	2017	151,103	150,531	115	71	34	86	11	90 (97)	25
27=	29	33	30	Indian School of Business	India	2015	145,100	145,453	160	51	32	82	54	93 (99)	27
29	24	26	26	Indian Institute of Management Ahmedabad	India	2015	182,736	181,863	105	36	3	79	92	91 (100)	15
30	38	35	34	Alliance Manchester Business School	UK	2015	128,436	130,535	108	43	16	83	51	76 (100)	55
31	42	45	39	Rotterdam School of Management, Erasmus University	Netherlands	2016	121,776	120,625	98	14	35	84	71	87 (98)	46
32	34	25	30	UCLA: Anderson	US	2017	147,778	149,608	98	77	49	85	6	88 (98)	22
33	28	22	28	University of Oxford: Saïd	UK	2013	140,552	139,235	87	22	11	88	41	86 (81)	36



Best value for money: Judge

It is the first time that Judge Business School at the University of Cambridge has made the top five of this ranking. This is significant progress given that the school was ranked 26th in 2012. Its alumni have the 12th highest average salary, at \$164,000, but the programme is top for value for money. With its one-year MBA, Judge has the lowest tuition fees among the top 15 schools, at about £40,000 in 2012 (\$57,000 PPP adjusted – see methodology, page 34) and its alumni have the second lowest opportunity cost, at about \$60,000 behind Insead's. – LO

Key to the 2017 FT Global MBA rankings

Weights for ranking criteria are shown in brackets as a percentage of the overall ranking.

Salary today: average alumnus salary three years after graduation, US\$ PPP equivalent (see Methodology, page 34). This figure is not used in the ranking.†

Weighted salary (20): average alumnus salary three years after graduation, US\$ PPP equivalent, with adjustment for variations between sectors.†

Salary increase (20): average difference in alumni salary before the MBA to now. Half of this figure is calculated according to the absolute salary increase and half according to the percentage increase relative to pre-MBA salary – the “salary percentage increase” figure in the table.

Value for money (3): calculated using salary today, course length, fees and other costs, including lost income during the MBA.†

Career progress (3): calculated according to changes in the level of seniority and the size of company alumni work in now, compared with before their MBA.†

Aims achieved (3): the extent to which alumni fulfilled their stated goals or reasons for doing an MBA.†

Careers service (2): effectiveness of the school careers service in terms of career counselling, personal development, networking events, internship search and recruitment, as rated by their alumni.†

Employed at three months (2): percentage of the most recent graduating class who had found employment or accepted a job offer within three months of completing their studies. The figure in brackets is the percentage of the class for which the school was able to provide employment data and is used to calculate the school's final score in this category. ■

Alumni recommend (2): calculated according to selection by alumni of ➤

Clustering

Although the headline ranking figures show changes in the data year to year, the pattern of clustering among the schools is equally significant. Some 170 points separate the top programme, Insead, from the school ranked number 100. The top 16 participants, down to Yale School of Management, form the top group of MBA providers. The second group, headed by Esade Business School, spans schools ranked 17 to 42. Differences between schools are relatively small within this group. The 40 schools within the third group headed by University of North Carolina: Kenan-Flagler are similarly close together. The remaining 18 schools, headed by University of Illinois at Urbana-Champaign, make up the fourth group.

Footnotes

* KPMG reported on the results of obtaining evidence and applying specified audit procedures relating to selected survey data provided for the Financial Times 2017 MBA ranking for selected business schools. Enquiries about the assurance process can be made by contacting Lori Huber of KPMG at lahuber@kpmg.ca. The specified audit procedures were carried out between November and December 2016. The audit date published denotes the survey for which the specified audit procedures were conducted. **These schools run additional courses for MBA students for which additional language skills are required.

	Diversity									Idea generation			
	Female faculty (%)	Female students (%)	Women on board (%)	International faculty (%)	International students (%)	International board (%)	International mobility rank	International course experience rank	Languages**	Faculty with doctorates (%)	PhD graduates No. (%)	FT research rank	Rank in 2017
	17	30	25	94	96	85	3	6	2	97	39 (41)	5	1
	24	41	30	38	40	21	66	18	0	90	47 (32)	5	2
	20	44	17	36	34	49	40	55	0**	99	96 (29)	1	3
	28	43	48	37	35	27	52	42	0	89	71 (32)	3	4
	21	33	33	77	92	38	13	29	0	98	41 (10)	21	5
	23	35	38	85	92	73	8	14	1	100	35 (17)	12	6
	19	38	13	58	53	34	45	74	0**	95	56 (29)	7	7
	39	31	46	63	92	84	28	36	1	98	14 (0)	68	8
	16	42	13	37	46	40	56	75	0	97	62 (18)	12	9
	26	28	32	63	81	90	11	5	1	100	19 (5)	49	10
	18	45	17	68	28	50	32	24	0	100	0 (0)	77	11
	24	41	21	40	43	31	65	25	0	100	64 (27)	17	12
	18	40	15	40	47	55	48	31	0	99	40 (42)	7	13
	21	38	20	53	44	7	47	40	0	100	33 (33)	12	13
	22	30	29	59	72	45	10	12	1	93	51 (6)	38	15
	29	43	21	44	46	46	54	47	0**	100	21 (24)	38	15
	37	32	13	41	94	87	18	13	1	92	44 (0)	85	17
	22	44	18	28	39	41	51	57	0	88	0 (0)	33	18
	25	35	20	46	31	20	78	53	0	86	57 (18)	2	19
	18	33	13	70	93	67	6	3	1**	100	39 (21)	29	20
	14	19	18	95	97	89	1	8	1	100	0 (0)	91	21
	38	36	25	31	77	67	5	10	0	96	45 (4)	38	22
	25	40	17	39	31	9	67	50	0	95	45 (22)	10	23
	19	34	16	42	45	53	58	56	0	99	46 (22)	10	24
	35	40	30	67	89	60	15	48	0**	99	38 (3)	56	24
	31	31	12	59	93	38	9	21	0	91	40 (5)	58	26
	25	31	23	42	42	33	87	49	0	93	19 (5)	17	27
	22	31	6	22	1	61	57	88	0	100	2 (0)	61	27
	18	22	0	3	1	0	43	33	0	100	36 (0)	95	29
	37	33	45	43	89	55	24	22	0	89	227 (1)	68	30
	23	37	29	50	96	33	7	59	1	100	78 (8)	24	31
	22	32	20	38	38	13	73	83	0	100	26 (31)	24	32
	18	31	43	58	95	57	16	51	0	100	23 (13)	58	33



Highest riser: Mendoza

Mendoza College of Business at the University of Notre Dame, Indiana, recorded this year's biggest rise, moving up 16 places to 60. It follows another strong increase the previous year, meaning that the school has moved up 29 places in two years. It is Mendoza's highest position since 2006, when it was ranked in 59th place. The school is ranked 37th for the quality of its career office and 54th for career progress, up six and 25 places respectively. Its alumni also have a salary increase of 117 per cent, up 20 percentage points compared with 2016. – **LO**



Top new entrant: Carey

WP Carey School of Business at Arizona State University has just recorded its best performance in a decade, ranked in 57th place, the same position it held in 2007. The school missed out on a ranking place last year due to a low response rate from its alumni to the FT survey. This improved performance is explained partly by its alumni's higher salary at \$114,000 compared with \$104,000 in 2015, as well as a greater salary increase of 115 per cent, 19 percentage points more than in 2015. – **LO**

FINANCIAL TIMES GLOBAL MBA 2017

The top full-time global MBA programmes (continued overleaf)

Alumni career progress

Rank in 2017	Rank in 2016	Rank in 2015	3-year average rank	School name	Country	Audit year*	Salary today (US\$)	Weighted salary (US\$)	Salary percentage increase	Value for money rank	Career progress rank	Alms achieved (%)	Careers service rank	Employed at three months (%)	Alumni recommend rank
34	39	55	43	Shanghai Jiao Tong University: Antai	China	2014	123,330	123,330	172	31	23	80	17	100 (97)	85
35	27	32	31	University of Virginia: Darden	US	2014	148,336	148,358	111	81	47	86	10	90 (100)	18
36	26	30	31	CUHK Business School	China	2016	121,193	121,193	119	38	15	81	72	82 (92)	78
37	37	45	40	City University: Cass	UK	2017	127,110	127,110	85	28	28	84	69	83 (93)	61
38	33	36	36	Carnegie Mellon: Tepper	US	2014	137,068	136,576	104	90	58	85	3	85 (100)	23
39	44	28	37	University of Hong Kong	China	2013	123,546	123,546	109	49	63	84	44	80 (96)	69
40	44	42	42	Georgetown University: McDonough	US	2015	135,950	135,711	105	94	62	85	39	90 (94)	34
41	49	51	47	University of Washington: Foster	US	2015	130,042	130,042	97	58	84	85	29	98 (100)	59
42	35	50	42	Lancaster University Management School	UK	2013	114,220	114,220	101	6	48	85	45	86 (92)	87
43	41	39	41	University of North Carolina: Kenan-Flagler	US	2016	130,910	131,250	105	83	65	84	18	90 (100)	29
44	46	38	43	Warwick Business School	UK	2015	112,702	112,702	74	20	43	79	49	96 (100)	50
45	35	34	38	Imperial College Business School	UK	2013	112,865	112,865	72	37	41	83	81	92 (92)	46
46	47	40	44	University of Texas at Austin: McCombs	US	2015	138,570	137,944	95	73	79	81	25	89 (100)	19
47	54	62	54	Indiana University: Kelley	US	2017	124,822	127,346	103	68	91	85	2	94 (99)	32
48	52	58	53	University of Southern California: Marshall	US	2015	135,916	135,199	95	97	68	83	38	92 (95)	41
49=	56	68	58	Macquarie Graduate School of Management	Australia	2016	131,488	131,488	75	29	17	82	99	92 (100)	92
49=	62	82	64	Indian Institute of Management Bangalore	India	2015	152,000	152,000	96	60	21	77	80	93 (97)	21
51	55	59	55	Emory University: Goizueta	US	2015	134,370	134,370	104	61	59	84	31	93 (99)	38
52	51	49	51	University of Maryland: Smith	US	2015	114,142	114,031	104	82	46	84	32	80 (98)	74
53	57	45	52	Cranfield School of Management	UK	2013	125,106	123,773	77	9	36	82	68	92 (93)	57
54=	49	55	53	Mannheim Business School	Germany	2014	113,829	113,829	73	15	56	87	64	98 (95)	66
54=	69	59	61	Sungkyunkwan University GSB	South Korea	2013	114,479	114,479	96	32	39	78	21	95 (96)	100
54=	66	75	65	AGSM at UNSW Business School	Australia	2016	121,794	121,794	61	48	82	81	87	84 (86)	64
57	-	76	-	Arizona State University: Carey	US	2015	113,707	113,707	115	47	77	83	23	95 (100)	51
58	65	54	59	Michigan State University: Broad	US	2014	106,517	106,517	124	50	99	83	27	96 (99)	46
59	60	67	62	University of St Gallen	Switzerland	2013	119,861	119,861	66	19	57	84	34	86 (86)	67
60	76	89	75	University of Notre Dame: Mendoza	US	2016	128,222	127,995	117	59	54	85	37	90 (98)	65
61	71	65	66	Georgia Institute of Technology: Scheller	US	2017	123,651	123,651	113	40	95	84	4	95 (100)	61
62	57	43	54	University of California at Irvine: Merage	US	2016	114,748	114,748	106	76	70	84	9	91 (100)	86
63	75	69	69	Ohio State University: Fisher	US	2015	114,120	114,120	108	46	80	85	43	93 (94)	60
64	53	43	53	Rice University: Jones	US	2014	128,920	130,852	97	64	94	83	28	81 (99)	46
65=	60	53	59	University of Toronto: Rotman	Canada	2015	98,076	101,270	83	100	87	80	84	80 (96)	28
65=	68	70	68	Wisconsin School of Business	US	2014	117,781	117,284	108	25	86	86	15	88 (100)	54
65=	80	-	-	Brigham Young University: Marriott	US	2015	127,420	127,420	120	17	72	85	59	88 (100)	42



Most gender-balanced cohort: Edinburgh

The University of Edinburgh Business School featured continuously between 2000 and 2012, reaching a high of 44 in 2008. However, it did not make it into the top 100 between 2013 and 2015. It returned in 2016 and rises seven places to 91 this year. In particular, the school is notable for having the most gender-balanced programme with 41 per cent of the faculty and half (49 per cent) of its latest cohort being women. The programme also includes activities focusing on women in leadership roles. – LO

Key to the 2017 FT Global MBA rankings

three schools from which they would recruit MBA graduates.†

Female faculty (2): percentage of female faculty. For the three gender-related criteria, schools with a 50:50 (male/female) composition receive the highest possible score.

Female students (2): percentage of female students on the full-time MBA.

Women on board (1): percentage of female members on the school's advisory board.

International faculty (4): calculated according to the diversity of faculty by citizenship and the percentage whose nationality differs from their country of employment – the figure published in the table.

International students (4): calculated according to the diversity of current MBA students by citizenship and the percentage whose nationality differs from the country in which they study – the figure in the table.

International board (2): percentage of the board whose citizenship differs from the country in which the school is based.

International mobility (6): based on alumni citizenship and the countries where they worked before their MBA, on graduation and three years after.

International course experience (3): calculated on whether the most recent graduating class completed exchanges, research projects, study tours and company internships in countries other than where the school is based. ■

Languages (1): number of extra languages required on graduation. ■

Faculty with doctorates (5): percentage of full-time faculty with a doctoral degree.

PhD graduates (5): number of doctoral graduates from each business school during the past three years. The figure in brackets is the percentage of these graduates who took up faculty positions at a top 50 full-time MBA school.

FT research rank (10): calculated according to the number of articles published by current full-time faculty members in 50 selected academic and practitioner journals between January 2014 and October 2016. The FT50 rank combines the absolute number of publications with the number weighted relative to the faculty's size.

† Includes data for the class of 2013 and one or two preceding classes where available.

■ Graduated between July 2015 and June 2016.

	Diversity									Idea generation			
	Female faculty (%)	Female students (%)	Women on board (%)	International faculty (%)	International students (%)	International board (%)	International mobility rank	International course experience rank	Languages**	Faculty with doctorates (%)	PhD graduates No. (%)	FT research rank	Rank in 2017
	30	43	13	3	20	32	100	27	0	92	147 (0)	88	34
	26	38	29	20	33	9	64	64	0	97	3 (0)	49	35
	23	40	33	55	54	67	25	19	0	98	31 (6)	48	36
	25	36	58	70	78	67	27	46	0	94	41 (15)	38	37
	21	28	15	41	41	5	72	67	0	92	46 (11)	33	38
	27	36	20	37	73	40	22	7	0	96	43 (5)	68	39
	25	34	19	40	37	18	62	72	0**	100	0 (0)	29	40
	32	43	21	24	42	6	91	90	0	91	32 (19)	7	41
	32	47	43	54	98	50	41	32	0	95	96 (1)	77	42
	26	30	22	37	33	13	95	63	0	85	30 (13)	15	43
	33	24	22	79	85	22	29	28	1	100	75 (5)	29	44
	31	35	40	93	88	67	23	30	0	100	46 (2)	38	45
	24	37	14	30	27	2	86	54	0	84	44 (5)	21	46
	25	30	22	28	37	24	80	65	0	78	43 (12)	24	47
	31	32	12	36	32	2	84	77	0	83	33 (21)	33	48
	30	26	50	61	98	75	30	69	0	100	42 (0)	85	49
	23	14	31	4	0	8	53	34	0	100	45 (2)	95	49
	29	24	14	20	36	0	88	73	0	90	18 (6)	58	51
	28	35	21	35	38	13	61	91	0	98	42 (21)	21	52
	32	28	17	57	75	39	26	41	1	94	52 (4)	91	53
	28	32	20	11	83	20	4	52	0**	100	100 (2)	77	54
	15	25	53	65	32	80	49	20	0**	100	0 (0)	49	54
	44	33	50	72	79	50	20	17	0	100	56 (0)	24	54
	24	43	9	31	34	2	81	98	0	90	50 (6)	45	57
	36	38	32	26	49	0	77	99	0	96	40 (5)	45	58
	15	31	50	80	98	50	2	37	1	100	11 (0)	68	59
	23	18	14	16	32	7	99	76	0	84	0 (0)	38	60
	21	25	19	34	31	4	89	94	0	76	28 (4)	38	61
	47	27	33	19	54	8	63	97	0	94	22 (0)	56	62
	26	27	17	27	36	4	79	78	0	81	22 (23)	20	63
	30	25	18	18	40	0	71	80	0	93	10 (10)	49	64
	23	34	55	74	66	27	33	62	0	98	42 (29)	3	65
	26	41	38	26	22	17	98	81	0	79	29 (3)	49	65
	12	20	7	1	22	4	94	82	0	90	0 (0)	66	65

Footnotes: page 31

Methodology

This ranking features the world's best 100 full-time MBA programmes. A total of 156 schools took part in the 2017 edition of this ranking. All participating schools meet the FT's entry criteria, including being accredited by EQUIS or the AACSB.

We survey alumni three years after graduation so the programmes must be four years old. For schools to enter the

ranking calculations, the FT requires that a minimum of 20 per cent of alumni reply to the survey, with at least 20 fully completed responses.

This ranking uses data collected from the schools and the 9,000 alumni who completed a full-time MBA at them in 2013 — a response rate of 41 per cent.

The ranking has 20 different criteria. Alumni responses inform eight criteria

that together contribute 59 per cent of its weight. Eleven criteria are calculated from school data, accounting for 31 per cent of the final ranking. KPMG audits a number of schools every year. The remaining criterion, the research rank, counts for 10 per cent.

Alumni-informed criteria are based on the data collected in the past three years. Responses from the 2017 survey

FINANCIAL TIMES GLOBAL MBA 2017

The top full-time global MBA programmes

							Salary today (US\$)	Weighted salary (US\$)	Salary percentage increase	Value for money rank	Career progress rank	Aims achieved (%)	Careers service rank	Employed at three months (%)	Alumni recommend rank
Rank in 2017	Rank in 2016	Rank in 2015	3-year average rank	School name	Country	Audit year*									
68	80	72	73	Washington University: Olin	US	2015	114,781	115,349	105	70	60	80	70	96 (98)	75
69	-	48	-	Purdue University: Krannert	US	2015	114,732	114,732	113	52	52	80	42	82 (99)	71
70=	40	36	49	The Lisbon MBA	Portugal	2014	118,442	118,442	88	18	33	78	83	81 (100)	87
70=	64	63	66	ESMT Berlin	Germany	2016	108,360	108,360	68	2	71	84	73	82 (96)	81
70=	79	73	74	University College Dublin: Smurfit	Ireland	2017	113,094	113,094	71	16	66	82	63	88 (92)	98
70=	-	-	-	Rutgers Business School	US		108,479	108,479	130	54	83	82	53	94 (87)	77
74	84	-	-	Edhec Business School	France	2017	113,502	113,502	77	3	51	82	76	78 (85)	81
75	66	79	73	Durham University Business School	UK	2017	104,321	104,321	75	7	50	79	96	89 (97)	84
76	87	90	84	Melbourne Business School	Australia	2016	100,598	100,319	81	27	88	82	78	91 (95)	72
77=	86	85	83	University of Rochester: Simon	US	2016	115,725	115,794	118	65	73	82	62	95 (90)	94
77=	-	96	-	University of South Carolina: Moore	US	2016	106,404	106,404	115	86	85	82	100	76 (100)	97
79	71	61	70	Vanderbilt University: Owen	US	2014	121,893	122,442	96	67	55	86	20	94 (97)	52
80=	63	80	74	University of Strathclyde Business School	UK	2015	98,105	98,105	95	4	29	84	75	97 (89)	99
80=	69	90	80	Boston College: Carroll	US	2014	116,433	116,433	90	75	78	85	67	88 (100)	45
82	71	78	77	Boston University: Questrom	US	2013	119,706	119,706	101	63	81	85	89	90 (97)	56
83	91	71	82	University of Illinois at Urbana-Champaign	US	2015	105,430	105,430	107	55	76	86	66	93 (100)	76
84	94	63	80	University of Iowa: Tippie	US	2012	103,916	103,916	130	23	98	84	33	80 (100)	90
85	98	97	93	University of Pittsburgh: Katz	US	2015	104,274	104,274	119	53	93	81	55	89 (98)	89
86	78	90	85	George Washington University	US	2016	114,340	114,340	97	89	89	83	82	73 (92)	73
87	90	73	83	Babson College: Olin	US	2013	121,130	121,312	89	69	8	82	74	80 (88)	30
88	71	83	81	University of Minnesota: Carlson	US	2014	117,567	117,567	88	66	97	84	36	94 (98)	63
89=	89	86	88	Pennsylvania State University: Smeal	US	2017	109,799	109,799	98	44	100	84	47	89 (100)	58
89=	83	-	-	Incae Business School	Costa Rica	2017	89,071	90,584	142	5	7	77	77	60 (85)	81
91	98	-	-	University of Edinburgh Business School	UK	2015	102,804	102,804	67	34	14	77	97	81 (91)	93
92	94	-	-	Grenoble Ecole de Management	France	2017	101,596	101,596	76	56	61	77	98	87 (69)	95
93	-	-	-	University of Texas at Dallas: Jindal	US		96,900	96,900	109	13	90	78	65	92 (100)	91
94	88	97	93	Western University: Ivey	Canada	2013	98,402	99,142	74	42	74	84	35	82 (100)	37
95=	-	-	-	Indian Institute of Management Calcutta	India		131,519	131,519	93	45	9	76	90	100 (98)	33
95=	-	-	-	Temple University: Fox	US	2017	98,464	98,464	103	93	96	82	93	100 (100)	95
97=	92	95	95	Birmingham Business School	UK	2017	99,765	99,765	80	21	53	76	95	93 (85)	79
97=	80	-	-	Ipade Business School	Mexico	2017	100,924	102,093	180	57	6	78	56	89 (100)	69
99	-	94	-	Vlerick Business School	Belgium	2016	97,960	97,960	72	12	69	80	94	62 (100)	79
100	93	86	93	Queen's University: Smith	Canada	2015	93,728	93,102	85	41	92	81	88	78 (100)	44



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carry 50 per cent of total weight and those from 2016 and 2015, 25 per cent each. Excluding salary criteria, if only two years of data are available, the weighting is split 60:40 if data are from 2017 and 2016, or 70:30 if they are from 2017 and 2015. For salary figures, the weighting is 50:50 for two years' data.

The first two alumni criteria are average income three years after

graduation and salary increase compared with pre-MBA salary, both weighted at 20 per cent. For the latter, half of the weight applies to the absolute increase and half to the percentage rise (published). Salaries are converted to US dollars using October 2016 International Monetary Fund purchasing power parity rates.

The salaries of non-profit and public

sector workers and full-time students are removed, as are the highest and lowest salaries from each school, to calculate a normalised average. Finally, salaries are weighted to reflect differences between different sectors.

"Value for money" for each school is calculated by dividing their average alumni salary three years after graduation by their MBA's total cost, including tuition, opportunity cost and other expenses. Any financial help given to alumni is subtracted from the total.

The school criteria include the diversity of staff, board members, students by gender, nationality and the MBA's international reach. For gender criteria, schools with a 50:50 composition score highest.

With the exception of the "PhD graduates" category (see key, page 33), criteria based on school data use 2017 information only.

The research rank is based on the number of articles by full-time faculty in 50 internationally recognised academic and practitioner journals. The rank combines the number of publications from January 2014 to October 2016, with the number weighted relative to faculty size. The list of journals used for this criterion was updated and increased from 45 to 50, following a consultation with business schools in June 2016.

The FT Global MBA ranking is a relative listing. Schools are ranked against each other by calculating a Z-score for each criterion. The Z-score is a statistic that shows where a score lies in relation to the mean. These scores are then weighted as outlined in the ranking key and added together for a final score.

After removing the schools that did not meet the response rate threshold from the alumni survey, a first version is calculated using all remaining schools. The school at the bottom is removed and a second version is calculated and so on until we reach the top 100. The top 100 schools are ranked accordingly to produce the 2017 list.

Laurent Ortman

Judith Pizer of Jeff Head Associates acted as the FT's database consultant. The FT research rank was calculated using Scopus, an abstract and citation database of research literature.

	Diversity									Idea generation			
	Female faculty (%)	Female students (%)	Women on board (%)	International faculty (%)	International students (%)	International board (%)	International mobility rank	International course experience rank	Languages**	Faculty with doctorates (%)	PhD graduates No. (%)	FT research rank	Rank in 2017
	22	25	13	35	39	1	70	95	0	95	24 (4)	24	68
	21	30	22	35	42	3	82	60	0	98	35 (6)	66	69
	32	38	50	34	51	50	44	2	1	100	12 (4)	95	70
	19	24	33	78	97	17	14	16	0	100	1 (0)	49	70
	39	44	24	51	72	65	34	66	0	100	30 (3)	68	70
	22	37	18	20	37	3	74	68	0	81	84 (1)	68	70
	37	32	35	46	91	82	21	23	0	90	26 (8)	88	74
	39	40	32	62	93	42	42	58	1	96	102 (2)	77	75
	31	37	29	69	83	24	12	35	0	96	45 (2)	61	76
	20	34	10	34	67	15	37	71	0	77	16 (25)	83	77
	31	52	23	32	21	0	38	1	1	83	26 (4)	49	77
	19	30	12	19	31	6	96	92	0	100	2 (0)	68	79
	37	40	35	49	86	47	31	43	0	79	67 (1)	94	80
	36	34	8	22	40	0	85	96	0	85	18 (6)	17	80
	35	43	10	27	30	70	69	86	0	70	21 (0)	61	82
	25	19	25	20	23	4	76	70	0	88	42 (7)	45	83
	23	19	23	30	40	8	90	61	0	83	41 (2)	68	84
	29	31	11	17	44	4	50	93	0	90	21 (10)	61	85
	32	41	13	40	43	8	60	44	0	96	25 (4)	81	86
	33	33	22	16	82	12	55	89	0	84	0 (0)	85	87
	30	32	33	25	16	9	92	84	0	79	34 (9)	33	88
	23	30	19	22	37	0	75	85	0	82	34 (9)	29	89
	9	32	16	48	76	63	46	11	0**	93	0 (0)	98	89
	41	49	39	60	77	39	35	15	0	93	65 (2)	82	91
	43	38	53	46	96	53	17	26	0	84	137 (1)	91	92
	28	22	12	57	40	2	93	99	0	77	40 (0)	15	93
	23	26	50	63	42	75	59	45	0	99	27 (11)	33	94
	23	15	7	1	0	0	83	38	0	99	25 (4)	98	95
	36	55	22	34	32	46	68	38	0	80	75 (7)	68	95
	36	37	55	45	94	50	39	87	0	93	69 (0)	88	97
	6	23	20	24	8	0	97	4	1	41	0 (0)	100	97
	31	45	17	24	77	92	19	9	0	95	18 (6)	83	99
	31	36	24	50	60	44	36	79	0	99	27 (4)	61	100

Footnotes: page 31



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Practical learning p38
Bringing power
to refugees



Mentoring p52
A shared
experience



Window on to the future

inside



ESMT dean says Germany's business education is growing up, p47

Optimistic:
Jörg Rocholl believes
his country's status
as an MBA backwater
is about to change

The power of sharing

Students found a way to deliver electricity to refugees with the help of scientists from Cern. By Alison Langley

A team of students charged with improving the lives of displaced people found themselves debating an unlikely choice:

should they develop an electricity grid to distribute scarce energy in refugee camps — or a teddy bear?

The nine students, from different countries, universities and disciplines, were part of a 12-week “challenge-based innovation” course created by Cern, the home of the Large Hadron Collider, near Geneva, and drawing on its scientists’ expertise.

The teddy bear, intended to give off a comforting glow, warmth and the smell of home to help traumatised refugee children, almost won. But eventually the group, which included MBA candidates from Barcelona’s Esade business school, aspiring designers from the city’s IED design school, as well as technical students from Italy and Spain, voted to develop a modular, expandable electricity grid.

The idea was to help refugee camps and emergency workers in disaster areas distribute power efficiently and equitably between communal facilities such as schools and hospitals, as well as individuals and families.

“We had big disagreements, but we were very democratic,” Argentine Esade student Iván Gabriel Leis recalls with a smile in December, when the group and other teams gather to polish and present their projects in the last of three stays at Cern.

Not far from where Leis and fellow Esade student Lalitha Kakulapati, from India, are talking, their teammates are

explaining the merits of “ElecTree” to a group gathered around a prototype. The team has created a scalable product that is cheap to make and easy to use.

The students are sleep-deprived but excited. Global Humanitarian Labs, a partnership of organisations aiming to encourage and accelerate innovative ideas for the non-profit sector, has just offered to support them in turning the concept into a viable product ready for testing in the field.

This is the fourth time Cern had opened its facilities to a cohort of students for the scheme. The challenge-based innovation initiative is intended to help close a gap in Europe between scientific excellence and commercial application, while demonstrating that the billions of euros spent at Cern can produce socially useful technologies. (Many of the students’ ideas exploit the facility’s research, as the teddy bear was intended to.)

Until ElecTree, none of the student projects had been picked up by investors. But the business schools’ and universities’ main aim is to give students experience of working with different nationalities and across disciplines while developing a taste for innovation and entrepreneurship.

Some of the students chose the programme so they could work with Cern scientists. “I’m a nerd and just to come to Cern and work with these

The challenges are broad to give students latitude to think big



brilliant people here — I wasn’t going to pass up on that,” says Kakulapati.

The five teams were each given a broad challenge, for example: “improve the cognitive development and communication skills of people with disabilities”. The ElecTree team’s task was to use technology to “improve the living conditions of refugees, displaced and other people in need of emergency temporary sheltering”. The challenges are intentionally broad to give the students latitude to think big, says Markus Nordberg, head of the project at Cern.

The team’s mentor was Daniel Dobos, a scientist on the Atlas experiment, which made the groundbreaking

PHOTOS: DARRIN VANSELOW; REUTERS



Connected: (above) people charge their phones inside a refugee camp in Serbia, (left) Iván Gabriel Leis and Lalitha Kakulapati with the prototype of ElecTree

discovery of the Higgs boson particle. The team's first step was to research the challenge. Dobos connected them with Geneva-based humanitarian groups including the UN refugee agency UNHCR and the International Red Cross to discuss ideas throughout the process.

Lykke Groven, a Danish design student, flew to a refugee camp on the Greek island of Lesbos. She reported back on WhatsApp and introduced the team to a Syrian boy so traumatised by the war that he could not remember his name. "The toys that he had were really comforting him," says Kakulapati. "This [teddy bear] idea suddenly came out of nowhere. We all loved it." ➤



Problem solving: (clockwise from left) the ElecTree team promote their project at Cern; the Large Hadron Collider; refugees in a makeshift camp in Italy last summer



The ElecTree proposal was prompted by one of the camp workers, who told Groven that while people had good ideas for improving sanitary conditions, health and education, none of these were possible without electricity.

“I think we all had that ‘aha’ moment when Lykke shared that,” says Leis.

Kakulapati remembered being caught in the earthquake in Nepal in April 2015. A hotel started up a generator for a few hours each evening so tourists and Nepalese could contact the outside world. With so many people struggling to get enough bandwidth to send an email, a system of sharing developed.

“When you are there in a time of need, the instinct is not to take. The instinct is to share,” Kakulapati says. “I feel like that is something we brought to our prototype. It’s designed so that you divert energy to essential functions that everyone needs and the rest is shared.”

Some team members were reluctant to abandon the teddy bear idea but



ultimately the group voted for the ElecTree proposal as the majority felt it would have a greater impact.

The students found that designers, engineers and business people view challenges in different ways and that working across disciplines was more demanding than overcoming cultural differences. Engineers are linear; they move from A to B, Kakulapati says. As for designers — she waves her hands above her head — designers go everywhere.

The two main concepts taught during the term are design thinking and lean start-up. The students explain this means that, starting with a broad

challenge, they explore, research and narrow the focus. Then they go back to the users, test the ideas and finally develop a prototype.

Building the prototype exposed further differences in approach. Leis says that the engineers “had a sense not about the end-user, but about the technology. I didn’t have a sense of the limits of technology. The designers were saying ‘OK, but we need to help everyone’. We said, ‘You’re crazy.’” The team did not use Cern technology in the end, but the students say they learnt from the advice and thought processes instead.

Keeping costs low and making the grid simple to understand and use was essential. The design students produced a product brochure and PowerPoint presentation explaining how it works.

On the day of the final presentation, it is the business students who don suits to outline the concept. ElecTree, they explain, is a modular extendable intelligent grid that prioritises electricity needs for hospitals and schools, but recognises the requirements of refugees. So when administrative buildings and schools are not in use, the electricity flows more equitably to shelters.

Representatives of the non-governmental and UN agencies working with the groups are in the audience or watching a live webcast. With the other seven members sitting on a platform behind them, Leis and Kakulapati deliver polished pitches about ElecTree. Then, prompted by a question that they had planted in the audience, they get to present the teddy bear idea, too. **B**

When admin buildings and schools are not in use the electricity flows to shelters

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From the drawing board

Wriggle room

**Four friends think they have found an answer to a gap in the food recycling market with a 'bit of a weird idea', writes Jonathan Moules
Photographs by Tom Pilston**

The co-founders of a Cambridge recycling technology start-up have found themselves working with thousands of unappealing business partners.

The four, who met as students at an environmental hackathon organised by Cambridge university's entrepreneurship club, hit on the idea of turning unwanted food into animal feed by feeding scraps to an army of black soldier fly larvae.

It was a concept that Joe Halstead, the biologist of the group, saw in action at his parents' pig farm in Devon. The ravenous larvae are not easy on the eye but Halstead had seen how they could transform food waste into fertiliser and wondered what other useful products they could make.

The team needed a business plan to turn the idea into a commercial reality. Fortunately one of their number, Matt McLaren, was studying for an MBA at the university's Judge Business School. His alma mater had also recently started a three-month incubator programme for early stage ventures, called Accelerate Cambridge.

"I knew a lot of the staff involved in the programme, so the week after I graduated from my MBA I went up and asked if we could join," McLaren says. The team was accepted and a month

after joining Accelerate Cambridge in October 2015 had formally incorporated a company named Entomics. "We saw that there was room to turn what we thought was a cool backyard concept into a proper business," says McLaren. "Being accepted onto the Accelerate Cambridge programme was a big step for us and was critical in gaining access to a wide range of mentors and coaches that pointed us in the right direction."

Although McLaren already had a network of friends and supporters from among his MBA classmates, whom he could tap for useful business tips, the Accelerate staff could offer connections with senior executives at multinational companies with bases in Cambridge, such as AstraZeneca and Microsoft. This was particularly useful for advice on the practical challenges

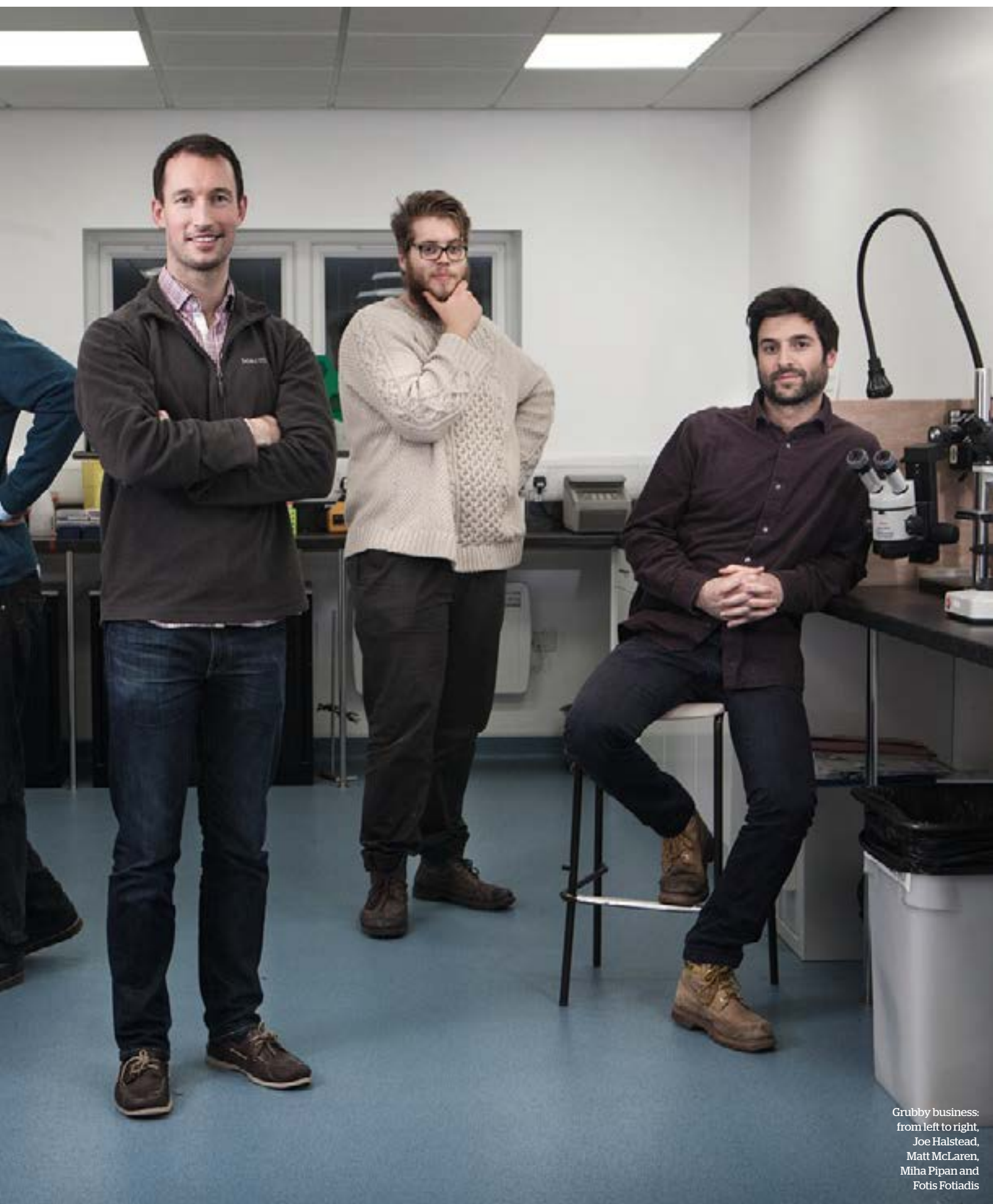
Entomics faced, such as setting up a research and development facility. "It was in a way free consulting," says McLaren.

Judge offered the Entomics team free working space to develop their idea but while the founders were



'Being accepted into the Accelerate Cambridge programme was critical in gaining access to a wide range of mentors and coaches'





Grubby business: from left to right, Joe Halstead, Matt McLaren, Miha Pipan and Fotis Fotiadis

grateful, the desks were unsuitable for the prototyping and laboratory work necessary to develop a recycling operation. "Unlike software developers, we cannot sit at home on laptops," McLaren notes.

Fortunately, Halstead had contacts at the National Institute of Agricultural Botany (Niab), a plant science research company, which was opening a facility just outside Cambridge and offered the Entomics team free space to set up their research and development laboratory.

Another fruitful partnership has been with the retailer J Sainsbury, which agreed to provide out-of-date food. This has enabled Entomics to manufacture its first commercial product, an animal feed, which it is selling to pet supply wholesalers. The arrangement came about after McLaren spoke to the manager of his local store about what Entomics was doing. "I think he was interested because it was a bit of a weird idea," he says.

McLaren says he is thankful for the range of skills he acquired during

'I am constantly calling my former MBA classmates for advice on such things as finance, engineering, law'

his MBA that are helpful in his role at Entomics, but he admits that he has been forced to learn new skills quickly as an entrepreneur. The MBA class network has been helpful. "I am constantly calling up my former MBA classmates for advice on... different subjects ranging from finance to engineering to law," he says.

Entomics has yet to seek equity backers, surviving on the savings of the founding team, competition prize money and grants. Its largest single offer of financial support was a £60,000 cheque from Cambridgeshire & Peterborough Local Enterprise Partnership, a regional development body.

A serious equity round will be needed to achieve the company's big goal for 2017, building its own pilot plant for new product development, such as converting waste into biodiesel. This is an area where the practical skills the team learnt during their time on the Accelerate Cambridge programme will come into their own, says McLaren.

"It is... practicalities like do you have the right financials on your [presentation] slide deck that mean you don't walk into a meeting... unprepared," he says. "It is a good way to enter the scary world of investors." **B**

Jargon buster: Everything-tech

There was a time when you could clearly identify a computer company. Either they sold metal boxes filled with microprocessors or employed programmers to write code.

Then the internet arrived and everyone became part of the technology industry, from shops that only sold stuff online to courier companies whose customers can trace their delivery using a GPS signal. The problem is that with each improvement comes irritating jargon that jars.

Financiers who used to call themselves something recognisable, such as an insurer or investment fund, are now called fintech entrepreneurs. Those who were once teachers or trainers are in the "edtech" business. Cleantech is not, as you might assume, some sort of digital bath flannel, but the moniker now adopted by businesses involved in what could be seen as environmentally friendly services, such as solar power provision. Agritech has been created to describe the web-savvy farmer.

Such descriptors seem to be popular with those most desperate to hype a business plan. If you have an idea that obviously improves our lot you do not need such jargon.

The only hope is that one day, someone calls us all out on this lazy bandying around of the word 'tech' with the sensible point that almost every company has, or needs to have, some form of digital support. We cannot reach that day soon enough. — **JM**

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Meet the dean

Window of opportunity

Germany has traditionally been a business education backwater, but ESMT Berlin's Jörg Rocholl says that is changing. By Jonathan Moules

From the window of his office, ESMT Berlin's president, Jörg Rocholl, can see two landmarks illustrating the city's turbulent past.

In one direction is the Fernsehturm, the TV tower built by the former East German government that dominates the Berlin skyline years after the cold war. The other way is a view of the Berlin City Palace, built when the city was the capital

of Prussia, which lay in ruins for decades after being heavily damaged by Allied bombs during the second world war.

Despite historic surroundings Prof Rocholl's focus is on the future. He likens the relatively youthful ESMT, founded 14 years ago as a privately owned business school, to the tech start-ups that have given Berlin an image as one of continental Europe's largest centres of entrepreneurial talent.

"We are still in the growing-up phase and this is what is exciting because it really means that things can be shaped," he says.

Prof Rocholl is only the third person to run ESMT, having taken the post of president five years ago at the age of 38. At the time, he was the youngest person in the world to lead a top business school. Today, he can claim to be ESMT's longest serving president

Historic links:
Jörg Rocholl
in the ESMT
building, which
was home to the
state council of
East Germany
from 1964 to 1989

The long view:
Jörg Rocholl is
optimistic about
the future of
business education



and is confident about the next chapter for the institution.

"I have a feeling that it's now Berlin's time, maybe even Germany's in lots of ways," he says, picking up on the dynamism tech start-ups have given the city. "The start-up community in Berlin is buzzing. Maybe they see an opportunity with the uncertainty in places like London over Brexit and I wonder whether there's a sense of that with the business schools."

Germany has long been a backwater for business education. Business schools were few and far between, largely because the country's education system did not lend itself to the postgraduate MBA programme. People tend to remain in full-time education to masters level, rather than return later.

ESMT was formed in part to fill that void. It now offers a full-time MBA, an executive MBA and a masters in management as well as open enrolment and customised executive education programmes. The school is trying to position itself at the cutting edge of technology and has been developing partnerships to attract MBA students to study in Germany. It is the first German

institute of higher education to accept the digital currency bitcoin in payment.

Last year, ESMT joined with Frankfurt School of Finance and Management, HHL Leipzig Graduate School of Management, Mannheim Business School and the Otto Beisheim School of Management to form the MBA Alliance Germany. The partnership will jointly market the highest ranked schools in Germany and late last year took out a double-page advertisement in the international media (including the Financial Times).

"This MBA alliance is one way to just reinforce the impression that all of a sudden there is an MBA market that is very active," Prof Rocholl says. "It is not as big yet as in the UK or in the US but has grown a lot within recent years."

The five member schools are all internationally accredited. ESMT, Frankfurt and Mannheim have secured the "triple crown" of recognition from the AACSB, Equis and AMBA bodies. AACSB said the Berlin school offered Germany "a chance for its first world-standard business school". The schools jointly produced 258 graduates in 2016, a fraction of the number for a single school in more developed markets such as the US, the UK or France.

With a high quality of life, thriving economy and affordable fees, Germany offers a strong return on investment for MBAs, plus good job opportunities and a simple work permit system for graduates.

ESMT is the first German institute of higher education to take bitcoin payments



VIDEO
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the Dean
interviews, go to:
ft.com/bized-video

CV

Born in Soest, North Rhine-Westphalia, Germany, in 1973.

Education

Obtained a PhD in finance and economics in 2004 and a masters of philosophy degree in 2001 from Columbia Business School in New York.

Career

From 2003 to 2007 he was assistant professor of finance at the Kenan-Flagler Business School of the University of North Carolina at Chapel Hill. In 2007, he joined ESMT Berlin as an associate professor and was promoted to full professor three years later. From September 2010 to October 2012 he was dean of ESMT's international business school. He has been president of the school since July 2011.

ESMT is ranked second for value for money in the 2017 MBA ranking. The €38,000 students pay for its one-year MBA course is considerably less than the €64,000 charged by France's Insead and €65,000 charged by IE Business School in Madrid. In the US, students can expect to pay six-figure sums. Columbia University, for example, charges \$141,000 per year for its two-year course.

ESMT cannot afford to rest on its laurels, however. It slipped from 64th to 70th in the 2017 MBA ranking.

Prof Rocholl admits that he only started to think about business school when he moved to the US to study at Columbia in New York.

"When I went to the US I got lots of requests from my advisers, from colleagues later on who said, how is it possible that a country like Germany with such a strong economy doesn't have a business school?"

Prof Rocholl did not have an answer to this question, but says it made him feel he needed to return to Germany to change the situation.

"There are lots of elements that make this place very attractive for students and for professors," he says. "I would say the profile we have with respect to technology, with respect to competitiveness, innovation is there. What I think we just need is growth."

That is starting to happen. Applications to the full-time MBA programme at ESMT were up 75 per cent last year and the school is succeeding in attracting a cosmopolitan staff, with 19 nations represented among the 37 core faculty.

It could be factors outside Prof Rocholl's control that will have the biggest effect on the school's future success. The UK's vote to leave the EU and the uncertainty raised by Donald Trump's presidential victory in the US may make continental European business schools attractive to many international students and staff. **①**



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Admissions

The right stuff

Admissions directors reveal what business schools look for in MBA applicants. By Janina Conboye

Aspiring students applying to the world's top MBA programmes face a selection process that is rigorous, to say the least. Even before candidates contemplate the detailed online application forms for their chosen schools, there is the graduate management admission test (GMAT) to contend with. Then would-be students must consider how to fund their course, while tackling assessed essays and pinning down the recommendations they need.

But who is applying to study for an MBA and what are business schools looking for? Schools report trends including an increasingly international mix of potential students and a rise in the number of women.

Crystal Grant, head of admissions at Imperial College Business School in London, says international diversity in the classroom has grown. She adds: "More candidates are also planning to launch entrepreneurial ventures or join start-ups immediately after their MBA rather than three to five years after."

Ceibs, based in Shanghai, China, has a growing number of students who want to remain in Asia after graduation. "Sixty-four per cent of international students in the current class, to graduate in 2018, highlighted Shanghai and Asia-Pacific as their desired job locations," says Yvonne Li, MBA director of admissions and career services. "This compares with 30 per cent in the previous class."

MBA students are coming from a wider range of industries. Brandon Kirby, MBA recruitment and admissions director at Rotterdam School of Management, says more applications are from the non-profit sector, as non-governmental organisations start to behave more like businesses. "We have also seen an uptick in Latin

American applications," says Kirby. "And we are also seeing an increase in applications from the healthcare and legal industries."

The slowdown in Australia's mining industry has led to a rise in the number of applicants from the resources sector to Melbourne Business School, alongside more from those in the armed forces, says director of admissions Sally Forrester. "They are looking to reinvent themselves and transition into another industry."

There is no one-size-fits-all answer to what schools want. A good GMAT score is not enough, so applicants need to research what their target schools are looking for. We asked some admissions directors what their schools want to see in an applicant.



Schools report an increasingly international mix of students and a rise in the number of women



Brandon Kirby
MBA recruitment and admissions director, Rotterdam School of Management, Netherlands

“We look for people who are dynamic in both their personality and their viewpoint, and are risk-takers. Are they pushing and challenging themselves? We want people who are looking to learn. We might see all the boxes ticked, but when we think about the classroom we need more than that. I did an MBA so when I look at applications, I ask questions about emotional intelligence. We want inquisitive individuals who want to make an impact — and by impact I mean within business, culture or the community. It is about business and leading others, but also about working with other people in complex organisations.”



Sally Forrester
Admissions director, Melbourne Business School, Australia

“It is not just about how smart you are — soft skills are very important. Our MBA uses a personal

effectiveness programme to assess the development of these soft skills, such as self-awareness and communication skills, which our students tell us is valuable in helping them achieve their potential. We look for students who are grounded, determined and motivated with a desire to learn and develop new skills [with] hard work and perseverance. Whether it is creating change, building a legacy or starting a business, we are looking for those who share a hunger for progress and are determined to improve themselves and the communities they serve.”



Crystal Grant
Head of admissions, Imperial College Business School, UK

“Finding original thinkers with a passion and a flair for innovation is important for us. We are experimental by nature. We recognise that real innovation comes from diversity and collaboration, so we look for candidates from a wide range of backgrounds who enjoy working in dynamic groups. We want applicants who share Imperial’s vision of benefiting business and society — those who are risk-takers in business and also take

risks in their views and actions on social impact, gender diversity, equality and lessening the gender gap.”



Yvonne Li
MBA director of admissions and career services, Ceibs, China

“We are based in one of the world’s most dynamic metropolises, Shanghai. Our location helps shape our identity. We provide world-class talent for inbound multinational companies or globalising Chinese enterprises. We look for MBA students who can embrace the opportunities and challenges of working and studying in such a rapidly evolving market; so, in short, we are seeking students who can take the lead. We want the responsible global business leaders of tomorrow who will embrace China’s depth and global breadth.”



Hugues Contant
Director of admissions, Essec Business School, France

“At the MBA level, we have traditionally had strong specialisations — luxury brand management, hospitality, strategy and management. We are now merging these into a single programme which gives applicants a solid foundation in core business plus the opportunity to major in a particular area. Applicants [want] core competencies but also sector-specific skills leading to clearly focused jobs, so what we are looking for is a correlation between an individual and a realistic project that we can help bring to fruition through increased knowledge, hands-on learning and international exposure.”



Professor Rajendra Bandi
Chairperson admissions, IIM Bangalore, India

“IIM Bangalore looks for people who, beyond having consistent academic excellence, are socially sensitive, self-motivated, willing to learn, accept responsibility, have good quality professional experience and who will be a good citizen both in an organisation and in wider society. We want applicants with an entrepreneurial mindset who will not only be ready to take up leadership roles in responsible companies but be ready to accept the responsibility and accountability. We also want applicants who are good team players in cross-cultural teams.”

PHOTO: ISTOCK

Shared experience

An MBA graduate and his mentor tell Janina Conboye why the relationship is a two-way street

Zach Satlin, graduate

What my mentor offers is twofold. Jeremy has helped me navigate London, its culture and working world. It was good to have someone who went through the same experience as me — we were both American graduates of Chicago Booth School of Business and had moved to the UK. But beyond good restaurants and European travel destinations we have been focusing on professional advice: how to manage my first direct report, how to get exposure to senior leadership and how to set myself up for promotion.

Based on his advice I make sure I volunteer for projects that give me exposure to senior leadership, I have set up quarterly one-on-ones with directors and I have gotten to know them. It is really nice to have someone to talk to who is not invested in my career. Jeremy's advice is unbiased and I get one person's view of the whole picture.

I graduated in 2015 and moved here to work for Amazon. To be honest London was not on my radar. I imagined my MBA would be a stepping stone, but I was not thinking about moving into a new industry or country. But you go and do an MBA and you realise there are so many opportunities available. I discovered an interest in technology and did a fantastic internship with Amazon.

I am now a senior financial analyst about to start a finance leadership and development programme. I will rotate within the company for three months.

Before my job in London, I had never

been to the UK. I arrived on a Saturday and started work on the Monday and did not know much about the city or its working environment. I thought I would need some local insight from contacts here. The idea of having a mentor had always been there, so it was the perfect opportunity.

Chicago Booth's London campus invites you to networking events with alumni and professors every week. It was at such an event that one of the alumni recommended Booth's mentorship programme as a good way to meet people and get some career guidance.

I was matched with Jeremy Perlman quite quickly and it works well. We do not meet too frequently. Generally we meet face-to-face and in traditional British fashion: at the pub.

I would recommend a mentor to others. Even if you are not moving abroad, it is good to have an outsider's perspective. Someone to help navigate professional decisions is great. It is also important to know what you want to get out of the relationship with a mentor. I go to Jeremy to discuss key inflection points in my career — as I am starting to think about promotion, for example.

Booth matched us well, but the advice given by a mentor is only as good as you make it.



It is good to have an outsider's perspective. Someone to help navigate professional decisions. I go to Jeremy for key points

You can give back to the community. And you can look at what you've done, how you did it and how you can do things differently



Jeremy Perlman, mentor

Why did I decide to become a mentor? First because someone asked me, but also because I have appreciated having people or mentors who I could bounce ideas off. I was involved with Chicago Booth's alumni network and I thought it was not too big an ask to sit down and have a few beers with someone.

I am vice-president of sales for Europe, the Middle East and Africa at Trifacta, a Silicon Valley-based data software company. I did an MBA at Booth and graduated in 2008.

After my MBA I moved to London to join a software company. I ran its EMEA business. After that I joined Apigee, recently acquired by Google, where I built its EMEA business. I am now doing something similar at Trifacta.

I decided to live in London because if things did not work out it would be easy to go back to the US. My wife is from Istanbul so being in London meant that we were closer to her family.

When you are a mentor it is different from giving advice to people who work for you. Zach, like me, was the classic story of an American coming here.

There are subtle cultural differences between things like the sarcasm and

politeness. Apply that to the workplace and it becomes even more interesting. It was good for Zach to calibrate these things and also interesting for me to reflect on them.

As a mentor I try to respond rather than give advice. We talk about topics such as how to navigate a corporate environment, its associated dynamics and career advancement.

We also talk about managing people and taking different approaches with different sorts of people. If you have just moved here and suddenly you are asked to do lots of different things — work in a new function, in a new company, hiring people interculturally — it is like trying to solve a varying equation. It is hard. Getting some understanding of these variables is helpful.

I would recommend being a mentor. It is a two-way street because in some sense you can give back to the wider community. And you can look back at what you have done, how you have done it and how you can do it differently.

I have mentored before. When I was doing my MBA I mentored several students at Chicago university. It was interesting how these relationships differed: some are transactional, some have stayed in touch. But with each you have to go with the flow.

You need to find some commonality with the person to be able to help them. If there's some reason to come back, then it will persist and some good will come of it. **B**



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*Economist Executive MBA rankings 2015



Best reads p57

The pick of the recent crop



Hopes & fears p66

Student reboots her artistic plans



Books

Sound advice

Our classic business book podcasts may surprise. By Andrew Hill

Six books in 12 weeks. The challenge we set listeners of our new business book podcast in 2016 was a stiff one and, in truth, it is not clear how many met it.

What is clear, however, is that FT columnists, asked to select a “classic” business book, came up with an extraordinarily eclectic list.

Their choices included straight-down-the-middle business titles, such as Bryan Burrough and John Helyar’s *Barbarians at the Gate*, but also a great novel (*Catch-22* by Joseph Heller, recommended for its insights into hierarchy and bureaucracy) and a 1962 collection of workplace advice, dating tips and recipes (the mould-breaking *Sex and the Single Girl* by Helen Gurley Brown, later editor of *Cosmopolitan*).

The first series generated some real insights into the business world, as seen through the eyes of a variety of authors.

David Nasaw, the author of *Andrew Carnegie*, the mammoth 2006 biography of the industrialist and philanthropist, told the show that if he were writing the book again, he would place more emphasis on Carnegie’s “distaste for men of wealth who didn’t produce anything”. Carnegie, he said, had a “notion that there was something noble in creating a product and giving it to a larger public at a lower price, and something ignoble about making money from the buying and selling of businesses to people”.

Discussing those same people, and how they were portrayed in *Barbarians at the Gate*, about the hostile bid for RJR Nabisco in the 1980s, Martin Dickson, FT New York bureau chief in the aftermath of the deal, said the book set “a new bar” for business writing. But by exposing the egos and machinations of dealmakers, he said, the book also presented an unpleasant public profile of Wall Street and corporate America that was influential in the years to come.

Lucy Kellaway picked Ken Blanchard and Spencer Johnson’s *The One Minute Manager* (“incredibly famous, incredibly

short”), whose simple message about how to get the best from people has sold millions. To Lucy’s disgust, though, she learnt that the idea she loved best — that it is important to give short, sharp “reprimands” to team members who make mistakes — had been adapted in the new edition to the softer “redirects”.

As Ann Francke, chief executive of the Chartered Management Institute, pointed out in our first podcast, time-poor businesspeople are looking for concise lessons that they can apply immediately — hence the hail of bullet-points at the end of every chapter in management books.

There is plenty to learn from all the books in the first challenge, whether an 800-page biography or a 100-page parable. In different ways, they all follow Francke’s rules for effective presentations: “You tell them what you’re going to tell them, you tell them, then you remind them what you told them.”

In that spirit, here is a reminder of the books in the first FT Business Book Challenge: *Andrew Carnegie* by David Nasaw; *Barbarians at the Gate* by Bryan Burrough and John Helyar; *Catch-22* by Joseph Heller; *The One Minute Manager* by Kenneth Blanchard and Spencer Johnson; *Sex and the Single Girl* by Helen Gurley Brown; *The Wisdom of Crowds: Why the Many Are Smarter than the Few* by James Surowiecki. Go to ft.com/business-book-podcast to listen to our Business Book Club podcasts.

The second series of the FT Business Book Challenge starts in February. If you have ideas for books that should be tackled in the new series, or would like to take part in the podcasts, email businessbookclub@ft.com. **B**

Andrew Hill is the FT’s management editor and author of Leadership in the Headlines: Insider Insights into How Leaders Lead



Listen without prejudice: columnists selected some surprising books and challenged listeners to read them in 12 weeks



Joint effort: teams of scientists are more productive than individuals

Unpicking the team

Collaboration is a quietly creative force when managed cleverly, writes Emma Jacobs

In the age of revolution, wrote Gary Hamel, the management expert, “it is not knowledge that produces new wealth but insight — insight into opportunities for discontinuous innovation.”

We all know businesses must innovate to attract customers with services and products and to update brands. Yet it is too often the big-bang disrupters and inventors that get the attention — the likes of Uber, Airbnb and Facebook. They are dramatic, after all. Yet Heidi Gardner, a former McKinsey consultant and Harvard Business School professor, now at Harvard Law School, argues that subtle innovations and insights from teams of consultants are just as important.

Key to achieving these, writes Gardner, is “smart collaboration,” which is also the title of her book. There are two reasons for this, she argues: “Expertise specialisation and the increasing complexity of today’s problems.”

Gardner cites a study showing that 2m patents and 20m academic publications across half a century demonstrate that teams are more productive than individual scientists. Moreover, teams produce innovations that have a greater impact in their domain — even in fields such as engineering and social science, which have a reputation for individual geniuses making spectacular breakthroughs.

Gardner explores the theme of smart collaboration in the context of professional service firms. In her research she has looked at the role

collaboration can play in innovation as well as raising a firm’s profitability. She claims it can also increase client satisfaction and engage workers, as well as breaking down silos in companies.

According to Gardner, encouraging collaboration can help engage all workers, but particularly millennials who are hungry for new projects and responsibilities, as well as giving them exposure to senior partners.

There is also a psychological benefit. Being part of a team increases attachment to the company, Gardner argues. Her own work, she says, has proved professionals’ motivation, sense of belonging and retention improve as their collaboration increases.

“Collaboration can be inspirational, motivational and even joyful,” she writes. Partners, she says, also observe that it makes them feel supported in the work — as per the old saying: “a problem shared is a problem halved”.

More to the point, it also means you can charge clients more money, she argues, because they value your strategic rather than purely technical advice.

The book is persuasive and thorough, yet it is fairly dry and at times the prose becomes clunky — not least in a section where she suggests that a firm can seek to bring new capabilities to bear. “Remember it’s not ‘Do you want fries with that?’” she writes. “It’s ‘Here’s another dimension of your problem that we can help solve by engaging a team of specialists to innovate on your behalf.’” The paragraph started so well.

Yet as a step-by-step guide, the book



Smart Collaboration, Heidi Gardner, Harvard Business Review Press, £26/\$32

leads the reader through the challenges. She also suggests taking a look at other professions, such as science, which is replete with star specialists.

She looks at the resistance met when encouraging the “solo specialist” to collaborate. Typically this is a professional who is in the middle or upper ranks of a knowledge firm and has a reputation in a particular niche. “Let’s suppose that this description fits you. Let’s further suppose that you’re pretty much satisfied with the status quo and that you’re not inclined to disrupt your well-oiled machinery by introducing collaborators.” It is a fair assessment of the kind of reader who might buy this book. In order to get them — or you, if you are the target audience — on side, she says, a company must encourage trust. “Can I trust that the partner I bring into my client relationship won’t screw up that relationship?”

Professionals reluctant to work in teams might feel they do not know how to, or because they worry about integrating diverse expertise and styles. To overcome this you need to build trust by figuring out who plays a brokering role in the firm — not necessarily the formal leaders.

The difficulty is how to make teams gel and to continue to collaborate over time. I would have liked to know more about how to pick teams that work effectively together. However, if you are the target audience — say, a lawyer or a consultant — this is a good guide on collaboration and how to overcome the resistance of the solo player. **B**

Books

Wise words



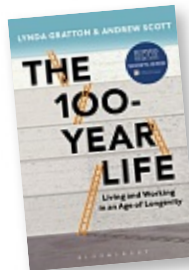
Andrew Hill picks some of the most thought-provoking books of the past year



What Works: Gender Equality by Design, by Iris Bohnet, Belknap Press, £21.95/\$26.95

This is a persuasive manual for anyone seeking to eliminate

unconscious biases, in recruitment and management, that perpetuate imbalances between men and women. In the book, a finalist for the FT/McKinsey Business Book of the Year award, Bohnet offers invaluable, research-based guidance about how to design and run organisations that are not only fairer but better. It is not as simple as it looks. As Bohnet points out, teams that look and think the same may be better suited for tasks that involve implementing existing solutions, whereas more diverse teams may be better at collective problem-solving.



The 100-Year Life: Living and Working in an Age of Longevity, by Lynda Gratton and Andrew Scott, Bloomsbury, £18.99/\$28

One of the first in what will doubtless be a wave of books about how to cope with longer lives and careers. Gratton and Scott, London Business School professors, use imagined case studies of individuals at different ages to map out how work, personal finances, corporate organisation and relationships may change. The book, another finalist for the FT/McKinsey award, is an important offset to the current obsession with how to manage millennials. A more important question, they imply, is how will millennials, many more of whom will live to 100, manage themselves?



Competing Against Luck: The Story of Innovation and Customer Choice, by Clayton M. Christensen, Taddy Hall, Karen Dillon and David Duncan, HarperCollins, £20/\$29.99

Harvard Business School's Prof Christensen is best known as author of *The Innovator's Dilemma* but for almost as long as he has taught disruptive innovation, he has promoted a "jobs to be done" approach. The authors explain how the theory can help companies work out why customers "hire" certain products and services. The book gives managers tools with which to adapt to disruption and avoid being swamped by process — and a further insight into Prof Christensen's thinking on innovation.



The Three Box Solution: A Strategy for Leading Innovation, by Vijay Govindarajan, Harvard Business Review Press, £22/\$32

Inspired by the Hindu gods Vishnu, Shiva and Brahma, Govindarajan, a professor at Dartmouth's Tuck Business School, lays out a simple and practical path for innovation. He says companies should assign core operations to box one, put stuff they need to forget, sell or close in box two and develop the future in box three. This should allow organisations to explore new frontiers, without losing sight of the need to exploit existing assets — an approach that, among others, Alphabet, Google's parent, is now testing at scale.



The Real Madrid Way: How Values Created the Most Successful Sports Team on the Planet, by Steven Mandis, BenBella Books, \$16.95

Adapting a common business book trope — *The Toyota Way*, *The Amazon Way*, *The Virgin Way*, and so on — Mandis, an academic, entrepreneur and former Goldman Sachs banker, dives into the Spanish football club to discover the secrets of its success. He emerges as a fan, though not an uncritical one, and attributes Real Madrid's commercial and sporting triumphs to its model: a member-owned organisation based on the values of its supporters and wider community. A fine antidote to the sporting and business fixation on data analytics as the only key to success.



Pariahs: Hubris, Reputation and Organisational Crises, by Matt Nixon, Libri Publishing, £20

Scandal seems woven into corporate life, no matter how many rules are applied, and often nemesis follows the hubris of business leaders. Nixon applies a quarter-century of experience working in and with big companies to recent headline stories of malpractice and explains why and how "pariah" organisations develop. He draws stimulating parallels between classical thinking, the historic use and abuse of power, and contemporary news. More importantly, he also suggests how leaders — and employees — can work to prevent the rot from setting in.

Nemesis follows the hubris of business leaders

technology Domestic goddesses



Artificially intelligent assistants are here and they are female. Kate Bevan asks why

I live alone, so I am generally fairly quiet, bar occasional shouting at my cat when she shreds the sofa. But lately I have become much more vocal thanks to the rise of artificially intelligent assistants.

The ability to ask your phone questions by speaking, through Siri, OK Google or Cortana, has been around for a while, but I have not noticed many people doing so in public. Perhaps that is because you look ridiculous issuing voice commands to your device in the pub or office.

It is different in the home. I have used Cortana for some time now, via Windows 10 on various laptops and desktops and on phones. When I say “Hey, Cortana” at home, at least three devices spring to attention.

More recently I have been using Google’s Pixel XL phone, which includes the first mobile iteration of its most evolved version of the Google Assistant (think of it as a smarter version of OK Google, which most Android users are familiar with). I also recently added an Amazon Echo to the collection of technology in my flat.

The Echo, and its smaller sibling, the Dot, are the first assistants to break free of the phone and become devices in their own right. Google launched its standalone assistant, Google Home, in the US last autumn and it will arrive in the UK this year. Several manufacturers including Lenovo also introduced artificial intelligence assistant devices at the CES technology show in Las Vegas this month.

As well as these AI assistants, we are seeing a rise of bots on services such as Facebook Messenger, where they will send you a boarding pass if you are flying with KLM, or help you complete the sign-up process on match.com.

The aim with these assistants is to encourage users to build a relationship with them



Virtual help: Cortana, Microsoft’s intelligent personal assistant, takes its name from a character in the Halo computer game; (below) Dave Limp, senior vice-president for Amazon devices and services, introduces the Amazon Echo

The point of all of these assistants is to make us feel connected to the products whose friendly interface they are, so that we spend more time in those ecosystems, buying products and sharing data.

It is interesting to note that Siri, Cortana, Alexa (the “personality” of the Amazon Echo) and the nameless Google assistant all speak with female voices by default. There has been much discussion about how this seems to entrench and build on the outdated but potent stereotype of women as secretaries or

subordinate staff, as anxious to please — which these assistants most certainly are.

There are many examples in popular culture of robots presented as female and subordinate. From Rosie, *The Jetsons’* cartoon domestic robot in the 1960s TV series, to Ava in the 2015 film *Ex Machina*, the gendered presentation of technological assistants and companions is deeply embedded.

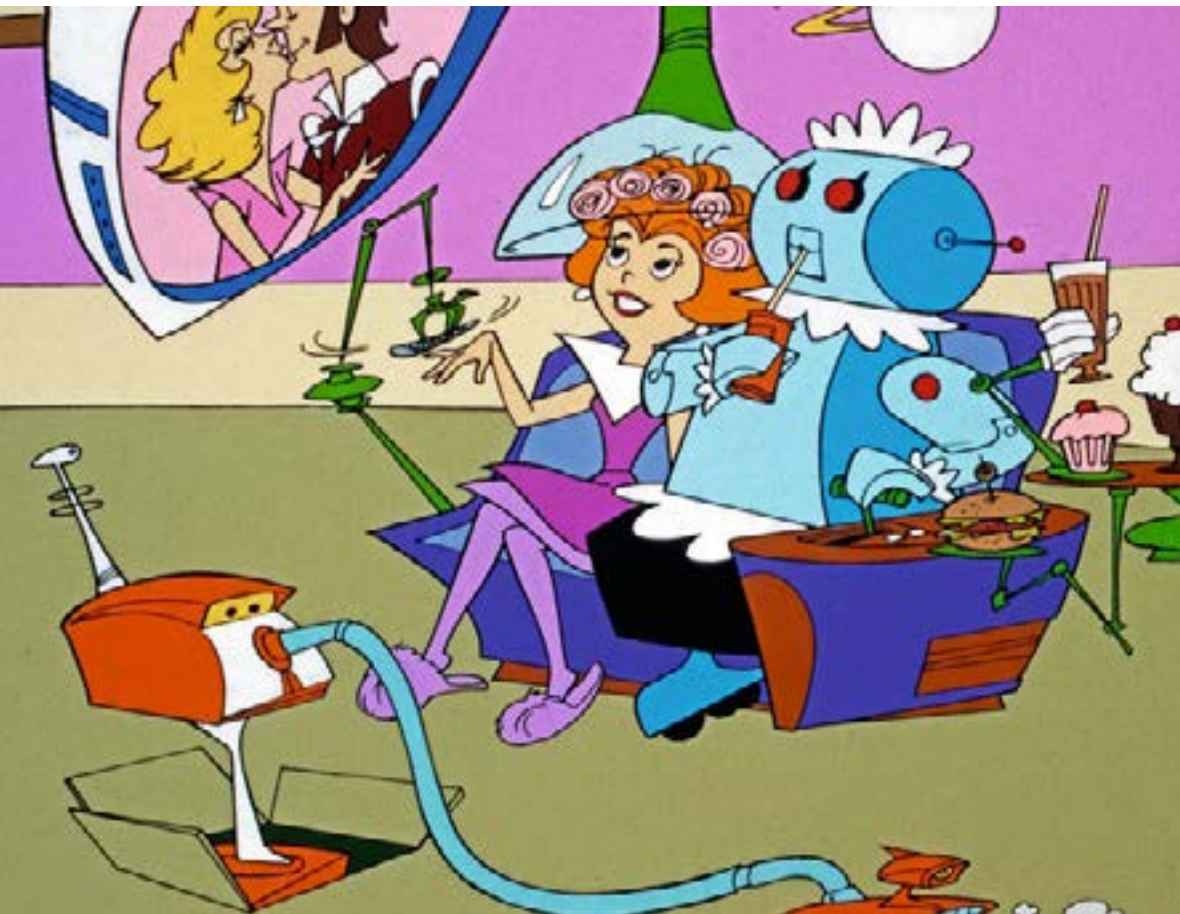
Daren Gill, head of Alexa product development at Amazon, says of Alexa’s gender: “We did a lot of testing for the voice; there were a lot of rounds of review about which voice was the most pleasing and what did the users like the most.”

Gill points out that the name “Alexa” comes from the library at Alexandria in ancient Egypt, which was dedicated to the Muses and formed a repository of knowledge. However, he adds that people do anthropomorphise devices.

“Personality is something we’ve really worked on,” he says. “There are many requests for Alexa to sing happy birthday and to say good morning.



PHOTOS: PA; UNITED ARCHIVES GMBH/ALAMY



Assistant: Rosie is a domestic robot in *The Jetsons* cartoon

Apps to save you time



Doodle
iOS, Android, free
doodle.com

Trying to wrangle several people into picking a date for a meeting or an event is painful, usually involving multiple emails, reply-all threads and calendar invites sent, declined and accepted. Doodle is a good alternative. The organiser creates a poll offering as many (or as few) options as they wish; the would-be participants are emailed and they pick their preferred dates. As participants respond, it quickly becomes clear which dates are the best for the event. There are two premium tiers, for individuals and businesses, offering an ad-free experience, encryption and, in the business version, custom domains for the web version. For most casual users, however, the free version is all you need. Be warned, though, the ads in the app are annoying.



Hopper
iOS, Android, free
hopper.com

There are many flight-booking apps and services, all doing much the same. Hopper is slightly more useful in that it offers you a view not only of how much your flights will cost, but also how those prices are likely to move. Pick your destination, then the app offers you a colour-coded calendar indicating when the flights will be cheaper or more expensive. Choose dates and the app will give an opinion ("Book now. This is not a great price but you will likely pay more if you wait"), a prediction on how the price is likely to change over the next few weeks and options to watch the trip or to go ahead and book. It is a little lacking in filters — there is no option to search only business class, for example — but it is a good way to evaluate the potential cost of a trip.



WordPress
iOS, Android, free
wordpress.com

This is invaluable if you manage a website or blog on the Wordpress platform and need to post or carry out admin tasks while on the move. The excellent app makes posting, managing users, moderating comments and viewing stats as painless as it can possibly be on a mobile device. That said, it is not perfect. Although the app offers you a tab in the sidebar for WP Admin, if you tap that you will be bounced to your browser, where you will have to sign in again and then do your admin tasks on the mobile website, which is a less than wonderful experience. — KB

That's powerful and new in the world: it's part of the family."

As with any new relationship, there is an element of getting to know an AI assistant. Gill says that Amazon's telemetry shows that "there's a lot of activity in the first two weeks to 30 days as you find out what Alexa can do". Happily for Amazon, once that initial exploration process is over, "they settle into patterns that work for them and the numbers are high — we're pleased with the engagement".

The key to embedding these AI assistants in our lives is to make them useful across a wide range of activities and this is where the lesson lies for entrepreneurs. At present, my Echo is just a little gimmicky fun — although I enjoy the frictionless experience of asking Alexa the time rather than picking up my phone, or enquiring what is in my calendar for the day instead of opening Outlook on my laptop.

However, as the new year progresses, I will be able to control my Sonos music system via Alexa and my Fibaro smarthome kit. Alexa already works with a range of smarthome devices on the Samsung SmartThings platform. Turning off the lights with a simple voice command still feels like the stuff of futuristic films. Amazon has been very clever about persuading developers to

Turning off the lights with a simple voice command still feels like the stuff of futuristic films

build in compatibility with Alexa. "We strive to be as open as possible," says Gill. "We want to encourage developers to use the platform."

There are many "skills" you can add to Alexa, third-party apps that expand its functionality, from the useful — checking travel conditions and finding recipes — to the frivolous, such as quizzes or getting Alexa to meow (the latter is useful if you want to freak out a resident feline).

Articles on the web compare Alexa to the Google Home assistant, but Amazon has an advantage at the moment as it was in this space ahead of Google. With both first-mover advantage and a clear focus on getting third parties to provide increasing functionality, Amazon may well have stolen a march on Google.

If you are an entrepreneur with the advantage of being ahead of your competitors, it makes sense to consider how your product or service should work not against providers of services, but with them, to create something that becomes not just fun or useful, but part of the family — however creepy that might feel. **B**

Get a better perspective on the Non-Executive landscape

The Financial Times Non-Executive Directors' Club hosts a number of workshops throughout the year designed for aspiring and existing non-executive directors. These events provide an excellent opportunity to learn and discuss subjects with leading business experts as well as networking opportunities.

So You Want To Be a Non-Executive Director?

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The Effective Non-Executive Director Programme

Two-day course | 1 & 2 March 2017 | London

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Costs and benefits



We asked MBA graduates: was your programme worth the price – and why?
By Wai Kwen Chan
@waikchan

My MBA gave me leadership confidence to not fear senior executives, but to embrace them as mentors and peers I can learn from. I do not fear unemployment because I have skills that will enable me to obtain work in many industries.

Financial controller

I never regretted studying for an MBA. It opened up opportunities that I never would have had. The jobs I secured since graduation paid from 50 to 100 per cent more than my pre-MBA job. I was able to pay off my significant student loans in less than three years.

Anonymous

Yes. I left a high-paying job and shelled out \$100k to stay out of the workforce for two years. But this was a chance to be immersed in a group of diverse voices, form bonds and enter a profession I would have had no other way to break into.

Marketing Manager

Yes. Before my MBA, I was a management consultant and wanted to work for social enterprises in emerging markets. Entering this space was difficult given that I had no formal work experience. With my MBA, I gained the experience. Now, I work for a social enterprise in Africa.

Chief of staff

Maybe. I am in a career that has enabled me to pay off my MBA. However, I have not yet recouped the opportunity costs from leaving the workforce and reducing contributions to my pension. In my industry, non-MBAs can achieve the same promotion and salary levels.

Anonymous

I think my MBA was worth the price but I don't think all MBAs are. For many programmes, the tuition costs are too high. My degree had a relatively low tuition cost and provided work experience. Also, my MBA more than doubled my salary potential.

Group administrator

As I am at a more senior level than I would have otherwise achieved, my MBA has been good value. It has proven to be an excellent way to transition careers. I used to be in the army.

Development manager

No. The cost of living and my salary do not justify the amount of money I spent on the MBA. Moreover, my job function, general management, has no need for MBA skills and the compensation reflects that.

Bank vice-president

Yes, definitely! The return isn't instant. The MBA gave me the skills and confidence to start my own business and the personal value of that cannot be measured using numbers.

Anonymous

Probably not. In hindsight, I might have chosen the part-time route and kept my job. I don't regret acquiring an MBA, but I think the cost is too high and a two-year duration is probably not necessary.

Anonymous

ft.com/business-education | [@ftbized](https://twitter.com/ftbized) | bized.communities@ft.com

MBA flavours

From bootcamps to extreme breakfasts, student bloggers share their experiences



Bootcamp lessons
Wynne Lewis
 Copenhagen
 Business School,
 Denmark

After reading Harvard Business Review's *The Making of a Corporate Athlete* by Jim Loehr and Tony Schwartz, I should have guessed what was coming. Our professor transformed into a drill sergeant. He made us complete three circuits of 10 high-intensity workouts ending in a "super plank" that was, indeed, super painful. He then reminded us that class resumed in 10 minutes. We changed out of our soaking athletic wear and got to class. Then the lesson ensued: sometimes you do not have much time in between your responsibilities, but maintaining your body is essential to maintaining your leadership stamina. This was not the lesson plan I was expecting in my first week, but it was the lesson I needed.



Critics are wrong
Alex Singleton
 Surrey Business
 School,
 UK

I have little doubt the experience of doing an MBA will be very positive for me and those I work with. The syllabus rightly prioritises subjects that matter in companies, such as finance and driving innovation, but are actually hard to pick up. Yes, soft skills are important. Books like Dale Carnegie's *How to Win Friends and Influence People* have made me a better person to work with, but this is surely the sort of material MBA students should be reading in their spare time. Besides, managers study MBAs not just

for the content but also for the credibility. People tell me I do not need to do an MBA — it is easier to "wing it". But we live in a credential-based society. MBA graduates, like everyone, will always be fallible but employing managers with those three letters seems less of a risk.



Tools for online MBAs
Charles Street
 Edinburgh Business
 School, Heriot-Watt
 University, UK

As an online MBA student the environment in which I study and engage with students, lecturers and thought leaders relies on technology. Here are some of the basic tools I have found most useful. **Adobe Acrobat Reader:** used to store an electronic version of the course text for each module. This allows me to read and summarise the material from anywhere, particularly during "dead time" like commuting to and from work. **Evernote:** this enables me to synchronise and access all the information at anytime, from anywhere, on any device. **Digital conversations:** Facebook, LinkedIn and WhatsApp. Being able to discuss and debate topics with students globally is a rich experience.



Chicago cuisine
Julia McInnis
 Chicago Booth,
 US

Chicago is a food city and so many of my Booth activities revolve around eating. Chicago is known for its steak houses, Ukrainian and Polish cafés and hot dogs with a dizzying array of

toppings. After a year here, I have got my go-to spots for everything from group meetings to networking coffees and Friday night places to celebrate surviving some of Booth's more exhausting weeks. Food and drink have been at the heart of my best group meetings and the Bongo Room (with two locations in the city) is the perfect place for a long brunch meeting. We usually ditch the laptops, but our notebooks vie for table space with opulent desserts that have been rebranded as breakfast. If cranberry vanilla pancakes can't bring people with different ideas together, I am not sure anything can.



Internship action plan
Timo Marquez
 HEC Paris,
 France

The search for an internship during an MBA is an important experience for many students. It provides the chance to work in the jobs and places where we see ourselves in the future. During my preparation I took the presentation slides from various career management sessions to develop a "dashboard", or visual map, with the basic aspects of the process, company details, specific roles and areas for further research and preparation. It has six key blocks: comparison of competencies and skills desired with personal experience; a company's value and culture, and personal strengths and weaknesses; professional goals related to the company; company information; follow-up questions; general notes. I filled in a dashboard for every position I was applying for. As I advance in my search for a job, the document will change and improve.

ft.com/business-education



THE FT MBA QUIZ

Calling all business schools – why not enter a team for the 2017 FT MBA quiz?

The quiz will take place on March 21 and will test the knowledge of up to 12 teams of business school students on topics written about in the FT, from business and politics to technology and the arts.

For more information, visit ft.com/quiz

Proceeds raised will go to the FT's partner charity Médecins Sans Frontières.



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Test yourself in the MBA quiz

Pit your knowledge against peers and raise money for Médecins Sans Frontières

Can you name the value of a bank's assets minus its liabilities? If you can, why not enter the FT MBA quiz — and test your knowledge against your peers.

The Financial Times is working with Médecins Sans Frontières, the medical aid charity, to raise money to help it carry on providing emergency medical care to patients wherever it is needed and to raise awareness of humanitarian crises. Here is how business school students can help — with a great opportunity to use their skills and talents to raise money.

The MBA fundraising quiz takes place on the evening of Tuesday March 21 at the FT offices in London. Hosted by Andrew Hill, management editor, up to 12 teams of three to six business school students will test their knowledge of economics and current affairs.

Each table is hosted by an FT journalist and there will be plenty of time to network over a glass of wine. Last year's quiz was won by Imperial College Business School for the third year running — could your school break their run in 2017?

The winning team's business school is crowned by Andrew as "smartest



Dispensing aid: Dr Martine Hennaux on her rounds at Mukedi hospital in the Democratic Republic of Congo

business school on the planet" and receives a free advertisement in the FT.

And if you knew the answer to the opening question was "bank capital", then you are in with a chance. **B**

Helen Barrett

Who should enter?

The MBA quiz is for business schools worldwide. Entry is limited to one team per business school

Entry fee: £2,000 per school

Team size: Three to six members

Venue: The Financial Times, One Southwark Bridge, London SE1 9HL

Time: Tuesday March 21 6pm-9pm

To enter or for more information email us at mba.quiz@ft.com

Deadline for entry: March 14 2017

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Joy Asfar

Artistic licence

The programme showed how technology has huge potential to disrupt the art world

How an MBA at Iese persuaded a student to rethink her plans for setting up a business

My father was an art dealer. From a very young age I went with him to Paris auction houses, gaining a love that inspired a dream to set up a business in the art world. After I completed a masters in art business in London I managed two galleries dealing in Middle Eastern art. Back then, technology never featured in my plans.

That changed when I started an MBA at Iese in Barcelona. The programme showed me how technology has huge potential to disrupt traditional ways of working. The art world can be very exclusive and I feel art should be made more accessible.

As I explored the impact of technology at Iese, I looked at an example of a venture that is making art more available to the wider public than ever before. The Google Cultural Institute is an online collection of millions of exhibits from museums around the world, in photos and videos. It merges arts — one of my passions — and tech, which is obviously the future. I see the commercial art world as being harder to disrupt because you can already bid and see that art online, for instance.

An MBA project that got me interested in technology and underlined how it can help to improve a company was one where we spent two months setting up a business over the summer, critiqued by our teachers and venture capitalists.

Our group developed the idea of an app that would help haulage companies make journeys more efficient by linking delivery trucks with people who need goods delivered. A lorry driving from Paris to Lebanon would not have to return empty, for example.

Creating an app sounds easy but it is very hard when you do not have the product in your hand to convince people to use it. It was a good idea but would need longer than two months to make it happen and would also require



Joy Asfar is Lebanese and grew up in Paris before moving to London aged 18. After a BA in international business at Regent's Business School London and a masters in art business at the Sotheby's Institute of Art in London, she managed two art galleries in London before moving to Barcelona in 2015 to take a 19-month MBA at Iese.

some investment to create a product to show to companies.

During that project we were divided into teams. The team becomes your family — you prepare case studies for the next day together. My group included a Brazilian, an Italian, a Briton, a German and an American. Two were consultants, one was from finance, one had worked with the government in Taiwan.

With such different cultures and experiences it becomes a very interesting conversation and you see and learn from how different cultures approach problems.

Diversity was one reason I applied for the course — another was its strong emphasis on entrepreneurship. Having lived in Paris and London I also wanted to move and Iese was my first choice.

When you do an MBA, you learn from the experiences of the other students, so different backgrounds and cultures bring diversity to what you learn on the course. For example, we had to read case studies on companies that had difficulties and prepare them for class, and students

would give ideas about how to solve a problem. Coming from a different culture, the likelihood is that you have different views — it enriches you.

I also like the fact that the intake is slightly smaller at Iese. In my year there were about 300 students, which is small compared with other schools. You do end up meeting the majority of students before the end of the year.

The workload for the course was heavy and the first semester was very intense but the course is exciting and the best thing I've done in 10 years.

As a result of the MBA, I've now decided that working at a company for a couple of years before starting my own business would be an invaluable way of gaining the experience I need.

Setting up a company sounds glamorous and fun but I realised it is hard and that you need to believe very much in your idea — you have to sell it and live for it — and also that the team is extremely important. **B**

As told to Jane Wild

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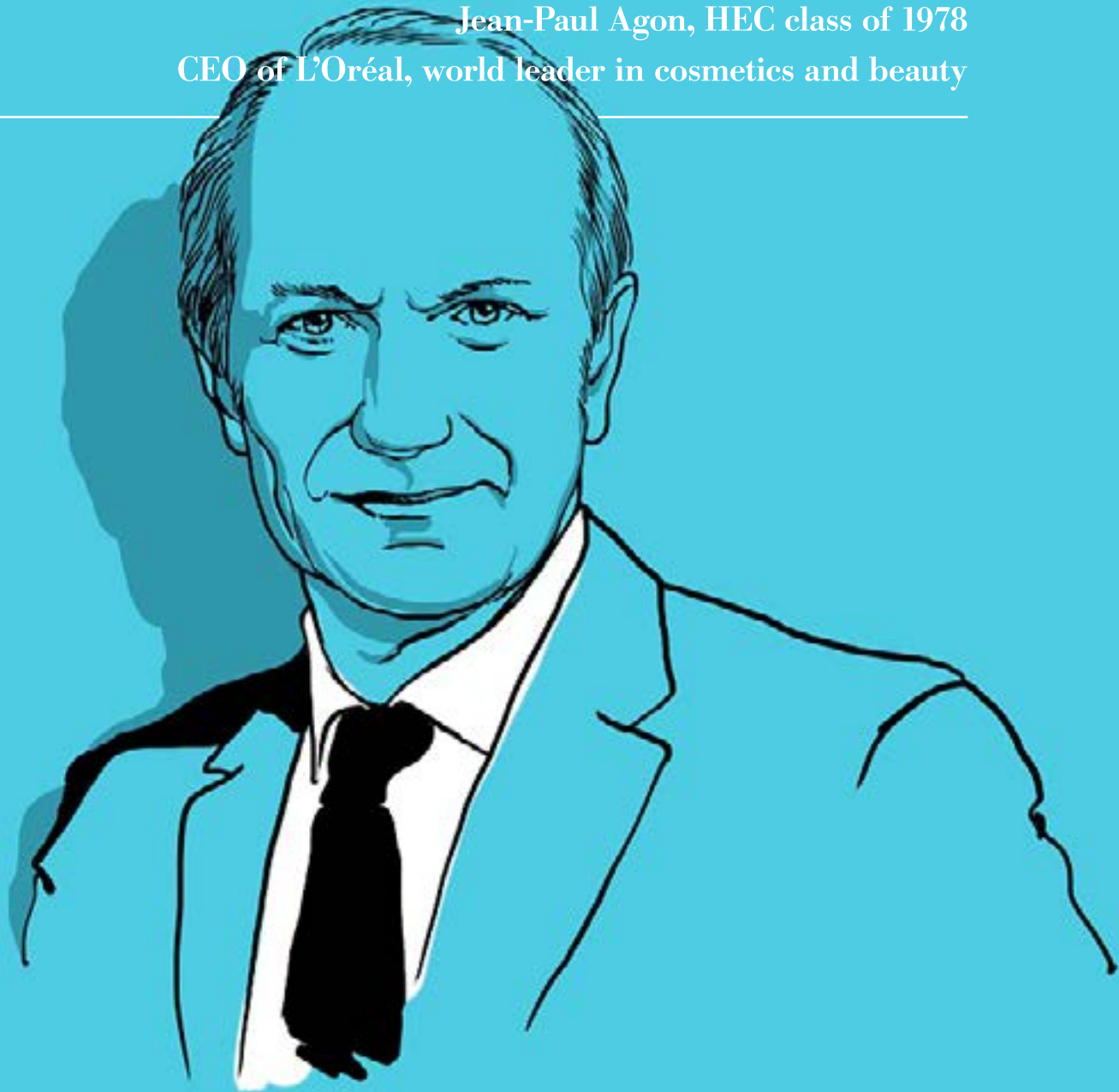
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