The Economist SPECIAL REPORT

THE FUTURE OF JOBS

September 10th 2011

The great mismatch

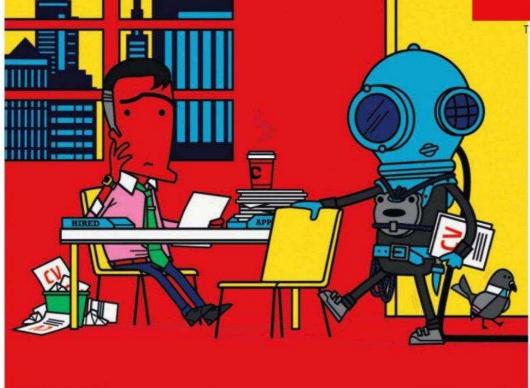


EVERY INNOVATION. EVERY ACHIEVEMENT. EVERY BREAKTHROUGH IS ONLY POSSIBLE BECAUSE IT'S HUMANLY POSSIBLE. Ideas are manufactured only by the imagination and the determination of people. And only the businesses that

recognize this are the ones who will succeed. Our mission is to help organizations across the globe achieve more than they ever thought possible. From workforce assessment, recruiting and training, to career management and talent based outsourcing, our Innovative Workforce Solutions let businesses reach their fullest potential by reawakening them to the very real power of people. We are ManpowerGroup. manpowergroup.com







The great mismatch

In the new world of work, unemployment is high yet skilled and talented people are in short supply. Matthew Bishop explains

"FAR AND AWAY the best prize that life offers is the chance to work hard at work worth doing," observed Theodore Roosevelt, then America's president, in a Labour day speech on September 7th 1903. Today the billions of people the world over who seek that prize are encountering simultaneous feast and famine. Even in developed economies that are currently struggling, many people, perhaps more than ever, are doing the job of their dreams, taking home both a good salary and a sense of having done something worthwhile. In booming emerging countries such as China and India, many at least have a better job than they ever thought possible. Yet at the same time in much of the world unemployment is persistently high and many of the jobs on offer are badly paid, onerous and unsatisfying.

This has serious political implications, not least for America's current president, Barack Obama, who risks losing his own dream job because of his perceived failure to have created enough work for his fellow citizens. As Mr Obama entered the White House in January 2009, the country's unemployment rate was about to climb above 8%, up from around 5% a year earlier. It has not recovered since and is currently around 9%. Until the presidential election in November next year Mr Obama is likely to be dogged by the phrase "jobless recovery"—always assuming that the recovery does not double-dip into an even more jobless recession.

Much as Americans complain, compared with some other countries their economy presents a picture of good health. In the weaker economies of the euro zone, jobs have been sacrificed in the name of austerity, especially in the public sector, to avoid defaulting on debts built up by free-spending governments. Anger at high unemployment has caused unrest and may have been a contributory factor in the riots in Britain last month. In late July thousands of unemployed young Spaniards, known as los indignados (the indignant), having protested in cities across their own country, began a long march to Brussels to draw attention to the



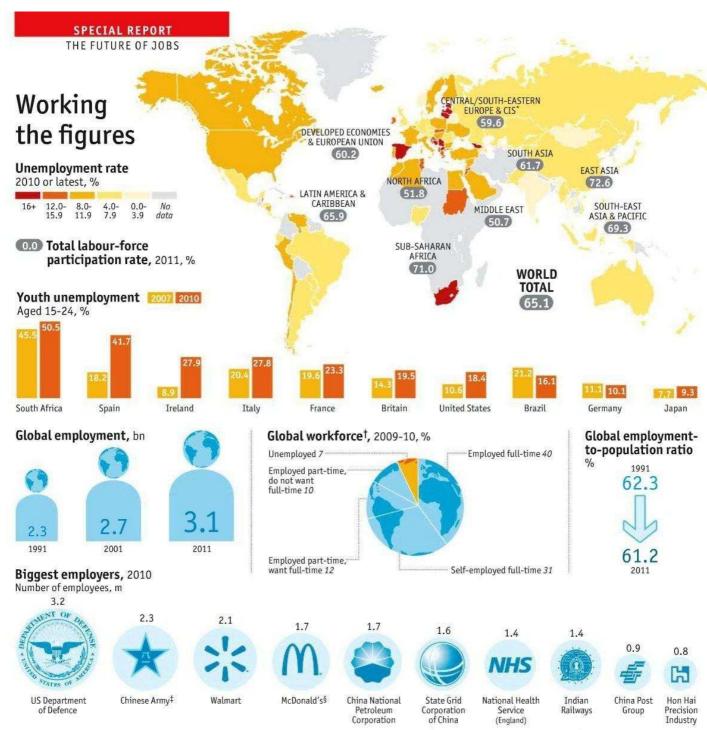
- 6 Labour-market trends Winners and losers
- 7 Job-hunting in Egypt Bottom of the pyramid
- 8 Self-help My big fat career
- 11 Interns Free-for-all
- 12 Companies' concerns Got talent?
- 15 The role of government Lending a hand
- 18 A better balance More feast, less famine

A list of sources is at Economist.com/specialreports

An audio interview with the author is at Economist.com/audiovideo/ specialreports

ACKNOWLEDGMENTS

In addition to those quoted in this special report, the author is particularly grateful for their help to Shahinaz Ahmed, Laura Alfaro, Matt Barrie, Nick Beim, Dalia Ben-Galim, Ron Blackwell, Gary Bolles, Scott Case, Dennis Cheek, Doug Conant, Hilary Cottam, Nicola Ehlermann-Cache, Hesham Fahmy, Alexander Hijzen, Mark Keese, Dion Lim, Richard Lyons, Nandan Nilekani, Denis Pennel, Michael Porter, J.P. Rangaswami, Wingham Rowan, Stefano Scarpetta, Cameron Sinclair, Anne Sonnet, Amy Stursberg, Barrie Stevens, Paul Swaim and Maynard Webb



Sources: IMF; ILO; Gallup; Fortune; EIU; The Economist

All 2011 data are forecasts *Commonwealth of Independent States *Surveys conducted in 129 countries and areas *2008 *SIncludes franchise employees

shockingly high jobless rate of over 40% among their age group.

Outside the rich world, the Arab Spring that brought down the governments of Tunisia and Egypt earlier this year was triggered in part by the lack of decent work for young people. Even in booming China and India policymakers worry about how to ensure there are enough decent jobs, especially for young people and graduates. Both countries still have hundreds of millions of people living in abject poverty, especially in rural areas. A good job would be the best way out.

Yet even as many people face a job famine, a minority is benefiting from an intensifying war for talent. That minority is well placed to demand interesting and fulfilling work and set its own terms and conditions. But above all the pay of such people-from executives to investment bankers and software engineers in Silicon Valley-is soaring. The most talented increasingly get a multiple of the salary of the average performer. This has led to rising inequality in incomes in many countries which may be increasing social tensions.

Mr Obama can reasonably point out that he was elected in the wake of a financial meltdown that had threatened to bring about another Great Depression, with an unemployment rate that would make the current one look like a lucky escape. The coordinated global stimulus by members of the G20 in 2009, though far from perfect, helped save the world from something much worse-though that probably provides little comfort to the 205m people round the globe who are now unemployed. Nor is there much scope for further stimulus.

But today's jobs pain is about more than the aftermath of the financial crisis. Globalisation and technological innovation are bringing about long-term changes in the world economy that are altering the structure of the labour market. As a result, unemployment is likely to remain high in the rich economies even as it falls in the poorer ones. Edmund Phelps, a Nobel prize-winning economist, thinks that in America the "natural rate" of unemployment (below which higher demand would push up inflation) in the medium term is now around 7.5%, significantly higher than only a few years ago.

Michael Spence, another Nobel prize-winning economist, in a recent article in Foreign Affairs agrees that technology is hitting jobs in America and other rich countries, but argues that globalisation is the more potent factor. Some 98% of the 27m net new jobs created in America between 1990 and 2008 were in the non-tradable sector of the economy, which remains relatively untouched by globalisation, and especially in government and health care—the first of which, at least, seems unlikely to generate many new jobs in the foreseeable future. At the same time, says Mr Spence, the mix of jobs available to Americans in the tradable sector (including manufacturing) that serves global markets is shifting rapidly, with a growing share of the positions suitable only for skilled and educated people.

Fear of continuing high unemployment also made a best-seller of Tyler Cowen's book, "The Great Stagnation: How America Ate All the Low-Hanging Fruit of Modern History, Got Sick, and Will (Eventually) Feel Better". It argues that for much of its history America (and to some extent other rich countries) enjoyed the benefits of free land, lots of immigrant labour and powerful new technologies. But over the past 40 years these advantages have faded and America has found itself on a technological plateau, he says. To the obvious question about the internet, he retorts that the web has provided lots of utility for users but much less in the way of profits—and relatively few new jobs.

Lowering this new natural rate of unemployment will require structural reforms, such as changing education to ensure that people enter work equipped with the sort of skills firms are

willing to fight over, adjusting the tax system and modernising the welfare safety net, and more broadly creating a climate conducive to entrepreneurship and innovation. None of these reforms is easy, and all will take time to produce results, but governments around the world should press ahead with them.

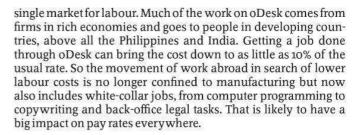
As this special report will explain, the changes now under way will pose huge challenges not only to governments but also to employers and individual workers. Yet they also have the potential to create many new jobs and substantial new wealth.

To understand why these changes are so exciting for some people and so scary for others, a good place to start is the oConomy section on the website of oDesk, one of several booming online marketplaces for freelance workers. In July some 250,000 firms paid some 13m

registered contractors who ply their trade there for over 1.8m hours of work, nearly twice as many as a year earlier.

ODesk, founded in Silicon Valley in 2003, is a "game-changer", says Gary Swart, its chief executive. His marketplace takes outsourcing, widely adopted by big business over the past decade, to the level of the individual worker. According to Mr Swart, this "labour as a service" suits both employers, who can have workers on tap whenever they need them, and employees, who can earn money without the hassle of working for a big company, or even of leaving home.

It is still small, but oDesk shows how globalisation and innovation in information technology, the two big trends that have been under way for some time, are moving the world nearer to a



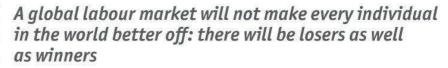
Who ate my job?

This is causing alarm among middle-grade white-collar workers in the rich world, who saw what happened to manufacturing jobs in their economies. But workers in emerging markets who have those sorts of skills and qualifications are delighted. "I'm making in a week on oDesk what I made in a month as a schoolteacher, and I get to spend far more time with my family," says Ayesha Sadaf Kamal, a freelance copywriter in Islamabad. Conversely, Janet Vetter, who used to have a full-time job as a copywriter for a magazine in New York, lost her job and now moves between part-time and freelance work. "I feel isolated as a freelancer and have had no health insurance since the start of the year; it's too expensive," she says.

It is tempting to think of the globalisation of the labour market as a zero-sum game in which Mrs Kamal in Pakistan is benefiting at the direct expense of Ms Vetter in America. But economists point out that such calculations suffer from the "lump of labour fallacy"—the belief that there is only a fixed amount of work to go round. A better explanation, they say, is the theory of comparative advantage, one of the least controversial ideas in economics, which suggests that free markets make the world better off because everyone can concentrate on doing what they are best at.

All the same, a global labour market will not make every individual in the world better off: there will be losers as well as winners, and they may put up stiff resistance to change if the losses prove too painful. For instance, total global GDP could double if all barriers to the free movement of labour were removed, argues Michael Clemens in a recent paper, "Economics and Emigration: Trillion-Dollar Bills on the Sidewalk?". Yet the political implications of such mass migration make it improbable that governments, especially in rich countries, would unconditionally open their doors.

Compared with previous bursts of global integration and



technological upheaval, the changes now taking place in the labour market may produce an unusually large number of losers, partly because they have coincided with a particularly deep recession and partly because they are happening exceptionally fast. The priority for policymakers must be to keep the number of losers as small as possible.

This special report will look at what this new world of work means for individuals and what they can do to ensure they are on the winning side. It will also look at the challenges facing companies as they compete to recruit the best talent. And it will examine what governments can do, even in these tough economic times, to equip their citizens to claim the prize described by Mr Roosevelt—and to protect the losers.

SPECIAL REPORT

THE FUTURE OF JOBS

Labour-market trends

Winners and losers

Divisions are getting deeper

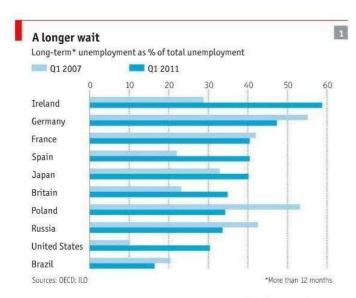
THIS YEAR MORE than 3.1 billion people the world over will be in work. That is a greater number than ever before, yet there is a sense of crisis about jobs. That is not just because globally 205m people-many more than a few years ago-are now officially unemployed, or because young people have been hit especially hard. It is also because the quality of such jobs as are available often seems to be declining, especially for routine white-collar workers in rich countries.

The latest Gallup Underemployment Index now stands at 19% of the global workforce. It is made up of the unemployed (7%) and those who have part-time jobs but would like to work more (12%). According to the International Labour Organisation, in 2009 some 1.53 billion people, roughly half the global workforce, were in "vulnerable employment", either working for themselves or in badly paid family jobs.

Until the global financial crisis of 2008 it had been widely believed that the world was enjoying a period of "Great Moderation". The business cycle that had previously caused bouts of high unemployment seemed to have been abolished by a combination of wise, independent central bankers, fiscally prudent rich-world governments and increasingly flexible labour markets. The governments of the G20 had to administer a huge co-ordinated fiscal and monetary stimulus to prevent the Great Moderation from turning into a Great Depression. But unemployment has not returned to its pre-crisis lows, and few governments have much capacity for further stimulus.

In many countries long-term unemployment has soared both in absolute terms and as a proportion of total joblessness. In America the long-term unemployed now account for 30% of the total, up from 10% in 2007 (see chart 1), shocking experts who believed that America's famously flexible labour markets would protect it from "European" levels of long-term joblessness.

Young people have been the biggest victims of the crisis. In 2007 the youth unemployment rate in the OECD was 14.2%, com-





pared with 4.9% for older workers; in the first quarter of this year the rates were 19.7% and 7.3% respectively. Some countries fared far worse than others: in Spain youth unemployment soared from 17.6% to a vertiginous 44% over the same period. A big part of the explanation there is that flexible contracts which make it easy to fire people were introduced for new entrants to the labour market but not for people already in work, so when firms had to make cuts the axe fell disproportionately on those flexible younger workers. Perhaps the most alarming rise is in the number of young people in the OECD classified as NEETS (not in employment, education or training), to 16.7m-some 12.5% of all 15-24-year-olds.

One reason why the young have suffered disproportionately is that older people have been less keen to leave the workforce than in previous downturns, when juicy early-retirement packages were on offer. Such offers have become rare, and as laws to prevent discrimination on age grounds are spreading, more people are working longer.

In some countries government policy has made a big difference. Germany, for example, was able to buck the trend of joblessness and youth unemployment thanks to measures that included a government subsidy for those on short-time work (of which more later). In America, Mr Obama's decision to extend unemployment benefits from 26 to 99 weeks may have contributed a little to the increase in long-term joblessness (adding about half of one percentage point to the rate, according to the Federal Reserve Bank of San Francisco), but it also slowed the rise in poverty. Longer-term social trends may also have played a part, says James Manyika of the McKinsey Global Institute. He cites Americans' greater reluctance to move home to find work, which may be partly due to the growing number of dual-career couples. Many people also have negative equity in their homes. Unemployment benefit has been made harder to get in many countries, which has increased the number of people claiming disability benefits. In 2010 they made up 5.9% of the workforce in America, 6.2% in Britain and over10% in Norway, up from 3.6%, 2.2% and 6.5% respectively in 1980.

These are serious problems. Young people who are out of work for long stretches at the start of their career can become permanently scarred by the experience and may never get back on track. The longer that people of any age are out of work, the less likely they are ever to find another job. And "once a person is on disability benefit that is in effect the end," says Robert Reich, an economist at Berkeley who was America's labour secretary under Bill Clinton.

Never waste a good crisis

Many of the labour-market trends that are currently troubling rich countries were already apparent long before the financial crisis, though the bubble that preceded it helped to hide them and the recession that followed it accelerated them. "It has given employers the excuse to do what they wanted to do but had resisted before the crisis," says Mr Reich. "Many employers are substituting technology for people. A lot of us were looking for jobs to be displaced by technology a few years ago and were surprised it wasn't happening faster. Employers didn't want a reputation for firing when the jobs market was tight."

Firms are relying more on part-time, contract and temporary workers who are inherently more flexible. In America in 2010, the number of part-time workers reached a new high of 19.7% of all employees. According to a recent survey of American firms by the McKinsey Global Institute, over the next five years 58% of them expect to use more part-time, temporary or contract employees, and 22% expect to outsource more jobs.

There has been growing demand for temporary staff provided by employment-services firms such as Manpower, and outsourcing and offshoring has continued to grow, despite reports that some jobs are being repatriated. Routine legal work is the latest activity to find its way from America and Europe to Bangalore. And bringing work to geographically distant workers is becoming easier all the time, with online marketplaces such as oDesk and freelancer.com, and services like Mom Corps for professional women. Mechanical Turk, owned by Amazon, lets people with a few spare minutes work on "micro-tasks" such as transcribing podcasts or image-tagging.

"These trends don't necessarily affect the number of jobs, but they do the quality of jobs, the security of jobs, how much people are paid and the benefits they get," notes Mr Reich. David Autor, an economist at the Massachusetts Institute of Technology, calls this the "hollowing out" of middle-grade jobs, resulting in the "bipolarisation" of the labour market between good jobs and commoditised ones in America and many other rich countries. There is a strong correlation between a

good education, higher earnings and a lower (though not negligible) risk of becoming unemployed. In America, the jobless rate among graduates rose from under 2% in 2007 to nearly 5% in 2010, but for non-graduates it jumped from 5% to over 11%.

Even before the crisis, America was on track for its worst decade for job creation in at least half a century, says Mr Manyika of the McKinsey Global Institute. As the institute sees it, there are three main types of work: transformational (typically involving physical activity, such as construction); transactional (such as routine jobs in call centres or banks, often still done by people but capable of being automated); and interactional (relying on knowledge, expertise and collaboration with others, such as investment banking or management consultancy). Transformational work has been in long-term decline in most rich countries, shifting to emerging markets, particularly China, though wages in Chinese factories are now soaring.

Now a wave of labour arbitrage and the substitution of technology for humans is starting to sweep through transactional work, wiping out many routine white-collar jobs in rich countries. But interactional work, says Mr Manyika, is unlikely to go the same way, because it is inherently difficult to standardise. In this kind of work technology tends to enhance human capabilities, often creating a "winner-takes-all" market in which the best performers are paid disproportionately well. Transformational and transactional work tend to suffer from fierce competi-

Bottom of the pyramid

Job-hunting lessons for young Egyptians

THAT AN EXECUTIVE at Google should become one of the faces of this year's Egyptian revolution was entirely fitting. Wael Ghonim, who became known around the world when he was jailed for running a Facebook page popular with protesters, had exactly the sort of high-flying job many young Egyptians could only dream of. High youth unemployment and the poor quality of many jobs available to young people was one big reason for the demonstrations in Cairo's Tahrir Square that brought down the regime of Hosni Mubarak.

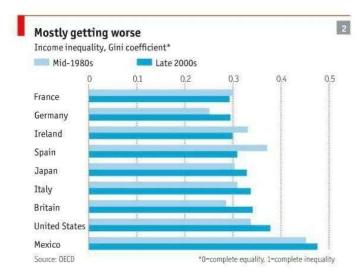
Egypt is one of many countries in the Middle East and north Africa, and indeed some other parts of the world, that face a "youth bulge" in their population. "It is the very sad story of squandered youth that stands at the heart of our region's epic tale of failure," says Fadi Ghandour, the Jordanian founder of Aramex, a global logistics firm, citing unemployment rates of 24% in Egypt, 27% in his own country, 30% in Tunisia and Syria, 39% in Saudi Arabia and 46% in Gaza.

A shockingly large proportion of Egypt's unemployed young people are graduates. Many of them have been put through the country's universities by parents scrimping and saving to pay fees of up to 40% of the average annual income, in the

belief that this would secure a good career and a better life. But Egypt's university system is not good at preparing its students for competing in the modern labour market.

An international not-for-profit organisation called Education for Employment is now trying to equip young people in the region with the skills they need to get work. Its students say that the skills they were taught at university were designed for days long gone when graduates automatically got a job in the public-sector bureaucracy. Courses did not prepare them for things like dealing effectively with people and coping with failure. Employers wanted experience in the real world and asked graduates to undergo further training.

"I expected to graduate and find lots of opportunities, but there was nothing worthwhile," says Heba Mohamed, who took an Education for Employment course and is now a "content associate" at Souq.com, a web marketplace, where she writes product descriptions. The not-for-profit organisation says that 100% of the students who undergo its short, practical courses immediately get a decentjob and 98% still have it three months later, which shows that much can be done if the problem is tackled sensibly. Even so, broader educational reform is badly needed.

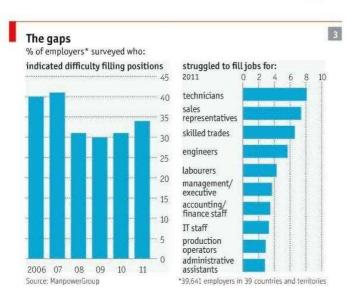


tion, slim profit margins and low pay, whereas the best interactional knowledge-work companies continue to earn fat margins.

In the two decades leading up to the global financial crisis real disposable household incomes increased in all OECD countries. In most of them the incomes of the richest 10% of households grew faster than those of the poorest 10%, so inequalities widened. In 2008 in the OECD as a whole the average income of the richest 10% was nearly nine times that of the poorest 10%.

Globally, the rise of many people out of poverty has reduced income inequality, though many people in informal and illegal work have not benefited. But within most countries inequality, as measured by the Gini coefficient, has increased in recent decades (see chart 2). Many rich countries are also seeing a decline in social mobility, suggesting a growing inequality of opportunity as well as of income.

In most countries inequality seems bound to keep growing. Even in these difficult economic times talent is in short supply and the world's leading companies are competing fiercely for it. In America unfilled vacancies have risen over the past couple of years despite high unemployment. According to Manpower's latest annual survey, 34% of employers worldwide say they are having trouble filling jobs, with technicians, salespeople, skilled trades workers and engineers the hardest to find (see chart 3). So what can individuals do to make themselves sought after?



Self-help

My big fat career

How individuals can survive in the new world of work

"I REWROTE MY entire book after my experience of Spain and seeing what is happening in America, to recast it in terms of survival job-hunting," says Richard Bolles. His book, "What Colour is Your Parachute?", was first published in 1970 as a guide to finding a fulfilling job and has sold millions of copies. When Mr Bolles went to Spain in March to give advice on dealing with its indignant army of unemployed, he found that nobody had much idea how to get people back to work.

Even in tough times there are jobs to be had, but applicants have to work far harder to get an employer's attention, says Mr Bolles. The main thing is to give them hope and teach them the latest techniques for looking for work, of which he lists no fewer than 18. They need to market themselves better and consider a broader range of employers than they might have thought of. Not least, they must "clean up their act on the internet". Facebook is now routinely scrutinised by human-resources departments, which will be instantly put off if they find anything negative or embarrassing.

Better the devil you know

The good thing about the internet is that it offers a vast amount of information to jobhunters, especially once they have secured an interview. Glassdoor.com, a website launched in 2008 that now covers more than 120,000 companies worldwide, lets employees (anonymously) share information about firms, ranging from what people think about the boss to salary levels and details about the interview process. Last year's annual Glassdoor list of oddball interview questions was topped by Goldman Sachs, which asked a candidate for an analyst's job, "If you were shrunk to the size of a pencil and put in a blender, how would you get out?" One Glassdoor contributor's suggested answer was, "Ask the government to bail me out," which would probably not have secured the job.

Whom you know has always played an important part in the search for work, but social media are changing it from an art into a science. Last May LinkedIn became one of this year's hottest initial public offerings, with its share price doubling on the first day of trading, because the social-networking site for professionals started in 2002 has become an integral part of the job market, useful for jobseekers and recruiters alike. It has around 120m members, more than half of them outside America and many of them professionals earning \$100,000 a year and above. The website enables them to identify mutual contacts who can introduce would-be employees and employers to each other. Such personal recommendations are thought to have a better chance of success than applications or job offers to total strangers. BranchOut, a start-up launched last year which mostly deals with less exalted jobs, is trying to do something similar, using people's networks of friends on Facebook to fill the jobs it lists.

Using these social-media tools to find a job is just the first step. According to Reid Hoffman, the founder of LinkedIn, the site is increasingly becoming a peer-to-peer career-development network. In future, he predicts, members of LinkedIn doing similar sorts of work will "trade intelligence" about professional best practice with each other. "It will be a way to upgrade yourself



Capital, Allianz Global Investors Solutions, NFJ Investment Group, and RCM.

Investing involves risk. The value of an investment will fluctuate and, when redeemed, may be worth more or less than its original cost. This material is for information only. Nothing in it should be interpreted as an offer or recommendation of any service or financial product and it may be subject to local country regulatory restrictions. Investors should consult with their own financial, legal, tax and other advisors regarding their particular circumstances.



constantly by trading intelligence, on, say, how to do my job as a product manager better."

The growing need for workers to keep upgrading and adapting their skills is one of the themes of a new book, "The Shift: The Future of Work is Already Here", by Lynda Gratton of the London Business School. She argues that the pace of change will be so rapid that people may have to acquire a new expertise every few years if they want to be part of the lucrative market for scarce talent. She calls this process "serial mastery" and notes that the current educational system in most countries, from kindergarten through university, does a poor job of equipping people for continuous learning. There is likely to be a wave of innovation in further education, particularly online, that will cater to this need in a more flexible, personalised way than the traditional degree or postgraduate course. For some people, this evolution will take place within a single firm offering long-term employment. But for a growing number of workers the trick will be to jump from one company to another to take advantage of changing skill shortages.

According to Ms Gratton, people will also have to invest more in their personal "social capital", which will involve three elements. First, they need to build themselves a "posse", a small group of up to 15 people they can turn to when the going gets rough, says Ms Gratton. They should have some expertise in common, have built up trust in each other and be able to work effectively together.

Second, they need a "big-ideas crowd" who can keep them mentally fresh. This echoes the discussion of "managed serendipity" in last year's business bestseller, "The Power of Pull", in which John Hagel and John Seely Brown argued that the successful worker of the future will live in clusters of talented, openminded people and spend a lot of time going to thought-provoking conferences. Third, they need a "regenerative community" to maintain their emotional capital, meaning family and friends in the real world "with whom you laugh, share a meal, tell stories and relax".

In a world where more people may work from home, there is a danger that they will become isolated. One remedy is the emergence of "collaborative workspaces" or "hubs" in big cities around the world. These are often more than shared offices with hot desks for people who prefer to be with other people even if they are not working for the same employer. The hub operator may also organise courses for professional development-on

marketing or taxation, say-and social events.

Moreover, working from home will not be so isolating if home is next door to where potential workmates live. As Richard Florida argues in "The Rise of the Creative Class", talented knowledge workers are choosing to cluster together in cities such as New York, Los Angeles, London and Shanghai so they can interact with each other easily, both formally and serendipitously. This has obvious implications for the price of property and other goods and services in areas where these workers choose to live, work, play, mingle and spend some of their evergrowing wealth.

Ms Gratton's main message-that workers will have to take responsibility for their own future-makes good sense. People who work their way up the corporate ladder in the traditional "Organisation Man" way will increasingly be the exceptionand that is surely a good thing. "The pleasures of the traditional working role were the certainty of a parent-child relationship. You could leave it in the hands of the corporation to make the big decisions about your working life," Ms Gratton explains. Now the world is moving towards an "adult-adult" relationship, which will require "each one of us to take a more thoughtful, determined and energetic approach to exercising the choices avail-

My pleasure

Karl Marx thought that much modern industrial work was essentially dehumanising, reducing people to factors of production. These days a growing number of people are doing jobs they find fulfilling because they involve things they actually like doing. This has always been true for sports stars, authors and the like, but the idea that work can be a source of positive pleasure is spreading into other fields.

One indication of this trend is the rapid growth of employment in non-profit organisations, where many jobs offer a sense of social purpose as well as a salary (which in return might be lower than it would otherwise be). Surveys consistently find that many of today's under-30s in rich countries want to spend their working day trying to make the world a better place as well as being properly paid, and turn down jobs that do not offer such satisfaction. Employers have cottoned on to this and now often mention a "social purpose" in their recruitment advertisements.

The talented, sought-after few, for their part, are encountering problems of their own as work takes up an ever-expanding >> part of their lives. The waves of lay-offs that followed the global financial crisis left a lot of extra work to do for those who remained, and the ubiquity of communications tools makes it difficult for them to get away from their job. But most employees just want the opportunity to do something they enjoy and balance their work obligations with other parts of their life. Many mothers of young children would like to keep working, at least part-time, and many older people who are still in good health when they reach the formal retirement age would like to continue in a job they like doing. Such preferences are reflected in the growing demand for childcare facilities and greater flexibility in pension arrangements.

Success by association

What about the people who do not command any kind of premium in the marketplace? One strategy could be to find a high-flyer and stick close. Even if joining their posse is out of reach, there are still horses to be fed and watered. The time-poor new rich are generating demand for household staff, and this sort of work can be very well paid. A private secretary and general factotum can earn up to \$150,000 a year nowadays. Salaries for standard butlers range from \$60,000 to \$125,000 and a head butler can make as much as \$250,000, according to the website of the Butler Bureau.

As more and more people live to a ripe old age, demand for home-care workers is likely to soar. America will need 2m more of them in the next decade alone, says Ai-Jen Poo of the National Domestic Workers Alliance, an organisation that represents those who work in other people's homes. But there are winners and losers even among domestic workers. As Ms Poo points out, many of them are badly paid, get little or no time off and are vulnerable to injury because they have had no proper training for lifting immobile people. A high proportion of them are illegal immigrants who have no come-back against ill-treatment. Unless the pay and training of home-care workers are improved, observes Ms Poo, ageing baby-boomers may have trouble finding competent people to look after them in their dotage.

The traditional way for workers to protect themselves against exploitation has been to club together to form a trade union. In rich countries unions have been in decline in the private

sector, but they remain powerful in the public sector and there are pockets of growth among people in vulnerable occupations. The National Domestic Workers Alliance, which was formed only four years ago, has already got the state of New York to adopt America's first bill of rights for people working in family homes, guaranteeing overtime pay, protection from discrimination and harassment, a minimum of one day's rest a week and a minimum of three days' paid leave a yearnot much, but better than nothing. Similar legislation is being debated in California.

America's Freelancers Union has also been growing rapidly. Set up in 1995, it now has 150,000 members and expects to add a further 100,000 in the next 18 months. It is very different from a traditional trade union in that it does not engage in collective bargaining with its members' widely dispersed employers. Instead, it uses its members' combined buying muscle to negotiate better terms for things like health care and pensions. It also runs fitness centres. In Britain, the Professional Contractors Group does something similar. ODesk has also negotiated benefits packages for contractors using its site.

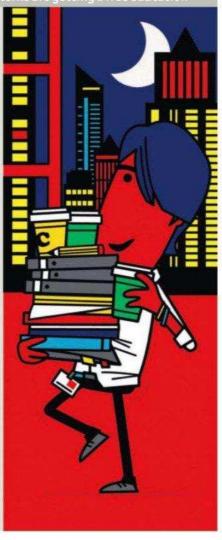
This may be the start of a "new mutualism movement" that will be very different from traditional trade unionism, says Sara Horowitz, the Freelancers Union's founder. "If work is going to be more gig-like and shortterm, the supportive safety-net institutions will need to be much more about enabling flexibility in the workforce." This new movement will bring together mutual organisations, co-operatives, friendly societies and social-enterprise start-ups to build a "marketbased safety net" and exercise political influence to get better protection for members. It will get its power from information and aggregation. For example, the Freelancers Union is currently developing a "crowdsourced" system for rating employers on how promptly they pay contractors.

Free-for-all

"MANY EMPLOYERS DON'T even know that how they use interns is breaking the law," complains Ross Perlin. His book, "Intern Nation", has tapped into a growing global concern about young people who work for next to nothing. As youth unemployment has soared around the world, so has interning, which is now standard practice from London to Paris, Los Angeles, New York and Shanghai. A growing number of "serial interns" take up a succession of internships in different companies and institutions. Interning has become like a lottery in which armies of young people compete for a few precious jobs, says Mr Perlin. But the odds are weighted. Getting an internship in the first place often depends on deep pockets and parental connections to which only the more fortunate youngsters have access.

What Mr Perlin wants is an intern bill of rights. But forcing employers to provide pay and benefits and comply with lots of red tape is surely the quickest way to put them off, thereby depriving young people of an early experience of the future of work. After all, what are those serial interns doing but learning about serial mastery? And although some of them may be doing menial tasks, the companies they are working for are probably so busy that the interns will also be given some tasks that actually matter.

Many people are outrageously exploited at work, but interns are not among them. After all, they are getting a free education, something that few universities provide these days.



Companies' concerns

Got talent?

Competing to hire the best and motivate the rest

"I'VE GOT 54 post-it notes on my wall on building a community in downtown Las Vegas," says Tony Hsieh. The founder of Zappos, an online shoe retailer now owned by Amazon, is turning the city's old town hall into its new campus, and part of Mr Hsieh's strategy is to engage his staff in helping to revive what was until recently an archetypal run-down urban area, ignored by the millions of tourists who visit Sin City's pleasure palaces. The post-it notes are ideas-how to improve the food scene, get a farmers' market, encourage the arts, build a hackers' space-from Zappos employees, a growing number of

whom have moved into the area well ahead of the campus opening in 2013. A regeneration that "usually takes 10-15 years will take five", predicts Mr Hsieh.

Reviving downtown Las Vegas is not an act of corporate social responsibility but part of a strategy to increase his firm's long-term profitability, insists Mr Hsieh. "Vegas can be a hard sell to people who have the stereotypical casino view of it. By developing a tech community, an arts scene, a music scene, we will make it more attractive for the sort of people we want to recruit."

One of his goals is to "increase the number of serendipitous interactions of our staff, inside and outside the firm". At Zappos, dating among employees is encouraged, as is "work-life integration, because if you are going to spend eight or ten hours a day on something, it might as well be with people you like." In the end, "it is going to be the companies that make their employees happiest that will attract the best people," says Mr Hsieh, picking up a theme from his best-selling book, "Delivering Happiness".

This philosophy is taking hold in many of the world's leading firms as they engage in an increasingly fierce war for talent. This is being fought on at least three fronts, each of which requires a somewhat different strategy. The first involves trying to hire the very best people in their field-because they are thought to be potentially far more productive than the merely competent. As Mark Zuckerberg, the boss of Facebook, recently put it, an exceptional employee is "not just a little better than someone who is pretty good; they are 100 times better". Second, some skills are much more sought after than others. For instance, "chemistry graduates are now getting some of the best starting salaries among all graduates," says Andrew Liveris, the boss of Dow Chemical. In emerging markets, the rapid pace of economic growth is creating across-the-board shortages of people with outstanding skills, from accountants to pilots. That makes it as hard to hold on to workers as to hire them in the first place.

According to Manpower, 46% of senior human-resources executives surveyed in the company's latest global annual survey said that their talent gap was making it harder for their firm to implement its business strategy. Only 27% said they felt their business had the talent it needed. And the shortage is likely to get a lot worse because of the imminent retirement of a generation of seasoned workers with sought-after skills in the rich economies. In 2008, one in four workers in America with a degree in science, technology, engineering or mathematics was 50 or over. Lockheed Martin, an aerospace firm, expects nearly half its science and engineering workforce to retire by 2019 and will have to hire a total of 142,000 engineers. Currently only 60,000 engineers a year graduate from American universities.

Money can help, even in Silicon Valley, the home of touchyfeely corporate cultures. Last November Google, which pampers its staff with everything from free food and tax advice to pre-natal classes for expectant fathers, announced a \$1,000 cash bonus and a 10% pay rise for everyone, hoping to stem a wave of defections to rivals such as Facebook. The average total starting package for a software engineer in Silicon Valley has risen from \$85,000 in 2008 to \$98,000 this year, according to Glassdoor, the workplace website. At Google a software engineer can now earn a basic starting salary (before options, bonuses and so on) of up to \$151,000, even more than at Apple (\$149,000) or Facebook (\$138,000), let alone Microsoft (\$128,000).

Not everyone is convinced that this star culture is a good idea. "Most of business life isn't really a choice between one

Finding the right people is hard enough; keeping them motivated once they are on the payroll is even harder



Still, Mr Hsieh is onto something with his ideas on creating a happy corporate culture. "When people are asked to rate the best companies, they increasingly favour those that let them bring their pets to work or spend more time working from home," says Samantha Zupan of Glassdoor. Having more control over their working lives is particularly important for educated, creative people. Google's decision to allow its staff to spend 20% of their paid-for time to work on whatever they want was controversial at first, but has started to spread. "How could you take your scarcest, most valuable employees and free them to do what they like? I thought they were nuts. But I was nuts. They were smart," says Scott Cook, the boss of Intuit, which has enjoyed a surge in performance since he introduced something similar. Setting your employees free in this way "helps you keep the most inventive people, because they want to invent". Netflix, a booming film-rental outfit, has taken to letting its employees take as much holiday as they like, hoping to establish an employment culture it calls "freedom and responsibility". But it also has a policy of firing people who do not perform well.

The other big challenge for employers is burn-out, especially for the supposed victors of the winner-take-all markets who are expected to be "always on". "The big losers from a lifestyle perspective are those who have unlimited opportunity," says Tony Schwartz, founder of The Energy Project, which trains people to understand the ebbs and flows of their energy at work and manage them better. The advice to get more sleep usually goes down well; after that it gets harder, he admits. Among other things, he teaches employees to take a break after 90 minutes'

133,000 EMPLOYEES. Through advanced manufacturing technology, GE employees lift thousands of people in the air, light up entire cities, bend steel and wield lasers. Because no matter what it is they're making they'r they're making, they're manufacturing the future. imagination at work

SPECIAL REPORT

THE FUTURE OF JOBS

work, because effectiveness declines rapidly after that.

This may sound elementary, but The Energy Project has been hired by firms such as Apple, Intel, Oracle, Facebook, Twitter and Google which rely heavily on the creativity of their employees. According to Erica Fox, head of learning programmes in Google's cross-functional learning and development team, they chose it because it is "science-based and has a measurable and demonstrable impact." In the first year 2,000 Googlers went through a course called "Managing Your Energy for Your Sustained Performance", many of them senior executives who then wanted their teams to attend the course too. The firm's famously supportive culture of supplying everything from free food to free massage can do only so much. "Until people become aware of

where they are in terms of energy levels, all the massages in the world won't help," says Ms Fox.

However, the war for talent is not just about knowledge workers. Walmart, the world's largest private-sector employer, which operates in 28 countries, sees a scarcity of talent in many fields. Susan Chambers, head of the giant retailer's "People" division, says that in merchandising, for instance, "you can't hire enough talent that can deal with the merchandising complexity. So it is incredibly important to develop talent internally."

Even in the lower ranks employees are having to handle growing complexity, not least because customers are changing the way they shop, making more use of the internet and mobile technology. "Not so long ago, I would have thought new technology would have affected the electronics department or our dotcom business. In fact, it has implications across the entire organisation, requiring a general increase in technical skills across the board." In India the firm has even established some free academies to train future store workers in its joint venture with Bharti, a local conglomerate. Firms that do a lot of business in emerging markets are generally much more enthusiastic about spending on training than those dealing mainly with rich countries, both because these markets are growing faster and because fewer people come out of the education system "work-ready". This is particularly important in India, where outsourcing firms such as

4 Colour me grey Population aged 65 years or over, % of labour force (aged 15-64) 2020* 2010 Japan Germany France Britain United States Russia China Brazil India Source: UN population division *Forecast



Infosys and Wipro train new recruits in state-of-the-art corporate university campuses.

Despite its reputation as a tough, anti-union employer, Walmart is currently trying to shift its corporate culture across the world from one based on rules to one based on values, says Ms Chambers. The aim is to ensure that employees will "feel empowered and have the right values so they can make the right decision." The thing that will decide if Walmart continues to be special as it grows around the world is getting these values across, she explains, noting that this will raise serious challenges for recruitment, workforce development and pay.

Just-in-time hiring

Jeff Joerres, the boss of Manpower, reckons that new information technology has made it much easier for companies to manage their workforces to keep them in step with demand for the goods and services they supply. That helps explain why firms in America and some other big economies have been slow to start hiring again in the current economic recovery: they have been waiting for tangible evidence of demand picking up, which in many of these economies has yet to materialise. But his optimism is not universally shared. Edmund Phelps, the economist, suspects that the huge wave of dismissals in big rich-world companies after the crash of 2008 got rid mainly of people working on forward-looking projects, thus reducing the potential for future innovation.

Nor do companies seem to have given enough thought to dealing with important demographic shifts. For example, even though women have been flooding into the labour market in growing numbers in the past few decades, the "glass ceiling" that stops them getting to the top mostly remains in place. "There is a sense that progress has stalled," says Nicole Schwab, co-founder of The Gender Equality Project, an organisation that works with firms to close the gap between male and female workers. One problem is that "most companies are still structured around one type of career-advancement model, and if a woman doesn't conform to that model she won't progress."

As younger people enter the labour market they will demand a very different workplace, says Don Tapscott, another management guru. Firms that try to maintain a "generational firewall" will do so at their peril, because for the first time in history "younger people know more than their elders about the biggest innovation of the day," namely social media. They may also favour practices such as remote working to make jobs greener.



Equally, a growing number of people are remaining healthy and active well past the traditional retirement age and want to carry on working, whether for the money or for the fun of it. That can create problems for younger workers, who may find it harder to get a promotion or find a job in the first place. On the other hand, points out Lynda Gratton, "there are some really smart 65-year-olds. Surely we can reconfigure work to keep them aboard." She thinks that many older people would prefer flexible working to complete retirement in the later stages of their career. Yet in the corporate world "there isn't enough experimentation going on. Everyone talks about Walmart and B&Q and their 90-year-old greeters, but that isn't enough."

There is also much to be done to ensure that workers are not exploited, especially in emerging markets. Western multinationals have generally improved labour practices throughout their supply chain compared with 20 years ago, when firms such as Nike were often accused of operating sweatshops, but some of the charges persist. For example, Hershey's, an American chocolate maker, has been targeted by activists such as the International Labour Rights Forum for buying its cocoa from countries where the abuse of workers is rife. (The company vigorously denies such abuse.) And some emerging-market firms still lag far behind Western multinationals, not least in their use of bonded labour. An executive at one Western multinational operating in the Gulf says he is currently encouraging other firms in the region to end the practice of holding the passports of cheap workers they ship in from abroad, as his has already done.

Work, rest and play

Finding the right people is hard enough; keeping them motivated once they are on the payroll is even harder. Surveys have suggested that about four out of five employees would leave their current job if they could, but most think they would have trouble finding another one at the moment. A global Gallup survey found that at the average big firm only 33% of employees describe themselves as fully engaged in their work, 49% say they are not engaged and 18% say they are "actively disengaged". At what Gallup calls "world-class" companies, the proportions are 67%, 26% and 7% respectively. China is not exempt from this problem. "There are so many university graduates," says Jack Ma, the founder of Alibaba, a Chinese internet empire, "and it is difficult to send them back to work in a factory. They want to work on the internet, be an entrepreneur."

Firms are also making a bigger effort to engage large num-

bers of employees in decision-making, which thanks to new technology is becoming ever easier and cheaper. Infosys, for example, involved some 56,000 employees in a strategy discussion, using a collective-intelligence portal, and felt the exercise was worthwhile. New collaboration platforms such as Salesforce Chatter-a sort of Facebook meets Twitter for companiesmake it easy for people to network and work on joint projects within a firm, and for management to see who is doing what with whom.

Such things are easily done when the work is inherently interesting. But what if it is not? If employees find their jobs too boring, they will soon become demotivated and leave, and finding replacements is time-consuming and costly. So companies are doing their best to keep even people doing routine jobs engaged in their work.

"Higher purpose is a great catalyst for employee engagement," says Judah Schiller, who until recently worked for Saatchi & Saatchi S, a consultancy that has advised big companies including Walmart, McDonald's and AT&T. It gets staff involved in good causes, hoping that this will motivate them more broadly at work. At AT&T an internal marketing campaign was created around the idea that everyone working for the company should "Do One Thing" for the environment. Walmart initially concentrated on environmental sustainability and saved a fortune from the ideas that employees came up with; now it has moved on to health, with a campaign that has already caused associates to lose a combined 200,000lbs of weight. "The goal is to get employees engaging with each other again, not just about the cause but about everything," says Mr Schiller.

The role of government

Lending a hand

Policymakers can help create jobs, up to a point

THE GREAT DELUSION of a Great Moderation caught on not least because it let those in charge feel they had solved one of the toughest questions of political economy: what is the proper role of government? A combination of free and flexible markets, including for labour, and an independent central bank to keep money sound seemed to have delivered the multiple alchemies of permanently low unemployment, low inflation and an end to the business cycle. Yet the financial crash and the subsequent jobs crisis have thrown the question wide open again.

There is now a renewed debate about the pros and cons of labour-market flexibility, with doubts being aired by the OECD, which had long championed it. Some Americans worry that their labour markets are becoming "Europeanised", by which they mean saddled with high long-term unemployment and low mobility. Spain's example shows that introducing flexibility to some parts of the labour market but not others can have undesirable social consequences. On the other hand recent experience in Germany (which in July had an unemployment rate of 7% as against America's 9.1%) suggests that not all things European are bad and that America's focus on labour-market flexibility alone may be too narrow.

The Hartz labour-market reforms introduced in Germany in the early 2000s included a scheme allowing the government to subsidise short-time working. That is thought to have stopped >>

• unemployment soaring after the financial meltdown in September 2008, saving hundreds of thousands of jobs. Singapore benefited from a similar scheme, and several other countries introduced their own versions in the aftermath of the crisis-although the OECD reckons that the ones that worked best were already in place when the crisis hit. That has lead some economists to argue that governments should put such arrangements in place as an insurance policy. But there have to be safeguards. In Germany it helped that firms had to contribute to the subsidy for short-time working, giving them an incentive to wind down the scheme as soon as demand started to recover. Alain de Serres, an economist at the OECD, suggests that governments should have an on-off switch for the kind of intervention in the labour market that can be helpful in tough times but harmful in normal conditions-for instance, making unemployment benefit payable for longer during a downturn.

About a third of American states have schemes for shorttime working in place, but they were hardly used after the crisis

because managers thought they would easily be able to rehire the people they had fired. In Britain, which has arguably the most flexible labour markets in the European Union, lots of workers reduced their hours, or had them reduced, without any government subsidy. This saved lots of jobs, helping to keep the unemployment rate well below America's.

In response to the economic downturn, Britain also took steps to keep younger people from spending long periods on the dole. The then Labour government set up the Young Person's Guarantee, offering everyone aged 24 or under who had been out of work for six months a guaranteed job or a place in training, backed by a £1 billion fund. Those in work got paid, supposedly enough to make it feel like a "real" job; those in training received extra money on top of their benefits. Over its life the scheme supported around 100,000 young people. Paul Gregg and Richard Layard, the two economists who devised it, believe that government should act as an "employer of last resort", not just for the young but for anyone who is unemployed for a long period.

But when the Conservative-Liberal Democrat coalition government took over in May last year it scrapped the scheme and introduced its own "Work Programme". This is based on a fundamentally different philosophy, combining the "tough love" element of the welfare reform introduced in America under Bill Clinton with a payment-for-results contract with the private sector. More than 500 businesses and voluntary organisations have signed up to get people who have claimed unemployment benefit for nine months to a year back into work. The government will pay the contractors only when the worker concerned has held down the job for some time.

These various schemes may help the cyclically unemployed find work and, in so far as those people would have become permanently unemployed, help reduce structural unemployment too. That is not to be sniffed at, but it does not solve the problem of creating enough decent jobs in the long term. The same is true of creating jobs through a debt-financed economic stimulus. That can help in the short run, as it did after the financial crisis. The debate still continues over whether further stimulus would be helpful, supposing politics or the financial markets allowed it. But the only long-term answer is to create real, sustainable jobs. What can government do about that?

A hundred flowers

Soaring unemployment in America has created an appetite for a range of policy ideas that would have been dismissed only a few years ago. In his book, "Make It In America", Andrew Liveris, the boss of Dow Chemical, calls for an industrial policy to support manufacturing, including the use of government subsidies to keep firms from moving their operations abroad. The firm

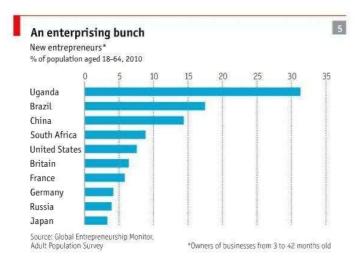
> has helped to try this out in Michigan, where the governor, Jennifer Granholm, who is now on Dow's board, used a mixture of local, state and federal government incentives to lure a cluster of firms involved in making batteries for electric cars. But governments are notoriously bad at picking industrial winners, and even if they succeed, there are questions about whether their interventions provide value for money. As Ms Granholm admits, whether the battery cluster turns out to be a good deal for taxpayers may depend on America adopting tough policies towards carbon emissions.

> There has been much talk about putting the unemployed to work to improve the energy efficiency of homes and commercial buildings, creating a range of "green jobs". But "I'm not sure what a green job is," says Michael Bloomberg, a billionaire businessman turned mayor of New York. "Putting a solar panel on a roof is a job for an electrician, and you are not going to take an unemployed person and suddenly make him an electrician."

> Another big idea, again offered with an envious eye to China, is to modernise America's creaking infrastructure. There is a good economic case for improving roads, bridges and so on, assuming the money can be found to pay for it. The construction industry has been hit hard by the downturn. But according to Mr Bloomberg, to think that this would solve the jobs problem is largely New Deal nostalgia. "The technology is different. If you built the Hoover dam today, you would do it with far fewer people," he says. "The average worker standing in line for benefits tends not to be muscular."

In response to accusations that he was anti-business, Barack Obama appointed Jeff Immelt, the boss of GE, to chair his advisory council on job creation This was controversial, as GE has shifted jobs abroad, and although hugely profit- >>





▶ able has recently paid little tax in America. One of the reforms Mr Immelt thinks would help create jobs in America, not least by attracting more foreign direct investment, would be to overhaul its corporate-tax system, which currently imposes one of the world's highest marginal rates on company profits. Ironically, this would involve closing many of the loopholes that GE has been so adept at exploiting.

Mr Immelt also wants America's education and training system to be overhauled, not least to produce far more graduates who are properly equipped to compete for good jobs and make it more responsive to the needs of business. A supply of many more people with qualifications in science, technology, engineering and mathematics will "have to be a big element of American competitiveness", he says.

Businesspeople complain endlessly about public-sector education and training schemes. In India, where many leading firms have established in-house universities to teach recruits the rudiments of their business, the government has responded by asking industry to design one of the world's most ambitious attempts to close the skills gap. It has provided seed capital for an industry-led programme to train 150m workers by 2022, the 75th anniversary of the country's independence, focusing on the 20 economic sectors in which it expects high growth. The programme, overseen by a new National Skill Development Corporation (NSDC), will be designed and run by the private sector, which will be free to decide how to spend the money. Dilip Chenoy, the chief executive of the NSDC, calls it "a demand-led supply-side model".

Making entrepreneurs of us all

Mr Immelt admits that tax and education reform, though essential, will take many years to bear fruit. He thinks a third set of policies, to promote innovation and entrepreneurship, is likely to produce faster results.

"Getting the innovation engine going again is essential to reducing the structural rate of unemployment," says Mr Phelps, the economist, dismissing the idea that innovation might actually destroy jobs by making production more efficient. "Virtually all innovations require people to conceive new products, to develop a way to produce them, market them and evaluate them," he adds. Empirical evidence suggests that innovation has expanded the number of jobs.

Research funded by the Kauffman Foundation shows that between 1980 and 2005 all net new private-sector jobs in America were created by companies less than five years old. "Big firms destroy jobs to become more productive. Small firms need people to find opportunities to scale. That is why they create jobs," says Carl Schramm, the foundation's president. In America about 700,000 new firms are started every year. Until 2005 they created an annual 3m jobs between them, but in the past few years the number of new jobs per start-up has fallen, says Mr Schramm, and the total is now around 2.3m.

The challenge is to raise that rate again, but government efforts to stimulate entrepreneurship have a poor track record. Steve Case, the founder of AOL and another member of the jobs council, thinks Congress could help by passing a bipartisan "entrepreneurship act". This could break the current political logjam by separately pushing several measures that have been blocked by Washington's battles over far bigger reforms. For example, it could include giving visas to foreign entrepreneurs on condition that they create jobs in America, which seems a no-brainer but has got nowhere because the country's mood has turned against immigration for entirely separate reasons. Mr Bloomberg wants to go further by offering visas to foreigners who agree to live in a failing city such as Detroit for a minimum of seven years without claiming any federal, state or local welfare benefits. "Overnight you would fill Detroit with people who would fill it with new jobs," he says.

Mr Case is also providing financial support for Startup America, an organisation that, among other things, wants to help people clone Silicon Valley in other parts of the country. That idea has been tried before in many parts of the world, but with little success. One reason seems to be that these efforts have generally relied on a single silver bullet, such as tax breaks from the government or small-business incubators set up by venture capitalists. But what makes Silicon Valley special is the way in which a lot of different things are mixed together to make the sum greater than the parts.

A venture called Research Triangle Park in North Carolina seems particularly promising because it has the same sort of talent, wealth and institutions (such as universities and big corporate research departments) as Silicon Valley, but until recently there has been no co-ordinated effort to put them together to produce a strategy for starting and expanding new businesses.

More broadly, Mr Case is calling on Mr Obama and business leaders to give entrepreneurship more of as a push because, he thinks, "entrepreneurship is not as uniformly part of the American dynamic as you'd think. The United States is better than most places, but the assumption that entrepreneurship is in America's DNA is not true."

If America needs to work harder to encourage entrepreneurs, the rest of the world has to make even more of an effort. StartUp Britain, launched earlier this year, is trying to do much the same as Startup America. Edward Davey, a business minister in the British government, is preparing a comprehensive package of help for entrepreneurs that he calls "employment in a box", which he says will "make it really, really easy to take on your first employee".

The emerging markets have similar needs. "In China the biggest challenge in the next five years is job creation," says Mr Ma of Alibaba. He has set himself the ambitious goal of creating 100m jobs by 2019, but says this depends on the Chinese government adopting a more positive attitude towards entrepreneurs, who do not have an easy life in his country. Small and medium-sized businesses face high raw-materials prices and rising labour costs, but miss out on the low electricity prices and tax advantages enjoyed by big firms. They also have trouble borrowing money. A recent survey found that 84% of the start-up businesses on Alibaba are looking for loans of up to \$50,000—too small for most Chinese banks to bother with, says Mr Ma, who is lobbying the government for easier finance.

A better balance

More feast, less famine

The new world of work needs to be fair as well as efficient

WORK TODAY IS about far more than economics. More even than when Theodore Roosevelt extolled its virtues, people the world over want work not just to put food on the table and money in the bank, but as a means of gaining personal satisfaction. The changes now under way stand to make the world as a whole significantly better off and allow many more people to win the prize of being able to work hard at something worth doing. Yet, as this report has explained, there are many people who are not winning the prize and for whom the outlook is grim, even in rich countries where getting a decent job had been taken for granted.

Globalisation and other pro-market reforms were sold as a package deal. Opening up a country's markets, the argument went, would increase overall wealth in every country, and policies for internal redistribution would help the inevitable losers—or else their personal misery could have serious social consequences for everyone else. That is why jobs are rightly at the top of the political agenda the world over.

Where unemployment is currently higher than usual, there is enormous pressure on politicians to spend money they have not got on quick fixes that almost certainly would not work. But almost everywhere, what is needed from government are the sort of fundamental reforms that can make a big difference in the long run, beyond the next electoral cycle.

The mismatch between the skills demanded by employers and those available in the market is a reflection both of bad choices by students, who have not thought hard enough about what will help them find a good job, and of education systems that are too often indifferent to the needs of the labour market and too slow to change even if they try. It is not just Egypt where the universities provide training for public-sector jobs that are no longer abundant yet fail to equip students with what they need to thrive in a market economy. Out of necessity, India is emerging as a model for tackling these problems, both because its companies have become expert in turning useless graduates

tion or carbon emissions. And since entrepreneurship plays a big part in creating jobs, especially in the phase when young businesses expand rapidly, government should do all it can to encourage more of it—though in view of its poor track record in this area, that should be mainly a matter of supporting (rather than obstructing) private-sectorled initiatives.

The goal of creating flexible labour markets should not be abandoned, but in future the ways in which inflexible labour markets are loosened up should be given more thought. The countries with the biggest youth-unemployment blems tend to be those where either there is no flexibility (as in much of the Middle East) or where flexibility applies only to newcomers to the jobs market, whereas older incumbents have continued to enjoy the protection that made the labour market inflexible in the first place (as in Spain). The political attractions of leaving the incumbents'

privileges untouched are obvious, but so, by now, are the social consequences of making the young bear most of the costs of

flexibility.

Long-term unemployment often turns into permanent unemployment, so governments should aim to keep people in work, even if that sometimes means continuing to pay them benefits as they work. Health care and pension systems should be (re-)designed to allow workers as much flexibility as possible, not least in deciding when to retire. In the rich world these welfare systems were built on the assumption that men with lifetime nineto-five jobs were the main breadwinners. In emerging markets that are introducing social protection for those unable to earn a living, the systems should be designed in ways that do not discourage work.

There is no excuse for delay in starting to put in place these long-term solutions. Jeff Immelt of GE may well be right to think that in America "ultimately

we will get it sorted," but he is also right that political dysfunction in Washington, DC, has "an opportunity cost. It is not like the rest of the world has stopped while we are going through this." The same is true in many other countries where reform has stalled or is not even on the agenda yet.

And while individuals wait for their governments to get their acts together, there is plenty that they can do to give themselves the best chance of surviving and thriving in the new world of work. They need to clean up their image on the internet, get in touch with their entrepreneurial DNA and brush up on their serial mastery. And form their very own posse.



Reprints

at US\$7.00 each, with a minimum of 5 copies, plus 10% postage in the United States, 15% postage in Mexico and Canada. Add tax inCA, DC, IL, NY, VA; GST in Canada. For orders to NY, please add tax based on cost of reprints plus postage. For classroom use or quantities over 50, please telephone for discount information. Please send your order with payment by cheque or money order to:
Jill Kaletha of Foster Printing Service
Telephone 866 879 9144, extension 168 or email jillk@fosterprinting.com (American Express, Visa, MasterCard and Discover accepted)

Reprints of this special report are available

For more information and to order special reports and reprints online, please visit our website www.economist.com/rights

, ,

Future special reports

The world economy September 24th Personal technology October 8th Business in India October 22nd The future of Europe November 12th

Previous special reports and a list of forthcoming ones can be found online: economist.com/specialreports



The political attractions of leaving the incumbents' privileges untouched are obvious, but so, by now, are the social consequences

into useful ones and because it has allowed industry to take the lead in creating a huge new programme to tackle skills shortages.

A second challenge is for governments to create the right conditions for businesses to create more jobs. That means running sustainable macroeconomic policies, so that firms need not fear that their investments will be undermined by another economic crisis; sensible regulation; and a tax system that is both competitive, with low marginal rates, and does not distort business decisions in arbitrary ways. Given the importance of job creation, it would make sense to shift some of the burden of taxation permanently away from employment towards consump-