OECD INSIGHTS

BRIAN KEELEY

HUMAN CAPITAL

How what you know shapes your life

OECD

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ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

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The OECD is a unique forum where the governments of 30 democracies work together to address the economic, social and environmental challenges of globalisation. The OECD is also at the forefront of efforts to understand and to help governments respond to new developments and concerns, such as corporate governance, the information economy and the challenges of an ageing population. The Organisation provides a setting where governments can compare policy experiences, seek answers to common problems, identify good practice and work to co-ordinate domestic and international policies.

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Also available in French under the title:
Le capital humain

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Foreword

Economic success crucially relies on human capital – the knowledge, skills, competencies and attributes that allow people to contribute to their personal and social well-being, as well as that of their countries.

Education is the key factor in forming human capital. People with better education tend to enjoy higher incomes – a benefit that is also reflected in improved economic growth. But the impact of human capital goes beyond economics. Raising human capital raises health levels, community involvement and employment prospects. Indeed, as globalisation increases the need for technological skills and adaptation, the importance of human capital will only grow in the years to come.

Sadly, too many people today are not being given the opportunity to fully develop their abilities. Even in developed countries, as many as one-fifth of young people fail to finish secondary school, which severely limits their subsequent employment prospects. Such failure is frequently concentrated in particular communities, leading to their marginalisation from the economic and social mainstream.

Given its significance for economic and social development, human capital has long been a priority subject for the OECD, which is heavily involved in education; working to develop understandings of how teaching and learning can be improved in the classroom and helping education systems in member countries to learn from each other's successes and failures. Best known, perhaps, is the OECD's PISA programme, which measures the competencies of

15-year-old students in more than 40 countries around the world. But the OECD also deals with issues such as schooling for tomorrow, childcare, education, lifelong learning and higher education.

The OECD is also looking at health issues, trying to understand how this sector performs and how it can deliver the best service to our societies.

The OECD's research and findings often feature in newspapers, television reports and other media. But for some time we have felt that we should deliver our analysis and research to a wider audience. That is why we created this new series of books: OECD Insights.

Our aim is to generate an informed debate on some of the key issues that affect our societies and economies today. All too often, such debate generates more heat than light. For a truly meaningful dialogue, we need to go beyond exchanging opinions – no matter how fiercely they are held – and look at the facts and figures. With a long record of research and analysis, we feel that few bodies are better placed than the OECD to report on these realities.

We hope that this new series of books will provide readers with the information and insights they need to understand the changes and challenges that will shape our economies, our societies, and ultimately, our lives, in the future.

Angel Gurría
Secretary-General of the OECD

Acknowledgements

The author gratefully acknowledges the advice and assistance of the following:

Willem Adema, Andrea Bassanini, Gary S. Becker, John Bennett, Annabel Boissonnade, Nick Bray, Tracey Burns, Alejandro Camacho, Rory Clarke, Margot Cohen, Martine Durand, Juliet Evans, Vincent Gallart, Tom Healy, Herwig Immervoll, Sue Kendall-Bilicki, Kaisu Kärkkäinen, Mosahid Khan, Vladimir Lopez-Bassols, Kate Lancaster, Janet Looney, Angus Maddison, John Martin, Marco Mira d'Ercole, George Papadopolous, Vikrant Roberts, Jean-Jacques Salomon, Tom Schuller, Raymond Torres, Spencer Wilson, Gregory Wurzburg.

Currency Note

Currency references are in US dollars unless otherwise indicated.

This book has...

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Today's children are growing up in a changing world. Globalisation is opening up economies and creating opportunities. Economic foundations have shifted, too, with the rise of the knowledge economy. Coupled with major social change, such as the ageing of populations, societies must find solutions to new challenges.

Investing for Change

By way of introduction…

The Paris suburb of Villiers-le-Bel is an uninspiring place on a cold, winter afternoon. Blocks of look-alike apartments line up in long rows. A discount store stands deserted on a street corner. Groups of young men hang around the community centre.

Just a few months earlier, youths like these had taken to the streets of Paris's suburbs. Thousands of cars were burned in night after night of rioting that featured on the front pages of newspapers around the world. Some in France dismissed it as nothing more than mindless violence. Others saw it as a cry of anger from immigrant communities who believe they have suffered decades of social exclusion and economic marginalisation.

The riots are just a memory on this dreary afternoon at the community centre as the men sit about in thick padded jackets listening to rap music on a stereo. Upstairs, four local unemployed women are meeting with an employment advisor. Some of the women were born in France; others are immigrants; all come from different ethnic backgrounds. They talk about what they need to put in their résumés and how to approach employers, and then discuss – sometimes heatedly – the problems they face in finding jobs.

Some of the women argue that because their area relies on just one railway line, employers are reluctant to hire them for fear that transport delays and strikes will keep them from getting to work. Others believe the barriers are more insidious, a reflection of prejudice and discrimination. All agree that lack of education can be a major obstacle to finding a job.

Linda, who grew up in France in a traditionally minded North African family, regrets that her education was cut short. "I was a model student at school", she explains, but she was pulled out before she could finish her schooling. "My father believed that women shouldn't work and that they should stay at home until they got married. In our education, our culture, our religion, a woman just has to accept things as they are."

Linda was married in her late teens, but her marriage didn't last, leaving her to bring up her children on her own. That's forced her family to reconsider its beliefs. "My father finally accepted my divorce. Now he understands my situation, he has changed his approach. Now he pushes me to find work." But for Linda, that's not easy: "No CV, no professional experience, never a trainee". She has turned to France's employment services for help with training and is hopeful that they can help her, but she knows it won't be easy. "There are no guarantees", she says.

To get on, to get a better job and to improve their incomes, the women know they need to have an education. That's hardly a revolutionary idea. Parents the world over and in all social classes nag their children to study hard and get good grades in the hope that some day they'll reap the rewards of all that work.

Behind that advice lies an interesting concept; namely, that the years we spend in education generate a form of capital that has the potential to produce a long-term return, just like forms of capital that we may be more familiar with, such as money in a bank or a piece of land. This idea has become highly influential among policy makers, and it has spread beyond just education. Good health, too, can be regarded as a form of capital that has the potential to pay returns to individuals in the form of increased lifetime earnings.

Indeed, even the relationships and shared values in societies can be seen as a form of capital that make it easier for people to work together and achieve economic success. Arguably, the absence of such capital explains some of the problems that affect places like Villiers-le-Bel.

This book is about these forms of capital.

▶ This chapter begins by briefly sketching out some key worldwide trends – changing demographics, globalisation and the rise of the knowledge economy – that are fuelling interest in these approaches to capital. It then looks at how those trends are being reflected in people's daily lives, and the challenges they pose. Finally, it introduces the work of the Organisation for Economic Co-operation and Development (OECD) in studying and analysing the impact of global change and how societies and governments can respond.

What challenges face our societies?

By the time you read these words, the Japanese village of Ogama may no longer exist. Concerned by their remoteness from medical facilities and daily amenities like shops, the village's dwindling and increasingly elderly population have decided to sell their land to a recycling plant. When they move to a bigger town, the villagers will bring the bones of their ancestors and their village shrine with them.

Ogama's disappearance is due in part to the decline of Japan's rural economy. It also results from a bigger issue in Japan and elsewhere in the developed world: societies are ageing. There are two main reasons: we're living longer and we're having fewer children. In years to come, this trend will have a real impact on developed countries. A few figures:

- At the turn of the millennium, about 15% of people in the OECD area were aged over 65; by 2030, that number is forecast to hit 25%.
- In the last half of the 20th century, the size of the working-age population of OECD countries rose by 76%; in the first half of this century, it's projected to grow by just 4%.
- Population changes will hit countries' potential for growth: Europe is currently reckoned to have a potential annual growth rate of 2.3%; by 2050 that is forecast to fall to 0.5%.

The result of all this is that the elderly will soon be depending for their welfare on falling numbers of active workers. In response, it's likely that more of us will have to go on working well past current retirement ages because there just won't be enough younger people to do the work. (Indeed, in Japan, as in some other countries the entire population, not just the workforce, is shrinking.)

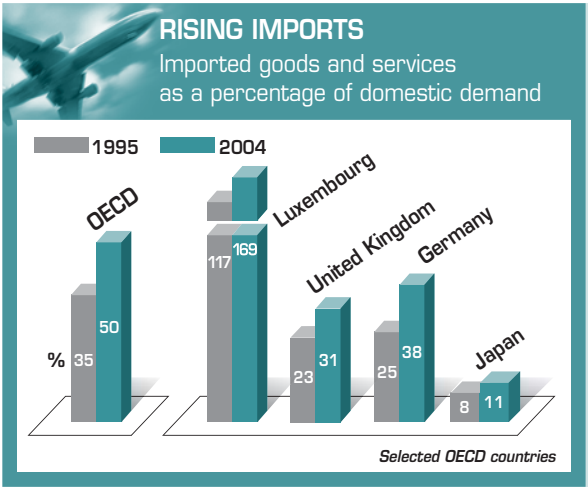
> **"… Population ageing is both a challenge and an opportunity. It will put upward pressure on public expenditures while dragging down economic growth. But it is also a tremendous opportunity for all of us to spend more rewarding years at work and in retirement."**
>
> *Live Longer, Work Longer*

To go on working we'll need to continue updating our skills throughout our working lives. Why? Because the skills we need in the workplace are evolving, and the pace of that evolution is speeding up. Behind those developments are two major factors: the march of globalisation and the rise of the knowledge economy.

Going global

Globalisation is a complex and controversial phenomenon that takes in a wide range of social, political, cultural and economic trends, but at its heart is a simple reality: national borders no longer matter as much as they used to. Signs of globalisation can be seen everywhere – from the rapid worldwide spread of technology to the increasing tendency of students and academics to go overseas to study and work.

Economically, globalisation means that national economies are increasingly plugged into each other and into the world economy. A succession of international deals has opened up trade and investment between countries; multinational firms now think nothing of shifting production around the world; and manufactured goods and some services cross borders effortlessly.



Globalisation is reflected in increasing international trade, although open borders are only one factor that determine levels of imports and exports. Others include the size of an economy and its geographical location.

For data on all 30 OECD countries use the StatLink below

Source: OECD Factbook 2006.

StatLink: *http://dx.doi.org/10.1787/425066253568*

Proponents of globalisation argue that it has brought economic growth and vastly expanded opportunities for trade. But it has also to some extent put manufacturing and low-skilled and some-skilled jobs in developed countries under increasing pressure from places like China and India, where salary levels are much lower.

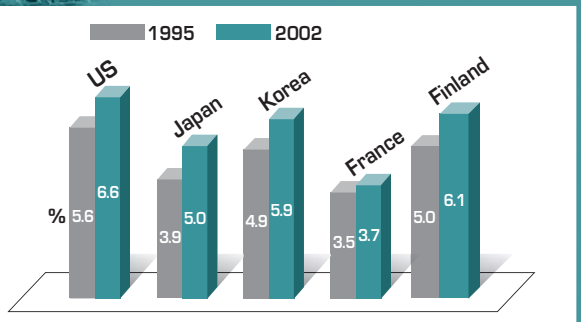
The knowledge economy

There's similar pressure from the emergence of the so-called knowledge economy. In developed economies, the value of knowledge and information in all their forms is becoming ever more apparent, a trend that is being facilitated by the rapid spread of high-speed information technology. The upshot is that brains, not brawn, are increasingly valuable, which is helping to widen the gap in earnings between those who have high levels of education and those who don't.

The roots of that gap can often be traced back to our very earliest lives. Even in developed countries, children from poorer families are less likely than their wealthier counterparts to get a decent education, which will make it far harder for them to compete when they grow up.

TOOLS FOR THE KNOWLEDGE ECONOMY

Investment in Research & Development, higher education and software as a percentage of GDP



Selected OECD countries

Investment in R&D, higher education and software can be expected to yield future returns. This sort of investment is rising more rapidly in the US and Japan than in most of Europe.

For data on more OECD countries use the StatLink below

Source: OECD Factbook 2006.

StatLink: *http://dx.doi.org/10.1787/554030183064*

Poverty doesn't just mean an absence of money; it means a lack of resources – education, health, useful social contacts – on which to build economic success. The impact goes beyond individuals. In many OECD countries, there are growing concerns about the emergence of marginalised social groups – communities that, because they lack links to mainstream society and have only relatively low levels of education are unable to take part fully in global and knowledge economies. In the eyes of many people, it's this marginalisation that led to the riots in the suburbs of Paris in 2005. France is far from alone in having communities that exist outside the mainstream. Many developed countries are worried about how they can maintain cohesion in societies that are home to ever-more disconnected communities.

> **"A growing dichotomy between the elite and the rest of the population puts a question mark on the social cohesion inside many societies – a cohesion that has been and still is the foundation for stability."**
>
> Jørgen Ørstrøm Møller in
> *The Creative Society of the 21st Century*

How are our societies responding?

Economic trends like globalisation and the knowledge economy can feel like vast, slow-moving weather systems that float high up in the atmosphere and are beyond anyone's influence. It's true that today no one country can really determine the shape of global economic development, although some, clearly, have more influence than others. But what societies and governments can do, indeed, what they must do, is react to changing economic and social situations in ways that best safeguard the interests of their own people.

Policy decisions can profoundly shape the development of national economies and the lives of their citizens. To see how that happens in the real world, imagine the life of a child called Jean as he grows up in a typical OECD country…

Years of economic growth have provided sufficient resources to build decent hospitals, so Jean has a very good chance of being born

safely and surviving his first few weeks. That's not the case in much of the world: about 4 million of the roughly 60 million children born each year die within their first month, according to the charity Save the Children. Around 99% of these infant deaths are in the developing world.

> **"While economic growth is not the only policy objective, it does provide the resources for tackling social exclusion, poverty and poor levels of health."** *The Well-being of Nations*

Just a few months after Jean is born his family must face its first dilemma. His mother must decide whether or not she's going to return to work. She's concerned that leaving her son with a child-minder will harm his development. But she also feels that by going out to work she can boost the family finances and improve her own long-term career prospects.

In large part, her decision will be shaped by the actions of government. In some OECD countries, governments are willing to subsidise mothers so that they can stay at home; in others, they may believe it's more important to tackle family poverty by encouraging women to go out to work. So, although it will be years before Jean even has the right to vote, social trends and government policies are already profoundly affecting his life.

That process will continue at the next great milestone in his life, school. Educational systems vary greatly in their effectiveness, and the factors that shape them can be so deeply embedded in societies that they can blind people to schools' failings. In some school systems, for examples, children from poorer backgrounds struggle to do well; in others, social background is less of a factor. Comparing the performances of school systems internationally can make these differences more apparent and help shape government responses.

If Jean comes from a less well-off background, he may be more likely to struggle throughout his school career to develop his potential. He may leave school as soon as possible and try to get a job, but without skills and training his options will be severely limited, especially as manufacturing jobs continue to migrate to less developed countries.

Assuming Jean finds a job, he may have the possibility of taking part in adult education, but his employer may not want to spend

> **"In the knowledge society access to opportunities to acquire needed knowledge, skills and competencies is essential for social progress and economic growth."**
>
> *Co-financing Lifelong Learning*

money on training an easily replaceable employee with low skill levels. Jean can only hope that the state will pay for adult education. Otherwise he risks slipping further and further behind in his attempts to earn a reasonable living.

What this book is about...

What can governments and societies do throughout the life of someone like Jean to help him achieve his potential? That's the sort of question, among many others, that the OECD tries to answer every day. The Organisation brings together 30 of the world's leading market democracies, and provides analysis and insights on key policy issues that directly affect people's lives. This book draws on that work to present a sense of how the concept of **human capital** can serve as a response to major social and economic challenges.

By necessity, a book of this size can only provide a brief introduction to the main issues and to the OECD's extensive research and analysis. To give a sense of that work, the book includes graphics and charts from a number of OECD publications as well as direct quotations from their texts. At the end of each chapter, there's a section with suggestions for further reading from the OECD.

What's in this book?

Chapter 2 will explain what human capital is all about, and look at why knowledge and information technology are becoming ever more important to economic growth around the world.

Chapter 3 looks at why the first years of a child's life are so important and at how family policy can play a major role in determining how children are cared for.

Chapter 4 looks at the school years, and examines factors that make some educational systems more effective than others.

Chapter 5 looks at learning beyond the years of formal education: as economies evolve and people work longer, continued training and education will become ever more important.

Chapter 6 looks at some of the wider range of elements that help people to earn a living, such as good health. It also looks at the links between social relationships and education.

Finally, **Chapter 7** looks at ways of measuring things like a society's education levels, and draws some conclusions.

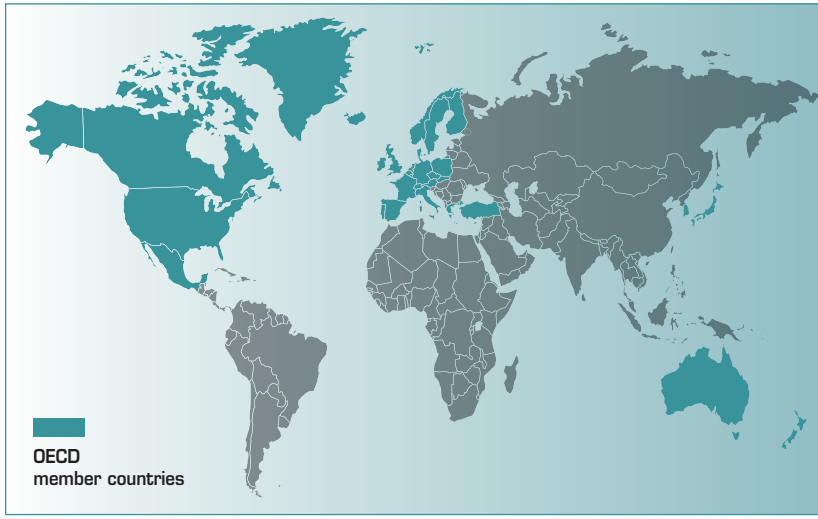
What is the OECD?

The Organisation for Economic Co-operation and Development, or OECD, is a forum that brings together 30 market democracies to tackle key economic, social and governance challenges in the increasingly globalised world economy. Altogether, these 30 economies account for 75% of the world's trade.

The OECD traces its roots back to the Marshall Plan that rebuilt Europe after World War II. The mission then was to work towards sustainable economic growth and employment and to raise people's living standards. These remain core goals of the OECD. The Organisation also works to build sound economic growth, both for member countries and those in the developing world, and seeks to help the development of non-discriminatory global trade. With that in mind, the OECD has forged links with many of the world's emerging economies.

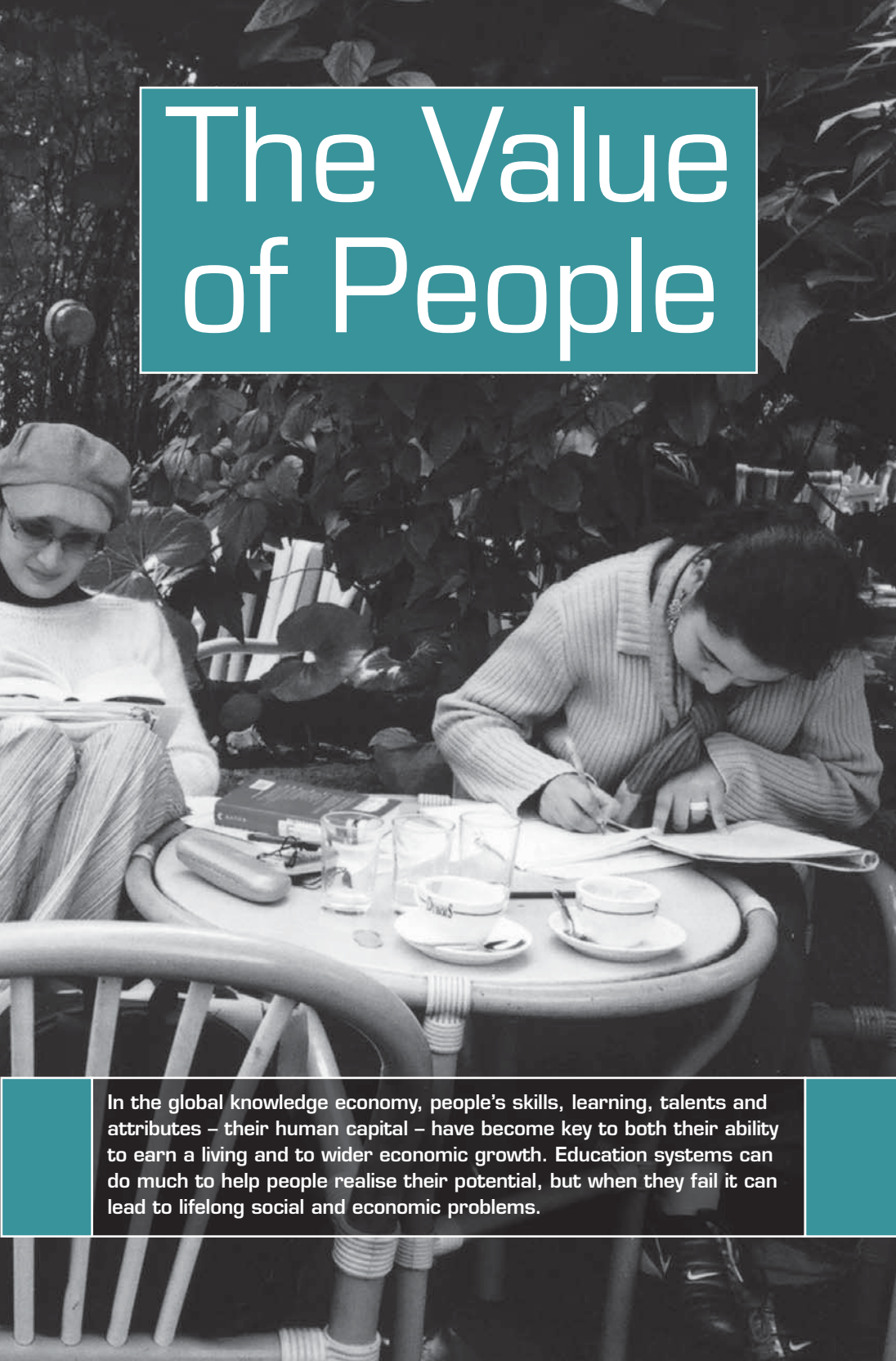
Numbers are at the heart of the OECD's work. It is one of the world's leading sources for comparable data on subjects ranging from economic indicators to education and health. This data plays a key role in helping member countries to compare their policy experiences. The OECD also produces guidelines, recommendations and templates for international co-operation on areas such as taxation and technical issues that are essential for countries to make progress in the globalising economy.

www.oecd.org



2

The Value of People



In the global knowledge economy, people's skills, learning, talents and attributes – their human capital – have become key to both their ability to earn a living and to wider economic growth. Education systems can do much to help people realise their potential, but when they fail it can lead to lifelong social and economic problems.

By way of introduction…

In India, Vikrant Roberts is getting ready for another day at SAP, an international software firm with a base in Bangalore. The city is India's high-tech hub, and it's changing rapidly, says the 28-year-old software engineer. "Bangalore used to be a small town kind of place. You could go for nice long walks, it was quiet. Now, it's really getting crowded. The traffic's impossible, in fact."

On any given day, Vikrant can talk over the phone to clients in Germany, the United Kingdom or the United States. Sometimes a call is enough, but he may have to get more involved: "If there's a problem in their system and they want me to log on, I can request a connection and log on to their system", he explains. Distance doesn't matter: the client's server may as well be in New York as New Delhi. It's all the same to Vikrant.

Bangalore is home to an ever-growing number of global and Indian software and information-technology companies employing educated young people like Vikrant. Indeed, some predict that in a few years it will take the place of California's Silicon Valley. Vikrant is more cautious: "India has a lot of catching up to do", he says.

Whether he's right or wrong, there's no doubt that India and other developing countries are growing rapidly and have the potential to reshape the world's economy. One famous forecast by the US brokerage firm Goldman Sachs sees Brazil, Russia, India and China – the "BRICs" – joining the United States and Japan to make up the world's six biggest economies by the year 2050. Only time will tell if that happens. But what can't be denied is this: the global economy is evolving, just as it always has done and just as it always will do.

▶ A key trend in this latest phase of world economic change is the rise of the knowledge economy, and that's the topic this chapter will focus on first. It will then go on to examine how the idea of investing in people has emerged as a response to economic change, and finally ask what all this means for education and how people learn throughout their lives.

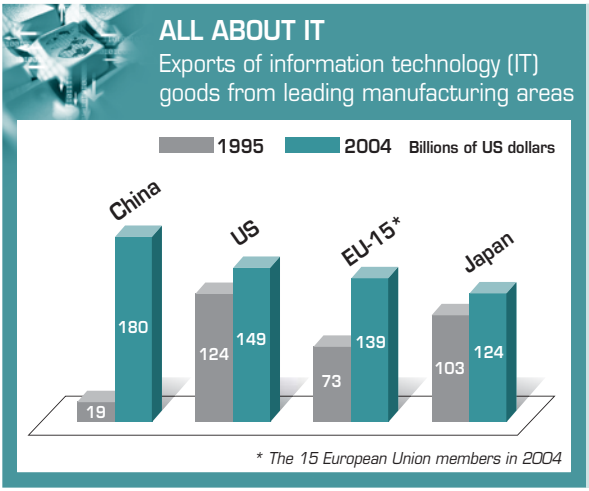
How is the global economy changing?

There was a time when economic strength was largely dependent on hard, physical assets: a better plough, a more efficient spinning wheel, a stronger tractor. The physical form these assets took really mattered: a plough did the work of a plough, a spinning wheel the work of a spinning wheel, and that was that.

These days, a major source of growth comes not from physical objects, but from something quite intangible: information. And the form of that information – whether it's on a computer hard disk, an iPod or flying through the air in a satellite transmission – hardly matters. It's all just ones and zeros.

> **New technology "is transforming economic activity, as the steam engine, railways and electricity have done in the past."**
> *The New Economy: Beyond the Hype*

Equally, the location of an asset – be it Manchester, Detroit or Yokohama – was once crucial to success. A factory had to be in the right *place*, accessible by boats or trains and close to natural



China has overtaken the United States to become the world's largest exporter of IT goods – computers, network routers and so on – which are helping to create the new knowledge economy.

Source: OECD ITS Database.

resources like coal. Today, location is less and less important. Providing the people are there to make use of the information, and the links are good, it doesn't matter much whether they're in Boston, Beijing or Bangalore.

Let's not run away with ourselves. Of course, manufacturing still relies on raw materials – iron, cotton, oil – just as it always has. And a farmer still needs to plant seeds in the ground. Manufacturing and agriculture are not about to go away. Indeed, with growing world populations and the emergence of new middle classes in China and India, demand for their outputs is rising, not falling.

Equally, information is hardly new. When the dinosaurs still walked the earth, insects like bees were using elaborate dances to exchange information about the location of nectar-rich plants. In prehistoric times, our ancestors used shouts and gestures – that is, they exchanged information – to hunt animals that were bigger and faster than any human. And long before the silicon chip appeared, fortunes were made through the sale of information: in 1865, John Julius Reuter turned his fledgling wire agency into a household name by breaking the news in Europe that President Lincoln had been assassinated.

What's different about information today is the sheer volume and pervasiveness of it and the speed at which it can be transmitted and processed. Rapid improvements in computing power and communication technologies, like the Internet, are making it ever cheaper to handle and process data. Moore's law – the prediction that the number of transistors on a silicon chip (and, by extension, computer performance) will double every 18 to 24 months – has essentially held good now for more than 40 years. Today, computers run ever faster and hold ever more information. Internet speeds, too, have risen rapidly since the days when waiting a minute or two for a new page to slowly reveal itself didn't seem unreasonable.

> **"The value of knowledge … has continued to rise. It is fundamentally different from other forms of capital. As it becomes abundant, it may be further expanded more easily and cheaply, in turn creating especially lucrative returns."**
>
> David Bloom, *The Creative Society of the 21st Century*

What's also different is that information-based activities are becoming ever more important both to national economies and individual businesses. Today, improvements in information technolo-

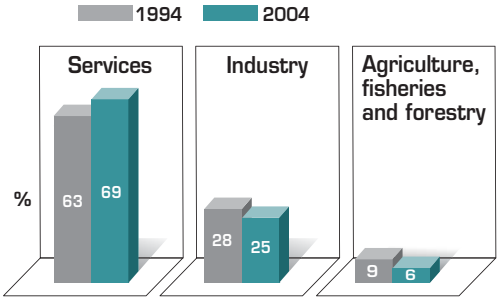
gies are felt in every aspect of business life, from managing warehouse supplies to monitoring sales. The pervasiveness of information technologies is reflected in company balance sheets. By some estimates, traditional book assets – essentially, the physical assets of a company that could be sold if it went bankrupt – now account for just one-fifth of US companies' value. Much of the rest lies in intangible things like knowledge and information.

The knowledge economy isn't just changing existing businesses; it's creating them, too. Think of text alerts to cell phones and search engines from Google, a company whose turnover rose 17-fold in just four years to $1.5 billion in 2005. And then there's the more obscure new businesses: in China, young people nicknamed "gold farmers" spend their days playing video games to earn virtual gold coins, which players normally use to "buy" other virtual objects, like weapons and fortresses. But the gold farmers aren't keeping this virtual gold for themselves. They're selling it for real money to players in the West who want the rewards of video-game success without making the effort.

All these activities involve the sale or exchange of knowledge and information. To make it all happen takes powerful computers and

WHO'S DOING WHAT?

Percentage of workforce in the services, industry and agriculture sectors across the OECD area



Rounded figures

OECD countries are seeing a shift from traditional jobs, such as manufacturing, to areas that don't create physical objects, like many services and the knowledge economy.

For data on all 30 OECD countries use the StatLink below

Source: OECD in Figures.

StatLink: *http://dx.doi.org/10.1787/808800743257*

connections. But, more importantly, it takes people – people with the skills and knowledge to make it work and transform it into economic growth.

The elements of growth

Why do economies grow? If the problem's never struck you before, you're probably not alone. While we have all lived through periodic recessions and economic slowdowns, few people in developed countries today have ever known a time when the economy hasn't been growing over the long term. Translated into our own lives, that means most of us are earning more than our parents did, and that we expect our children to earn more than we do. Economic growth, it sometimes seems, is inexorable, if a little mysterious.

And yet there's no law that says economies have to grow. They can stand still, and even contract, for decades or centuries at a time. In recent times, the pace of growth has varied enormously from country to country and from decade to decade. For about 30 years after the end of World War II, western Europe came close to narrowing the economic gap with the United States. That process halted in the early 1980s, when Europe began to slip behind the United States again. These days, China's economy is growing rapidly, by about 8% a year. But there are huge differences between the economies of the gleaming, modern cities on the coasts, and those of the dusty, remote towns of western China.

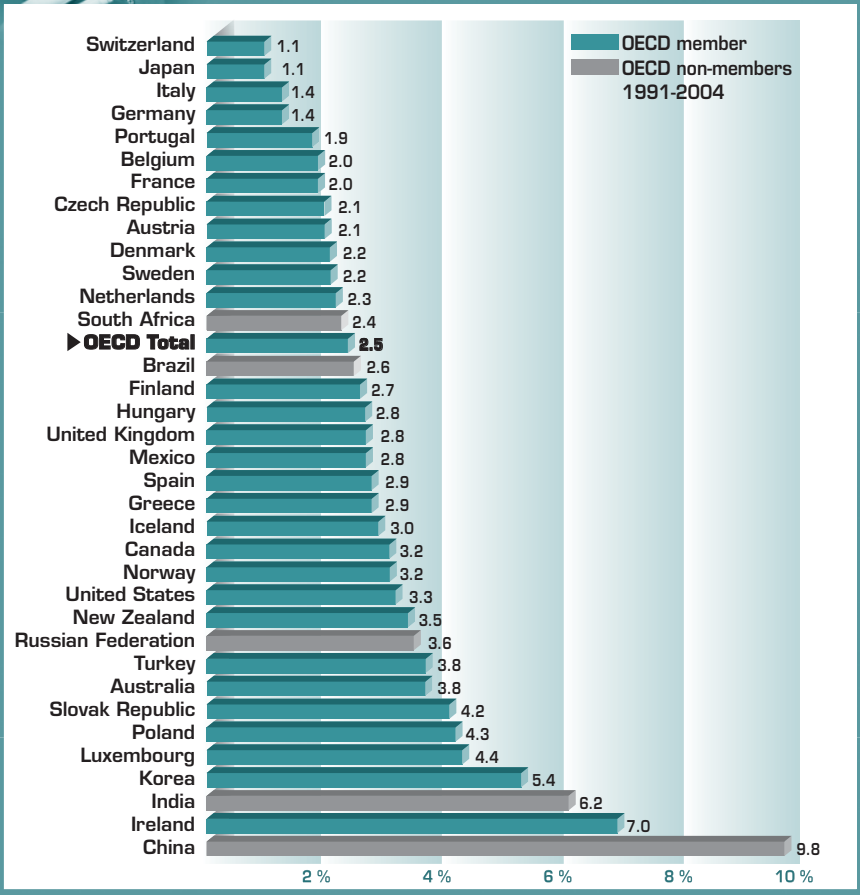
Why? Why do some economies grow faster than others? That question is at the core of economics, and it's the reason why economics is at the core of modern life. Whether it's because of human greed for material goods or our desire to create a better world with good schools and hospitals for all, most of us want to see our countries – and ourselves – become wealthier.

What is human capital?

To understand why economies grow, we need first to look at why economic activity happens in the first place. Traditionally, many economists believed four things – "the four factors of production" – were needed. The first is obvious: land. Without land, there would

GROWTH ROAD

Annual average growth in GDP
in OECD members and in other economies



Since the mid-1990s, growth in the OECD region has diverged, with the United States drawing ahead of most other members. There have, of course, been exceptions, such as Korea and – most notably – Ireland. But even they have been outperformed by China, which of course, is coming off a much lower economic base. Whether China can maintain its soar-away growth in the years to come remains to be seen, still, there's no doubt that countries like China, India and the Russian Federation are reshaping the world's economy.

For data in Excel™ format use the StatLink below

Source: OECD Factbook 2006.

StatLink: *http://dx.doi.org/10.1787/511708367123*

be nowhere to grow crops or to lay the foundations for a factory or a farm. The second is equally clear: labour, or workers. Then there's capital: that's the assets, usually money, needed to supply the bricks for a factory and the machines to fill it. And finally there's enterprise, or what the economist John Maynard Keynes called "animal spirits". In other words, the initiative that turns a bare patch of land into a factory.

Let's go back to the second of those factors of production, labour. With a few exceptions, economists originally tended to see workers as a mass. Provided they were willing and able to do physical work, it didn't really matter very much what they knew or what their abilities were. An exception to this way of thinking was the 18th century Scottish economist Adam Smith. He believed that economic activity was fuelled not by workers as a collective mass but by "the acquired and useful abilities of all the inhabitants or members of the society". An individual had to pay a price to gain such talents and abilities, added Smith, but once attained they stood as "a capital fixed and realised, as it were, in his person".

Smith's writings still influence the world we live in today. (His support for free trade makes him a bogeyman for those opposed to global trade deals. Ironically, Smith himself earned a comfortable living collecting customs payments on behalf of the British treasury.) However his belief that workers' individual capabilities were a kind of **capital** – an asset just like a spinning wheel or a flour mill that could yield returns – took a while to catch on. Although it showed up from time to time in the earlier years of the 20th century, it wasn't really until the 1960s that economists began systematically to incorporate such ideas into their work.

Explaining growth

That happened because they were trying to answer our original puzzle, why do economies grow? Classical economists, influenced by Smith, believed the answer lay in "the invisible hand". In a free market, Smith believed, people acting out of self-interest would use the factors of production and goods and services in such a way as to give each of them the best possible return. Spread across an economy, the effort of all these individuals acted as a giant invisible hand, pushing economic resources towards their most productive use.

Later economists, such as Robert Solow in the 1950s, came up with more refined, if less intriguing, solutions to the growth ques-

tion, explaining the relationships between various factors of growth – labour and physical capital, for instance – through "economic models". Initially, these didn't take much account of the impact of differing levels of education, or the quality of labour, on economic growth. But that gradually changed, and since the early 1960s, there's been increasing agreement on one key part of the growth puzzle, namely, the importance of people – their abilities, their knowledge, and their competences – to economic growth. Or, in other words, **human capital**.

Like many influential ideas, human capital is hard to pin on just one person. But one of the early important exponents was the American economist Theodore Schultz. In a paper that appeared in 1961, he observed that "economists have long known that people are an important part of the wealth of nations". No one could argue with that: after all, economists had always included labour as a factor in creating economic output.

What economists were less willing to acknowledge, Schultz pointed out, is that individuals consciously invest in themselves to improve their own, personal economic returns. A student studies medicine to heal people, but also because doctors earn more than street-sweepers; a manager trains to learn a new inventory system so she can keep up to date at work but also in the expectation of gaining a promotion and a pay rise.

Human capital is defined by the OECD as the knowledge, skills, competencies and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being.

Those examples aren't Schultz's, but the idea behind them is. Namely, that investment by individuals in themselves – most commonly through improving their education – yields real improvements in personal income and well-being. Not only that, said Schultz, but across an economy, the quality of human capital – levels of education, standards of health – can be linked to economic growth. Essentially, what he and other economists were saying was this: a modern economy can't grow without an educated workforce.

Rising education

Human capital – the quality of the workforce – is only one factor determining economic growth. Countries can have broadly similar educational levels, but show wide variations in their pace of growth. Other factors can include demography (especially, the ratio of young to old in a population), technological innovation, openness to foreign trade, and the state of a nation's political and legal systems.

But human capital does play an important role in economic growth, and it is one that can be traced back to the 19th century and the rise of mass education. Like most relationships it isn't straightforward. Instead, there's always been something of a push-me, pull-you effect. Education creates a workforce capable of taking on more complex and better-paying jobs. At the same time, the existence of such jobs makes it worthwhile for students to stay on in school; eventually, all those unpaid hours in the classroom will translate into a job that compensates workers for when they were learning and not earning.

> **"Does education spur growth, or does growth spur individuals to consume more education? In practice, it is likely that causality operates in both directions."**
>
> *Education at a Glance 2005*

Equally, countries with high levels of education tend to become wealthier, so there's more money to spend on further expanding education. That might sound like a chicken-and-egg situation but it's probably not. Historical evidence from countries like Germany and the United States indicates that the advent of mass education around the end of the 19th century predated large-scale economic growth. (Ironically, the goal of boosting economic growth scarcely figured among the many factors that initially drove the rise of mass schooling.) In more recent years, Asia's "tiger economies" – Singapore and Korea among others – all had relatively high literacy levels before embarking on ferocious growth spurts in the 1980s and early 1990s.

Indeed, just as a good supply of well-educated workers can help an economy to grow, its absence can be a bottleneck. Despite a population of around a billion people, India is suffering from a shortage of well-qualified graduates, according to managers in information-technology businesses. A national employers' association predicts

VIEWPOINT Gary Becker

Ever since it emerged, the concept of human capital has been controversial. Indeed, Theodore Schultz, a pioneer in the area, acknowledged as much. "Our values and beliefs inhibit us from looking upon human beings as capital goods, except in slavery, and this we abhor", he wrote in the early 1960s.

Almost 50 years later, the idea of human capital still isn't universally loved. For one thing, say critics, treating education and health as a form of "capital" represents an unwelcome entry by economists into what they believe should be seen as social issues. Then there's causality – does an expansion in education create wealthier societies, or do wealthier societies expand education? And then there are issues like credentialism, which raises the question of whether to some extent employers pay higher salaries to people because they have an academic "credential", such as a university degree, rather than because they have unique expertise that can improve the company's productivity.

To discuss some of these issues, we spoke to **Professor Gary S. Becker**, winner of the Nobel prize for economics in 1992 and author of *Human Capital*, a seminal work published in 1964.

Which comes first, economic growth or the expansion of education?

It's not a new question but it's an interesting question. There are various ways you try to get at that. You look at various increases in education that are based on shifts in public policy, and then you see the subsequent effects on economic growth. I definitely believe there's a strong causation from improvements in education – in human capital – to economic growth. But there is also some reverse back from economic growth to increases in education.

Doesn't the concept of human capital treat people like machines?

It certainly doesn't dehumanise individuals; you can use it to deal with all kinds of issues, not only the effect on earnings but the effect on health, the effect on family formation and so on. But it was highly controversial, even among economists. Now, I think, in most countries a politician can't run for office and at some point not mention or discuss the importance of human capital to the country.

And what about credentialism?

Yes, that's an old criticism. … If it's simply credentialism, then as you go from the individual's [earnings] to the aggregate you wouldn't find much of an effect at the GDP level. I don't think credentialism is zero, but it's not the dominant source of the higher returns to education.

If someone's parents are well educated, they in turn are more likely to get a good education than someone from a poor family. An important issue?

I think it's very important. I think there is an important role for social policy to try to give children of poorer backgrounds and less educated backgrounds, if they have the capacities, the opportunities to extend their education. It's not an easy problem, because it's based on family structure in part, but I think we need to do a better job of at least giving those students who are able to benefit from it, better quality education at [younger ages] so that if they have the capacities they can go on and finish secondary school and go on to higher education.

Do governments need to spend more?

Yes, but it's also a question of doing better. I believe in vouchers and competition in the educational structure. The question is, are we spending it the right way, efficiently, and I think there are real questions about whether we can improve the efficiency and maybe end up spending less money and getting more results from that money.

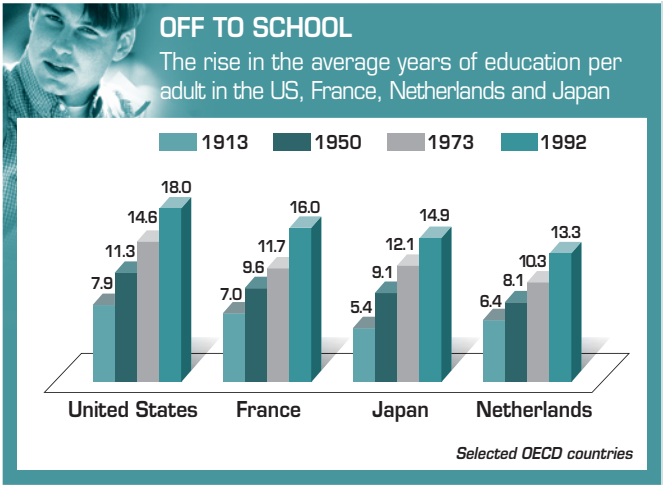
that the industry, which currently employs around 350 000 people in India, will have a shortfall of 206 000 workers by 2009. The lack of suitably qualified staff is crimping growth and pushing up salaries of existing workers.

More broadly, India's population has much lower levels of education than, say, China's. Only 61% of Indian adults can read; in China the figure is more than 90%, says UNESCO. That gap is one of several factors commonly cited for China's faster pace of economic growth since the early 1990s.

Returns to learning

What are the economic benefits of human capital? There are two ways to look at them – from the perspective of the individual and of the national economy.

For individuals, the economic benefits of human capital – such as increased earnings – have to be balanced against the cost of acquiring that capital in the first place. Those costs include the money they weren't earning when they were in education as well as the price of education itself – school and university fees, and so on. In many countries, this doesn't come cheap. Families may make big



Student numbers have been rising in many countries since the 1800s. UNESCO estimates there were 500 000 students in universities worldwide in 1900. A century later, the figure was around 100 million.

Source: Monitoring the World Economy 1820-1992.

sacrifices to send young people to university, while graduates may still be paying off student loans years after starting work.

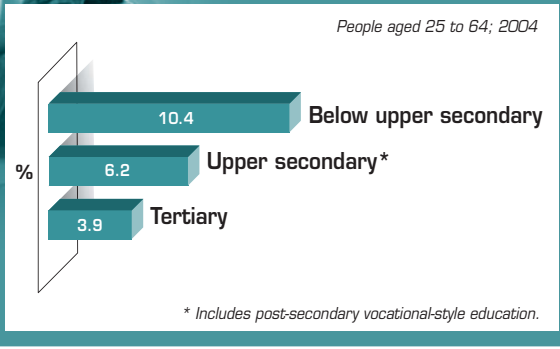
> **"In all countries, graduates of tertiary-level education earn substantially more than upper secondary and post-secondary non-tertiary graduates."** *Education at a Glance 2006*

Usually, all this investment will eventually pay for itself. Indeed, it isn't even necessary to go all the way to university to enjoy economic benefits from education. For instance, someone who completes the full course of secondary education (typically, leaving education at about the age of 18), is more likely to have a job than someone who only finishes lower secondary education (leaving school at around the age of 15 or 16). Of course, third-level graduates have even higher rates of employment than those who only complete secondary school.

And then there's income. Here, once again, the higher a person's level of education the better they do in economic terms, a situation that holds right across the OECD area. In Norway, for instance, university graduates enjoy a 26% earnings premium over people who only finished secondary school; in Hungary that figure rises to 117%.

WHO'S NOT WORKING?

Percentage of people at each level of education who are unemployed across OECD area



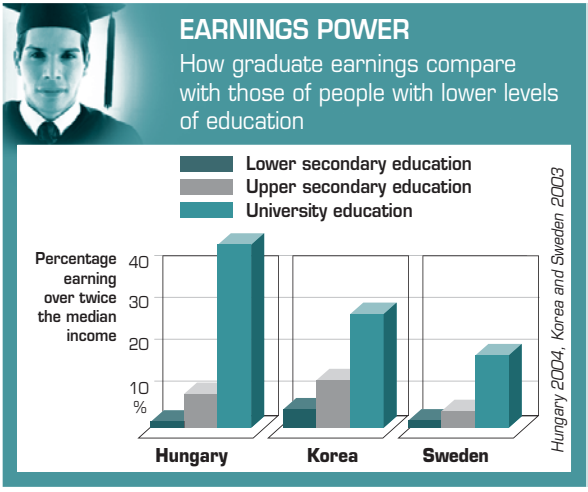
The risk of unemployment declines, sometimes dramatically, as people gain more education. In the Czech Republic, 23% of people who failed to finish secondary school are unemployed against just 2% of university graduates.

For data on all 30 OECD countries use the StatLink below

Source: Education at a Glance 2006. StatLink: *http://dx.doi.org/10.1787/015830764831*

What do these higher earnings represent? In a word, productivity. In the real world, productivity can have an almost judgemental sense. If we speak of one colleague as being less productive than another, it may be just a polite way of saying he isn't pulling his weight. Economists use "productivity" in a rather different way.

Simplifying somewhat, productivity represents the economic value of what is produced by a worker (or a piece of land or any form of capital). Higher productivity also tends to fuel economic growth, which brings us on to the wider economic benefits of increasing human capital. Even though economists have long believed that there is indeed a link between education and economic growth, calculating the scale of that impact hasn't been easy. Human capital, after all, is only one factor – albeit an important one – influencing growth. But a consensus has tended to emerge that the link between human capital and growth is real and significant. This has been backed up by some numbers from the OECD that show if the average time spent in education by a population rises by one year, then economic output per head of population should grow by between 4% and 6% in the long run.



University graduates have above-average earnings. Equally, people who complete secondary education (usually leaving school around age 18) earn more than those who leave school earlier.

For data on more OECD countries use the StatLink below

Source: Education at a Glance 2006.

StatLink: *http://dx.doi.org/10.1787/815010258467*

Broader benefits

Economic growth is only part of the human capital equation. Education brings other benefits to the individual, too: people with more schooling are more likely to volunteer for community groups, like women's associations and parent-teacher groups. They're also more likely to enjoy better health: they smoke less (an extra year of education means that an average woman will smoke 1.1 fewer cigarettes a day), and exercise more (an extra 17 minutes a week for every extra year in school).

> **"The non-economic returns to learning, in the form of enhanced personal well-being and greater social cohesion, are viewed by many as being as important as the impact on labour market earnings and economic growth."**
>
> *The Well-being of Nations*

Indeed, good health can itself be regarded as a part of human capital, although clearly people can't always invest in it in the same way as they do in education.

What are the challenges for learning?

Education has been expanding relentlessly in OECD countries, and elsewhere, for longer than most of us have been alive. Many, if not most, OECD member countries have now been providing a basic primary education to all citizens for at least a century, while the roots of widespread secondary education date back 50 years. And, since the 1970s and 1980s, access to universities has grown dramatically in much of the OECD area.

This expansion has come about for many reasons. Economically, there has been pressure to provide an increasingly well-qualified workforce to meet the demands of business. Socially, changes in the structure of OECD economies have cut job opportunities in manufacturing and trade for young people. Education has, to some extent, provided a way to keep young people off the streets. Less cynically, since ancient times societies have recognised education's wider role and benefits. Education instructs the individual in the ways of his or her society, but it can also open minds to new ways of thinking.

As the poet W.B. Yeats wrote, "Education is not the filling of a pail, but the lighting of a fire."

"Throughout the two centuries since the first industrial revolution, upper secondary education systems have had to respond to a series of changes in society and in national economies." *Completing the Foundation for Lifelong Learning*

Whatever the reasons for its expansion, education now eats up a large slice of spending in OECD countries – 6.3% of combined GDP, although there are big variations between countries. Iceland spends almost 8% of its GDP on education, compared with just over 3.5% for Turkey. There are also big variations *within* countries on how much is spent on children as they make their way from the sandpits of kindergarten to the lecture theatres of university. On average, countries in the OECD spend $5 055 a year to educate a primary student, $6 939 for a secondary student, and $12 208 for a third-level student, but again these averages mask very big differences between countries.

The scale of modern societies' spending on education inevitably generates heated debates over what the purpose of education should be, how it should be funded, and who it should benefit. That debate is both natural and necessary. How we learn and what we learn help shape each of us as individuals and, thus, the societies we live in. Education fuels change and, in turn, responds to social, economic and cultural change. Decisions that we take now will affect our lives, and our children's, for decades to come.

Those decisions will be particularly crucial for young people from poorer families. As the economic returns to education rise, societies will have to ask how care and education can give *all* children the resources they need to make the most of their talents and abilities. Societies that fail in this challenge will become increasingly polarised, creating communities that are excluded from the economic and social benefits of globalisation and the knowledge economy.

Not surprisingly, education is a key part of the OECD's work. The next three chapters of this book will look at many key issues in learning and education, such as giving children the best start in life and reducing the impact of poverty. They will also examine some solutions that policy makers are particularly interested in.

Further Reading from the OECD

➤ **The Sources of Growth in OECD Countries** *(2003)*
Growth patterns throughout the 1990s and into this decade have turned received wisdom on its head. For most of the post-war period, poorer OECD countries grew faster than richer ones. In the 1990s this pattern broke down. Most notably, the United States began drawing further ahead of the field from the second half of the 1990s onwards. Why has growth diverged so sharply across the OECD? How much of it is attributable to new technology and R&D? How important is education and training? Are unemployment, flexibility in labour markets and competition in product markets important influences? This publication provides a comprehensive overview of these issues and new insights on what drives economic growth in OECD countries. It builds on an earlier publication from the OECD Growth Project, **The New Economy: Beyond the Hype** *(2001)*.

➤ **The Creative Society of the 21st Century** *(2000)*
How can growing social diversity be harnessed to make for more creative societies? Three powerful forces are simultaneously shaping the social foundations of the future: Deep-seated change in underlying economic systems, rapid global integration, and growing social diversity itself. The question is whether the three will combine constructively and lead to social progress or to another, grimmer, scenario. Does growing diversity, commendable in itself, mean we are headed for greater global and national inequality? Will access to and use of new knowledge and advanced technologies alleviate or aggravate the differences? What policies can help ensure that growing differentiation within and among societies fuels creativity, not tensions? *The Creative Society of the 21st Century* asks some hard questions, and examines the policy opportunities that need to be grasped if we are to foster sustainable social foundations for the 21st century.

➤ **The World Economy: A Millennial Perspective, by Angus Maddison** *(2004)*
Angus Maddison provides a comprehensive view of global economic growth since the year 1000. In this period, world population rose 22-fold, per capita GDP 13-fold and world GDP nearly 300-fold. The biggest gains occurred in the rich countries of today (Western Europe, North America, Australasia and Japan). The gap between the world leader – the United States – and the poorest region – Africa – is now 20 to 1. In the year 1000, the rich countries of today were poorer than Asia and Africa. *The World Economy: A Millennial Perspective* has several objectives. The first is a pioneering effort to quantify the economic performance of nations over the very long term. The second is to identify the forces that explain the success of the rich countries, and explore the obstacles that hindered advance in regions that lagged behind. The third is to scrutinise the interaction between the rich and the rest to assess the degree to which this relationship was exploitative.

Also mentioned in this chapter:

➤ Education at a Glance – OECD Indicators 2006 Edition

➤ The Well-being of Nations: The Role of Human and Social Capital *(2001)*

➤ Completing the Foundation for Lifelong Learning: An OECD Survey of Upper Secondary Schools *(2004)*

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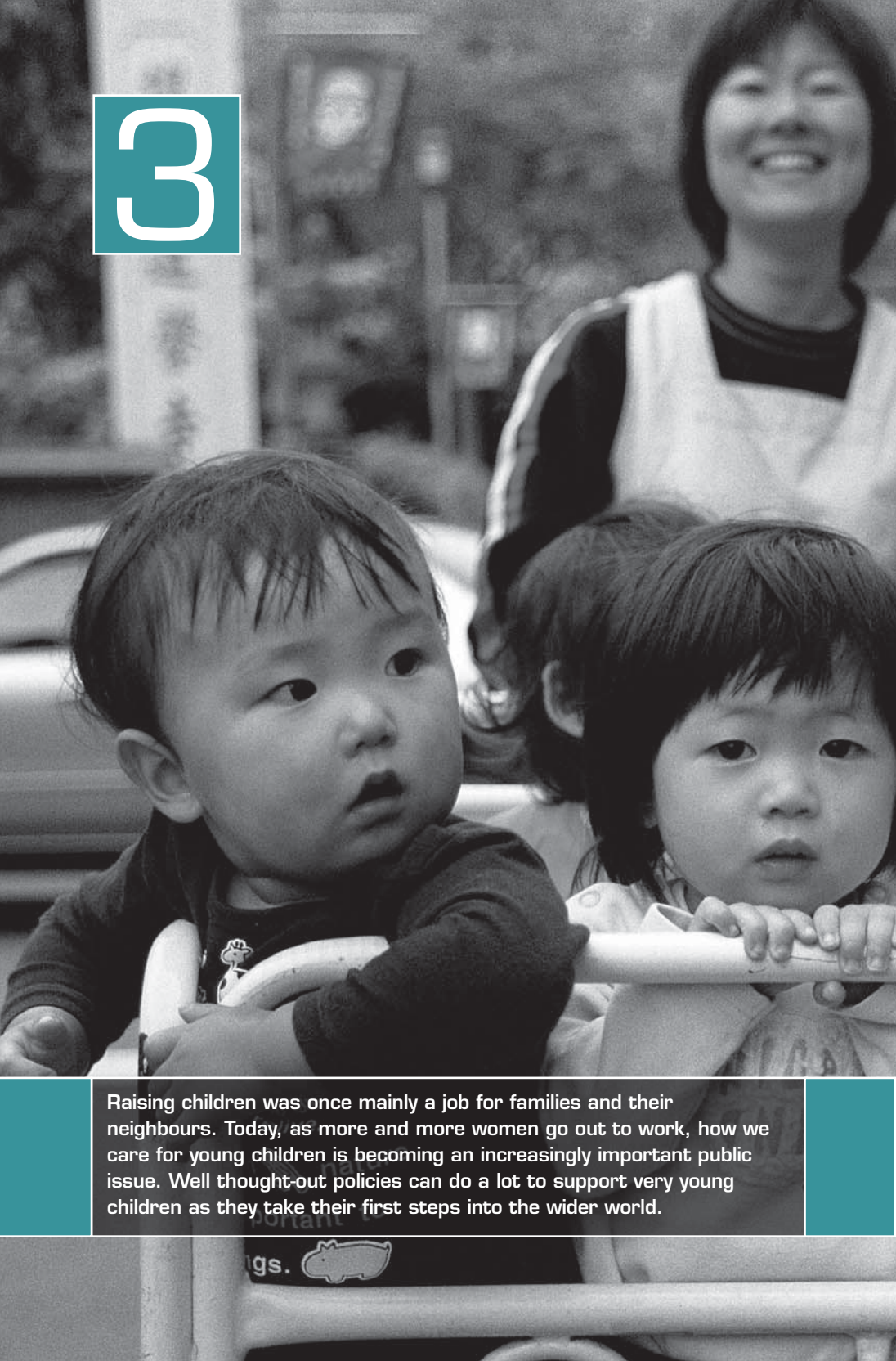


Raising children was once mainly a job for families and their neighbours. Today, as more and more women go out to work, how we care for young children is becoming an increasingly important public issue. Well thought-out policies can do a lot to support very young children as they take their first steps into the wider world.

First Steps

By way of introduction…

In the Mexican village of San Nicolás de los Ranchos, the local seamstress has noticed a change in her trade. Until quite recently, Beatriz Tlatenco Sandre spent much of her time making shrouds for children. "I dressed up kids who had passed away, clothed in the same robes of the saint chosen by their parents", she told a reporter. According to a Mexican tradition, dressing dead children as saints protects them in the afterlife.

These days Beatriz is still dressing children, but far more of them are alive and well. In large part, she says, that's because the village is benefiting from a special state aid programme, *Oportunidades*, that targets aid at very poor families.

The families don't get very much, yet it's enough to make a difference in the children's lives. It also helps that the money is given with strict conditions. For example, Beatriz is required to take her children for regular visits to the medical centre and has to attend monthly health lectures. "We have to attend the talks", she explains, "otherwise we get a reprimand". And, as long as her children keep showing up in school, she also gets help with education expenses.

Programmes like *Oportunidades* focus on children's education and health for this simple reason: the first years of life are crucial to human development and lay the groundwork for our ability to develop our human capital. It's such an obvious idea that it hardly seems worth stating. And yet across the world, disabilities and poverty mean many children never lay those vital foundations.

▶ What can societies do to ensure they do? This chapter looks at the child's earliest years and at how they can lay the foundations for subsequent development. It looks first at some of the problems facing children and their families today, in particular the need to ensure that children are cared for properly in families where both parents are working. It then looks at the role of government policies in shaping the ways we care for children today, and – finally – at what children can get out of well-planned preschool education.

What challenges face children and families?

Long before children go to school, they begin developing their human capital. As every parent knows, infants and toddlers are constantly learning – acquiring skills like walking and talking and the ability to interact with other people. Less visibly, they also develop important ideas about themselves and their relationship with the world as well as attributes like self-confidence that will be important for the rest of their lives.

Barring illness or disability, all children go through these processes, but not always in the same way. External factors, like poverty, for example, can have a big impact on how children develop. That's worrying because child poverty is rising in much of the developed world.

In the OECD area, children are more likely to be poor than any other segment of society. Around 12% of children in OECD countries fell below the poverty threshold at the start of this decade, up slightly on the 1990s. There are big variations, however. In the Nordic countries, only around 1 in 25 children is classed as living in poverty; in the United States, Mexico and Turkey, it's above 1 in 5.

Early poverty hits children throughout their lives and continually limits their capacity to develop their talents and abilities. Children from poor families are less likely to complete secondary education and much less likely to go to university. In France, for instance, more than three out of five teens from the poorest 20% of families have to repeat at least one year in school; the figure is less than one out of five for children from the wealthiest 20% of families.

> **"… a failure to tackle the poverty facing millions of families and their children is not only socially reprehensible, it will also weigh heavily on our capacity to sustain economic growth for years to come."** *Extending Opportunities*

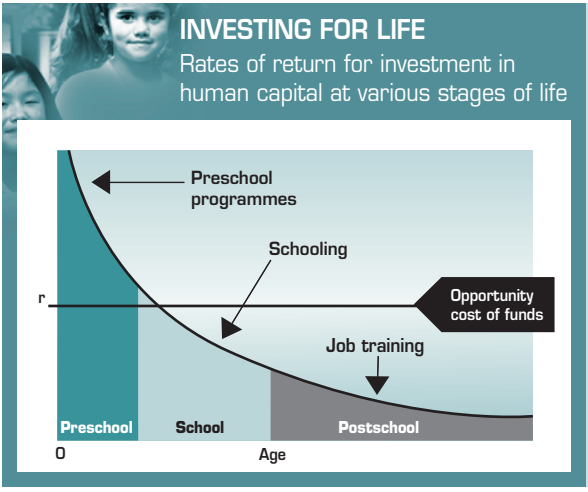
Investing in children

Investing in children's health and learning – their human capital – brings lifelong benefits for many reasons. For one thing, children possess unique learning abilities in their early years. By the age of two, for example, most children have already grasped the

basics of a language. Anyone who has ever tried to learn a language as an adult will know just how much of an achievement that is. Young children also have the potential to develop key social skills and early learning skills that can stay with them for the rest of their lives.

Early investment may also make sound economic sense. Nobel laureate James Heckman argues that investing in learning in early childhood brings higher returns than at any other time in life. There are social benefits, too. One US study showed that giving special support to under-fives from disadvantaged backgrounds reduced probation and criminal rates by up to 70% by the time the children reached their mid-teens.

Despite these benefits, governments don't always spend as much on early care and education as they should. Still, there's no doubt that they are increasingly involved in childcare – both the care and education of young children – which is now a very significant public issue. Why? In large part because more and more women are going out to work, facing societies with this question: who will look after the kids?



Nobel laureate James Heckman argues that money spent on preschoolers brings returns that can't be matched at any other stage of life. Why? First, the earlier we're educated in life, the more time we have to earn returns on that investment. Second, learning young makes it easier to go on learning throughout life, which increases human capital and, thus, earnings.

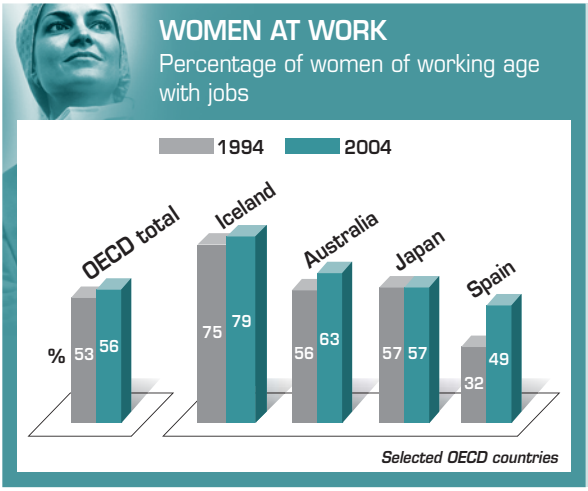
Source: Starting Strong II.

> **"The education and care of young children is shifting from the private to the public domain, with much attention to the complementary roles of families and early childhood education and care institutions…"** – *Starting Strong I*

Working mothers

In many countries, women have been playing an ever-more important role in the workforce since the 1960s. Even over the past decade or so, that trend has continued, with women making big inroads in some OECD countries. In Spain, for example, fewer than one third of women had jobs in 1994; by 2004 that had reached just under half.

Much of the impetus for this change originally came from women themselves, who often had to overcome considerable opposition to the idea of them holding down full time jobs. These days, governments in many countries often actively encourage women to go out to work. Their reasons vary. At one level, it's an attempt to ensure equality between men and women. Less obviously, getting women working can help address a wider range of social and economic issues. Take, for instance, child poverty.



More women are going out to work, but overall far fewer women work than men. Across the OECD area, about 56% of women go out to work compared with 75% of men.

For data on all 30 OECD countries use the StatLink below

Source: OECD Factbook 2006.

StatLink: *http://dx.doi.org/10.1787/180707813562*

Children and poverty

Children in families where only one parent works are almost three times more likely to be poor than children living in families where both parents work, and the problem is even more acute in jobless single-parent families. That's one reason why some governments – particularly in the English-speaking world – are focusing on getting parents, especially single parents, out to work.

On average, if the employment rate for mothers in a country rises by 12%, the poverty rate among children falls by 10% (although there are big variations between countries). Going out to work also provides a greater sense of belonging in society, which can bring social benefits for families. Equally, reducing poverty in children's earliest years can help in the lifelong development of their human capital.

> **"Work gives individuals not only financial security, but also a sense of identity, belonging and self-respect."**
>
> *Extending Opportunities*

Work clearly can't solve all the problems of families at the bottom of the social ladder. Some countries, such as the United States, have quite high levels of child poverty – more than 20% – even with large numbers of working single parents. There are a number of reasons for that, but one of the most important is this: most single parents are women, and women are more likely than men to be stuck in part-time or shift work. Such jobs don't always pay much and may offer few incentives, such as pension plans or healthcare, for workers to stay on.

To help people in low-paying jobs, many countries require employers to pay a minimum wage (workers on minimum wages often go on receiving state benefits as well). But there's often controversy over just how high – or low – such wages should be. Too high, and employers may argue that they have no choice but to employ fewer workers; too low, and unions may argue that workers are being exploited. Getting the balance right is essential if more single parents are to join the workforce.

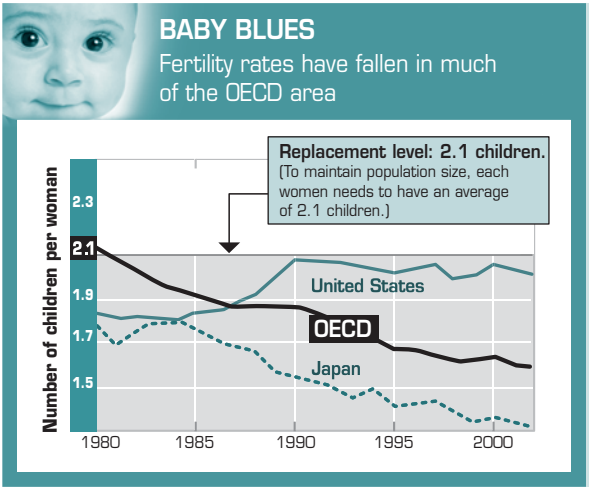
Expanding the labour force

There's another factor driving governments to get women into the workforce: demographics. It's a curious fact that although the num-

ber of people in the world has doubled since the early 1960s, some countries are seeing, or are about to see, real falls in their populations.

In most developed countries, women are having fewer children. To maintain a country's population, they should be having an average of about 2.1 children each, a level known as the replacement rate. But since the 1970s, many developed countries have fallen below that rate. In Austria, Germany, Italy and Korea, for example, women are having an average of as few as 1.3 children each. (Worried by low fertility rates in his country, Australia's senior finance minister has urged citizens to "have one for the father, one for the mother and one for the country".)

Meanwhile, as birth rates decline, more of us – thanks mainly to improved medical care – are living longer. That's changing the balance between young and old in many populations, sometimes quite dramatically. What to do? Part of the answer lies in getting women working. Indeed, in recent decades, the decision by more and more women to get jobs has been a major factor in expanding the size of the workforce in the OECD area. Potentially, that trend still has a long way to go: in OECD countries, about three out of every four



Women are having fewer children, which means in the future there will be fewer people of working age to pay for things like pensions and social welfare benefits.

For data on more OECD countries use the StatLink below

Source: Society at a Glance 2005.

StatLink: *http://dx.doi.org/10.1787/426518142513*

men of working age (15 to 64) go out to work; for women the figure is just over two out of four.

> **"Increased female participation has been a major component in labour supply growth during past decades…"**
> *OECD Employment Outlook 2006*

To increase that level, societies face the challenge of finding ways that allow women both to work and to be mothers. On the surface, those goals might seem contradictory, but they don't have to be. With adequate childcare systems in place, women are more likely to feel that they can raise children *and* maintain a career. Take these two examples: in Sweden, between about 15% and 20% of women at the age of 40 don't have children, a level that's the same regardless of education levels. In Switzerland, where childcare policies are less developed than in Sweden, about 40% of women with a university education don't have children, presumably because of the difficulty in balancing a career with a family.

Tough decisions

Still, there's no doubt that in many parts of the world, working and being a parent is quite a double act. There's also no doubt that, even after decades of progress, having a family is more likely to affect the career of the mother than the father. That's because women still carry the main burden of raising children. According to research in Europe, men claim on average to be responsible for childcare in only 10% of families (their partners put the figure at just 5%).

Not surprisingly, many women choose to stay at home or work only part time – and, indeed, are effectively encouraged to do so in some countries. But leaving the workforce can have a serious impact on a woman's career. Research shows that anything more than about six months away from the labour market hurts a mother's career prospects. Indeed, even having a child hurts a mother's earnings: according to one study, women in the United Kingdom have hourly earnings equivalent to 91% of men's. When they become mothers, that figure drops to 67%. And even after their children have left home, women's earnings are stuck at 72% of the average for men.

However, if women need to work or want to reduce the impact of motherhood on their careers, they may have no choice but to put their children into day care. Here, too, there are difficult decisions to be made. Although it's the subject of much controversy, many experts believe children probably don't start to benefit from day care until they're around two years old.

So, families face real dilemmas, and the decisions they take can have an impact on children's lives, both directly, by determining who is actually looking after the child, and indirectly, by raising or lowering the family's income. Those decisions aren't made in isolation: in modern societies, they're often heavily affected by government policies.

How can we help children and families?

Governments intervene – directly and indirectly – in family life in lots of ways, including through tax systems, benefit payments, special leave for parents, programmes for very poor families, subsidies for day care and so on. The results of this can have a profound impact on preschoolers, determining whether they're cared for at home by a parent, in the home of a relative or carer, or in a day-care centre.

Working or staying at home

They might seem a long way removed from the cradle, but tax and benefit systems play a role in determining how children are cared for. Understanding the impact of such systems isn't always easy: as Albert Einstein is reputed to have said, "The hardest thing in the world to understand is income tax". Depending on where they live, people who are married or living together may pay their taxes together or separately; they may get tax deductions if they use day care or they may not; they may see their taxes rise very rapidly as their salary increases or only very slowly.

The permutations are almost endless, and they can have a big impact on whether parents – particularly mothers – go out to work. For example, in some systems a husband and wife are taxed jointly, which can have the effect of moving the second earner – the person

who's earning less – into a higher tax band. The extra tax that the second earner has to pay can eat into his or her salary and so act as a disincentive to working.

> **"… Current tax and benefit systems discourage mothers from entering or re-entering the labour force – a situation that needs to be remedied."**
>
> *Extending Opportunities*

There can be similar issues with state benefits. Poorer families may find that any extra income they get from having a second earner disqualifies them from receiving certain benefits – child benefit, tax credits and so on – with the result that they suffer a net loss, especially when they factor in the cost of day care. Once again, the tax and benefits system is providing the second earner with an incentive *not* to work, and that can have long-term implications both for how the child is cared for and the family's income.

Where the need is greatest

State benefits can have an even more profound impact on children's lives. As we saw in Mexico, the targeted *Oportunidades* programme offers small monthly payments to about 5 million Mexican families – about a quarter of the population – mainly in rural areas. But the assistance is attached to certain conditions, most notably that children go to school and have their health regularly monitored.

The programme is innovative in other ways, too. Payments are usually made to mothers, who, it's thought, are more likely than the fathers to make sure that the money is spent on necessities. Also, families get slightly higher payments for girls than for boys, a strategy aimed at overcoming the tendency for girls to be undervalued in traditional communities.

The programme has its critics. One Mexican newspaper claimed that families in some states had fed baby food distributed by the programme to their pigs because their children won't eat it. Still, there are signs that the programme is making progress. One study showed a 20% increase in the number of girls attending school (for boys the figure was 10%) in participating families, while illness among children aged between one and five dropped by 12%. Indeed, the idea of attaching conditions to aid is catching on, and

THE OECD AND ... Active Social Policy

Social policy is sometimes seen as a safety net for people in trouble. That's led some critics to accuse it of feather-bedding people and shielding them from economic realities. Despite such attacks, few would argue for a complete end to social benefits, especially for society's weakest members, such as children. But, faced with falls in the working-age populations, governments have been increasingly looking at ways to reform social policy.

In recent years, the OECD has promoted active social policy. Rather than just helping people with problems, the aim is to invest in people and thus prevent problems from developing in the first place (for example, by creating sympathetic tax and childcare systems that make it easier for mothers to go out to work and so increase family income).

More and more governments are signing up to such approaches: in 2005, OECD social ministers declared that "social policies must be pro-active, stressing investment in people's capabilities and the realisation of their potential, not merely ensuring against misfortune."

What are the criticisms? Active social policy is sometimes accused of serving as a cover for governments that are trying to cut back their role in welfare provision and place more responsibility on the shoulders of citizens. Citizens, it's argued, once turned to government payouts to cushion them from, say, job loss and old age; now they're increasingly told that it's up to them to cushion themselves, through developing their human capital, for instance, or funding private pensions.

Some analysts also argue that active social policies represent an invasion of free-market principles into social policy. Old-style social policies tended to redistribute income from rich to poor with the immediate aim of creating a more egalitarian society.

By contrast, active social policies – with their focus on early childhood development, for example – can be seen as attempt to equip people with the ability to *compete* in the future. Critics say that creating such competition-based societies is fair only if everybody really is starting from the same level. But with large income gaps in many countries, that may not always be the case.

other South American countries, like Peru and Brazil now have similar programmes.

> *Oportunidades* **"increased attendance of children entering secondary school by almost 20% for girls and 10% for boys…"**
> *Extending Opportunities*

To an extent, such highly targeted programmes represent a compromise between how much governments can raise in tax to spend on social issues and the scale of the problems they're trying to address. Sweden, for example, boasts probably the world's most comprehensive childcare system. Day care is heavily subsidised and available whenever parents need it, costs for healthcare and education are low, and parents can take leave for up to 18 months and still be sure of going back to their jobs. It sounds perfect, apart from one small thing: tax. The amount of money the government takes in tax (which funds a range of programmes, not just childcare) is equal to just over half of the country's total GDP.

By contrast, the government's tax take in Mexico – a poorer country than Sweden and one with more children living in poverty than any OECD country – is just under a fifth of GDP. While Mexico might be advised to raise its tax take so it can increase its social spending, few politicians would be prepared to ask voters to match Nordic tax levels, even with the promise of implementing universal care.

Time off for parents

Governments can do more for children and their families than just hand out cash. Take parental leave: its origins date back to the 1870s and the first German Chancellor, Otto von Bismarck. Hoping to counter the appeal of socialism, he introduced a series of health and insurance policies for workers that included a three-week break for new mothers. Today, maternity leave usually runs for much longer than that – as long as three years in Finland, France and Germany – although mothers are usually on full pay, or nearly full pay, for no more than the first three months or so. After that, they generally receive reduced or no payments, but usually retain rights to return to their old jobs.

Paternity leave is much less common, and it's often unpaid. Even where paternity leave exists, fathers rarely use it all up for fear of

losing income and being seen by their employers as less than committed to their jobs. Some countries, such as Iceland, do offer well-paid paternity leave, and even shared leave, which couples can divide up between them depending on their needs.

Paid leave from the state can go part of the way to helping parents bridge the care gap, but parents can also benefit from family-friendly policies at work, such as part-time working; work contracts that run just for the duration of the school term; and home working, especially when a child is ill. Governments, however, are reluctant to force companies to adopt such policies. In a globalising economy, companies sometimes see such measures as an unfair burden if they're not shared by competitors overseas. Equally, unions may regard part-time working as a threat to full-time jobs.

Some businesses report that flexible working cuts down on staff turnover, absenteeism and the cost of recruiting and training workers. Still, it can be very hard to measure the real impact of such policies on companies' profitability and, thus, to make a strong business case for them. As a result, the availability of flexible working varies greatly. In Austria and Italy, more than two out of three women say it's available where they work; in Ireland and the United Kingdom, it falls to no more than two out of five.

What can preschool education do for children?

Caring for preschoolers is sometimes regarded as an exercise in safety. If a tot doesn't throw up in the sand pit, drown herself in the paddling pool or set fire to the kindergarten, then her day will often be regarded as a success. If she happened to learn anything, that's a bonus.

> **"… Services for children under three have often been seen as an adjunct to labour market policies, with infants and toddlers assigned to services with weak developmental agendas."**
>
> *Starting Strong II*

In reality, we should probably have higher expectations for what preschool children can achieve. Children have powerful learning abilities in their earliest years, and these can be developed through well thought-out care and education. Those benefits can be particu-

VIEWPOINT David Shipler

In this edited extract based on his book "The Working Poor: Invisible in America", *author* **David Shipler** *reports on the problems of an American working mum, Caroline Payne, and her disabled daughter, Amber. Payne has found a job at a Tampax factory, but it means working some night shifts and leaving Amber on her own…*

While Caroline was running machines that put packages of tampons into boxes, she was worrying about Amber, and with good cause.

At 14, Amber could barely read and write, could not easily tell time from clocks with hands, and was unable to understand that she had enough money if she gave a storekeeper $10 to buy something for $4. Yet she could play the flute if her mother wrote the letter for each note on the musical score.

She took gymnastics lessons at a dance school, for which her mother paid by cleaning the school's studio once a week. She also had epilepsy, and the risk of a seizure prompted doctors to advise that she not be left alone for long. The logistical maze of arranging care for Amber around constantly shifting hours of work had Caroline tangled in anxiety.

Amber happened to tell her teacher how scary it was being home alone after dark. The teacher was alarmed and threatened to report Caroline for neglect.

"She can't take care of herself", said Donald R. Hart, the principal of Claremont Middle School. "We have a legal obligation to report if neglect is going on." He raised the issue with his "wrap-around team", comprising a school psychologist, a local counseling agency representative, a juvenile protection worker and a guidance counselor. "I've asked them what is out there for services for Amber while Mom is working", he reported, "and there is just nothing out there".

Faced with the threat of being reported to the state's child protection agency, Caroline stopped going to work, started working the phones trying to find care for Amber and came up empty-handed.

"I'm trying to do the best I can and get caught up on little bills", she said. "And now I don't have a job, and I'm gonna have to go apply for welfare. You pull yourself up, and then somebody has to knock you down. If I don't work, it's neglect: not feeding or clothing my child."

Perhaps the most curious and troubling facet of this confounding puzzle was everybody's failure to pursue the most obvious solution: if the factory had just let Caroline work day shifts, her problem would have disappeared.

She asked a supervisor and got brushed off, but nobody else – not the school principal, not the doctor, not the myriad agencies she contacted – nobody in the profession of helping thought to pick up the phone and appeal to the factory manager or the foreman or anybody else in authority at her workplace.

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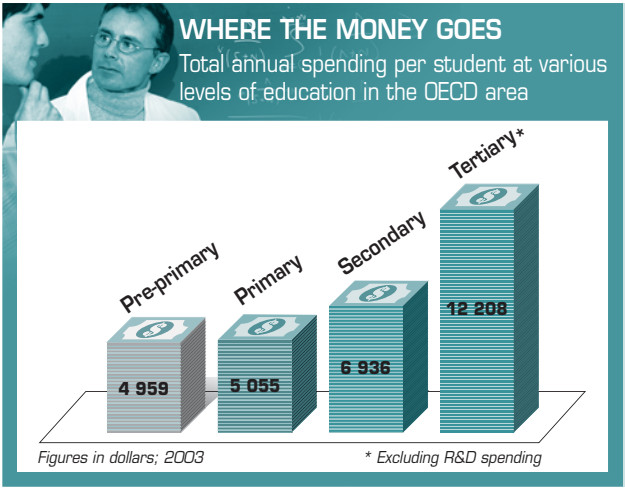
larly important for children from immigrant backgrounds, who may have language difficulties and who may be at high risk of living in poverty. Unfortunately, preschool children's potential is not always fully taken advantage of.

Private and public

These days, children in OECD countries will typically spend up to two years in kindergarten or day care before starting primary school. Depending on where they live, some will spend more than eight hours a day in a childcare centre, others no more than two to three hours. Indeed, mismatches between kindergarten and day-care hours and parents' working hours are a problem for many families. The result is that parents may have to work part time, or children may have to switch a few times a day from kindergarten to childminder.

Demand for professional childcare is rising rapidly as more and more mothers enter the workforce; in many ways, the private sector is probably better able than the state to quickly meet this demand. But the increasing quantity isn't always being matched by rising quality. In many countries, adults caring for very young children, especially the under-threes, may have no professional qualifications and may receive low wages, which results in high levels of turnover.



Countries don't always spend a great deal on preschool education, leading to potentially wasted opportunities for children's early development.

For data on all 30 OECD countries use the StatLink below

Source: Education at a Glance 2006.

StatLink: *http://dx.doi.org/10.1787/717773424252*

Day-care centres themselves may not even have to register or receive a licence. Sometimes the only restriction is a health-and-safety limit on the number of children who can attend.

If the private sector can help meet demand, it's up to the public sector – the state – to ensure that day care is of a good standard. But even though countries have been increasing spending on preschoolers, sometimes quite significantly, overall many are probably still not investing enough time, money and effort into enforcing and maintaining standards.

> **"Despite [increasing investment] in families and young children, significant shortcomings still exist, particularly in services for children under three."**
>
> *Starting Strong II*

Big variations in spending on childcare means there are big variations in the extent to which it's available for children. Much of Europe, for instance, supports an idea of "universal access" – in other words, that *all* children are entitled to at least some care or education provision from the age of three, or earlier (in Finland, the entitlement starts at birth). Elsewhere, free education may not begin until as late as five, and free preschool education may only be provided for children with special needs, such as those from immigrant and disadvantaged families or those with learning difficulties.

This question of access arouses strong feelings. Supporters of government-funded universal access argue that every child, regardless of social background, has a right to preschool education. Opponents argue that lower-income taxpayers should not be subsidising childcare for the middle-classes, who could afford to pay for it themselves, and that government money should be targeted to where it's needed most. As demand grows for childcare, this debate is likely to heat up.

Care and learning

What do we mean by "care", "education" and "learning"? There really isn't much point in making a distinction when talking about preschoolers. Toddlers and enfants are always learning, even if on the surface it may look as if they're just being cared for. For example, when a father gives his toddler a bottle to hold, he's both feeding the child ("care") and helping her to develop her autonomy ("learning").

> **"In most countries, policies for 'care' and 'education' have developed separately, with different systems of governance, funding streams, and training for staff…"**
>
> *Starting Strong I*

Unfortunately, there has been a tendency in many countries to look at preschool as either a question of care *or* education, and to leave it in the hands of either the health or the education ministry. That approach, which is becoming less common, can lead to wasted opportunities. If care is the sole or main focus, then the children's learning needs may be ignored; if learning is overemphasised, development and health problems in children – especially those from disadvantaged backgrounds – may be overlooked.

Different approaches

There are differing approaches, too, to preschool learning. In one tradition, typically found in France and English-speaking countries, preschool focuses on getting children ready for school. The emphasis is on developing knowledge and skills that will be useful for children later on in the classroom.

A second preschool tradition, widespread in central Europe and the Nordic countries, sees these early years as a way of preparing children for life, not just for school. Children are encouraged to play and interact, and often work together on projects to help develop their social skills. This tradition also sees the preschool years as a period that should be cherished in its own right.

As an illustration of the differences in these approaches, children in the Nordic tradition often spend several hours a day outdoors, which is regarded as a place that's just as valuable for learning as indoors. In the French and English-speaking world's tradition, outdoors is regarded as a place for recreation, and indoors as the place where children should be "learning".

The "ready for school" approach can be very appealing for parents and for teachers. It holds out the hope that children will enter primary school with a head start on reading and writing. However, it isn't clear that this sort of approach is best suited to how very young children actually learn. Also, children in the more relaxed Nordic model don't seem to suffer any disadvantages.

In Finland, children don't start formal primary schooling until around the age of seven. They spend the preceding years in day-care centres staffed by teachers, assistants trained in nursing and day-care helpers, and time spent on developing formal education skills is kept to a minimum. And yet, by the age of 15, Finnish students still score among the highest in the world in literacy and maths tests. Finnish children also benefit from the fact that the path from preschool to school is well mapped out, and a lot of thought is given to ensuring that children move smoothly from one level of education to the next.

Indeed, a little more co-ordination in all areas of preschool policy could bring benefits in many OECD countries. Among other things, that means giving thought to both children's care and learning needs and ensuring that there's continuity between their preschool and school years. Of course, it all costs money. But the evidence of the educational and social benefits should encourage societies to ask if such spending might not be one of the best long-term investments they can make.

Further Reading from the OECD

➤ **Babies and Bosses – Reconciling Work and Family Life** *(series)*

– **Volume 1: Australia, Denmark and the Netherlands** *(2002)*

– **Volume 2: Austria, Ireland and Japan** *(2003)*

– **Volume 3: New Zealand, Portugal and Switzerland** *(2004)*

– **Volume 4: Canada, Finland, Sweden and the United Kingdom** *(2005)*

Balancing work and family life is a challenge. Some people want a bigger family, but may feel their jobs just won't allow it. Others may be happy with the size of their family, but would like to work more or to work shorter or more flexible hours. Getting the balance right is essential for individuals and families, economic growth and social development. The *Babies and Bosses* series looks at how a wide range of policies – covering areas from tax and benefits to childcare – determine whether people can work *and* have children, and examines ideas for policy reform.

➤ **Extending Opportunities: How Active Social Policy Can Benefit Us All** *(2005)*

Social policy is often disparaged as being a burden on society, but well-designed social protection can be an asset that is critical for sustaining social development. To fulfil its potential, however, social protection needs to shift its focus from insuring individuals against a few well-defined contingencies towards "active social policy", which seeks to invest in people's capabilities and make use of them to the best of their potential at every stage of their life. *Extending Opportunities* offers a comprehensive assessment of social issues in OECD countries, including levels of poverty, gender gaps in employment and earnings, social assistance and disability, and the special problems facing older people. It also examines the ways in which active social policy can respond.

➤ **Starting Strong II: Early Childhood Education and Care** *(2006)*

Economic development and rapid social change have significantly changed family and child-rearing patterns. This review of early childhood education and care in 20 OECD countries describes the social, economic, conceptual and research factors that influence early childhood policy. These include increasing the number of women in the labour force; reconciling work and family responsibilities in a way that's fairer to women; confronting demographic challenges; and in particular, addressing issues of access, quality, diversity, child poverty and educational disadvantage. How countries approach such issues is influenced by their social and economic traditions, their understandings of families and young children, and by accumulated research on the benefits of quality early childhood services. *Starting Strong II* examines how participating countries have responded to issues raised in the previous volume, **Starting Strong** (2001). It also looks at new policy initiatives, identifies policy areas for further critical attention from governments, and offers an overview of early childhood education and care systems in each of the participating countries.

Also mentioned in this chapter:

➤ OECD Employment Outlook – 2006 Edition: Boosting Jobs and Incomes

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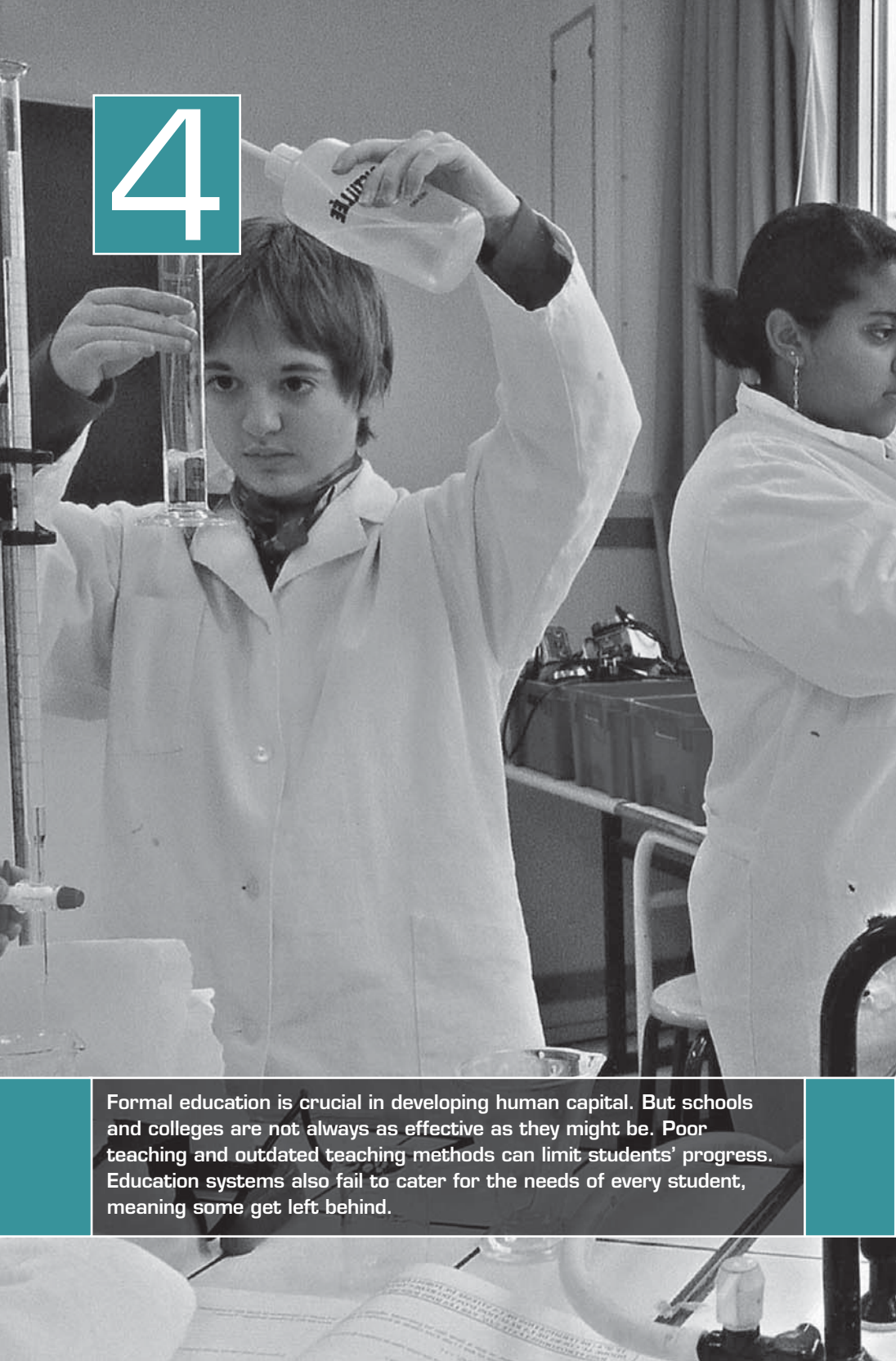


Formal education is crucial in developing human capital. But schools and colleges are not always as effective as they might be. Poor teaching and outdated teaching methods can limit students' progress. Education systems also fail to cater for the needs of every student, meaning some get left behind.

Off to School

By way of introduction…

Wander into the PROTIC classroom at the *Les Compagnons-De-Cartier* school in Quebec and you might be forgiven for thinking it's actually a newsroom. Laptop computers sit open on every desk and students are free to walk about and talk to each other about projects they're working on. Their teacher doesn't stand at the top of the class but instead moves around the room, spending time with individual students or groups of them, checking their work, asking questions and providing feedback.

This special programme aims to put students in charge of their own learning, requiring them to work in groups, set their own learning goals within certain limits and use information technology for research and communications. It's a big change for their teachers: "… You have to accept that you are no longer in control of everything that's happening in the classroom", says one. "We are not the only source of knowledge anymore."

Don't be surprised if that doesn't sound like the sort of school most of us went to: put simply, schools change. While the image of a teacher standing before a group of students seems to have been with us since ancient times, the reality is that education evolves in response to social and economic change: Latin gives way to Spanish and Chinese, Euclid gives way to New Maths and computer studies. Today, as the economic value of education – a key component of human capital – rises, schools are once again reinventing themselves. Unfortunately, they're not always doing it as effectively or as quickly as they need to.

▶ This chapter asks how well schools are helping young people to develop their human capital. It looks first at the skills and abilities young people need to acquire, and at how well schools are doing in helping them do so. It then looks at some problems schools are facing – in particular poor teaching and outdated teaching methods – and at some potential solutions. Finally, it looks at whether education systems are responding to the needs of young people who aren't academically inclined.

Are students learning what they need to learn?

What do we think about school? A UK businessman, Josiah Stamp, once described it as a system for "the inculcation of the incomprehensible into the ignorant by the incompetent". More recently, a bestselling book about France's schools was titled *La Fabrique du Crétin* ("The Cretin Factory").

Despite the criticisms, in many ways schools work pretty well. Around the world there are growing numbers of adults who are literate and numerate and, by and large, they learned those abilities in school. From school, people also "learn how to learn" – developing their ability to apply themselves to complicated tasks and to engage with complex ideas.

Today's education essentials

All very useful, but to be truly effective education needs to give a wider set of competencies to help people navigate their way through the modern world. A competency is more than just knowledge and more than just a skill. It includes elements of both, but it also involves attitudes.

For instance, if we want to send a message to someone in another country, we need knowledge, in this case knowledge of one or more languages. We also need skills, possibly the computing skills needed to send an e-mail. But, if we're to communicate effectively, we also need an attitude or approach that tries to understand the cultural references of the person with whom we're communicating. ("Never underestimate the importance of local knowledge", as the global banking group HSBC says in its ads.) Put these elements – **knowledge**, **skills** and **attitude** – together and they form the beginnings of a **competency**.

What competencies do young people need? Think about the world they're heading out into: it's one in which more of us are earning a living in the knowledge economy. It's also one in which globalisation means greater interaction between people from different cultures and backgrounds. And it's one in which individuals and communities are facing major social and economic challenges – from funding retirement to tackling global climate change. Against this background, an OECD project recommended using the following

three broad categories of competencies for setting key education goals:

- The ability to use "tools" like language and computers effectively.
- The ability to interact with people from different cultures and backgrounds.
- The ability to manage our own lives.

These competencies don't say in concrete terms what students should be studying in the classroom. But they do offer a way of thinking about how well young people are prepared for the modern world. They also make it possible to identify goals, both for the classroom and for the learning that people need to go on doing throughout their lives.

Basic needs

Unfortunately, many young people leaving school today are not developing these competencies, and are even failing to develop more basic skills, like reading and writing. The numbers vary widely from country to country, but even in Finland, a country whose students score exceptionally well in international tests, around 12% of young men in their early 20s have not completed upper-secondary education. (The figure for women of the same age is just over 7%; with a few exceptions, more girls than boys finish high school in OECD countries.)

For a few of these youngsters, quitting school may well be the right decision. Think of Richard Branson, who dropped out of school – admittedly, a rather exclusive UK "public school" – and went on to found the Virgin music, entertainment and aviation empire. But for most young people, ending education early will hurt their prospects for the rest of their lives. They will have fewer job options and will earn less.

We could ask why so many young people fail in schools. But it might be better to ask why our schools fail young people. The impact of social background on students is often cited. Indeed, it's sometimes argued that educational systems have a choice: they can deliver a really good education to an elite group of students and not worry too much about the rest, especially children from poorer families, or they can deliver a pretty mediocre education to just about every student. This is a false choice. Quite simply, some OECD

countries – such as Canada, Finland, Japan and Korea, among others – are better at delivering a decent education to all students, regardless of their economic backgrounds.

How do we know? From international tests, such as PISA, the OECD's Programme for International Student Assessment. In 2000, the OECD began its first round of international student assessment to start investigating the links between student performance, social background and the learning environment in schools – areas that touch upon some of the hottest issues in education today.

For example, take the question of whether education systems should divide up children by categories such as academic ability or – effectively – social background. Children from poorer backgrounds generally suffer big disadvantages in school, but the connection between family income and educational performance isn't always straightforward. A lot depends also on the sort of school. If children go to **socially integrated** schools – where students come from a variety of social backgrounds – they're likely to do better than if they go to schools where all the children share similar economic disadvantages.

> **"Students in integrated educational systems perform, on average, better than those in selective education systems, and their educational performance is less dependent on their background."**
>
> *School Factors Related to Quality and Equity: Results from PISA 2000*

Equally, there's a link between how students perform and the level of **academic integration**. PISA shows that when an educational system mixes together young people of differing abilities, students do better and social background tends to be less of a factor. Why? We can't say for sure, but it may be that mixed classes help raise the performance of kids who aren't initially doing all that well. Also, the flexibility allowed by integrated systems may encourage students to raise their game because they know they have a wider range of educational options.

THE OECD AND … PISA

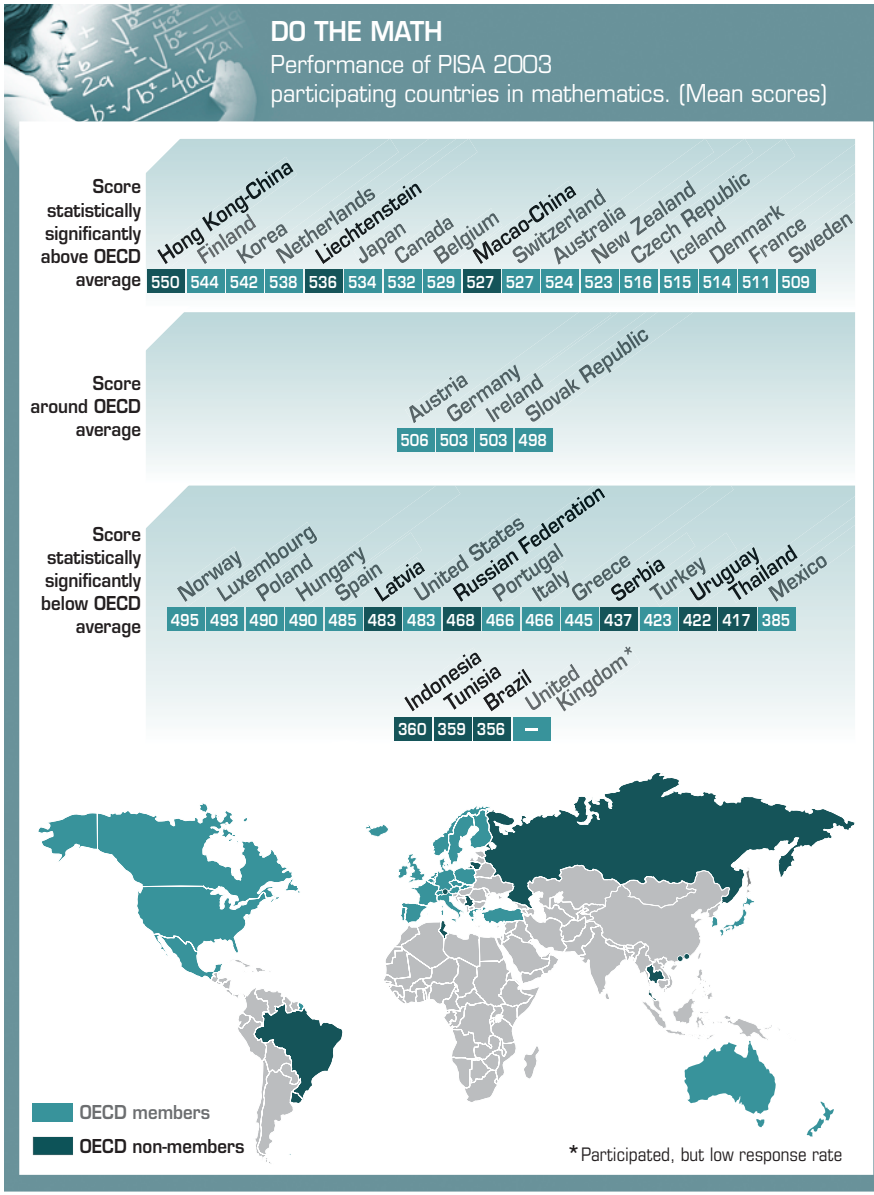
The teenage years are a time of transition as young people gradually take on more of the rights and responsibilities of adulthood. In many countries, that process begins around the age of 15 or 16, when compulsory education comes to an end and young people, guided by their families, must decide whether to stay on in school, enter training or try to find work. How prepared are they to make such decisions, and how ready are they for the world beyond the school walls?

They're the sort of questions that the Programme for International Student Assessment seeks to answer. PISA tests are held every three years and, in its 2003 round, involved more than 275 000 students in well over 40 countries and territories around the world.

Three main areas are covered in the two-hour test: reading, maths and scientific literacy. But unlike school examinations, PISA tests aren't tied to specific national curricula. Instead, the students – all aged between 15 and 16 – are asked to apply knowledge acquired in school to situations they might encounter in the real world, such as planning a route, interpreting the instructions for an electrical appliance, or taking information from a chart or graph. Through questionnaires, the programme also explores the students' social backgrounds, their motivation to learn and the learning environment in their schools.

Results from PISA are closely watched in participating countries, provoking either hand-wringing or celebrations depending on how students have done. But the value of PISA lies not in creating international league tables of student performance. Instead, it can help us to understand *why* students in some countries and some schools do less well than others. It also challenges policy makers to learn from other places that may be doing a better job of combining quality and equity in their educational systems.

Although such comparisons can be useful, PISA is about a lot more than just measuring students' abilities in various countries. The research examines a wide range of factors in education, including the impact of students' social backgrounds, their attitudes to learning, gender differences and much more. Also, students' abilities are examined in a very wide range of areas, including mathematics, reading and problem solving.



Source: First Results from PISA 2003: Executive Summary.

How can we make education better?

PISA shows us that some school systems are better than others in overcoming the effects of social disadvantage. Why? There are few easy answers. And even if there were, implementing deep-rooted reform in schools can be very difficult. In part that's because how each country educates its young people is influenced by many factors – cultural, social, economic, historical. Some societies place a very high value on education, and that can permeate deeply into people's consciousness regardless of social background. Equally, deep-seated traditions can blind societies to the failings of school systems. Educational practices that seem "normal" may in fact be damaging to students and unheard of in other countries.

But the idea of importing solutions from overseas often elicits a hostile reaction. In the United States, some education reformers believe America could benefit from studying the way that Japan's education system encourages teachers constantly to learn from one another. "The most common response is that Japanese culture is 'nothing like ours'", commented *The New York Times*' Brent Staples, who regrets that attitude.

Even taking cultural and social differences into account, there's no reason why school systems can't learn from each other's successes and failures as they try to improve the quality of education by tackling issues such as teaching quality, information flow in schools, and innovative approaches in the classroom.

Teachers matter

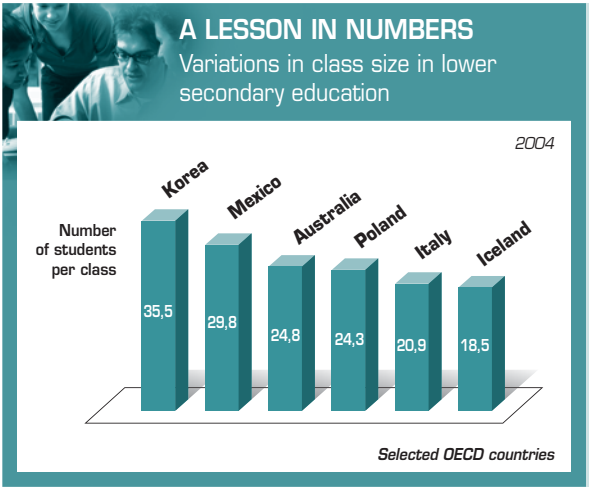
Teachers are not all the same. There are good teachers and there are bad teachers, there are well-trained teachers and poorly trained teachers – and there are potentially great teachers struggling to do their best in stifling school systems. The impact of a teacher on students can be enormous. Take away issues like social background, and quality of teaching emerges as the biggest factor in determining how well students do in school. Put simply, teachers matter.

> **"There is now substantial research indicating that the quality of teachers and their teaching are the most important factors in student outcomes that are open to policy influence…"**
>
> *Teachers Matter*

Despite their important role, however, morale among teachers is falling in many countries. In part that's probably a result of the changing social status. In traditional societies, teachers – along with doctors and religious leaders – were sometimes the only people in their locality with an advanced education. Today that's usually no longer the case in developed countries, where teaching is just one among many professions.

Indeed, there's concern that teaching is no longer the draw it was. With some notable exceptions, teacher-training programmes tend to attract students with lower academic qualifications. For schools, this shortage of academic high-flyers can become particularly acute with subjects like computing, foreign languages and sciences. Anyone with good qualifications in these areas may not want to go into teaching when there are better-paid jobs elsewhere.

Teachers' salaries generally are rising but they're not keeping up with those in other professions. If that's to change, it may be at the expense of other priorities, such as reducing class size. Teaching is also finding it harder to attract men. On average across the OECD, only one in five primary teachers are male. Their absence means there are fewer male role models in school at a time of increasing



Parents and teachers like smaller classes. But with limited education budgets that may mean employing more teachers on lower salaries, which could potentially impair teaching quality.

For data on OECD and partner countries use the StatLink below

Source: Education at a Glance 2006.

StatLink: *http://dx.doi.org/10.1787/108323448085*

concern about the position of boys in education. In the majority of OECD countries, more girls graduate from secondary school than boys. Is this because girls are doing better or boys are doing worse? That's an ongoing debate, and one that won't be settled anytime soon.

All these problems come at a difficult time for schools. Education expanded rapidly in the 1960s and 1970s, which means many teachers recruited back then are coming up to retirement age. On average, a quarter of primary teachers and almost a third of secondary teachers in OECD countries are aged over 50. In some countries, the figures are as high as 40%. It's true that all those teachers may not need to be replaced. With just a few exceptions, such as France and the United States, the number of young people in OECD countries is falling, so in future there won't be as many children to teach.

But that still won't solve the problem many countries face in producing enough high-quality teachers. That's worrying, especially as the demands on teachers are growing all the time. For instance, increasing immigration means teachers are more likely to be teaching young people from a range of cultural backgrounds. They also need to keep up with new ways of teaching, which may mean focusing not on what is being taught but on what is being *learnt* and, just as importantly, *how* it's being learnt. That shift in focus requires teachers to rethink how they work. Add in the need to keep up with curriculum changes, new technologies and new ways of assessing students' progress, and an already demanding job is set to become even more complex.

Better teachers…

How can the quality of teaching be improved? Much of the answer lies in training and recruitment and how teachers are rewarded – processes that must be thought about from the moment a student first enters teacher training to that day, years later, when he or she finally leaves the classroom. An example: to widen the pool of potential teachers, training systems can be changed to make it easier for applicants to join at different stages in their careers, and not just straight out of secondary school or college. In the United States, for instance, around 25 000 professionals and graduates switch over to teaching each year, and there's evidence to show that they're every bit as effective in the classroom as their more established colleagues.

GLOBAL VIEW Immigrants and Education

How well do immigrant students do in school? The answer, like much else to do with immigration, is often shrouded in a fog of half-truths and vague generalisations. Young immigrants from certain Asian backgrounds, for instance, are sometimes seen as model students – high achievers driven by parents who value education. Conversely, immigrant students from other backgrounds are sometimes seen as uninterested in learning and as not very successful in the classroom.

What's the reality? To come up with some answers, the OECD's PISA programme examined the performance of first and second-generation immigrant children in 17 member and non-member countries and territories that have substantial immigrant populations. Here are some of the findings:

The bigger the immigrant community, the less likely students are to succeed.

MYTH: There's no real link between the size of an immigrant population and the school performance of immigrant students. This suggests that high levels of immigration are not a barrier to integration.

Immigrant students don't want to learn.

MYTH: First and second-generation immigrants are every bit as enthusiastic about learning and school as their native counterparts – sometimes considerably more so. Such positive approaches to learning are a vital first step that schools can build on to help young immigrants succeed.

Immigrant students always do badly.

MYTH: Internationally, there are big variations in the educational success of immigrant students. In Australia, Canada and New Zealand, for instance, they perform just as well as native students. In Canada and Sweden, second-generation students significantly outperform native students. Sadly, however, in many of the other areas surveyed, immigrant students struggle to match the achievements of native students.

Educational problems will leave immigrants facing considerable challenges in later life.

REALITY: In most of the areas surveyed, around a quarter of immigrant students have very low skill levels in maths, which is likely to cause them serious difficulties later on when it comes to finding work.

Language explains some, but not all, immigrant educational problems.

REALITY: Language isn't the only factor that holds back immigrant students, but it plays a significant role in a number of the areas surveyed, including Belgium, Canada, Germany and the United States.

Providing special language support makes a difference.

REALITY: Although the PISA data doesn't supply exact figures, it seems clear that immigrant students benefit where there are well-established systems for special language education, such as in Australia, Canada and Sweden. More countries are now establishing such systems, which should go some way to helping immigrant students bridge education gaps where they exist.

Training is good for teachers, but to be effective it needs to be co-ordinated across the teaching career. It's also important that it's the right type of training. Finland, for example, requires teachers to complete an initial and lengthy Master's course. Many countries simply aren't prepared to match that level of investment. But regardless of the level of their initial training, it's important that teachers go on learning throughout their career.

> **"There needs to be a clear set of expectations about teachers' own responsibilities for their own ongoing development, and a structure of support to facilitate their growth."**
>
> *Teachers Matter*

Professional development takes many forms: there are teacher conferences, programmes to train teachers for curriculum changes, school workshops, and so on. And it doesn't even have to be about developing skills that are only applicable to the classroom. In Japan, for instance, new teachers often take a month-long internship at places like private companies, nursing homes, museums and so on. The idea is to help them develop social and entrepreneurial skills, for example, and to get a broader understanding of what society expects from schools. Crucially, such programmes, ranging up to a year in length, are also available for experienced teachers, providing them with new perspectives on how they, their schools and their profession are seen in the wider community. Once back in their schools, they're expected to discuss their insights with colleagues.

… and better schools

Ironically, that process of sharing information – the cornerstone of the teacher-student relationship – is increasingly seen as lacking between teachers. Schools have generally not kept up with the development of "knowledge management". That's business jargon for the process – often informal – of sharing knowledge, insights and experiences within organisations. The aim is to encourage individuals and groups to reflect on what works and what doesn't.

Many teachers, however, interact mainly with their pupils, and may spend relatively little time talking and working directly with colleagues. In the corporate world, many companies believe it's vital to become – more jargon – "learning organisations". These are places that put a high value on this process of exchanging information and insights, and use those exchanges as the basis for action.

Some OECD countries are now moving to ensure that schools learn similar lessons.

Formative assessment

Many countries are also encouraging more fundamental innovation in the classroom. To see that in action, let's go back to the Canadian school, *Les Compagnons-de-Cartier*. The school makes extensive use of what's known as **formative assessment** – an approach that uses a range of techniques to regularly and systematically monitor how well students are learning so that lessons can be constantly fine-tuned to meet their needs. (In contrast, the traditional end-of-year exam is known as **summative assessment**, as it offers a summary of what students have learned.)

There's no single approach to formative assessment. In the Canadian school, teachers do a lot of work to prepare lessons and set learning goals, but their interaction with students tends to be more informal and unstructured than in a traditional classroom. Students do a lot of their learning by working together on interdisciplinary projects. One project, for instance, asked whether the conflict between Israel and the Palestinians is based on religious differences or the need to control scarce water resources. That required students to carry out research on subjects like geography, religious studies and history.

> **"The atmosphere in classrooms is more like that in a newsroom or a company office. There is a lot of talking, but in general, a high-level of discipline."**
>
> *Formative Assessment: Improving Learning in Secondary Classrooms*

Before such project work fully begins, teachers spend a lot of time helping students to understand the criteria for what constitutes a good piece of work, how to assess their own and peers' work constructively, and developing "learning to learn" skills like brainstorming. With this background, students then begin to review their group members' work, asking each other to explain points in greater detail or to clarify muddied thinking. Some of that happens even outside school hours: students bring home their classroom laptops, and use them to get in touch with other students. (Computers, though, are by no means mandatory in formative assessment.)

Every nine days, students reflect on what they have learned by submitting a report to the teacher, who responds in a logbook or portfolio. Based on these reports and the feedback, students can analyse how they might have done things differently and make decisions on future choices. Students thus have real control over how they learn. They also develop an understanding of the process of learning and how they need to navigate their way through it. "I always look at my report card", says one student, "and decide for myself, yes, those are the areas I want to work on over the next months". As well as benefiting educationally, students also seem to enjoy this form of teaching: "Compared to my old school there is a lot more pride here about our work", says another student, "not about grades but about the results of what we do in the projects".

Formative assessment, which has become one of the hottest topics in education, takes many forms, but there are a number of common characteristics: it's **systematic**, not haphazard; it sets clear **learning goals** for students, and constantly **tracks** their progress towards them; it **actively involves** students in the learning process; it encourages **interaction**, between the student and the teacher and between students; it offers **variety**, both in how students learn and in how they're assessed; and it provides **feedback**, and tailoring of instruction to meet individual students' needs.

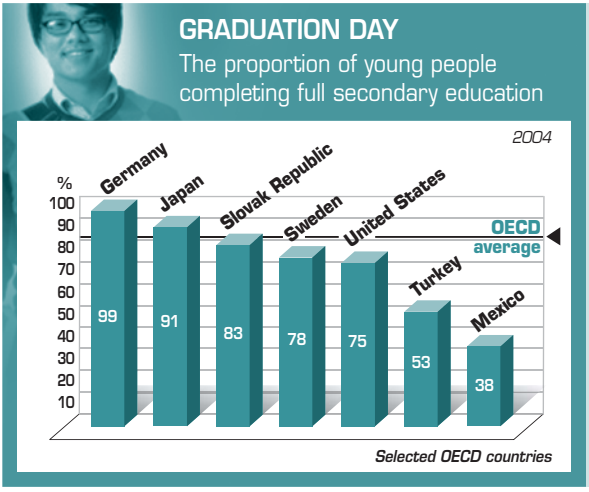
> **"If formative assessment is used as a framework for teaching, teachers change the way they interact with students, how they set up learning situations and guide students toward learning goals, even how they define student success."**
>
> *OECD Policy Brief: Formative Assessment*

Does it work? Research shows that methods like these can be strikingly effective. The report from an OECD project that studied formative assessment in a number of countries described it as "perhaps one of the most important interventions for promoting high performance ever studied".

Why aren't we seeing greater use of such innovations in the classroom? One problem is that teachers don't always find it easy to mesh formative assessment with "high stake" traditional exams. For better or worse, summary style exams still determine student's prospects for further education and jobs in many countries, and there may be a lot of pressure on teachers to "teach to the test", *i.e.* to focus solely on the skills or knowledge that will help students pass the exam. However, with proper training there's no reason why teachers can't learn to integrate formative assessment into systems that prepare students for summary exams.

How can the reach of education be broadened?

No matter how many changes are made in classrooms, some young people simply decide that school is not right for them. Take Kanako Mizoguchi, a Japanese girl who at the age of 14 decided she just wanted to stay in her room. "I still find it hard to describe why", she told a reporter. "I felt like I was becoming invisible, like I was being rubbed out. I really thought I was going to explode and do something bad." The girl went on to spend the next five years in her room, an example of a phenomenon known in Japan as *hikikomori*, or social withdrawal.



Most young people – four out of five – complete secondary education in OECD countries. But that still leaves some quite large groups who don't, which risks severely limiting their job prospects.

For data on OECD and partner countries use the StatLink below

Source: Education at a Glance 2006. StatLink: *http://dx.doi.org/10.1787/141843246636*

VIEWPOINT Janet Cohen

Why do Finnish 15-year-olds do so well in international tests? Janet Cohen, a reporter with the BBC's The World Tonight programme, went to Finland to find out (edited extract).

Reporter: It's 8 in the morning in inner-city Helsinki. Here at the Arabia School that means it's time for ice hockey. The children here are aged from 7 to 16 and most of them live locally. Supervising them, their teacher Mikko Autio believes in starting the day with sport.

Autio: It is very important, you know. After this sport when we go back to school they are fresh and they are awake to study.

Reporter: It's obviously worth the effort. Young Finns are among the best in the world at maths, reading and problem solving, up with countries like Korea and Japan. Even more interesting, they have the smallest number of low achievers, and children from poorer homes do nearly as well as the better off. So, what's the secret? The head of the Arabia School is Kaisu Kärkkäinen. Her answer is simple:

Kärkkäinen: Firstly, I have to say the teachers. And secondly, the teachers. And thirdly, the teachers. It's most important. And then, we take good care of children with special needs, and we put a lot of teaching hours into helping them.

Reporter: Upstairs, Mikko Autio's class is working on projects about Nordic culture, from authors to theme parks. There is a national curriculum, but UK teachers would be amazed by the freedom Finnish teachers have.

Autio: I'm not following to a weekly schedule. If there's an area we have to do more in, say, mathematics, sometimes we learn mathematics the whole day! And sometimes, if we want to go skiing for the whole day, it's OK.

Reporter: Downstairs in the English class, these 14-year-olds are interviewing each other about their hobbies. There is grammar to study, but the emphasis is on what interests them. There is testing, but it's low key. There are no SATs, no league tables and no grading until matriculation at 15, and no school inspections. The English teacher, Riitta Severinkangas, says teachers are in the driving seat.

Severinkangas: I think we are quite trusted professionals, and we are very autonomous. So, I can be very creative … if I want to.

Reporter: Of course, it's not foolproof. A few pupils do end up in a small special needs class. … On the whole, though, mixed ability classes are the norm. If there's a child with problems, the class gets an extra teacher, and the child gets an individually tailored curriculum drawn up by the school's welfare team of psychologists and support workers. On top of that, all teachers get training to teach special needs. The class teacher is Eine Liinanki.

Liinanki: Finnish teachers are very highly educated, and the government has put a lot of effort to make this system and make it work.

Reporter: In Finland, teaching is a Master's degree. It lasts up to six years and it's free. Not surprisingly, the students are queuing up, and only 13% of them get in. … The job has status, and that's rooted in history according to Patrik Scheinin, Professor of Education at the University of Helsinki.

Scheinin: The church in Finland used to support being able to read. You had to be able to read something of the Bible before you could get married. That's a strong incentive. Later, that was used by the national movement in Finland, so that the Finns built their literature, their school system, their teacher training to become an independent state, and teachers are something of national heroes even still.

Reporter: So, teachers rule. In Finland, there's one teacher for every 14 children, compared to one for 20 children in the UK. It's all aimed at eliminating failure as an option. Cynics say it brings universal competence at the expense of excellence. But calls for league tables and a more centralised curriculum have been muted by Finland's success in the international comparisons, and above all by its faith in its teachers.

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Kanako's case is extreme, but she represents a broader group of young people who for a wide range of reasons – psychological, social, cultural – opt out of both education and employment. There's even a name for them: NEETs – not in employment, education or training. Many OECD countries, not just Japan, are increasingly concerned about the problems facing such young people.

Typically, about 80% of young people complete secondary school in developed countries, while about 20% drop out. No matter how much education expands, that hard core seems to remain fairly fixed. "I'm convinced that's part of the reason that there's been a big upsurge of interest in ministries of education in vocational education," says Greg Wurzburg of the OECD.

Vocational schooling – which aims to prepare young people for a specific trade, such as carpentry – has faded away in many countries, says Wurzburg. "The spectrum of interests and abilities of students became bigger", he explains, "but the spectrum of choice in schools has become smaller as vocational education became discredited in some countries".

There's now growing interest among governments in bringing it back, sometimes with controversial results. Following rioting in 2005, the French government announced plans to allow 14-year-olds to become apprentices. "The government's objective is not really to give jobs to these young people but to extract them from a school system where they are failing", Bernard Hugonnier of the OECD told the *International Herald Tribune*. "I'll be frank: the goal is to get them off the streets." But not all education alternatives are quite so controversial. Some countries are developing apprenticeship schemes, where young people learn on the job and often attend school part-time.

> **"Greater emphasis on short-cycle programmes can help improve the match between the interests of the students and the labour market."**
>
> *The New Economy: Beyond the Hype*

That trend is being replicated in third-level education, too, where whole new learning institutions are being created that lean more towards the practical than the academic. In the late 1990s, for example, Hungary introduced a programme of short-duration courses designed specifically to serve industry's needs, while Mexico has launched technical universities offering two-year courses targeted directly at the needs of the labour market.

As human capital becomes ever more important to the ability to earn a living, such approaches will become even more relevant. It's increasingly important for societies to cater for the education needs of *every* young person, not just traditional academic high-fliers. The price of not doing so could well be increased social inequality and slower economic growth.

Further Reading from the OECD

➤ **Education at a Glance** *(annual)*
Governments across the OECD area are seeking policies to make education more effective while searching for additional resources to meet changing demands for education. *Education at a Glance* offers countries a chance to judge their performance in an international context. Using a rich, comparable and up-to-date array of indicators, the book shows who participates in education, what is spent on it and how education systems operate. The book also looks at the results of education, ranging from comparisons of student performance to the impact of education on earnings and adults' chances of employment.

➤ **Learning for Tomorrow's World: First Results from PISA 2003** *(2004)*
Are students prepared for the challenges of the future? Are they able to analyse, reason and communicate their ideas effectively? Are they ready to continue learning throughout life? These are questions that parents, students, the public and those who run education systems continually ask. *Learning for Tomorrow's World* presents initial results from the PISA 2003 assessment, going well beyond an examination of the relative standing of countries in mathematics, science and reading to shed light on countries that succeed in achieving high performance standards while providing an equitable distribution of learning opportunities. *Learning for Tomorrow's World* is just one of a large number of publications from the OECD's PISA programme.

➤ **Teachers Matter: Attracting, Developing and Retaining Effective Teachers** *(2005)*
A comprehensive, international analysis of trends and developments in the teaching profession in 25 countries around the world. *Teachers Matter* looks at research on attracting, developing and retaining effective teachers, innovative and successful policies and practices that countries have implemented, and teacher policy options for countries to consider. While documenting many areas of concern about teachers and teaching, the report also provides positive examples of where policies are making a difference. At a time when many countries are facing an ageing teaching workforce and having trouble attracting new recruits, this book provides insights into how governments can successfully deal with these issues.

➤ **Formative Assessment: Improving Learning in Secondary Classrooms** *(2005)*
The achievement gains associated with formative assessment – the frequent assessments of student progress to identify learning needs and shape teaching – have been described as "among the largest ever reported for educational interventions". While many teachers incorporate aspects of formative assessment into their teaching, it is much less common to find formative assessment practised systematically. *Formative Assessment* features exemplary cases from secondary schools in several countries to show how formative assessment can be put into practice.

Also mentioned in this chapter:

➤ The New Economy: Beyond the Hype: The OECD Growth Project *(2001)*

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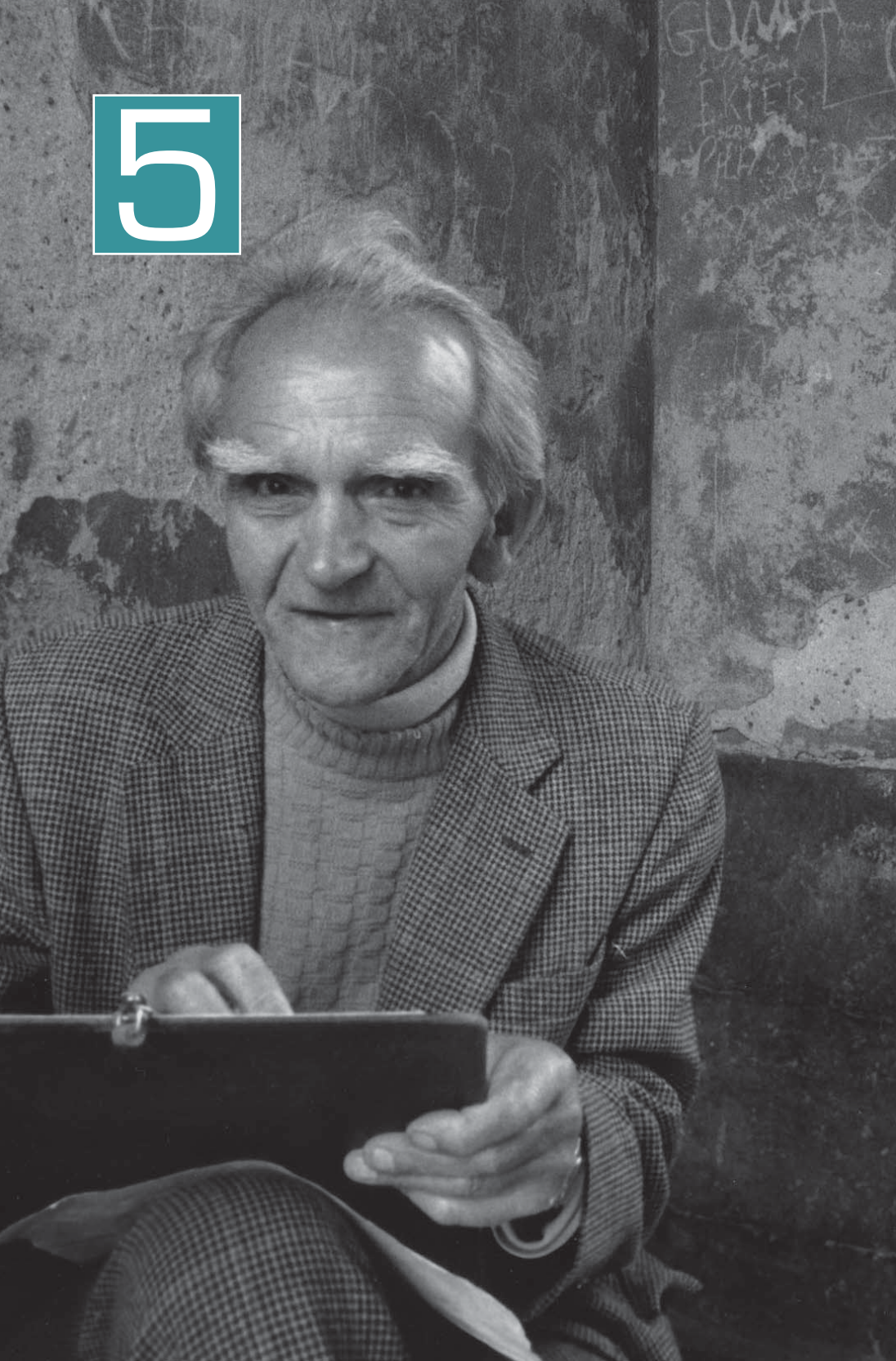
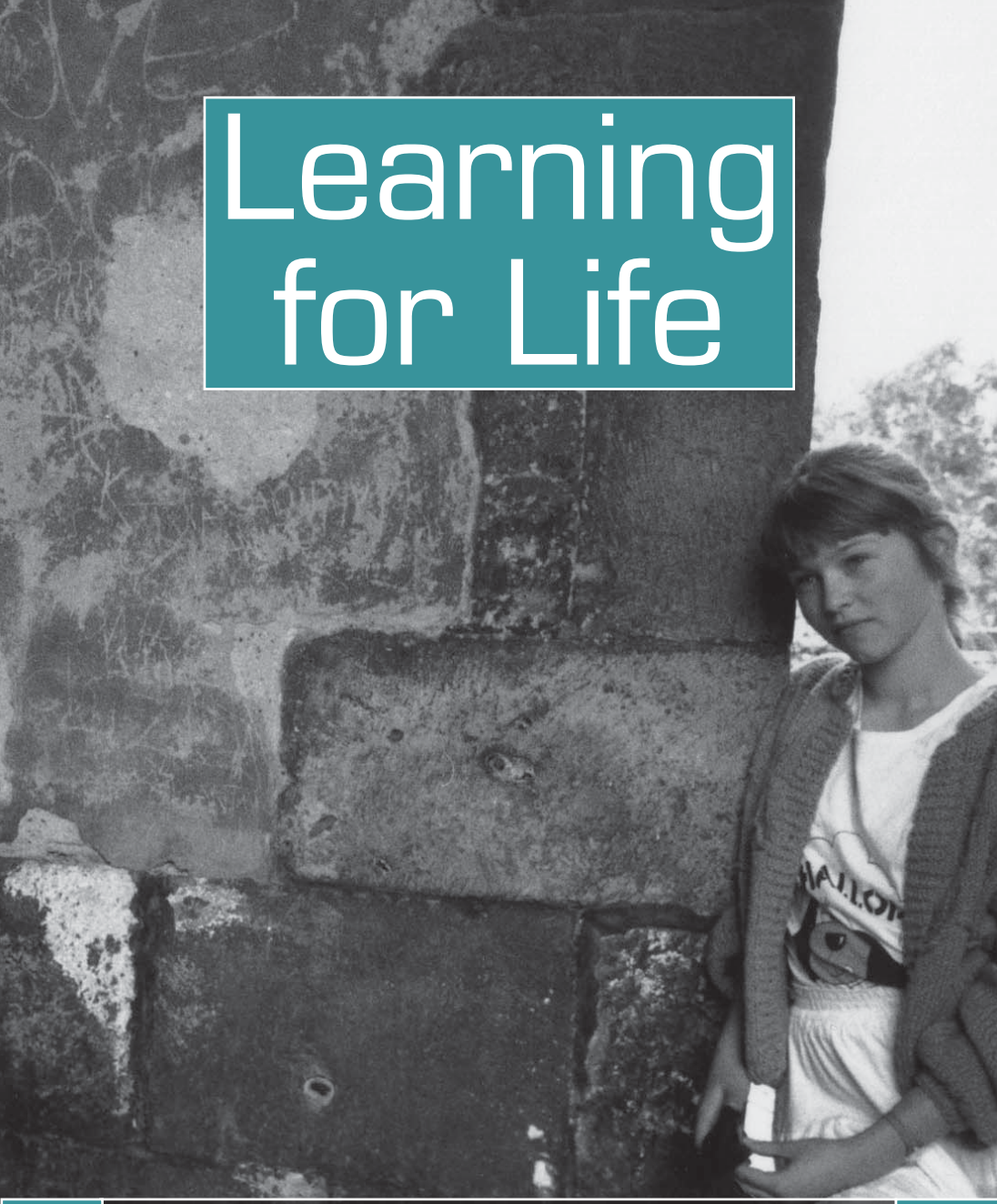


Learning for Life



Populations in many societies are ageing, meaning that in future there will be fewer people of working age to support growing numbers of retirees. The result is that more of us will need to go on working for longer. To do that societies will need to break down the barriers that prevent adults from updating their skills and education.

By way of introduction…

In blue shorts and grey socks, Kimani Nganga Maruge looks like any other Kenyan schoolboy, except for one thing: he's in his 80s. At an age when even the most active retirees are slowing down, Mr. Maruge decided a few years ago to learn to read and write. Inspired by the introduction of free primary education in Kenya, he took a pair of trousers, cut them off at the knees, and walked slowly down to his local school. The headmistress, Jane Obinchu, thought he was joking, but she decided to give him a chance.

"We thought he might come for a week or so and then give up", Mrs. Obinchu told a reporter. "He hasn't given up". Mr. Maruge wants to learn to read so that he can study the Bible for himself. Maths is also important. As a veteran of Kenya's war of independence in the 1950s, he's hoping to get government compensation. "I want to learn maths so I can count my money", he explained. Inspired by his story, the United Nations invited Mr. Maruge to New York in 2005 to tell a wider audience about the benefits of education. His message: "You are never too old to learn".

Whether you're an 85-year-old grandfather in Kenya, a 55-year-old manager in Kyoto, or a 25-year-old graduate in Kansas, that message has never been more relevant. In a world where the economic value of education is rising, people can't afford to stop developing their human capital on the day they leave school or university.

Adult learning isn't just about earning a living. In many countries, people are now expected to make choices in areas where the state was once the main – or only provider – of pensions, schooling for children, medical care, and so on. To choose well, they will need to keep up to date with a host of changes and trends. And then there's learning for sheer pleasure – something people will have more time for as lifespans continue to lengthen.

▶ This chapter looks at adult learning, and finds out who's getting it and who isn't. It examines the barriers that prevent adults from developing their skills and knowledge. And it looks at what individuals, employers and governments can do to tear down those barriers.

Who needs to go on learning?

We're getting older. Not just as individuals but as societies. Falling birth rates and rising life expectancies mean developed countries are growing greyer. As a result, our societies will be depending for support on an ever smaller proportion of active workers in the years to come.

Little surprise that many governments are encouraging people to look forward – if that's the right phrase – to working longer. How much longer? One researcher, Stanford University's Shripad Tuljapurkar, has suggested that if medical advances continue adding years to our lives, by the middle of this century people could be retiring at the age of 85.

A scary thought, perhaps. But in some ways working for at least a few more years might not be a bad thing. It's a sad statistical fact that people who take early retirement don't always live to enjoy it. One study of workers at Shell Oil found that people who retired at 55 were almost twice as likely to die within 10 years as those who retired at 60 or 65. (The study took some account of the likelihood that some early retirees were in poor health.) Though we might not always care to admit it, work can be important to happiness and well-being.

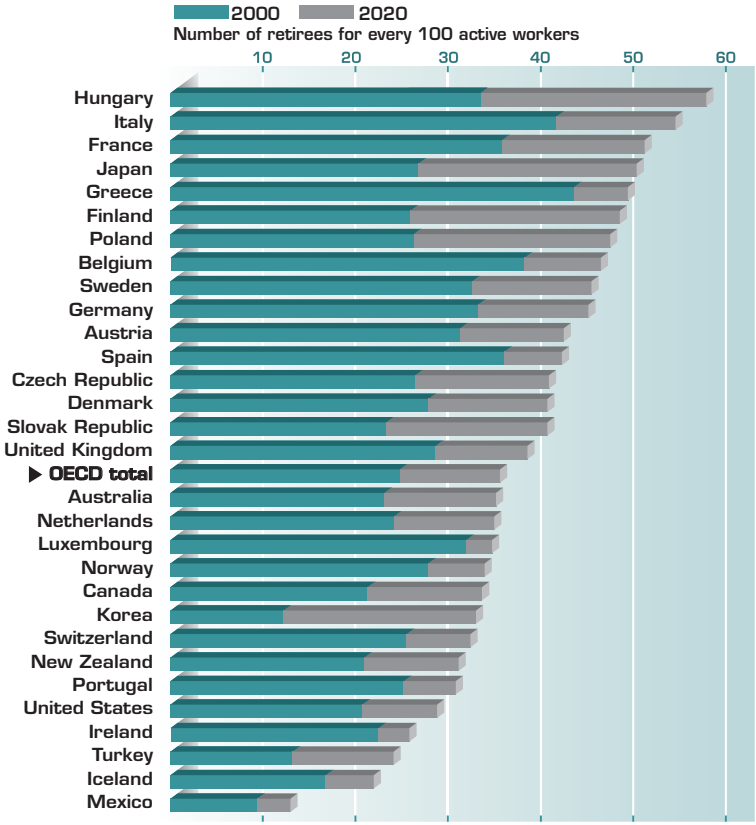
If we need to go on working for longer, we'll also have to go on upgrading our skills, education and abilities – our human capital – throughout our lives. After all, anyone who's still working in their mid-60s may have completed full-time education more than four decades ago. A lot will have changed in that time.

Not convinced? Think back on how much has changed in the past 40 years. Back in the 1960s, it was rare for countries to outlaw discrimination against women in the workplace. Office computers, where they existed, sat in separate rooms, and data were entered by crews of clerks. And the Internet? That was still just a twinkle in a military planner's eye. Now think ahead to the developments we'll see in the next 40 years. To stay relevant at work, people will need to go on continually upgrading their education.

GOING GREY

Ratio of retirees to active workers

The proportion of retirees to active workers is rising. For example, the figure of just over 50 for Japan (below) indicates that there will be just over 50 retirees for every 100 active workers by 2020, compared with just under 27 in 2000.



Populations are ageing across the OECD, meaning that in future more and more retired people will be relying on the financial support for an ever-smaller number of people in the workforce. Not surprisingly, governments in developed countries are encouraging people to work for longer.

For data in Excel™ format use the StatLink below

Source: OECD Factbook 2006.

StatLink: *http://dx.doi.org/10.1787/173116830105*

Playing catch-up

That's true for everyone, but especially for people who may have missed out on education the first time round. Even though literacy and numeracy levels have risen across the OECD area, most countries have pockets – sometimes quite large – of adults who struggle with reading, writing and basic maths. One OECD-led study estimated that at least a quarter of adults in the countries surveyed were stuck at the lowest reading levels. Many wind up working in jobs that require low skills and low levels of education, and may be at special risk of seeing their jobs going overseas where labour is cheaper.

The expansion of secondary and third-level education has made things even harder for low-skilled workers. Sometimes this is a reflection of the reality that today's jobs are more complex or at least require basic literacy and numeracy skills. It can also reflect "credentialism" (see Chapter 2) and screening – the tendency of employers to use minimum qualifications as a way of sorting out job applicants, even if the qualifications aren't absolutely necessary to do the job.

Whatever the reason, there are clear signs that people with low levels of education are not keeping up in economic terms with the rest of the population. One proof of this is that since the 1980s, many OECD countries have seen widening salary gaps between workers based on their education levels.

> **"… Expansion of demand for tertiary education may not have benefited those from socially disadvantaged backgrounds and may even have worsened the labour market position of the low-skilled."** *The Well-being of Nations*

Some analysts go further and argue that the big difference in income these days is not between those who have third-level education and those who don't, but rather between those at the very tip of the earnings scale and everyone else. American economist Paul Krugman cites data showing that the income of the wealthiest 10% of Americans grew by just 34% between 1972 and 2001. The top 0.01%, however, saw their incomes rise by 497%. Krugman, and others, argue that the emergence of such tiny but hugely wealthy elites risks destabilising society. His critics argue that while incomes at the top end may indeed be rising rapidly, individuals

GLOBAL VIEW Winners and Losers

The news headlines: "Canada suffers mass lay-offs in factory exodus: strong currency and cheap China imports get the blame"; "Telstra set to off-shore 425 more jobs to India"; "Credit Suisse could move another 5 000 jobs to the East".

The news media regularly carry warnings about how jobs in developed countries are under threat from cheap imports and low wages overseas. Governments in developed countries often respond by saying that their economies will need to focus on higher-end jobs and that workers will need to raise their skills and education – their human capital – to fill those jobs.

But how big an impact will overseas competition have on jobs? The answer: some, but perhaps not as much as people think.

Take the threat from cheap imports. Based on a survey of half its member countries, the OECD estimates that only around 1 in 25 manufacturing jobs is at high risk because of competition from imports, although around 1 in 5 faces at least some risk. Of course, it isn't always possible to say for sure if a particular job has been lost due to international trade: companies close down or lay off workers for lots of reasons. What is clear, though, is that workers in manufacturing, more than in many service industries, are at special risk.

Such workers may have relatively little education and may be relatively old. They can struggle to find a new job that pays as well as their old one, especially if they live in the United States. There, manufacturing workers laid off as a result of international trade suffer pay cuts of around 13% on average. In Europe, workers on average manage to maintain their salary levels, although a reasonably significant number – around 8% – suffer pay cuts of almost a third. Workers in Europe are also at greater risk of long-term unemployment than in the United States.

Lost jobs and substantial pay cuts can be disastrous for individuals, especially those who were on low salaries in the first place. Simply advising such workers to upgrade their skills isn't enough. Governments, employers and unions will need to look at how they can actively help them to cope with changes. In Europe, for example, the European Commission has proposed setting up a Global Adjustment Fund to help retrain and relocate up to 50 000 workers a year. In the United States, the Trade Adjustment Assistance programme has been in operation since the 1960s, albeit with limited success.

But while there are job losses for individuals from trade globalisation, many observers believe that, overall, the benefits of trade openness outweigh the drawbacks, and can add up to greater job creation. At the very least, they say, statistics show that there's no systematic link between trade openness and widespread job losses.

Ironically, the perception of a threat from trade globalisation, rather than the reality, can cause problems of its own. In the United States, the Association for Computing Machinery has warned that young Americans may be deciding not to study computer science because they believe – wrongly – it has no future in the United States. "The perception among high school students and their parents is that the game is over – that all computing jobs are going overseas", Professor Bill Patterson, the association's president, told a reporter. "It's an extraordinarily widely held misperception."

with third-level education still enjoy much higher incomes, in relative terms, than those who never made it beyond secondary school.

Can adult learning help the less well-educated? Yes, but not always as much as we might like. Education over the course of a lifetime is a little like building a house. Get the foundations right, and chances are the house will be sturdy for years to come. Get the foundations wrong, and it takes a lot of repairs to put the house on a truly firm footing. Still, the potential benefits from adult learning are real and worth pursuing.

What are the obstacles to further learning?

There are big variations between OECD countries in the number of adults who receive job-related training and education. More than 40% of workers take part each year in Denmark, Sweden, Switzerland and the United States against only 10% in Greece, Hungary, Italy and Spain.

More significantly, there are very big gaps *within* OECD countries between who gets trained and who doesn't. They can be summed up in this way: those who need training most don't get it. "If you are older you are much less likely to receive training than when you are younger", explains the OECD's Raymond Torres. "If you are less educated, you are much less likely to receive training than if you are highly educated. If you are at the bottom of the labour market you are less likely to receive training than if you are a manager."

The advantage of youth…

Younger adults receive more training for a number of reasons. For starters, many are still completing their professional training. If they haven't yet started a family, they're also likely to have more free time and to have fewer work and family commitments – a major obstacle to training for older workers.

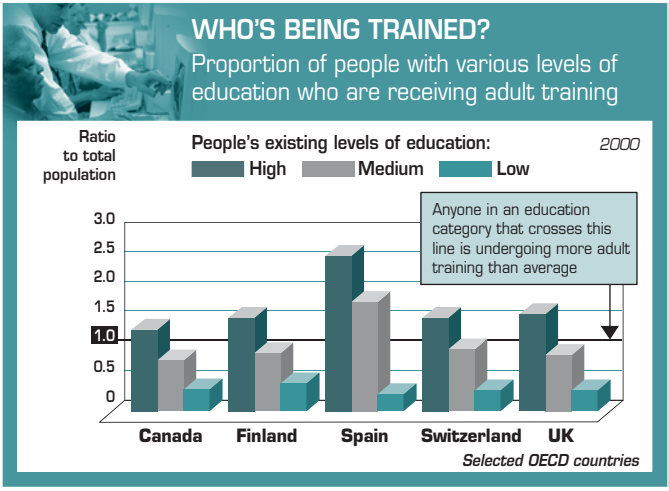
There's another important factor: younger adults are usually better educated to begin with. And, in general, the more education you start with, the more likely you are to continue with formal learning. That gap in initial education is a result of the fact that older people

in many OECD countries completed their formal schooling before the rapid expansion of upper-secondary and third-level education in recent decades. In Ireland, for example, around 75% of adults under 34 have completed secondary education compared with less than 40% of those in their mid-50s.

Age can also be a barrier if adults feel that they're just too old to benefit from training. That's a perception that may be shared by their employers, and it does have some basis in harsh economic realities. Compared to somebody who's coming up to retirement age, a younger person – or their employer – has a much longer period available in which to earn back any money invested in adult education.

… and seniority

Seniority in a company is also important in determining who gets trained: the higher someone is in an organisation, the more likely they are to receive training. From an employer's perspective, that can make sense. With senior staff, managers may see training as an investment that will pay for itself in increased productivity and expertise. With less skilled workers, companies may see training as



The more education you have, the more likely you are to undergo training as an adult. This means that the education gap between employees may tend to grow over time.

Source: Beyond Rhetoric: Adult Learning Policies and Practices.

mainly a cost. Managers may figure that such workers don't need to know much to do their jobs and probably won't hang around for long anyway, so there won't be time to earn back the cost of training.

Equally, unskilled workers are less likely to request training. That may be due in part to their being unaware of the potential financial benefits of adult learning. The result of all this is that lower-skilled workers often find themselves caught in a trap, albeit one that's partly of their own making. They can rise up in a company only if they receive training but their lack of initial education means there's less incentive for employers to provide them with it. So what can be done to get them out of the training trap?

How can we lower barriers to learning?

When dreaming up detective stories, writers keep three key things in mind: motive, means and opportunity. That's also not a bad place to start from in trying to solve the mystery of why more people aren't pursuing adult learning.

So, what are the motive, means and opportunity in the case of lifelong learning? The **motive** is all about why adults want to go on learning, and about what can be done to increase their motivation. Then there's the **means** – money, or who pays for adult learning. Finally, there's **opportunity**: what can be done to deliver learning to adults?

Motivation: encouraging adults to pursue learning

No one will be motivated to pay for training unless they're confident of getting a return. Governments want training to boost the workforce's stock of human capital; companies want increased productivity; employees want a pay rise and better prospects for promotion. Those aims aren't irreconcilable; indeed, successful training and education often manage to achieve all of them.

But training can have unwanted side-effects that eat into motivation. For example, companies may be at greater risk of losing workers who have completed training if they find that the only way to turn their new skills into pay rises is by quitting and finding new

jobs. Despite such drawbacks, it still makes sense for companies to train workers: training raises productivity and profits as well as worker's wages.

It can be difficult, however, to overcome resistance among workers. Unless the potential returns from training are very clear, they may simply not be willing to bother with it. Many people find further education a chore, especially if it eats into their time outside work, when they may have family and social commitments.

"Individuals tend to act rationally and finance learning activities when they expect clear returns…" *Promoting Adult Learning*

There are other barriers. Anyone who finds it hard to convince a prospective employer about the value of their existing abilities and accomplishments – their human capital – may be dissuaded from developing those abilities still further. Similarly, unless a qualification from training is widely recognised people may – understandably – have little wish to train for it.

Governments can help people win recognition for existing learning through **national-qualification systems**. These can be especially important for less educated workers, who do much of their learning informally. Typically, this sort of learning is not represented in the form of written qualifications – think of "the tricks of the trade" to be found in every profession from plumbing to software engineering. These abilities can be valuable in their own right, and may well deserve to be recognised.

Approaches vary, but in many national-qualifications systems people aren't required to complete a prescribed course, which removes a major psychological barrier to participation. All they may have to do is show by means of a test that they have the required skills and competences.

"When it comes to putting what they have learned to good use, individuals are often at a loss as to their ability to put their investment in training into effect and profit from it…" *Beyond Rhetoric: Adult Learning Policies and Practices*

Doubts about the value of training also eat into people's motivation. Adult learning attracts more than its fair share of dubious providers, and even awards such as distance-learning degrees from

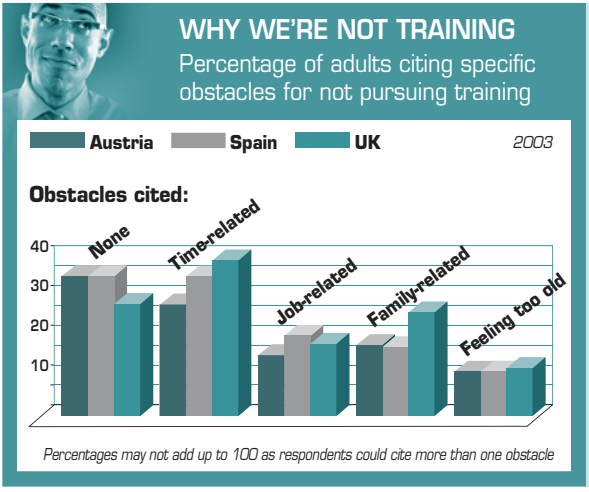
reputable universities can sometimes be unfairly regarded as second-class qualifications.

Many OECD countries have quality-control agencies to monitor courses provided by private providers. But there may be benefits in looking at a wider approach to create a true market in adult training. That would require proper monitoring of training providers and some sort of government action against training centres that don't meet national standards. Such a system could provide adults with real incentives to seek out only recognised courses, and encourage private providers to offer high-quality learning.

Means: who pays for adult learning?

The training needs of skilled employees tend to be met by either the company or the individual. Where governments intervene, they're more likely to help low-skilled workers. We can look at the role that governments play from two perspectives – that of the **company** and that of the **individual**.

The company: tax breaks are an important weapon for governments in encouraging companies to train staff. Although it's difficult to design tax breaks well, governments like them because they



Many adults are not interested in pursuing training. Others would like to, but feel they can't. Their reasons may include job and family pressures or a feeling that they're just too old.

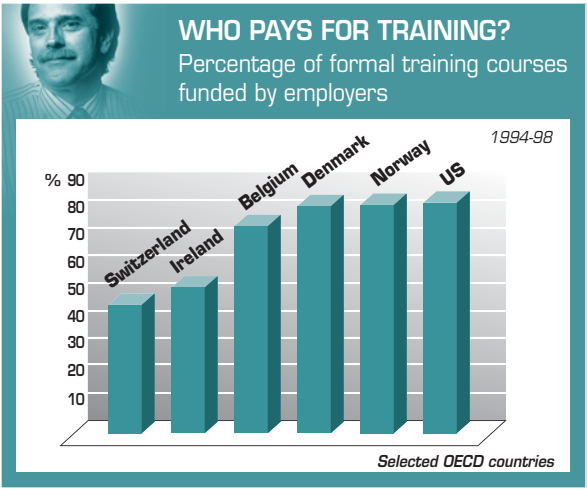
Source: Promoting Adult Learning.

use the existing tax system and encourage companies to train their own staff rather than poaching them from other firms; overall, that helps raise the human capital of a country's workforce. Companies like them too because, unlike direct state subsidies, they tend to give managers a freer hand in deciding who gets trained and who doesn't.

But that's also a disadvantage. Given a free rein, companies train senior staff, which defeats the purpose of introducing a tax benefit aimed at encouraging wider training. There are other disadvantages, too. For instance, whether or not tax benefits exist, companies still have to train staff. Offering tax benefits can mean that taxpayers are subsidising a company for training it would have carried out anyway, a phenomenon known as **deadweight loss**.

Tax breaks essentially give companies money for training, but governments can also take money from companies. In Spain, for example, companies pay a payroll tax of 0.6% to fund training. The collection of such levies by the state can make it easier to direct training at less educated workers.

The individual: many OECD countries have adopted a philosophy of asking all the partners – government but especially the



Employers pay for most training, even though it can give workers skills useful to other companies. Potentially, that may make workers more likely to be poached.

Source: Employment Outlook 2003.

employer and employee – to help fund adult learning, a strategy known as **co-financing**. The aim is to give everyone a financial stake in the process and to reflect the likelihood that the main benefits will be enjoyed by the company and the employee.

Co-financing works in many ways. For example, governments may subsidise study leave for workers, which takes away a major cost of non-company training for many people, namely the need to take time off work. In France, workers can squirrel away up to 20 hours paid leave each year for training. Governments can also offer more direct help in the form of training loans, although getting the money back isn't always easy.

Several countries, for example Canada, the Netherlands and the United Kingdom, have experimented with **individual learning accounts**, which encourage low-skilled workers to save money for training. Money saved is tax free and matched to some extent by contributions from government and employers. In Canada, the pilot Learn$ave system pays up to three dollars for every dollar the account holder puts away.

There can be problems. The United Kingdom suspended its scheme after just a year because of fraud and the opening of bogus accounts. And, because the scheme wasn't targeted solely at the low-skilled, many account holders used the money to fund education they were planning to undergo anyway, another example of a deadweight loss.

Opportunities: delivering learning

The first step towards learning can be the hardest, especially for adults who need to undergo basic education. Anyone who struggled in school is likely to have unhappy memories of the classroom, while those with reading problems may suffer from low self-esteem as a result of the stigma that even today is still attached to illiteracy. In reality, their problems may be the result of dyslexia – a disorder characterised by problems with reading and spelling and which has been shared by a surprising number of famous people, including, it's believed, Thomas Edison and Pablo Picasso.

First contact is crucial for adult learners. They need to be able to find help easily and to feel that they're being treated with respect. Many OECD countries have now set up "one-stop shops" that offer help for adults with job hunting and adult education. These centres can help adults figure out their needs without having to approach

dozens of different government agencies and educational institutions, and then direct them to where they can get help.

Once adults have taken the first step, it's important that their dignity is respected. No adult wants to be treated like a child, and nor do they want to feel as if they're being sent back to school. So, informal approaches, both in the style of teaching and the place where it happens, can bring benefits. One successful approach is to ease adults into education by doing just a few hours of learning a week. It can also be useful to take advantage of their family's support. In the United States, the Family Literacy Program brings parents and children together in the same place to learn, which can be especially helpful for immigrant families trying to learn the language of their adopted country.

> **"… The approach that has proved successful is to move away from the school model and try to combine different modes and purposes of learning as often as possible."**
>
> *Promoting Adult Learning*

Because time is often an issue, adults can benefit from systems that allow them to set their own learning pace and to take exams and tests at a time that suits them. In the United States, the long-established General Educational Development service operates more than 3 000 centres that offer testing but not training. Individuals take exams in five main subjects, and if they pass they're awarded the equivalent of a high school diploma. One of out every seven high school diplomas in the United States is awarded through this system.

In Korea, where the labour market places a huge emphasis on formal qualifications, the Credit Bank System allows individuals to "bank" educational credits over several years from courses in a range of universities and other educational institutions. Begun in 1998, the system awarded qualifications to around 25 000 people in its first five years.

Approaches like these can help ensure that people are able to develop their human capital through the course of their lives – from their earliest years before beginning formal schooling, through the years of compulsory and third-level education, and on into adulthood. Those increases can bring clear economic benefits, but as the next chapter shows, human capital is linked to more than just a bigger wage packet. Its benefits include gains in health and even, potentially, healthier societies.

Further Reading from the OECD

➤ **Live Longer, Work Longer** *(2005)*
In an era of rapid population ageing, many employment and social policies, practices and attitudes that discourage work at an older age have passed their sell-by date and need to be overhauled. They not only deny older workers choice about when and how to retire but are costly for business, the economy and society. If nothing is done to promote better employment prospects for older workers, the number of retirees per worker in OECD countries will double over the next five decades. Drawing on findings from 21 country reviews, *Live Longer, Work Longer* works to establish a new agenda of age-friendly employment policies and practices.

➤ **Beyond Rhetoric: Adult Learning Policies and Practices** *(2003)*
Adults may well ask why they should resume learning. The reality is that the changing requirements of knowledge-based societies, skill shortages and the increasing importance of civil participation and social cohesion drive the need to continually update skills and knowledge. Yet those who are most in need are often precisely the ones who participate least in adult learning and training programmes. **Beyond Rhetoric** aims to identify what works in the policy and practice of adult learning. It defines the features of a desirable system of adult learning, including ways to motivate adults to learn and methods to deliver appropriate services.

➤ **Co-financing Lifelong Learning: Towards a Systemic Approach** *(2004)*
Lifelong learning is not yet a reality for all, in part because our societies still have the habit of viewing learning as something for the young, something that is state supported. There are also deep-seated institutional and policy biases against investment in human capital. But promising signs of change have emerged in the past few years, including initiatives that make it easier for private and public actors to co-invest in lifelong learning. However, they do not yet represent systemic change. *Co-financing Lifelong Learning* summarises the important economic and financial challenges that lifelong learning poses, reviews recent experience with initiatives on co-financing, and takes stock of the political debate.

➤ **Promoting Adult Learning** *(2005)*
Bringing together key lessons from 17 OECD countries, *Promoting Adult Learning* provides policy guidance on improving adults' participation in learning – an area that has been given little policy priority until recent years. The review addresses potential barriers to learning as well as the policies to remedy them. Among these are policies for increasing and promoting the benefits of adult learning to make them transparent and easily recognised. Other policy levers include economic incentives and co-financing mechanisms. Finally, policy making can be improved via co-ordination and coherence in a field that is characterised by a wide variety of stakeholders.

Also mentioned in this chapter:

➤ The Well-being of Nations: The Role of Human and Social Capital *(2001)*

6

A Bigger Picture

No one is an island. How we develop, from childhood to adulthood, is linked to our relations with our families and societies. Equally, the full range of our human capital – from the state of our health to the level of our learning – affects, and is affected by, our relations to wider society.

By way of introduction…

The sizzling summer of 2003 broke records in Europe. Crowds flocked to the beaches to soak up the sun as temperatures climbed into the high 30s centigrade and beyond. In cities, people who couldn't get away from their jobs sweated through those long, hot days. And behind closed doors, old people died. In Italy more than 4 000 elderly were struck down by the heat; in France as many as 15 000.

The deaths were shocking enough, but what really struck home was that so many of the elderly died alone. In some cases they lay dead for days or even weeks before being discovered. How could such a thing happen in modern, well-organised societies?

In some respects, it's the very nature of those societies, with their anonymous ways and declining sense of community, that contributed to the deaths of the elderly. We live in communities where we move in and out of city apartments without ever finding out who our neighbours are; we seal ourselves away on the daily commute behind the white earphones of iPods. Wealth has brought us much – longer lives, higher living standards, foreign holidays – but along the way we may be losing some of the things, like community spirit, that make us happiest.

Significantly, those relationships can potentially affect our lives in other ways, too, including how well we're able to develop our human capital. That affects not only our educational development but even things like health. Adults who live alone, for instance, may be more at risk of heart disease than people who live with someone else.

▶ So far, this book has tended to speak of human capital largely in terms of learning. But human capital can include other elements, including the state of our health. This chapter examines some of these broader issues connected with human capital, beginning with a look at the links to health. It then goes on to look at the possible links between human capital and social relationships, a subject that's producing some intriguing and at times controversial insights.

Is there more to human capital than learning?

Education may be a key – if not *the* key – component of human capital, but health is also part of the mix. The relationship between the two isn't straightforward. For instance, good health helps people to develop their human capital – healthy children are better able to learn. But it's also one of the fruits of human capital – people with higher levels of education tend to be healthier.

> **"One of the clearest benefits of education is better health. Individuals with higher educational attainment have healthier habits and lifestyles."** *The Well-being of Nations*

Not only that, but health is itself a distinct ingredient within human capital (even though people don't always consciously "invest" in their health in the same way they do in their education). A worker whose human capital includes strong health is more productive in the workplace and so tends to earn more. That increased productivity is good for the wider economy. Raising the health of the overall population helps an economy to grow. According to one estimate, a country that sees an improvement in life expectancy of five years – a reflection of rising health levels – will see its economy grow up to 0.5% faster than one where life expectancies are static.

Health and poverty

The impact of health on economic growth is even clearer in developing nations, and was recognised in the Millennium Development Goals, a set of targets laid down by the United Nations at the turn of the century for the eradication of extreme poverty. Of the eight goals, three refer to health issues – reducing child mortality, improving the health of mothers and combating illnesses like HIV/AIDS and malaria.

Particularly in developing countries, the relationship between poverty and health runs both ways. Poverty means there isn't enough money to pay for vaccines and cheap medicines so diseases that could be easily prevented or treated are left largely unchecked. Those who fall ill become a burden on their families and are unable to make a contribution to the economy, which means in turn that there's less money around to pay for medical care. There is thus a vicious circle in which poor health is both a cause of *and* a result of poverty.

"In developing countries, breaking the vicious circle of poverty and ill health is an essential condition for economic development." *Poverty and Health*

What to do? One thing the world could do is allocate medical resources more effectively. It's estimated that about 90% of the world's burden of disease and illness receives only 10% of global spending on medical research. Most research is instead focused on treating illnesses that are more prevalent in the developed world. In part, that's because much government-funded research happens in developed countries. Similarly, pharmaceutical companies know they can make greater profits from selling drugs for illnesses that are common in the wealthy world, like obesity and heart disease, and not those of the developing world, like malaria and river blindness.

Expanding waistlines

Even in the developed world, health is an economic factor and, once again, the link between poor health and low income flows both ways. Take weight. Across the developed world, more and more people are overweight or obese, which carries serious medical risks – notably heart and lung diseases, diabetes, arthritis, some forms of cancer and gallbladder problems.

Just over 30% of Americans are reckoned to be obese, or abnormally overweight, double the number in 1980. The problem isn't unique to the United States. Despite the success of books like *French Women Don't Get Fat*, almost 1 in 10 French people is now obese, up from just over 1 in 20 in the early 1990s. Even the developing world is not immune: waistlines are also bulging in China and other parts of Asia as people adopt Western lifestyles and give up traditional diets.

"Because obesity is associated with higher risks of chronic illness, it is linked to significant additional health care costs." *OECD Factbook 2006*

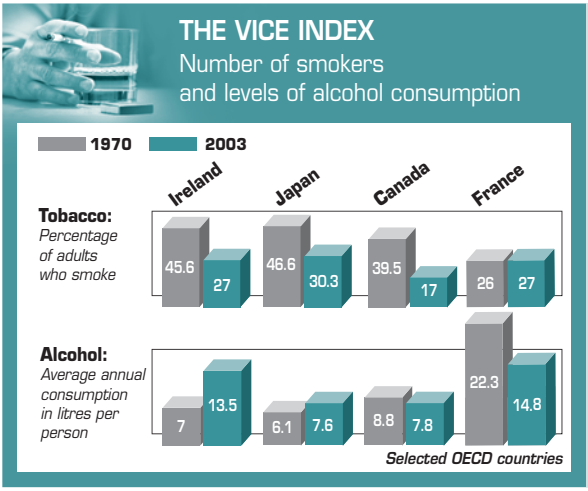
Many researchers believe that low income is directly linked to obesity and, in turn, that obesity and its associated health problems cut people's incomes. A hundred years ago, a cartoonist wanting to depict a scene in a factory might have shown the wealthy boss as a fat man and his poor employee as skinny. Today, those depictions would probably be reversed.

Paying for health

Improving medical care means that people with chronic illnesses like obesity will enjoy a reasonable quality of life for longer. That's good news, but it does raise a question: who will pay for their treatment? As many governments are finding, maintaining the health human capital of a nation is a little like throwing money into a bottomless pit. No amount of cash will ever satisfy demands for health care, and making decisions on what to treat and what not to treat can be a political minefield.

In the years to come, cost is likely to become an even bigger issue for OECD countries as populations age and the price of medical technologies goes on rising. At present, public spending on health and long-term care accounts for some 7% of GDP across the OECD area. By the middle of this century, that could almost double to 13%. In response, there's a trend among governments to look at ways of making people more responsible for their own health care.

> **"Rising demand is forcing governments to explore ways of transferring more responsibility to individuals."**
> David Bloom, *The Creative Society of the 21st Century*



Smoking is declining in most OECD countries, but the picture is more mixed when it comes to drinking: alcohol consumption is rising in about as many countries as it's falling.

Source: Health at a Glance 2005.

In part that means asking people to cover more of their medical bills by paying for their own insurance, but it also involves trying to educate people on ways to look after themselves better. That has already yielded some impressive results. Look, for example, at the fall in smoking in developed countries since the 1970s, which has been helped along by media coverage, punitive taxes on cigarettes, and public education campaigns.

Such campaigns clearly cost money, but as countries attempt to maintain and even develop their stocks of health human capital, they may find that prevention costs rather less than the cure.

Wider benefits

The benefits of human capital go beyond increased income and improved health. For communities, there can be wider spill-over benefits from the presence of individuals with high human capital. Some studies have shown that their presence raises incomes in communities as a whole. In effect, factories and offices with some highly educated employees are more productive, and the benefit of this is felt by *all* the workers in an enterprise regardless of their education levels.

Raising human capital is also sometimes cited as a way of reducing crime. The research is far from conclusive, although one American study showed that if 1% more men completed high-school education it would save the United States $1.4 billion a year by cutting the cost of crime to victims and society as a whole. Crime and violence are costly everywhere. The World Health Organization estimates that the annual cost of injuries from violence world wide is $500 billion.

Education seems to bring broader social benefits than just cutting crime, however. Studies show that citizens with higher levels of education also have higher levels of **civic and social engagement** – they're more involved in their communities and take practical steps to help the welfare of the societies in which they live. To understand why, let's look at another form of capital – **social capital**.

Some studies show "the social benefits of education are large – possibly larger than the direct labour market and macroeconomic effects." *The Well-being of Nations*

GLOBAL VIEW Travelling Medicine Show

The next time you're whiling away an hour in a hospital waiting room, try asking yourself this question: where did all these doctors and nurses come from? If you're in a large English-speaking country it's likely that many come from countries where good hospitals are scarce.

Around a quarter of doctors in Australia, Canada, the United Kingdom and the United States were trained overseas, according to one American study. Between 40% and 75% of those doctors come from poorer countries, mainly India, the Philippines and Pakistan.

Working overseas holds big attractions for doctors and nurses from poorer countries. They can earn more money, develop their skills and learn about state-of-the-art medical equipment and treatments that may not exist back home. That experience can be valuable if they go back to practise in their own country. But they don't need to go home to make a contribution. Remittances from doctors and nurses working overseas, like those of other workers, contribute to the economies of countries like the Philippines and Mexico. That money pays for new homes, starts up businesses and funds education for the next generation.

But there are downsides. The departure of highly trained medical staff eats into the human capital of developing nations. That means they have fewer resources to tackle diseases like HIV/AIDS and also means that their taxpayers are effectively subsidising the medical systems of far wealthier countries. And it can distort the way that medics in the developing world are trained. Spurred on by their student's travelling plans, medical schools may neglect to train them in treating illnesses found locally, focusing instead on diseases that are more prevalent in developed countries.

One OECD member, the United Kingdom, has responded with an ethical code that bars *active* recruiting of doctors in parts of the developing world, although doctors and nurses from such countries can still go and work in the United Kingdom. Any further steps by OECD countries will need to be carefully balanced to ensure that developing countries – and their medical graduates – maximise the benefits and minimise the drawbacks of globalisation's travelling medicine show.

What is social capital?

The concept of social capital became fashionable only relatively recently, but the term has been in use for almost a century while the ideas behind it go back further still. "Social capital" may first have appeared in a book published in 1916 in the United States that discussed how neighbours could work together to oversee schools. Author Lyda Hanifan referred to social capital as "those tangible assets [that] count for most in the daily lives of people: namely goodwill, fellowship, sympathy, and social intercourse among the individuals and families who make up a social unit".

That gives some sense of what's meant by social capital, although today it would be hard to come up with a single definition that satisfied everyone. For the sake of simplicity, however, we can think of social capital as the links, shared values and understandings in society that enable individuals and groups to trust each other and so work together.

In recent years, the term entered the popular imagination with the publication in 2000 of Robert Putnam's bestseller, *Bowling Alone: The Collapse and Revival of American Community*. Putnam argued that while Americans have become wealthier their sense of community has withered. Cities and traditional suburbs have given way to "edge cities" and "exurbs" – vast, anonymous places where people sleep and work and do little else. As people spend more and more time in the office, commuting to work and watching TV alone, there's less time for joining community groups and voluntary organisations, and socialising with neighbours, friends and even family.

To demonstrate this decline, Putnam looked at the way Americans play 10-pin bowling, a sport with a big following in the United States. He found that although bowling has never been bigger, Americans are no longer competing against each other in the once-popular local leagues. Instead, they are – literally – bowling alone. Putnam argued that the decline of the community networks that once led Americans to bowl together represents a loss of social capital.

Varieties of social capital…

There's much debate over the various forms that social capital takes, but one fairly straightforward approach divides it into three main categories:

- **Bonds**: Links to people based on a sense of common identity ("people like us") – such as family, close friends and people who share our culture or ethnicity.
- **Bridges**: Links that stretch beyond a shared sense of identity, for example to distant friends, colleagues and associates.
- **Linkages**: Links to people or groups further up or lower down the social ladder.

The potential benefits of social capital can be seen by looking at social bonds. Friends and families can help us in lots of ways – emotionally, socially and economically. In the United Kingdom, for example, a government survey found that more people secure jobs through personal contacts than through advertisements. Such support can be even more important in countries where the rule of law

Social capital is defined by the OECD as "networks together with shared norms, values and understandings that facilitate co-operation within or among groups". In this definition, we can think of networks as real-world links between groups or individuals. Think of networks of friends, family networks, networks of former colleagues, and so on. Our shared norms, values and understandings are less concrete than our social networks. Sociologists sometimes speak of norms as society's unspoken and largely unquestioned rules. Norms and understandings may not become apparent until they're broken. If adults attack a child, for example, they breach the norms that protect children from harm. Values may be more open to question; indeed societies often debate whether their values are changing. And yet values – such as respect for people's safety and security – are an essential linchpin in every social group. Put together, these networks and understandings engender trust and so enable people to work together.

is weak or where the state offers few social services: clans can fund the education of relatives and find them work, and look after orphans and the elderly.

"… Access to information and influence through social networks also confers private benefits on individuals and in some cases can be used by individuals or groups to exclude others and reinforce dominance or privilege."

The Well-being of Nations

But bonds can hinder people, too. Almost by definition, tightly knit communities, such as some immigrant groups, have strong social *bonds*, with individuals relying heavily for support on relatives or people who share their ethnicity. Simultaneously, their lack of social *bridges* can turn them into eternal outsiders from wider society, sometimes hindering their economic progress. Of course, social exclusion works both ways: tightly knit groups may exclude themselves, but they may also be excluded by the wider community.

Like almost any form of capital, social capital can also be put to ends that harm other people. The links and trust that allow drug cartels and criminal gangs to operate are a form of social capital, albeit one that the rest of us could do without. Companies and organisations can also suffer if they have the wrong sort of social capital – relationships between colleagues that are too inward-looking and fail to take account of what's going on in the wider world. Conversely, social capital can also help businesses. In *Bowling Alone*, Putnam attributes a large part of the success of Silicon Valley in the United States to formal and informal co-operation between start-up companies in the area.

"… Social capital provides the glue which facilitates co-operation, exchange and innovation."

The New Economy: Beyond the Hype

… and criticisms

The concept of social capital has its critics. One argument that's made is that Putnam got it wrong when he said social engagement is eroding. Instead, it may just be evolving. Rather than joining groups in our neighbourhoods, like bowling leagues, we're now joining groups made up of people who share our beliefs – fighting for envi-

ronmental protection or gay rights, for instance – rather than our locality. These groups – such as a branch of Greenpeace or Amnesty International – can exist in the "real" world. But they may also exist only virtually on the Internet, which is arguably creating whole new "communities" of people who may never physically meet but who share common values and interests. Not everyone, however, is convinced that these new forms of community have the same value as more traditional forms.

> **"In many countries there would seem merely to have been a shift from support of traditional organisations and institutions … to newer forms of voluntary association…"**
> Barrie Stevens *et al.* in *The Creative Society of the 21st Century*

Critics also argue that the term "social capital" is vague, hard to measure, poorly defined and perhaps not even a form of capital at all. (Economists often argue that capital involves making some form of sacrifice in the present – like studying in school to raise your human capital when you could be playing outside – to produce gains in the future.) Despite the debate, social capital is a concept that's attracting interest among politicians and policy makers. One reason for this is the increasing concern over marginalisation in our societies.

As we've seen repeatedly, the knowledge economy puts a premium on human capital and can worsen the job prospects of people with limited education, who are also often the least well off in our societies. Some analysts speak of the emergence of an "underclass" in developed countries, a group that is outside the mainstream of society and has little chance of re-entering it, both because of a lack of human capital and, arguably, the "right" sort of social capital. Indeed, that twin absence may not be a coincidence. A case can be made that human capital and social capital are inextricably linked.

Are human and social capital linked?

Human and social capital don't exist in isolation from each other. The two are linked in complex ways and, to some extent, feed into each other. In other words, social capital promotes the development

of human capital and human capital promotes the development of social capital, although the mechanics of the process are complex.

How social capital forms human capital

Education: school children all know that one of the greatest obstacles to taking an unofficial day off from class is the nosey neighbour. What they probably don't know is that their fear of being spotted playing truant represents social capital (the relationship between the child's family and its neighbours) helping to develop human capital (education).

> **"Communities with high levels of social capital tend to achieve better school outcomes than communities which face social fragmentation and isolation."**
>
> *The New Economy: Beyond the Hype*

The evidence for such links goes beyond the anecdotal tales of schoolchildren. The American sociologist James Coleman examined data on dropout rates from high schools in the 1960s to see if they were linked to levels of social capital within the children's families and communities. Measuring factors such as the amount of attention parents paid to their children and the relationship of the family to a wider community, he found that where there was more social capital children were more likely to stay on in school.

Paradoxically, social capital can hinder learning. Tightly knit communities who see little value in education may hold back children and adults who want to pursue learning.

Health: illness can be socially isolating, but the reverse is true, too. By damaging the mental well-being of people living on the edge of society, social isolation can itself cause illness, both physical and mental.

This idea isn't a new one: As long ago as the late 19th century, the French sociologist Emile Durkheim broke away from the conventional wisdom that suicide was the act of a single troubled individual and instead placed it in the context of the individual's relationship to wider society. He reasoned that people with weaker social ties are more likely to kill themselves.

The impact of social capital on health goes beyond suicide, and holds true for both young and old. Studies have shown that child

VIEWPOINT Robert Putnam

In this edited extract from an interview with the OECD Observer, **Robert Putnam** *discusses his response to the question,* "*How might the idea of social capital apply to education?*"

A few ideas spring to mind, though, I stress, these do not apply just to education, but to policy levers across a wide spectrum.

Let's start with human capital and social capital. These are clearly linked in a kind of virtuous circle, with education tending to increase social capital and at the same time social capital tending to increase educational performance. The decline in social capital in the US might have been even sharper had it not been for the quality and strength of our higher education. Still, more is needed. Civics courses, community service requirements and even extracurricular activities like sports and music, have been shown to have long-term effects on the civic engagement of those students who have been exposed to them.

Social capital formation also requires careful thought about space. Schools, but also offices, housing developments and entire cities need to be designed with an eye toward how architecture (in the large and the small) can encourage easy, casual connections among people who might otherwise find themselves in isolated niches.

Another lever relates to scale. Most research suggests that "smaller is better" from a social capital point of view, with smaller towns, smaller firms and smaller classrooms….

The trouble is that government policies can inadvertently "destroy" social capital. Think of the closing of post offices in small towns and rural areas. In the US, some have experimented with the notion of "social capital impact assessment" for major policy initiatives, so that, for instance, when putting in a major new expressway system, one at least considers how the result will affect social networks.

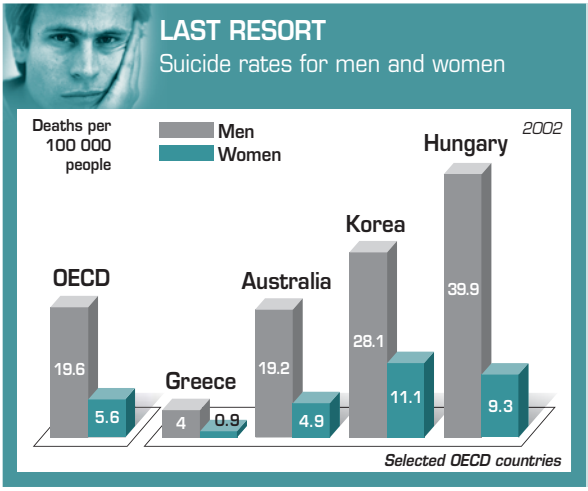
Governments should understand that investing in social capital requires time. As our labour markets develop – especially as more women go out to work – and as technology expands, greater flexibility on the part of employers can allow employees to better reconcile professional demands with the needs of family and community.

abuse is lower in areas where neighbours know one another. At the other end of the age scale, dementia and Alzheimer's are more prevalent among old people who are socially isolated. The effect shows up at other stages of our lives, too. One US study showed that lonely people in their 50s and 60s had higher blood-pressure readings than people who had good social contacts, while a Danish study showed that living alone left middle-aged people at almost twice the risk of suffering heart disease.

"Perhaps the most convincing evidence of the positive impact of social ties lies in the area of personal health."

The Well-being of Nations

Quite why social isolation should have such a significant impact on health is unclear, but it's probably the result of a number of factors. One is that social networks form a real support, supplying people with assistance and care that can reduce both mental and physical stress. Also, the enjoyment we get from being with friends and family may trigger physical reactions in our bodies that help us combat stress and stimulate our immune systems. Whatever the reasons, the results seem clear: if you want to stay healthy, get a friend.



Suicide claimed more than 130 000 lives in the OECD area in 2002. At least three times more men than women kill themselves, although the gender gap is narrower for attempted suicides.

For data in Excel™ format use the StatLink below

Source: Health at a Glance 2005.

StatLink: *http://dx.doi.org/10.1787/724646780077*

Can human capital form social capital?

Human capital is widely seen as contributing to social capital. At its most basic level, that's simply a reflection of the fact that education can help children and young people to recognise their responsibilities as members of society. On another level, there's evidence to show that, broadly speaking, the more time individuals spend in education the higher their levels of civic and social engagement.

Which brings us to an interesting paradox. We know that people in developed countries are spending more time in school. We also know that in those very same countries there's concern over an apparent decline in social engagement. (One symptom that's often pointed to is the long-term fall in voting levels.) How can we reconcile these apparent contradictions?

The idea that education helps boost civic and social engagement has been shown to be true in several studies, but just how that relationship works is still not fully understood. To explore it, it's necessary to go beyond simply looking at the length of time people spend in education – just going to school doesn't automatically make people more socially committed.

Instead, we need to look at what people actually do during all those years in the classroom. For example, a study of 28 countries in the late 1990s showed that allowing students to debate political and social issues in the classroom makes them more politically aware and more likely to want to become actively involved in civic affairs.

Also, to understand how education affects human behaviour – which is what we're essentially talking about here – we need to look not just at how much education each individual has but at how much they have *compared with* each other and at how much a society has *in total*. These differing levels appear to influence the way in which people become involved in society – whether it's voting, volunteering, joining a political party or organising a community festival, or any combination of these.

To see those relationships in action, consider the case of someone with a much higher level of education than others in their community. Some sociologists argue that the high social status of such a person may encourage them to become politically involved as they will be confident of getting close to the levers of power with relatively little trouble. Someone with lower levels of education may conclude

precisely the opposite and so shy away from political engagement, preferring instead to focus on community involvement.

The future for social capital

Sociologists and educators are still some way from fully understanding these complex relationships, and from finding ways to use education to develop social and civic engagement. Indeed, social capital is a concept that raises almost as many questions as it answers, and in the eyes of some it still has to prove its worth. At its most basic level, its value may lie mainly in offering a fresh perspective on how economic development affects, and is affected by, our societies. Or it may represent a substantial breakthrough in our understanding of key social relationships that underlie everything from growth to personal happiness.

> **"Research on social capital is at an early stage of development and cannot yet tell us with any degree of confidence whether any given programme or policy will fail or succeed in realising its social capital objectives."** *The Well-being of Nations*

So, is it too early for governments to try to find ways to boost social capital? Some governments seem to think not. In Ireland, for example, the government established a special task force to encourage people to become more involved in their communities through volunteering and joining local groups. The move was prompted in part by widespread concern that the outstanding economic growth of recent years has damaged traditionally strong community ties. Other governments, especially in the English-speaking world, are pursuing similar ideas.

The results of such initiatives – and their impact on society – remains to be seen. But one thing is clear: with the rapid pace of economic development set to continue, it will become ever more important for us to understand how human and social capital can potentially help equip individuals and societies to cope with the changes that lie ahead.

Further Reading from the OECD

➤ **Health at a Glance** *(annual)*
Standards of health have risen across OECD countries. The price? Spending on health care has never been higher. Faced with rising health costs, governments in many countries are seeking ways to slow health spending and to secure better value for money. *Health at a Glance* provides the latest comparable data and trends on different aspects of the performance of health systems in OECD countries. It provides striking evidence of large variations in indicators of health status and health risks, and in the costs, allocation of resources and outputs of health systems.

➤ **Society at a Glance** *(biannual)*
The OECD's biannual compendium of indicators shows the extent to which member countries are becoming more equal, more healthy and more cohesive. Covering such topics as employment, educational attainment, poverty, income inequality, life expectancy and social cohesion, *Society at a Glance* provides a statistical snapshot of social wellbeing in OECD countries, allowing users to analyse interlinked social issues in the context of a more complete representation of a country's social characteristics.

➤ **The Well-being of Nations** *(2001)*
In a rapidly changing world, the success of nations, communities and individuals may be linked, more than ever before, to how they adapt to change, learn and share knowledge. *The Well-being of Nations* helps clarify the concepts of human and social capital and evaluates their impact on economic growth and well-being. The evidence suggests that human and social capital can be of key importance in contributing to a wide range of positive outcomes, including higher income, life satisfaction and social cohesion. While there is limited scope for public policy to change the quality, stock and distribution of human and social capital in the short-term, the report looks at a number of areas in which public, private and voluntary actors may leverage long-term improvements in both human and social capital.

➤ **Poverty and Health (DAC Guidelines and Reference Series)** *(2003)*
Concern for the health of the poor is a central development issue. In addition to the intrinsic value of health for individuals, investment in health is an important and previously underestimated means of economic development. *Poverty and Health*, jointly published by the OECD and the World Health Organisation sets out the essential components of a pro-poor health approach. It provides a framework for action within the health system – and beyond it, through policies in other sectors and through global initiatives. Aimed at development agency staff working in policy and operations, the recommendations are also relevant for policy makers and planners in partner countries.

Also mentioned in this chapter:

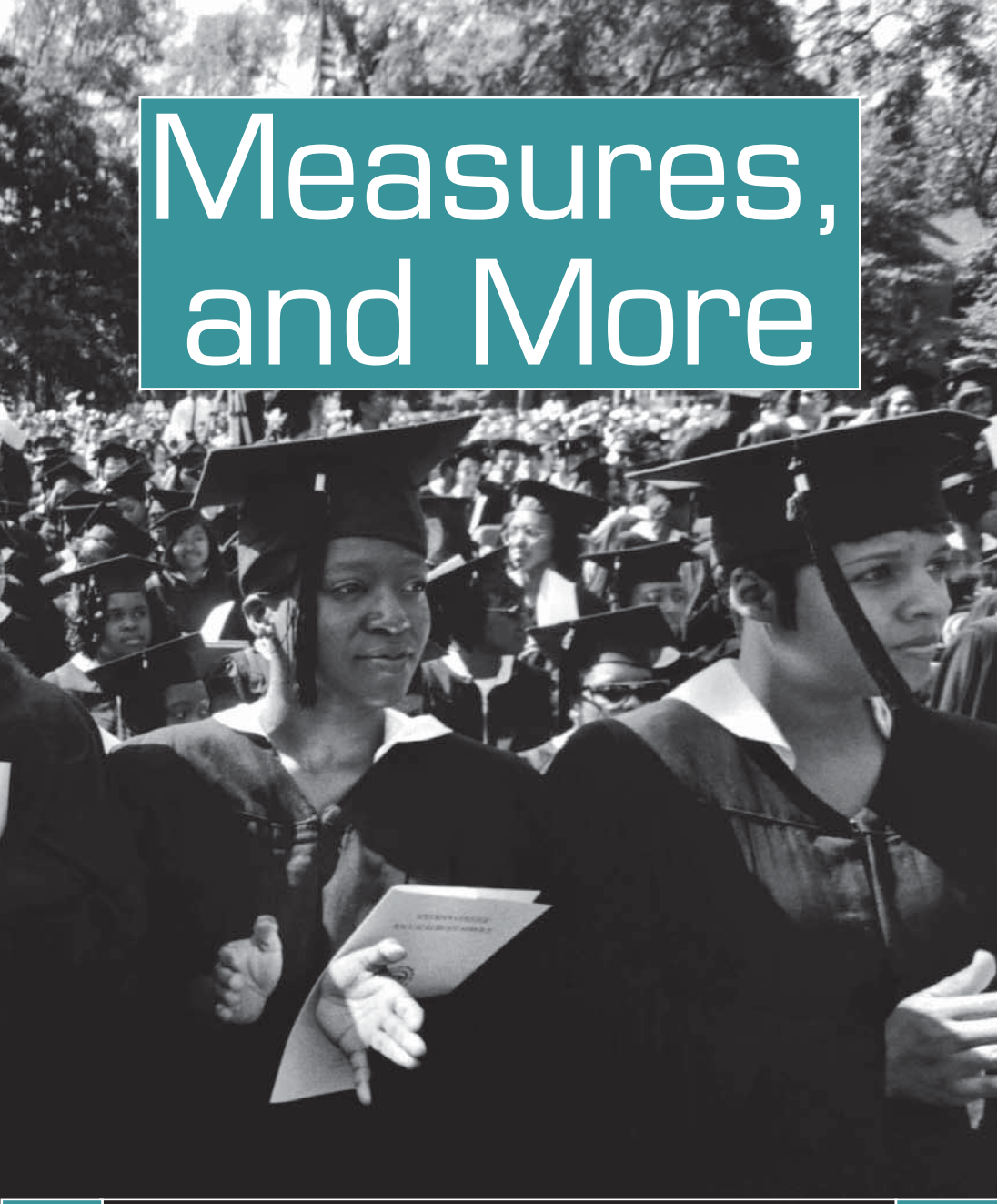
➤ OECD Factbook 2006: Economic, Environmental and Social Statistics

➤ The Creative Society of the 21st Century

➤ The New Economy: Beyond the Hype: The OECD Growth Project *(2001)*

7

Measures, and More



Earning a degree is one of life's milestone. But a piece of parchment can never truly convey an individual's full range of talents and abilities. Similarly, economic measures may give only a limited sense of the importance of human capital and social capital to a society's sense of well being.

By way of introduction…

We live in a world of measurement. Almost as soon as we're born, we're weighed and measured. After we die, we're measured one last time. In between, almost every aspect of our lives can be, and often is, measured: our physical development, our academic achievements, our value to an employer, our sporting ability.

Measurement matters. It lets doctors track a child's development, helps governments allocate resources to where they're needed, and allows voters to hold politicians accountable. And yet measurement is not a simple case of hard facts and cold numbers. It involves interpretation and sometimes controversial human decisions. In effect, by deciding to measure one thing, we're often deciding *not* to measure something else.

Take GDP, or gross domestic product, one of the most commonly used measures of economic activity. GDP essentially measures all the productive activity of an economy or, rather, all the productive activity that someone is willing to pay for. It doesn't measure things like the time parents spend in teaching their children to read – an activity that is clearly productive. Nor does it measure the value of leisure time.

In business, it's sometimes said that "if you can't measure it, you can't manage it". Like many business slogans, that contains a grain of truth, but it also omits a lot that a manager needs to know – team dynamics, colleagues' strengths and weaknesses – if she's to run a business effectively. Similarly, the failure – or inability – of our societies to measure some useful or productive activities means we sometimes don't place enough value on what we can't measure, and so don't do enough to foster activities that have social and environmental but not clear, direct monetary value.

If you haven't guessed already, this chapter is mainly about measurement. It looks first at how human and social capital are measured, and at what those measures include and – crucially – what they leave out. It then looks at how some states are supplementing standard economic measures, like GDP, with measures for human, social and other forms of capital to get a broader sense of their economic and social health. Finally, it takes a step back to briefly review again some of the key issues OECD countries are facing in further developing their citizens' human capital.

How do we measure human and social capital?

Some things are easy to measure. To take **direct** daily measurements of the temperature all we need is a thermometer. But what about finding out how hot it was 200 years ago? Unless somebody back then kept a record, all we can do is try to infer the temperature from naturally occurring "records". For example, we could cut down a tree and measure the variations in the size of its rings. The wider the ring, the warmer the year. The size of the ring is not telling us the temperature, however. It's a **proxy**, or stand-in, that lets us work out roughly what the temperature might have been back then.

Similarly, human and social capital are not directly measurable, either for individuals or across a society. To "measure" them we need to use proxies, and each of those proxies has benefits and drawbacks.

Measuring human capital…

Among the most common proxies for human capital are measuring the length of time people spend in school or the sort of education qualification they gain. The advantages are obvious: most countries keep extensive school records. Unfortunately, those records don't say what students learned (remember, what students are taught in school is distinct from what they may actually learn – everything from academic subjects to social values and attitudes to the ability to pursue learning on their own). Five years in one school may be more valuable than in another; similarly, the work needed to get a diploma in one national educational system may not match what's needed somewhere else.

An alternative approach is to test people for what they know, which is the idea behind OECD projects like PISA (see Chapter 4). Useful as they are for allowing international comparison, such assessments examine only a limited range of skills and competences, and, like any survey, their accuracy can be affected if the sample of the population that's surveyed is too small or unrepresentative.

We could also try to work out how much a country's stock of human capital is worth in economic terms. Typically, this would involve determining the levels of individuals' skills, compe-

tences and qualifications and then seeing how much they're earning. There are a few problems, though. Firstly, by focusing just on the *individual's* human capital we risk ignoring the *collective* skills and abilities in an organisation that can help raise everybody's productivity. Secondly, this sort of approach sees the world as a place where abilities automatically translate into a certain level of income. But from our own experience we know that there are a range of other factors – gender, temperament, personality – that may affect the value that organisations attach to people.

Equally, some attempts have been made to measure the **social value** of human capital. These estimates work by calculating how much it would cost to purchase the benefits of human capital (such as improved health) through alternative means. These approaches are interesting, and seem to show that increasing human capital brings strong social benefits. However, as with much else in this area, they suffer from questions over cause and effect: how much does human capital contribute to health, say, or health contribute to the development of human capital.

The bottom line is that human capital is hard to measure. Any individual measure can only tell us so much. For a fuller picture we need to combine a number of different indicators, but even then we need to understand the limitations of our understanding.

> **"Single-index measures of human capital need to be complemented with more specific measures based on direct measurement of knowledge and skills in organisations."**
>
> *The Well-being of Nations*

… and social capital

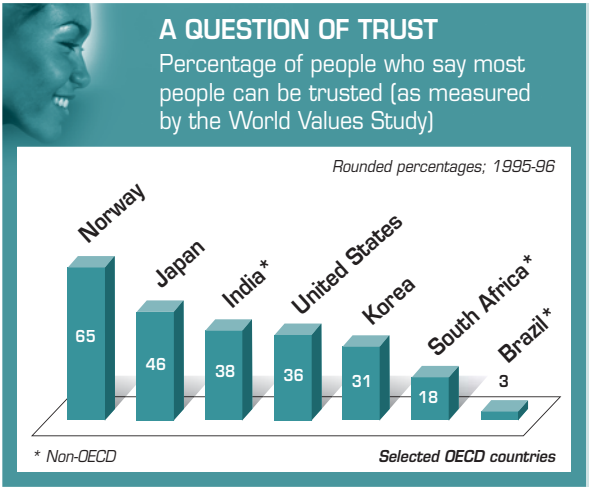
Measuring social capital is harder still, which is perhaps not too surprising for a concept that's still essentially in its infancy. Social capital is seen as deriving from a number of sources – networks, norms, values and understandings. Because of this, measures of it tend to be based on a wide range of elements, such as membership levels in organisations, voting numbers, the extent to which people say they visit friends, and surveys of people's feelings about the societies they live in.

The aim of all this is to produce a measure that's **comprehensive** and that includes a **balance** of objective measures (*e.g.* participation

in organisations), and subjective (*e.g.* survey responses). But no measure of social capital will be comprehensive enough to capture all the elements of how people in a society interact and work with each other.

Another approach is to measure things that *might* be seen as resulting from an absence of social capital – crime, murder rates, incivility. But it's important to stress the word "might". We just don't know enough about the causes of social capital or of social disorder to understand fully how the two are linked.

Finally, **trust** is sometimes seen as a good proxy of social capital. Trust itself can't be measured directly, but surveys can ask people to say whether they trust their fellow citizens. The problem is that trust in one culture may not mean the same thing in another. Also, trust is rarely spread out evenly across social groups. Some societies, such as France, have quite high levels of trust within families, but much lower levels in the wider community. Still, while trust is not a perfect proxy for social capital, many social scientists believe it holds up reasonably well against other, broader measures.



Trust is usually measured by asking people if they trust other people. Some researchers have also tried experiments to test levels of trust, such as dropping wallets in the street and seeing how many are returned.

Source: The Well-being of Nations.

Can we measure everything that matters?

The Himalayan kingdom of Bhutan is like nowhere else on earth. One of the world's least developed countries, it had no roads until the early 1960s, television was banned until the late 1990s, and even today there are strict limits on the number of tourists who may enter this remote, mountainous country each year.

Bhutan is largely Buddhist, a fact that touches almost every aspect of life, including its approach to economic growth. Buddhists generally regard the desire for material wealth as a barrier to spiritual enlightenment. As a result, Bhutan's leaders take a cautious approach to growth, which they believe is beneficial only if it also raises the sum of "Gross National Happiness," or GNH. If forced to choose between the two, they believe GNH should be put first.

How could such a measure be meaningfully defined or objectively calculated? Not easily, but the Centre for Bhutan Studies in the capital, Thimphu, says it is developing a GNH index. When it finally appears, it's likely to be based on a number of categories, including health and education levels, environmental diversity and cultural vitality.

This might all sound like just another example of Bhutanese eccentricity, but in fact the kingdom is not alone. Other countries, too, are working on sets of alternative indicators that could include measures of their levels of human capital, among other forms of capital. In part, these indicators are aimed at providing a broad picture of national well-being. But, crucially, they're also designed to indicate whether nations possess sufficient capital – in all its forms – to ensure sustainable economic development.

A word about GDP

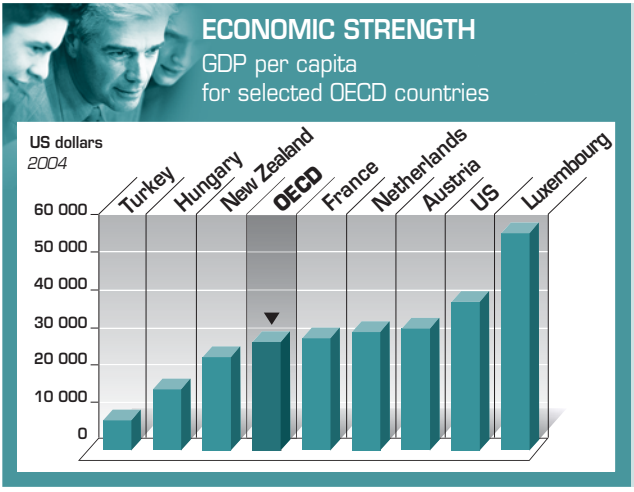
So, what's wrong with existing economic indicators? To quote Albert Einstein, "Not everything that can be counted counts, and not everything that counts can be counted".

In many respects, traditional indicators do an excellent job. Take GDP – gross domestic product – which expresses the size of an economy. As an indicator, GDP has a lot going for it. It's widely used and generally regularly updated, which makes it possible to compare the performance of economies internationally. It's also a broad measure, and so offers a comprehensive snapshot of the state of an

economy. In fact, GDP is so useful that it has effectively become the gold standard of economic progress: governments brag about it when it's rising, make excuses when it's not.

GDP has a lot to say about economic activity, but when it comes to whether this activity is good or bad for society, GDP is silent. Here's a strange fact: road accidents contribute to GDP. The cost of medical treatment for the victims, moving the wrecked car and buying a new one all help boost GDP. From the point of GDP, road accidents are good. From the point of view of society, they're bad.

In large part, that's because economic growth, as represented by increases in GDP, is a mix of the good and the bad. In general, it's positive, although not for its own sake. For instance, economic growth gives societies the resources to tackle poverty, provide education and improve health services, and widens the choices available to governments and societies. For individuals, it can also mean increasing income which allows them to invest in their own and their family's health, wealth and happiness. But if there are winners there may also be losers: individuals and communities who, because they lack the resources to compete in an expanding economy, find themselves trapped in a cycle of poverty.



GDP per capita – which divides the total size of a country's economic output by the size of the population – is widely used as an indicator of economic strength.

For data on all 30 OECD countries use the StatLink below

Source: OECD Factbook 2006.

StatLink: *http://dx.doi.org/10.1787/744188366804*

> **"...Growth in economic output enlarges the range of human choice... rather than serving as a goal in itself."**
>
> *The Well-being of Nations*

None of this complexity is expressed in GDP. (To be fair, GDP is just one of a number of indicators that economists use. Others, such as the Gini coefficient, do offer insights into issues like income inequality.) And this is one of the reasons why there's growing interest in producing alternative indicators that might give a broader understanding of the health of societies, and their ability to continue growing.

Measures of all things

Much of the impetus for this comes from the concept of **sustainable development**. The idea behind sustainable development is that our generation's efforts to meet its needs should not restrict the ability of future generations to meet theirs. To ensure that happens, we will need to pass on to the next generation both a clean environment and societies in which everyone can meet their potential.

Not surprisingly, sustainable development tends to emphasise environmental issues, but there's also concern for the health of societies and for human capital, in part because education plays such a large role in determining people's lifetime opportunities.

Just as in Bhutan, alternative indicators are typically based on measures for many different things – from the state of people's health to environmental resources to social inequality, and so on. In many ways, that's both a strength and a weakness. On the one hand, it offers the chance to draw up a broad, representative measure of a country's real "wealth", in all its senses. On the other hand, it raises the question of what to include, and how to balance the importance of one element against another.

> **"Progressing towards sustainable development implies that the objectives of increasing economic efficiency and material wealth must take into account social and environmental objectives."**
>
> Candice Stevens, *Measuring Sustainable Development*

There are other issues: if indicators contain too many elements, they risk becoming incomprehensible, and thus effectively irrelevant; too few and they may not paint a truly representative picture.

Also, a single headline figure derived from multiple indicators for environmental, social and human capital can conceal as much as it reveals; in effect, it risks treating things like environmental resources and human capital as interchangeable even when clearly they're not. And, as with any social or economic indicator, there are plenty of practical difficulties in garnering accurate and up-to-date figures.

Despite the difficulties, many OECD countries have developed, or are developing, sets of alternative indicators to complement measures like GDP. In Canada, for example, a state-appointed commission has recommended setting up a system for evaluating the country's resources in terms of natural, human and social capitals. It argues that such assets are "at least as important to the future economy as factories and machinery". Other countries, too, take a "capital" approach, which offers potentially useful insights into the state of both their environments and their societies.

It's likely that in the years to come, as pressure grows on our environment and amid a rising appreciation for the economic importance of human capital, more and more governments will consider such approaches.

By way of conclusion

What would Davies Giddy make of our world today? In 1807, Mr. Giddy, a member of the British parliament, was campaigning hard against a bill that would have provided children aged between 7 and 14 with two years of free education. According to Mr. Giddy, educating the poor would be "prejudicial to their morals and happiness; it would teach them to despise their lot in life, instead of making them good servants in agriculture, and other laborious employment to which their rank in society had destined them…"

The bill never became law, but Mr. Giddy's victory was relatively short-lived. Today, 200 years later, young people in the United Kingdom spend an average of 12.6 years in education, just slightly above the average for the OECD area of 11.9 years. A few OECD countries, such as Mexico, Portugal and Turkey, still have

some way to go before catching up on that average, but by and large most developed countries are nearing the limits for how long young people can spend in education. Already, young people in most OECD countries are offered free education until about the age of 18; and even after that, in many countries they can go on to avail of free university education.

So, in much of the developed world, the era of huge expansion in mass education is nearing an end. To some extent, that will make one of the standard measures of human capital – the number of years people spend in education – less useful. Increasingly, differences in human capital between countries will depend not on quantity of education but on **quality** – or the success of education systems at developing people's full talents and abilities across the course of their lives.

A challenge for education

The roots of this process can begin in the preschool years. As more and more women go out to work, the needs of preschoolers are becoming a bigger issue for societies. But instead of regarding this as a problem, we might do well to see it as an opportunity. Well-planned care and education for preschoolers has the potential to help ease the impact of poverty on young lives. In particular, preschool education can help children from immigrant backgrounds to learn new languages and to feel as if they belong in the societies in which they're growing up.

> **"In several countries, policies to expand access to early childhood services for immigrant and ethnic minority groups have been pursued in order to expose children and families to the language and traditions of mainstream society, and provide opportunities for parents to establish social contacts and networks."**
>
> *Starting Strong I*

And then there's the school years, that long period in our lives in which we go from being a child dependent on our parents to a young adult stepping out into the world. How does school prepare us for this change? Not always as well as it might do. The social and economic disadvantages of family poverty can be set in stone during these years, determining people's futures. In Germany, for example, schools may effectively place children as young as 10 on either a

vocational or academic track. Regardless of their early respective educational performance, a child from a white-collar family is four times more likely to go on the university track than one from a blue-collar family.

There's nothing wrong with vocational education. Indeed, Germany deserves praise for keeping it alive at a time when it has been allowed to wither away elsewhere, depriving young people of an important educational alternative. But the choice of whether a child will eventually go on to university should surely be determined by his or her talents and abilities, not by family background.

Our social background also tends to be too much of a factor in determining whether or not we go with education and training after school. As populations age, many governments want workers to postpone retirement. To be able to do that, though, workers will need to go on updating their skills and abilities; in many cases, people from poorer backgrounds will only be able to do that with considerable help from the state, and that will cost money.

Indeed, societies face some tough decisions on how they fund the development of human capital. The resources available are limited, and how they are allocated will be extremely important for societies in the years to come.

At the preschool level, for example, many countries have already begun to spend more on care and education, but it's probably still not enough. When it comes to schools, there may be a temptation to cut back funding as demographic changes reduce the size of the student population. But that could mean missing out on opportunities to innovate in the classroom, and to develop education alternatives for young people whose needs are not currently being met.

At the tertiary level, there are more and more calls for students to pay a greater share of the cost of their education. The argument is that as graduates gain such a big income boost from having a degree, it's only fair that they should pay some of the price. That may well be a reasonable response, but fees must be levied in ways that don't make it even harder than it currently is for young people from poor families to go to university.

Looking ahead

By raising people's human capital, education has already played a significant role in bringing developed countries to where they are

today. Economies and individuals are wealthier than ever, and people are healthier and living longer.

But where will this long process of increasing human capital take us next? Will we choose to create "winner takes all" societies, in which the talented and educated pile up economic and education resources, leaving everyone else far behind? Will economic inequality – in some ways a powerful incentive for people to improve their lots – turn into a trap from which those who lack educational, social and economic capital cannot escape?

Or will we choose to create societies that try to give everyone, regardless of their gender, class, or ethnic background, a fair chance of competing? Will we accept that while every society has its winners and its losers, it's just not acceptable for children to be deprived of the chance to make the most of their abilities simply because of their social background, nor to be deprived of the opportunity to fully contribute to the well-being of the society in which they live.

The choice is surely ours.

Further Reading from the OECD

➤ **Economic Policy Reforms: Going for Growth 2006** *(2006)*
Across the OECD, governments are seeking to undertake structural reforms to strengthen their economic growth. *Going for Growth 2006* takes stock of the progress made in implementing policy reforms to improve labour productivity and to get more people working that were identified as priorities in the 2005 edition. It also provides comparative indicators covering structural policy areas such as labour markets, education and product market regulation. A special feature is the focus on innovation, a key driver of economic growth. The book provides comparative indicators on performance and relevant policies in this area, and specific policy recommendations for each OECD country to improve innovation performance. There are also two analytical chapters covering regulation of financial systems and economic growth and alternatives to GDP as a measure of well-being.

➤ **OECD Factbook** *(annual)*
Published annually, the *OECD Factbook* offers a comprehensive and dynamic statistical update on the economies, environments and societies of OECD member countries and selected non-member countries. More than 100 indicators cover a wide range of areas: economy, agriculture, education, energy, environment, foreign aid, health and quality of life, industry, information and communications, population/labour force, trade and investment, taxation, public expenditure and research and development. There are short introductions to each indicator, as well as detailed definitions, comments on the comparability of the data, assessments of long-term trends and references for further information. A dynamic link (StatLink) is provided for each table directing readers to websites where the corresponding data can be found in Excel™ format.

➤ **Understanding Economic Growth: A Macro-level, Industry-level, and Firm-level Perspective** *(2004)*
A unique tool providing facts, figures and analysis of economic growth in OECD countries. The analysis focuses on growth patterns during the last decade and identifies the fundamental drivers of growth. It also looks at how and why countries react differently to these drivers. It examines growth at the macroeconomic level, industry level and firm level and also analyses the contribution of information technology (IT) at each of these levels. Packed with over 50 tables and figures, *Understanding Economic Growth* provides unique data to better understand the reality of economic growth.

Also mentioned in this chapter:

➤ The Well-being of Nations: The Role of Human and Social Capital *(2001)*

➤ Measuring Sustainable Development, OECD Statistics Brief *(September 2005)*

➤ Starting Strong: Early Childhood Education and Care *(2001)*

Additional Statistics

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Abbreviations used in these tables:

c: Too few observations to provide reliable estimates.

m: Data not available.

A-1: EMPLOYMENT RATES FOR WOMEN

Share of women of working age (15 to 64 years) in employment

	1990	1992	1994	1996	1998	2000	2002	2004
Australia	57.1	55.5	56.4	58.7	59.4	61.8	62.1	62.6
Austria	..	..	58.8	58.2	58.5	59.4	61.0	60.7
Belgium	40.8	44.6	44.8	45.6	47.5	51.9	51.1	53.0
Canada	62.7	60.9	61.0	61.4	63.3	65.6	67.0	68.4
Czech Republic	..	..	61.0	60.6	58.7	56.9	57.1	56.0
Denmark	70.6	70.4	67.1	67.4	70.3	72.1	72.6	72.0
Finland	71.5	63.8	58.7	59.5	61.3	64.5	66.1	65.5
France	50.3	50.8	50.8	51.8	52.4	54.3	55.8	56.7
Germany	52.2	55.7	54.7	55.5	56.3	58.1	58.8	59.9
Greece	37.5	36.2	37.1	38.5	40.3	41.3	43.1	45.5
Hungary	..	52.3	47.8	45.5	47.3	49.6	49.8	50.7
Iceland	..	74.0	74.6	76.5	78.3	81.0	79.8	79.4
Ireland	36.6	37.1	38.9	43.3	48.2	53.3	55.2	55.8
Italy	36.2	36.5	35.4	36.0	37.3	39.6	42.0	45.2
Japan	55.8	56.9	56.5	56.8	57.2	56.7	56.5	57.4
Korea	49.0	48.7	49.8	51.1	47.3	50.1	52.0	52.2
Luxembourg	41.4	46.2	44.9	43.6	45.6	50.0	51.5	50.6
Mexico	..	35.1	36.2	37.4	40.1	40.1	39.9	41.3
Netherlands	47.5	51.0	52.6	55.2	59.4	62.6	64.7	..
New Zealand	58.6	57.5	59.9	63.4	62.1	63.5	65.3	66.5
Norway	67.2	66.7	67.5	70.4	73.6	74.0	73.9	72.7
Poland	..	53.1	51.9	51.8	52.2	48.9	46.4	46.4
Portugal	55.4	56.1	55.0	55.6	58.3	60.5	60.8	61.7
Slovak Republic	..	..	52.6	54.6	53.5	51.5	51.4	50.9
Spain	31.8	32.5	31.5	33.8	36.5	42.0	44.9	49.0
Sweden	81.0	76.3	70.7	69.9	69.4	72.2	73.4	71.8
Switzerland	..	67.0	65.6	67.2	68.8	69.3	71.5	70.3
Turkey	32.9	31.9	30.4	30.3	28.5	26.2	26.6	24.3
United Kingdom	62.8	61.9	62.1	63.3	64.2	65.6	66.3	66.6
United States	64.0	63.6	65.2	66.3	67.4	67.8	66.1	65.4
OECD total	53.9	52.7	52.9	53.7	54.5	55.3	55.3	55.6

Source: OECD Factbook 2006. StatLink: *http://dx.doi.org/10.1787/178241456066*

Rising employment rates among women are leading societies to rethink care for pre-school children.

A-2: CHANGING SCHOOL POPULATION, 2005 TO 2015

Demographic trends and indicative impact on educational expenditure, student enrolments and graduate numbers

	Expected change in size of population (2005 = 100)						Illustrative impact of demographic change			
	Age group						Estimated percentage change in			
	0-4	5-14	15-19	20-29	30+	All persons	… total expenditure on educational institutions	… enrolments in primary and lower secondary education	… number graduates from upper secondary education	… numbers of new tertiary graduates
Australia	107	96	97	110	116	110	-0	-4	-3	10
Austria	93	85	88	102	105	101	-10	-15	-12	2
Belgium	94	93	94	100	104	101	-5	-7	-6	0
Canada	102	91	94	108	114	109	m	-9	-6	8
Czech Republic	97	88	70	80	108	99	-18	-12	-30	-20
Denmark	91	93	115	109	103	102	1	-7	15	9
Finland	101	90	95	100	106	102	-5	-10	-5	-0
France	95	102	96	97	106	103	-1	2	-4	-3
Germany	99	86	86	104	102	100	-9	-14	-14	4
Greece	94	96	89	76	109	101	m	-4	-11	-24
Hungary	91	85	81	82	105	97	-16	-15	-19	-18
Iceland	95	95	100	102	115	108	m	-5	0	2
Ireland	104	119	91	85	123	113	m	19	-9	-15
Italy	87	97	96	85	103	100	-6	-3	-4	-15
Japan	93	96	93	79	105	100	-10	-4	-7	-21
Korea	90	71	95	88	116	103	-18	-29	-5	-12
Luxembourg	103	105	119	109	115	113	m	5	19	9
Mexico	91	92	100	106	132	111	-4	-8	-0	6
Netherlands	88	95	103	109	105	103	-1	-5	3	9
New Zealand	97	94	94	117	111	107	-1	-6	-6	17
Norway	97	92	108	114	106	105	1	-8	8	14
Poland	101	81	69	82	111	99	-20	-19	-31	-18
Portugal	93	100	100	79	110	103	-4	0	0	-21
Slovak republic	97	79	71	83	113	100	-20	-21	-29	-17
Spain	99	116	91	66	111	103	m	16	-9	-34
Sweden	106	93	84	117	104	103	-2	-7	-16	17
Switzerland	93	83	96	108	104	101	-7	-17	-4	8
Turkey	97	101	108	100	128	113	2	1	8	-0
United Kingdom	100	91	92	113	105	103	-4	-9	-8	13
United States	105	103	100	113	111	109	7	3	0	13
OECD average	97	94	94	97	110	104	-6	-6	-6	-3

Source: Education at a Glance 2006.

StatLink: *http://dx.doi.org/10.1787/850142374718*
(please consult for notes)

Demographic changes mean student numbers will fall in many OECD countries, which will affect how education is funded.

A-3: EXPANSION OF THIRD-LEVEL EDUCATION

Tertiary attainment for age group 25-64, as a percentage of the population of that age group

	1991	1992	1993	1994	1995	1996
Australia	21.8	..	22.5	23.1	24.3	24.8
Austria	6.7	7.0	..	7.7	7.9	8.1
Belgium	19.6	20.2	..	22.3	24.6	23.9
Canada	29.9	30.8	..	34.2	34.9	35.6
Czech Republic	..	..	..	10.1	10.6	10.4
Denmark	18.3	19.2	..	19.6	20.4	20.9
Finland	25.0	25.9	..	26.8	27.7	28.4
France	15.2	16.0	17.1	17.8	18.6	19.2
Germany	20.5	20.1	..	20.4	22.2	21.8
Greece	..	..	..	17.9	17.4	18.9
Hungary	..	..	..	..	..	13.4
Iceland	..	..	..	..	..	20.8
Ireland	15.9	17.0	..	18.6	19.9	22.6
Italy	6.1	6.4	..	7.5	7.9	8.1
Japan	..	..	..	..	..	..
Korea	14.4	16.1	17.5	17.8	18.6	19.6
Luxembourg	..	..	..	..	18.1	19.0
Mexico	..	..	..	..	11.9	13.2
Netherlands	19.6	20.9	..	21.4	22.0	22.5
New Zealand	22.9	23.6	..	23.2	25.3	..
Norway	24.8	25.3	..	27.4	28.6	26.9
Poland	..	..	..	..	9.9	..
Portugal	6.7	..	..	10.7	11.0	10.9
Slovak Republic	..	..	..	11.3	11.1	11.5
Spain	9.9	13.1	..	15.0	16.1	17.5
Sweden	25.2	25.8	..	27.0	28.3	27.4
Switzerland	20.3	21.0	..	21.4	21.1	21.9
Turkey	6.3	4.8	..	7.0	8.4	..
United Kingdom	16.3	18.5	..	21.3	21.9	22.3
United States	30.1	30.2	..	32.2	33.3	33.9
OECD average	17.9	19.0	..	19.2	19.3	20.1

Source: Factbook 2006

Third-level education is continuing to expand. One result is that older workers often have lower levels of education than younger colleagues.

1997	1998	1999	2000	2001	2002	2003
24.3	25.4	26.7	27.5	29.0	30.8	31.3
10.6	10.9	10.9	13.9	14.1	14.5	14.5
25.1	25.3	26.7	27.1	27.6	28.1	29.0
37.3	38.1	39.2	40.0	41.6	42.6	44.0
10.6	10.4	10.8	11.0	11.1	11.9	12.0
..	25.4	26.5	25.8	26.5	27.4	31.9
29.4	30.2	31.3	32.0	32.3	32.6	33.3
20.0	20.6	21.5	22.0	23.0	24.0	23.4
22.6	23.0	22.9	23.5	23.2	23.4	24.0
15.5	16.8	17.5	17.6	17.8	18.3	18.3
12.2	13.2	13.5	14.0	14.0	14.2	15.4
20.9	21.0	22.4	23.2	24.6	26.3	26.3
22.8	21.1	20.5	21.8	23.7	25.4	26.3
..	8.6	9.3	9.4	10.0	10.4	10.4
30.4	30.4	31.6	33.4	33.8	36.3	37.4
19.8	22.5	23.1	23.9	25.0	26.0	29.5
..	..	18.3	18.3	18.1	18.6	14.9
13.8	13.6	13.4	14.6	15.0	15.3	15.4
..	24.2	22.6	23.4	23.2	24.4	24.4
25.8	26.6	27.0	28.0	29.2	29.8	30.9
25.8	27.4	27.5	28.4	30.2	31.0	31.0
10.2	10.9	11.3	11.4	11.9	12.6	14.2
..	8.3	8.7	8.9	9.1	9.3	10.8
10.5	10.3	10.1	10.4	10.9	11.0	11.8
18.6	19.7	21.0	22.6	23.6	24.4	25.2
27.5	28.0	28.7	30.1	31.6	32.6	33.4
22.2	22.9	23.6	24.2	25.4	25.2	27.0
7.6	7.5	8.1	8.3	8.4	9.1	9.7
22.7	23.7	24.8	25.7	26.1	26.9	28.0
34.1	34.9	35.8	36.5	37.3	38.1	38.4
20.8	20.7	21.2	21.9	22.6	23.4	24.1

StatLink: *http://dx.doi.org/10.1787/380018442476*

A-4 RETURNS ON EDUCATION IN TERMS OF INCOME

Relative earnings of the population with income from employment (2004 or latest)
(Upper secondary and post-secondary non-tertiary education = 100)

Level of education		Below upper secondary		Post-secondary, non-tertiary	
		25-64	30-44	25-64	30-44
Australia	2001	77	75	92	92
Belgium	2003	89	91	m	m
Canada	2003	78	78	102	104
Czech Republic	2004	73	75	m	m
Denmark	2003	82	81	107	104
Finland	2003	94	92	m	m
France	2004	85	85	m	m
Germany	2004	88	82	109	112
Hungary	2004	73	75	120	119
Ireland	2002	76	77	98	96
Italy	2002	78	80	m	m
Korea	2003	67	77	m	m
Luxembourg	2002	78	76	117	120
Netherlands	2002	84	84	m	m
New Zealand	2004	75	73	103	101
Norway	2003	80	89	117	120
Poland	2004	78	80	99	100
Spain	2004	85	84	c	c
Sweden	2003	87	83	120	122
Switzerland	2004	74	81	108	107
United Kingdom	2004	67	69	m	m
United States	2004	65	66	110	110

1. Tertiary-type B education aims to give students practical, technical or occupational skills for direct entry into the labour market.
2. Tertiary-type A education is largely theory-based and designed to give students qualifications for further research or direct entry into high-skill professions, such as medicine. (Category also includes advanced research programmes.)

Source: Education at a Glance 2006.

Spending longer in education carries a cost, but it produces a return in terms of increased income.

Tertiary-type B[1]		Tertiary-type A[2]		All tertiary	
25-64	30-44	25-64	30-44	25-64	30-44
111	107	143	146	133	135
114	116	148	148	130	130
112	112	169	172	140	141
126	145	185	193	182	191
115	117	130	124	127	123
122	115	173	162	148	138
125	130	163	167	147	151
128	129	163	153	153	146
138	144	218	222	217	222
113	116	160	160	144	145
m	m	153	137	153	137
111	122	156	161	141	148
129	136	165	171	145	152
m	m	m	m	148	147
102	105	147	142	129	129
141	147	125	134	126	135
154	166	166	170	163	169
104	105	144	141	132	130
106	101	139	134	128	124
142	141	177	175	164	162
124	122	174	181	158	162
114	114	181	182	172	173

StatLink: *http://dx.doi.org/10.1787/815010258467*

A-5 RELATIONSHIP BETWEEN ADULT TRAINING AND EXISTING EDUCATION

Participation rate and expected number of hours in non-formal job-related education and training by level of educational attainment, 2003

		Participation rate during one year			
Level of education		Lower secondary	Upper secondary[1]	Tertiary	All levels
Austria		5	19	37	19
Belgium		6	15	30	16
Canada[2]		6	20	35	25
Czech Republic		3	10	21	11
Denmark		22	36	54	39
Finland		20	32	54	36
France		9	19	33	19
Germany		3	10	24	12
Greece		n	3	11	4
Hungary		1	4	9	4
Ireland		5	10	20	11
Italy		1	6	12	4
Luxembourg		3	12	27	12
Netherlands		5	11	13	9
Poland		1	7	29	9
Portugal		4	15	27	7
Slovak Republic		6	19	37	19
Spain		3	7	14	6
Sweden		24	37	57	40
Switzerland		8	27	44	29
United Kingdom		7	26	46	27
United States		12	32	56	37
OECD average	All	7	17	31	18
	Males	8	18	31	19
	Females	6	17	32	17

1. And post-secondary, non-tertiary.
2. Year of reference 2002.

Source: Education at a Glance 2006.

Workers who have completed third-level education are more likely to receive formal job-related training.

Expected hours of participation between 25 and 64				Average hours of work	Ratio (%) of hours in training to annual hours of work
Lower secondary	Upper secondary[1]	Tertiary education	All levels		
140	420	767	422	1550	27
293	437	719	469	1542	30
128	517	796	586	1740	34
34	142	556	182	1986	9
719	836	1,230	934	1475	63
497	530	1,003	669	1718	39
450	692	1,061	713	1441	49
130	390	650	398	1441	28
c	c	312	106	1936	5
c	270	402	253	m	m
82	185	392	203	1646	12
26	111	254	82	1591	5
c	189	402	176	1592	11
216	308	322	283	1354	21
16	90	513	139	1984	7
232	c	c	343	1678	20
43	178	721	225	1931	12
102	261	503	237	1800	13
350	562	917	622	1563	40
212	621	1,301	723	1556	46
103	297	480	315	1672	19
c	374	746	471	1822	26
210	371	669	389	1668	25
243	393	684	405	m	m
241	370	686	384	m	m

StatLink: *http://dx.doi.org/10.1787/558317523300*

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OECD PUBLICATIONS, 2, rue André-Pascal, 75775 PARIS CEDEX 16
PRINTED IN FRANCE
(01 2007 10 1 P) ISBN 92-64-02908-7 – No. 83931 2007