



Human capital

The people's champion

Gary Becker made humans the central focus of economics. The second in our series on big economic ideas

WHY do families in rich countries have fewer children? Why do companies in poor countries often provide meals for their workers? Why has each new generation spent more time in school than the one that came before? Why have earnings of highly skilled workers risen even as their numbers have also increased? Why should universities charge tuition fees?

This is an incredibly diverse array of questions. The answers to some might seem intuitive; others are more perplexing. For Gary Becker, an American economist who died in 2014, a common thread ran through them all: human capital.

Simply put, human capital refers to the abilities and qualities of people that make them productive. Knowledge is the most important of these, but other factors, from a sense of punctuality to the state of someone's health, also matter. Investment in human capital thus mainly refers to education but it also includes other things—the inculcation of values by parents, say, or a healthy diet. Just as investing in physical capital—whether building a new factory or upgrading computers—can pay off for a company, so investments in human capital also pay off for people. The earnings of

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well-educated individuals are generally higher than those of the wider population.

All this might sound obvious. As far back as Adam Smith in the 18th century, economists had noted that production depended not just on equipment or land but also on peoples' abilities. But before the 1950s, when Becker first examined links between education and incomes, little thought was given to how such abilities fit with economic theory or public policy.

Instead, economists' general practice was to treat labour as an undifferentiated mass of workers, lumping the skilled and unskilled together. To the extent that topics such as training were thought about, the

view was pessimistic. Arthur Pigou, a British economist who is credited with coining the term "human capital", believed there would be an under-supply of trained workers because companies would not want to teach skills to employees only to see them poached by rivals.

After the second world war, when America's GI bill helped millions complete high school and university, education started to receive more attention from economists, Becker among them. The son of parents who had never got beyond the eighth grade but who filled his childhood home with discussions about politics, he wanted to investigate the structure of society. Lectures by Milton Friedman at the University of Chicago, where Becker completed his graduate studies in 1955, showed him the analytical power of economic theory. Doctoral degree in hand, Becker, then in his mid-20s, was hired by the National Bureau of Economic Research to work on a project calculating returns on schooling. What seemed a simple question led him to realise that no one had yet fleshed out the concept of human capital. In subsequent years he developed it into a full-fledged theory that could be applied to any number of questions and, soon enough, to issues previously seen as outside the realm of economics, from marriage to fertility.

One of Becker's earliest contributions was to distinguish between specific and general human capital. Specific capital arises when workers acquire knowledge directly tied to their firms, such as how to use proprietary software. Companies are happy to pay for this kind of training because it is not transferable. By contrast, as Pigou suggested, firms are often reluctant to stump up for general human capital: teach employees to be good software programmers and they may well jump ship to whichever company pays them the most.

But this was just the beginning of his analysis. Becker observed that people do acquire general human capital, but they often do so at their own expense, rather than that of employers. This is true of university, when students take on debts to pay for education before entering the workforce. It is also true of workers in almost all industries: interns, trainees and junior employees share in the cost of getting them up to speed by being paid less.

Becker made the assumption that people would be hard-headed in calculating how much to invest in their own human capital. They would compare expected future earnings from different career choices and consider the cost of acquiring the education to pursue these careers, including time spent in the classroom. He knew that reality was far messier, with decisions plagued by uncertainty and complicated motivations, but he described his model as an "economic way of looking at life". His ►►

► simplified assumptions about people being purposeful and rational in their decisions laid the groundwork for an elegant theory of human capital, which he expounded in several seminal articles and a book in the early 1960s.

His theory helped explain why younger generations spent more time in schooling than older ones: longer life expectancies raised the profitability of acquiring knowledge. It also helped explain the spread of education: advances in technology made it more profitable to have skills, which in turn raised the demand for education. It showed that under-investment in human capital was a constant risk: young people can be short-sighted given the long payback period for education; and lenders are wary of supporting them because of their lack of collateral (attributes such as knowledge always stay with the borrower, whereas a borrower's physical assets can be seized). It suggested that there was no fixed number of good jobs but that highly paid work would increase as economies produced more skilled graduates who generated more innovation.

The backlash

Human capital could also be applied to topics beyond returns to individuals from education. The idea was a powerful variable in explaining why some countries fared far better than others: to promote income growth over many years, heavy investment in schooling was necessary. It shed light on why firms in poor countries tended to be more paternalistic, providing dormitories and canteens: they reaped immediate productivity gains from rested, well-fed workers. It informed big increases in the numbers of women studying law, finance and science since the 1950s: the automation of much household work meant that women could invest more in building their careers. And it helped explain the shrinkage of families in wealthy countries: if increasing value is placed on human capital, parents must invest more in each child, making large families costly.

But any theory that attempts to explain so much is bound to encounter pushback. Many critics bristled at Becker's market-driven logic, which seemed to reduce people to cold, calculating machines. Although "human capital" is an unsightly term—in 2004 a panel of German linguists deemed *Humankapital* the most offensive word of the year—it is the task of social science to identify and refine concepts that would otherwise be fuzzy. It took Becker's framework to make the importance of education explicit, and to put people at the heart of economics.

Within the discipline, some objected that Becker had overstated the importance of learning. Education matters not because it imparts knowledge, critics said, but because of what it signals about the people

who complete university, namely that they are disciplined and more likely to be productive workers. In any case, people of greater abilities are the ones who are most likely to get higher degrees in the first place.

Yet increasingly sophisticated empirical analyses has revealed that the acquisition of knowledge is in fact a big part of what it means to be a student. Becker himself highlighted research findings that one quarter of the rise in per-person incomes from 1929 to 1982 in America was because of increases in schooling. Much of the rest, he insisted, was a result of harder-to-measure gains in human capital such as on-the-job training and better health.

He was also fond of pointing to the success of Asian economies such as South Korea and Taiwan, endowed with few natural resources other than their populations, as proof of the value of investing in human capital—and in particular of building up education systems. Becker's original analysis focused on the private benefits to students, but economists who followed in his footsteps expanded their field of study to include the broader social gains from having well-educated populations.

The importance of human capital is now taken for granted. What is more controversial is the question of how to cultivate it. For those inclined to support a bigger state, one interpretation of Becker's analysis is that the government ought to pour money into education and make it widely available at a low cost. For a conservative, the conclusion might be that the private gains from education are so big that students should bear the costs of tuition.

Although Becker's academic writings rarely strayed into policy prescriptions, his popular writings—a monthly *Businessweek* column that began in the 1980s and blog posts in later years—offer a measure of his views. For starters, he talked of "bad inequality" but also "good inequality", an unfashionable idea today. Higher earnings for scientists, doctors and computer pro-

grammers help motivate students to tackle these difficult subjects, in the process pushing knowledge forward; from this perspective, inequality contributes to human capital. But when inequality gets too extreme, the schooling and even the health of children from poor families suffer, with their parents unable adequately to provide for them. Inequality of this sort depresses human capital, leaving society worse off.

As for the debate about whether government-funded universities should raise tuition fees, Becker thought that only fair, given that their graduates could expect higher lifetime earnings. Rather than subsidising students who go on to become bankers or lawyers, he argued that it would be more productive for the government to fund research and development. Yet, concerned by mounting inequality in America, he thought that more should be done to invest in early childhood education and improve the state of schools.

The knowledge economy

Becker applied his own prodigious reserves of human capital well beyond education. He used his "economic approach" to look at everything from the motives of criminals and drug addicts to the evolution of family structures and discrimination against minorities. In 1992 he was awarded the Nobel prize for extending economic analysis to new spheres of human behaviour. He remains one of the most cited economists of the past half-century.

Mr Becker's way of doing economics, initially a radical challenge to convention, came under attack as it went mainstream. The rise of behavioural economics, with its emphasis on limits to rationality, undercut his depiction of people as rational agents seeking to maximise welfare. Improvements in data collection and analysis also gave rise to more detailed empirical research, instead of the wide-ranging concepts that he favoured.

Yet precisely because Mr Becker's analysis touched on so much, it still has a lot to offer. Consider the debate on how governments ought to respond to disruptive technological change. From the standpoint of human capital, one answer is obvious. Technological advances mean that the knowledge that people acquire in school is becoming obsolete more quickly than before. At the same time, longer life expectancies mean that the returns on mid-career training are higher than in the past. It is therefore both necessary and possible to replenish human capital by designing better systems for lifelong learning.

This is just one element of the response to technological disruption but it is a vital one. Becker never intended that his theory of human capital explain everything in economics, only that it explain a little about a lot. On this count his work remains indispensable. ■



ADMG 1005 Macroeconomics

Exercise 2

After reading “The People’s Champion” posted on Blackboard, respond to the following questions and submit a hard copy of your responses.

1. What form of economics dominated Gary Becker’s work: Normative or positive? (Hint: The article contains a sentence that should help you answer this question.) (1 point)
2. What is your reaction to Becker’s work? Explain with at least two examples. (3 points)
3. Do you agree or disagree with Becker’s critics. Explain and provide examples. (3 points)