# ARE YOU EMPLOYABLE?

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*"Education is what remains after one has forgotten what one has learned in school."*

*Albert Einstein*

## EDUCATION IS FUNDAMENTAL TO DEVELOPMENT AND GROWTH

The human mind makes possible all development achievements, from health advances and agricultural innovations to efficient public administrations and private sector growth. For developing countries to reap these benefits fully, they need to unleash the potential of the human mind. And there is no better tool for doing so than education.[1]

The role of education in promoting economic growth is highly relevant, on several different levels and dimensions, not only in developing countries but also in developed countries. Education provides a foundation for human, social, technological and economic development. Education has a major effect on labour productivity, poverty, trade, technology, health, income distribution and family structure. In short, it forms a groundwork on which much of our present economic and social wellbeing is built.

In general, there are at least two levels to review fundamental effects of education to development: individual and national.

[1] Elizabeth M. King, Director, Education, The World Bank, January 10-12, 2011, QE2 Conference Center, London

Without neglecting other important aspects, such as social costs of inequality and poverty, national budgetary restrictions, or religious considerations, the main focus in this article is to maintain an economic perspective to education, both individual level and national level.

## FROM HUMAN CAPITAL TO KNOWLEDGE ECONOMY

Human capital is the stock of productive skills, talents, health and expertise of the labour force, just as physical capital is the stock of plant, equipment, machines, and tools. Within each type of capital, the performance, vintage and efficiency can vary. The stocks of human and physical capital are produced through a set of investment decisions, where the investment is costly in terms of direct costs and, for human capital investment, in terms of the opportunity cost of the individual's time.[2]

The importance of knowledge and learning has been recognized since the beginning of time. But it was really the Nobel winning economists that put the argument of education as investment. In 1961 Theodore W. Schultz publishes *Investment in Human Capital*[3] and next year Gary S. Becker[4] gave us the Human Capital theory. Schultz's article demonstrates the importance of the concept of human capital in explaining various economic anomalies. Schultz argues that both knowledge and skill are a form of capital, and that this capital is a product of "deliberate investment." He highlights Western countries, and explains their increase in national output as a result of investment in human capital. He also makes a direct link between an increase in investment in human capital, and the overall increase in workers earnings.

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2 Claudia Goldin. *Human Capital.* Department of Economics Harvard University and National Bureau of Economic Research, Handbook of Cliometrics, 2014

3 Schultz, T. W. (1961). *Investment in Human Capital.* The American Economic Review 1(2), 1-17

4 Becker, Gary S. (1962): *Investment in Human Capital: A Theoretical Analysis.* Journal of Political Economy 70, no. 5, Part 2. See also: Becker, Gary S: Gary Becker's *Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education,* published in 1964.

If we jump over a few decades of human capital studies and come to the present, we will find that many "external" (other than human being) factors have changed. Several efforts have been made to describe these changes or conditions caused by changes in trends (so-called megatrends), real or assumed, in a number of new terms. Depending on the point of view, the terms depict a change or a change of circumstance from different aspects. Some of them are the economic aspect (new economy,[5] creative economy[6]), others social (service society, interaction society, welfare society). For example, an individual-oriented perspective is represented by a "dream society"[7] and a "learning society".

Perhaps the most important external factor among these megatrends has been the unprecedented rapid development of information technology. As a result of this, other than the agricultural-intensive economies and labor-intensive economies, the global economy is in transition to a "knowledge economy"[8] as an extension of an "information society" in the Information Age led by innovations. The widespread growth rate of wireless communication is creating the basis for using the term ubiquitous[9] society as well.

Though, the profusion of information and unforeseen calculation power of the computers have lead the individuals, compa-

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5 A 1983 cover article in Time, *"The New Economy"*, described the transition from heavy industry to a new technology based economy

6 The term refers to the socio-economic potential of activities that trade with creativity, knowledge and information. Governments and creative sectors across the world are increasingly recognizing its importance as a generator of new jobs, wealth and cultural engagement

7 *"In today's Information Society, we prize those who can skillfully manipulate data. In tomorrow's Dream Society, we will most generously reward those who can tell stories."* Rolf Jensen. Article from The Futurist, Vol. 30, No. 3, May-June 1996.

8 The term was popularized by Peter Drucker as the title of Chapter 12 in his book *The Age of Discontinuity* (1969).

9 Ubiquitous is based on the Latin word "ubique". It means extending everywhere. The "ubiquitous network society" is a society where wireless communication and networking is possible to anyone, anytime, anywhere and through any device. "Ubiquitous computing" was first used by Mark Weiser, who coined the phrase around 1988, during his tenure as Chief Technologist of the Xerox Palo Alto Research Center (PARC).

nies and societies sometimes in the state of positivistic illusion of knowing and being able to accurately forecast, e.g. the need for content, quantity and quality of education. The puzzle for the decision makers is in reaching beyond the overflow of data, and being able to translate the data into actionable information, and finally transforming the insight into measurable strategies and action plans.

And today, it is not only the question of overflow of data or rapidly changing, and in many cases contradictory information. Today, decision makers, business executives and individuals, worldwide, face more than ever "alternative facts" or "cherry-picked data" in this highly complex information environment, which is vaguely named "post-truth era".[10] Therefore, Media Literacy has become one of the challenges of education. People should be able to understand the complex messages they receive from television, radio, Internet, newspapers, magazines, books, billboards, video games, music, and all other forms of media. Media Literacy skills should be included in the educational standards of every school subject – in language arts, social studies, health, science, and other subjects. Many educators have discovered that Media Literacy is an effective and engaging way to apply critical thinking skills to a wide range of issues.

## THE LABOUR MARKET IS CHANGING – IT IS IMPORTANT TO FOCUS ON SKILLS AT ANY AGE

In individual level, to promote success in today's labour market, one needs to invest early, and then invest in the relevant skills: *problem-solving skills, learning skills, communication skills, personal skills for self-management and social skills.*

One of the reasons for the change in the returns pattern (i.e. returns to investment in education) is the race between technology and education, as labour markets adjust to automation, digitaliza-

[10] Post-truth definition: *"Relating to or denoting circumstances in which objective facts are less influential in shaping public opinion than appeals to emotion and personal belief."* https://en.oxforddictionaries.com/definition/post-truth

tion (e.g. Deep Tech, IoT, Big Data, AI, robotics, VR & AR, digital ecosystems), and globalization. In this new world, the ability of workers to compete is handicapped by the poor performance of education systems. Technological change and global competition demand the mastery of competencies and the acquisition of new skills for many.

Digitalization will enter into education and training in a vastly increasing speed. Today´s "Playful Learning Centres", "Finance Labs" or "Entrepreneurship Labs" are ecosystems for research, development and educational learning practice. It creates a design, development and decision evaluation spaces by using new digital learning tools and educational innovations aiming from preschools, primary and secondary schools to universities and business. At the same time, these labs are collaborative hubs – a playground of development – for researchers, industry leaders, teachers & educators from various sectors, students, and parents and children themselves.

Most millennials expect to pursue multiple careers and change directions a few times over their working lives. There is a new mindset. Rather than hanging on to a job for life, the goal today is to be ***employable*:** to develop the skills, experience and expertise necessary to move on or up – rather than mere school attainment – regardless of your employer. Ideally, this gives people greater choice and flexibility to ride career waves or slow down at different stages of their longer working lives.

A skilled population is the key to a country's sustainable development and stability. The acquisition of knowledge, skills, competences that *Lifelong Learning* should enable is not limited. In its conceptual understanding, to that of foundational skills, but also encompasses a larger panel of skills, bearing in mind the emergence of new skills deemed critical for individuals (as learning to learn, skills for global citizenship, entrepreneurial skills, and other core skills).

Rapid change in technological environment and tightening requirements of labour market have led to situation where Lifelong Learning is becoming an economic imperative. Technologi-

cal change demands stronger and more continuous connections between education and employment. Neurogenesis tells us that learning can continue into advanced ages. The relative costs and benefits to investments in older persons compared to younger persons differs. In any case, investments in more able workers at any age generate higher returns than investments in less able workers. As a consequence, policy attention to technical and vocational education and training (TVET) is increasing worldwide.

Evidence is needed on what works in order to invest smartly in education, both in individual and national level. Overall, another year of schooling raises personal earnings by 10 percent a year[11]. This is typically more than any other investment an individual could make. The value of human capital – the share of human capital in total wealth – is 62 percent[12]. That is four times the value of produced capital and 15 times the value of natural capital.

This constantly accelerating transition requires that the rules and practices that determined success in the industrialized, or post-industrialized, economies need rewriting in an interconnected, globalized economy where knowledge resources, such as expertise, R&D&I and trade secrets, are as critical as other economic resources.

Education in every sense is one of the fundamental factors of economic, social and cultural development. No country can achieve sustainable economic development without substantial investment in human capital. Education enriches people's understanding of themselves and surrounding world. It improves the quality of their lives and leads to broad social benefits to individuals and society. Education raises people's productivity and creativity and promotes entrepreneurship and technological advances. In addition, it plays a very crucial role in securing economic and social progress.

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11 Claudio E. Montenegro & Harry Anthony Patrinos. *Comparable Estimates of Returns to Schooling Around the World*. Policy Research Working Paper 7020. World Bank 2014.

12 Kirk Hamilton & Gang Liu. *Human capital, tangible wealth, and the intangible capital residual*. Oxf Rev Econ Policy (2014) 30 (1): 70-91.

## THE QUALITY OF EDUCATION MATTERS EVEN MOR FOR ECONOMIC GROWTH

Building on several decades of thought about human capital—and centuries of attention to education in the more advanced countries—it is natural to believe that a productive development strategy would be to raise the schooling levels of the population.

The most important caveat for the literature on education and growth is that it sticks to years of schooling as its measure of education—to the neglect of qualitative differences in knowledge. This misses the core of what education is all about. The problem seems even more severe in cross-country comparisons than in analyses within countries: Who would sensibly assume that the average student in Ghana or Peru would gain the same amount of knowledge in any year of schooling as the average student in Finland or Korea? Still, using the quantitative measure of years of schooling does exactly that.[13]

There is strong evidence that the cognitive skills of the population, rather than mere school enrollment, are powerfully related to individual earnings, to the distribution of income, and to long-run economic growth. Differences in learning achievements matter more in explaining cross-country differences in productivity growth than differences in the average number of years of schooling or in enrollment rates.

A development-effective educational strategy should thus focus not only on sending more children to school, but also on maintaining or enhancing the quality of schooling. Just providing more resources to schools is unlikely to be successful—improving the quality of education will take major changes in institutions. Simply increasing educational spending does not ensure improved student outcomes.

The relationship between skills and growth proves extremely robust in empirical applications. The effect of skills is complemen-

[13] Eric A. Hanushek & Ludger Wößmann. *Education Quality and Economic Growth*. The International Bank for Reconstruction and Development / The World Bank. 2007.

tary to the quality of economic institutions. Especially focus should be put on the role of *educational quality*. Quality, in this sense, means the focus needs to be re-headed and see education as an investment, with learning gains as the key metric of quality. Getting value for the education euro/dollar/Lira requires smart investments – that is, investments that prioritize and monitor learning, not schooling. It is essential to look behind traditional metrics, such as the number of teachers trained or number of students enrolled. Different growth simulations reveal that the long-run rewards to educational quality are large, but also require patience.

According to Hanushek & Wößmann,[14] evidence suggests that three institutional features may be part of a successful system for providing students with cognitive skills:

- Choice and competition
- Decentralization and autonomy of schools
- Accountability for outcomes.

However, the researchers continue that deeper analyses, particularly of issues of design and implementation in specific contexts, have to be left for more encompassing surveys and collections.

## FINANCIAL LITERACY SHOULD BE LEARNED AS A BASIC SKILL

Economic phenomenon and financial markets around the world have become increasingly complex, but at the same time accessible to the 'small investor', as new products and financial services grow widespread. At the onset of the financial crisis in 2008, consumers over indebtedness and subprime mortgages are now slowly become forgotten. However, people who had huge debt or capital investments during financial crisis were in the historically unusual position of being able to decide how much they wanted to borrow or can consume.

[14] Eric A. Hanushek & Ludger Wößmann. Education Quality and Economic Growth. The International Bank for Reconstruction and Development / The World Bank. 2007.

Financial market integration and technological developments have increased the opportunity for customers to select among wide range of financial services and their service provider. The range of products available in the financial markets is diverse, and there are increasingly more complicated products for customers to choose from. At the same time, the risks related to selecting a financial instrument and service provider have increased. Yet many of these widely available financial products – quickie loans, reverse mortgage loans, capital-protected investments, ETFs, index-linked bonds, investment insurance and pension insurance, etc. – have proven to be complex and difficult for financially unsophisticated consumers to master. So, while financial and pension developments have their advantages, by permitting tailored financial contracts and more people to access credit, they also have certain disadvantages.[15]

Most of disadvantages are related to risks and costs of financial product. There are large differences between investment products and their risks, and no such thing as a fully risk-free product exists. If a high return is promised on the product, it also comes with higher risks. In assessing the risks, it is important to ascertain whether it is possible to lose both the return and the principal.

Before making any decision, it is also advisable to check the costs related to the product. It is possible that other costs are deducted from the return besides fees and commissions directly charged to the customer. Such costs include commissions paid to asset managers, the broker, insurance company or bank. It is also worth checking how easily and fast investment is possible to turn into cash (liquidity of financial product).

For customers, corporate executives, and even bankers, this all requires financial knowledge and skills. By definition, *Financial Literacy* is knowledge and understanding of financial concepts and risks, and the skills, motivation and confidence to apply such knowledge and understanding in order to make effective decisi-

[15] See more: Annamaria Lusardi Olivia S. Mitchell. *The Economic Importance of Financial Literacy: Theory and Evidence*. NBER Working Paper 18952. Cambridge, 2013

ons across a range of financial contexts, to improve the financial wellbeing of individuals and society, and to enable participation in economic life.[16]

Financial knowledge is a form of investment in human capital. Endogenizing financial knowledge has important implications for welfare as well as policies intended to enhance levels of financial knowledge in a larger population. A lack of Financial Literacy contributes to ill-informed financial decisions, and these decisions could, in turn, have tremendous adverse effects on both personal finance and, ultimately, on national economy.

Financial Literacy is now acknowledged as an important element of economic and financial stability and development. Financial education, financial consumer protection and financial inclusion are recognized at the highest policy level as three essential ingredients for the financial empowerment of individuals and the overall stability of the financial system.[17]

Existing empirical evidence shows that young people and adults in both developed and emerging economies who have been exposed to good-quality financial education are subsequently more likely than others to plan ahead, save and engage in other responsible financial behaviours. This evidence suggests a possible causal link between financial education and outcomes, and indicates that improved levels of financial literacy can lead to positive behaviour change.[18]

Higher levels of Financial Literacy have been found to be related not only to asset building but also to debt and debt management, with more financially literate individuals opting for less costly mortgages and avoiding high interest payments and additional fees. In addition, financially literate consumers can make more in-

16 PISA Financial Literacy Framework, OECD, 2015

17 OECD/INFE (International Network on Financial Education), 2009; OECD, 2009a; see also Gerardi et al, 2010, for empirical analysis of financial literacy and mortgage delinquency.

18 PISA Financial Literacy Framework, OECD, 2015

formed decisions and demand higher-quality services, which can, in turn, encourage competition and innovation in the market.

As consumers can protect themselves to a greater extent against income or expenditure shocks, and are less likely to default on credit commitments, macro-level shocks are likely to have a lower impact on financially literate populations. Financially literate consumers are also less likely to react to market conditions in unpredictable ways, less likely to make unfounded complaints and more likely to take appropriate steps to manage the risks transferred to them.

All of these factors can lead to a more efficient financial services sector. They can also ultimately help to reduce government aid (and taxation) aimed at assisting those who have taken unwise financial decisions – or no decision at all.

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