

CONTEXT BETWEEN HUMAN CAPITAL DEVELOPMENT AND ECONOMIC GROWTH

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Abstract

The knowledge economy raises the need to pay increased attention to the development of human resources and the subsequent impact of this fact on the development of many economic indicators. Although the prevailing view is that the higher quality of human resources is also reflected in the pace of economic growth, it may be extended with opposing ones who reject this claim. The main goal of this paper is to theoretically define the interaction between increasing the level of human capital and economic growth and to explain why looking for connections between these two variables is a difficult process. As economic growth is closely linked to the development of several other socio-economic indicators, we have also pointed to another area that is influenced by the level of human capital development. In order to achieve the goal, we have studied several theoretical publications dealing with the issue. In working with theoretical sources, we used mainly general scientific methods such as analysis, synthesis, deduction or induction.

Keywords: economic growth, human capital, unemployment, education

Introduction

Recently, the study between the development of human capital and economic growth has received increasing attention among developed countries. In the past, this relationship has been explored mainly in developing countries. And although these tendencies persist to this day, several other facts need to be mentioned. Achieving a favorable rate of economic growth is one of the basic goals of all countries. While in the past natural wealth was considered to be the main source of growth, developments in many countries around the world have shown that, despite its limited quantity, sustainable growth can be achieved. Examples are Japan or the so-called asian tigers. These countries have experienced favorable economic growth rates in a relatively short period of time, mainly due to the rapid implementation of innovation and technological progress. On the contrary, countries like Iraq or Iran have not been able to use the vast reserves of natural resources (oil) to achieve growth. Introduction of innovations, resp. however, technological progress does not take place on its own, but high-quality human resources are behind it. Developments from the recent past also confirm this assumption - technological development has already progressed since World War II, especially in those countries that have invested heavily in science, research and education. These trends in the world therefore rightly raise the need to focus more on the issue of human resources and the possibilities for their development. Today, the knowledge economy, together with the technological revolution, is leading to changes in labor markets. Jobs with unskilled or low-skilled workers are disappearing and the demand for highly-skilled workers with great creativity, able to process a lot of information, is growing. Thus, attention has been focused more and more within countries around the world on improving the quality of education systems, as formal education is generally considered to be the most important prerequisite for human resource development.

1 Economic growth

The performance of the economy and economic growth of each country is influenced by the activities and interrelationships of the four sectors (households, companies, the state and abroad). Economic growth can be characterized as an increase in the amount of products and services that are produced in the economy. Achieving

economic growth is an important goal for any country's government, as it is associated with rising real average incomes and rising living standards. It can be measured using several macroeconomic aggregates. The basic and most comprehensive indicator is gross domestic product (GDP), which best captures the processes taking place in the economy. However, when it comes to economic growth, it is important to realize that it is not just the growth of measured real GDP, but rather the growth of potential GDP that the economy would achieve if it used all the factors of production effectively. A distinction must be made between real and potential GDP because measured GDP may exceed potential output in the short term or, conversely, may fall below its level. In addition to GDP, economic performance and growth can also be expressed by alternative indicators such as gross national product (GNP), Nett Economic Welfare (NEW) or the Human Development Index (HDI). In connection with the development of human capital, the HDI seems to be the most important, as it also takes into account the level of health and education in individual countries and the education system influences the level of human capital. When calculating the HDI, the educational level is assessed according to two criteria: the average number of years of adult schooling (25 years) and the expected length of schooling of children are determined, while their average is calculated.

2 Human capital

Human resources and their qualifications, which we refer to as human capital, are beginning to gain in importance in the period of the formation of a new, so-called knowledge economy. The first signs of increased interest in this area can be seen as early as the 50s and 60s. years of the 20th century, when, under the influence of the development of science and technology, the demand for educated labor began to increase. Human capital is beginning to be understood as the knowledge and skills of man, which allow him to create new knowledge, respectively. added value. Different authors interpret this term differently. However, they agree that human capital is a qualitative characteristic of the individual. It is most often based on the definition that "human capital is the ability, skill and corresponding motivation to apply those abilities and skills" (Becker, 1993). This means that it is not enough for an individual to have these abilities, but he must also be able to use them adequately, resp. have created conditions for their activity in which it can use them. As early as the 1960s, Becker pointed out the effects of education on earnings, career choices, employment and unemployment, and the fact that, in addition to education, human capital has an impact on the individual's influence on the individual. In addition to G. S. Becker, T. W. Schultz, J. Mincer, M. Friedman and S. Rosen were pioneers in the field of human capital. Schultz explains how human capital affects productivity and the rate of return on investment in education, although it is difficult to measure. According to him, the rate of return on these investments is in most cases higher than the rate of investment in "inhuman" capital (Shultz, 1971). It was based on the finding that the gradual increase in real earnings of workers is mainly due to additional skills of workers and only to a lesser extent due to the so-called. overall productivity factors.

Human capital and the assessment of its quality are receiving increasing attention throughout the world. The Organization for Economic Co-operation and Development (OECD) is one of the most important institutions dealing with its evaluation. Each year, it publishes a report on human capital development called Education at a Glance. It includes information on the structure, funding and performance of education systems in OECD countries and other partner economies. In 2019, Education at a Glance focused mainly on tertiary (higher) education, as the demand on the labor market for graduates with this type of education remains strong, despite the fact that they are increasing. The World Bank has databases that address the issue of human capital development. It monitors how much money each country spends on education (the share of government expenditure on education in GDP), and keeps statistics on school enrollment at each level of the education system. In this context, however, it also points out that a high enrollment ratio may not reflect a successful education system. Following this, it also keeps statistics on student progress, ie. what proportion of students moves from one year to another, resp. from a lower level of the education system to a higher level. The Summary Innovation Index, compiled annually by the European Commission, can also be an important source of data on assessing the level of human capital. This index measures several areas, one of which is the area of human resources, which provides information on the state of the population with tertiary education, doctoral graduates or lifelong learning. In addition to these institutions, of course, there are many others that deal with this issue.

2.1 The importance of education in the development of human capital

The development of human resources occurs in the process of education. Economic theory presented by the Chicago school characterizes the process of education as a process of investing in human abilities (Šrédľ, 2010). This means that each individual is free to decide on their education by comparing the costs of education and the benefits (or benefits) from it. Thus, the money he uses for the educational process is not perceived as a cost of consumption, but as an investment. Such an investment does not only include explicit (direct) costs e.g. for study aids, but especially the cost of the opportunity sacrificed (eg the lost salary that an individual would receive if he entered the labor market after high school and did not continue his studies at university). These costs can be referred to as individual costs. Today, however, a significant part of the cost of an individual's education is borne by the state. By not entering the labor market, the state loses income in the form of unpaid income tax, insurance, ... On the other hand, the state secures an individual with a higher level of human capital in the future, which will significantly contribute to economic growth. However, there is often a problem here - the economic efficiency of education is difficult to measure. In general, the benefits of education are compared with the costs associated with obtaining the relevant education, with an emphasis on maximizing benefits and minimizing costs. While the amount of costs of education can be determined quite accurately, quantifying the benefits of education is problematic, e.g. simply because the effect of education never acts alone, but is linked to other factors of socio-economic development. This may lead to a situation where the effect of the education of an excellent graduate of a surplus field will be less than the effect of the education of an average (even possibly below average) graduate of a shortage field.

Most economists now agree that the quality of human capital is the most important element of economic growth. However, there is no one-sided relationship between the two categories - just as the level of human resources affects economic growth, so growth affects the level of human development (eg income growth can positively affect education levels by investing when an individual has sufficient resources). more into their education). The interrelationships between these categories are usually mutually reinforcing, ie countries generally achieve high economic growth and a high level of human development, or, conversely, low growth and a low level of human development. In the short term, it is possible to notice different levels of these variables in some countries, but if a country has a higher growth rate with a lower level of human capital development, it will usually reach a low value in a short time. On the other hand, if a country achieves a low rate of economic growth with a higher level of human capital development, it is likely that economic growth will increase in the future.

2.2 Contradictory views on the importance of education

However, there are also opinions that the impact of education on the level of human capital is constantly decreasing. Randall Collins is a proponent of the idea that the knowledge that students acquire during their longer and more expensive studies has little to do with labor market requirements. According to him, apart from ensuring basic literacy, no other contribution of education to economic development or to increase labor productivity can be demonstrated (Keller, Tvrđý, 2010). Although the results of research and analysis indicate the opposite, Collins is convinced that his grasp of the issue is correct. He argues that in companies it is usually true that employees with the greatest knowledge are not usually the best paid and usually do not hold top positions within the company. According to him, acquaintances, belonging to privileged classes or political instruments play a role here. He also argues that most professional experience can be gained by a worker directly in practical life and does not require unnecessarily long studies. In this context, he criticizes academic titles as an operational curtain of G. Becker's functionalist, technocratic theory of human capital (Collins, 1979). He recognizes higher education in only a few professions, such as at doctors, lawyers, architects. However, he also emphasizes the need for practice. While this view can be accepted in part, we believe that without insufficient training, employees may not be able to handle the tasks assigned, they may be less willing to participate in further training that requires constantly changing conditions and rapid introduction of innovations, after losing their jobs. they may have a bigger problem finding a job again and so on. Collins also deviates from the thesis of the interaction between economic growth and increasing the level of human capital. He argues that even the high level of education achieved does not bring anything to the economy, but on the contrary, the rapid economic development in recent decades has created sufficient funds to invest in education, and therefore the two categories are now mistakenly linked. The increase in the number of university graduates is a consequence and not the cause of the economic growth of any country. Collins's theory deviates absolutely from many other economists who disagree with it, and to which we agree for the reasons stated above. However, other authors with similar views as Collins can be found. E.g. even according to Wolf, economic growth took place in developed countries before the level of education increased (Wolf, 2002).

At the same time, developments show that as growth has taken place, the number of professions has begun to increase, which has created a greater need to study in order to be able to find a job. Economic growth leads to the promotion of education, regardless of whether higher education leads to growth. However, Wolf admits that educated people earn more, it is easier for them to get a job, they often have higher intelligence, achieving higher education is an indicator of perseverance and motivation, which leads employers to look for such people. At the same time, however, it points to the limited needs of individual economies, which are not able to provide all graduates with adequate jobs. Many times they end up in jobs for which they are retrained, e.g. as vendors or waiters, which will in no way lead to increased growth. However, if we look at their prospects for the future, we cannot say with certainty how much they will remain in their current job and whether they will not hold the position for which their education system has prepared them in a relatively short time, leading us to be completely unaware of with Wolf's opinion.

2.3 Expressing the level of human capital

As mentioned earlier, most economists believe that the impact of education on human capital is crucial. In order to demonstrate this impact, a link needs to be found between human capital development and economic growth. The problem arises here: in order to do this, it is necessary to measure the level of human capital. However, it is very demanding because human capital is a qualitative property of man and in order to be able to work with it in relation to economic indicators, it is necessary to express it quantitatively (Mazouch, 2011). However, it is not possible to assess the amount of knowledge, skills and innate abilities, so it is mostly based on the assumption that human capital is the result of education (the length of education plays an important role here). E.g. according to Denison (in: Ivanová et al., 2009) it is based on a two-thirds assumption - two thirds of the difference in earnings between individuals with higher and lower levels of education can be attributed to formal education, only the remaining one third is innate abilities and dispositions. Even on this basis, one of the easiest ways to express human capital is to measure knowledge. However, knowledge is only a part of human capital (it does not include, among other things, qualities, abilities, experience or potential). In addition, their level may change over time. It would therefore not be objective to measure human capital in this way. Therefore, the level of human capital is in some cases assessed on the basis of a survey of the level of education. The highest formal education achieved is determined. However, there is also a problem here - the same levels of education can differ significantly and do not include the degree of human capital depreciation. In addition, other alternative indicators of education can be used, such as e.g. educational potential of the company, average length of education, average length of education, etc. In order to determine the extent to which economic growth depends on the educational indicators of the population, it is necessary e.g. use correlation analysis to determine the interdependence between GDP per capita and these indicators.

3 The impact of human capital on selected areas

The development of human capital affects the functioning of several areas. One of them is the labor market, in which each individual moves, while having a certain productivity, which he offers on it, and for which he then receives a certain appreciation (eg wage). It is assumed that an individual with a higher level of human capital is more productive and higher labor productivity contributes to higher economic growth. In general, higher productivity will subsequently be rewarded with a higher income than the less productive individual will average. The government of each country is interested in this productivity through taxes, resp. wages, it is therefore in the interest of each country that as many individuals as possible be highly productive. It follows from the above that another area that affects the level of human capital development is the level of GDP. When examining their interdependence, it is recommended to replace the absolute value of GDP development, e.g. growth rate and the level of human capital also the level of growth, e.g. the value of the number of years by which the average length of education in society has increased (Mazouch, 2011). This makes it easier to identify how much GDP has increased in the event of an increase in the level of human capital. However, it must not be forgotten that economic growth is also affected by other factors and that GDP growth is not only the result of human capital development and also of the fact that the impact of the increase in human capital on the economy will be delayed. At the same time, we find recommendations in the professional literature that it is better to examine the dependence between GDP growth and human capital development at the level of smaller regions than at the level of the national economy. Lewin and Raut (1997) point out that exports are considered to be the driving force behind economic growth. According to them, human capital does not affect the development of GDP directly, but by acting on one of its most important components - exports. It is export that is the area where new technologies are widely used

and, as we mentioned earlier, human resources are behind the development of new technologies. The level of human capital development is also linked to the risk of unemployment. In general, individuals who have a higher level of human capital are more likely to apply in the labor market. Although unemployment is significantly affected by the economic cycle and increases during the recession, even in this unfavorable period, the unemployment rate is lower for people with a higher level of human capital. This is due to the fact that even in times of economic difficulties, companies try to keep key employees who often hold demanding positions, which would be difficult to replace. Although it can be stated that an individual with higher educational attainment has a lower probability of becoming unemployed, it should also be pointed out that if this situation occurs, such an individual loses more. Unemployment in such a case will not only mean a loss of income and related problems, but also a loss of specific human capital that the individual has created through continuing vocational training and work in a specific job (Bethmann, 2013). As this type of capital is so specific that it can only be used within one organization and one job, even if such an individual can be re-employed quickly, this continues to be a loss for him. Many studies even state that the loss of human capital is the largest component of the cost of job loss. There are increasing opinions that the pressure on an individual to re-employ should not be so enormous. It is more appropriate for human capital to be transferred to an area that is at least similar and will continue to be used at least in part. It is therefore recommended to look for an adequate job for longer than to work in a completely different area, as there is a socio-economic decline in an individual's life due to the loss of the opportunity to use their potential in the form of specific human capital. In practice, however, such an approach can be encountered relatively rarely, simply because an individual who does not work for the state represents an increased cost of social security.

Conclusion

Although there are no clear links between capital development and economic growth, the hypotheses that their interdependence is high are confirmed worldwide. E.g. Japan, which is characterized by a shortage of natural resources, is achieving a long-term favorable rate of economic growth. Studies, but also the experience of other Asian countries, show that this is due to education, investment in human capital and increasing levels of labor productivity in these countries. On the contrary, for developing countries, where education systems are generally of lower quality and do not reflect new trends in the development of the world economy, it is often difficult to achieve constant rates of economic growth. In 2020, however, a new question came to the fore: can the Covid-19 pandemic affect the interrelationship of the variables studied? There are two assumptions. On the one hand, the pandemic has accelerated the pace of the introduction of gradual electronicisation and digitization, which has increased the demands on human resources and their ability to work with information and communication technologies. On this basis, it can be assumed that the level of human resources development has increased and, over time, this fact should also be reflected in the pace of economic development. On the other hand, the functioning of education systems was significantly affected. Although it is possible to function relatively well in the online environment in this area as well, the opinion persists that online teaching in the long run leads to a decrease in the knowledge of pupils and students and this failure will be difficult to catch up in the coming time. Not to mention that today no one knows how long this situation will persist and as long as education is carried out mainly in a distance form. However, as we know that the impact of the level of human capital development in the economic development of the country is manifested only with a certain delay, it is currently not possible to objectively assess these assumptions. However, we assume that in the coming years it would be important to address this issue and relevantly evaluate its impact on the economy of a country.

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