

International Conference on Research Paradigms Transformation in Social Sciences 2014

Human well-being and educational investment efficiency

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Abstract

Society's attitude to investments in human beings changed due to the ideas contained in the theory of human capital. Nowadays it is proved – these investments provide a production effect, the benefits for the individual and the benefits to the government. We can say that investments in the education today become tomorrow a competitive advantage. Therefore the well-being and sustainable economic development of nations depend on the human capital. That is why the paper considers human well-being and its key factors, the relationship between the human well-being and human capital, and criteria for estimation of investment efficiency in education. The quantitative analysis was carried out using dependencies between education and wages, graduates' wages and their profession, education and unemployment. Non-monetary income from educational investments is shown in this paper. A conclusion is made about the benefits from educational investments and their impact on human well-being. It is proposed to pursue a special policy in the field of development of human resources and investments in the human capital.

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Peer-review under responsibility of Tomsk Polytechnic University.

Keywords: well-being, human capital, investments in human capital, efficiency of investments, tertiary education

1. Introduction

Well-being is a provision of a minimal level of prosperity for citizens (social group, family, and person) including material, social, and nonmaterial benefits. Human well-being is characterized by a number of determinants among which the level of productive force development and economic relations play a central role. The higher productive forces the higher the population well-being. Productive forces are determined by a combination of physical and human capital i.e. means of labor and human labor power. The latter includes production experience, knowledge, and labor skills that drive physical capital. Thus, human capital is the principal part of productive forces of society.

The socio-economic development of society in the early part of the new century is characterized by the increasingly larger role of the human factor. Nowadays, the human capital is regarded in a new fashion: it determines a raise of the competitive capacity of the country and provides the well-being of its citizens. In this connection, investments in human capital are the integral part of the successful economic development. Thus, for example, in the USA the human capital investments amount to over 15 % of the gross domestic product that exceeds gross private domestic investments in fixed-capital assets (Bazarov, T.Yu., 2011).

In Russia, the achievement of a sustainable economic development, the human well-being, and modernization of economy is impossible without improvement of the entire education system involving people of all ages and walks of life who have different abilities and varied backgrounds. As a result of development of the market economy, the demand for tertiary education in Russia has become considerably active.

It is obvious that in terms of ever-lasting demand for high quality education, the previous methods of financing are unable to provide the high level of large-scale specialist training. In this context, the education system faces the problem of creating new methods of financing that could provide the expanding production of specialists with high professional standards taking into account the prudent management and redeployment reduction of the economy's

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resources. In fact, it means to deny a full budgetary financing of higher vocational education and transfer to its investment by consumers. However, the possibility for tertiary education in Russia to develop in terms of increasing private expenses is rather equivocal and requires the assessment of its efficiency.

2. Body of Research

Such criteria as wages, employment, and living standard allow the assessment of educational investment efficiency. Let us consider them below.

Worker's wage is one of the most important criteria of assessment of educational investments. Higher level of education, greater the ability of people who will adopt new information, acquire new skills, and adapt to new technologies (Bartel, A.P., & Lichtenberg Frank, R., 1991). Labor efficiency of people having a higher level of education increases, so the wages would increase also. Thus, the level of education directly depends on the wages. Figure 1 presents the diagram of this dependence, reported by the United States Census Bureau.

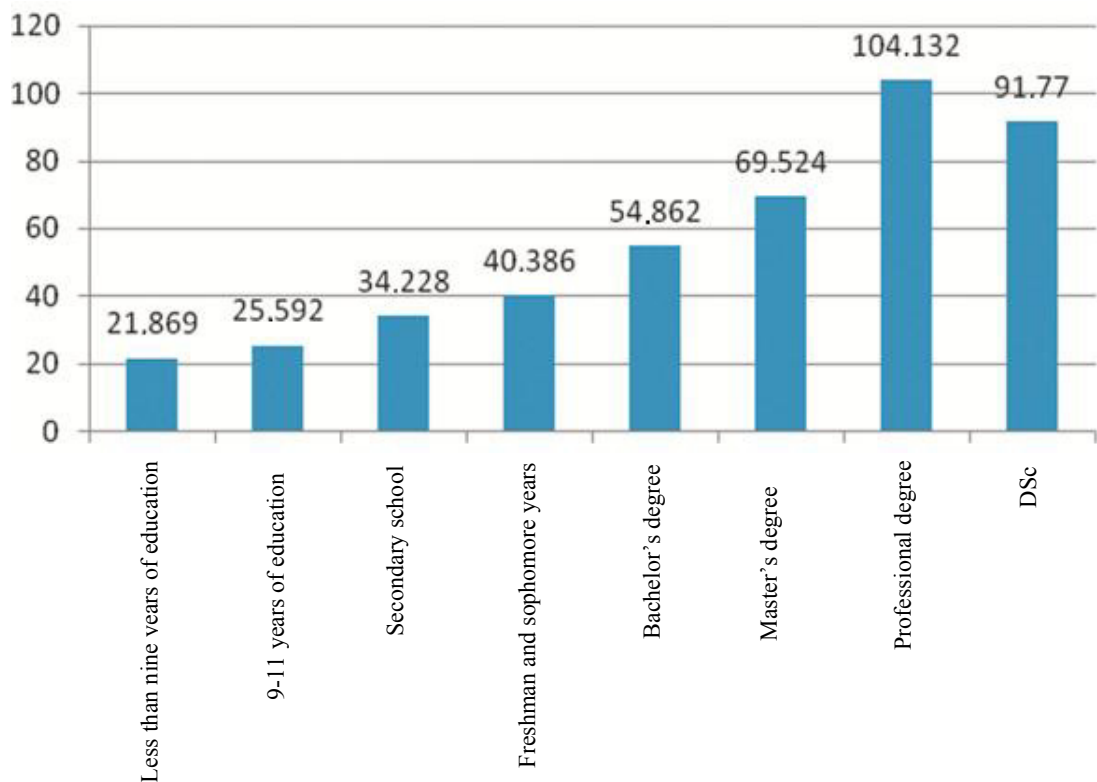


Fig. 1. Dependence between wages (USD) and level of education (USA, 2009), adapted from (U.S. Census Bureau, 2010)

According to D. Nesterova and K. Sabir'yanova (Nesterova, D., & Sabiryanova, K., 1998) who in the 80s and early 90s studied the efficiency of investments in the human capital, those investments in education yielded weak benefits both for secondary and tertiary education, namely: 2.3 % and 5 % respectively. In the authors' opinion, it is comparable to 3 % annual interest rate of that time period, and hence, stays at a reasonably low level.

If benefits from educational investments are considered as a duration process, the share of income and expenditure on education at a certain period of time shows a higher yield of investments made in a higher level of education. The demand from companies for highly skilled specialists is observed to be growing.

Figure 1 contains a plot of the time-dependent wage increase for workers with tertiary education as compared to those with lower levels of education. Although wage increase is observed for all employees, the difference between wages of university graduates and secondary school leavers is obvious, so that the efficiency of investments in tertiary education is confirmed again.



Fig. 2. Annual male wages in USD (above the age of 25), adapted from (U.S. Census Bureau, 2010)

However, wages depends not only on education levels but also the worker’s specialist area. Wages of workers having the same level of education and similar professional skills can be different. Thus, first-year starting wages of engineers and computer engineers is 35.8 % higher than that of other graduates. In Figure 3, the difference between wages in Russia is shown for graduates specialized in different areas.

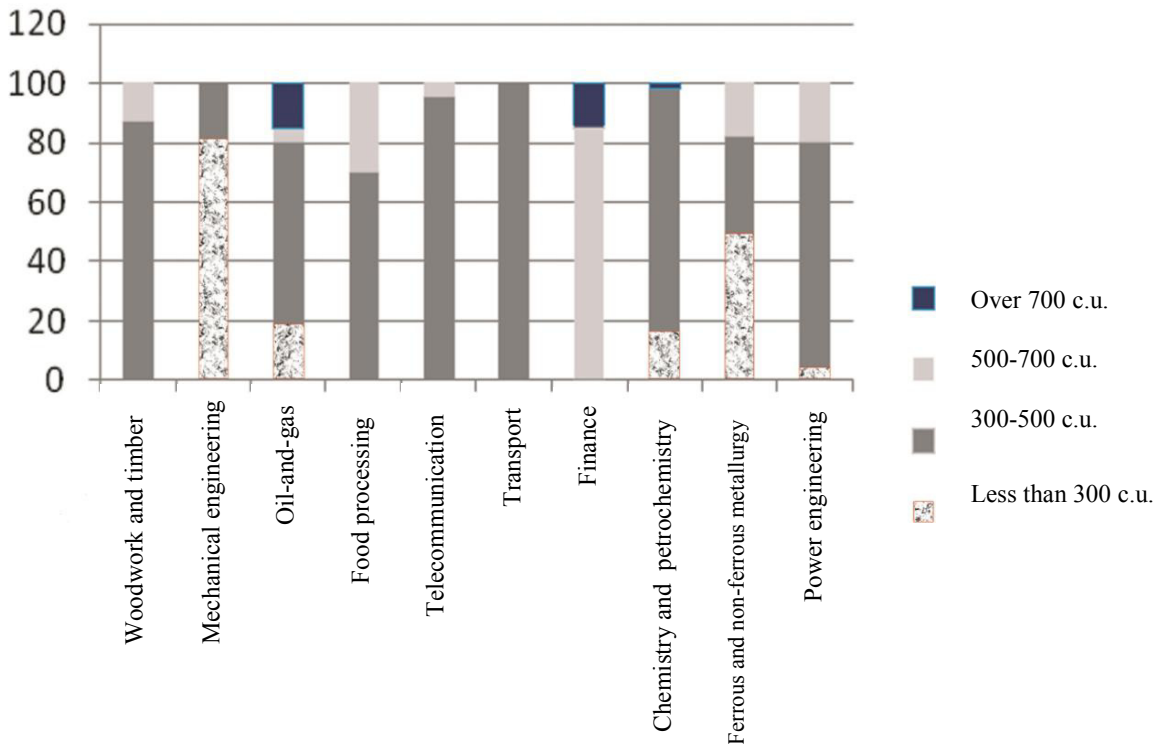


Fig. 3. First-year starting wages of specialists graduated from Russian universities in 2006 (%), adapted from (Weekly publication ‘Business man’ ‘Money’, 2007)

The level of education gained by a person affects not only his/her wage but also the employment. Such factors as labor conditions, physical activity, self-determination, labor diversity, and communication with other people also undergo favorable changes.

According to J. Mincer (Mincer, J., 1993), an American economist, employees with a higher level of education have three advantages over those who attained a lower educational level, namely: high wages, consistency of employment, and a consistent growth of income mobility. A higher level of education reduces the possibility of unemployment because a demand for highly skilled specialists is continued to be growing. According to data of the

Department of Labor, in 2014 the average number of workplaces in the USA will reach 13 %, while the number of office workers with secondary education decreases 36 % (Smirnov, E., 2007).

The similar is the problem of unemployment. Thus, in September 2011, allowing for seasonal fluctuations, the United States suffered a 4.2 % jobless rate for graduates aged 25 and over with tertiary education, while for citizens without tertiary education it was 9.7 % (U.S. Department of Labor, 2011).

This dependence between the level of education and unemployment is caused by the fact that workers with a higher level of education seek for job more effectively including both data collection and positioning themselves in the capacity of a possible resource on a labor market. As Mincer noted in (Mincer, J., 1993), the more information have job-seekers, the more chances to find the job that is most suited to them. And it is unlikely they will quit this job. This is one more reason why workers with higher level of education do not suffer much from unemployment: job search and on-the-job experimentation allows them to gain experience together with the specific human capital that makes him more valuable for employers.

While considering the problem of investments in education, it should be noted that there are not only monetary but also non-monetary incomes which are not taken into account in assessment of investment yield rates in education, health care, etc. Therefore, one cannot assess the investment efficiency based on yields of investment rates since accounting only for monetary income of education underrates its real value. The efficiency of education can be assessed not only by economic factors. Workers having a higher level of education are considered to be healthier than those who have not (Theory of human capital and its application to estimation of financial flows in health care, 2002). It means that investments in general human capital and educational investments in particular, increase the return to the health care capital.

Education improves the efficiency of different kinds of human activity even beyond the labor market. It fosters the individual development and attainment of such traits as self-determination, self-confidence, flexibility, tolerance, open-mindedness, respect to esthetic and cultural values, and intellectual demands.

Education has an impact on development of such attainments as the ability to make decisions, communicate, efficiently use of time, etc. It is obvious that these attainments and attributes are useful not only in the labor market but also in establishing informal contacts (entering clubs, choice of friends), purchasing durables, and others. Education influences much the formation of the human capital. i.e. investments in continuing education, on-the-job training, health support, and migration.

Also, it is worth noting that the family, neighbors, and the society have advantages from the educated individual. Thus, for example, a family benefits from relief for taking care of children, and neighbors do not hear noisy children in the streets. In this way, educational investments will provide non-monetary benefits for those who gained education, and additional non-monetary benefits for surrounding persons.

3. Conclusion

It should be noted that the well-being and sustainable economic development of nations depend upon the human capital. Since, it is necessary to pursue a considered and consistent policy in the field of development of human resources and balanced investments in the human capital. Acquiring education is advantageous that is expressed by the growth of well-being of both an individual and the society as a whole. Advantages of education are in higher wages, efficient costs to consumers, satisfaction with job and leisure, transfer of attainments to new generations. In the future information-oriented society to which Russia is aimed at, education and intelligence are major benchmarks which will meet economic, social, and well-being standards.

Acknowledgements

The authors acknowledge the financial support from the Russian Humanities Research Foundation Project ‘Availability of tertiary education and its quality improvement under innovative reconstruction in Russia’ (project № 14-32-01043a1).

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