Alternative Approaches to Determining Costs and Benefits of Further Professional Education

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Abstract

This article provides new approach to evaluation of employer and employee costs and benefits of further professional education. Based on the results of the survey of MBA graduates of the Faculty of Economics of Lomonosov Moscow State University, it argues the definitions of costs and benefits of further professional education become wider. While making a decision about participation in further education programs workers now consider not just the earnings gain, but also the utility of education that consists, for instance, career progress or job satisfaction increase. For employers several alternative approaches are suggested including costs related to workers' resignation because of the career progress absence after education and benefits in the form of additional professional duties. These mean that the real value of further professional education is now higher for both employers and employees than it was considered earlier.

Keywords: further professional education, worker, employer, costs, benefits, career path.

1. Introduction

Digitalization of the economy predetermines the emergence of new professions (specialists in the field of cyber security, neural networks, artificial intelligence, etc.), and requires new knowledge and skills even in old professions. In addition to the hard skills for the professions of the future, soft skills play an important role in creating an imaginative and constructive environment in a company, bringing it a competitive advantage. Further professional education is responsive to changes and, along with classic programs, new programs are being introduced to provide employees with the necessary competences. People who already have a first or secondary professional education and want to change something in their working life are enrolled in these programs. This need for change and the way it is now being implemented are deeply rooted, and analyzing the current situation, we can highlight a number of conditions for the development of further professional education (Burak & Razumova, 2017).

The theoretical conditions for the development of further professional education include the theory of human capital (G. S. Becker, T. Schults), the theory of educational signals (M. Spence) and the model of reproduction of human capital (J. Ben-Porath). The first one shows the importance of human abilities, knowledge and skills for his labor activity and higher income (Becker, 1975a). The second shows that the document on education is a signal to the employer about the abilities of the employee, his productivity, so the higher the level of education, the greater the return on it (Spence, 1973a). The model of reproduction of human capital demonstrates the importance of human capital accumulation for investing in new human capital throughout the worker’s working life (Ben-Porath, 1970). Through further professional education, periods of
human capital accumulation and investment may be extended until the end of the employee's working life, and due to the development of distance learning technologies, the individual may not make a choice between work and study in further education programs.

- Models of human capital confirm the expediency of further education for employee.
- MBA graduates have return on investment in education in various forms.
- Income increase is important for them as well as career growth and job satisfaction.
- That’s why definitions of benefits and costs of further education become wider.

Changes in labor market requirements for workers and changes in economic growth rates may be considered as economic conditions. These changes predetermine not only the emergence of new professions, but also the constant adjustment of educational programs taking into account economic fluctuations. Changes in the employer’s requirements for employees are based on changes in the set of competencies for certain positions. For example, in order to perform the functions of the head of the planning and financial department, a leading economist does not need to obtain a second higher education; in addition to the available knowledge in the field of economics and finance, it is enough for him to master managerial competencies. Through further professional education, the employee can fill in gaps in the required skills in a short period of time. In times of economic instability, employees may face the challenge of retaining them in the workplace, which is also possible through further professional education programs that will strengthen the employee’s competitive position in the labor market.

The social conditions for the development of further professional education include, first and foremost, the social adaptation of various population groups. Thus, for example, mass retraining of the military after the Second World War was carried out through programs of further professional education. Through the implementation of further professional education programs, the most vulnerable groups in the labor market, such as the disabled people and pensioners, also adapt to changes in life. Professional retraining programs help people to master a new profession in a fairly short period of time and move from the status of an unemployed to the status of an employed person. And professional development programs help to resume employment after a long break.

Technological conditions are reflected in the dual impact of scientific and technological progress on the development of further professional education. Firstly, technological changes lead to the emergence of new professions, which changes the structure of demand in the labor market and, consequently, the requirements for employees themselves. The rapidity of such changes does not allow to react promptly to them in higher education, and therefore further professional education becomes relevant, which is able to prepare the necessary specialists in a shorter period of time. Secondly, the emergence of new information and communication technologies has predetermined the development of a completely new format – distance programs of further professional education, which allow employees to study without interruption and in almost any educational organization of the world.

Historical conditions include the change of formations. If we look at the history of worlds’ further professional education, we can see that it changes in accordance with certain global challenges, including the socio-political system. The transition of workers from the public sector to the private sector, and vice versa, forces them to acquire new knowledge, skills and abilities, which can be achieved through further professional education. Moreover, there are age limits for higher education, while there are no such limits for further professional education. A historical condition is the development of new ideas and concepts in response to changes in the socio-economic life of the population and supported by the international community. Thus, for example, the concept of lifelong learning has predetermined the development of further professional
education as the main tool for ensuring the continuity of learning after the completion of higher or secondary education programs by an individual.

The sphere of further professional education is developing quite actively: both in Russia and abroad the number of students in the programs is growing, new methods and technologies of program implementation appear, and education on such programs becomes more accessible. The development of new information and communication technologies has determined the emergence of distance learning and gave a powerful impetus to the development of further professional education. It is with the development of distance learning that open online courses have become widespread, allowing individuals to adopt experience and gain knowledge from leading specialists and experts in their field on a completely free basis. The advent of corporate universities promotes on-the-job training, which is particularly important for the company's production and technical staff. However, the pace of further professional education development is insufficient from the economic development point of view.

All of the above determines the following purpose of the work: based on the survey of graduates of the MBA program of the Faculty of Economics of Lomonosov Moscow State University prove that MBA program as a part of further professional education is valuable for the employees.

Transformations in the nature of the work and the portrait of the employee are changing the methodology for assessing the benefits and costs of further professional education: alternative approaches to interpreting costs and benefits are emerging, which forces employees and employers to make decisions about training beyond economic determinism.

2. Method

There are theoretical models owned by G. S. Becker, M. Spence, which emphasize economic relations between the employee and the employer. The first one is firm's human capital investment model (Becker, 1962) which implies two options for investing in employee training: general and specific human capital. The theory argues that investing in specific capital is less risky and more profitable for the employer, as the knowledge and skills acquired are applicable only within the company and the salary after training can be set at a level below the new employee's marginal product. In the case of general human capital, the situation is more complicated: since the knowledge and skills acquired are also applicable in other firms, in order to retain the employee after training, the employer will set the salary at the level of the new employee's marginal product, and he can compensate for the training costs incurred by setting the employee's lower salary (below his marginal product) for the period of training.

This approach was reconsidered by well-known economists D. Acemoglu and J. Pishke, who argued that labor market imperfections in the form of asymmetry of information and wage compression form incentives for employers to invest not only in specific but also in total human capital (Acemoglu & Pischke, 1999). This is explained by the fact that the increase in labor productivity of an employee after training is much higher than the increase in his wages, and the higher the qualification of the employee is, the greater is the difference, respectively, the higher is the rent received by the employer.

However, at present, in addition to manipulating the salary of the employee being trained, there are other methods of retaining him at the workplace:

(1) Drawing up an additional agreement to the employment contract for a certain period of time after the training;

(2) Provision of free working hours for the period of training, but provided that all necessary professional tasks are fulfilled;
(3) Drawing up an individual career development plan to confirm the company’s interest in this employee.

In addition, it is difficult to imagine nowadays such specific knowledge and skills that would not be useful for the employee at another workplace, because the fact that he has successfully completed the training already reflects his abilities. Certain positions are characterized by both multitasking and interdisciplinarity in terms of the education required to perform the work, so even if the employee goes into a fundamentally different sphere, the acquired knowledge and skills can be useful in the new profession.

The employer may not reduce the employee’s salary for the period of training, as he guarantees himself an employee for this period with the help of certain legal instruments. Moreover, the employee's salary is set at the limit product level, because modern technologies of education in combination with distance employment (if the employee is provided with a free schedule for the period of training) may not reduce his limit product: for example, he is assigned a task that must be completed in a week, and he allocates his time himself.

The second model is the theory of educational signals (Spence, 1973b), which also, as well as the model of individual return on investment in human capital, characterizes the competitiveness of the employee, but on the other hand: the first signal of the employee’s abilities to the employer in the labor market is a diploma confirming the level of education of the employee, and only then follows the verification of knowledge. The model assumes that a higher level of education is a characteristic of more capable employees, as they have lower costs of education.

Accordingly, speaking about the career advancement of an employee, we believe, within the framework of this theory, that it is possible only with a certificate or diploma of a well-known educational program or educational organization, confirming that their owner, due to their natural abilities, acquired properties and characteristics, was able to master a new level of education and, therefore, is ready to perform more complex production tasks. Thus, there are certain brands (in our work it is the qualification: Master of Business Administration (MBA), diploma of Lomonosov Moscow State University and others), which can strengthen the position of the employee in the labor market. Naturally, in this context it is also important for the employer to perceive such brands, as in certain circumstances the presence of the qualification of MBA, for example, may become a negative signal to the employer. The fact is that the qualification under consideration implies that the graduate's employment in a managerial position is required, so by employing such a candidate for a managerial position, the employer understands that as soon as he has the opportunity, the employee will move to the managerial position (in this or another company), and the employer will have to bear the costs of finding, hiring and adapting a new employee to the vacant position again. If an employee receives a MBA qualification on his own initiative and at his or her own expense, a conflict may arise within the division if the immediate supervisor decides that this is the way the employee is trying to take his or her place. In this case, the qualification is a negative signal. The quality of the programs may also reinforce both positive and negative signals, as they are directly related to the reputation of the program or educational organization.

Thus, the model describes not only the impact of the level of education received on the possibility of employment in a better-paid job, but also explains the behavior of the employer when making career decisions for employees. The modification also makes it possible to predict the choice of an educational organization and/or training program by the employee to increase the chances for career growth.

In 2016-2017, a survey of MBA graduates was conducted to identify changes in their working lives after the program had been implemented (Burak & Razumova, 2018a). Respondents included 144 graduates of the MBA program at the Faculty of Economics of the Lomonosov Moscow State University. Only those graduates who paid for their studies on their own
participated in the survey. It should be noted that this circumstance did not allow to collect quantitative data on the level of graduates’ income, so the increase in income in our work is considered as a qualitative parameter. The questionnaire included nine questions, five of which determined the main characteristics of the graduate: gender, age, region, specialization in basic higher education and professional activity. The remaining four questions in the questionnaire reflected the impact of the knowledge and skills acquired through the program on career development, income and job satisfaction. These questions implied a choice of one answer from those provided, but the questions on career development and income were given the option “other”, where respondents were able to reflect their vision of the answer. An analysis of the responses in this category was carried out, allowing for the distribution of the responses among the identified options (no difference from the answers given: some respondents provided more detailed answers to the questions).

The systematization of the received answers made it possible to form the basis for the proposed approach to determining the benefits and costs of participation of employees and employers in further professional education.

3. Results

Basing on the results of the analysis, it is possible to highlight the advantages and risks of further professional education from the position of the employee and from the position of the employer. So, for employee we can underline such advantages of participating in further professional programs as professional and personal growth; increase in the chances of career and income growth; opportunity to study according to an individual plan; ability to learn a new profession in a short period of time; on-the-job training; practice-oriented education; available cost of programs; obtaining an appropriate certificate of completion of the program confirming the level of knowledge and skills; absence of age limits. For the employer advantages will be: more qualified employees; increase in employee loyalty to the company; on-the-job training; possibility of training employees according to the agreed training program; available cost of programs. There is one risk for both employer and employee - absence of the desired educational result. Also, for employee we can add as a risk negative attitude of the employer to receiving further professional education by the employee because of jealousy or suspicion that he wants to overjump his boss. Employer, in addition, has a risk of quitting an employee immediately after training.

The risks identified can be mitigated as follows:

1. In order to avoid the employer’s perception of the education received as a negative signal, the employee should coordinate the educational trajectory with the career path, taking into account the type of career development. If it is a question of career development outside the company, the training is chosen by the employee himself, based on the requirements of the next position in another organization. An individual’s choice of further professional education may have a direct impact on his or her career advancement.

2. The retention of an employee in the workplace after training or full reimbursement of training costs is possible both by manipulating the employee’s salary for the period of training and by using such tools: additional agreement to the employment contract for a certain period of time after training (apprenticeship contract); provision of a free work schedule for the period of training, but subject to the completion of all necessary professional tasks; preparation of an individual career development plan to confirm the company’s interest in this employee.

3. The absence of the desired return on training may be a sign of the wrong choice of the program: if the required educational result is correctly correlated with the content of the training and competencies developed during the program, this will
reduce the risk of unjustified investments. Moreover, this type of risk increases in
the conditions of limited supply from educational organizations, when it is really
difficult to choose a program that would fully meet the requirements of the customer,
but today the sphere of further professional education can satisfy almost any request
of the consumer, especially taking into account the popularization of individual
educational trajectories. Achievement of the required educational result is directly
related to the quality of educational services, which is not easy to assess when
choosing a program. However, emerging educational brands can reduce the risk of
receiving low-quality educational services.

The results of the MBA graduates survey show that 50% of respondents (those who
moved to a higher position, started their own business and are in the process of moving to a higher
position) achieve career growth as a result of the MBA program. The indicator “On the same
position” (29%) cannot be considered as negative, as all respondents went through the crisis
period of 2015 and the stability of the workplace, in this case, may be a reflection of such a function
of further professional education as retention in the workplace during the period of economic
fluctuations. Foreign experience has shown that further education is used in some countries as
one of the tools for overcoming the crisis.

The data show an increase in the level of income (45.8%) and satisfaction with work
(62.5%) of the survey respondents as a result of mastering the MBA program. The lack of changes
in the income level of a significant part of graduates (43.7%) is probably related to the period of the
survey, including the crisis in 2015, so the stability of income cannot be considered as a
negative indicator. The decrease in respondents’ income is due to maternity leave, long-term sick
leave, bankruptcy of the company, negative reaction of the employer to the qualification of a
“master of business administration” (due to which the employee was dismissed and started his
own business) (Burak & Razumova, 2018b).

Looking at some of the respondents’ answers, it can be noted that the growth of income
is also observed among those graduates who have expanded their functions in their positions. At
the same time, respondents who started their own business or moved up to higher positions noted
not only the growth, but also the previous level of earnings, and even its reduction. Thus, we can
say that a higher position is not necessarily accompanied by an immediate increase in income.

The systematization and individual analysis of respondents’ answers revealed that in
the absence of career growth and of increased income level the respondents’ job satisfaction
increases. This suggests that the concept of benefits from further professional education is not
only measured by the increase in wages.

Moreover, an analysis of the expectations of MBA program participants conducted in
2016-2017 showed that career and professional growth for them is of paramount importance. Thus, the analysis of the benefits of further professional education should take into account career
development opportunities, regardless of whether they are accompanied by an increase in
earnings or not.

4. Discussion

The idea of participating in training is born out of the well-known theoretical models
and empirical research carried out in the field of human capital. They demonstrate that education,
in particular, further professional education can be a profitable investment. For instance, the
model of individual return on investment in human capital suggests that decision to invest in
education involves comparing the benefits and costs of education (Becker, 1975b). The higher the
return on education is, the more likely an individual is to invest in it, all other things being equal.
The return, in turn, depends on the length of working life, the cost of education (both direct and
alternative in the form of lost earnings), the difference in earnings of workers with different levels of education, the current financial situation. This model, which was originally developed to identify differences in consumer behavior with respect to different levels of education (primary, secondary, vocational, and tertiary), can be modified for further professional education.

There is a difference between the decision to invest in the education of young people and adults. For an adult person who has work and earnings, and the extremely high value of the leisure time required for family responsibilities, the cost of education (instead of work or leisure time) is much higher (monetary and temporal) than for a person of young, traditionally student age. The model shows that an adult person will spend time and money on further professional education only if he or she manages to minimize the costs (distance learning, on-the-job training, short programs, etc.) and maximize the benefits (learning what is needed to increase earnings, career advancement, and competitiveness in the labor market).

So once an idea has emerged, the employee and the employer analyze the benefits and costs that they will incur when making a decision on training.

Two approaches to measuring the return on investment in learning are demonstrated to the employee. The classical approach to measuring the return on investment in education is known from human capital theory, where the costs of training are related to the benefits of incremental wages after training. The assessment can be done in two ways: by determining the net present value of the investment (NPV) or the internal rate of return (IRR). The investment decision will be positive if the NPV is greater than 0 or the IRR is higher than the current interest rate.

However, there is an alternative approach that measures the benefits of learning, i.e. the benefits include not only salary increases, but also increased job satisfaction and career advancement. Thanks to the decent work concept proposed by the International Labor Organization in 1999, it has become clear to society that not only wages are an indicator of suitable work, but also improvements in the quality of working life, family/work balance, etc. The international community takes a course to work with self-realization, which predetermines the development of employees on individual educational and career path. Accordingly, the return on training becomes an individual concept, depending on the employee's preferences at a given time. Thus, the modern approach to determining the benefits and costs of an employee's investment in education goes beyond economic determinism.

For the employer, we identify three alternative approaches to determining the costs and benefits of investing in employee training.

The first approach is the direct and indirect costs associated with the quitting of an employee who has not received a career advancement after training. Research suggests that the lack of career growth is one of the most common reasons for quitting of an employee (Berger, 2013; Tkachenko, 2015). Employer’s costs related to dismissal of an employee can be classified according to the following aggregated items: dismissal costs, search and hiring, training and adaptation of a new employee. Indirect costs, including reduced productivity, reputational risks, risk of information leakage, etc., may exceed the direct costs. The cost of dismissal of 156 employees of one Russian company was calculated in 2016. Losses of the company from dismissal amounted to almost 111 million rubles (Cost of dismissal, 2017). Thus, the employer suffers significant losses in case of dismissal and, if there is a possibility of career advancement, it is more profitable to retain the employee than to hire a new employee.

The second approach is to choose between the costs of training an employee for further promotion to a vacant job and the costs of finding a competent specialist in the foreign market. The first option seems to be the most advantageous because the employee is well known, knows the company, the team, etc., but it all depends on what the manager expects from the new
employee: if the company is kept at the current level, then such a decision is likely to be justified; if radical changes are made, it will be more profitable to hire a new employee who has not become a part of the corporate culture and can bring “fresh” ideas. It is possible that the two factors under consideration could work simultaneously. For example, a manager has decided to train an employee, but the employee has resigned due to certain circumstances (maternity leave), so the employer, while retaining the current employee, is forced to hire an external candidate at a significant cost if it comes to hiring for a managerial position. According to different estimates, the costs of recruitment and hiring may vary from 13,000 rubles (Karandashev, 2017), if it is an ordinary employee, to 25%-30% of the annual income of a future employee – a top manager or key specialist (Improving recruitment ..., 2015).

The third approach is to benefit from the additional functionality of the employee after the training. Assessing the return on investment in training is challenging: it remains relevant in activities where the learning outcome can be applied to the work and evaluated instantly. One of the possible variants of benefits for the employer is the introduction of additional functionality to the employee, which allows to obtain a higher marginal product of the employee’s work with a minimum increase in wages. As an illustration, one of the real cases of a student of the MBA program of the Faculty of Economics of Moscow State University is as follows: after receiving the document on additional education, the employee addressed the employer with a question on raising the salary, as he became an even more qualified employee. The employer is not interested in raising the salary only for an additional document of education, and the employee is not ready to work anymore for a minimum increase in wages. There are many solutions to this situation: from the employer’s refusal to increase wages and expand functionality to the employer’s decision to establish a trial period with a minimum increase in wages for the employee with new responsibilities, and then transfer him to a higher position. The choice depends primarily on the position and condition of the company. But the most cost-effective solution for the employer in such a situation is to revise the employee’s functionality with a minimum increase in salary: the employer will assign the employee to solve more complex tasks, which the employee after training will not be perceived as an increase in the volume of work, as he already has the knowledge and skills that will allow him to easily cope with these tasks.

5. Conclusion
The research has shown that there are objective advantages and risks of participation of employees and employers in further professional education. However, the obtained tools allow employees and employers to adequately assess the expediency and profitability of investing in further professional education taking into account the evolution of understanding of the benefits of training.

Our study offers additional arguments to prove the advisability of investing in further professional education for employees and employers. It is likely that the results can be multiplied by other forms of further professional education. The effectiveness of training in further professional programs for trainees will be increased, if it is possible to customize programs.

In addition, in connection with the pension reform, the relevance and expediency of further professional education for seniors increases in Russia. The creation of special programs for this category of citizens will contribute to the long-term maintenance of human capital at a high level.
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