

DIE ROLLE DER BILDUNGSDIENSTLEISTUNGEN BEI DER BILDUNG DES MENSCHLICHEN KAPITALS

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Abstrakt. Der Artikel verwendet das SEM-Path-Modell, um die Auswirkungen von Bildungsdiensten auf die Verringerung der Arbeitslosigkeit und den Aufbau von Humankapital in Usbekistan zu bestimmen. Die Analyse ergab, dass alle Befragten, die an der Umfrage teilnahmen, nach der Schule eine höhere Schulbildung, ein höheres Bildungs- und Beschäftigungsniveau, eine jährliche Zunahme der Berufserfahrung und eine geringere Arbeitszufriedenheit hätten. Darüber hinaus betonten die Autoren in dieser Studie die Rolle der Eltern bei der Schaffung von Bedingungen für ihre Kinder, um Bildungsdienste effektiv zu nutzen, um ihre Zukunft zu verbessern.

Schlüsselwörter: Bildungsdienste, Bildungseinrichtungen, Humankapital, SEM-Path-Modell.

THE ROLE OF EDUCATIONAL SERVICES IN THE FORMATION OF HUMAN CAPITAL

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Abstract. The article uses the SEM-Path model to determine the impact of educational services on reducing unemployment and building human capital in Uzbekistan. The analysis showed that, if all respondents

who took part in the survey had secondary education after school, they would have a higher level of education and employment, an increase in work experience on an annual basis and a decrease in job satisfaction. Furthermore, in this research, the authors emphasized the role of parents in the creation of conditions for their children to effectively use educational services to improve their future.

Keywords: educational services, educational institutions, human capital, SEM-Path model.

Introduction

Currently, one of the most important issues in the period of deepening economic reforms and modernization of the economy in our country is to further improve the existing market of educational services. In order to achieve this, all educational institutions are required to train a competitive, skilled workforce and specialists who can manage the economy on the basis of market principles by improving economic relations in the market of educational services. In fact, in order for a specialist to be in demand in the labor market, he or she must have the knowledge, certain specialization, professional training and a certain level of qualification.

Therefore, the Law of the Republic of Uzbekistan No. LRU-637 "On Education"[1], Decree of the President of the Republic of Uzbekistan No. PD-6108 "On measures to develop education and science in the new period of development of Uzbekistan" [2], PD-5712 "On approval of the Concept of development of the public education system of the Republic of Uzbekistan until 2030" [3] and PD-5847 [4] "On approval of the Concept of development of the higher education system of the Republic of Uzbekistan until 2030" and Resolution No. PR-4312 "On approval of the Concept of development of the system of preschool education of the Republic of Uzbekistan until 2030" [5] and relevant regulations set priorities for the implementation of promising reforms in the education system. Effective implementation of these tasks requires the development of practical recommendations for the system in order to strike a balance between supply and demand in the market of educational services, to further improve the quality of educational services and increase public contentment.

Today, when the culture of providing educational services to the population is evolving, the changing income and desires of consumers from year to year require the development of the concept of systematic research in this market. This calls for increased competition among direct education service providers, expansion of opportunities to provide educational services that meet international quality standards, a

deeper study of the population's demand for quality and affordable education services, expanding and improving the range of services. The adaptation of educational institutions to the needs of all educational services by studying the needs of consumers will directly lead to the development of the services market and the formation of a pure competitive environment in it, as well.

The market of educational services plays a vital role in the modern economy, since the provision of educational services increases the level of knowledge and skills of employees. Educational services are also one of the important factors in improving the quality of workforce in the labour market.

Educational services are an activity that provides a document that allows an organization carrying out educational activities or an individual entrepreneur to continue training and engage in professional activities at a later stage in the organization and implementation of the educational process for training in individual courses, subjects, disciplines [11]. A common feature of educational services is that they are intangible, that is, they cannot be accumulated. By consuming educational services, a person forms knowledge, skills, abilities and personal capabilities. Consumers of educational services are different from other consumers, for the reason that, they do not want to make money only, but primarily to satisfy their need for knowledge.

Families with children, firms and enterprises interested in increasing production efficiency, the state, which aims to achieve economic growth and increase the welfare of the population, are interested in increasing the prestige of higher and secondary special education institutions in the market of educational services. It is in the process of exchanging educational services that economic relations are formed between them [9]. The needs of the education system are met through the benefits of education. They are a type of economic blessing that is the product of human activities related to education and are considered to have signs of preference. Meeting the economic needs of the people constitutes the benefit of the blessing of education. Knowledge, professional training, acquisition of specialization and continuous improvement of it allow a person to earn accordingly and live a prosperous life.

Literature review

Science and education are the socio-economic and political resources of any state's power. In countries with developed national and international education markets, the share of active people with higher education is about 60% [25]. Through such an indicator, any country will be able to assess its potential in the global education market. In the global markets for

educational services, the leading countries are English-speaking countries - the United States, the United Kingdom, Australia, Canada, followed by Germany, Japan, Korea, Singapore and China.

It is important to note, theoretical and methodological aspects of educational services market formation began to develop in the late twentieth century, led to the formation of a global market of educational services, which significantly changes all components of human life due to increasing global knowledge [11]. The complex concept of the market of educational services was first proposed in 1980 in Germany by V.Zarges and F.Heberlin [8]. They emphasize that the effectiveness of educational services should be determined by the quality of services provided for the training of qualified personnel.

A number of problems in the development of the education services market have been studied by many foreign scholars: Bahdin N. Tanjung has developed ways to overcome the shortcomings and problems associated with increasing the competitiveness of educational services in human resource management in Indonesia [14]; F.L.Cooke, R.Schuler and A.Varma conducted research on human resource management in Asian countries, studying current issues of the past, present and future [18]; Pratibha Bundela Gupta, Parag Dubey, Trupti Dave, B.L.Gupta proposed ways to implement national education policies for strategic practices in human resource management in higher education [19]; D.M. Kupper, K. Klein, and F. Volcknerk developed proposals and recommendations for new HRM approaches in the digital economy [15]; C.E.Connelly, Ch.Fieseler, M.Cerne, S.R.Giessner, and S.I.Wong have studied examples of the theory and practice of shaping the digital economy in the field of HRM [14]; A. Verger and S. Robertson have developed analytical tools to assess the viability of the international market for educational services and to analyse the competitiveness of educational services [12].

Uzbek scientist G.N.Akhunova studied the theoretical foundations of the formation and development of educational services market in Uzbekistan, their features and principles, the balance of supply and demand in the educational services market, the formation of vocational education marketing and practical aspects of educational marketing management [6]. D.Kh.Shadimetova studied the role of the system of advanced training in the market of educational services and ways to develop and improve the marketing strategy in the system of advanced training [10]. Moreover, D.H.Nabiev studied the theoretical and methodological problems and prospects of education management, ways to improve the management of marketing of educational services [7].

Research methodology

There is a need to determine the importance of educational services in the socio-economic development of the country and the formation of human capital. Foreign scholars include Jens Dietrichson, Dana McCoy, S.S. Ruhm and Victoria Hidalgo. Preschool education has been shown to improve a child's grades, knowledge, and income during the educational stages [17].

In the case of Uzbekistan, there is a need to develop analytical methods and recommendations for their effective use to determine the impact of educational services on the formation of human capital. In this study, a discriminant analysis method was used to demonstrate the effectiveness of marketing research in determining the impact of educational services on a child's long-term outcomes [16].

The results of the research has shown, that a child who attended preschool had higher grades and average incomes at the school and higher levels of education than a child who did not attend preschool, and a lower level of dissatisfaction. However, the results of this study are not sufficient to clearly demonstrate the impact of preschool education on human capital formation. In this regard, as a continuation of this study, there is a need to improve the data collection and analysis process of marketing research observation method based on the requirements of the SEM-Path model, aimed at determining the impact of preschool education on human capital formation.

Hence, it is important to use social survey methods that allow easy and efficient collection of data on the long-term results achieved by respondents over their lifetimes. It will be necessary to study foreign experience to develop these survey questions and its answer options. The research involves the use of interview and telephone survey methods, which are the most effective methods of collecting information based on questionnaires.

Classification based on statistical analysis will be needed to determine to what extent the results of the social survey collected during the study will affect the child's future activities. It is envisaged to analyze the results of the social survey completed by the respondents using the statistical analysis program Stata 15. Because this program helps to simplify the calculation and justify the accuracy in the process of statistical analysis.

Analysis and results

In the process of statistical analysis, it is necessary to first check the reliability of the survey results and the results of the correlation of the selected variables using the Krombach alpha test [22]. According to the

results of the Krombach alpha test, the correlation value of the 11 selected variables received values close to 1, which indicates that there is a good correlation and justifies the acceptability of these variables for the model. The classification of the variables on the basis of the data of the respondents is given in Table 1 below.

Table 1.

Classification of variables for analysis [24]

№	Factors	Assignment	Classification
Dependent variables – Y			
1.	Education	Y₁	The level of education of the child was determined in three groups: uneducated, secondary special, higher
2.	Occupation	Y₂	The child's employment rate is defined in two groups: working, not working
3.	Instability	Y₃	How long the child has been working at the last job has been taken over the years
4.	Experience	Y₄	Indicators of the child's work experience are obtained over the years
Independent variables – X			
1.	Went to kindergarten	X₁	The child went to kindergarten, nursery, did not
2.	Woman	X₂	Gender of the child: female, male
3.	The village	X₃	Child's place of residence: village, city
4.	Age	X₄	The age of the child is taken over the years
Intermediate variables – X			
5.	School score	X₅	The child's school education score was determined in 4 groups: satisfactory, average, good, excellent
6.	Secondary special education score	X₆	The child's secondary special education score was determined in 4 groups: satisfactory, secondary, good, excellent
7.	Higher education score	X₇	The child's higher education score was determined in 4 groups: satisfactory, secondary, good, excellent

The use of the SEM-Path model in determining the extent to which the impact of educational services on the future activities of different groups of respondents and the main differences between them depends on the analysis process increases the reliability and accuracy of the analysis results [23].

The public opinion polls were conducted in June-August 2019 among 1,098 respondents from all regions of Uzbekistan, and on the basis of questionnaires from the respondents who participated in the survey, the results were collected in various areas that they have achieved over the years. Respondents who filled out the social questionnaire incorrectly were deregistered, and the conclusion of the social survey was based on the data of 930 respondents. Of the respondents, 484 live in rural and 446 in urban

areas, of which 400 were male and 530 were female. It was also found that 157 of the respondents had no education, 404 had higher education and 369 had secondary special education.

It would be useful to show the impact of educational services on the growth of factors such as employment, unemployment and awareness, as well as internships as key indicators of human capital formation based on concrete results based on the tabular data of the SEM-Path model (Table 2).

Table 2

Analysis of the SEM-Path model aimed at determining the impact of educational services on human capital formation [24]

Variables	Coefficient	Default error	Z	P > Z	Interval change (95 % accuracy)	
The effect of increasing the level of education						
Score in School period	0.098 ***	0.016	6.100	0.000	0.130	0.067
Score in secondary education period	0.099 ***	0.010	9,900	0.000	0.118	0.079
Score in higher education period	0.478 ***	0.011	45,000	0.000	0.458	0.499
Woman	-0.028	0.025	-1.090	0.274	-0.077	0.022
Went to kindergarten	0.058 **	0.027	2,150	0.031	0.112	0.005
Age	0.279 ***	0.055	5,080	0.000	0.171	0.386
Rural	0.001	0.024	0.020	0.980	-0.047	0.048
Constant	0.515 **	0.200	2,580	0.010	0.123	0.907
Effect on increasing the internship						
Score in School period	0.370 ***	0.054	6,910	0.000	0.474	0.265
Score in secondary education period	0.336 ***	0.033	10.160	0.000	0.271	0.401
Score in higher education period	0.400 ***	0.035	11.340	0.000	0.331	0.469
Woman	-0.203 **	0.084	-2.420	0.016	-0.368	-0.038
Went to kindergarten	0.438 ***	0.090	4,870	0.000	0.262	0.614
Age	0.767 ***	0.182	4,210	0.000	0.410	1,124
Rural	-0.162 **	0.081	-2,000	0.045	-0.320	-0.003
Constant	-1.003	0.664	-1.510	0.131	-2.304	0.297
Impact on the decline of instability						
Score in School period	0.245 ***	0.037	6,550	0.000	0.172	0.319
Score in secondary education period	0.088 ***	0.022	4,080	0.000	0.131	0.046
Score in higher education period	0.057 **	0.024	2,330	0.020	0.104	0.009
Woman	-0.011	0.055	-0.210	0.833	-0.119	0.096
Went to kindergarten	0.187 ***	0.060	3,130	0.002	0.070	0.304
Age	1,769 ***	0.126	14.040	0.000	1,522	2,016
Rural	0.172 ***	0.052	3,320	0.001	0.071	0.274

Constant	-5.346 ***	0.458	-11.680	0.000	-6.243	-4.449
Impact on employment						
Score in School period	0.056 ***	0.014	3,960	0.000	0.084	0.028
Score in secondary education period	0.069 ***	0.009	7,840	0.000	0.051	0.086
Score in higher education period	0.073 ***	0.009	7,780	0.000	0.054	0.091
Woman	-0.166 ***	0.022	-7.450	0.000	-0.209	-0.122
Went to kindergarten	0.156 ***	0.024	6,530	0.000	0.109	0.203
Age	0.400 ***	0.048	8,300	0.000	0.306	0.495
Rural	-0.037 *	0.021	-1.730	0.083	-0.079	0.005
Constant	-0.700 ***	0.176	-3.980	0.000	-1.044	-0.356

Table 2 above provides an analysis of the factors influencing human capital formation based on the SEM-Path model. Since the main focus in these models is to determine the impact of learning stages on human capital formation, it is worthwhile to analyze only to what extent and through what factors educational services affect human capital formation, without going into the analysis of all models presented in the table.

The analysis of the SEM-Path model, aimed at determining the impact of educational services on human capital formation, led to the following conclusions:

The level of education was significantly higher than the school grade ($r < 0.001$), with a coefficient of 0.098; secondary special education grades were significant ($r < 0.001$), with a coefficient of 0.099; the cost of higher education is also significant ($r < 0.001$), increasing by a factor of 0.478.

The increase in length of service was significant for school grades ($r < 0.001$), with a coefficient of 0.370; the value of secondary special education increases significantly ($r < 0.001$) by a factor of 0.336, while the value of higher education increases significantly ($r < 0.001$) by a factor of 0.400.

The school score was significant for the decrease in dissatisfaction ($r < 0.001$), with a coefficient of 0.245; secondary special education grades were significant ($r < 0.001$), with a coefficient of 0.088; the value of higher education is significant ($r < 0.001$), affecting the coefficient of 0.057.

The school score was significant for employment ($r < 0.001$), with a coefficient of 0.056; secondary special education grades were significant ($r < 0.001$), with a coefficient of 0.069; the value of higher education is significant ($r < 0.001$), affecting the coefficient of 0.073.

Explaining how important the selected variables are for the model in order to determine the impact of educational services on human capital formation requires checking the results using R-square values (Table 3).

Table 3

Analysis of R-square values of SEM Path model [24]

Variables	Changes (Variance)			R - square value	mc value	mc 2 value
	Real value	Forecast	Error			
Score in School period	1,195	0.208	0.987	0.174	0.417	0.174
Score in secondary education period	2,197	0.283	1,915	0.129	0.359	0.129
Score in higher education period	2,929	0.641	2,288	0.219	0.468	0.219
Woman	0.854	0.722	0.132	0.845	0.919	0.845
Went to kindergarten	2,369	0.912	1,457	0.385	0.620	0.385
Age	0.799	0.337	0.462	0.422	0.650	0.422
Rural	0.154	0.052	0.102	0.336	0.579	0.336
sum of R squares				0.644		

According to the results of the R-square values given in Table 3 above, all variables selected to assess the impact of educational services on human capital formation are 64% significant for the model, and its R-square value is 38% if the significance of the main variable is considered separately for this model. Can be seen that.

Figure 1 shows the results of the SEM-Path model, which was conducted to determine the extent to which educational services will have an impact on future activities in different groups of respondents and the main differences between them.

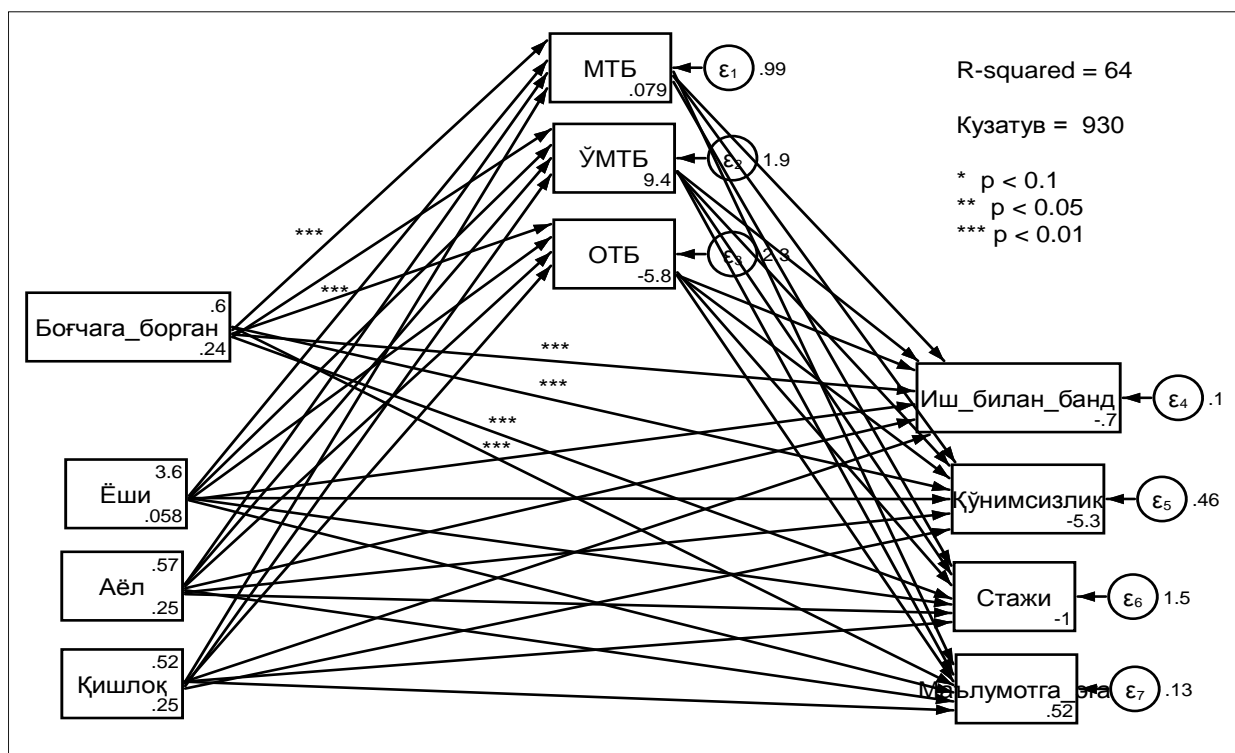


Figure 1. Results of the SEM-Path model for determining the impact of educational services on human capital formation, in coefficients [24]

Note: Went to kindergarten -; – Age; – Woman; - The village; - School score; - Secondary special education score; - Higher education score;– Occupation; – Instability; Стажи – Experience;– Education.

Conclusions and suggestions

1. The results of this model, aimed at assessing the impact of educational services on human capital formation, are recommended for use in the development of targeted strategies for youth education in the country and in explaining the effectiveness of educational services to parents.

2. The high impact of educational services on the formation of human capital has been scientifically substantiated using the SEM-Path model. In this regard, if all respondents in the study had secondary special and higher education after school, they would have achieved higher levels of education and employment, increased annual work experience, and reduced inefficiency in employment.

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