BULLETIN OF NATIONAL ACADEMY OF SCIENCES
OF THE REPUBLIC OF KAZAKHSTAN
ISSN 1991-3494
Volume 4, Number 374 (2018), 111 – 120

JEL 338:24:336.1

G. S. Dyussembekova[1], G. M. Beisembayeva[2], G. B. Bayandina[1], S. K. Burgumbayeva[3]

[1]S. Toraighyrov Pavlodar State university, Pavlodar, Kazakhstan,
[2]Bishkek Humanities university, Bishkek, Kyrgyzstan,
[3]L.N. Gumilyov Eurasian National university, Astana, Kazakhstan.
E-mail: gulsara.dyusembekova@mail.ru, bayandinagd@mail.ru, saulenai@yandex.ru

ANALYSIS OF THE INTERDEPENDENCE OF ENTREPRENEURSHIP DEVELOPMENT AND THE GROWTH OF POPULATION EMPLOYMENT WITHIN THE REALIZATION OF STATE PROGRAMS

Abstract. According to the experience of developed countries, the development of entrepreneurship generates a self-sustaining process of development and expansion of the real sector of the economy and services to ensure growth of the population employment, promotes the growth of its business activity and solution of social problems of the population. In this regard, during the analysis, the impact of the number of registered small and medium enterprises within realization of "Employment roadmap – 2020" state program on the unemployment rate in the Republic of Kazakhstan for 2001–2016 was investigated. In order to solve this problem, in the article it is developed method of analysis using mathematical-statistical methods (correlation-regression method) that allows to assess the impact of state employment programs on the labor market and the unemployment structure in the Republic of Kazakhstan in context of country and regional aspects. For this purpose, the analysis of forecasting of employment and unemployment rates in the Republic of Kazakhstan with the use of mathematical tools was also carried out.

Key words: labor market, employment rate of the population, socio-economic development, economically active population, state employment programs, business activity, unemployment rate, employment roadmap, vector of the development, unemployment structure.

Purpose of this article is to analyze the interdependence of entrepreneurship development and the growth of population employment within the realization of state programs (on the example of "Employment roadmap – 2020" state program). Methodology: synthesis, content-analyze, accommodation, linear pair regression analysis (Pearson correlation coefficient), method of forecasting. Originality/value: for the purpose of achieving socio-economic development of the Republic of Kazakhstan, one of the most important directions, as N.A. Nazarbayev defined "Social and economic modernization is the main vector of development of Kazakhstan" in 2012, is the employment of the population of the republic. At the same time, an important aspect is the assessment of the impact of state employment programs on population employment in the Republic of Kazakhstan, in particular the State Program "Employment Roadmap – 2020", which is a vector in the development of the labour market in the country's regions. Findings: according to the analysis, the influence of the development of entrepreneurship on the reduction of unemployment in the country is confirmed. Thus, the important role of the state industry program "Employment roadmap – 2020" in addressing employment problems is emphasized, contributing to the creation of new jobs at the country's enterprises, in particular, promoting the development of entrepreneurship as a driving force in the economy of the country's regions.

The main goal of creating "Employment roadmap – 2020" state program, for example, is to form and expand new jobs, to increase employment in the regions of the Republic of Kazakhstan and thereby to reduce unemployment rate in the country, and to involve citizens in entrepreneurship. The growth in the number of jobs as a result of the Program implementation reflects the opportunities of enterprises in the regions of the Republic of Kazakhstan to address problems in employment [1].

Meanwhile, it should be noted that, according to the experience of developed countries, the development of entrepreneurship generates a self-sustaining process of development and expansion of the real sector of the economy and services to ensure growth of the population employment, promotes the growth of its business activity and solution of social problems of the population. In this regard, during the analysis, the impact of the number of registered small and medium enterprises on the unemployment rate in the Republic of Kazakhstan for 2001-2016 was investigated [2]. The number of small and medium enterprises and the unemployed population in the Republic of Kazakhstan for 2001-2016 is presented in table 1.

Table 1 – The number of small and medium enterprises and the unemployed population in the Republic of Kazakhstan for 2001-2016*

Years	Number of small and medium enterprises, units (X)	Number of unemployed population, thous. people (Y)
2001	154 334	780,3
2002	171 661	690,7
2003	188 030	672,1
2004	206 371	658,8
2005	224 854	640,7
2006	245 776	625,4
2007	266 284	597,2
2008	281 372	557,8
2009	295 656	554,5
2010	284 639	496,5
2011	299 022	473,0
2012	315 594	474,8
2013	336 548	470,7
2014	351 358	451,9
2015	357 801	454,2
2016	381 414	445,5
*Compiled by the author according to the source [3].		

Calculation of the covariance coefficient. Covariance coefficient characterizes the degree of linear dependence of two random variables [4, p. 115], represented by the formula (1):

$$\operatorname{cov}(X,Y)=\frac{1}{n}\sum_{k=1}^{n}(x_k-M_x)\cdot(y_k-M_y), \tag{1}$$

where M_x – evaluation of the mathematical expectation of a random variable X; M_y – evaluation of the mathematical expectation of a random variable Y.

The value of the mathematical expectations of the random variables X and Y was calculated by the formulas (2), (3):

$$M_x=\frac{1}{n}\sum_{k=1}^{n}x_k=272544{,}625 \tag{2}$$

$$M_y=\frac{1}{n}\sum_{k=1}^{n}y_k=565{,}25625 \tag{3}$$

The calculation of the centered values for calculating the covariance coefficient is presented in table 2 [5].

The final calculation of the covariance coefficient.

$$\operatorname{cov}(X,Y)=-6479893{,}122656\,.$$

Table 2 – Calculation of centered values for calculating the covariance coefficient*

k	x_k	y_k	(x_k-M_x)	(y_k-M_y)	$(x_k-M_x)\cdot(y_k-M_y)$
1	154334	780,3	-118210,62500	215,04375	-25420456,08984
2	171661	690,7	-100883,62500	125,44375	-12655220,23359
3	188030	672,1	-84514,62500	106,84375	-9029859,46484
4	206371	658,8	-66173,62500	93,54375	-6190129,03359
5	224854	640,7	-47690,62500	75,44375	-3597959,58984
6	245776	625,4	-26768,62500	60,14375	-1609965,48984
7	266284	597,2	-6260,62500	31,94375	-199987,83984
8	281372	557,8	8827,37500	-7,45625	-65819,11484
9	295656	554,5	23111,37500	-10,75625	-248591,72734
10	284639	496,5	12094,37500	-68,75625	-831563,87109
11	299022	473,0	26477,37500	-92,25625	-2442703,32734
12	315594	474,8	43049,37500	-90,45625	-3894085,02734
13	336548	470,7	64003,37500	-94,55625	-6051919,12734
14	351358	451,9	78813,37500	-113,35625	-8933988,63984
15	357801	454,2	85256,37500	-111,05625	-9468253,29609
16	381414	445,5	108869,37500	-119,75625	-13037788,08984
*Calculated by the author according to source [3].					

Then, it is necessary to calculate the *correlation coefficient (Pearson coefficient)* – the indicator of mutual probability influence of two random variables [6]. The correlation coefficient can be calculated by the following formula (4):

$$\mathrm{R}_{\mathrm{x,y}} = \frac{\operatorname{cov}(X,Y)}{\sigma_x \sigma_y}, \tag{4}$$

where cov(X,Y) – covariance of random values X and Y; σ – standard deviation of covariance.

Estimates of the variances of the random variables X and Y, respectively, are determined by the formulas (5), (6):

$$\sigma_x^2 = \frac{1}{n}\sum_{k=1}^{n}(x_k - M_x)^2, \tag{5}$$

where σ_x^2 – variance of a random variable X.

$$\sigma_y^2 = \frac{1}{n}\sum_{k=1}^{n}(y_k - M_y)^2, \tag{6}$$

where σ_y^2 – variance of a random variable Y.

Evaluations of the mathematical expectation of the random variables X and Y [7, p. 154-155], respectively, are determined by the formulas (2), (3) or by the formulas (7-10):

$$\mathrm{R}_{\mathrm{x,y}} = \frac{M_{x,y} - M_x \cdot M_y}{S_x S_y}; \tag{7}$$

$$M_{x,y} = \frac{1}{n}\sum_{k=1}^{n} x_k \cdot y_k; \tag{8}$$

$$S_x^2 = \frac{1}{n}\sum_{k=1}^{n} x_k^2 - M_x^2; \tag{9}$$

$$S_y^2 = \frac{1}{n}\sum_{k=1}^{n} y_k^2 - M_y^2 . \qquad (10)$$

In practice, the formula (3.9) is often used to calculate the correlation coefficient, since this formula requires less computation. However, if the covariance cov(*X, Y*) was previously calculated, then it is more convenient to use the formula (3.6), since in addition to the covariance value, the results of intermediate calculations can be also used [8].

In order to calculate the correlation coefficient by the formula (3.6), it is necessary to use the results presented in table 3.7, by adding two new columns $(x_k - M_x)^2$, $(y_k - M_y)^2$ to this table, in which (based on preliminary calculations) the values of the squares of centered random variables. The calculated data for estimating the variances of random variables *X* and *Y* are presented in table 3.

Table 3 – Estimated data for evaluation of variances of the random variables *X* and *Y**

k	x_k	y_k	(x_k-M_x)	$(x_k-M_x)^2$	(y_k-M_y)	$(y_k-M_y)^2$
1	154334	780,3	-118210,625	13973751862,89062	215,04375	46243,81441
2	171661	690,7	-100883,625	10177505793,1406	125,44375	15736,13441
3	188030	672,1	-84514,625	7142721838,89062	106,84375	11415,58691
4	206371	658,8	-66173,625	4378948645,64062	93,54375	8750,43316
5	224854	640,7	-47690,625	2274395712,89062	75,44375	5691,75941
6	245776	625,4	-26768,625	716559284,39062	60,14375	3617,27066
7	266284	597,2	-6260,625	39195425,39062	31,94375	1020,40316
8	281372	557,8	8827,375	77922549,39062	-7,45625	55,59566
9	295656	554,5	23111,375	534135654,39062	-10,75625	115,69691
10	284639	496,5	12094,375	146273906,64062	-68,75625	4727,42191
11	299022	473,0	26477,375	701051386,89062	-92,25625	8511,21566
12	315594	474,8	43049,375	1853248687,89062	-90,45625	8182,33316
13	336548	470,7	64003,375	4096432011,39062	-94,55625	8940,88441
14	351358	451,9	78813,375	6211548078,89062	-113,35625	12849,63941
15	357801	454,2	85256,375	7268649478,14062	-111,05625	12333,49066
16	381414	445,5	108869,375	11852540812,89062	-119,75625	14341,55941
*Calculated by the author according to source [3].						

Hence,

$$\sigma_x^2 = 71444881129,75000 / 16 = 4465305070,609375;$$

$$\sigma_y^2 = 162533,239375 / 16 = 10158,327461;$$

$$\sigma_x^2\sigma_y^2 = 4465305070,609375 \cdot 10158,327461 = 45360031120234,679688;$$

$$\sigma_x\sigma_y = 6734985,606535.$$

The author calculated the correlation coefficient (Pearson coefficient) by formula (4).

$$R_{x,y} = -6479893,122656 / 6734985,606535 = -0,962124.$$

The resulting value ($R_{x,y}$), or more precisely Pearson correlation coefficient, indicates that *X* factor has a significant impact on *Y*.

Now it takes to check *the significance of the correlation coefficient* (test the dependence hypothesis). Since the evaluation of the correlation coefficient is calculated based on the final sample, and therefore may deviate from its general value, it is necessary to check the significance of the correlation coefficient [9, P. 15-16]. The test is performed using the t-criterion, formula (11):

$$t = \frac{R_{x,y} \cdot \sqrt{n-2}}{\sqrt{1-R^2_{x,y}}}. \quad (11)$$

A random value t follows the t-distribution of Student and, according to the t-distribution table, it is necessary to find the critical value of the criterion ($t_{кр.\alpha}$) for a given significance level α [10].

If t value calculated by formula (3.13) is less than $t_{кр.\alpha}$ by module, then there will be no dependence between the random variables X and Y. Otherwise, the experimental data do not contradict the hypothesis of dependence between random variables [11].

$$t = \frac{-0{,}96212 \cdot \sqrt{16-2}}{\sqrt{1-(-0{,}96212)^2}} = -13{,}20540.$$

By the table of t-distribution, the author defined the critical value of $t_{кр.\alpha}$ parameter. In this case, the number of degrees of freedom is 16 (n-2 = 16-2) and α = 0.1, which corresponds to the critical value of $t_{кр.\alpha}$ criterion = 1,761 (table 4).

The absolute value of t-criterion is compared with $t_{cr\ \alpha}$. The absolute value of the t-criterion is not less than the critical value: t = 13,20540, $t_{cr.\alpha}$ = 1,761. Consequently, the experimental data, with a probability of 0,9 (1 - α), will not contradict the hypothesis of dependence of random variables X and Y.

Calculation of the coefficients of the linear regression equation.

The linear regression equation is the equation of a straight line approximating (approximately describing) the relationship between the random variables X and Y. If we assume that X is free and Y is dependent on X, then the regression equation will be written as follows, formulas (12-14):

$$Y = a + b \cdot X; \quad (12)$$

$$b = R_{x,y}\frac{\sigma_y}{\sigma_x} = R_{x,y}\frac{S_y}{S_x}; \quad (13)$$

$$a = M_y - b \cdot M_x. \quad (14)$$

The coefficient b calculated by formula (3.15) is called the linear regression coefficient. In some sources, a is called a constant regression coefficient and b, respectively, is called the variable.

Errors in prediction of Y by the given value of X are calculated as follows: the absolute error by formula (15), the relative error by formula (16):

$$\sigma_{y/x} = \sigma_y\sqrt{1-R^2_{x,y}} = S_y\sqrt{1-R^2_{x,y}}; \quad (15)$$

$$\delta_{y/x} = \frac{\sigma_{y/x}}{M_y} \cdot 100\%. \quad (16)$$

$\sigma_{y/x}$ value (formula (15) is also called the residual mean square deviation, which characterizes the loss of Y from the regression line described by equation (12) for a fixed (given) value of X.

Calculation of the ratio $\frac{\sigma^2_y}{\sigma^2_x}$:

σ_y^2 / σ_x^2 = 10158.32746 / 4465305070.60938 = 0,00000.

Calculation of the ratio $\frac{\sigma_y}{\sigma_x}$.

As a result of extraction of the square root from the last number, the following value is obtained:

σ_y / σ_x = 0,00151.

Calculation of b coefficient by formula (13):

b = -0,96212 · 0,00151 = -0,00145.

Table 4 – *t*-distribution for defining of the critical value of $t_{кр.\alpha}$ criterion*

Number of the degrees of freedom (n–2)	α = 0.1	α = 0.05	α = 0.02	α = 0.01	α = 0.002	α = 0.001
1	6,314	12,706	31,821	63,657	318,31	636,62
2	2,920	4,303	6,965	9,925	22,327	31,598
3	2,353	3,182	4,541	5,841	10,214	12,924
4	2,132	2,776	3,747	4,604	7,173	8,610
5	2,015	2,571	3,365	4,032	5,893	6,869
6	1,943	2,447	3,143	3,707	5,208	5,959
7	1,895	2,365	2,998	3,499	4,785	5,408
8	1,860	2,306	2,896	3,355	4,501	5,041
9	1,833	2,262	2,821	3,250	4,297	4,781
10	1,812	2,228	2,764	3,169	4,144	4,587
11	1,796	2,201	2,718	3,106	4,025	4,437
12	1,782	2,179	2,681	3,055	3,930	4,318
13	1,771	2,160	2,650	3,012	3,852	4,221
14	**1,761**	2,145	2,624	2,977	3,787	4,140
15	1,753	2,131	2,602	2,947	3,733	4,073
16	1,746	2,120	2,583	2,921	3,686	4,015
17	1,740	2,110	2,567	2,898	3,646	3,965
18	1,734	2,101	2,552	2,878	3,610	3,922
19	1,729	2,093	2,539	2,861	3,579	3,883
20	1,725	2,086	2,528	2,845	3,552	3,850
21	1,721	2,080	2,518	2,831	3,527	3,819
22	1,717	2,074	2,508	2,819	3,505	3,792
23	1,714	2,069	2,500	2,807	3,485	3,767
24	1,711	2,064	2,492	2,797	3,467	3,745
25	1,708	2,060	2,485	2,787	3,450	3,725
26	1,706	2,056	2,479	2,779	3,435	3,707
27	1,703	2,052	2,473	2,771	3,421	3,690
28	1,701	2,048	2,467	2,763	3,408	3,674
29	1,699	2,045	2,462	2,756	3,396	3,659
30	1,697	2,042	2,457	2,750	3,385	3,646
40	1,684	2,021	2,423	2,704	3,307	3,551
60	1,671	2,000	2,390	2,660	3,232	3,460
120	1,658	1,980	2,358	2,617	3,160	3,373
∞	1,645	1,960	2,326	2,576	3,090	3,291
* Calculated by the author.						

Calculation of *a* coefficient by formula (14):

$$a = 565{,}25625 - (-0{,}00145 \cdot 272544{,}625) = 960{,}76339.$$

Estimation of the error of the regression equation.

As a result of extracting σ_y^2 from the square root, the following value is obtained:

$$\sigma_y = \sqrt{10158{,}32746} = 100{,}78853 .$$

Based on the results of squaring $R_{x,y}$, the following value is obtained:

$$R^2_{x,y} = -0{,}96212^2 = 0{,}92568.$$

Most often, by giving an interpretation of the determination coefficient, it is expressed as a percentage, i.e. *changes in X lead to a change in Y in 92,57% of cases*. In other words, the accuracy of selecting the regression equation is high. The remaining 7,43% change in *Y* is explained by to the factors not taken into account in the model (as well as by specification errors).

Calculation of the absolute error (residual mean square deviation) by the formula (15):

$$\sigma_{y/x} = 100{,}78853 \cdot \sqrt{1 - 0{,}92568} = 27{,}47609 \; .$$

Calculation of the absolute error by the formula (16):

$$\delta_{y/x} = \frac{27{,}47609}{565{,}25625} \cdot 100\% = 4{,}86082\% \; .$$

Errors of equation: $\sigma_{y/x} = 27{,}47609$, $\delta_{y/x} = 4{,}86082\%$.

As a result, the linear regression equation has the following form, formula (17):

$$Y = 960{,}76339 - 0{,}00145X. \tag{17}$$

The regression coefficient b = -0.00145 shows the average change in the resulting indicator (in the units of *Y*) with an increase or decrease in the value of *X* coefficient per the unit of its measurement. In this example, with 1 unit increase *Y* decreases by -0,00145 on average.

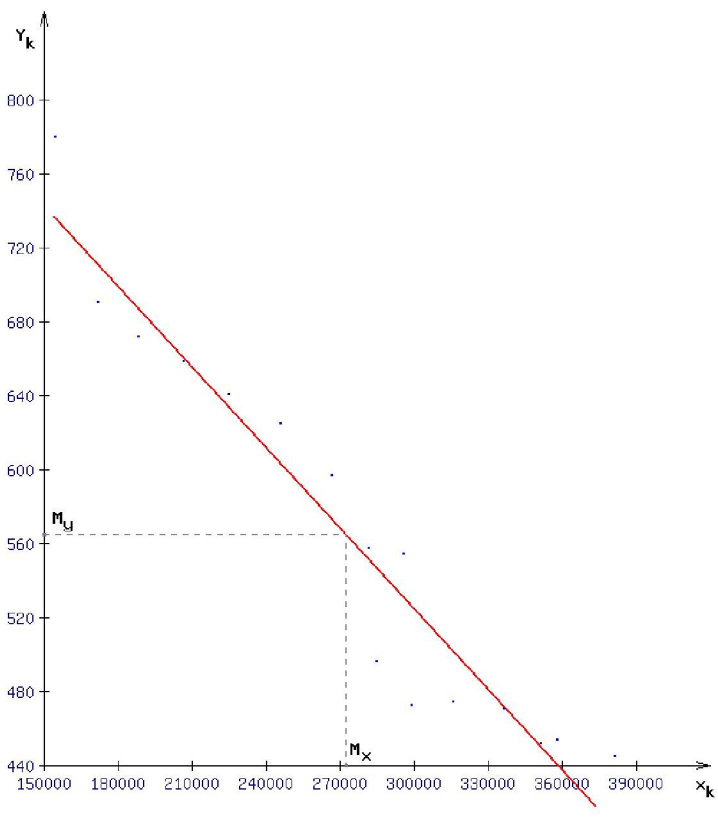
The coefficient a = 960,762 formally shows the predicted level of *Y*, but only if $x=0$ is close to the sampled values.

The approximation error ($\bar{A}$) in the range of 5-7% indicates a good selection of the regression equation for the original data.

$$\overline{A} = \frac{0{,}642}{16} \cdot 100\% = 4{,}01\% \, .$$

On average, the calculated values deviate from the actual values by 4,01%. Since the error is less than 7%, this equation can be used as a regression.

For the visual representation, a scattering diagram (correlation field) and the regression line diagram are built (figure).



Scattering diagram (correlation field).

Note – Compiled by the author.

The author finds the minimum and maximum X sample elements. These are the 1st and the 16th elements, respectively, X_{min} = 154334 and X_{max} = 381414. The author finds the minimum and maximum Y sample elements. This is the 16th and the 1st elements, respectively, Y_{min} = 445,5 and Y_{max} = 780,3.

The starting point is chosen on the abscissa axis slightly to the left of X_1 = 154334, and a scale is selected to place X_{16} = 381414 point and other points on the axis. The starting point is chosen on the ordinate axis slightly to the left of Y_{16} = 445,5, and a scale is selected to place Y_1 = 780,3 and the remaining points on the axis.

The author places the values of X_k on the abscissa axis, and Y_k values - on the ordinate axis.

The author applies the points (X_1, Y_1), (X_2, Y_2), ..., (X_{16}, Y_{16}) to the coordinate plane. Then the author draws a regression line and obtain the scattering diagram (correlation field) shown in the figure.

For this purpose, the author finds two different points with coordinates (X_{r1}, Y_{r1}) and (X_{r2}, Y_{r2}) satisfying the equation (17), applies them to the coordinate plane and draws a straight line through them. The author takes the value X_{min} = 154334 as the first point abscissa. The author substitutes the value of X_{min} in equation (17) and obtains the first point ordinate. Thus, the author has a point with coordinates (154334; 736,79934). Similarly, the author obtains the coordinates of the second point by setting X_{max} = 381414 as the abscissa. The second point will be: (381414; 407,26886). The regression line is shown in red in the figure.

Thus, the dependence of the number of the unemployed population in the regions of the country (Y) on the development of entrepreneurship (X) in the Republic of Kazakhstan for 2001-2016 has been studied [12]. Paired linear regression (Pearson correlation coefficient) was selected at the specification stage. Its parameters are estimated by the least squares method [13]. The statistical significance of the equation is verified by means of the determination coefficient and the Fisher criterion [14].

It was found that in the investigated situation, 92,57% of the total variability of Y is explained by the change in X. It is also established that the parameters of the model are statistically significant. An economic interpretation of the model parameters is possible - an increase in the number of small and medium enterprises (X) by 1 unit leads to an average decrease of the unemployed population (Y) by 0,00145 measurement units (persons). Thus, with an increase in the number of small and medium enterprises (X), the number of unemployed people in the country will decline.

The resulting estimates of the regression equation also allow us to use it for the forecast. With the number of small and medium enterprises (X), equal to 299799 units, the number of unemployed population (Y) will be in the range from 460,44 to 590,97 people, and with a probability of 95% will not go beyond these limits [15].

In the conclusion, according to the analysis, we would like to note, that the influence of the development of entrepreneurship on the reduction of unemployment in the country is confirmed. Thus, the important role of the state industry program "Employment roadmap – 2020" in addressing employment problems is emphasized, contributing to the creation of new jobs at the country's enterprises, in particular, promoting the development of entrepreneurship as a driving force in the economy of the country's regions.

REFERENCES

[1] Programma «Dorozhnaya karta zanyatosti – 2020». Postanovleniye Pravitel'stva Respubliki Kazakhstan ot 19 iyunya 2013goda № 636. URL: http://dkz.mzsr.gov.kz/

[2] Pasport programmy razvitiya produktivnoi zanyatosti i massovogo predprinimatel'stva na 2017–2021 gody. Utverzhdena postanovleniyem Pravitel'stva Respubliki Kazakhstan ot «29» dekabrya 2016 goda № 919. URL: http://prz.enbek.gov.kz/ru/node/8

[3] Oficial'nyi internet-resurs Komiteta po statistike Ministerstva nacional'noi ekonomiki Respubliki Kazakhstan. URL: http:// www.stat.gov.kz (data obrashcheniya: 20.02.2017).

[4] Kveyd E.S. Analiz slozhnykh system (metodologiya analiza pri podgotovke resheniy). M.: INFRA-M, 2008. 120 p.

[5] Karzeva M. Otsenka effektivnosti programm sodeystviya zanyatosti. V kn. Otsenka programm: metodolgiya i praktika. / Pod red. A. I. Kuz'mina, R. O'Sallivan, N.A. Koshelevoi. M.: Izdatel'stvo «Presto-RK», 2009. 396 p.

[6] Ravallion M., Wodon Q. Evaluating a Targeted Social Program When Placement is Decentralized // Policy Research Working Paper. 1998, available at: http://siteresources.worldbank.org/INTISPMA/Resources/multi_page.pdf

[7] Kenel Zh. Otsenka i audit programm: skhodstva i razlichiya. V kn. Otsenka programm: metodolgiya i praktika. / Pod red. A. I. Kuz'mina, R. O'Sallivan, N. A. Koshelevoi. M.: Izdatel'stvo «Presto-RK», 2009. 396 p.

[8] Kremer N.Sh. Ekonometrika / Pod red. N. Sh. Kremer, B. A. Putko. M.: YUNITI, 2005. 311 p.

[9] Roberto M., Sontheimer L.E. Performance Monitoring Indicators Handbook. Washington, DC: The World Bank Operations Policy Department, 1996. 60 p.

[10] Peters G.B., Pierre J. Governance without Governing? Rethinking Public Administration // Journal of Public Administration Research and Theory. 1998. Vol. 8. Issue 2. P. 223-243.

[11] Public Expenditures Management Handbook. The World Bank. Washington, D.C., 1998. 193 p.

[12] Zaklyuchenie po monitoring realizaciii pravitel'stvennoi programmy Dorozhnaya karta zanyatosti 2020» za 2015 god. Ministerstvo nacional'noi ekonomiki Respubliki Kazakhstan. Astana, 2016. URL: http://economy.gov.kz/ru/pages/zaklyuchenie-po-monitoringu-realizacii-pravitelstvennoy-programmy-dorozhnaya-karta-zanyatosti

[13] Taylor F.W. The Principles of Scientific Management. New York: Harper & Brothers Publishers, 1919. 144 p., available at:
http://strategy.sjsu.edu/www.stable/pdf/Taylor,%20F.%20W.%20(1911).%20New%20York,%20Harper%20&%20Brothers.pdf

[14] Wollmann H. Evaluation in Public-Sector Reform: toward a «Third Wave» of Evaluation? // In Evaluation in Public Sector Reform "Concept and Practice in International Perspective" / Ed. H. Wollmann H. Cheltenham: Edgar Elgar Publishing Limited, 2003. P. 12-29.

[15] Simon H. Rationality as Process and Product of Thought // The American Economic Review. 1978. Vol. 68, N 2. P. 1-16, available at: http://www.ibiblio.org/philecon/General%20Information_files/simon-rationality.pdf

Г. С. Дуйсембекова[1], Г. М. Бейсембаева[2], Г. Б. Баяндина[1], С. К. Бургумбаева[3]

[1]С. Торайғыров атындағы Павлодар мемлекеттік университеті, Павлодар, Қазақстан,
[2]Бишкек гуманитарлық университеті, Бишкек, Қырғызстан,
[3]Л. Гумилев атындағы Еуразиялық ұлттық университеті, Астана, Қазақстан

МЕМЛЕКЕТТІК БАҒДАРЛАМАЛАРДЫ ЖҮЗЕГЕ АСЫРУ ШЕҢБЕРІНДЕ ХАЛЫҚТЫҢ ЖҰМЫСПЕН ҚАМТЫЛУЫНЫҢ ӨСУІ МЕН КӘСІПКЕРЛІКТІҢ ДАМУЫНЫҢ ӨЗАРА БАЙЛАНЫСЫНЫҢ ТАЛДАУЫ

Аннотация. Қазақстан Республикасының әлеуметтік-экономикалық дамуына қол жеткізу мақсатында маңызды бағыттардың бірі – Н. Ә. Назарбаев 2012 жылы «Әлеуметтік-экономикалық жаңғырту – Қазақстан дамуының басты бағытында» атап өткендей, республика халқының жұмыспен қамтылуы болып табылады. Осы бағытта маңызды аспектілердің бірі – Қазақстан Республикасы халқының жұмыспен қамтылуына жұмыспен қамтудың мемлекеттік бағдарламасының, әсіресе «Жұмыспен қамтудың жол картасы – 2020» мемлекеттік бағдарламасының ықпалын бағалау, ол ел аймақтарындағы еңбек нарығының дамуында басты бағыт болып табылады. Дамыған елдердің тәжірибесіне сәйкес, кәсіпкерліктің дамуы халықтың жұмыспен қамтылуының өсуін қамтамасыз ету үшін экономика мен қызмет көрсету саласының нақты секторының дамуы мен кеңеюінің үрдістерін тудырады, сонымен қатар оның іскери белсенділігінің өсуі мен халықтың әлеуметтік мәселелерінің шешілуіне ықпал етеді. Осыған байланысты, талдау жүргізу барысында, Қазақстан Республикасындағы 2001-2016 жылдардағы жұмыссыздық деңгейін анықтауда «Жұмыспен қамтудың жол картасы – 2020» мемлекеттік бағдарламасын іске асыру шеңберінде шағын және орта бизнес кәсіпорындарының тіркелген санының ықпалы зерттелді. Елдегі және аймақтық аспектілердегі мемлекеттік бағдарламаларды іске асыру шеңберінде осы мәселені шешу үшін мақалада математикалық-статистикалық әдістерді (корреляциялық-регрессивтік әдіс) қолданумен талдау әдісі жасалынған, ол елдегі және аймақтық аспектідегі мемлекеттік бағдарламаларды жүзеге асыру шеңберінде кәсіпкерліктің дамуы мен халықтың жұмыспен қамтылуының өсуінің өзара байланысының талдауын жүргізуге мүмкіндік береді.

Түйін сөздер: еңбек нарығы, халықтың жұмыспен қамтылу деңгейі, әлеуметтік-экономикалық даму, экономикалық белсенді халық, жұмыспен қамтудың мемлекеттік бағдарламалары, бизнес қызметін дамуының басты бағыты, құрылымы, жұмыссыздық деңгейі, жұмыспен қамту жол картасы жұмыссыздық.

Г. С. Дюсембекова[1], Г. М. Бейсембаева[2], Г. Б. Баяндина[1], С. К. Бургумбаева[3]

[1]Павлодарский государственный университет им. С. Торайгырова, Павлодар, Казахстан,
[2]Бишкекский гуманитарный университет, Бишкек, Кыргызстан,
[3]Евразийский национальный университет им.Л.Гумилева, Астана, Казахстан

АНАЛИЗ ВЗАИМОСВЯЗИ РАЗВИТИЯ ПРЕДПРИНИМАТЕЛЬСТВА И РОСТА ЗАНЯТОСТИ НАСЕЛЕНИЯ В РАМКАХ РЕАЛИЗАЦИИ ГОСУДАРСТВЕННЫХ ПРОГРАММ

Аннотация. Согласно опыта развитых стран, развитие предпринимательства порождает самоподдерживающий процесс развития и расширения реального сектора экономики и сферы услуг для обеспечения роста занятости населения, способствует росту его деловой активности и решению социальных проблем населения. В связи с этим, при проведении анализа, было исследовано влияние количества зарегистрированных предприятий малого и среднего бизнеса в рамках реализации государственной программы «Дорожная карта занятости – 2020» на уровень безработицы в Республике Казахстан за 2001–2016 годы. Для решения данной проблемы в статье разработан метод анализа с применением математико-статистических методов (корреляционно-регрессионного метод), позволяющий провести анализ взаимосвязи развития предпринимательства и роста занятости населения в рамках реализации государственных программ в страновом и региональном аспектах. С этой целью также проведен анализ прогнозирования занятости и безработицы по РК с применением математического инструментария.

Ключевые слова: рынок труда, уровень занятости населения, социально-экономическое развитие, экономически активное население, государственные программы занятости, бизнес деятельность, уровень безработицы, дорожная карта занятости, вектор развития, структура безработицы.

Information about authors:

Dyussembekova G. S. – doctor PhD, Department of state management, business and law chair of management and politology, S. Toraighyrov Pavlodar state university, Kazakhstan, Pavlodar

Beisembayeva G. M. – doctoral candidate, Department of economy and finance chair of economic programs and management, Bishkek Humanities university, Kyrgyzstan, Bishkek

Bayandina G. B. – doctor PhD, Department of state management, business and law chair of management and politology, S. Toraighyrov Pavlodar state university, Kazakhstan, Pavlodar

Burgumbayeva S. K. – doctor PhD, Department of mechanics and mathematics chair of supreme mathematics, L. N. Gumilyov Eurasian national university, Kazakhstan, Astana