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Abstract

The technique of formation of factors for carrying out the analysis of dependence of a state of health of the population from ecological factors in Byelorussia by means of log-analysis application is considered.

1995-2010

16

18].

40 % [1, ()

(Z).

[2,

12-13].

[5].

1

	(X _i)
X ₁ -	, . . . ;
2 -	, . . . ;
3 -	, . . . ;

X_4 -	%
5 -	;
(Y _i)	
1 -	
2 -	
3 -	
Y ₃ -	
4 -	
5 -	
(Z _i)	
Z ₁ -	
%;	
Z ₂ -	
Z ₃ -	
Z ₄ -	
Z ₅ -	
Z ₆ -	
Z ₇ -	
Z ₈ -	
Z ₉ -	

(20) ()

(),

[6, . 338-339].

(X, , Z)

• F_x -

• F_y -

• F_z -

[2, . 13].

(F)

(2). (F_x).
 2 , :
 (F_x, F_y, F_z) 1995-2010 . (F_y)
 (F_z).

2

1995 - 2010 .

	(F _r)		
	F _x	F _y	F _z
1 995	1,53892	0,82130	1,26514
1 996	1,30757	0,64125	1,20741
1 997	1,18064	0,82823	1,33082
1 998	0,6629	1,75756	1,20056
1 999	-0,49649	0,56634	0,47511
2 000	-0,70897	-0,00486	0,29376
2 001	-0,59889	-0,27261	0,11907
2 002	-0,82079	-0,52596	-0,01935
2 003	-1,16547	-0,92044	-0,14781
2 004	-0,54557	-0,83183	-0,53324
2 005	-0,71513	-1,06192	-0,88523
2 006	-0,19564	-1,23818	-1,04894
2 007	-0,41185	-0,8118	-1,37352
2 008	-0,10825	-1,0362	-1,35163
2 009	0,169309	-0,98544	-1,72970
2 010	0,178131	-0,97865	-1,75910'

(3).

[8, . 290-292].

1997 . () 0-17 , 2 -

(100) 1995-2010 . [7],

(X_i, Y_i, Z_i)

F_x, F_y, F_z (CM. 2).

(i)

(F_x),

(F_y)

(F_z)

[8, . 290-292].

$$X_{1t} = 52,029 F_{X_t} + 52,029 F_{X_{t-1}}; \quad R^2 = 0,994$$

(1,192) (1,192)

$$Y_{1t} = -121,869 F_{Y_t} - 45,264 F_{Y_{t-1}} - 31,342 F_{Y_{t-2}} - 107,947 F_{Y_{t-3}}$$

(12,667) (5,081) (5,791) (13,552)

$$R^2 = 0,955$$

$$Z_{1t} = -324,59 F_{Z_t} - 324,59 F_{Z_{t-1}}; \quad R^2 = 0,898$$

(31,618) (31,618)

(100) 1995-2010 . [7],

(X_i, Y_i, Z_i)

F_x, F_y, F_z (. 2).

(F_x) 1

104,058

100 (52,029 + 52,029);

$$\bar{Z} = 0,398 \cdot 0 + 0,148 \cdot 1 + 0,102 \cdot 2 + 0,352 \cdot 3 = 1,408$$

306,422

100
(121,869+45,264+31,342+107,947);

(F)

(F_Y) 1

1,408

649,18

100
(324,59+324,59).

(2)

F F F_Z

(3).

3

F_X F_Z

(1)

(F)

F

(F_Z)

39,8 %

(14,8 %),

(2)

(10,2%)

35,2 %

1768 4823

$$F_1 : F_Z = 0,5 \cdot 0 + 0,5 \cdot 1 = 0,5$$

100
3208 6548

-
- 4930

(F_X)

7881

100

(F_Z)

5850 12292

100

0,5

1
3

F

:

$X_{1t} = 52,029 F_{Xt} + 52,029 F_{Xt-1}$	$Y_{1t} = -121,869 F_{Yt} - 45,264 F_{Yt-1} - 31,342 F_{Yt-2} - 107,947 F_{Yt-3}$	$X_{1t} = -324,59 F_{Zt} - 324,59 F_{Zt-1}$
$\beta_0 = \frac{52,029}{104,028} = 0,5;$ $\beta_1 = \frac{52,029}{104,028} = 0,5$	$\beta_0 = \frac{121,869}{306,422} = 0,398;$ $\beta_1 = \frac{45,264}{306,422} = 0,148;$ $\beta_2 = \frac{31,342}{306,422} = 0,102;$ $\beta_3 = \frac{107,947}{306,422} = 0,352$	$\beta_0 = \frac{324,59}{649,18} = 0,5;$ $\beta_1 = \frac{324,59}{649,18} = 0,5$

5850 12292

100

(4)

(F_z)

F

2

(F)

$$Y_{4t} = -0,128F_{Zt} - 0,034F_{Zt-1} - 0,060F_{Zt-2}; R^2 = 0,981$$

(0,025) (0,002) (0,024)

(2)

488
100

- 977

(F_z)

«

(F)»

(4).

F_z

(30,2+24,6), 30,2 %

54,8 %

0,128

100

29,4 %

- 0,222

-0,162
100

57,7 %

F_z

3-

27 %

15,3 % -

()

100

$$0,5770 + 0,153 \cdot 1 + 0,270 \cdot 2 = 0,693$$

(0,693)

(3)

(F_z)

$$Y_{3t} = -79,233F_{Zt} - 68,275F_{Zt-1} - 57,317F_{Zt-2}; R^2 = 0,985$$

(27,486) (2,744) (26,177)

- 79,233,

79

100

148

- 205

100

216 . , - : , 2001. -
6.
. [.];
(,), . - , 1999.-598 . . - .:
7. 2010: .
./
0-17 , 2010. -598 .
8. : /
2001. -344 .
.
.-2011.- 7.- .31-35.

$F_x, F_y, F_z,$

1. :
2. . - . : - , 1998.- 181
- 2 (45). - . 12-17. // . - 2009. -
3. : /
4. , 2010.-233
5. / - 2- . - . :
, 2000. -672