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$$NAS = (GNS - D_h + CSE - R_{n,i} - CD) / GNI, \quad (1)$$

NAS – ; GNS –

; D_h –

; CSE – ; $R_{n,i}$ –

; CD – ; GNI –

1990-

«World Development

Indicators».

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1 [10].

2 « »,

[4; 8], [7], [2] [1], [6].

[12].

$$\bar{C}_{it} - C_{it} = \alpha_0 + \alpha_1 S_{it} + \epsilon_{it}, \quad (2)$$

($\bar{C}_{it} - C_{it}$) - i $t; S_{it}$ -

(ϵ_{it}) ; α_0, α_1 -

S_{it} : -

(GSS); (NS), . . .

; « »

(GNS), . . .

(GS), . . . « »

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[12]

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	90,2	-0,002
	131,4	0,128
« »	237,0	0,129
	152,2	0,037

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 2008 . . , -
 [11]. -

$$PV C_{it} = \frac{C_i}{(1+r)^t}, \quad (3)$$

$PV C_{it} - C_i -$; $r -$. -

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	[15; 16; 18].	-
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Ссылка на работу	Объем выборки		Тип данных	Зависимая переменная	Объясняющие переменные									
	Кол-во стран	Временной диапазон			GSS	NS	GNS	GS	PGNS	PGS	TGNS	TGS	PTGS	
Ferreira, Vincent [12]	93	1970–2001	Панельные	$\bar{C}_{it} - C_{it}$	+	+	+	+						
World Bank (2006)	54; 69; 74; 74; 78	1970–2000	Пространственные	$PV\Delta C$	+	+			+					
Ferreira, Hamilton, Vincent [11]	64	1970–2001	Панельные	$PV\Delta C$	+	+			+					
Mota, Domingos [16]	1 (Португалия)	1990–2005	Временные ряды	$\bar{C}_{it} - C_{it}$ $PV\Delta C$	+	+			+				+	
Blum, McLaughlin, Hanley [9]	1 (Германия)	1850–2000	Временные ряды	$PV\Delta C$		+			+				+	
Greasley, Hanley, Kunnas et al. [14]	1 (Великобритания)	1765–2000	Временные ряды	$PV\Delta RW$		+			+				+	+
Greasley, Hanley, Kunnas et al. [15]	1 (США)	1869–2000	Временные ряды	$PV\Delta C$		+			+				+	
Oxley, Hanley, Greasley et al. [18]	3 (Германия, США, Великобритания)	1870–2000	Временные ряды, панельные	$PV\Delta C$					+					+

GSS – (. green savings); NS – (. gross savings); NS – (. net savings); GNS – « »
(. genuine savings); $PGNS$ – « »
(. GNS adjusted for population growth); PGS –
(. GS adjusted for population growth); $TGNS$ – « »
(. GNS adjusted for measure of technological progress); TGS –
(. GS adjusted for measure of technological progress); $PTGS$ –

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$(\bar{C}_{it} - C_{it})$. 4. $(\bar{C}_{it} - C_{it})$.
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$$R_N = ((P - AC) \times V), \quad (4)$$

R_N - ; AC - ; P - ; V -

	2003 .. *										
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
	5,1	5,0	4,0	3,1	1,2	1,6	1,7	1,0	1,3	-0,3	-0,6
	27,9	24,5	22,1	15,4	11,9	14,7	14,6	9,2	4,4	-0,1	1,8
	4,4	3,8	2,6	1,5	0,4	1,2	1,1	0,6	0,4	0,5	-0,1
	13,5	13,9	11,4	8,7	8,5	11,5	8,9	4,8	1,2	0,1	-0,1
	52,7	48,8	34,1	20,4	5,0	26,1	26,4	13,4	2,4	-3,4	-8,6
	26,5	25,7	22,1	16,4	8,0	10,8	9,4	2,7	-0,8	-1,9	-3,8
	88,3	87,5	67,7	34,7	8,6	32,7	31,0	20,0	-5,9	-21,2	-28,5
	47,9	40,1	21,8	6,2	-8,6	8,8	12,9	5,7	-3,6	-10,2	-16,7
	59,7	45,8	20,8	-10,4	-31,5	13,7	11,5	-0,4	-14,9	-23,5	-13,6
	93,4	73,6	51,9	35,4	13,5	37,1	34,0	8,1	-4,0	-20,5	-26,6
	58,2	49,4	37,1	21,4	12,0	23,9	24,7	9,8	2,4	-9,6	-18,4
	19,6	13,6	6,4	1,6	-3,0	3,9	6,5	6,5	3,3	-3,6	-2,1

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. – URL: <https://fedstat.ru/indicator/33691>).

2004–2006 . [4].

2003 ..
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	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
	1,9 (25,6)	2,0 (29,6)	2,7 (32,6)	4,2 (42,1)	4,5 (41,4)	4,0 (37,8)	4,7 (42,5)	6,8 (55,8)	4,7 (35,9)	4,9 (36,2)	5,4 (36,0)
	7,4 (13,3)	7,5 (13,0)	11,9 (18,2)	13,8 (19,5)	14,5 (19,8)	12,8 (20,0)	17,1 (25,8)	18,3 (25,9)	17,6 (24,8)	17,3 (24,0)	14,7 (20,9)
	1,0 (11,1)	1,0 (10,7)	1,5 (14,3)	1,5 (11,7)	2,1 (14,7)	2,9 (20,2)	3,5 (22,6)	3,6 (23,4)	5,1 (31,5)	5,7 (33,6)	6,5 (36,8)
	5,8 (20,1)	8,3 (25,8)	14,0 (36,6)	11,6 (27,6)	8,1 (19,2)	7,0 (16,4)	11,2 (23,5)	16,2 (31,2)	16,7 (29,6)	13,1 (22,5)	15,2 (24,9)
	12,5 (12,5)	15,7 (14,9)	20,5 (16,5)	27,7 (18,8)	32,4 (21,3)	23,5 (16,7)	27,1 (18,0)	32,4 (21,2)	36,3 (22,8)	38,6 (23,1)	38,8 (22,8)
-	14,2 (26,6)	14,1 (26,1)	16,7 (25,8)	23,0 (31,4)	29,4 (35,8)	22,9 (29,1)	22,6 (27,3)	24,8 (26,4)	30,6 (31,7)	24,4 (26,1)	27,3 (31,6)
-	48,1 (15,1)	60,0 (17,6)	69,8 (16,7)	87,2 (18,0)	129,4 (29,9)	139,5 (35,2)	145,1 (27,7)	154,7 (28,7)	180,8 (35,4)	163,9 (32,1)	141,1 (26,1)
.	25,1 (13,5)	30,6 (15,3)	53,8 (22,8)	82,9 (31,2)	79,8 (31,0)	59,5 (24,5)	62,6 (23,1)	70,7 (24,2)	82,2 (25,8)	87,7 (27,1)	85,8 (24,9)
.	51,8 (24,3)	64,1 (28,0)	65,7 (26,9)	76,6 (26,5)	90,1 (26,7)	59,1 (21,8)	80,5 (25,9)	100,7 (29,1)	116,9 (37,7)	89,9 (33,1)	88,6 (31,2)
-	28,3 (16,9)	31,9 (17,5)	40,4 (19,1)	63,2 (26,2)	81,4 (30,6)	57,6 (25,6)	62,5 (26,0)	69,2 (25,1)	74,8 (23,8)	80,1 (24,0)	80,6 (23,7)
.	21,4 (12,7)	30,1 (17,6)	33,3 (17,8)	43,2 (22,1)	48,5 (23,8)	32,4 (18,2)	36,8 (19,4)	41,8 (20,1)	47,7 (22,5)	44,1 (19,6)	38,2 (16,8)
.	21,2 (18,4)	15,7 (12,7)	28,4 (21,1)	48,8 (34,5)	50,8 (34,8)	40,2 (30,9)	40,1 (28,4)	48,3 (31,4)	48,6 (30,3)	43,2 (26,4)	42,8 (26,3)

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	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
	1,2 (16,5)	1,3 (18,8)	1,4 (17,1)	2,5 (25,3)	3,5 (32,2)	3,7 (35,1)	3,8 (34,1)	5,8 (47,5)	3,7 (27,8)	3,8 (27,9)	4,2 (28,0)
	3,2 (5,8)	2,4 (4,2)	7,1 (10,9)	7,9 (11,2)	9,0 (12,4)	9,0 (14,1)	12,0 (18,1)	12,6 (17,8)	11,5 (16,1)	11,2 (15,5)	7,8 (11,2)
	-0,1 (-0,8)	0,2 (2,8)	1,1 (9,9)	0,9 (7,0)	1,0 (7,2)	2,5 (17,8)	2,7 (17,9)	2,8 (18,1)	3,9 (24,1)	4,0 (23,7)	5,2 (29,5)
	3,6 (12,6)	4,7 (14,5)	11,0 (28,8)	7,0 (16,7)	3,1 (7,3)	3,0 (7,1)	6,3 (13,1)	11,2 (21,5)	11,0 (19,5)	7,1 (12,2)	9,6 (15,8)
	6,0 (6,0)	8,1 (7,7)	12,3 (9,9)	18,9 (12,8)	23,6 (15,5)	17,0 (12,1)	17,8 (11,8)	21,2 (13,9)	25,6 (16,1)	27,4 (16,4)	27,8 (16,3)
-	8,6 (16,2)	7,6 (14,0)	8,9 (13,7)	12,5 (17,1)	20,2 (24,5)	17,2 (21,8)	13,7 (16,5)	16,2 (17,3)	21,2 (21,9)	13,8 (14,7)	16,4 (19,0)
-	28,4 (8,9)	38,1 (11,2)	47,9 (11,5)	61,9 (12,8)	103,1 (23,8)	117,0 (29,5)	111,3 (21,2)	117,9 (21,9)	138,9 (27,2)	118,1 (23,1)	91,6 (17,0)
	9,1 (4,9)	12,3 (6,1)	35,9 (15,2)	62,5 (23,5)	59,6 (23,2)	39,4 (16,2)	29,2 (10,8)	33,9 (11,6)	38,2 (12,0)	50,1 (15,5)	41,0 (11,9)
	37,3 (17,5)	44,2 (19,3)	43,2 (17,7)	50,7 (17,5)	63,9 (18,9)	36,9 (13,6)	53,5 (17,2)	70,8 (20,5)	85,0 (27,4)	56,0 (20,6)	53,9 (19,0)
-	15,5 (9,3)	15,0 (8,2)	23,9 (11,3)	43,9 (18,2)	62,4 (23,5)	42,5 (18,9)	42,6 (17,7)	47,8 (17,3)	50,5 (16,1)	56,5 (16,9)	57,7 (17,0)
	14,1 (8,4)	21,6 (12,6)	24,4 (13,0)	33,5 (17,2)	38,5 (18,9)	24,5 (13,8)	25,6 (13,5)	29,7 (14,3)	33,8 (15,9)	28,9 (12,8)	23,0 (10,1)
	12,4 (10,7)	5,7 (4,6)	18,1 (13,5)	34,2 (24,2)	36,8 (25,2)	28,9 (22,3)	24,6 (17,4)	31,1 (20,2)	28,8 (18,0)	22,0 (13,5)	20,9 (12,9)

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- URL: <https://www.fedstat.ru/indicator/40492>.

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$$CD = V_{CO_2} \times MC \times \frac{12}{44}, \tag{5}$$

CD – ;
 V_{CO_2} – ; MC –
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 12/44 ,
 [10].

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³ .: *Global Warming Potentials*. – URL: http://unfccc.int/ghg_data/items/3825.php .

«
» [14]:

$$\text{Annual CO}_2 \text{ emission} = \frac{\text{CO}_2 \text{ per gallon}}{\text{MPG}} \times \text{miles}, \quad (6)$$

Annual CO₂ emission – , . ;
CO₂ per gallon – , / ;
MPG – , / ; miles –

4,7
-4,27

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1%

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5-100).

90%



(. 8),

		2003 .. . (. (%)*)*										
		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
		2,9 (39,3)	3,6 (53,4)	4,2 (50,6)	5,6 (56,0)	6,1 (55,8)	6,5 (61,8)	6,6 (59,2)	8,7 (71,1)	6,8 (51,2)	6,9 (51,0)	7,1 (47,9)
		5,9 (10,6)	5,7 (9,8)	11,0 (16,8)	13,8 (19,4)	14,7 (20,1)	14,1 (22,0)	16,8 (25,3)	15,2 (21,4)	14,5 (20,2)	15,2 (20,8)	12,4 (17,6)
		2,4 (27,5)	2,8 (30,5)	3,9 (35,7)	4,1 (32,4)	4,2 (30,1)	5,9 (41,2)	5,7 (37,6)	6,3 (40,6)	7,8 (48,6)	8,3 (49,1)	9,2 (51,8)
		3,0 (10,2)	3,0 (9,3)	10,0 (26,2)	6,7 (15,9)	2,8 (6,6)	3,5 (8,2)	5,8 (12,1)	10,5 (20,1)	11,0 (19,6)	7,1 (12,1)	9,2 (15,1)
		17,4 (17,4)	20,4 (19,4)	27,8 (22,4)	35,3 (23,9)	40,4 (26,6)	33,4 (23,7)	33,4 (22,2)	40,8 (26,6)	46,8 (29,4)	48,0 (28,8)	48,7 (28,6)
		11,4 (21,4)	10,1 (18,7)	12,4 (19,2)	14,8 (20,3)	23,8 (28,9)	21,0 (26,7)	16,5 (19,9)	15,6 (16,6)	19,9 (20,6)	13,6 (14,6)	17,2 (19,9)
		18,4 (5,8)	29,8 (8,7)	39,2 (9,4)	62,4 (12,9)	99,1 (22,9)	99,2 (24,9)	60,9 (11,6)	54,0 (10,0)	61,6 (12,1)	35,7 (7,0)	7,4 (1,4)
		15,9 (8,5)	22,9 (11,5)	48,4 (20,5)	78,8 (29,6)	72,3 (28,1)	46,8 (19,3)	29,0 (10,7)	22,0 (7,5)	16,6 (5,1)	29,4 (9,1)	13,4 (3,9)
		-3,2 (-1,5)	-7,9 (-3,5)	-12,6 (-5,2)	-5,9 (-2,1)	10,5 (3,1)	-9,5 (-3,5)	5,0 (1,6)	15,5 (4,5)	25,1 (8,1)	-10,8 (-4,0)	-6,8 (-2,4)
		27,2 (16,3)	25,3 (13,8)	36,4 (17,2)	59,8 (24,8)	79,7 (29,9)	58,8 (26,1)	60,1 (25,0)	69,3 (25,0)	76,1 (24,1)	85,1 (25,4)	83,8 (24,7)
		23,4 (13,9)	33,5 (19,6)	38,6 (20,6)	49,0 (25,1)	52,3 (25,7)	38,2 (21,5)	38,1 (20,1)	44,8 (21,6)	50,7 (23,9)	48,1 (21,3)	40,0 (17,6)
		-18,0 (-15,6)	-16,6 (-13,4)	-1,2 (-0,9)	13,1 (9,2)	13,8 (9,4)	12,3 (9,4)	2,8 (2,0)	3,0 (1,9)	-0,6 (-0,4)	-4,3 (-2,7)	-5,8 (-3,6)

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(47,9%)

(51,8%).

(2)

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(. 9).

	1	p-value	Within R-squared
	0,059	0,1399	0,018
	0,075	0,1676	0,02
« »	0,209	0,0057	0,06
	0,218	0,0003	0,105

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(16-02-00127, 18-310-00337)

(16-12-24015)

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E.A. Syrtsova

VERIFYING THE RESULTS OF GENUINE SAVINGS ASSESSMENT IN REGIONS

The article suggests an approach to verifying the results of genuine savings assessment in regions based on econometric modeling. It describes a methodology for calculating the components of genuine savings regarding the existing statistical accounting system and evaluates the sustainable development of Siberian regions over the past ten years. We design a model to link genuine savings and future consumption. Having evaluated the model, we confirmed two hypotheses: first, genuine savings growth leads to an increase in the future well-being; secondly, the components of genuine savings are estimated correctly. Therefore, based on the proposed approach to assessing genuine savings, it is possible to formulate a methodology for calculating them as an indicator in the statistical accounting system of Russia, at which point the indicator can be included in the national program of following the principles of sustainable development as one of the sustainability indicators for decision-making in regional policy.

Keywords: natural resource economics; sustainable development; genuine savings; econometric modeling; regional economy

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