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DEGREE OF SOCIO-ECONOMIC MODERNIZATION IN THE ROMANIAN RURAL AREA

ABSTRACT

The main objective of the paper was to highlight the territorial disparities in terms of rural area modernization in Romania. For this purpose, a theoretical model was developed to measure the socio-economic modernization level based on several representative dimensions (demographic dimension, social dimension, economic dimension and ecological dimension), as well as a series of indicators specific to the investigated issue. The results indicated a continuation of the discrepancy trend, in the period 2007–2018, but the gap between the most modernized and the least modernized counties, in socio-economic terms, was reduced, with some of the counties in the upper part of the ranking moving to the lower part of the ranking.

Key words: rural area, sustainable development, Romania.

JEL Classification: R20, Q01.

1. INTRODUCTION

Depending on the entity or phenomenon we refer to, modernization may have different meanings (Parsons, Apud & Smelser, 1984). Thus, in economic terms, modernization means high productivity, competitiveness; from the community point of view, modernization means infrastructure and access to utilities; in social terms, modernization means access to education, healthcare and information; from an ecological point of view, modernization means protecting the environment; politically, modernization means the nation-state, with all its functions and bodies; individually, modernization means modern personality, a person's intellectual openness, detachment from tradition, a sense of personal efficiency, desire to be an informed citizen, ability to adapt to new experiences. Over time, modernization in Romania has not been a constant/continuous process, being directly related to historical evolution – political influence (change of political regime). The modernization of the rural area has not been achieved uniformly at national level, there are different particularities that trigger significant gaps between regions, counties or rural areas. The elements necessary for modernization in rural areas are the presence of entrepreneurship, the existence of a modern infrastructure, modern attitudes and values. The presence of these elements does not imply the loss of

rural specificity (of traditions and customs), ideally these should be capitalized. The modernization of rural households has been achieved differently, depending on the intensity of exposure to innovative elements, and this has resulted in facilitating their acceptance in the current way of life (Chițea, L., 2021).

2. MATERIAL AND METHOD

Based on the consultation of recent literature on theoretical and applied models for the measurement of rural modernization, a theoretical model was developed to measure the degree of socio-economic modernization in the Romanian rural area. Considering the multidimensional character of the Romanian rural area and its regional, county and local specificities, a set of relevant indicators was proposed, to highlight the socio-economic characteristics of the Romanian rural area.

The selection of the appropriate indicators for the construction of the theoretical model related to the rural socio-economic modernization index (RMI) is based on the available statistical indicators, relevant for the objective pursued. The selection of indicators was an important step and was influenced by the goal and objectives of the research. The indicators were introduced in the SPSS software for aggregation, data analysis and presentation of results. The indices were calculated at country, macroregion, development region and county level, in the post-accession period (2007–2018). Each dimension of an indicator for a certain territorial unit was analysed on comparative basis with other rural territorial units to measure the territorial gaps in terms of socio-economic modernization of the rural area.

In the elaboration of the theoretical matrix of the rural socio-economic modernization index, the same dimensions were considered as in the case of the development index, namely: the demographic dimension, the social dimension, the economic dimension and the ecological dimension (Table 1).

Table 1

Theoretical matrix of the rural socio-economic modernization index

Rural socio-economic modernization index	Dimension	Result indicators
	Demographic modernization	– population renewal index (NIS tempo online: POP107A) (1) – dependency ratio (NIS tempo online: POP107A) (2) – migration balance (NIS tempo online: POP303B) (3)
	Social modernization	– average lifespan (NIS tempo online: POP217A) (4) – fertility rate (NIS tempo online: POP203B) (5) – infant death rate (NIS tempo online: POP209B) (6)
	Economic modernization	– agricultural area per person employed in agriculture (NIS tempo online: AGR101A, FOM103A) (7) – labour renewal rate (INS tempo online: POP107A) (8) – share of population employed in agriculture in total working age population (NIS tempo online: FOM103A, POP107B) (9)
	Ecological modernization	– share of eligible localities for the agro-environmental measures, in the period 2007–2013, 2014–2020 (MARD:) (10)

Source: Author's own model

Data processing for the Composite Index for the rural socio-economic modernization degree was performed with the help of the Excel Program and SPSS. Indicators were grouped by criteria (natural-anthropoc criterion, demographic criterion, social criterion, economic criterion), each criterion receiving a specific share. The indicators were normalised, with the national average considered as reference, and the formula used was the following: $X = 100 \times (x_i / X_i) / (p_i / P_i)$, where x_i and X_i represent the values registered at county and national level, and p_i and P_i – population at county and national level. For the indicators already expressed as ratio to the population, the calculation formula was: $X = 100 \times (x_i / X_i)$. Aggregation of the indicators into sub-criteria and criteria was achieved according to the theoretical model.

3. RESULTS AND DISCUSSIONS

The rural socio-economic modernization index (RMI) aims to capture the rural modernization phenomenon at county level, as an evolutionary process in the post-accession period. Rural modernization is different from rural development, development being the last stage of modernization, which implies deep and long-last changes in the fields of technology, economy and ecology, with implications in the entire social and cultural system (Smelser, N.J., 1966).

In the investigated period, the rural socio-economic modernization index had a stable trend (Table 2). If we examine the modernization index value, we could see that the modernization process has not had a strong dynamics; but if the analysis takes into consideration the index dimension, certain important changes can be noticed. Thus, a significant depreciation of demographic and social dimensions is noticed, in the conditions in which the economic dimension is maintained constant, and a significant increase can be noticed only in the ecological dimension.

Table 2

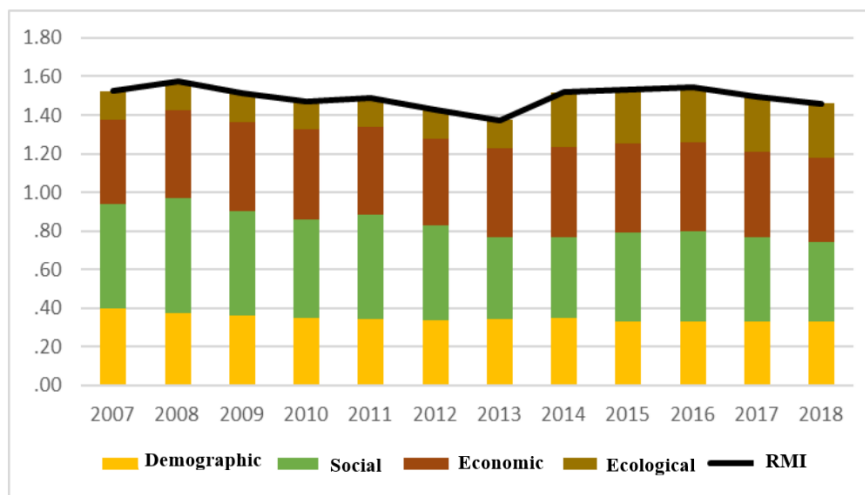
Evolution of the rural socio-economic modernization index

	2007	2010	2013	2016	2018
Total	1.56	1.50	1.42	1.60	1.51
At macroregional level					
Macroregion 1	1.55	1.53	1.47	1.68	1.62
Macroregion 2	1.60	1.51	1.49	1.54	1.40
Macroregion 3	1.53	1.46	1.31	1.58	1.51
Macroregion 4	1.56	1.47	1.39	1.58	1.54
At regional level					
Nord-Vest Region	1.41	1.40	1.34	1.56	1.48
Centru Region	1.68	1.67	1.60	1.80	1.76
Nord-Est Region	1.50	1.44	1.45	1.53	1.34
Sud-Est Region	1.70	1.59	1.52	1.56	1.46
Sud Region	1.58	1.50	1.35	1.59	1.51
București-Ilfov Region	1.13	1.19	0.96	1.55	1.45
Sud-Vest Region	1.53	1.45	1.31	1.54	1.44
Vest Region	1.61	1.49	1.49	1.63	1.66

Source: Author's own calculations based on NIS tempo online data

Depending on the degree of rurality, we can notice an upward trend of the modernization index in the predominantly urban areas (from 1.13 in 2007 to 1.45 in 2018), as a result of the increase in the attractiveness of these areas for the younger population and a slightly downward trend in the intermediate areas (from 1.60 in the year 2007 to 1.56 in the year 2018) and in the predominantly rural areas (from 1.55 in 2007 to 1.49 in 2018) (Figure 1).

The variation of RMI index, in the period 2007–2018, by macroregions, reveals a significant decrease in Macroregion 2 (from 1.60 in 2007 to 1.40 in 2018), a slight decrease in the case of Macroregions 3 (from 1.53 in 2007 to 1.51 in 2018) and 4 (from 1.56 in 2007 to 1.54 in 2018).



Source: Author's own calculations based on NIS tempo online data

Figure 1. Evolution of socio-rural modernization index and of its main dimensions at national level, year 2018.

By development regions, the hierarchy in terms of RMI index was the following: Centru (1.76), Vest (1.66), Sud (1.51), Nord-Vest (1.48), Sud-Est (1.46), București-Ilfov (1.45), Sud-Vest (1.44) and Nord-Est (1.34).

Table 3

Share of counties by the degree of rural socio-economic modernization, in the period 2007–2018

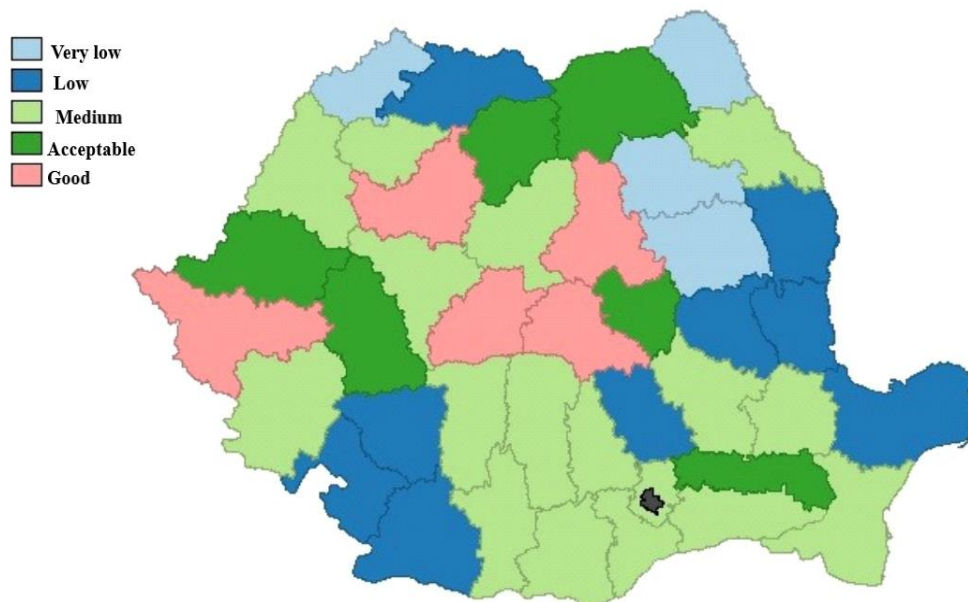
RMI level	2007	2010	2012	2013	2016	2018
Good	9.76	17.07	12.20	7.32	7.32	12.20
Acceptable	48.78	26.83	41.46	26.83	24.39	14.63
Medium	31.71	43.90	31.71	41.46	46.34	41.46
Low	7.32	9.76	12.20	19.51	19.51	21.95
Very low	2.44	2.44	2.44	4.88	2.44	9.76

Source: Author's own calculations based on NIS tempo online data

The top-ranking counties were the following: Braşov (1.96), Harghita (1.90), Sibiu (1.86), Timiş (1.82) and Cluj (1.81); at the opposite pole, we find the counties Satu Mare (1.09), Botoşani (1.13), Neamţ (1.18), Bacău (1.19) and Vaslui (1.31). (Figure 2)

The ranking of counties by rural modernization level revealed the following structure:

- Counties with a good modernization level (12.20%): Braşov, Harghita, Sibiu, Timiş, Cluj;
- Counties with an acceptable modernization level (14.63%): Ialomiţa, Bistriţa-Năsăud, Hunedoara, Arad, Covasna, Suceava;
- Counties with medium modernization level (41.46%): Vâlcea, Brăila, Mureş, Iaşi, Teleorman, Alba, Constanţa, Giurgiu, Argeş, Sălaj, Buzău, Bihor, Dâmboviţa, Olt, Călăraşi, Caraş-Severin, Ilfov;
- Counties with low modernization level (21.95%): Mehedinţi, Prahova, Tulcea, Dolj, Galaţi, Vrancea, Gorj, Maramureş;
- Counties with very low modernization level (9.76%): Bacău, Neamţ, Botoşani, Satu-Mare.



Source: Author's own calculations based on NIS tempo online data

Figure 2. Classification of rural areas by RMI index, by counties, 2018.

In the investigated period, the gap between the counties with the highest socio-economic modernization level and those with the lowest modernization level narrowed from 1.37 in 2007 to 0.86 in 2018. There was a decrease in the share of counties with acceptable modernization level (from 48.78% to 14.63%), while the

share of counties with low and very low modernization level increased (from 9.76% to 31.71%), a similar process being also noticed in the case of counties with medium modernization level (from 31.71% to 41.46%). These changes reveal a restructuring in demographic and social terms in the rural area; even though the gap between counties has narrowed, it can be noticed that some of the counties in the upper part of the ranking have moved to the lower part of the ranking.

The *RMI index evolution in Macroregion 1* was favourable, this being the only region where growth was noticed, with the highest value, i.e. 1.62 (Table 4). There is a gap between the two component development regions, with the Centru region having a significant advance, mainly in terms of the economic and social dimensions.

In Macroregion 1, the demographic dimension was equally important in both regions. The ecological dimension had the most spectacular growth, both at macroregion level and at the level of component regions.

The classification of counties from Macroregion 1, by modernization level, in the year 2018, is the following: 33.3% counties with good modernization level; 16.7% counties with acceptable modernization level; 33.3% counties with medium modernization level and 16.7% counties with low and very low modernization level.

Table 4

Evolution of RMI index and component dimensions in Macroregion 1, in the period 2007–2018

	RMI		Demographic		Social		Economic		Ecological	
	2007	2018	2007	2018	2007	2018	2007	2018	2007	2018
<i>Nord-Vest Region</i>	<i>Increasing trend</i>		<i>Stable trend</i>		<i>Decreasing trend</i>		<i>Stable trend</i>		<i>Increasing trend</i>	
Bihor	1.49	1.47	0.42	0.35	0.57	0.46	0.44	0.43	0.06	0.22
Bistrița-Năsăud	1.68	1.69	0.22	0.25	0.62	0.55	0.55	0.58	0.29	0.30
Cluj	1.59	1.81	0.55	0.55	0.63	0.61	0.19	0.34	0.21	0.30
Maramureș	1.32	1.31	0.24	0.26	0.57	0.45	0.28	0.28	0.23	0.32
Satu Mare	0.73	1.09	0.15	0.17	0.10	0.32	0.47	0.40	0.01	0.21
Sălaj	1.63	1.48	0.53	0.39	0.58	0.35	0.51	0.52	0.01	0.22
<i>Centru Region</i>	<i>Increasing trend</i>		<i>Stable trend</i>		<i>Downward trend</i>		<i>Stable trend</i>		<i>Increasing trend</i>	
Alba	1.45	1.55	0.30	0.33	0.50	0.49	0.38	0.41	0.27	0.32
Brașov	1.90	1.96	0.31	0.38	0.71	0.64	0.68	0.62	0.21	0.32
Covasna	1.65	1.67	0.24	0.31	0.52	0.46	0.58	0.55	0.30	0.34
Harghita	1.81	1.90	0.28	0.32	0.64	0.56	0.55	0.60	0.33	0.43
Mureș	1.47	1.59	0.38	0.31	0.61	0.52	0.40	0.50	0.08	0.26
Sibiu	1.82	1.86	0.20	0.24	0.63	0.63	0.84	0.70	0.14	0.29

Source: Author's own calculations based on NIS tempo online data.

In Centru region, the rural socio-economic modernization index had the highest value among all the regions of the country, ranging from 1.55 in Alba county to 1.96 in Brașov county. There was an increasing trend of the RMI index in all the counties of the region. The modernization index increased in Nord-Vest

region, yet with values below the national average, ranging from 1.09 in Satu Mare to 1.81 in Cluj. The two counties at the extremes of the hierarchy also had the highest increase of RMI index in the investigated period.

Macroregion 1 had the following characteristics:

- most counties were in the upper part of the hierarchy (83.3% are counties with medium, acceptable and good level);
- the demographic indicators had values close to national average – demographic renewal 87.87%, migration balance 441.5 persons, dependency ratio 50.58%;
- in the case of social indicators, we can notice the highest fertility rate (42.59%), average lifespan (74.55 years) higher than the national average and infant death rate close to national average (7.76%);
- in the case of economic indicators, we can notice the lowest labour renewal rate (1.72), high share of population employed in agriculture (29.02%) and a large agricultural area per person employed in agriculture (9.66 ha), which may signal out population's orientation towards farming;
- in ecological terms, 42.26% of localities were eligible for Measure 13.1 (areas facing natural constraints in the mountainous area), 57.84% for high nature value grasslands and traditional farming practices.

RMI index evolution in Macroregion 2. Down from 1.60 in the year 2007 to 1.40 in 2018, with significant decrease and final values below the national average in both component regions (Table 5).

Table 5

Evolution of RMI index and component dimensions in Macroregion 2, in the period 2007–2018

	RMI		Demographic		Social		Economic		Ecological	
	2007	2018	2007	2018	2007	2018	2007	2018	2007	2018
<i>Nord-Est Region</i>	<i>Decreasing trend</i>		<i>Decreasing trend</i>		<i>Decreasing trend</i>		<i>Increasing trend</i>		<i>Increasing trend</i>	
Bacău	1.59	1.19	0.41	0.17	0.56	0.22	0.45	0.59	0.16	0.21
Botoșani	1.18	1.13	0.47	0.27	0.43	0.16	0.25	0.54	0.03	0.16
Iași	1.83	1.57	0.47	0.40	0.69	0.48	0.55	0.50	0.13	0.18
Neamț	1.30	1.18	0.28	0.22	0.58	0.29	0.32	0.43	0.12	0.24
Suceava	1.52	1.64	0.35	0.28	0.75	0.63	0.31	0.45	0.12	0.29
Vaslui	1.55	1.31	0.37	0.17	0.64	0.29	0.47	0.63	0.08	0.22
<i>Sud-Est Region</i>	<i>Decreasing trend</i>		<i>Decreasing trend</i>		<i>Decreasing trend</i>		<i>Stable trend</i>		<i>Increasing trend</i>	
Brăila	1.86	1.59	0.43	0.34	0.65	0.31	0.50	0.55	0.28	0.38
Buzău	1.81	1.48	0.58	0.41	0.62	0.30	0.36	0.45	0.25	0.32
Constanța	1.57	1.53	0.27	0.25	0.36	0.38	0.59	0.52	0.35	0.38
Galați	1.27	1.37	0.25	0.16	0.54	0.32	0.43	0.56	0.05	0.33
Tulcea	2.10	1.40	0.23	0.31	0.46	0.04	0.75	0.68	0.67	0.37
Vrancea	1.57	1.37	0.44	0.33	0.64	0.34	0.34	0.41	0.15	0.29

Source: Author's own calculations based on NIS tempo online data.

The social and demographic dimensions contributed to the decrease of this index, both following a decreasing trend. The economic and ecological dimensions followed an upward trend in the investigated period, 29.91% and 14.16% respectively. The only counties with a positive evolution in Macroregion 2 were Suceava (+7.89%) and Galați (+7.87%), while the counties Tulcea (-33.33%), Bacău (-25.16%) and Buzău (-18.23%) were at the opposite pole.

Sud-Est region followed a more decreasing trend (-14.15%) in terms of modernization than Nord-Est Region (-10.59%), the social dimension being the only dimension with a similar evolution in the two regions, with a strong depreciation, of -67.23% in Nord-Est Region and -71.82% in Sud-Est Region. The other dimensions of index, even though following the same direction, had a different rate; thus, the demographic dimension depreciated in both development regions (-10.47% in Nord-Est and -4.58% in Sud-Est), while the economic dimension (+52.32% in Nord-Est region and only +11.11% in Sud-Est region) and the ecological dimension (+18.08% in Nord-Est and +9.79% in Sud-Est) appreciated.

In Macroregion 2, the ranking of counties by the degree of socio-economic modernization was the following: 25.0% with very low development level; 33.3% with low development level; 33.3% with medium development level and 8.4% with acceptable development level, with no county having a good modernization level.

Macroregion 2 had the following characteristics:

- concentration of counties in the lower part of the interval (83.3% with medium level and below medium level);
- the demographic indicators had the lowest value of the demographic renewal rate (78.44%), the migration balance of 437.58 persons close to national average and the lowest dependency ratio (50.21%) among all macroregions, which may mean an acceptable potential for sustaining the demographic process with no excessive burden on active population;
- the social indicators indicated an average lifespan (73.58 years) below the national average, a fertility rate (35.33%) below the national average and the highest infant death rate 9.69%, which may represent a high degradation in social terms;
- the economic indicators revealed an agricultural area per person employed in agriculture of 8.33 ha, below the national average; the highest value of labour renewal rate 1.88; share of population employed in agriculture 28.64% below the national average, which reveals the orientation to subsistence farming activities;
- in ecological terms, 35.85% of localities were eligible for Measure 13.2 (areas facing significant natural constraints), 28.99% for important meadow bird grasslands; 14.27% for high nature value grasslands and traditional farming practices.

RMI evolution in Macroregion 3 had a slight decreasing trend of the modernization level in the investigated period (from 1.53 in the year 2007 to 1.51 in 2018) (Table 6). The modernization index value in the macroregion was similar to the national average.

Table 6

Evolution of RMI index and component dimensions in Macroregion 3, in the period 2007–2018

	RMI		Demographic		Social		Economic		Ecological	
	2007	2018	2007	2018	2007	2018	2007	2018	2007	2018
<i>Sud Region</i>	<i>Decreasing trend</i>		<i>Decreasing trend</i>		<i>Decreasing trend</i>		<i>Oscillating trend</i>		<i>Increasing trend</i>	
Argeş	1.50	1.49	0.60	0.34	0.41	0.40	0.37	0.50	0.11	0.24
Călăraşi	1.65	1.46	0.38	0.33	0.54	0.23	0.74	0.57	0.00	0.34
Dâmboviţa	1.53	1.47	0.30	0.27	0.65	0.54	0.49	0.44	0.09	0.21
Giurgiu	1.64	1.49	0.53	0.36	0.54	0.41	0.58	0.47	0.00	0.25
Ialomiţa	1.76	1.71	0.55	0.42	0.65	0.39	0.51	0.55	0.05	0.35
Prahova	1.58	1.42	0.31	0.26	0.60	0.41	0.47	0.50	0.20	0.25
Teleorman	1.41	1.55	0.71	0.58	0.32	0.29	0.37	0.35	0.00	0.34
<i>Bucureşti-Ilfov Region</i>	<i>Increasing trend</i>		<i>Increasing trend</i>		<i>Decreasing trend</i>		<i>Increasing trend</i>		<i>Increasing trend</i>	
Ilfov	1.13	1.45	0.18	0.25	0.66	0.62	0.30	0.33	0.00	0.25

Source: Author's own calculations based on NIS tempo online data.

The two component development regions had divergent/contrary evolutions, with a clear downward trend in Sud region (from 1.58 in 2007 to 1.51 in 2018) – mainly determined by the social dimension that significantly depreciated, in this period, and a clear upward trend in Bucureşti Ilfov (from 1.13 in 2007 to 1.45 in 2018) – with increases in all dimensions, except for the social dimension that depreciated.

The Sud region experienced demographic depreciation (–7.74%), social depreciation (–30.77%) and economic depreciation (–5.86); the counties with the highest decrease of modernization index were Călăraşi (–11.52%) and Prahova (–10.13%). Bucureşti-Ilfov region appreciated in demographic, economic and ecological terms, yet it followed a downward trend in social terms.

Macroregion 3 had the following characteristics:

- most counties ranked in the category with medium modernization level (75%);
- the demographic indicators – demographic renewal rate 91.89%, above the national average, the lowest migration balance 129 persons, the highest dependency ratio 52.01%, revealing a low level of demographic attractiveness and a low level of demographic modernization;
- the social indicators had values close to the national average: average lifespan 74.2 years, fertility rate 36.64% and infant death rate 7.31%;
- the economic indicators revealed the smallest agricultural area per person employed in agriculture (7.68 ha) and the lowest share of population employed in agriculture (27.28%); labour renewal rate 1.73, below the national average, which reveals a limited agricultural potential;
- from the ecological point of view, 45.18% of localities were eligible for Measure 13.2 (areas facing significant natural constraints), 11.96% for important meadow bird grasslands; 12.19% for high nature value grasslands and traditional farming practices.

The evolution of RMI index in Macroregion 4 is characterized by a slight decreasing trend of the modernization level (from 1.56 in 2007 to 1.54 in 2018), a value similar to the national average (Table 7).

Table 7

Evolution of RMI index and component dimensions in Macroregion 4,
in the period 2007–2018

	RMI		Demographic		Social		Economic		Ecological	
	2007	2018	2007	2018	2007	2018	2007	2018	2007	2018
<i>Sud-Vest Region</i>	<i>Decreasing trend</i>		<i>Decreasing trend</i>		<i>Decreasing trend</i>		<i>Oscillating trend</i>		<i>Increasing trend</i>	
Dolj	1.54	1.40	0.70	0.44	0.40	0.32	0.28	0.36	0.17	0.28
Gorj	1.62	1.32	0.26	0.22	0.58	0.35	0.68	0.53	0.10	0.22
Mehedinți	1.56	1.43	0.58	0.42	0.41	0.35	0.40	0.38	0.16	0.28
Olt	1.45	1.46	0.63	0.39	0.45	0.35	0.35	0.42	0.01	0.30
Vâlcea	1.46	1.60	0.45	0.42	0.52	0.56	0.40	0.39	0.08	0.23
<i>Vest Region</i>	<i>Increasing trend</i>		<i>Oscillating trend</i>		<i>Oscillating trend</i>		<i>Decreasing trend</i>		<i>Increasing trend</i>	
Arad	1.68	1.67	0.40	0.32	0.51	0.43	0.73	0.64	0.04	0.28
Caraș-Severin	1.58	1.46	0.41	0.40	0.30	0.22	0.59	0.52	0.28	0.33
Hunedoara	1.59	1.69	0.51	0.56	0.52	0.54	0.31	0.23	0.25	0.35
Timiș	1.60	1.82	0.44	0.48	0.45	0.58	0.69	0.52	0.01	0.24

Source: Author's own calculations based on NIS tempo online data.

The two component development regions had divergent/opposite evolutions, with a clear decreasing trend in the Sud-Vest region (from 1.53 in 2007 to 1.44 in 2018) – determined by the demographic depreciation (–10.12%), social (–16.41%) and economic depreciation (–1.59%); at the same time, a clear increasing trend was noticed in the Vest region (from 1.61 in 2007 to 1.66 in 2018) – the ecological dimension appreciated by 34.84%, while the demographic and social dimensions remained at the same level and the economic dimension depreciated by 23.30%.

In the Sud-Vest region, the values of the rural socio-economic index range from 1.32 in Gorj county to 1.60 in Vâlcea; the counties with the highest depreciation are Gorj (–18.52%), Dolj (–9.09%) and Mehedinți (–8.33%).

In the Vest region, the index values range from 1.46 in Caraș-Severin to 1.82 in Timiș, with the highest increase in the counties Timiș (+13.75) and Hunedoara (+6.29%).

Macroregion 4 had the following characteristics:

- most counties were in the category of medium modernization level (88.9%);
- the demographic indicators had the highest values of the demographic renewal index (102.89%), migration balance (842.67 persons) and dependency ratio (50.89%), close to national average, which reveals a high demographic attractiveness for macroregion 4 and a high level of demographic modernization;
- the social indicators had divergent values, namely: very high values for the average lifespan (74.78 years) and very low values of fertility rate (33.78%) and infant death rate (6.58%);
- in economic terms, Macroregion 4 had the largest agricultural area per person employed in agriculture (9.70 ha) and the highest share of the population employed in agriculture (34.49%), denoting a high agricultural potential;

- in ecological terms, 27.86% of localities were eligible for Measure 13.2 (areas facing significant natural constraints), 20.51% were eligible for Sub-measure 13.1 (mountain areas), 35.09% eligible for high nature value grasslands and traditional farming practices; 15.59% eligible for important areas for meadow birds.

4. CONCLUSIONS

The multi-criteria analysis of the level of rural socio-economic modernization has revealed a series of characteristics and trends, namely:

- A stable trend of the modernization index in the investigated period, with Macroregion 1, Centru and Vest regions and Braşov, Harghita, Sibiu, Timiş, Cluj, Ialomiţa, Hunedoara, Bistriţa-Năsăud, Arad, Covasna, Suceava counties on top positions.
- The ranking of counties by rural modernization level revealed the following structure: counties with a good modernization level 12.20%; counties with acceptable modernization level 14.63%; counties with medium modernization level 41.46%; counties with low modernization level 21.95%; counties with very low modernization level 9.76%.
- In the period under analysis, the gap between the most modernized counties in socio-economic terms and the least modernized counties has been reduced, yet some of the counties in the upper part of the ranking moved to the lower part of the ranking.
- The following dimensions (from the structural analysis) that influence RMI are: the economic dimension (32.15%), the social dimension (27.07%), the demographic dimension (21.97%) and the ecological dimension (18.81%).

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Annex 1. Rural socio-economic modernization index (RMI), by counties, in the period 2007–2018

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	1.56	1.61	1.55	1.50	1.53	1.47	1.42	1.57	1.59	1.60	1.55	1.51
Macro 1	1.55	1.60	1.51	1.53	1.54	1.53	1.47	1.65	1.66	1.68	1.64	1.62
NV Region	1.41	1.46	1.37	1.40	1.40	1.39	1.34	1.54	1.53	1.56	1.52	1.48
Bihor	1.49	1.49	1.31	1.31	1.32	1.38	1.15	1.55	1.37	1.50	1.63	1.47
Bistrița-Nas.	1.68	1.72	1.69	1.69	1.78	1.73	1.57	1.77	1.77	1.72	1.66	1.69
Cluj	1.59	1.63	1.64	1.79	1.71	1.72	1.66	1.78	1.84	1.85	1.86	1.81
Maramureș	1.32	1.36	1.42	1.26	1.22	1.12	1.35	1.35	1.40	1.45	1.25	1.31
Satu Mare	0.73	0.96	0.88	0.91	0.89	0.83	0.88	1.14	1.11	1.11	1.21	1.09
Sălaj	1.63	1.62	1.30	1.44	1.50	1.53	1.40	1.63	1.67	1.74	1.50	1.48
Centru Region	1.68	1.74	1.66	1.67	1.68	1.67	1.60	1.76	1.80	1.80	1.77	1.76
Alba	1.45	1.55	1.60	1.52	1.50	1.61	1.48	1.59	1.58	1.65	1.45	1.55
Brașov	1.90	1.91	1.77	1.92	1.79	1.88	1.70	2.01	2.04	2.03	1.93	1.96
Covasna	1.65	1.86	1.66	1.68	1.78	1.65	1.61	1.81	1.80	1.69	1.71	1.67
Harghita	1.81	1.83	1.73	1.73	1.80	1.70	1.81	1.84	1.88	1.98	1.95	1.90
Mureș	1.47	1.50	1.38	1.45	1.51	1.48	1.40	1.53	1.58	1.60	1.57	1.59
Sibiu	1.82	1.79	1.79	1.70	1.72	1.68	1.58	1.77	1.92	1.83	1.99	1.86
Macro 2	1.60	1.68	1.60	1.51	1.56	1.51	1.49	1.51	1.55	1.54	1.48	1.40
NE Region	1.50	1.63	1.53	1.44	1.49	1.48	1.45	1.51	1.51	1.53	1.46	1.34
Bacău	1.59	1.57	1.46	1.36	1.45	1.42	1.47	1.49	1.48	1.43	1.34	1.19
Botoșani	1.18	1.48	1.35	1.32	1.34	1.35	1.27	1.40	1.42	1.39	1.26	1.13
Iași	1.83	1.95	1.86	1.73	1.80	1.74	1.72	1.67	1.66	1.68	1.64	1.57
Neamț	1.30	1.40	1.39	1.29	1.31	1.26	1.35	1.38	1.49	1.45	1.42	1.18
Suceava	1.52	1.69	1.54	1.50	1.56	1.58	1.56	1.67	1.65	1.69	1.69	1.64
Vaslui	1.55	1.67	1.59	1.41	1.48	1.50	1.34	1.46	1.38	1.52	1.43	1.31
S-E Region	1.70	1.73	1.67	1.59	1.62	1.55	1.52	1.50	1.58	1.56	1.50	1.46
Brăila	1.86	1.92	1.97	1.67	1.77	1.51	1.49	1.66	1.80	1.63	1.53	1.59
Buzău	1.81	1.85	1.71	1.72	1.76	1.66	1.55	1.57	1.56	1.68	1.68	1.48
Constanța	1.57	1.59	1.50	1.51	1.55	1.51	1.35	1.32	1.41	1.54	1.53	1.53
Galați	1.27	1.40	1.23	1.32	1.23	1.15	1.28	1.48	1.59	1.56	1.38	1.37
Tulcea	2.10	2.03	2.05	1.81	1.83	1.92	1.91	1.56	1.46	1.42	1.51	1.40
Vrancea	1.57	1.61	1.56	1.52	1.58	1.52	1.53	1.42	1.67	1.53	1.38	1.37
Macro 3	1.53	1.58	1.54	1.46	1.48	1.38	1.31	1.55	1.60	1.58	1.55	1.51
S Region	1.58	1.63	1.59	1.50	1.53	1.42	1.35	1.57	1.62	1.59	1.56	1.51
Argeș	1.50	1.53	1.51	1.47	1.56	1.40	1.25	1.54	1.60	1.62	1.59	1.49
Călărași	1.65	1.75	1.52	1.35	1.47	1.21	1.13	1.50	1.49	1.53	1.42	1.46
Dâmbovița	1.53	1.58	1.50	1.58	1.59	1.48	1.36	1.46	1.51	1.55	1.41	1.47
Giurgiu	1.64	1.67	1.61	1.40	1.39	1.38	1.27	1.34	1.66	1.47	1.59	1.49
Ialomița	1.76	1.78	1.79	1.75	1.66	1.57	1.69	1.88	1.76	1.63	1.73	1.71
Prahova	1.58	1.59	1.62	1.54	1.54	1.46	1.48	1.57	1.64	1.59	1.46	1.42
Teleorman	1.41	1.49	1.60	1.43	1.48	1.45	1.30	1.69	1.68	1.73	1.74	1.55
BI Region	1.13	1.21	1.17	1.19	1.16	1.12	.96	1.42	1.42	1.55	1.45	1.45
Ilfov	1.13	1.21	1.17	1.19	1.16	1.12	.96	1.42	1.42	1.55	1.45	1.45
Macro 4	1.56	1.57	1.54	1.47	1.51	1.44	1.39	1.58	1.56	1.58	1.51	1.54
SV Region	1.53	1.53	1.49	1.45	1.46	1.40	1.31	1.51	1.46	1.54	1.46	1.44
Dolj	1.54	1.50	1.48	1.49	1.58	1.58	1.43	1.58	1.38	1.56	1.48	1.40
Gorj	1.62	1.63	1.46	1.52	1.48	1.29	1.20	1.20	1.46	1.51	1.40	1.32
Mehedinți	1.56	1.60	1.45	1.44	1.27	1.33	1.47	1.63	1.35	1.41	1.49	1.43
Olt	1.45	1.39	1.41	1.35	1.38	1.29	1.10	1.54	1.45	1.61	1.45	1.46
Vâlcea	1.46	1.54	1.65	1.47	1.59	1.51	1.33	1.60	1.65	1.61	1.49	1.60
V Region	1.61	1.63	1.60	1.49	1.57	1.48	1.49	1.68	1.69	1.63	1.57	1.66
Arad	1.68	1.74	1.70	1.58	1.52	1.53	1.50	1.84	1.76	1.74	1.52	1.67
Caraș-Severin	1.58	1.52	1.73	1.50	1.65	1.51	1.48	1.59	1.57	1.60	1.46	1.46
Hunedoara	1.59	1.58	1.54	1.52	1.62	1.58	1.53	1.70	1.73	1.41	1.59	1.69
Timiș	1.60	1.66	1.41	1.35	1.47	1.31	1.45	1.57	1.70	1.77	1.71	1.82

Source: Author's own calculations, processing of NIS tempo online data.

Annex 2. Demographic dimension of the rural socio-economic modernization index (RMI), by counties, in the period 2007–2018

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	0.40	0.37	0.36	0.35	0.34	0.33	0.34	0.35	0.33	0.33	0.33	0.33
Macro 1	0.32	0.30	0.31	0.30	0.30	0.29	0.30	0.31	0.31	0.31	0.31	0.32
NV Region	0.35	0.34	0.34	0.33	0.32	0.32	0.31	0.32	0.32	0.32	0.33	0.33
Bihor	0.42	0.38	0.37	0.38	0.35	0.35	0.34	0.35	0.33	0.33	0.35	0.35
Bistrița-Nas.	0.22	0.22	0.23	0.21	0.20	0.20	0.21	0.23	0.22	0.24	0.24	0.25
Cluj	0.55	0.57	0.60	0.61	0.57	0.53	0.55	0.56	0.56	0.55	0.56	0.55
Maramureș	0.24	0.25	0.24	0.23	0.24	0.26	0.24	0.24	0.24	0.25	0.25	0.26
Satu Mare	0.15	0.12	0.13	0.12	0.11	0.11	0.12	0.13	0.14	0.15	0.16	0.17
Sălaj	0.53	0.48	0.48	0.43	0.43	0.46	0.42	0.42	0.40	0.42	0.40	0.39
Centru Region	0.29	0.27	0.28	0.27	0.27	0.27	0.28	0.30	0.30	0.30	0.30	0.32
Alba	0.30	0.31	0.32	0.31	0.31	0.31	0.31	0.32	0.31	0.31	0.31	0.33
Brașov	0.31	0.29	0.27	0.28	0.29	0.29	0.29	0.33	0.33	0.35	0.36	0.38
Covasna	0.24	0.24	0.26	0.25	0.26	0.26	0.29	0.31	0.30	0.31	0.30	0.31
Harghita	0.28	0.26	0.28	0.28	0.28	0.27	0.30	0.30	0.30	0.29	0.31	0.32
Mureș	0.38	0.34	0.36	0.34	0.32	0.31	0.31	0.32	0.32	0.31	0.30	0.31
Sibiu	0.20	0.17	0.19	0.17	0.18	0.18	0.19	0.21	0.21	0.21	0.22	0.24
Macro 2	0.38	0.36	0.35	0.33	0.33	0.31	0.32	0.32	0.30	0.29	0.28	0.28
NE Region	0.39	0.38	0.36	0.35	0.34	0.32	0.32	0.31	0.28	0.27	0.26	0.25
Bacău	0.41	0.34	0.30	0.26	0.27	0.23	0.22	0.21	0.19	0.19	0.17	0.17
Botoșani	0.47	0.47	0.46	0.44	0.44	0.42	0.41	0.38	0.34	0.33	0.31	0.27
Iași	0.47	0.52	0.52	0.51	0.50	0.50	0.50	0.48	0.45	0.43	0.42	0.40
Neamț	0.28	0.26	0.26	0.24	0.24	0.22	0.22	0.23	0.22	0.22	0.21	0.22
Suceava	0.35	0.33	0.30	0.29	0.27	0.25	0.26	0.26	0.25	0.25	0.27	0.28
Vaslui	0.37	0.36	0.34	0.33	0.32	0.31	0.29	0.27	0.24	0.22	0.20	0.17
SE Region	0.37	0.34	0.33	0.32	0.31	0.31	0.32	0.33	0.31	0.31	0.30	0.30
Brăila	0.43	0.40	0.40	0.38	0.38	0.37	0.38	0.38	0.36	0.35	0.36	0.34
Buzău	0.58	0.53	0.50	0.48	0.45	0.45	0.45	0.45	0.42	0.42	0.40	0.41
Constanța	0.27	0.23	0.18	0.20	0.21	0.20	0.21	0.22	0.23	0.24	0.24	0.25
Galați	0.25	0.25	0.26	0.25	0.23	0.21	0.22	0.22	0.19	0.18	0.15	0.16
Tulcea	0.23	0.25	0.26	0.26	0.27	0.29	0.32	0.34	0.32	0.33	0.32	0.31
Vrancea	0.44	0.39	0.36	0.35	0.33	0.32	0.34	0.35	0.34	0.33	0.33	0.33
Macro 3	0.45	0.41	0.40	0.38	0.37	0.37	0.39	0.39	0.36	0.35	0.35	0.35
S Region	0.48	0.45	0.43	0.41	0.40	0.39	0.41	0.42	0.38	0.37	0.36	0.37
Argeș	0.60	0.47	0.39	0.39	0.38	0.35	0.36	0.35	0.34	0.34	0.32	0.34
Călărași	0.38	0.37	0.36	0.35	0.34	0.35	0.36	0.37	0.34	0.34	0.33	0.33
Dâmbovița	0.30	0.34	0.32	0.30	0.29	0.28	0.27	0.29	0.27	0.27	0.26	0.27
Giurgiu	0.53	0.50	0.46	0.44	0.42	0.40	0.39	0.40	0.39	0.38	0.37	0.36
Ialomița	0.55	0.49	0.50	0.47	0.48	0.49	0.62	0.62	0.46	0.42	0.44	0.42
Prahova	0.31	0.28	0.28	0.26	0.26	0.27	0.26	0.28	0.28	0.27	0.26	0.26
Teleorman	0.71	0.69	0.68	0.66	0.62	0.62	0.62	0.61	0.59	0.57	0.57	0.58
B-I Region	0.18	0.17	0.18	0.17	0.18	0.17	0.20	0.22	0.23	0.24	0.25	0.25
Ilfov	0.18	0.17	0.18	0.17	0.18	0.17	0.20	0.22	0.23	0.24	0.25	0.25
Macro 4	0.49	0.45	0.43	0.41	0.40	0.39	0.39	0.39	0.38	0.39	0.40	0.41
SV Region	0.52	0.48	0.46	0.43	0.42	0.39	0.40	0.39	0.37	0.38	0.38	0.38
Dolj	0.70	0.61	0.57	0.54	0.54	0.53	0.50	0.49	0.45	0.46	0.43	0.44
Gorj	0.26	0.24	0.23	0.22	0.22	0.22	0.22	0.22	0.22	0.23	0.23	0.22
Mehedinți	0.58	0.53	0.52	0.49	0.47	0.43	0.44	0.44	0.41	0.41	0.43	0.42
Olt	0.63	0.56	0.56	0.51	0.48	0.42	0.44	0.40	0.37	0.39	0.39	0.39
Vâlcea	0.45	0.44	0.42	0.40	0.38	0.36	0.39	0.39	0.39	0.40	0.41	0.42
V Region	0.44	0.42	0.39	0.39	0.38	0.38	0.39	0.40	0.40	0.40	0.42	0.44
Arad	0.40	0.35	0.31	0.31	0.29	0.30	0.31	0.31	0.30	0.29	0.31	0.32
Caraș-Severin	0.41	0.41	0.39	0.39	0.38	0.40	0.40	0.42	0.40	0.41	0.40	0.40
Hunedoara	0.51	0.50	0.50	0.48	0.50	0.49	0.51	0.53	0.53	0.53	0.54	0.56
Timiș	0.44	0.40	0.37	0.36	0.34	0.34	0.33	0.35	0.38	0.37	0.44	0.48

Source: Author's own calculations, processing of NIS tempo online data.

Annex 3. Social dimension of the rural socio-economic modernization index (RMI),
by counties, in the period 2007–2018

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	0.54	0.60	0.54	0.51	0.54	0.49	0.43	0.42	0.46	0.47	0.43	0.41
Macro 1	0.56	0.64	0.57	0.61	0.62	0.58	0.49	0.51	0.54	0.54	0.52	0.50
NV Region	0.51	0.59	0.52	0.56	0.59	0.54	0.46	0.49	0.48	0.51	0.49	0.46
Bihor	0.57	0.61	0.48	0.50	0.53	0.55	0.30	0.50	0.34	0.46	0.60	0.46
Bistrița-Nas.	0.62	0.69	0.69	0.70	0.78	0.71	0.51	0.63	0.64	0.56	0.52	0.55
Cluj	0.63	0.63	0.62	0.73	0.72	0.73	0.61	0.58	0.62	0.64	0.65	0.61
Maramureș	0.57	0.62	0.72	0.58	0.56	0.40	0.61	0.47	0.51	0.54	0.38	0.45
Satu Mare	0.10	0.37	0.32	0.36	0.37	0.31	0.32	0.35	0.31	0.31	0.42	0.32
Sălaj	0.58	0.61	0.30	0.49	0.55	0.54	0.41	0.43	0.48	0.54	0.34	0.35
Centru Region	0.60	0.70	0.63	0.66	0.66	0.63	0.52	0.53	0.59	0.58	0.56	0.55
Alba	0.50	0.59	0.63	0.54	0.51	0.61	0.46	0.48	0.49	0.57	0.39	0.49
Brașov	0.71	0.78	0.70	0.85	0.70	0.79	0.56	0.70	0.73	0.72	0.61	0.64
Covasna	0.52	0.75	0.57	0.60	0.69	0.55	0.46	0.61	0.62	0.50	0.52	0.46
Harghita	0.64	0.70	0.63	0.67	0.68	0.56	0.60	0.49	0.53	0.62	0.59	0.56
Mureș	0.61	0.68	0.54	0.60	0.66	0.61	0.51	0.42	0.49	0.51	0.50	0.52
Sibiu	0.63	0.67	0.69	0.68	0.69	0.64	0.50	0.50	0.66	0.56	0.74	0.63
Macro 2	0.58	0.64	0.56	0.47	0.51	0.47	0.43	0.36	0.42	0.42	0.39	0.31
NE Region	0.61	0.72	0.61	0.52	0.55	0.54	0.50	0.44	0.46	0.49	0.45	0.35
Bacău	0.56	0.57	0.48	0.38	0.43	0.41	0.45	0.40	0.40	0.38	0.33	0.22
Botoșani	0.43	0.70	0.52	0.46	0.43	0.43	0.34	0.33	0.39	0.36	0.26	0.16
Iași	0.69	0.76	0.69	0.59	0.66	0.60	0.58	0.48	0.51	0.55	0.53	0.48
Neamț	0.58	0.67	0.63	0.53	0.53	0.49	0.55	0.44	0.55	0.51	0.52	0.29
Suceava	0.75	0.91	0.77	0.74	0.78	0.80	0.73	0.65	0.62	0.67	0.68	0.63
Vaslui	0.64	0.71	0.59	0.40	0.49	0.50	0.37	0.35	0.29	0.45	0.38	0.29
SE Region	0.55	0.56	0.50	0.43	0.47	0.39	0.36	0.28	0.38	0.36	0.32	0.28
Brăila	0.65	0.66	0.66	0.36	0.49	0.23	0.23	0.30	0.48	0.33	0.23	0.31
Buzău	0.62	0.65	0.50	0.53	0.58	0.47	0.36	0.32	0.34	0.46	0.50	0.30
Constanța	0.36	0.44	0.42	0.45	0.51	0.48	0.30	0.21	0.29	0.41	0.39	0.38
Galați	0.54	0.60	0.39	0.43	0.36	0.29	0.41	0.33	0.47	0.45	0.31	0.32
Tulcea	0.46	0.36	0.39	0.17	0.19	0.27	0.24	0.17	0.09	0.05	0.15	0.04
Vrancea	0.64	0.66	0.62	0.62	0.68	0.62	0.62	0.35	0.60	0.47	0.34	0.34
Macro 3	0.55	0.59	0.55	0.50	0.54	0.46	0.38	0.39	0.48	0.47	0.45	0.41
S Region	0.53	0.57	0.53	0.47	0.52	0.44	0.37	0.36	0.46	0.43	0.43	0.38
Argeș	0.41	0.53	0.56	0.51	0.58	0.44	0.26	0.40	0.47	0.47	0.49	0.40
Călărași	0.54	0.62	0.41	0.33	0.50	0.28	0.21	0.23	0.27	0.31	0.20	0.23
Dâmbovița	0.65	0.66	0.56	0.67	0.71	0.62	0.53	0.49	0.57	0.60	0.49	0.54
Giurgiu	0.54	0.55	0.52	0.36	0.42	0.45	0.38	0.20	0.54	0.35	0.49	0.41
Ialomița	0.65	0.66	0.60	0.56	0.47	0.42	0.46	0.35	0.43	0.33	0.41	0.39
Prahova	0.60	0.61	0.62	0.54	0.53	0.44	0.48	0.49	0.61	0.55	0.44	0.41
Teleorman	0.32	0.36	0.45	0.31	0.42	0.42	0.27	0.33	0.34	0.43	0.46	0.29
B-I Region	0.66	0.75	0.69	0.70	0.67	0.63	0.44	0.61	0.61	0.72	0.62	0.62
Ilfov	0.66	0.75	0.69	0.70	0.67	0.63	0.44	0.61	0.61	0.72	0.62	0.62
Macro 4	0.46	0.48	0.45	0.43	0.49	0.43	0.38	0.41	0.40	0.42	0.37	0.41
SV Region	0.47	0.47	0.42	0.42	0.44	0.41	0.31	0.37	0.34	0.43	0.38	0.39
Dolj	0.40	0.39	0.39	0.45	0.49	0.47	0.35	0.37	0.21	0.40	0.38	0.32
Gorj	0.58	0.57	0.40	0.48	0.47	0.32	0.24	0.13	0.42	0.49	0.40	0.35
Mehedinți	0.41	0.46	0.31	0.34	0.21	0.29	0.41	0.46	0.20	0.28	0.39	0.35
Olt	0.45	0.38	0.34	0.35	0.40	0.36	0.16	0.36	0.29	0.44	0.31	0.35
Vâlcea	0.52	0.57	0.65	0.49	0.63	0.60	0.41	0.53	0.60	0.54	0.44	0.56
V Region	0.45	0.49	0.50	0.43	0.54	0.46	0.46	0.45	0.47	0.41	0.35	0.44
Arad	0.51	0.60	0.58	0.49	0.48	0.49	0.45	0.55	0.49	0.49	0.28	0.43
Caraș-Severin	0.30	0.24	0.49	0.29	0.46	0.31	0.29	0.31	0.30	0.32	0.21	0.22
Hunedoara	0.52	0.52	0.50	0.52	0.66	0.62	0.53	0.54	0.58	0.25	0.44	0.54
Timiș	0.45	0.60	0.41	0.43	0.57	0.42	0.55	0.40	0.51	0.59	0.48	0.58

Source: Author's own calculations, processing of NIS tempo online data.

Annex 4. Economic dimension of the rural socio-economic modernization index (RMI),
by counties, in the period 2007–2018

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	0.47	0.49	0.50	0.49	0.49	0.50	0.51	0.52	0.52	0.52	0.50	0.49
Macro 1	0.49	0.48	0.45	0.45	0.45	0.47	0.50	0.53	0.53	0.53	0.51	0.49
NV Region	0.41	0.40	0.38	0.37	0.37	0.39	0.43	0.46	0.47	0.47	0.45	0.43
Bihor	0.44	0.43	0.40	0.36	0.38	0.42	0.44	0.48	0.48	0.48	0.46	0.43
Bistrița-Nas.	0.55	0.53	0.49	0.49	0.50	0.52	0.56	0.60	0.61	0.61	0.60	0.58
Cluj	0.19	0.21	0.20	0.22	0.21	0.25	0.28	0.33	0.36	0.36	0.35	0.34
Maramureș	0.28	0.26	0.23	0.22	0.19	0.23	0.27	0.32	0.33	0.34	0.30	0.28
Satu Mare	0.47	0.47	0.43	0.43	0.40	0.40	0.44	0.45	0.45	0.44	0.42	0.40
Sălaj	0.51	0.51	0.51	0.51	0.51	0.53	0.56	0.56	0.57	0.57	0.54	0.52
Centru Region	0.57	0.56	0.53	0.52	0.53	0.55	0.57	0.60	0.59	0.59	0.58	0.56
Alba	0.38	0.38	0.37	0.40	0.40	0.42	0.44	0.47	0.45	0.45	0.43	0.41
Brașov	0.68	0.64	0.59	0.59	0.60	0.60	0.63	0.66	0.65	0.63	0.63	0.62
Covasna	0.58	0.57	0.53	0.53	0.53	0.54	0.55	0.55	0.54	0.54	0.55	0.55
Harghita	0.55	0.54	0.49	0.44	0.50	0.53	0.58	0.62	0.63	0.64	0.62	0.60
Mureș	0.40	0.40	0.40	0.44	0.46	0.48	0.50	0.52	0.52	0.52	0.51	0.50
Sibiu	0.84	0.80	0.77	0.71	0.70	0.71	0.74	0.76	0.76	0.76	0.73	0.70
Macro 2	0.44	0.48	0.50	0.51	0.52	0.53	0.54	0.55	0.55	0.55	0.54	0.53
NE Region	0.39	0.42	0.45	0.46	0.49	0.51	0.53	0.55	0.56	0.55	0.54	0.52
Bacău	0.45	0.49	0.52	0.56	0.59	0.62	0.64	0.67	0.67	0.65	0.62	0.59
Botoșani	0.25	0.29	0.33	0.39	0.44	0.48	0.50	0.52	0.53	0.54	0.54	0.54
Iași	0.55	0.54	0.52	0.50	0.50	0.50	0.51	0.52	0.52	0.52	0.51	0.50
Neamț	0.32	0.34	0.38	0.39	0.42	0.43	0.46	0.47	0.49	0.48	0.45	0.43
Suceava	0.31	0.34	0.35	0.34	0.39	0.42	0.44	0.48	0.49	0.49	0.47	0.45
Vaslui	0.47	0.52	0.58	0.60	0.60	0.61	0.61	0.62	0.63	0.63	0.63	0.63
SE Region	0.50	0.54	0.55	0.56	0.55	0.55	0.55	0.55	0.55	0.54	0.54	0.53
Brăila	0.50	0.59	0.63	0.65	0.62	0.63	0.60	0.59	0.58	0.56	0.55	0.55
Buzău	0.36	0.42	0.46	0.46	0.48	0.49	0.49	0.48	0.47	0.48	0.46	0.45
Constanța	0.59	0.57	0.54	0.51	0.49	0.48	0.48	0.51	0.51	0.51	0.52	0.52
Galați	0.43	0.50	0.53	0.59	0.59	0.60	0.60	0.60	0.60	0.60	0.58	0.56
Tulcea	0.75	0.76	0.73	0.72	0.71	0.69	0.68	0.68	0.68	0.68	0.68	0.68
Vrancea	0.34	0.40	0.43	0.41	0.42	0.43	0.42	0.43	0.44	0.43	0.43	0.41
Macro 3	0.48	0.51	0.54	0.53	0.52	0.50	0.49	0.49	0.48	0.48	0.47	0.46
S Region	0.50	0.54	0.57	0.56	0.55	0.53	0.51	0.51	0.50	0.50	0.49	0.48
Argeș	0.37	0.42	0.44	0.46	0.49	0.49	0.52	0.54	0.55	0.55	0.53	0.50
Călărași	0.74	0.75	0.76	0.66	0.63	0.58	0.56	0.56	0.54	0.55	0.55	0.57
Dâmbovița	0.49	0.50	0.53	0.53	0.51	0.50	0.48	0.47	0.46	0.46	0.45	0.44
Giurgiu	0.58	0.61	0.64	0.59	0.54	0.53	0.50	0.49	0.49	0.49	0.48	0.47
Ialomița	0.51	0.58	0.64	0.68	0.65	0.61	0.56	0.56	0.53	0.53	0.54	0.55
Prahova	0.47	0.50	0.52	0.55	0.56	0.56	0.55	0.54	0.52	0.52	0.51	0.50
Teleorman	0.37	0.43	0.47	0.45	0.44	0.42	0.41	0.41	0.42	0.40	0.37	0.35
B-I Region	0.30	0.29	0.31	0.32	0.31	0.32	0.32	0.33	0.33	0.33	0.33	0.33
Ilfov	0.30	0.29	0.31	0.32	0.31	0.32	0.32	0.33	0.33	0.33	0.33	0.33
Macro 4	0.49	0.52	0.53	0.51	0.50	0.50	0.50	0.50	0.50	0.49	0.46	0.44
SV Region	0.42	0.48	0.50	0.50	0.50	0.49	0.49	0.49	0.48	0.47	0.44	0.42
Dolj	0.28	0.33	0.35	0.33	0.39	0.40	0.42	0.43	0.44	0.42	0.39	0.36
Gorj	0.68	0.71	0.72	0.72	0.69	0.65	0.64	0.63	0.60	0.57	0.55	0.53
Mehedinți	0.40	0.44	0.45	0.45	0.43	0.45	0.46	0.46	0.46	0.44	0.40	0.38
Olt	0.35	0.45	0.50	0.49	0.49	0.49	0.48	0.48	0.48	0.47	0.45	0.42
Vâlcea	0.40	0.46	0.50	0.50	0.49	0.47	0.45	0.45	0.44	0.44	0.40	0.39
V Region	0.58	0.58	0.57	0.53	0.50	0.50	0.51	0.52	0.52	0.52	0.50	0.48
Arad	0.73	0.75	0.77	0.74	0.71	0.71	0.70	0.70	0.69	0.68	0.66	0.64
Caraș-Severi	0.59	0.59	0.58	0.54	0.53	0.52	0.51	0.53	0.55	0.55	0.52	0.52
Hunedoara	0.31	0.32	0.29	0.27	0.22	0.23	0.25	0.27	0.26	0.27	0.26	0.23
Timiș	0.69	0.66	0.62	0.55	0.54	0.54	0.56	0.58	0.57	0.57	0.54	0.52

Source: Author's own calculations, processing of NIS tempo online data.

Annex 5. Ecological dimension of the rural socio-economic modernization index (RMI),
by counties, in the period 2007–2018

	2007–2013	2014–2020
Total	0.15	0.28
Macro 1	0.18	0.29
NV Region	0.14	0.26
Bihor	0.06	0.22
Bistrița-Nas.	0.29	0.30
Cluj	0.21	0.30
Maramureș	0.23	0.32
Satu Mare	0.01	0.21
Sălaj	0.01	0.22
Centru Region	0.22	0.33
Alba	0.27	0.32
Brașov	0.21	0.32
Covasna	0.30	0.34
Harghita	0.33	0.43
Mureș	0.08	0.26
Sibiu	0.14	0.29
Macro 2	0.20	0.28
NE Region	0.11	0.22
Bacău	0.16	0.21
Botoșani	0.03	0.16
Iași	0.13	0.18
Neamț	0.12	0.24
Suceava	0.12	0.29
Vaslui	0.08	0.22
SE Region	0.29	0.35
Brăila	0.28	0.38
Buzău	0.25	0.32
Constanța	0.35	0.38
Galați	0.05	0.33
Tulcea	0.67	0.37
Vrancea	0.15	0.29
Macro 3	0.06	0.28
S Region	0.06	0.28
Argeș	0.11	0.24
Călărași	0.00	0.34
Dâmbovița	0.09	0.21
Giurgiu	0.00	0.25
Ialomița	0.05	0.35
Prahova	0.20	0.25
Teleorman	0.00	0.34
B-I Region	0.00	0.25
Ilfov	0.00	0.25
Macro 4	0.12	0.28
SV Region	0.10	0.26
Dolj	0.17	0.28
Gorj	0.10	0.22
Mehedinți	0.16	0.28
Olt	0.01	0.30
Vâlcea	0.08	0.23
V Region	0.15	0.30
Arad	0.04	0.28
Caraș-Severin	0.28	0.33
Hunedoara	0.25	0.35
Timiș	0.01	0.24

Source: Author's own calculations, processing of NIS tempo online data.