



POLICY PAPER

Olga GAGAUZ, PhD in Sociology, Research Associate (RA)
Irina PAHOMII, scientific researcher

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DEMOGRAPHIC SECURITY INTEGRATED TERRITORIAL INDEX (DSITI)

SUMMARY

Demographic Security Integrated Territorial Index (DSITI) is a tool for monitoring socio-economic and demographic situation in administrative-territorial profile, aimed at awareness of component bodies and public opinion on demographic challenges and their correlation with other sectors.

DSITI is built on four basic blocks: demographic development, population health and social security, labour market conditions. According DSITI, two municipalities gain the highest scores: Chisinau and Balti – 70,2 and 60,6 points respectively, while the lowest – Ocnita (46,5), Cantemir (46,4) Donduseni (45,5) and Soldanesti (44,6).

The score depends largely on proximity and distancing of districts to Chisinau and Balti, or to an attractive socioeconomic pole status for the area (Cahul and Soroca). Central districts gain higher scores in all composite index, although their demographic and economic potential form based on peripheral areas, by migration of working-age population.

DSITI demonstrates a significant gap in socio-economic and demographic administrative-territorial units. Lack of employment opportunities, low wages and low social safety correlates with negative migration growth, worsening demographic situation, depopulation and deepening of demographic ageing.

Under current conditions, a priority direction of state policies has the promotion of a territorial development strategy based on balanced development of regions and the increase of living standards of the population

Demographic Security Integrated Territorial Index (DSITI) aims to provide accessible comparisons in administrative-territorial profile that can be used to illustrate the complexities by domains: economy, social sector, health and demography, and raising public awareness regarding demographic challenges and their correlation with other sectors related to population and development. DSITI presents a tool for monitoring socio-economic development and demographic processes.

DSITI provides an overview on demographic security, which also includes economic security, and consists of supporting a sufficient level of welfare and financial potential of the state, followed by social security concerned to each person sustainability¹.

¹ National Strategic Demographic Security of the Republic of Moldova (2014-2016), approved by Government Decision RM No. 551 of 10 July 2014.

DSITI LIMITATIONS

Calculating DSITI, the quality of statistics and availability of indicators in territorial profile determine the results.

It is known that the Moldovan population is overestimated because the official estimates of the so called stable population includes labour migrants missing in the country more than one year, while according to international standards, demographic and socioeconomic indicators must be calculated in relation to present population.

Hence, some indicators calculated relative to the official stable population are distorted due to these discrepancies between the stable and the present population, some being overestimate and others underestimated. The best example is the share of working age population, which is quite high

for most of the districts, despite the fact that due to labour migration a significant proportion of this quota established with permanent residence abroad.

Statistics in territorial areas are very limited, which makes it difficult to develop a sensitive DSITI to all components included.

Thus, the national statistical office does not provide the data on poverty, access to medical services (share of population having health insurance), access to social infrastructure etc.

There is also the lack of data with regard to population education and professional training.

DSITI FOCUSES ON FOUR MAIN DIMENSIONS FOR DEMOGRAPHIC SECURITY:

DEMOGRPHIC DEVELOPMENT	POPULATION HEALTH	SOCIAL SECURITY	LABOUR MARKET CONDITIONS
<ul style="list-style-type: none"> Total fertility rate Demographic ageing rate Natural increase Migration growth 	<ul style="list-style-type: none"> Life expectancy at birth Number of family doctors per 10 thousand population Infant mortality rate Prevalence of cardiovascular diseases Prevalence of tumours Persons aged 18 and over with primary disability per 100 thousand inhabitants 	<ul style="list-style-type: none"> Average pension for age limit in relation to the national average Share of pensioners receiving the minimum pension payment Average wage compared to the national one. % of pupils who study in the first shift 	<ul style="list-style-type: none"> % of new created jobs of the total number of jobs in the country % of unemployed employees of the total number of unemployed % of working-age population of the total population % of employed pensioners
DEMOGRAPHIC INDEX	HEALTH INDEX	SOCIAL INDEX	ECONOMIC INDEX

DEMOGRAPHIC SECURITY INTEGRATED TERRITORIAL INDEX

DSITI DEMONSTRATES A SIGNIFICANT GAP IN TERRITORIAL PROFILE

DSITI (Table 1 in the Annex) oscillates within 70,2-44,6 points, the difference between the maximum and minimum being 36,5%. None of the country's administrative-territorial units does not obtain the maximum possible score (100 points), which emphasizes the

low degree of demographic security caused by low levels of composite indicators: demographic, health, social and economic index, which shows a reflection of long-term socio-economic crisis affected Moldova and negative demographic trends.

²Penina O., Jdanov D., Grigoriev P. *Producing reliable mortality estimates in the context of distorted population statistics: the case of Moldova. Working papers of Max-Planck Institute for Demographic research, Germany, Rostock, 2015, 35 p.*

Two municipalities, Chisinau and Balti, have the highest scores, although with significant difference. Chisinau obtained 70,2 points and Balti – 60,6. A relatively high score gained three districts in the Central area, near to Chisinau: Dubasari – 58,7, Ialoveni – 56,6 and Anenii-Noi – 55. A score within this range was obtained by Cahul (56,5), from the South of the republic, which is an attractive pole for socio-economic development of the region.

There are 15 districts in the group 50,1 to 55,0, among

which from Central area: Ungheni, Orhei, Criuleni, Straseni, Nisporeni, Rezina; North area: Soroca, Falesti, Drochia, Glodeni; and South: Basarabeasca, Cimislia, Gagauzia, Leova, Stefan Voda.

The score of 44,6 to 50 points was accumulated by 14 districts, including from Central area: Calarasi, Sângerei, Hancesti, Telenesti, Soldanesti; from South: Causeni, Taraclia, Cantemir; from Northern area: Briceni, Edinet, Riscani, Floresti, Ocnita and Donduseni.

1. DEMOGRAPHIC INDEX

DEMOGRAPHIC INDEX, in administrative-territorial profile, fluctuates from 67,5 to 30,5 points, the difference between the maximum and minimum value is 54,9%, which demonstrates significant differences in the demographic development. Districts and administrative-territorial units are divided into five groups according to demographic index value.

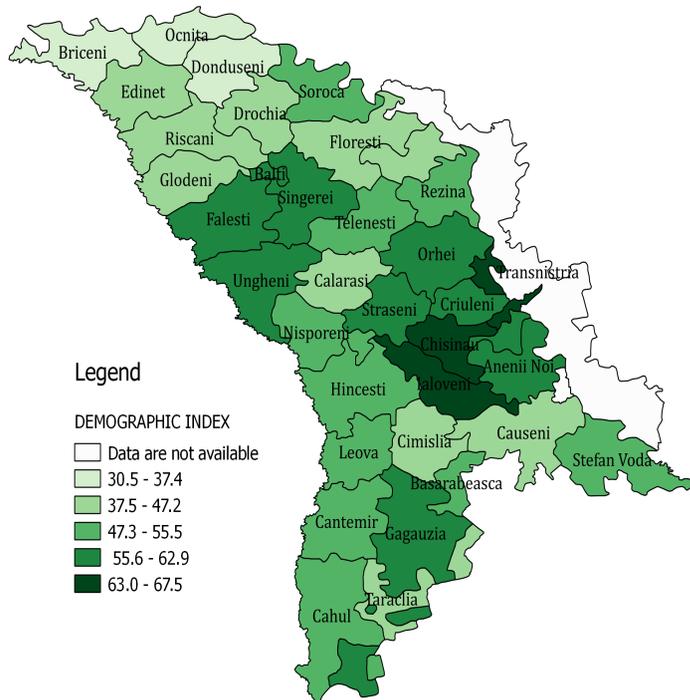
The highest value is recorded for Chisinau (67,5) and districts from Central area: Dubasari (66,7) and Ialoveni (66,4).

The Chisinau municipality held the first place due to migration growth (5,2‰) and relatively low demographic ageing rate (14,7%).

Chisinau, over several years, does not ensure natural reproduction of population, total fertility rate records the lowest values (0,9 children per woman of the reproductive age). The population growth is ensured by absorbing the population from peripheral districts, on internal migration account, while the long-term perspective for demographic development potential is very low.

The central districts, especially Ialoveni and Dubasari, maintain a relative demographic stability by migration attraction of the population, the total fertility rate is under the simple reproduction level (1,3 and 1,5 children per woman of childbearing age).

The second group forms Balti – 61,2 points, districts from Northern area: Falesti and Singerei; from Central area: Ungheni, Orhei, Criuleni and Anenii-Noi; and South: ATU (Autonomous Territorial Unit) Gagauzia.



Balti, as Chisinau, records a positive migration growth (2,4‰), while total fertility rate is very low (1,5 children per woman of childbearing age). The low rate of demographic ageing in the above-mentioned districts is due to high proportion of working age population, which forms by the migration outflow from peripheral districts.

Values, between 47,3 and 55,5 points (third group), are recorded preponderantly in the Central and Southern area, from the North, just Soroca refers to this group. The demographic situation in these districts determines by the ratio of natural increase and migration growth.

The most obvious example is Soroca, which records a negative natural increase (-2,9‰), the relative stability of their population is provided by migration growth (2,8‰).

Therewith, the rate of demographic ageing in Soroca is the highest across districts from this group, 17,7%. Other districts, even if they record positive natural increase in small amounts, they lose their demographic potential resulted from the negative migration growth.

The fourth group consists of ten districts with a demographic index between 37,5 to 47,2 points, the smallest score is recorded by Taraclia (40,2).

Depopulation process characterises all districts from this group, natural increase and migration growth recording negative values. Edinet highlights by the highest natural decrease of population (-4,3‰), meanwhile the migration growth of population being relatively low (-1‰). For

other three districts: Soldanesti, Glodeni and Taraclia, is peculiar the decrease in population, due to a high migration outflow (-5,4-5,5‰), the natural decrease being more moderate (-2,1- 1,1‰).

The lowest total fertility rate in the fourth group was recorded by Cimislia (1,16 children per woman of childbearing age), and the highest in Soldanesti (1,76).

Three districts from North: Briceni, Ocnita and Donduseni accumulated the lowest score, which varied between 30,5 and 37,4, having the highest demographic ageing rate 21-24,4%, the highest values of negative natural increase -6,3‰ and -7,4‰, and a negative migration growth -0,7‰ and -3,2‰

2. HEALTH INDEX

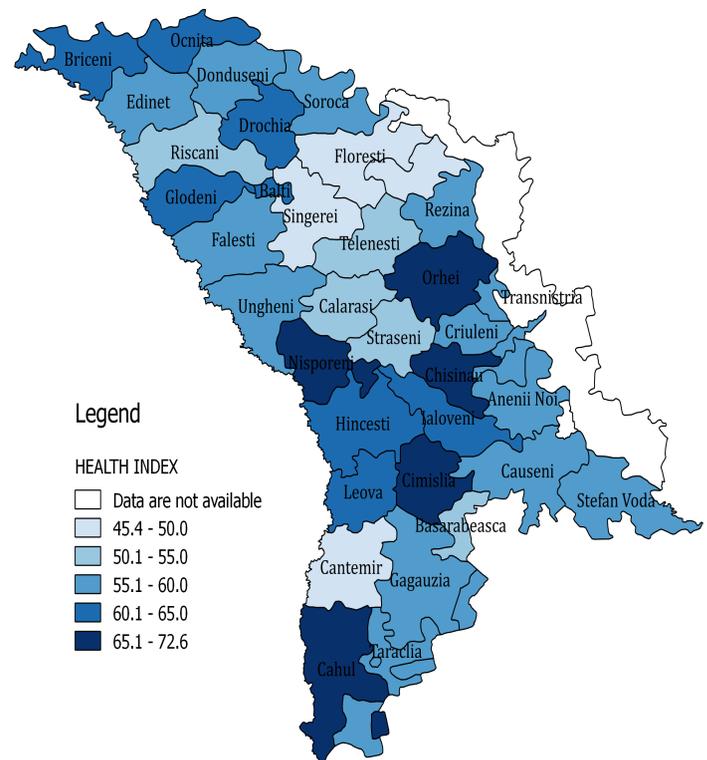
In territorial profile, HEALTH INDEX fluctuates between limits of 72,6 and 45,4 points, the difference between maximum and minimum value being 37,4%, the lowest compared to other composite indexes.

The highest score has been registered by Nisporeni -72,6 points, with a life expectancy at birth close to the average for the republic (69,88 years), low infant mortality (5,4‰), relatively favourable indicators on morbidity and disability of population, meanwhile the supply with family doctors is lower than the country's average (3,9 per 10,000 inhabitants).

Chisinau and three districts – Orhei, Cimislia and Cahul recorded a score between 65,1 and 70 points. Cahul held the second position – 69,8 points, and on the third position is Chisinau – 67,5 points, Cimislia – 66,7 points and Orhei– 65,2 points. Their position is determined by low infant mortality (5,0-5,3‰), just Chisinau is an exception recording an infant mortality rate of 6,8‰, this one advanced due to the life expectancy at birth indicator (74,1 years), which is the highest per republic, as well as by lower primary disability.

Prevalence of cardiovascular diseases observed in Chisinau is higher than that one recorded per group. Thus, Chisinau recorded 1692,5 cases per 10 thousand persons, meanwhile the average per republic accounted for 1562,8 cases per 10 thousand people.

The next group included districts with intermediate values which fluctuate from 60,1 to 65 points, including Hincesti



(64,7), Briceni (64,2), Ocnita (63,1), Drochia (62,5), Ialoveni (62,3), Glodeni (62,1), Leova (61,1) and Balti (60,2).

Although Balti recorded a high life expectancy at birth (73,25 years), being on the second place, it lost its score due to a high infant mortality rate – 9‰.

Ocnita and Drochia accumulated this score, due to a higher life expectancy at birth than the average per republic, 71,9 and 72,5 years respectively. Although, Ocnita lost from the score due to the high infant mortality rate –11‰.

Drochia, with a low infant mortality rate – 5,5‰, lost points due to the unfavourable values of indicators related to primary morbidity and disability. Ialoveni highlights by recording a high infant mortality – 14,3‰, meanwhile other indicators are more favourable.

The next group consists of 12 districts and has a score range between 55,1 and 60 points. In this group, there are five districts from the Central area: Dubasari, Ungheni, Anenii Noi, Rezina, Criuleni; three districts from Southern area: Causeni, Taraclia, Stefan-Voda and ATU Gagauzia; and three districts from Northern area: Soroca, Edinet, Falesti.

Six out of the above-mentioned districts have a higher infant mortality rate than the average per republic, and in ATU Gagauzia the primary disability is 1,5 higher than the country average (respectively 517,1 and 331,3 per 100 thousand inhabitants).

Another group consists of six districts, including Donduseni, Calarasi, Telenesti, Riscani, Basarabeasca, Straseni, which accumulated a score between limits of 50,1 and 55. Their position is determined by high mortality rates, primary disability, the prevalence of tumours and morbidity by circulatory diseases. These districts have a higher life expectancy at birth than the country average.

The last group consists of four districts: Singerei, Floresti,

Cantemir and Soldanesti accumulating the smallest scores, between 45,4 and 49,8.

Cantemir records the lowest level regarding the number of family doctors per 10 thousand inhabitants (1,8), being twice lower than the average per republic (4,3). Likewise, the infant mortality rate is the highest per republic (21‰).

Soldanesti highlights by the highest rate of primary disability of the population aged 18 and over, this indicator being three times higher than the minimum per republic. This district is characterized by high infant mortality (13‰) and the lowest life expectancy at birth (67,75 years).

Singerei and Floresti accumulated a low score because of the significant higher rates of infant mortality (respectively 16,9‰ and 16,7‰), primary disability (440,1 and 109,8 per 100 thousand inhabitants) and the prevalence of circulatory diseases (2284,6 and 1950,9).

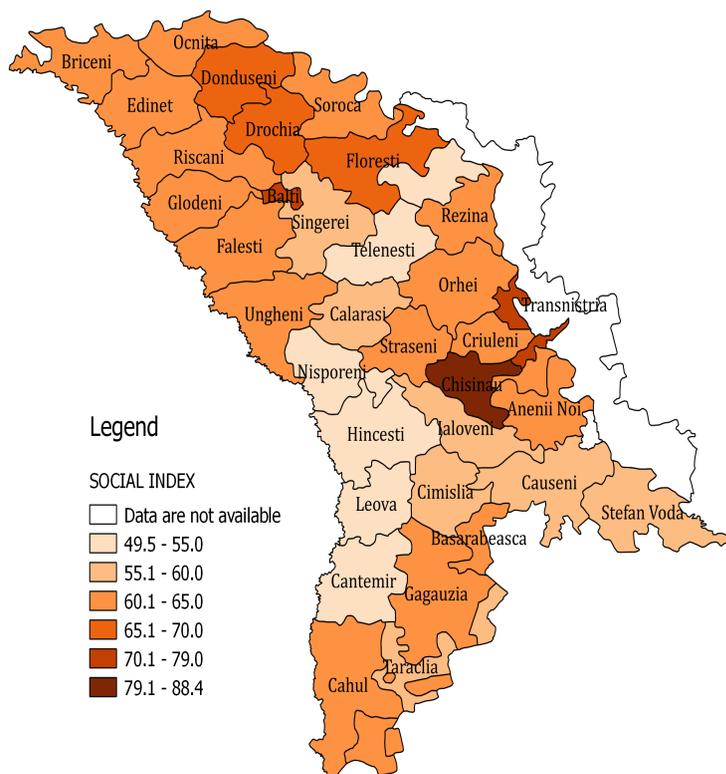
The health index is, mostly influenced by statistics recording on morbidity and mortality. Some differences are difficult to explain. Probably, Chisinau and Balti recorded higher infant mortality values or morbidity by cardiovascular diseases or tumours, because of medical statistics, which include the cases of residents from other districts, who looked for medical care in other districts.

3. SOCIAL INDEX

SOCIAL INDEX in administrative-territorial profile fluctuates between limits of 88,4 and 49,5 points, the difference between maximum and minimum values is 44,0%.

The first position is held by Chisinau municipality (88,4), with a score about twice higher than the lowest value per republic. The capital distinguishes by the highest indicators: the average wage and pension. Share of pensioners receiving minimum pension amount is the lowest per republic (only 7%).

The second place is held by Balti and Dubasari, which obtained 79,0 and 77,2 points. As well as Chisinau, these one record higher indicators than average per republic to the average wage and pension, share of employed pensioners, share of pensioners receiving minimum pension amount, is 12% and 10,6%.



Three districts from North: Drochia, Donduseni and Floresti accumulated a score between limits of 65,2 to 69,3. All the indicators from social block, except share of children studying in the first shift, are worse than in the administrative-territorial units mentioned above.

Many districts from North, five from Centre (Rezina, Orhei, Straseni, Criuleni and Anenii Noi), Cahul and ATU Gagauzia accumulated a score between limits of 60,1 and 65.

These districts record the average monthly wage similar to the average per republic, the average pension in comparison with that one per republic constitutes 91-96%, share of pensioners receiving the minimum pension payment fluctuates between limits of 17,7 and 26%. Share of children studying in the first shift indicator had no

significant influence on the value of the social index.

The fourth group included districts that accumulated scores between limits of 55,1 and 60,0: Ialoveni, Taraclia, Singerei, Causeni, Cimislia, Stefan Voda and Calarasi.

The low scores among these districts are determined by high proportion of pensioners receiving the minimum pension payment, 24,9 to 29,2%, other indicators have less impact in social index formation.

The lowest scores record Leova, Hincesti, Nisporeni, Cantemir, Telenesti and Soldanesti – 49,5-55. The lower position of these one is determined by the indicators: average pension related to average per republic (83,4- 86,9%) and high share of pensioners who receive the minimum pension payment (30-39,1%).

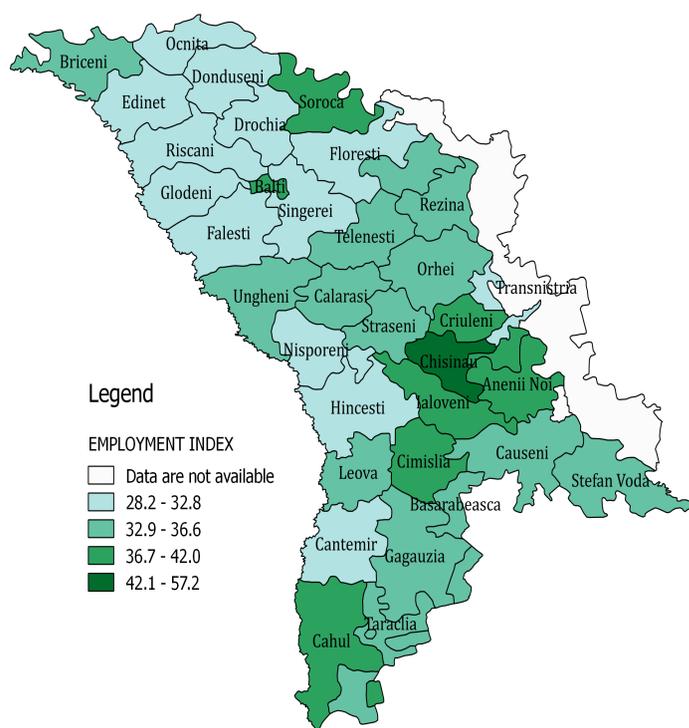
4. EMPLOYMENT INDEX

The employment index fluctuates between limits of 57,2 and 28,2 points, the difference between maximum and minimum value is 50,7%. Maximum value of employment index is lower, compared to other domains, and highlights the economic vulnerability of population by the labour market underdevelopment and fewer employment opportunities for the population.

The highest score accumulates Chisinau (57,2), which is characterized by a high share of working age population. The decisive indicator is the share of new created jobs (52,4%), is ten times higher than for other districts and administrative-territorial units, meanwhile share of unemployed employed from total number of unemployed (50,94%) recorded insignificant differences compared with the data per republic.

The accumulated score is due to high proportion of pensioners engaged on the labour market – 47,3%.

The most trenchant discrepancies are caused by values obtained from each district for the following indicators: share of new created jobs towards the total per republic, share of unemployed engaged on the labour market and share of pensioners engaged on the labour market.



Balti has the second position 42 points, which is characterized by a higher share of unemployed engaged in the labour market – 42,06% and by share of employed pensioners – 45,3%, while share of new created jobs per republic is quite modest and constitutes 4,89%, this caused the discrepancy between the accumulated score across two municipalities.

A similar score as Balti was accumulated by Cimislia – 40,4, which is characterized by the highest indicator per republic – share of unemployed engaged on the labour market (64,5%).

Also, the score of 36,7-42,0 was accumulated by five districts from Central area: Criuleni, Ialoveni, Anenii-Noi; from South – Cahul and from North – Soroca.

These districts have a high proportion of working age population of the total population (72-76%), share of unemployed engaged on the labour market 43,8 to 54,8%, share of employed pensioners 21,7-32%. Share of new created jobs was very modest, varying between 3% (in Cahul) and 0,48% (in Cimislia).

The third group consists of 14 districts with scores between limits of 32,9 and 36,6 points: Ungheni, Straseni, Orhei, Calarasi, Telenesti, Rezina and Soldanesti; from South: Causeni, Stefan Voda, Leova, Taraclia, Basarabasca and ATU Gagauzia; from North – Briceni.

The highest values were recorded by Basarabasca and Soldanesti (36,6), Ungheni (36,4), having more favourable indicators according to share of unemployed and pensioners engaged on the labour market.

Other districts from this group did not differ significantly by indicators regarding the labour market, just Stefan Voda

and Leova, have a higher share of unemployed engaged on the labour market 44,6%.

The districts from North: Ocnita, Donduseni, Edinet, Riscani, Drochia, Glodeni, Falesti, Singerei, Floresti were in the fourth group with scores fluctuating between 28,2 and 32,8 points. Hincesti, Cantemir, Nisporeni and Dubasari were also in this group.

Hincesti compared to other districts is characterised by a quite high proportion of working age population (73,7%), a higher employment rate (43,7%) and a higher share of new created jobs. However, the position of this district was determined by the low share of unemployed engaged on the labour market (23,5%), the indicator being one of the lowest per republic, just Ocnita having a lower one (18,25%). The lowest share of employed pensioners (19,1%) was recorded in Hincesti.

Donduseni and Ocnita, have the last positions regarding the employment index, the proportion of new created jobs being 0,62% and 0,48%, share of unemployed employed of total number of unemployed, being 27,6% and 18,25%, share of employed pensioners, 22% and 20%. Being the most aged districts, these districts have a lower proportion of working-age population, 67,3% and 71,6% respectively.

CONCLUZIONI

DSITI highlights a significant gap in socio-economic and demographic development in territorial profile. This is one of the main issues of demographic security characterised by DSITI, relatively high for Chisinau and a pronounced gap between districts.

The accumulated score depends on the proximity/distance of districts to Chisinau and Balti, or to an attractive socioeconomic pole status for that region (for example, Cahul or Soroca).

Central districts, near to Chisinau, accumulate higher

scores, although, their demographic and economic potential is based on the peripheral areas, especially by attracting working age population.

Gaps between the administrative-territorial units are huge, the ratio of the extremes is about two.

In current conditions, promoting strategies on territorial development on balanced development of regions and the increase of living standards of population present a prior direction of state policies.

DSITI SHOWS A SIGNIFICANT GAP IN TERRITORIAL PROFILE

District	Demographic index	Health index	Social index	Employment index	DSITI	Ranking
Chisinau	67.5	67.5	88.4	57.2	70.2	1
Balti	61.2	60.2	79.0	42.0	60.6	2
Dubasari	66.7	59.2	77.2	31.5	58.7	3
Ialoveni	66.4	62.3	59.5	38.4	56.6	4
Cahul	55.5	69.8	63.1	37.5	56.5	5
Anenii Noi	59.4	58.2	64.8	37.6	55.0	6
Ungheni	62.1	58.8	62.6	36.4	54.9	7
Orhei	57.4	65.2	61.8	35.1	54.9	8
Criuleni	61.5	56.3	60.1	39.7	54.4	9
Soroca	55.0	57.0	63.9	37.1	53.3	10
UTAG	58.1	57.1	61.3	36.1	53.1	11
Straseni	62.9	52.5	61.7	35.3	53.1	12
Nisporeni	52.1	72.6	53.3	32.6	52.6	13
Rezina	54.0	57.1	64.1	33.4	52.1	14
Falești	57.3	55.6	62.8	32.5	52.1	15
Cimislia	42.4	66.7	57.5	40.4	51.8	16
Leova	54.2	61.1	55.0	35.3	51.4	17
Drochia	42.6	62.5	69.3	30.6	51.2	18
Basarabeasca	51.0	53.1	61.9	36.6	50.6	19
Glodeni	44.3	62.1	63.0	32.0	50.4	20
Stefan-Voda	51.3	57.3	56.5	35.7	50.2	21
Causeni	46.7	59.2	58.4	34.6	49.7	22
Sangerei	57.7	49.8	58.4	32.7	49.6	23
Briceni	37.4	64.2	62.0	34.4	49.5	24
Hancesti	49.9	64.7	53.7	29.5	49.4	25
Edinet	43.3	55.9	64.9	32.5	49.1	26
Rascani	44.8	53.5	63.9	32.8	48.8	27
Telenesti	55.1	53.8	50.2	34.7	48.4	28
Taraclia	40.2	59.1	58.9	35.3	48.4	29
Calarasi	47.2	54.3	56.2	34.4	48.0	30
Floresti	44.5	48.1	65.2	30.4	47.0	31
Ocnita	30.5	63.1	64.4	28.2	46.5	32
Cantemir	54.6	46.1	52.3	32.6	46.4	33
Donduseni	32.7	55.0	65.3	29.1	45.5	34
Soldanesti	46.8	45.4	49.5	36.6	44.6	35
Maximum value	67.5	72.6	88.4	57.2	70.2	
Minimum value	30.5	45.4	49.5	28.2	44.6	
Percentage difference between the minimum and maximum value	54.9	37.4	44.0	50.7	36.5	



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