ANALYSIS OF RURAL TRANSFORMATION TRAJECTORIES IN THE POST-SOVIET SOCIETY: A SPOTLIGHT ON DAGESTAN

Linar Imangulov[1]* [iD], *Sergey Safronov*[1] [iD], *Maria Savoskul*[1] [iD]

[1]Lomonosov Moscow State University, Faculty of Geography, Department of Economic and Social Geography of Russia, Moscow, Russia; e-mails: linar.imangulov.1999@mail.ru; saffff@mail.ru; savoskul@yandex.ru

Abstract: The article analyzes the spatial features of the post-Soviet socio-economic transformation of rural areas of southern Russia with the Republic of Dagestan as an example. The limited availability of reliable statistical data determined the need to organize five expeditions to Dagestan from 2020 to 2024. The results of the expeditions revealed a high spatial heterogeneity of rural development in the region. The presence of vast mountainous and the specifics of post-Soviet modernization of society and economy determine a particular nature of development of rural Dagestan. The classification procedure allowed identifying 10 types of districts in rural Dagestan with significant differences in their basic characteristics. The analysis of the dynamics of the main socio-economic indicators of Dagestan rural areas within different geographical, social, and economic types emphasized that a comprehensive analysis of the transformation of mountain territories should consider both the specific features of mountains and the factors of population and economy modernization. The study has shown that rural Dagestan has two main trajectories of socio-economic transformation of territories in the post-Soviet period, i.e., inertial and modernization. Together they demonstrate matching of such processes as the archaization and modernization of the local economy structure, and traditionalization and modernization of the society. It has been revealed that the inertial trajectory of rural transformation dominates in mountainous and piedmont rural areas, while the modernization one dominates in the plains. This is a serious challenge for the spatial development of the region.

Keywords: rural settlement; rural-urban systems; typology of rural areas; mountainous areas; North Caucasus

1. Introduction

For a long time, mountains were socio-economic periphery. During the last century the increased transport connectivity of the world and the spread of globalization processes have resulted in the active integration of mountain territories into the global world. The recent century has been that of increasingly dynamic various transformations of mountain areas (Messerli et al., 2004). As a result of transformations, mountain territories have faced a number of serious socio-economic problems, such as depopulation, crisis of social structure

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*Corresponding author, e-mail: linar.imangulov.1999@mail.ru

of local communities and traditional economic patterns, increased pressure on fragile mountain ecosystems due to mining or tourism development, and others.

The heterogeneity of the global mountain space gives rise to different stages of transformation of mountain territories occurring under the new realities. Summarizing the experience of mountain territories development, four hypothetical stages could be distinguished, which are descriptive of a current variety of socio-economic transformations of the world's mountain territories inhabited by humans:

- Growth: positive population dynamics and active economic development;
- Crisis: the emergence of serious socio-economic and environmental problems due to overpopulation and increased environmental pressure or other factors (e.g., structural crisis in the economy, urbanization, etc.);
- Decline: large-scale migration to urban areas and economic abandonment of agricultural land; and
- Renaissance: revitalization of the economy and reducing the rate of depopulation due to, for example, the development of tourism and recreation.

Mountainous countries and regions in Tropical Africa, such as Tanzania, Kenya, etc., are largely at growth and crisis stages (Charlery de La Masselière et al., 2017). Additionally, Asian and North African mountainous regions (India, Pakistan, Nepal) are largely at the stages of crisis (Okahashi, 2016; Shahi, 2022) and decline (Algeria, Morocco; Bendjeffal & Benabdeli, 2015; Kelfaoui et al., 2021). On the other side, North American and European mountainous countries and regions (e.g., Switzerland) are predominantly at the stage of revitalization (Gómez Valenzuela & Holl, 2023; Kopainsky & Rieder, 2004).

Revitalization is the best option for socio-economic transformation of mountainous areas at the fourth stage. The stage mainly deals with the solution of socio-economic problems of mountainous areas through the development of tourism (Schirpke, 2023). A competent policy regarding tourism development in mountains allows achieving the goals of sustainable mountain development. Ignoring tourism management leads to excessive touristic pressure and serious socio-economic and environmental problems (Mann, 2009).

The transformation of mountain areas in the post-socialist countries is much more complicated because of the lasting crisis phenomena in the economy and society. The trends of socio-economic transformation of mountains in the countries of Eastern Europe and those of the former Soviet Union are not the same. Traditionally inhabited Carpathian Mountains within the borders of different states (Slovakia, Poland, Ukraine, and Romania) are at the stages of decline and revival (Pomázi & Szabó, 2010). The Caucasus, Tien Shan, and Pamir mountains are a mosaic of areas that are at almost all the above mentioned stages of mountain transformation (Herbers, 2001).

The transformation of mountain areas in the republics of North Caucasus in the south of Russia is complicated by the socio-cultural modernization of society during the post-Soviet period (Vendina, 2016). A demonstrative example Dagestan with rather religious and conservative population (Kisriev, 2004). The population of Dagestan predominantly professes Islam and is characterized by a communal-clan organization of society (Bobrovnikov, 2002).

Post-socialist Albania (Shehu et al., 2013), Bosnia and Herzegovina (Knežić et al., 2021), Azerbaijan, Tajikistan (Herbers, 2001), and Kyrgyzstan have similar socio-economic features of mountain development (Table 1). Mountainous Dagestan also shares many similarities with Turkey (Türker et al., 2003), Iran (Taleshi, 2007; Thorbeck et al., 2014), Morocco and

Algeria (Bendjeffal & Benabdeli, 2015; Kelfaoui et al., 2021), Pakistan, some regions of India, such as Jammu and Kashmir state (Hussain, 2015), and China (Xinjiang Uygur and Ningxia Hui autonomous regions; Guo et al., 2024).

Table 1. Current trends of the development of some mountainous regions similar to the Dagestan region

Transformation trends	Southern Europe	Middle East	North Africa	Central Asia	South Asia	East Asia
	Bosnia and Herzegovina, Albania	Turkey, Iran	Morocco, Algeria	Tajikistan, Kyrgyzstan	Pakistan, India	China
Depopulation	yes	rather yes	rather no	no	no	rather no
Migration outflow	yes	yes	rather yes	rather yes	rather no	rather yes
Agricultural conservation	rather yes	rather yes	rather yes	yes	yes	rather yes
Tourism development	rather yes	rather no	rather no	rather yes	rather yes	rather yes

Note. Compiled by the authors based on the analysis of the following sources: Guo et al., 2024; Herbers, 2001; Hussain, 2015; Kelfaoui et al., 2021; Knežić et al., 2021; Shehu et al., 2013; Taleshi, 2007; Türker et al., 2003.

The level of socio-economic development of these countries and regions determines a mix of current trends of the socio-economic development of mountains. The depopulation processes are characteristic of the developing countries with a relatively high Gross domestic product (GDP) per person due to the emigration of the rural population to large cities or abroad. This is the case with Turkey, Bosnia and Herzegovina, Albania, Algeria, Morocco, and Iran, for example. The developing countries with comparatively lower GDP per capita, experience a growth of rural population in the mountains and a certain conservation of land use patterns; the migration of rural population is rather limited. Such is the case with India, Pakistan, Tajikistan, Kyrgyzstan, and similar countries.

The mountain Dagestan occupies an in-between position against the background of the above-described mountainous countries and regions and has a variety of often contradictory trends of socio-economic transformation of mountainous rural areas at the intra-regional level. At present, the mountainous and foothill regions of Dagestan have different post-Soviet population dynamics: decline and growth (Eldarov, 2008). The natives of mountainous areas are less competitive at the urban labor market; their historical memory and connection with their small homeland (Starodubrovskaya et al., 2011) also contribute to the stability within a number of mountainous rural areas. The development of recreational activities and tourism in mountainous areas may have a positive impact on such stability in some rural areas.

Many mountainous areas of Dagestan are characterized by increased contrast and different rate of the socio-economic transformation of rural areas. Over time they have outpaced the plain regions in spheres, such as the development of tourism and recreation. All this is taking place under the active socio-cultural modernization of society, including the transformation of the value system, and the globalization, associated with the expansion and deepening of ties connecting this region with the rest of Russia and the world.

With that in mind, the purpose of the study is to identify post-Soviet trajectories of socio-economic transformation of the rural Dagestan. In order to achieve this goal, a

typology of modern municipalities of the Dagestan with predominantly rural population is elaborated.

2. Study area

The Republic of Dagestan is located in the south of the Russian Federation. It occupies the extreme eastern sector of the North Caucasus and has access to the Caspian Sea. According to the data of the Federal State Statistics Service [FSSS] (2024a), it is the largest national republic of this region in terms of the area (50.3 thousand km²), population (3.2 million in 2022), and economy (10 billion USD in 2018). The population of the region is characterized by a complex set and hierarchy of identities and is far from being a single conglomerate. It has population groups of different territorial and ethnic origin, and different degrees of religiosity (Vendina, 2016).

The rural area of Dagestan has both some all-Russian trends and regional features of development in the post-Soviet period (Table 2). The mountainous nature of Dagestan, with a significant share of mountains in the area (48.4%), population (56.7% in 2020) and economy of the region, determines the regional specificity of the rural Dagestan development. Many socio-economic indicators could often be described by the mountain-plain dichotomy.

Table 2. Components of the socio-economic development of rural Dagestan

Components	All-Russian development trends	Regional features of development
Settlement	Polarization of the settlement system: increase in the population of large settlements due to migration	Preservation of more balanced settlement structure; Moderate reduction in the network of small settlements with a permanent population
Demographic situation	Depopulation of high-altitude settlement areas (Eldarov, 2008; Polyan & Sergeeva, 1986)	A significant part of the population lives in the mountains (56.7% in 2020); High proportion of the rural population (54.7% in 2020:); High ethnic and cultural diversity of the population; High birth rate and low mortality rate of the population
Migrations	Increased spatial mobility of the population (Mkrtchyan, 2019)	Large-scale migration from villages to cities; Significant role of social capital in making decisions about migration (Mkrtchyan, 2019); Labor migration of the population is historically widespread
Lifestyle of the population	Preserves inter-generational differences (Vendina, 2016)	Values of a large family, community, religion and healthy lifestyle are dominant (Bobrovnikov, 2002; Kisriev, 2004; Vendina, 2016); Gender and age patterns in behavior are significant (Starodubrovskaya et al., 2011)
Economy	De-ruralization of local labor markets in rural areas (Muduev, 2002; Nefedova, 2013)	Transformation of land use in the mountains; Use of traditional nature management practices in the mountains
Local self-government and budgets	Low budget security	High role of local community institutions in managing the territory and solving social problems in the mountains

Note. Compiled by the authors on the basis of bibliographic review of sources and statistical data; FSSS (2024a), results of in-depth and expert interviews, and visual en-route observations.

The socio-economic specificity of Dagestan is the active urbanization and incomplete demographic transition of the population. Hence, it is the post-Soviet population growth and

active development of cities against the background of depression and development of rural areas. The transformation processes in the rural areas of Dagestan fit into the following scheme. The most active transformation of rural areas started in the 1930s and was associated with the semi-voluntary resettlement of population from the mountains to the plain (Sergeeva, 1967). Further transformation processes were associated with the partial downward migration of mountain residents in the Soviet period (Muduev, 2003; Osmanov, 2000). At the end of the Soviet period, the destruction of predominantly subsidized collective farming in rural areas contributed to a mass migration of population to settlements and towns in the foothill and plain zones (Eldarov, 2008; Karpov & Kapustina, 2011).

3. Methodology of compiling a typology of rural areas

The work is based on materials of two sources. The first is the results of field research carried out in 2020–2024 in 12 mountainous-piedmont and plain districts of Dagestan. The following rural districts were surveyed (Figure 1): Akhtynsky, Botlikhsky, Buynaksky, Gunibsky, Dakhadaevsky, Karabudakhkentsky, Kizlyarsky, Laksky, Levashinsky, Rutulsky, Untsukulsky, and Tsumadinsky.
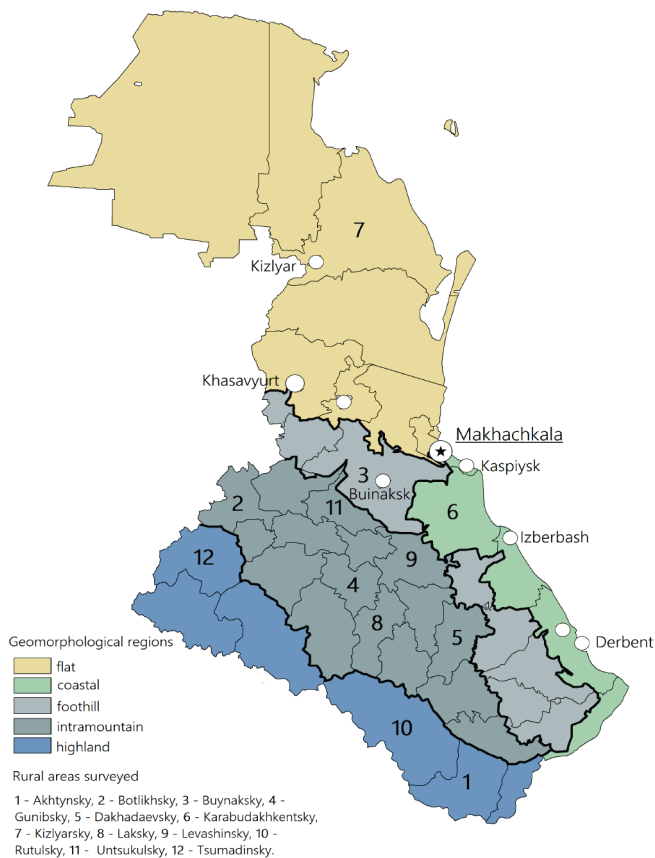

Figure 1. Surveyed rural districts of Dagestan.

During the field research, a comprehensive economic and geographical survey of rural areas was conducted, including visual en-route observations, expert interviews with employees of the district and village administrations (81), educators (52), heads of agricultural organizations (17), and in-depth interviews with local residents (107). The purpose of in-depth interviews was to obtain information about individual, family, and group life strategies of rural residents in the post-Soviet period and mechanisms of lifestyle transformation. On the other hand, the purpose of expert interviews was to get a general idea about the trends of transformation of different components of rural areas on the basis of estimated expert judgments. Expert interviews with representatives of local authorities were held in accordance with the standard structure of questions (Table 3).

Table 3. List of sample questions used in expert interviews with local authorities

Blocks	Examples of questions
Administrative status	What is the administrative status of a settlement? What was the settlement's administrative status in the past?
Geographical position	Which road leads to the settlement? How far is the district center from the settlement?
Landscape position	How does the settlement fit into the landscape?
Economic base	What agricultural enterprise existed in the Soviet period? What forms of agricultural activities are there in the settlement?
Demographic situation	How many people actually live in the settlement? How often and why do residents leave the locality?
Employment of the population	What places of employment exist in the settlement? Are there many people who work outside the settlement?
Service sector	What social service institutions are there in the settlement? When was the largest number of service sector objects?
Appearance of the village	Where are new houses being built in the settlement? Are there many empty houses in the settlement?
Local authorities	What tasks does the settlement administration have to solve? What does the settlement's budget consist of?
Self-organization of the population	How actively do the residents of the settlement participate in formal and informal events?

The use of the questionnaire made it possible to describe different aspects of socio-economic transformation of rural settlements, which are not reflected in the statistics. Thus, the socio-economic transformation of more than 150 rural settlements with different characteristics was described out of 1603 settlements in Dagestan in 2020).

The second source of materials are official statistics data, namely materials from the 1989, 2002, and 2010 Censuses (FSSS, 2024b), and municipal statistics of Dagestan for 1990–2020s (FSSS, 2024c). The quality of regional statistics in the national republics of the North Caucasus dictated the "narrow" set of indicators used, as well as the need to aggregate them to avoid errors (Starodubrovskaya et al., 2011). The authors additionally checked the differentiation of statistical data between districts by individual indicators "for adequacy", including through the results of field research.

A comprehensive analysis of transformation processes in rural areas requires taking into account different aspects of modernization. The work places the main emphasis on the socio-demographic processes, the dynamics of the settlement system, changes in the specialization of the economy, and ethno-cultural features of the territory.

Spatially, this study refers to the level of municipalities. However, the authors also used the data of settlements when analyzing the transformation of rural areas. This made it possible to provide a complete picture of the post-Soviet transformation of rural areas by combining the transformation features of different interrelated territorial levels, i.e., region, municipalities, and settlements. Thus, the authors used the multi-scale approach in their work.

The procedure of classification involved 40 rural districts, except for Bezhtinsky district, for which no data are available. At the first stage, the primary grouping of municipal districts was carried out on the basis of statistical data and general geographical information. At the second stage, the trajectories of rural transformation were corrected and made more specific based on the results of expert interviews in key rural settlements. Municipalities where interviews were not held were included in the corresponding types based on the similarity of socio-demographic, geographical, and socio-cultural characteristics.

The districts were classified according to four criteria:

- belonging to a geomorphologic area (distribution of districts according to Ataev, 1997 and Milkov & Gvozdetsky, 1976);
- position in the settlement system (based on the distance of a district center from Makhachkala: 0–90 km—semi-peripheral, 90–150 km and 150–300 km—peripheral of the 1st and 2nd order, respectively);
- specialization of economy (the leading branch was determined on the basis of the specialization index value); and
- main demographic characteristics of the population, i.e., population dynamics in 1989–2020 and its factors.

The specified types of rural districts in Dagestan are complex, and their names include their basic characteristics. The most common types of rural districts are described using the example of the surveyed Akhtyn, Botlikh, and Kizlyar districts.

Further on, two main trajectories of transformation of rural areas during 1989–2024 were defined for the municipal districts of Dagestan on the basis of quantitative and qualitative analysis of the existing trends in population dynamics, demographic situation, shifts in the economy structure, and the viability of traditional cultural elements:

- inertial with preservation of traditional way of life under the extensive economic development, with (a) shrinking settlement and depopulation, and (b) growing population and diversification of the economic structure; and
- modernization with the presence of socio-cultural modernization elements under the intensive development and increasing complexity of the economic structure.

4. Research results

4.1. Types of rural areas in Dagestan

Rural Dagestan has 10 types of rural areas in terms of the combination of their geographical, social, and economic features (Figure 2). They are located within different geomorphologic areas: on the plain, in the seaside zone, foothills, in-mountain zone, and highlands. The regional center (Makhachkala) and other large cities (Khasavyurt and Kaspiysk, except for

Derbent), are located predominantly in the plain in the central part of Dagestan. Rural areas in the highland and inland mountain zones, and some plain areas in the north are the periphery, which limits their development. Mountainous areas are not only remote from the main markets in the major cities, but also have lower density of infrastructure and roads. In winter and during the rainy season the access to the mountainous rural areas is partly limited.

This is confirmed by interviews with the residents. "To get to my village from Makhachkala you have to spend more than four hours. In the fall and spring even an off-road vehicle is not always passable. If someone goes to the district center, all the seats in the car are full. Otherwise you have to call a cab for 3,000 rubles one way (about 30 USD)"—a man, 24 years old, Laksky district.
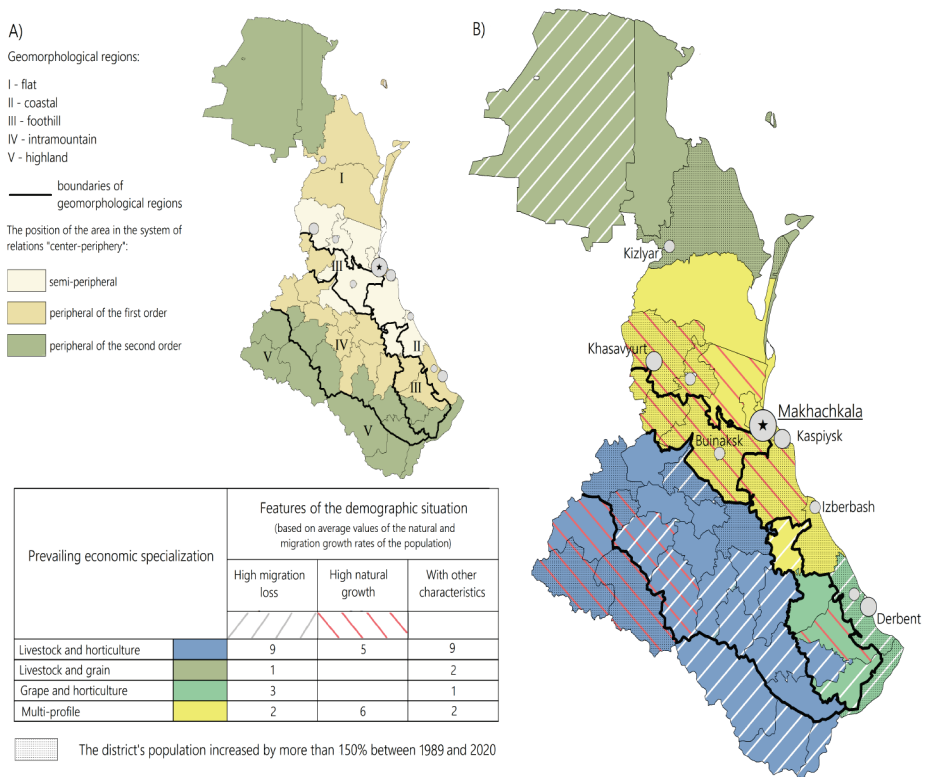

Figure 2. Features of districts of Dagestan.
Note. (A)—the position of the areas within the geomorphological regions and the system of relations "center–periphery", and (B)—socio-economic characteristics of the areas.

Rural districts have different economic structure. In the high-mountain and intra-mountain zones, they specialize mainly in livestock breeding (23 districts); in some districts, stone fruits are grown. Large farms and surviving agricultural enterprises breed meat-wool sheep. Private subsidiary farms are mainly engaged in breeding cattle for their own needs. In some mountainous areas, a cow remains the main source of income for the family.

As an example, a woman, 55 years old, from Gunib district said: "I have seven milk cows. I live alone. I need something to feed my children and grandchildren. I sell the surplus to acquaintances. This is my main income."

In the foothill zone, rural areas have a greater variety of leading branches, i.e., cultivation of grain crops, viticulture, vegetable growing, etc., and agriculture has a diversified structure. The leading branches of agriculture in the districts of the coastal zone are viticulture and horticulture. The viticulture in Dagestan demonstrates positive dynamics in comparison with other branches of agriculture. Five rural districts specialize in cultivation of grapes. Combinations of different types of specialization (cattle breeding, grain farming, etc.) are characteristic of the rural districts of the plain zone. A reason is the functioning of transhumance system since the Soviet period.

Demographic differences in rural areas of Dagestan are related to the altitudinal and partly basin differentiation of this region. The rural areas of the highland and in-mountain zones demonstrate two completely different situations. High population growth is recorded in the valleys of the Andi Koisu and Avar Koisu rivers, inhabited predominantly by peoples of the Avar-Ando-Tsez group. In Avar rural areas, expanded reproduction of the population prevails (on average, more than two or three children in a family). The population participates in the seasonal labor migration. Official statistics data (FSSS, 2024b), show that to low migration outflow, most Avar settlements have positive population dynamics. Lower rates of population growth or depopulation are observed in the Samur Valley, populated by peoples of the Lezghin linguistic group. Population replacement prevails in the Lezghin districts (on average, two or three children in a family). Whenever possible the rural residents migrate to larger cities of Dagestan and other regions of Russia for permanent residence. As a result, a significant number of settlements have become depopulated since the Soviet period.

Our interlocutor illustrates this situation: "Entire families with children leave to pick vegetables and fruits in the Krasnodar Krai. In summer, more than half of the residents are absent from the settlement. We lack education, we have to work as laborers"—a man, 45 years old, Botlikh District.

Rural areas of the foothill zone have significant natural and migratory population growth, regardless of basin affiliation and ethnic structure of the population. The reasons are the proximity to the regional center and other large cities and better conditions for living and farming. Rural areas of the plain zone have different demographic situation. It is more favorable in the rural areas near large cities. Peripheral semi-desert rural areas of the Nogai Steppe of Dagestan have more complicated demographic situation. Semi-peripheral rural areas have high natural increase and high migration loss of population.

Here is an excerpt from the interview: "Why should I leave for noisy Makhachkala? It takes me only one hour to get there from Gubden. And in the settlement I have a family, relatives, and a business. I can relax in nature, in the mountains. In the city there are everlasting traffic jams on the roads and expensive housing because of the influx of tourists and locals"—a man, 35 years old, Karabudakhkent district.

4.2. Pattern of rural areas transformation based on selected study areas

Each of the types of rural areas of Dagestan has specific functioning and transformation in the post-Soviet period. Table 4 analyzes the main features of socio-economic transformation for

the most widespread types of rural areas (Akhtyn, Botlikh, and Kizlyar districts) in the post-Soviet period.

Table 4. Modern socio-economic characteristics of the rural areas of Dagestan

Indicators	Akhtyn	Botlikh	Kizlyar
Location	Peripheral	Peripheral	Semi-peripheral
Geomorphological region	Vysokogornaya street	High-mountain intra-mountain	Plain
Area (km^2)	1,119	687	3,047
Ethnic composition	Lezgins	Avars, Ando-Tsez peoples	Avars, Dargins, Russians, etc.
Population density (inhabitants per km^2)	28	87	25
Official population (in 2021)	31,807	59,920	77,815
Population dynamics in 1989–2021 (in %)	+9.1	+120.6	+56.7
Average number of children in families*	2–3	3–4	2–3
Number of settlements	19	37	84
Average population of a settlement	1,674	1,619	926
Share of the district center in the total population of the district (in %)	48	20	The center is not a part of the district
Leading economic sectors	Livestock breeding, horticulture	Livestock breeding, horticulture	Livestock breeding, grain farming, viticulture
The place of the district in the mountain–kutan system, (number of kutan settlements/ kutan population)**	Has kutans in the plain (2/1,414)	Has kutans in the plain (16/5,752)	Has kutans of mountain areas (116/37,200)
Share of the working-age population participating in labor migration (in %)*	20–30	30–50	Less than 20

Note. *The data were obtained based on expert interviews with the heads of rural settlements and employees of preschool and educational institutions; **kutan—a settlement on the plain in the zone of distant cattle breeding (in the Soviet period—a temporary camp of shepherds on the plain in winter).

- *High-altitude peripheral Lezghin cattle-breeding and horticultural district with predominance of population replacement and significant migration outflow of population*

The Akhtyn district is located in the middle part of the Samur River valley. The district has a very few kutan settlements in the plain. The district is characterized by extremely high migration outflow of population. The able-bodied local male population is involved in labor migration to Moscow and resource-mining cities of Western Siberia. High-mountain settlements of the Akhtyn district have significant deviations between the actual and official population numbers (10–50% and more). Also, the settlements located lower down the

valley have minimal deviations in population numbers. The reason is that rural residents maintain permanent registration in rural areas while migrating to the city (in order to receive social payments and benefits). Low natural population growth in the district is the result of the prevalence of just population replacement (on average two, less often three children in a family). The district's population is socially modernized, less religious and more mobile. The economy of the Akhtyn district is based on livestock breeding, namely meat sheep breeding.

As in other mountainous areas of Dagestan, horticulture and grain farming came to an end because of their low economic profitability. Here are some quotes from the interview: "Our grandfathers used to work in the Baku oil fields in Azerbaijan. In the Soviet period, they worked in the cities of Dagestan and Russia. Now there are many who work in Siberia"—a man, 57 years old, Akhtyn district. "Unlike Avars, we drink alcohol. Very often you can see vodka on the men's table. In Avar districts there is no such thing, they are religious, although we go to the mosque too"—a man, 39 years old, Akhtyn district.

- *Intra-mountain peripheral livestock breeding and gardening district with predominance of expanded reproduction and insignificant migration outflow of population*

The Botlikh district is characterized by high numbers and density of population. The scale of population resettlement to the plains during the Soviet period was minimal. The demographic situation in other mountainous areas of Dagestan would have been similar to the Botlikh district if there had been no policy of population resettlement to the plains during the Soviet period. The unfinished demographic transition in the district is a cause of the favorable current demographic situation in the Botlikh district. The population in the district is religious and traditional. The value of secular education is low. The result, among other things, is the expanded reproduction and a relatively smaller migration outflow of the population. In the post-Soviet period, cattle breeding became the main branch of the economy. Grain farming has completely come to an end. Some orchards were preserved due to the functioning of a canning factory in Botlikh. Under the rapid population growth, the reduced number of jobs is compensated by labor migration of the population. The agrarian course of labor migration could be attributed to the low competitiveness of poorly educated rural population at the urban labor markets. It has a positive effect on the rural population dynamics.

Here is what our interlocutors said: "We have a lot of girls at school wearing hijab (head scarves). It has become customary for us. Early consensual marriages are welcomed. A lot of young people stay in the neighborhood. It is hard for them to compete with urban and other rural children because of the worse quality of education"— woman, 42 years old, Botlikh District. "It is better not to start a conversation between a visiting man and a woman here. It is not customary. You can approach old women with questions, but a contact with young women is limited. This is the way it is accepted in our religion"—a man, 35 years old, Botlikh District.

- *Plain peripheral livestock-grain district with predominance of expanded reproduction and insignificant migration outflow of population*

Until the middle of the 20th century, the Kizlyar district was populated predominantly by Cossacks. Currently, the share of Russians in the district is 13%. In the 1960s and 1970s, the first kutan farms relating to the mountain areas with different ethnic composition appeared within the territory of the district. The district is characterized by extremely high degree of the territory development. Settlements are mainly concentrated along the rivers, canals and main roads. Some settlements are illegally located on agricultural land (replacing the former

branches of collective and state farms). At present, socio-economic ties of the Kizlyar district with the mountains are limited. They are of familial (rare interaction with relatives) and economic (cattle drive from the plain to the mountains) nature. The development of rural areas is significantly influenced by the city of Kizlyar. It concentrates migration flows from the rural areas of the plains and mountains. The predominant sectors of the economy in Kizlyar district, i.e., grain farming and livestock breeding, have been preserved in the post-Soviet period. The structure of agriculture is fully adapted to the plain conditions: the agrarian sector is highly marketable and is oriented at the interregional sales of produced goods.

A similar situation is voiced in conversations with local residents: "Our settlement was formed spontaneously on the site of a former collective farm. Mountain dwellers from different districts started to move here. Now Avars and Dargins live here. We try to be friends, but there are conflicts over land plots for grazing"—a man, 27 years old, Kizlyar district. "Here there is no such thing as in the mountains. Each family has its own rules. We have religious and secular families. I know women who do not wear head scarves. The locals censure it, but they treat it moderately. There are young people who smoke and drink. Everything is different here"—a woman, 31 years old, Kizlyar district.

4.3. Trajectories and factors of rural areas transformation

The post-Soviet transformation of rural areas of Dagestan is specific at particular territorial levels. Inertial and modernization trajectories describe a diversity of socio-economic transformation processes at the level of municipalities of the Dagestan (Figure 3) and depend on different factors (Table 5).

Table 5. Factors determining the trajectories of the socio-economic transformation of Dagestan rural areas

| Factors | Trajectories of socio-economic transformation | | Modernization |
| | Inertial | | |
	Shrinking	Expanding	
Specialization of commodity economy	No clear specialization	One or two leading industries	Diversification of the economy and labor market
Transport and geographical position	Deep or peripheral position	Internal transport hubs	Suburban areas and transport corridors in the plain
Migration	Outflow	Influx	Noticeable influx
Orographic	High and mid mountains	Mountain basins and river valleys	Lowlands, foothills, plains
Preservation of traditional institutions and cultural elements	Preservation and strengthening	Partial weakening	Some weakening of social control over people's behavior

The inertial trajectory of socio-economic transformation of rural areas prevails mainly in the mountains and just several plain areas. Preservation of stable trends in population dynamics since the Soviet period and extensive development of the economy are typical features. In the mountains, the inertial trajectory is subdivided into two sub-trajectories, i.e., inertial shrinking and inertial expanding. They differ in the post-Soviet dynamics of rural space development.

The inertial expanding trajectory is the most common for rural areas inhabited by Avars, Dargins, and Kumyks (some foothills and river valleys of the Andi and Avar Koysu rivers). This

group of rural areas is experiencing population growth and extensive economic growth of the districts has already reached the limits of ecological capacity of mountain territories.

The inertial shrinking trajectory is characteristic of rural areas predominantly inhabited by Lezghin peoples (Southern Dagestan and some intra-mountain regions). A decrease in the population and the economic base is characteristic of this group of rural areas. The reasons are the remoteness of Southern Dagestan from the main markets and the large-scale migration outflow of the rural population to the cities. The population is concentrated in the large rural settlements, while the small settlements are actively abandoned.
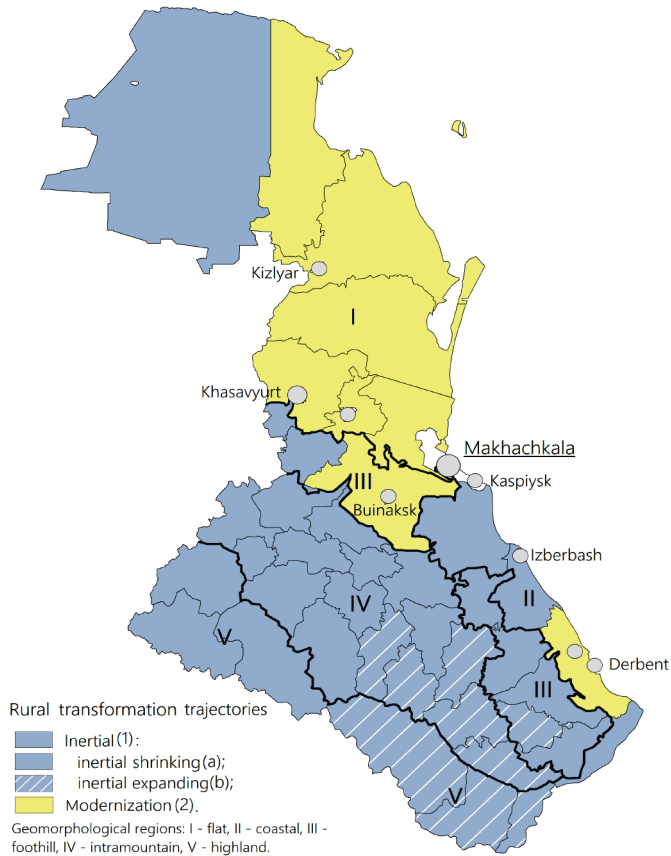

Figure 3. Trajectories of the transformation of Dagestan rural areas.

The modernization trajectory of socio-economic transformation of rural areas prevails in the plain. The reasons are the active spread of market factors in the economy and the isolation of newcomer population from the past places of settlement (destruction of the rural community). At the same time, the traditional elements in the way of life of the rural population are still strong in the plain. In most cases, new townspeople (former rural residents) keep high trust in the people around them. For this reason, many of them are not concerned by the theft of their private property in the city. This reflects the complex non-

linear nature of society modernization, which is based on the interaction of traditional and modern elements in all spheres of human life. This is one of the consequences of human adaptation to new socio-economic realities.

The following quotes from the interviews can be cited as an example: "We rarely lock our apartments in apartment buildings. Everyone lives here"—a woman, 32 years old, rents an apartment in Makhachkala for the second year. Here is another excerpt from the interview: "Don't make me laugh, why lock the car? This is Makhachkala, everyone here is an insider. They won't dare, because in case of anything we will quickly find and solve the issue among ourselves"—a man, 29 years old, the conversation took place in the bazaar of Makhachkala.

5. Conclusion

The post-Soviet transformation of rural Dagestan is influenced by exogenous and endogenous factors. The group of exogenous factors includes those of post-Soviet transformation of rural areas common to all Russian regions. The group of endogenous factors is largely associated with a vast area of mountains in Dagestan and the specifics of its socio-economic situation. This determines a more complex mosaic of intra-regional trajectories of the post-Soviet socio-economic transformation of rural areas than in other regions of Russia, namely the population growth in some piedmont areas and intermountain basins along with the population growth in suburban rural areas.

The rural Dagestan is characterized by a combination of some all-Russian trends and specific regional features of development. The former are associated with the shrinking network of settlements, polarization of the settlement system, deagrarianization of the employment structure of rural population and the growing migration mobility of the population. The latter are related to a vast area of mountainous territories, ethno-cultural diversity and religiosity of the population, as well as the increased territorial heterogeneity of socio-economic development. Regional features of rural development in this region overlap with the all-Russian trends of socio-economic transformation of rural areas, thus complicating their manifestation.

The results of classifying the rural areas of Dagestan confirmed that the hierarchical and altitudinal position of rural areas influences the general character and trajectories of the post-Soviet socio-economic transformation of districts. This emphasizes the importance of pairing the factors of mountain specificity and modernization of population and economy in the process of analyzing the development of mountain territories. For example, orographic heterogeneity determines the time lag of innovations and their limited application in the most remote mountain massifs because of local specifics, i.e., the dominance of traditionalism, economic feasibility of certain practices in other conditions, etc.

Rural Dagestan has two main trajectories of socio-economic transformation of rural areas, i.e., inertial and modernization. Together they demonstrate matching of such processes as the archaization and modernization of the local economy structure, and traditionalization and modernization of society. The trajectories also have territorial specifics. The inertial trajectory of rural transformation dominates in mountainous and piedmont rural areas, while the modernization one dominates in the plains.

In the post-Soviet period new elements of economy and lifestyle of the population have spread widely in the plain. Inter-regional and intra-regional migrations contribute to the weakening of the historical memory of the plain population. At the same time, the position of traditional elements in the lifestyle and attitudes of the population is still strong in the

plain. This reflects a complex non-linear nature of society modernization, based on the interaction of traditional and modern elements in all spheres of human life.

On the contrary, the population in the mountains is becoming more traditional. The main reason is the post-Soviet degradation and structural archaization of the economic base of mountainous areas. Religion has become widespread in the post-Soviet period. Local mechanisms of population adaptation to changing conditions appear in the mountains. For example, the people actively self-organize in mountain territories. Often the territorial, familial, and religious unity of residents of a settlement determines a high social capital of rural communities in the mountains. As a result, tightly knit rural communities are very often engaged in improving settlements and solving common problems at their own expense. This is an example of the positive impact of traditionalism on rural development.

Transformation processes are taking place in rural Dagestan under globalization and social modernization of the population. Ethno-cultural and confessional factors are increasingly responsible for the preservation and reproduction of traditional social ties and relations. They also influence the stability of rural settlement. According to the results of field research, the strongest influence of these factors is recorded in Avar rural areas of mountainous Dagestan with a stable number of permanent residents. On the other hand, such mechanisms are weaker in the Lezghin rural districts of Southern Dagestan.

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