

Cartographic Representation of Population Census Registers (According to Census Books of II Half of 17th Century)

Dali Nikolaishvili^{1,*} , Mariam Shanava^{1,2}

¹ Faculty of Exact and Natural Sciences, Department of Geography, TSU. Tbilisi, Georgia

² Akaki Tsereteli State University, Faculty of Exact and Natural Sciences, Department of Geography. Kutaisi, Georgia

* Corresponding author: mariam.shanava96@gmail.com

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Abstract

Population census registers are among the most important historical sources, offering broad opportunities for studying the demographic, social, economic, and cultural development of society. Through them, it is possible to identify population size, social strata, settlement networks, taxation systems, and anthroponymic characteristics. Particular importance is attached to the historical-cartographic analysis of such data, as it enables the reconstruction of past spatial realities. The aim of this study is to analyze the data from the population census registers of Kartli in the 17th-18th centuries and to map them demographically. The research is based on the registers of the Zemo Kartli (Upper Kartli) military-administrative district (Sadrosho) from the second half of the 17th century and the 1715 register of the Ruisi Samtskso (Ruisi Parish), published in the works of Ivane Javakhishvili and Ekvtime Takaishvili. The study employs retrospective cartographic methods, historical-comparative and semantic analysis, GIS technologies, historical maps, toponymic evidence, and modern statistical data. As a result of the research, villages were identified and localized, and thematic maps were produced. During the research it was established that in 1715, the territory of the Ruisi Parish contained 87 villages and approximately 2,000 households. The population was unevenly distributed, with both relatively large and small settlements, including settlements undergoing decline. A dispersed settlement system and a tendency toward village abandonment were identified. Anthroponymic analysis shows that the naming system was characterized simultaneously by diversity and cultural uniformity. The most common names were Giorgi, Datuna, Tamaza, Ivana/Ivane, and others. The study confirms that population census registers constitute an important source not only for history, demography, and ethnography, but also for historical cartography. Through their analysis and the use of GIS technologies, it becomes possible to reconstruct historical space and determine the dynamics of settlement network development as well as the characteristics of territorial population distribution.

Keywords: Population census registers, historical cartography, retrospective analysis, Zemo Kartli, 17th century, Georgia

Introduction

Population census registers are among the most reliable and valuable sources, providing a comprehensive picture of the past development of society and its trends. Their value can be examined from several perspectives. First, they provide accurate information about population size, territorial distribution, ethnic and confessional structure, as well as sex-age composition and social status. On the other hand, population census registers are also important for the study of economic history. Census records frequently document people's occupations (for example, farmers, craftsmen, merchants, and others), which enables researchers to determine the general structure of the economy and the level of development of its individual sectors. They also enable researchers to identify linguistic substrata and

assess the degree of linguistic assimilation, as well as to determine the characteristics of territorial population distribution, including population concentration and changes in settlement networks over time.

Population census registers are important not only for the study of the past, but also have practical applications in contemporary life, serving as sources of legal, scientific, and cultural significance. Through them, it is possible to:

- To determine historical changes in political and administrative boundaries, as well as in the boundaries of villages and cities;
- To Determine historical changes in political and administrative boundaries, as well as in the boundaries of villages and cities;
- To identify hereditary property rights and legal relationships (old registers often contain information about who owned land or lived in a specific territory), which may be significant in resolving contemporary disputes;
- To restore historical justice (for example, identifying repressed or forcibly resettled populations);
- To identify historical geographical names and establishing their correct spelling;
- To study the history of specific family names, ancestors, and kinship ties (census registers often contain lists of family members).

Moreover, by comparing historical and modern data, it becomes possible to identify demographic trends, which, in turn, provide a basis for proper future planning.

Thus, due to the wide range of issues they address, population census registers are valuable sources for historians, ethnographers, geographers, economists, linguists, and specialists in other fields.

Population census registers are also an important source for historical cartography. They provide the possibility to address and cartographically represent a range of issues within this scientific discipline.

Historical cartography, as an interdisciplinary field developing at the intersection of cartography and historical geography, aims to create of historical maps and atlases, the development of methodologies for their production, and the analysis of spatial distribution patterns of objects depicted on maps. However, in Georgia, historical cartography is considered a relatively underdeveloped discipline (Nikolaishvili et al., 2011, p. 33).

For Georgian historians, cartographers, and geographers, the work of Ivane Javakhishvili, which encompasses ancient population censuses and fiscal registers of Georgia, represents a highly important and fundamental source. In the very first chapter of the fourth volume, the scholar describes the approaches and procedures of population enumeration in feudal Georgia. In the II half of XVIII century Georgia, there were 4 Sadrosho (banner / military banner district), which functioned as military-administrative units, each governed by a different commander ([Essays on the History of Georgia, 1973](#)). These Banners units also served as census/registration units.

The aim of this study is to analyze the data from the population census registers of Kartli in the 17th-18th centuries and to map them demographically. On the basis of this analysis, the collected data are organized according to settlement systems, quantitative and structural characteristics of the population, forms of economic activity, and features of historical development. An important direction of the research is the identification of methodological principles for the cartographic representation and visualization of census registers, so that they can be used to ensure spatial analysis of historical-demographic, historical-ethnographic, and historical-geographical processes.

Methods and Materials

The study employs a retrospective cartographic method, which enables the reconstruction of past spatial realities and their representation on maps based on both modern and historical spatial data. For this purpose, a variety of sources were used in combination: historical documents, census registers, old maps, modern toponymy, and relevant scholarly literature on the subject. Through analysis and comparison of these data, the historical spatial patterns is reconstructed. Specifically, based on the analysis of settlements and population figures, a series of thematic maps was created. This involved the identification, systematization, and classification of data contained in the census registers, comparative analysis of datasets, the creation of a GIS database, the development of appropriate cartographic symbols, and the compilation of a series of thematic maps.

The presented work is primarily based on the registers included in the work of Ivane Javakhishvili, *Economic History of Georgia* (1930, 1996).

In addition, these registers were also used as sources.

The research was carried out in several stages:

- Stage I – Systematization of census data (compilation of a list of villages, creation of a digital dataset of household numbers);
- Stage II – Identification and localization of villages (comparison of historical village names with their modern equivalents, identification of forgotten or modified toponyms based on later sources, and determination of their locations using other scholarly sources and topographic maps). For this purpose, comparative, semantic, and other research methods were applied;
- Stage III – GIS geocoding and database creation (compilation of an attribute table based on census register data and modern datasets);
- Stage IV – Preparation and analysis of thematic maps using GIS (determination of the spatial distribution of settlements and population concentration, and their comparison with the contemporary situation).

In the feudal period, the territory of Georgia was divided into *sadroshe* (Banner) – military-administrative units: The Advance (Metsinave), Royal (Samepo), Right (Memarjvene), and Left (Memartskhene) *Sadroshe*. During both the unified Georgian kingdom and the period of its fragmentation into kingdoms and principalities, the territories and boundaries of these *sadroshe* and their constituent duchies (*saeristavo*) changed. Each of the kingdoms of Kartli, Kakheti, and Imereti had its own duchies. By the first half of the 17th century, the Kingdom of Kartli already included the Advance (Metsinave, in Lower Kartli), Royal (Samepo), Left (Memartskhene in Mukhrani), and Right (Memarjvene, in Upper Kartli) *sadroshe* (Atlas of the History of Georgia, 2016, p. 44).

The census books discussed in the article covered the territory of the Right – Upper Kartli *Sadroshe*.

Results

A general overview of the registers of the II half of the 18th century

In the II half of the 18th century, Georgia was in a complex historical situation. This was a period when the country experienced a severe demographic and economic crisis due to the difficult conditions caused by Ottoman pressure, Lekianoba (raids by Dagestani groups), and Qizilbash incursions. Furthermore, reforms were being initiated by the king, for which accurate statistical information was essential. In this context, the registers were of considerable practical importance in several respects. First, they had military-mobilizational significance: the data in the registers made it possible to determine how many combat-ready men existed in a given *sadroshe* and how many fighters each noble, noble family, or village could mobilize when necessary. Second, they had fiscal significance: the state treasury was replenished through taxes paid by the population, making it essential to accurately record the real number of taxpayers. Third, the registers also had a legal function, as they documented the attachment of serfs (*kma-glekhi*) to specific landlords or state lands. In this respect, the registers acquired additional importance by facilitating the search for and return of fugitive peasants (Javakhishvili, 1996, Vol. 4, p. 38).

The registers reflect the real situation of the population, which is expressed through the difficult socio-economic condition of the villages. At that time, large family households dominated in Kartli, meaning that several brothers lived together in one household with their wives and children. According to Ivane Javakhishvili, such a household structure and demographic arrangement made it easier for families to fulfill tax obligations. In addition to this economic strategy, living in large extended families also had a defensive function, as it facilitated resistance against enemy invasions (Javakhishvili, 1996, Vol. 4, p. 42).

The registers clearly distinguish different categories of peasantry. For example, “*mkvidri*” (settled/owned peasants) or purchased peasants (*nasqidi*), and old serfs, who were hereditarily tied to the land and could not change their place of residence without the consent of their feudal lord. This status was inherited and passed down from ancestors to their children. Another category includes “*bogano*” and “*khizani*”. These groups did not possess their own land; they were mainly resettled or displaced populations, often taking refuge in other areas. Their legal and social status was still not fully defined during this period.

The registers also mention the branches of agriculture practiced by the population of Upper Kartli at that time. These included arable farming (with wheat and barley cultivation), viticulture (notably, the registers also record taxes levied on wine), animal husbandry, and other related economic activities.

An analysis of the registers shows that they mainly contain descriptions of the villages of the dioceses and the population settled there, i.e., the parish (mrevli). The number of households (komli) is listed according to villages. In the household lists, the name of the head of the family is indicated, as well as the names of his children, brothers, and even other relatives. Their social status is also recorded, specifying whether the person is a settled peasant (mkvidri), a migrant/tenant peasant (khizani), or a landless poor person (bogano).

However, it should be noted that there are certain discrepancies between the Upper Kartli registers and the parish registers. For example, Ivane Javakhshvili points out that the register of the Upper Kartli sadrosho is likely earlier than the 1715 parish register. For instance, in the sadrosho register, in the village of Abano, the following is mentioned: “Bezishtashvili Paata, one household; his brothers Gurgena, Datuna, Ivana, and their four sons.” In the 1715 parish register, however, Bezishtashvili Paata no longer appears, while Ivane is recorded as a separate household head, and his grandson Ivane, “Ivanashvili Ivane,” is also listed separately as an independent household head (Takaishvili, 1907, p. 171). Despite certain shortcomings, these data still provide a valuable demographic picture, which can be used to estimate the population of villages at the time and to map population density. Accordingly, it can once again be emphasized that census registers are not only an important foundation for historical-geographical research, but also a key resource for the further development of historical cartography.

Overview of the Registers of the Upper Kartli Sadrosho of the II Half of the 17th Century and the Ruisi Parish Census of 1715

Ivane Javakhishvili provided extensive analysis of numerous population registers, including those of the Upper Kartli Sadrosho from the 17th-18th centuries (Fig. 1). These registers are of particular importance, as they represent one of the oldest known demographic-statistical monuments in the Georgian historical space. The documents demonstrate that, by that period, an organized system of population registration already existed in Kartli. The census records were structured by villages, social groups, and household units, indicating a relatively advanced administrative framework. This organization reflects the active role of both the state and feudal authorities, as well as the church, in controlling the population. They assessed military and fiscal resources and maintained detailed knowledge of the social composition of each village.

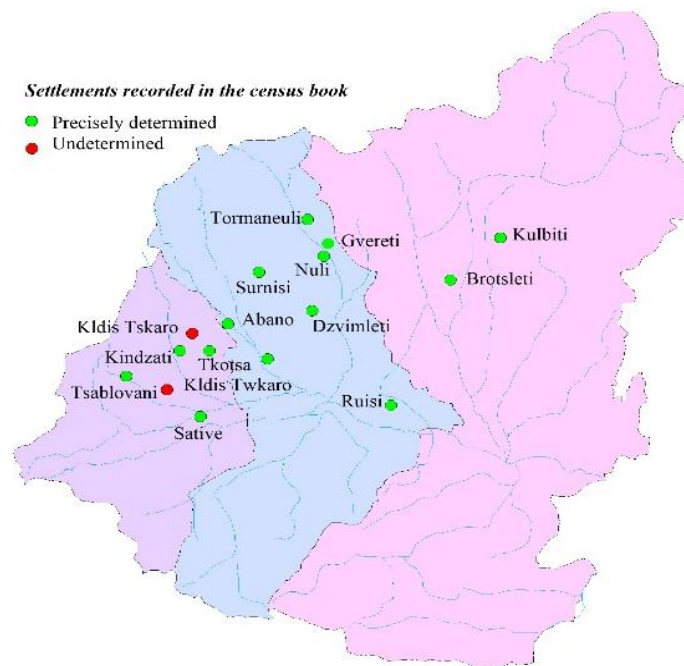


Figure 1. Settlements according to Zemo Kartli Sadrosho

The 17th-century census register of the Upper Kartli Sadrosho is considered the oldest surviving Georgian population register. The data are organized according to the villages within the territory of the Upper Kartli Sadrosho. Frequently encountered terms include: „salashkro vaji“ (military service male), „Nasheni vaji“ (native-born male), „zma“ (brother), and „zmiswuli“ (nephew), which clearly reflect both the military potential of the population and the structure of large patriarchal family units.

The register is also characterized by a distinctive form of recording. The text is written in a continuous narrative style, and individual households are not clearly separated from one another. Only social groups are distinguished by lines of separation (Javakhishvili, 1930/1996). This demonstrates that Georgian administrative practice was still in the process of development and differed from later, more refined census registers. A significant place in the document is also given to genealogical descriptions of the population. Family members, brothers, sons, and descendants are frequently mentioned, which gives this source considerable importance for the study of Georgian surnames, family structures, and demographic processes.

The register clearly reflects the social hierarchy of Kartli society. The village community was not homogeneous. The population is divided into groups such as „mokalne msakhlebeli“ (resident laborers), „Bogano“ (vagrants), „Msakhuri and Glexi“ (servants and peasants), and „meulufe and mesepe“ (royal steward and royal servant), indicating the existence of relatively free peasantry, dependent peasantry, a service class, and groups closely tied to land and lordship (Table 1).

Table 1. General similarities and differences between the census books of the Upper Kartli Sadrosho (II half of the 17th century) and the 1715 Ruisi Samtskso

Date of census	II half of the 17th century	1715
Aim of census	Population census	
	State-military	Ecclesiastical-taxation
Objects of enumeration	Households with male population only	
Order of enumeration objects	The population is organized by villages	
Feudal hierarchy	Mokalne (resident holder) Bogano (Vagrant) Servant Peasant Meulufe (royal steward) Mesepe (royal servant)	Tarkhan (tax exemption) Mobegre (taxpayer) Bogano (Vagrant) „Other“ (heir)
Church influence	Is less noticeable	Is clearly visible

Only the male population is included in the census records. This is not incidental, as the primary concern of Georgian state practice was the assessment of military manpower, the number of able-bodied men, and the determination of taxable units.

The 1715 Samrevlo Register, i.e. the Ruisi Samtskso Census, was compiled by order of Bishop Nikoloz Mroveli (Orbelishvili / Kaplanshvili) (Ivane Javakhishvili, 1996). It was published by Ekvtime Taqaishvili in 1907, who notes that „Each family or household is recorded by surname and personal name, and not each individual person separately“ (Takaishvili, 1907, p. 207), meaning that the register is essentially a list of households (komli). According to Ivane Javakhishvili, the register includes the entire population of the parish (Javakhishvili, 1930, p. 11). He further cites Bishop Nikoloz Mroveli's statement that the purpose of the census was fiscal: „I recorded it for the dram, so that the revenue of the church would not be lost“. This reflects that the primary aim of the register was to determine the income of the Ruisi episcopal see (sakhdomo). Thus, the main function of the register was fiscal, as it was created primarily for the assessment of parish revenues.

The 1715 Ruisi Samtskso Register functioned as an instrument of financial control, as clearly indicated by the text itself: „I recorded it for the dram, so that the revenue of the church would not be lost“. This statement demonstrates that the Church sought to precisely determine who was liable for which taxes, how much income the episcopal see generated, and the status of each household. In addition, the Church recorded not only serfs but the entire ecclesiastical parish population. Therefore, the register provides an overall fiscal picture of the community, reflecting its complete taxation structure.

According to the register, the population was divided into 2 main groups: Tarkhans and Mobeghre (peasant liable for labor service). A tarkhan was a person who was exempt from regular taxation and, instead of paying taxes, was obliged to provide service; such individuals enjoyed certain privileges and did not pay the full burden of dues. In the register, they are referred to with expressions such as „has a sacrificial obligation“ or „has a memorial obligation“, indicating their privileged fiscal status. In

contrast, a mobeghre was a regular taxpayer who paid standard obligations such as drami, cod of grain, and shaurs (small coin). The register also shows differentiation in the amount of taxation according to economic status: Bogano – the poorest segment of the population with limited property – paid ½ a kodi (meseare of grain), whereas others paid a full kode.

Table 2. Correspondence of village's names in the Ruisi Samtskso with their modern equivalents

Name of villages	20002 / 2014	Municipal - Community affiliation
Abano	Abano	Kareli
Brotsleti	Brotsleti	Gori
Zemo Dzvileti	Zemo Dzvileti	
Tormaneuli	Tormaneuli	
Kldis Tskaro	KldistTskaro	Khashuri: Ali, Tsagvli
Kulbiti	Kulbiti	
Nuli	Nuli (former village	Kareli
Ruisi	Ruisi	Kareli
Sative	Patara Sative	Khashuri
Surnisi	Sunisi	
Tskotsa	Tskotsa	Khashuri
Ptsa	Ptsa	Kareli
Kvemo Dzvileti	Kvemo Dzvileti	
Kindzati	Kindzati	Khashuri
Gvereti	Gvereti	
Tsablovani	Tsablovana	Khashuri

The nobility and the princes and nobles class (Tavadi, Aznauri) are not included in the register. According to Ivane Javakhishvili, they had different types of obligations and did not fall within the general taxation system, instead performing other forms of service-based duties (Javakhishvili, 1930/1996). This clearly demonstrates the privileged structure of feudal society, where social stratification was directly reflected in fiscal and administrative practices.

Both registers represent important historical sources that provide valuable insight into the social, demographic, and administrative systems of 17th-18th century Georgia. Both are based on household (komli) enumeration and constitute a significant foundation for the study of social strata, fiscal obligations, and village organization. However, the register of the Upper Kartli Sadrosho has a more military-demographic and social character, with particular emphasis on family and kinship structures and population social categories. In contrast, the Samrovlo Register is primarily ecclesiastical-fiscal in nature and serves the economic interests of the Ruisi Bishopric, focusing on the documentation of the obligations of mobeghres and tarkhans.

Population mapping of the pastoral district register

According to the register, there were 87 villages in the Ruisi pastoral district, while the number of households was 1,972 (approximately 9,860 inhabitants). However, as E. Takaishvili notes, these data are not complete, since several pages are missing from the original manuscript. According to his calculation, “If we estimate even a minimum of five persons per household, the total would be 9,095 persons; if we also take the missing pages into account, then the entire Ruisi pastoral district would amount to nearly two thousand households, and the total population would exceed 10,000” (Takaishvili, 1907, p. 207). The incompleteness of the register is also discussed by Ivane Javakhishvili, who notes that “In the description of this numerous populations, information about the nobility is very rare” (Javakhishvili, 1930, p. 12). He also attempts to explain the probable reason for this omission, stating that “Instead of paying the drama tax and performing service, the nobility had other obligations imposed upon them” (Javakhishvili, 1930, p. 12).

Despite the gaps in the data, the register provides a fairly clear picture of the population size and the peculiarities of its territorial distribution, including villages and abandoned settlements, the social structure (such as the Bogano, village headman, and priest), the economic condition (household tax), anthroponyms (personal names), and other aspects.

The data included in the register corresponds to the territories of three modern municipalities: Borjomi, Kareli and Khashuri Municipalities. Of these, 49 households (245 inhabitants), 36 households

(180 inhabitants), and 2 households (10 inhabitants) belonged to each municipality, respectively (Table 2).

Table 3. Ten most widely distributed personal names (According to 1715 register of the Ruisi Samtskso)

Personal Names	Number of Personal Names	Number of Villages
Giorgi	198	64
Beri	192	61
Datuna	133	63
Tamaza	107	52
Ivana, Ivane	101	51
Papuna	69	38
Sekhni, Sekhnia	63	36
Mamuka	57	36
Paata	54	37
Zakara, Zakaria	43	30
Total	1017	468

The ten most widespread personal names belong to names traditionally used among Georgians. Some of these names are still found in the modern period (Table 3). In this regard, the most common name was “Giorgi” (Saint George-derived), which was borne by nearly 200 individuals across 64 villages.

Within the boundaries of the present-day Kareli Municipality, 49 villages are recorded, inhabited by 1,126 households, or approximately 5,630 people. The largest settlements were the villages of Atotsi and Bredza, each with 58 households, corresponding to about 290 inhabitants per village (620 inhabitants according to the 2014 census). They were followed by the village of Prinevi, with 57 households, or approximately 285 inhabitants (620 inhabitants according to the 2014 census). Two additional villages had more than 50 households: Tighva and Dvani. There were also very small settlements with fewer than 5–6 households. These included Aramgana, Arkniti, Metekhi, Mughni, Skhliti, Patkineti, Gharistavi, and Tsipliti.

Within the boundaries of the present-day Khashuri Municipality, 36 villages are recorded, inhabited by 776 households, or approximately 3,880 people. The largest settlement was the village of Tezeri, where 111 households lived, corresponding to about 555 inhabitants (620 inhabitants according to the 2014 census). In terms of population size, the village of Ruisi was considerably smaller than Tezeri, as were the other villages. Three additional villages had more than 40 households: Bekami with 45 households (approximately 225 inhabitants; 180 and 327 inhabitants in Greater and Lesser Bekami respectively, according to the 2014 census), Brili with 43 households (approximately 215 inhabitants; 101 inhabitants in 2014), and Itria with 42 households (approximately 210 inhabitants; today an abandoned settlement). Nearly 70% of the villages had between 10 and 40 households. These included Surami, Tkotsa, Vaka, Osiauri, Odzisi, and others. The smallest settlements (fewer than 10 households) were five villages: Zindisi (now abandoned), Monasteri, Kindzati, Nabakhtevi, and Gorati (now abandoned). The last of these had only 4 households. With the exception of the abandoned settlements, population numbers in all these villages had increased by the time of the 2014 census.

An analysis of the population figures shows that during this period, within the territories of the present-day Kareli Municipality and Khashuri Municipality, there were 49 villages inhabited by 1,126 households (approximately 5,630 people). This implies that settlement patterns were highly fragmented. There were both relatively large villages and very small settlements, some of which may have been partially depopulated or in decline, with the prospect of eventually turning into abandoned settlements. This points to the existence of a dispersed settlement system, meaning that the population was distributed quite unevenly across the territory.

The register contains more than 1,600 anthroponyms (personal names). Among them, the 10 most widespread names are Giorgi, Bera / Beri, Datuna, Tamaza, Ivana / Ivane, Papuna, Sekhnia, Zakara / Zakaria, Paata, and Mamuka (Table 4). The first five names are found in almost every settlement where the number of households exceeded 10. This pattern differs significantly from the modern situation. The only exception is the name “Giorgi”, which points to its special cultural and religious significance, particularly due to the cult of Saint George in Georgian tradition.

Out of 36 villages, the names Giorgi, Datuna, and Tamaza are found in more than 20 villages, accounting for more than half of the total number of villages. This once again highlights the popularity of these names, showing that people tended to choose from a limited set of well-established names. This suggests the existence of a common social standard and cultural continuity.

There are around 80 names that appear in only one village. These are rare and unique names, most of which have not survived to the present day; this indicates a process of cultural filtering. Among them are names that are still used in the modern period (for example, Avtandil, Aleks, Amiran, Gela, Gia, Elizbar, Zaza, Ioseb, Mirza, Murvan, Petre, and others), as well as names that have long since fallen into oblivion (such as Amoan, Gosita, Goshpar, Varmieli, Zakuta, Indua, Ruama, Rcheula, Fotskhveri, Dzama, Dzelia, Jasha, and others).

Table 4. Distribution of personal names by villages (According to 1715 register of the Ruisi Samtskso)

Number of Villages	Personal Names
> 25	Giorgi, Datuna
20-25	Tamaza
15-19	Bezhuva, Beri, Iavana / Ivane, Paata, Papuna, Sekhni / Sekhnia
10-14	Bidzina / Bidzini, Zakara, Zakaria, Mamuka, Naskida
5-9	Basil / Basili, Bezhan, Ber / Bera, Beruka, Givi. Zurab / Zuraba, Tevdora / Tevdore, Katsia, Makhara, Nikoloz / Nikoloz, Otia, Oatara / Otari, Ramaza, Saba, Sgio, Shoshita, Khosia
< 5	Others

In the described historical period, the system of personal naming, despite its numerical diversity, was functionally characterized by high concentration and structural uniformity. The presence of more than 1,600 anthroponyms across 36 settlements indicates potential diversity; however, likewise, a certain level of cultural homogeneity existed in the form of local traditions and individual naming practices.

This tendency reflects the conservative nature of society, where the choice of personal names was strongly determined by religious, cultural, and familial traditions.

Conclusion

Based on the data from the 1715 register, it can be concluded that the settlement system of the Ruisi Sadrosho at that time predominantly consisted of a network of small and fragmented villages. The population was unevenly distributed. The majority of settlements were small-scale villages with few households, indicating a predominantly agrarian, non-urbanized landscape. The village of Tezeri stands out as the largest settlement and likely served as one of the main centers of economic and social activity. The prevalence of villages with fewer than 10 households (such as Zindisi, Gorati, Nabakhtavi, the monastic settlement of Kinzati, and others) points to weakly developed settlements and a tendency toward village abandonment. In the subsequent historical period, as a result of various socio-historical processes, a further trend of settlements turning into deserted villages (deserted settlements) can be observed.

Competing interests

The authors declare that they have no competing interests.

Authors' contribution

All authors provided critical feedback and helped shape the research, analysis and manuscript.

ORCID iD

Dali Nikolaishvili  <https://orcid.org/0000-0002-6540-3682>

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