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LAND FRAGMENTATION: IS IT A CURSE OR A BLESSING FOR SMALL FAMILY FARMS?

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Abstract

Agriculture has undergone profound transformations shaped by shifting relations between agency and structure. This article examines the factors influencing small family farm dynamics in rural Georgia within the broader context of the post-Soviet transition. It explores the legacies of a centrally planned economy and the emergence of market relations, focusing on their effects on land ownership, access to resources, and household strategies. Using a mixed-methods approach, the study combines in-depth interviews with small family farmers and spatial analysis of cadastral data. This framework enables a nuanced understanding of farming under conditions of land fragmentation. The findings highlight how state policies, particularly those contributing to fragmented land ownership, shape agricultural structures and farming models. Farmers' strategies are further constrained by institutional and policy settings governing access to land. By situating these dynamics in rural Georgia, the article contributes to broader debates on rural development and agrarian change in transitioning economies.

Keywords: family farms, land ownership, agricultural dynamics, rural area, Georgia

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RAZDROBLJENOST ZEMLJIŠČ: PREKLETSTVO ALI PREDNOST ZA MAJHNE DRUŽINSKE KMETIJE?

Izvleček

Kmetijstvo je doživelo velike preobrazbe, zaznamovane s spreminjajočim se razmerjem med delovanjem akterjev in struktur. Prispevek analizira dejavnike, ki vplivajo na dinamiko majhnih družinskih kmetij na podeželju Gruzije v širšem kontekstu postsocialističnega prehoda. Obravnava dediščino centralno planskega gospodarstva in vzpon tržnih odnosov ter se osredotoča na njihove učinke na lastništvo zemljišč, dostop do virov in strategije gospodinjstev. Študija uporablja kombiniran raziskovalni pristop, pri katerem povezuje poglobljene intervjuje z majhnimi družinskimi kmeti in prostorsko analizo katastrskih podatkov. Ta okvir omogoča poglobljeno razumevanje kmetovanja v razmerah razdrobljenih zemljišč. Ugotovitve poudarjajo, kako državne politike, zlasti tiste, ki prispevajo k razdrobljenemu lastništvu zemljišč, oblikujejo kmetijske strukture in modele kmetovanja. Strategije kmetov so dodatno omejene z institucionalnimi in političnimi okviri, ki urejajo dostop do zemljišč. Z umestitvijo teh procesov v podeželski prostor Gruzije članek prispeva k širšemu razumevanju razvoja podeželja in agrarnih sprememb v tranzicijskih državah.

Ključne besede: družinske kmetije, lastništvo zemljišč, kmetijska dinamika, podeželje, Gruzija

1 INTRODUCTION

Agriculture constitutes the bedrock of societies, underpinning local food systems, economic structures, and social relations. It drives food security, shapes community identities, and influences household livelihoods. This makes agriculture essential not only to national economies but also to the overall quality of life in rural areas (FAO, 2017). Agriculture also remains the backbone of agri-food systems in rural and mountainous regions, where natural resource-based sectors, such as pastoralism and extractive industries, have historically sustained local livelihoods (Godde et al., 2000).

Despite these advancements, diverse agrarian pathways persist, reflecting the multifunctional nature of agriculture (Oostindie, 2018). Today, farming styles range from small-scale subsistence agriculture to large-scale commercial operations, exhibiting substantial variation across rural regions and countries. These differences are widely debated and explained through a range of factors, from structural conditions, such as agricultural policies, land ownership patterns, technological advancements, and agri-environmental changes, to the agency of farmers as creative and adaptive actors

(Darnhofer, 2021a, 2021b; Jongerden, 2022). This article explores these dynamics through a case study from Georgia which was under Soviet rule for much of the twentieth century (1921–1991) and underwent rapid land reforms in the early years of independence during the 1990s.

While many studies have explored land-policy implementation in Georgia and the prevalence of family farms, few have examined how land reforms have actively reshaped agricultural structures. The limited research has examined how these factors interact with agrarian transitions and rural development trajectories (Grilli et al., 2024). As a result, our understanding remains rooted in descriptions of the status quo rather than appreciating the transformative effects of these reforms. Addressing this gap is essential for designing policies that support resilient and resource-efficient farming systems, particularly in environmentally constrained regions.

This study addresses a research gap by examining how local households in Georgia's mountain regions respond to limited access to natural resources and how these responses shape household farming strategies and styles. By focusing on these dynamics, the study also contributes to ongoing discussions on the factors influencing agricultural development.

The study has three main aims: (i) to examine how policy frameworks shape smallholder farming; (ii) to investigate the role of environmental resources in household adaptation strategies; and (iii) to assess the impact of land fragmentation on rural economic resilience.

By addressing these dimensions, the study contributes to the broader discourse on agrarian change, rural livelihoods, and sustainable development in post-Soviet economies. The analysis considers agricultural practices, land ownership, and rural economies before and after Georgia's independence from Soviet rule in 1991. It provides insights into the evolving dynamics of smallholder farming and contributes to broader debates on rural resilience and sustainable agricultural development.

2 LITERATURE REVIEW

The agricultural development pathway explores the interaction between structure and agency, with a focus on policy change and occasionally placing the farmer at the center of transformation. Some authors argue the importance of policy, with structure considered superior to agency (Lerman, 2008; Prishchepov et al., 2012), while others highlight the role of farmers and their resources, emphasizing agency over structure (Shigaeva et al., 2007). Oostindie (2018) argues in his article for the significance of policy change, illustrating how different countries adopt diverse approaches, such as technology-led sustainable intensification and the recognition of multifunctional family farming. Rather than adhering to a binary perspective of structure versus

agency, he suggests overcoming this dichotomy by integrating both aspects into agricultural development strategies.

National agricultural policy plays a crucial role in shaping rural livelihoods, influencing farm structures, market access, and sustainability. While policy frameworks vary across countries, they often reflect a livelihood pathways approach, where household strategies depend on resource availability and external conditions. However, not all farmers benefit equally from new policy frameworks, as their ability to adapt depends on access to resources and assets. Furthermore, according to Scoones (1998), different livelihood strategies depend on the minimum capabilities and the social, material, and non-material assets that households possess. These resources can be considered “capital,” serving as an important foundation for securing various livelihoods and largely determining a household’s ability to initiate new economic activities. The successful transformation of family-based economic activities significantly depends on household-owned capital and available resources (Dercon & Krishnan, 1996; Abdulai & Crole-Rees, 2001). For rural populations, under conditions of unequal access to resources, there is a risk of deepening inequality during the policy-led transformation while not considering agency resources (Ellis & Freeman, 2005; Gautam & Andersen, 2016). In particular, it is especially difficult for poor households to overcome severe socio-economic conditions because, against the backdrop of limited opportunities, they cannot increase their income by relying on diversified economic activities (Salifu, 2019). For example, studies on agricultural commercialization in Southeast Asia highlight how policies supporting cash crops and land tenure transformation have primarily benefited larger landowners and well-connected farmers, while those lacking financial and social capital struggle to compete (Vicol, Pritchard et al., 2018). Similarly, in Indonesia’s relationship coffee model, opportunities for producer upgrading were largely captured by elite farmers, reinforcing existing inequalities rather than alleviating rural poverty (Vicol, Neilson et al., 2018). Comparative studies further indicate that land reform models have had mixed success in addressing rural poverty. While privatization is intended to empower smallholder farmers, in many cases this approach must be paired with broader support systems, including rural infrastructure, extension services, research, and appropriate regulatory and trade policies. Effective reforms should also prioritize women’s land rights and recognize the importance of collective and indigenous land rights for ensuring equity and environmental sustainability (Pierri et al., 2025).

The idea that farm characteristics also influence how farmers make decisions and choose their strategies for moving forward is also evident (García-Arias et al., 2015). Research from Greece suggests that farms respond differently to changes in policy, physical, and social environments, with some adopting diversification strategies that expand economic activities to include alternative farm enterprises, off-farm employment, and agritourism (Damianos & Skuras, 1996). These pathways allow farmers to mitigate risks. Furthermore, Daskalopoulou et al. (2002) identify three primary farm

strategies: i) subsistence farming, producing mainly for household consumption; ii) survivalist farm households, seeking to modernize as a means of maintaining income; iii) productivist farm households, expanding farm operations to increase revenue. While such models provide useful insights, research indicates that farm diversification is heavily influenced by land size, resource access, and market integration (Weltin et al., 2017; Potočnik Slavič, 2017).

Natural resource availability is a crucial determinant of agricultural viability and rural development. Studies show that factors such as soil quality, altitude, and irrigation access significantly affect farm productivity (Burchfield & Poterie, 2018). For instance, research indicates that farmers with larger, well-irrigated lands are more likely to engage in diversified livelihood activities (Musumba et al., 2022). In Georgia, collectively owned resources, such as communal village pastures, play a significant role in shaping rural livelihoods. Studies suggest that better pasture management can improve livestock production and enhance economic well-being (Neudert et al., 2020). Inefficient pasture management has a negative impact on livestock production, including milk yield and low weight gain. This is due to overgrazing of pastures, difficulties in disease management (Millns, 2013).

While existing literature provides insights into policy frameworks, land tenure, commercialization, and diversification, gaps remain in understanding how these factors intersect in countries with economy in transition like Georgia's specific context.

3 LAND OWNERSHIP IN GEORGIA

3.1 Land reforms in post-Soviet countries: Historical legacies and policy divergence

The fall of the Berlin Wall in 1989 signaled the end of communist control in Eastern Europe and accelerated the broader collapse of communist regimes across the Soviet bloc (Maier, 1997; Snyder & White, 2011). With this shift, the post-communist transition began, an economic and institutional transformation from centrally planned systems to market economies. Land reforms formed a core component of this transition (Blanchard, 1998). In much of Eastern Europe, agricultural land was not fully collectivized during the communist era. This affected the policies that countries adopted concerning land privatization. The post-1990 reforms generally followed two main pathways: the re-establishment of ownership rights and compensation for former landowners (Giovarelli & Bledsoe, 2001).

In Poland, where collectivization was limited, and most farmland remained privately owned even before 1989, reform efforts focused primarily on privatizing the remaining state farm estates, allowing liberal land markets to emerge relatively early in the transition process (Csaki & Lerman, 1997). By contrast, in the Czech Republic

and Slovakia, land reform relied mainly on formal legal restitution to pre-communist owners. Individuals whose land had been expropriated by the state were entitled to reclaim property in kind or receive compensation (Giovarelli & Bledsoe, 2001). Restitution thus referred both to the process and the outcome of addressing property dispossession that occurred before 1990 (Horák, 2024). Hungary, however, adopted a compensation-based model rather than direct restitution. Former landowners received compensation vouchers reflecting a scaled-down valuation of their losses, while landless workers from cooperatives and state farms were also granted small parcels. These vouchers could be used to bid for land at compulsory auctions, where each collective farm was required to set aside part of its land for restitution-related claims. As a result, access to land occurred not through the direct return of property but through market-based mechanisms facilitated by compensation bonds (Varga, 2010).

In post-Soviet countries, land reforms were initiated soon after the dissolution of the Soviet Union in 1991, across all newly independent states. They included a package of reforms that focused on rapid privatization of land and other assets, liberalization of markets and deregulation (Spoor & Visser, 2001). However, the specific policies varied, shaped by each country's historical legacy and institutional context (Swinnen & Heinegg, 2002). Most notably, countries with a history of private landownership and family farming adopted different approaches compared to those without such a tradition.

Land policies in post-Soviet countries can generally be distinguished into four main categories, although in practice these approaches are sometimes combined. First, some countries, such as the Baltic states, implemented land restitution policy, returning land to pre-Soviet owners. In some cases, households were given the option to receive alternatives, such as financial compensation or other forms of property (Unwin, 1997). Second, countries in the South Caucasus primarily distributed land as physical plots to rural households. Third, states such as Ukraine, Russia, and Kazakhstan adopted a share-based privatization policy, whereby agricultural land was distributed in the form of paper shares rather than physical parcels. Under this system, former collective and state farm workers received entitlements to land shares, which could later be leased, sold, or converted into physical parcels. Finally, in countries such as Belarus, Turkmenistan, and Uzbekistan, the transfer of land-use rights has been highly restricted or entirely prohibited. These divergent approaches have had significant implications for agricultural development, land market formation, and rural livelihoods across the region (Swinnen & Heinegg, 2002).

Despite differing policy approaches, all post-Soviet countries experience some degree of fragmentation in both land ownership and land use. In countries where state agricultural land was physically distributed to the rural population, farm structures today are marked by excessive fragmentation of both ownership and use. In countries that pursued restitution, land-use fragmentation is less clear-cut. However, irrespective of the land policy adopted, areas in which rural populations have limited economic alternatives to agriculture often exhibit similar levels of land-use fragmentation,

comparable to those observed where land was physically divided into small plots (Hartvigsen, 2014). Moreover, in some countries, land is even more fragmented than it was before the Soviet farm collectivization. In many cases, several eligible individuals had legal claims for the same land parcel, which led to the physical division of land among them. As a result, today's landholdings are even more fragmented than they were in the 1940s (Jürgenson, 2016).

Another perspective is that, despite the prevalence of small family farms, corporate farms still play a key role in agriculture in the former Soviet Union (Lerman, 1998; Petrick, 2021). Such farms follow an accumulation strategy based on renting and/or purchasing land. This strategy is characterized by strong access to land, capital, and influential social or political connections, often enabling the monopolization of high-quality land (Shigaeva et al., 2007). These large farms, also successors of collective enterprises, continue to dominate due to fertile land, infrastructure, and historical advantages.

All three countries in the South Caucasus (Armenia, Azerbaijan, and Georgia) experience high levels of land ownership and land-use fragmentation. In Armenia and Georgia, land was distributed directly in physical parcels. In contrast, Azerbaijan initially allocated land through paper-shares, which were later converted into physical land. These land shares could be bought, sold, leased, or used as equity in privatized farm enterprises (Lerman et al., 2004; Hartvigsen, 2014). In all three countries, land reforms were implemented rapidly. The size and number of parcels distributed to households depended largely on the available land fund within a given region or community, along with other factors reflecting each country's specific context (Hayward, 2022, 2023a, 2023b).

3.2 Soviet era land ownership in Georgia (1921–1991)

At the beginning of the 20th century, agricultural land distribution in Georgia was highly unequal. While peasants comprised most of the population, they owned only 6.2% of the total landholdings. In contrast, 57.8% was designated as treasury land, including church property, and 31.3% was held by the aristocracy (Devdariani, 1931, as cited in Arabidze, 2016). During Georgia's brief three-year period of independence (1918–1921), agrarian reforms were initiated to address this imbalance, with the primary goal of redistributing land to the peasantry. Peasants were, for the first time, granted ownership of land as private property (Arabidze, 2016). However, these reforms, along with their subsequent updates, were never fully realized due to the Red Army's invasion of Georgia in 1921, which led to its incorporation into the Soviet Union (Janelidze, 2018).

For more than seven decades, agricultural land in Georgia remained under state control, profoundly shaping the organization of farm production. Following the Soviet occupation of Georgia in 1921, the collectivization of agriculture was initiated and fully implemented by the late 1930s, despite sustained resistance from farmers

(Ebanoidze, 2003; Natroshvili, 2000, as rewritten by Sovlab, 2025). During the Soviet period, Georgia, like other republics of the Soviet Union, operated under a system of state-owned land managed through large collective farms (*kolkhozes*) and state farms (*sovkhozes*), which constituted the only commercial farming entities (Hartvigsen, 2013). These farms functioned under centralized oversight and strict government regulation, concentrating agricultural production under state management. The process involved the confiscation of land from so-called “kulaks” (wealthier peasants) and the abolition of private land ownership (Lomadze, 1930). Rural populations worked within collective farms according to state directives, receiving wages and/or shares of output. Although private ownership was prohibited, households were sometimes allowed small subsistence plots, typically ranging from 0.25 to 0.5 hectares.

3.3 Post-Soviet land reforms in Georgia (1991–present)

After Georgia gained independence in 1991, urgent land reform became a priority in response to poverty and food insecurity caused by the collapse of the Soviet centrally planned economy. The government introduced privatization measures aimed at transforming the state-controlled agricultural system into a market-driven land ownership model.

Following independence, land reforms played a pivotal role in reshaping Georgia’s agricultural landscape. The process of determining who would have access to this valuable natural resource (e.g. agricultural land) became a crucial factor in the development of farm structures across rural areas. These reforms not only redefined landownership but also influenced the emergence of different farming systems, ranging from small family-operated farms to larger commercial enterprises. As a result, the post-independence period has marked a significant shift in the distribution and management of agricultural land, shaping the future trajectory of rural economic development.

Starting in 1992, the Georgian government initiated land privatization, transferring approximately 25% of agricultural land into private ownership (Egiashvili, 2002). This reform followed two primary models: i) direct privatization: each rural household was granted up to 1.25 ha of land free of charge in the lowlands and up to 5 ha in the highlands. As a result of the land reform 1,055,200 families, i.e. an estimated 4 million Georgian citizens, became owners of small land parcels, with an average of 0.9 ha per household (Ebanoidze, 2003); ii) land leasing: the remaining state-owned agricultural lands were leased to private individuals. Consequently, this led to the development of a dual agricultural sector: a self-subsistence sector consisting of small-holder farmers and a market-oriented sector dominated by large leaseholders.

This so-called social privatization was free of charge (Egiashvili, 2002). Although there were some efforts to address land fragmentation through land consolidation, most of these initiatives failed to achieve their intended objectives in the agricultural

sector. Simultaneously, spontaneous consolidation was occurring with commercial agricultural companies acquiring small land parcels. This process was viewed as harmful to the interests of small businesses (Egiashvili, 2002).

Since 2002, the structure of agricultural landownership in Georgia has remained largely unchanged, land fragmentation continues to impact agricultural productivity and rural livelihoods. The 2014 Agricultural Census reported that almost 99% of agricultural holdings with land were smaller than 5 ha, highlighting the persistent challenge of small-scale farming in the country (FAO, 2020). Similarly, in 2021, 98.3% of farm holdings had less than 5 ha of land, with 90% owning less than 1.5 ha (GEO-STAT, 2021).

The Agriculture and Rural Development Strategy of Georgia 2021–2027 (MEPA, 2019) coordinated by Ministry of Environmental Protection and Agriculture of Georgia (MEPA) acknowledges challenges related to small farm sizes, fragmented land plots, and the lack of comprehensive land registration. Beyond this, however, the strategy provides limited discussion of measures aimed at consolidating fragmented parcels, despite their relevance for agricultural development. The Strategy assigns responsibility for sustainable land management and monitoring to the National Agency for Sustainable Land Management and Land Use Monitoring.

4 RESEARCH DESIGN AND METHODOLOGY

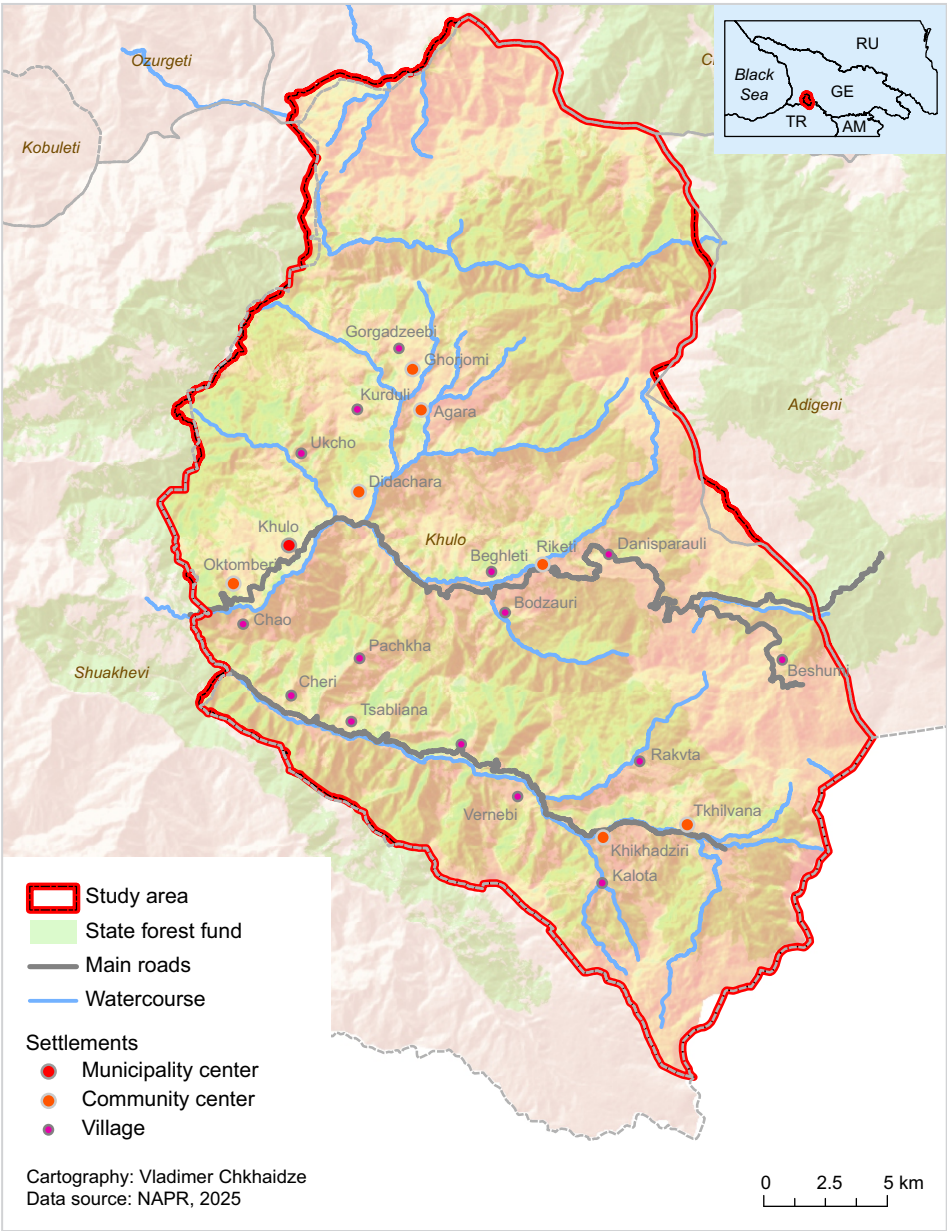
The case study was conducted in 2022 and 2023 in the mountainous municipality of Khulo (41°38'40"N 42°18'50"E) (Figure 1). The municipality is located in western Georgia's Adjara region of the Lesser Caucasus. Its population exceeds 16,000 residents according to the 2024 population census.

During the Soviet period, Khulo played an important role in agriculture, particularly in viticulture and tobacco cultivation, with the latter being a contributor to the local economy. Today, agriculture remains central to the community, with residents primarily growing crops such as potatoes, corn, beans, and vegetables. Traditional practices like nomadic livestock farming and viticulture continue to be part of the local way of life.

We conducted 24 in-depth semi-structured interviews (Flick, 2014) with households across multiple villages, representing a range of economic activities. Each interview lasted approximately 40 minutes. The selection of interviewees followed a maximal variation approach to purposive sampling, as outlined by Patton (2015). The maximal variation approach ensured a broad spectrum of perspectives by incorporating participants from diverse backgrounds: i) geographic locations, ii) family types, and iii) levels of owned capital.

The respondents were beneficiaries of grant schemes provided either by the government agency Enterprise Georgia or through the European rural development

Figure 1: Study area: Khulo municipality in western Georgia.



model LEADER (a French acronym *Liaison Entre Actions de Développement de l'Économie Rurale* – “Links between actions for the development of the rural economy”). Both funding schemes covered the case study municipality and provided financial support for small and medium-sized enterprises, including farmers.

Qualitative research in different villages helped capture a variety of viewpoints, experiences, and insights. Thematic analysis (Silver & Lewins, 2014) was employed to examine the interview data, using the qualitative data analysis software MAXQDA (Kuckartz & Rädiker, 2019).

In addition to qualitative data, land ownership information for Khulo municipality was obtained from the National Agency of Public Registry (data was retrieved in April 2025). Since 1 January 2022, Georgia has been implementing a systematic land registration process aimed at registering all land parcels, including those with owners but without formal documentation. Until now, some land has been traditionally owned by households, but they do not possess legal ownership documents. The current process aims to formalize and digitize all land ownership records. The digitization of cadastral records was largely completed by the end of 2025 (Parliament of Georgia, 2016). Therefore, the administrative data currently available represent the most reliable source at this stage.

The limitation of the database is the absence of information on land-use practices, which would be valuable for future analyses of land ownership and utilization. The most recent data have been compared with the latest available agricultural census 2014. Data processing and spatial analysis were conducted using ArcGIS and R.

5 RESULTS

5.1 Land ownership profile

Similar land reform was implemented in Khulo as in other parts of Georgia following the country's independence at the end of the twentieth century. The case of Khulo can be expected to reflect the general characteristics and trends observed in other municipalities, apart from those where local households had access to relatively larger land parcels.

In Khulo, land ownership is predominantly under state mandate, accounting for 57.5% of the total land. A smaller portion, 21.6%, is held by individuals and households. Additionally, 20.5% of the land falls under a joint ownership structure involving both the state and private entities. This typically refers to legal entities such as limited liability companies (LLCs), where the state and private individuals are co-founders. The remaining 0.4% falls under other, less common forms of ownership.

Of the land parcels owned by individuals, households, and through joint state–private ownership, 96.2% are smaller than 1 ha. Approximately 2% range between 1 and

2 ha. Interestingly, just 0.1% of landowners hold parcels between 20 and 99.9 ha – an amount that accounts for more than 15% of the total privately or jointly held land (Figure 2). Larger land parcels are predominantly owned by the state (Figure 3 and Figure 4). These results reflect patterns already observed in 2014, when the average area of operated land was less than 0.9 ha. Evidently, land fragmentation has persisted since the land reform of the 1990s, and households continue to hold small parcels of land.

Figure 2: Land parcel size structure by ownership type in Khulo municipality in 2025.
Source: NAPR, 2025.

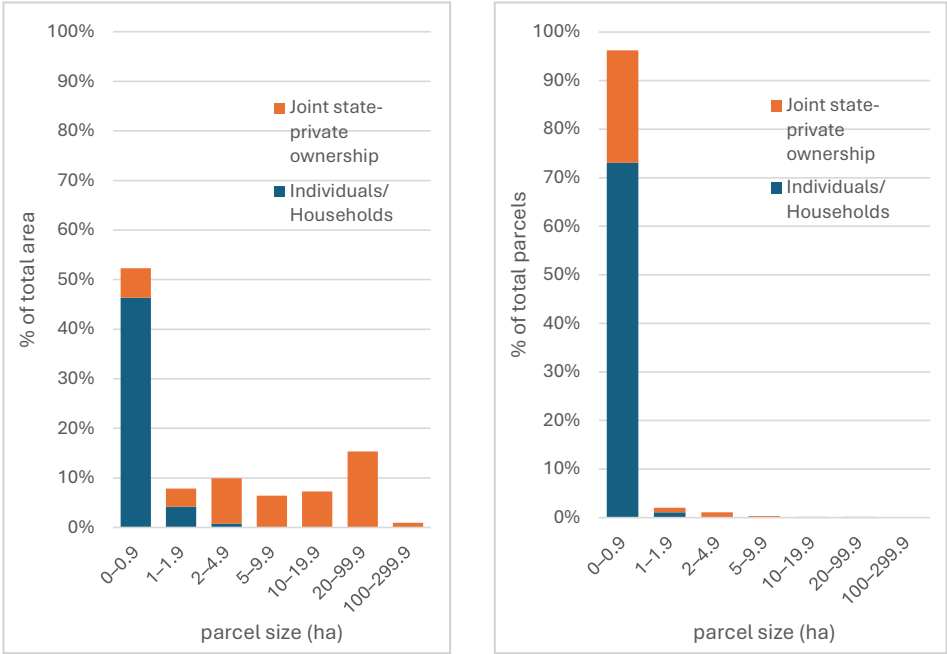


Figure 3: Spatial distribution of land parcel sizes (ha) as an indicator of land fragmentation in Khulo municipality in 2025.

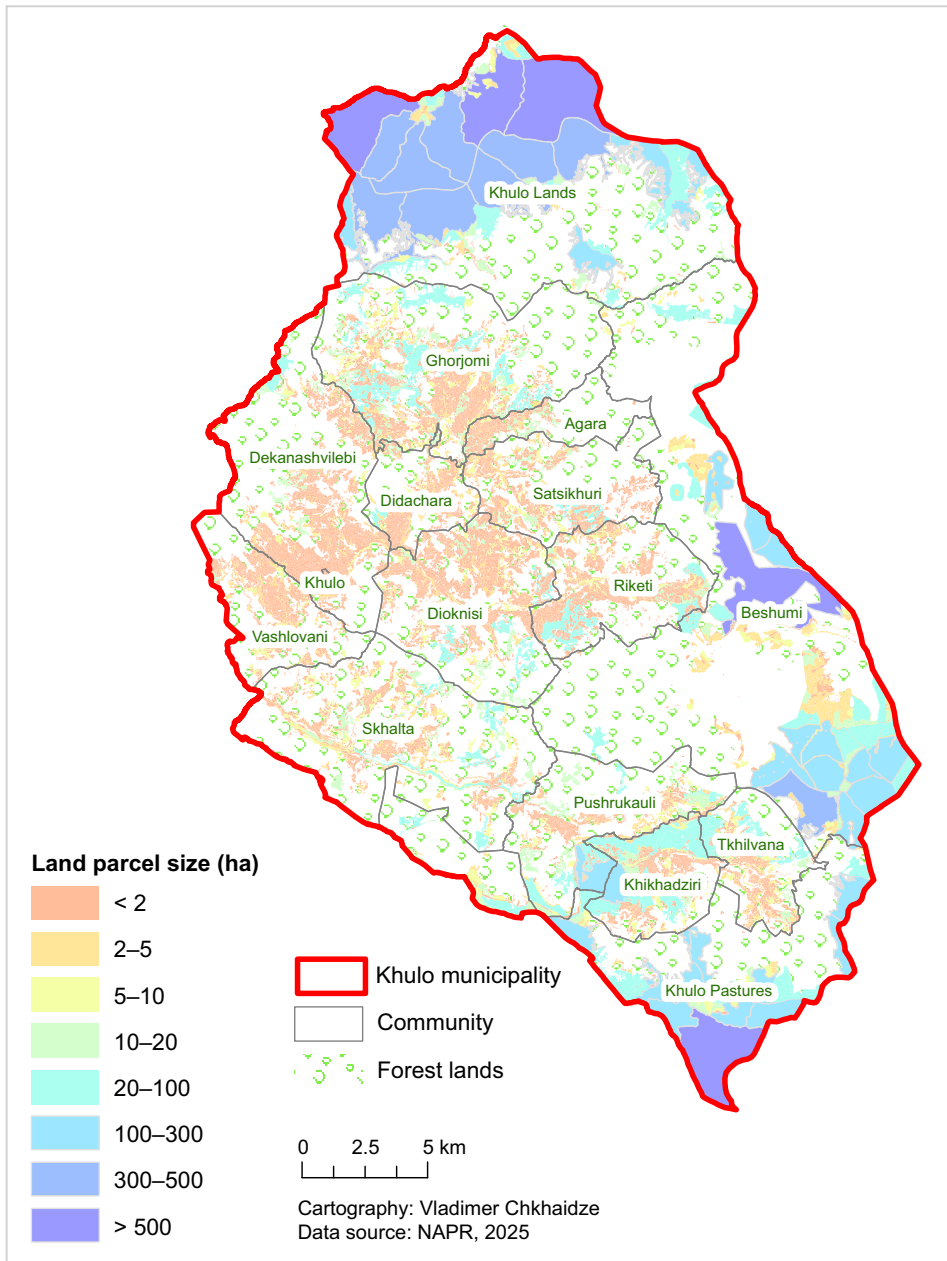
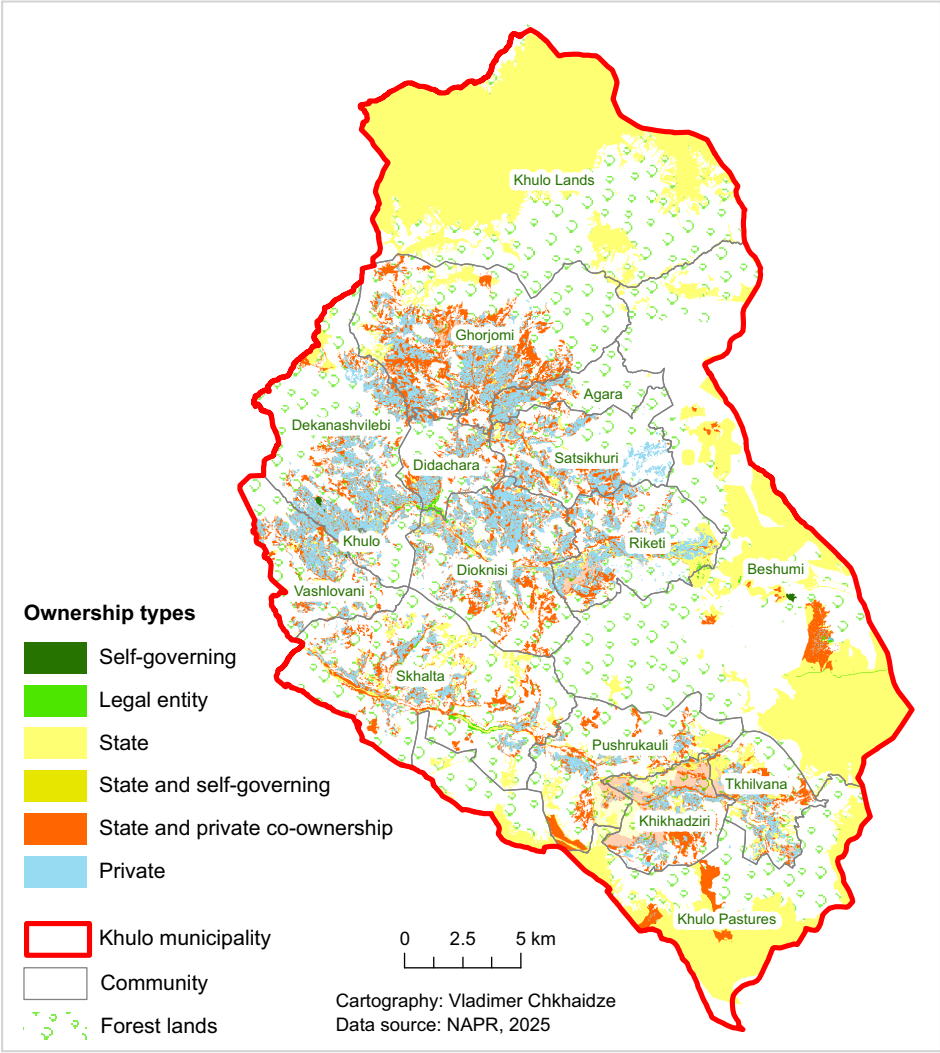


Figure 4: Spatial distribution of land ownership types in Khulo municipality in 2025.



5.2 The land consolidation strategies

Privately owned natural and infrastructural resources, such as land, housing, and other buildings, are primarily acquired through inheritance. However, household members actively contribute to their construction, maintenance, and adaptation, shaping these assets over time to better serve their economic needs and aspirations. These resources not only provide shelter and security but also serve as a foundation for income-generating activities, particularly in rural areas where access to financial capital is limited.

Smallholders generally have limited resources for grow their farm business. To address these constraints, they combine existing assets, including natural, infrastructural, and social capital, to initiate and develop economic activities. While individual resources may be insufficient on their own, their strategic combination enables households to overcome financial limitations and pursue diverse livelihood strategies. In resource-constrained environments, infrastructural and natural assets (such as land and buildings) often serve as foundations for small businesses, allowing households to substitute financial capital with other forms of assets (Gugushvili, 2023).

Despite the importance of land in household farming strategies, access remains a challenge, with only a few households interviewed managing to expand their landholdings. Those who seek to expand their landholdings often rely on gradual accumulation strategies, acquiring small land parcels over an extended period as financial resources permit, though this results in fragmented and dispersed parcels that complicate agricultural operations. Cadastral database further reveals that a single household in the municipality of Khulo owns up to 17 land parcels, often scattered across multiple locations. The average distance between parcels is 1–2 km, while the maximum distance can reach up to 8 km (NAPR, 2025).

Households employ several strategies to cope with the challenges posed by land fragmentation. One common approach involves exchanging land with neighbors or relatives, consolidating scattered land parcels into more manageable landholdings; however, this process is highly dependent on opportunity, market availability, and chance. In other cases, families secure informal access to land owned by relatives who no longer actively cultivate it, often in exchange for share of the harvest. These informal arrangements enable households to expand agricultural activities without immediate financial investment, fostering cooperative resource management within extended family networks. The diverse strategies employed by rural households reflect their adaptability in navigating land fragmentation and resource constraints, balancing economic viability with the challenges of limited market opportunities.

“I bought it earlier, when they distributed it to us after the collapse of the communist system, I moved it around and put it together so that I had half a hectare. I bought one 5–6 myself. A relative gave me some more land, and my daughter’s father-in-law gave it to his son.” (Male, 75 years old)

It should be highlighted that the land registration process is still ongoing, and not all land has been registered yet. This delay may also hinder the buying and selling of land. A few interviewed farmers mentioned barriers in land registration, which can arise for various reasons. One such reason is the lack of supporting documentation for ownership, with some lands being classified as forested areas. Others are simply waiting for the land registration system to reach their village.

The findings are further supported by cadastral database, which shows that it is common for a single household to own between three and seventeen land parcels. This suggests cases where families have gradually expanded their landholdings over time. However, a major challenge remains in consolidating these scattered parcels into a single, contiguous area. It may also be the case that when landholdings belong to the same family, fragmentation persists due to generational divisions of inherited land, further exacerbating the issue. Such processes can lead not only to land fragmentation but also to land-use fragmentation. In some cases, agricultural land is also used for tourism purposes, as the same lands are suitable for both activities (for further details, see Gugushvili et al., 2017 and Hüller et al., 2017)

5.3 Adapting small-scale farming: Strategies for economic sustainability

For almost one-third of the rural population (Gugushvili et al., 2021), agriculture remains primarily a subsistence activity, with small family farms relying on fragmented landholdings to cultivate staple crops that ensure household food and generate limited cash income. These farms often balance subsistence needs with minimal surplus production for local trade or barter. While this model was common at the beginning of the 21st century, its economic limitations have led some farmers to explore alternative strategies to enhance profitability.

One common approach involves transitioning from subsistence or less profitable farming to the cultivation of high-value crops. By selecting products with high market demand, such as lettuce, raspberries, blueberries or other specialty fruits and vegetables, farmers can maximize returns despite limited land availability. However, this shift requires strategic planning, knowledge of market trends, and, in many cases, investment in productivity-enhancing technologies such as improved irrigation systems and greenhouses. Small family farms who successfully enter niche markets can differentiate themselves from large-scale producers. To remain present in the market as a stable supplier, small land parcels do not provide sufficient opportunity. Lead farmers who have established market connections often encourage others to adopt the same crops. They support this process by sharing knowledge, assisting with sales, and creating a form of informal cooperation – essentially functioning as a cooperative without formal cooperative status.

Beyond crop selection, diversification has become a main strategy for small-scale farmers seeking to enhance financial resilience. Many farms have integrated

complementary income streams, such as transitioning from large-scale winemaking during the Soviet era to artisanal wine production. Given the small size of landholdings, it is no longer feasible to earn sufficient income from wine production alone. Instead, farmers maximize their earnings by diversifying into wine-related products and developing additional services. By offering vineyard tours, wine tastings, and direct-to-consumer sales, small-scale farmers not only increase their revenue but also strengthen connections with their customer base. This style of hosting guests in guesthouses – combining accommodation with various rural life experiences and agricultural activities – is common in many parts of the country (Gugushvili, 2019; Schmid et al., 2022).

Similarly, other farms supplement traditional agricultural activities with tourism services, including on-farm tourist accommodation and agritourism experiences. This approach helps households earn additional income and mitigate seasonal economic fluctuations.

A crucial factor in the economic sustainability of small farms is the establishment of direct sales networks. Rather than relying on intermediaries or wholesalers, farmers increasingly engage directly with consumers through farmers' markets, farm-based sales, and digital platforms. These networks enable producers to retain a larger share of the final sale price; hence build loyal customer network and their brand. Notably, many small family farms maintain close relationships with urban-based relatives and friends who prefer purchasing agricultural products directly from trusted sources. These informal trust-based networks, often built on long-standing personal connections, play a vital role in sustaining farm income.

“We work more on orders. Our customers know the quality of our products, they call us, and we send them, and we sell at fairly high prices due to the quality.” (Female, 34 years old)

The reliance on trust extends beyond personal networks to broader consumer relationships. In many cases, farmers forgo formal quality certification processes, as their customers already associate their products with high quality, cleanliness, and natural production methods. Consumers who are familiar with the farmers' practices value the perceived authenticity of their products, reinforcing direct sales channels. Some farmers even utilize public transport for product deliveries, demonstrating the flexibility and adaptability of these informal distribution systems.

Maintaining stable prices is another critical aspect of farmer-consumer relationships. Given the close ties between producers and their customers, many farmers avoid imposing additional charges, such as delivery fees, and refrain from setting restrictive conditions on weight or quantity. While such practices may not always be economically optimal, they help preserve consumer trust and ensure long-term demand stability, reinforcing the viability of small-scale agricultural enterprises.

Through these adaptive strategies, ranging from high-value crop cultivation and diversification to direct consumer engagement – small family farms navigate structural challenges associated with fragmented land ownership. Their ability to innovate and cultivate strong, trust-based networks remains central to their long-term sustainability in an increasingly competitive agricultural landscape.

5.4 Navigating the challenges of mass-produced competitors

While small-scale farmers employ various strategies to enhance their economic sustainability, they continue to face significant market challenges. One major difficulty is the additional time and expense required to transport agricultural products to urban centers. The competition with mass-produced goods further exacerbates these challenges, as locally grown products often struggle to differentiate themselves in price-sensitive markets.

“Even if we bring it to the market, it doesn’t typically fare well. They do everything with powders and chemicals, and they prefer cheaper options and eat it, rather than grown in the normal way and buying it at an acceptable price ... they prefer to buy it simply cheaply and eat it, and if we sell the farm product at a lower price, we certainly don’t have any profit, because the high costs here (in rural areas).”
(Female, 31 years old)

The reliance on social networks plays a crucial role in mitigating these economic challenges. Farmers who maintain strong connections with loyal consumers, those familiar with their products, production methods, and the local environment, gain a competitive advantage. However, this advantage diminishes when farmers seek alternative markets, as immediate differentiation from mass-produced goods becomes more difficult. Unlike consumers who already trust and recognize their products, new customers may require additional incentives or lower prices before committing to a purchase.

In this context, maintaining long-term, trust-based relationships is of paramount importance. Farmers engage in informal agreements with their customers, ensuring that products are stored and reserved for them during the season. The significance of these social ties extends beyond agriculture, as similar relationship-based practices are observed in other economic sectors introducing new or innovative products to the region.

5.5 Integrating informal systems with formal food safety standards

Farmers recognize that maintaining these relationships is not only essential for sustaining economic stability but also integral to preserving their social identity within their communities. Tourism research in mountain regions suggests that guesthouse owners give competitive advantage to locally sourced agricultural products into their

cuisine. Tourists seeking authentic culinary experiences place high value on these ingredients. However, a persistent challenge remains: some agricultural suppliers struggle to provide official documentation verifying compliance with food safety standards (for details, see Salukvadze et al., 2020). This issue is not new. Gelashvili (2013) also identified two major barriers preventing small-scale farmers from integrating into the tourism supply chain: a lack of marketing skills and difficulties in labeling agricultural products according to tourism industry standards. Because farmers lack marketing, legal, organizational, and logistical capacities, they struggle to enhance farm production and services, even though they possess diverse forms of traditional knowledge that are crucial for creating distinctive regional products (Guštin & Potočnik Slavič, 2020). These challenges continue to hinder efforts to ensure product traceability and safety certification, limiting the participation of smallholders in the formal tourism economy. Despite these regulatory challenges, guesthouse owners and local farmers rely primarily on social networks for food sourcing (Salukvadze et al., 2019).

This observation reflects a broader pattern in which the sale and purchase of agricultural products between guesthouses and farmers rely primarily on trust-based social relations among neighbors and acquaintances rather than on formal certification. While this informal system fosters strong producer-consumer relationships, it also underscores the need for greater integration of small-scale farmers into formalized quality assurance frameworks. Strengthening these frameworks would enhance the competitiveness and sustainability of rural tourism while maintaining the authenticity that visitors seek.

5.6 Limited access to agricultural equipment

The challenge for small family farms is the financial inability to invest in essential agricultural equipment. Due to the small size of their landholdings, purchasing modern machinery is often economically unfeasible. Unlike large commercial farms, which benefit from economies of scale, small-scale farms operate with limited production capacity, making it difficult to generate sufficient revenue for such investments.

Agricultural machinery, including tractors, irrigation systems, and processing equipment, requires significant upfront capital. Small-scale farmers, particularly those managing fragmented land parcels, often struggle to accumulate the necessary financial resources. Given the limited yields from small lands, profit margins remain low, further restricting opportunities for reinvestment in mechanization.

The inability to modernize farming practices due to equipment shortages has broader implications for productivity and market competitiveness. Without access to efficient agricultural tools, small-scale farmers face increasing difficulties in meeting the demands of both local consumers and the tourism supply chain. Addressing this issue through targeted financial support, cooperative ownership models, or improved access to agricultural subsidies could significantly enhance the viability of smallholder farming in rural areas.

6 DISCUSSION

In Khulo municipality small-scale family farming has been the most common form of agriculture. This approach has remained largely unchanged since the early years of Georgia's independence in 1991. For over thirty years, households have operated within this reality, continuously adapting their farming strategies to maximize returns using the limited resources available to them. These adaptations have led to diverse decisions regarding crop selection, input use, and marketing strategies. This case provides a relevant example for broader debates on how agricultural structures are shaped. It demonstrates that both external structural conditions and farmer agency play crucial roles. Farmers navigate, resist, or rework these conditions in context-specific ways.

External factors, such as policy reforms and the institutional rules governing land ownership and use have played a decisive role in shaping the structural conditions of agricultural development. This pattern has been documented in various contexts (Hu & Gill, 2021; Koutsou et al., 2011; Zinyama, 1988), reinforcing the argument that institutional frameworks are central to the reorganization of farming. Hofstee's (1960, as cited in van der Ploeg, 2012; Jongerden, 2022) work offers a valuable critique of structuralist and functionalist explanations by introducing the concept of farming styles as socially embedded. He contends that variations in agricultural practices cannot be solely explained by geography, market access, or historical trajectories. Instead, farming styles are shaped by culturally and socially situated ideas that are internalized, consciously or unconsciously, by members of specific farming communities. Furthermore, Darnhofer (2021a) conceptualizes the relationship between agency and structure through the notion of resilience, positioning it in contrast to a more static understanding of the farming 'system' and the interconnected processes that largely operate beyond farmers' direct control. She argues that farming trajectories evolve in inherently uncertain ways: although farmers can shape and negotiate these processes, they cannot fully determine their outcomes. Our findings contribute to this ongoing debate by bridging the structure–agency divide. While state-led land reform in the early years of Georgian independence in 1991, particularly the distribution of small land parcels to rural households, created structural conditions that shaped the trajectory of agricultural activity, these reforms did not fully determine outcomes. Our research illustrates how farmers actively negotiated these constraints. Although the pathways available to them were limited, the farming strategies they adopted varied considerably. This reflects diverse responses to the same institutional setting. Some farmers managed to creatively reconfigure their practices within the boundaries imposed by policy. This demonstrates both resilience and adaptability in navigating structural limitations.

The study underscores the centrality of land access and resource combination in shaping household farming strategies. Privately owned natural and infrastructural resources, primarily acquired through inheritance, serve as the foundation for income-generating activities. However, the persistent challenge of land fragmentation limits

the economic scalability of smallholder farming. Households employ diverse strategies, such as gradual land accumulation, informal arrangements, and land exchanges, to consolidate scattered parcels. These adaptive measures reflect the ingenuity of rural households in navigating structural constraints, but they also highlight the need for policy interventions to facilitate land consolidation and reduce fragmentation. The findings align with existing literature on post-Soviet agrarian transitions, which emphasize the uneven distribution of benefits from land reforms and the challenges faced by smallholders in maintaining economic viability (Giovarelli & Bledsoe, 2001).

Farmers pursue different trajectories in response to the conditions and constraints present in their environment. One of the strategies for income maximization among small family farms is income diversification, both within and beyond the agricultural sector. In the context of fragmented landholding systems, diversification has emerged as a critical response to structural constraints. Notably, many households have integrated tourism-related activities into their livelihood portfolios. This aligns with broader research showing that diversification whether on-farm (e.g., agritourism) or off-farm is commonly pursued to reduce risk and stabilize income, especially for smaller farms (Grilli et al., 2024). Further evidence highlights the role of on-farm diversification in enhancing resilience and enabling adaptation to environmental and economic constraints (Damianos & Skuras, 1996; Weltin et al., 2017). However, the success of these strategies depends on access to knowledge, technology, and markets, underscoring the importance of targeted support for smallholder farmers.

In the Georgian context, the combination of tourism and agriculture emerges as one of several pathways to rural economic development, though its uptake is shaped by distinct socio-demographic constraints. The households reported a shift toward tourism at the expense of agricultural production, limiting farming to subsistence levels. This was frequently attributed to a shortage of human resources, often linked to gendered household labor structures and the absence of younger or male family members. The labor-intensity of farming, coupled with limited access to mechanization or modern technology, further restricts households' capacity to maintain diversified livelihoods (Salukvadze & Backhaus 2020). Thus, while diversification offers potential for resilience and income generation, it is unevenly accessible and deeply embedded in broader structural conditions, including household composition, ageing rural populations, and infrastructural deficits, that shape the everyday realities of rural life in Georgia.

Another strategy farmers adopt in response to land fragmentation is the development of trust-based customer networks. This study highlights the critical role of social capital and trust-based networks in sustaining small-scale farming. Direct-to-consumer sales and informal exchanges enable farmers to bypass intermediaries, retain a larger share of the final sale price, and maintain customer loyalty. These findings resonate with literature on the importance of social capital in rural development, particularly in contexts where formal institutions are weak or inaccessible (Putnam,

2016). However, reliance on informal networks also limits farmers' ability to integrate into formal markets, where compliance with food safety standards and certification requirements is essential. This tension between informal trust-based systems and formal market integration highlights the need for policies that bridge this gap, enabling small-scale farmers to access broader markets while preserving the authenticity and quality of their products.

The study also sheds light on the challenges faced by small family farms, including limited access to agricultural equipment, higher production costs, and barriers to formal market integration. The inability to invest in modern machinery due to financial constraints hinders productivity and competitiveness, particularly in comparison to large-scale commercial farms. This finding resonates with research on the structural disadvantages faced by small-scale farmers in fragmented land systems (Hartvigsen, 2014; Latruffe & Piet, 2013; Neudert et al., 2020). Addressing these challenges requires targeted interventions, such as cooperative ownership models, improved access to agricultural subsidies, and capacity-building programs that enhance farmers' technical and marketing skills.

The study contributes to the broader discourse on the shaping of agricultural systems, addressing the question of whether similar structural settings necessarily lead to similar farming strategies. The findings provide sound evidence that large-scale structural factors, such as land reforms, play a significant role in defining the transformation path of agriculture. However, within these structures, farmers retain a degree of agency, though often within constrained parameters. Limited access to resources, particularly natural capital such as land, significantly narrows the scope of household decision-making and resilience.

7 CONCLUSION

This article examined how land fragmentation, a consequence of Georgia's 1990s land reforms, continues to shape small family farms three decades after independence. It addressed two interrelated questions: first, how state land policies have structured agricultural development; and second, how farmers respond differently to these structural factors. Drawing on qualitative interviews and a spatial analysis of land ownership patterns in Khulo municipality, a mountainous region of western Georgia, the study contributes to broader debates on the relationship between structure and agency in agrarian transitions.

Even though land fragmentation is recognized as a major bottleneck for agricultural development at the policy level, few measures have been effectively deployed in practice, and landholdings in Georgia remain highly fragmented. Most rural households still own less than one hectare of land. It is important to highlight that only a small portion of land is solely owned by individual households; much of the remaining land is either state-owned or jointly owned by the state and private actors.

The study also examined strategies small family farms employ to consolidate land parcels, such as land purchases, land exchanges, and land transfers through gifting. However, these initiatives have had limited impact and have had limited transformative effect on the broader landscape of land fragmentation. At the household level, land consolidation strategies, such as gradual accumulation, informal arrangements, and land exchanges, allow households to expand agricultural activities despite the constraints of fragmented land structures.

Many households have transitioned from subsistence farming to cultivating high-value crops and integrating complementary income streams, such as agritourism and artisanal production. These strategies enhance income stability and resilience against seasonal fluctuations and market uncertainties.

Social capital plays a critical role in sustaining small-scale farming enterprises. Trust-based relationships with consumers enable farmers to bypass intermediaries, retain a larger share of the final sale price, and maintain customer loyalty. However, reliance on informal networks limits their ability to integrate into formal markets, where compliance with food safety standards and certification requirements is essential.

A major challenge for small family farms is the financial inability to invest in essential agricultural equipment, as the small size of their landholdings makes such investments economically unfeasible. Without access to modern machinery, small-scale farmers face barriers to improving productivity and market competitiveness, highlighting the need for targeted support mechanisms to enhance their viability.

The study results suggest that far more policy measures are needed to support the development of small family farms. Land-related reforms should, on the one hand, address the enduring fragmentation of agricultural land and, on the other, engage with the practices that small family farms have developed in response to these structural conditions. While supporting land consolidation efforts, policies should also build on these farming models, considering farmers' needs and helping them scale up their working prototypes.

Overall, the study illustrates that while structural conditions impose significant constraints, small family farms exercise agency through creative adaptation, highlighting the value of understanding rural development as a dynamic interplay of structure and agency.

This study focused on a single municipality in Georgia, representing a mountainous environment with its distinct cultural background and local institutions. Further research in other settings could help verify these findings and integrate additional perspectives. The study was limited by the analysis of spatial data at the municipal level; future studies could explore land fragmentation at the national level and compare Caucasus countries using cadastral data. Moreover, cadastral data did not include variables on land-use practices, and the land registration process is still ongoing. Improvements in data availability would provide researchers with more reliable and sound information, contributing to a fuller understanding of the issue.

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RAZDROBLJENOST ZEMLJIŠČ: PREKLETSTVO ALI PREDNOST ZA MAJHNE DRUŽINSKE KMETIJE?

Povzetek

Kmetijstvo je temelj družbe, saj podpira lokalne prehranske sisteme, gospodarske strukture in socialne odnose ter oblikuje identiteto skupnosti. Na gruzijskem podeželju je ta panoga doživela temeljito preobrazbo, na katero so vplivali spreminjajoči se odnosi med delovanjem in strukturnimi pogoji. Prehod iz centralno planskega v tržno gospodarstvo po razpadu Sovjetske zveze leta 1991 je v Gruziji pomembno spremenil lastništvo zemlje ter delovanje kmetijskih gospodinjstev. Medtem ko je bilo sovjetsko kmetijstvo zaznamovano z državnim lastništvom in nadzorom nad zemljo, ki so jo upravljale velike kolektivne kmetije (kolhozi) in državne kmetije (sovhozi), je obdobje po osamosvojitvi prineslo hitro privatizacijo, s katero so želeli zmanjšati revščino in omiliti negotovost pri preskrbi s hrano.

Leta 1992 je gruzijska vlada začela »socialno privatizacijo«, s katero je približno 25 % kmetijskih zemljišč brezplačno prenesla v zasebno last. V okviru te reforme so gospodinjstva na podeželju v nižinah prejela do 1,25 ha, tista v višavju pa do 5 ha zemljišč. Tako je več kot milijon družin postalo lastnikov majhnih zemljišč, katerih povprečna velikost je bila le 0,9 hektarja na gospodinjstvo. Tako je nastal »dvojni kmetijski sektor«, ki ga sestavljata sektor malih kmetov, ki pridelujejo za lastne potrebe, in tržno usmerjen sektor, v katerem prevladujejo veliki najemniki. Kljub različnim strategijam je razdrobljenost zemljišč ostala pomembna ovira; do leta 2021 je 98,3 % kmetijskih gospodarstev v Gruziji še vedno obdelovalo manj kot 5 hektarjev zemlje.

Primer občine Khulo v hribovitem območju regije Adjara podrobno ponazarja to dinamiko. Podatki kažejo, da je 57,5 % zemlje v občini v državni lasti, 21,6 % pa v lasti posameznikov oziroma gospodinjstev. Kar 96,2 % zemljišč v lasti posameznikov je manjših od 1 ha. Razdrobljenost se kaže ne le v velikosti, temveč tudi porazdelitvi zemljišč. Eno gospodinjstvo ima lahko v lasti do 17 različnih parcel, razpršenih na več lokacijah, ki so med seboj oddaljene tudi do 8 kilometrov. Ta prostorska porazdelitev otežuje kmetijske dejavnosti in omejuje ekonomsko prilagodljivost malih kmetij.

Za študijo primera smo opravili 24 poglobljenih polstrukturiranih intervjujev s predstavniki gospodinjstev v več vaseh občine Khulo. Anketiranci so se ukvarjali z različnimi gospodarskimi dejavnostmi, vključno z malim kmetijstvom, živinorejo in storitvami, povezanimi s turizmom. Vsak intervju je trajal približno 40 minut. Kvalitativne podatke, pridobljene z intervjuji, smo dopolnili s podatki o lastništvu zemljišč, pridobljenimi pri Nacionalni agenciji za zemljiško knjigo aprila 2025. Zbrani material smo analizirali s kombinacijo kvalitativnih in prostorskih metod, pri čemer smo uporabili programska orodja R, QGIS in MAXQDA.

Rezultati naše študije kažejo, da se delovanje kmetov odraža v raznolikih in ustvarjalnih strategijah prilagajanja strukturnim omejitvam, ki jih povzroča razdrobljenost zemljišč. Gospodinjstva se pogosto zanašajo na neformalne oblike konsolidacije zemljišč, kot so izmenjava parcel s sosedi ali zagotavljanje dostopa do opuščenih oziroma neobdelanih zemljišč v lasti sorodnikov. Takšni dogovori malim družinskim kmetijam omogočajo razširitev kmetijskih dejavnosti brez večjih takojšnjih finančnih vlaganj. Nekatera gospodinjstva stremijo k postopnemu povečevanju obsega zemljišč z nakupom manjših parcel, kadar jim to dopuščajo finančne zmožnosti, čeprav takšna praksa pogosto še pogloblja problem prostorske razpršenosti zemljišč.

Majhne družinske kmetije skušajo ekonomsko vzdržnost doseči predvsem z diverzifikacijo dejavnosti in usmerjanjem v pridelavo visokokakovostnih pridelkov. Kmetje se postopoma preusmerjajo od pridelave osnovnih živil za lastne potrebe k pridelavi nišnih kultur, po katerih je na trgu večje povpraševanje (npr. solata, maline, borovnice). Takšna usmeritev zahteva strateško načrtovanje ter občasna vlaganja v tehnologije za povečanje produktivnosti, kot so rastlinjaki. Poleg tega se številna gospodinjstva vključujejo v dopolnilne dejavnosti, povezane s turizmom (npr. turizem na kmetiji, ponudba nastanitve, ogledi vinogradov). Ta večfunkcionalni pristop prispeva k blaženju sezonskih gospodarskih nihanj in krepi finančno odpornost gospodinjstev.

Ključen del teh prilagoditvenih strategij je zanašanje na socialni kapital, ki temelji na zaupanju, in na mreže neposredne prodaje. Mali kmetje pogosto obidejo posrednike in veletrgovce ter pridelke prodajajo neposredno potrošnikom prek kmetijskih tržnic, digitalnih platform in osebnih povezav z mestnimi sorodniki. Te neformalne, na zaupanju temelječe mreže so pogosto tako učinkovite, da se številni kmetje odpo-vejo formalnim certifikatom kakovosti, saj kupci njihove izdelke že prepoznavajo kot čiste in pristne. V gorskih regijah lastniki gostišč in nastanitvenih obratov pogosto dajejo prednost lokalno pridelanim živilom, s čimer turistom ponujajo pristnejše kulinarčne izkušnje.

Kljub temu se ti kmetje še naprej soočajo z izrazitimi tržnimi izzivi in strukturnimi omejitvami. Mali proizvajalci se težko kosajo z masovno proizvedenimi živili, ki so zaradi nižjih proizvodnih stroškov cenovno konkurenčnejša. Pomembno oviro predstavlja tudi omejena finančna sposobnost vlaganja v sodobno kmetijsko opremo; zaradi majhnosti in razpršenosti zemljišč je nakup traktorjev ali namakalnih sistemov pogosto ekonomsko neupravičen. Poleg tega odvisnost od neformalnih prodajnih mrež ustvarja napetosti v procesu formalne integracije na trg. Številni mali kmetje nimajo tržnih, pravnih in logističnih zmogljivosti za ustrezno označevanje proizvodov v skladu s standardi turistične industrije ali za zagotavljanje skladnosti z uradnimi predpisi o varnosti hrane.

Širša teoretična razprava o strukturi v primerjavi z delovanjem je ključna za razumevanje te gruzijske dinamike. Medtem ko nekateri strokovnjaki menijo, da sta politika in struktura najpomembnejša dejavnika kmetijskega razvoja, drugi poudarjajo vlogo kmeta kot ustvarjalnega akterja. Študija razkriva, da so državne zemljiške

reforme sicer ustvarile razdrobljene strukturne pogoje, ki opredeljujejo pokrajino, vendar te reforme niso v celoti določile razvoja majhnih kmetijskih gospodinjstev. Njihov razvoj je močno odvisen od delovanja posameznih kmetov, ki se ves čas prilagajajo in upirajo strukturnim omejitvam. Odpornost se kaže v raznolikih odzivih na iste institucionalne okvire, kjer nekateri kmetje ustvarjalno preoblikujejo svoje prakse, da bi preživeli in uspeli.

Zaključek študije opozarja, da čeprav strukturni pogoji nalagajo znatne omejitve, majhne družinske kmetije delujejo prek ustvarjalnega prilagajanja, kar poudarja pomen razumevanja razvoja podeželja kot dinamičnega medsebojnega delovanja strukture in delovanja.