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Smallholder Farms in Bulgaria and Their Contributions to Food and Social Security

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Abstract: Bulgaria has a long tradition of smallholder farming, predominantly producing for self-consumption. As a result of land reform and farm restructuring, many rural households received agricultural land. Some developed commercial farms but most households stayed as subsistence farmers and used their small pieces of land to produce for self-consumption and market the excess output to top up their non-farm incomes or meagre pensions. They had little capital and insecure access to markets. The paper employs semi-structured, in-depth interviews with 10 smallholders for obtaining detailed information about individuals' behaviour and exploring issues in greater detail. In particular, the study looks at the drivers of the diverse strategies pursued by smallholder farms, their importance for household food security and incomes, and the prospects of smallholder farms in the future, especially the possibilities for productivity increases. The Bulgarian study on contemporary smallholder farms shows that subsistence production constitutes a valuable safety net for households with low incomes, and therefore, it acts as an extension of the limited social security system of the country. Despite all the challenges faced by smallholders, half of the interviewed households succeeded to commercialise and increase marketable surplus. Policies for increased commercialisation of smallholder farms and a structural change in agriculture should address, besides market factors, the socioeconomic aspects which contribute to the persistence of subsistence farming. Furthermore, when prioritising different policies, the chosen livelihood strategies of the households should be taken into account.

Keywords: smallholders; farming; post-communist agriculture; Bulgaria



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1. Introduction

There is a long tradition in Bulgaria of farming small and fragmented holdings, predominantly producing for self-consumption. During the communist era, agriculture was dominated by large, highly mechanised, cooperative, and state farms, which operated under state plans and sold their products at regulated prices. However, alongside the large farms, a myriad of small, less than half a hectare, farms producing for self-consumption remained (e.g., [1,2]). After the fall of the communist regime in 1989, the vast majority of Bulgarian households received agricultural land through restitution and were expected by policymakers to expand production into commercial farms. However, despite the expectations, and various market reforms, the rural households have kept their ways as they did under communist rule: they farm about half a hectare or less, producing for self-consumption and supplementing income from salaried work.

By 2007 the supplementary, subsistence, and small farms (of up to 1 EU economic size unit (ESU)) in Bulgaria accounted for 76% of all farms, while the share of the utilised agricultural area (UAA) by these farms was less than 10% [3]. The value of one ESU is defined as a fixed number of euros of farm gross margin. Over time, the number of euros per ESU has changed to reflect inflation. In 2010, one ESU equalled EUR 1200,

as stated in the Eurostat Concepts and Definitions Database (CODED). Furthermore, 1 ESU roughly corresponds to either 1.3 hectares of cereals, or 1 dairy cow, or 25 ewes, or equivalent combinations of these. Amongst the smallholder farms, two main types could be distinguished: commercially oriented relatively large farms that produce mainly for the market and subsistence relatively small farms which rely to a large extent on their produce for self-consumption and do not generate (substantial) cash income [4], as the latter are smaller than 0.5 ESU, on average. The study in [5] identifies commercially oriented farms which sell more than 50% of their output. At the other end of the spectrum is a myriad of subsistence farms which do not sell output regularly and depend almost entirely on their produce for survival. In between the two extreme models is a numerous group of semi-subsistence (supplementary) farms, which combine features of both the commercial and subsistence models, often supplementing incomes with off-farm employment. This latter model accounts for more than half of all smallholder farms in Bulgaria.

Considering that interdisciplinary studies on the situation of smallholder farms in Bulgaria are quite limited, the goal of this paper is to shed light on the situation and motives of the smallholders in Bulgaria, in the contemporary, post-communist period. Furthermore, we base our analysis on a qualitative case study which is unique for the case of Bulgaria and allows us to look directly into detailed evidence from 10 smallholder farm life stories and reveal significant heterogeneity in circumstances, strategies, and outcomes. Specifically, the paper is concerned with (1) what are the drivers of the diverse strategies pursued by smallholder farms? (2) what is smallholder farms' contribution to food security? and (3) what are the prospects of smallholder farms in the future and what are the implications for policy? Our main finding is that smallholder production constitutes a valuable safety net for all households with low incomes, and therefore, it acts as an extension of the limited social security system in the country. However, smallholder farm distribution is also predetermined by the general socio-economic and demographic characteristics of rural regions.

2. Context and Methodology

The rapid collapse of the communist system in Bulgaria did not allow for institutional adjustments that could soften the impact of transition on ordinary citizens, including smallholders. In the agricultural economy, old producers (state and collective farms) disappeared or changed organisation, and new producers emerged. Lands were restituted on a historic basis as recipients received actual land, but the allotments were small and fragmented. The transition also brought the free market, and profit maximisation became the guiding principle to producers' behaviour. The symbiotic relationship between large farms and household producers came under stress, and the institutional framework for agrarian policies completely changed bringing the end of planned food production, planned inputs, and planned food distribution that had guided farm behaviour for decades [6].

In this new economy, the smallholders found themselves in a disadvantaged position. They had little land and capital, and insecure access to markets. Most smallholders remained quasi-capitalist actors—producing for self-consumption and ensuring household survival—while a minority of households produced for surplus (e.g., [7]). Household characteristics played an important role in the agrarian transition which meant that not all smallholders were equally able to adapt. In [8], the author emphasises the importance of 'conversion of assets', but conversion is not feasible for everybody as not everybody possesses assets that are of value in the market economy. Specific to the case of farm restructuring, the studies in [9] and [10] demonstrate the importance of human capital and point to the role of entrepreneurship and willingness to take risks. Thus, in the post-communist period, behavioural responses to new opportunities and the new institutional framework determined the emergence of diverse farming modes which were associated with winners and losers from the agrarian transition [11].

In the post-communist period, in Bulgaria, the majority of smallholder farms are run on a part-time basis by older persons, and their importance has been declining [12]. Further-

more, the smallholders' place in the agrarian system is diminished by the rise of domestic agrarian oligarchs (agribusiness) and the exclusion of smallholders from the agricultural supply chain [13,14]. Therefore, post-communist smallholders are disadvantaged, arising from their traditional mode of production that is unable to compete against technologically advanced larger farms. The 'protection' that smallholders had in the communist era—the need by the state for food that smallholders produced—has been replaced by cutthroat competition in which weakness leads to economic marginalisation.

In these new conditions, following the Western experience, smallholders could potentially use collective action to form producer organisations and improve market access and their terms of trade. However, a critical shortcoming in Bulgaria as well as in other former communist countries is the lack of social capital and trust that underlies it. The resistance of former communist regimes to the local social organisation has removed an important source of social capital that might otherwise stimulate collective organisation in the post-communist period [15].

Thus, based on the preceding discussion one can hypothesise that the majority of smallholder farms in Bulgaria are bound to remain small, subsistence units which are increasingly becoming an extension of the limited social security system in Bulgaria and providing a lifeline to the elderly and unemployed.

Following our conceptualisation of smallholders' situation in Bulgaria, we next carry out a qualitative analysis comprising 10 semi-structured, in-depth interviews, conducted in 2010. We obtained detailed information about smallholder farmers' behaviour regarding their production and organisation strategies and utilised an inductive qualitative content analysis (QCA) which followed the step-by-step method outlined in [16]. The first step consisted of reading the interview transcripts several times to obtain a global understanding of the content and to discern major themes or 'content areas' of the text. In the second step, the text relating to these content areas was extracted and merged into one narrative per content area. As a third step, meaning units, e.g., words, sentences, or paragraphs, were identified in each narrative. These meaning units were then condensed into shortened strings of text preserving the core meaning. Each condensed unit was abstracted and subsequently labelled with a code. The coded material within the identified content areas was then compared and sorted into sub-themes. The final step of the interpretive process was completed by a synthesis of findings summarised in the last (summary) section of this paper. A more detailed discussion on the semi-structured interview methodology followed is presented in Appendix A.

We selected respondents by purposive sampling applying two criteria. The first criterion was that the household should have produced output in both 2003 and 2006 as recorded in the Bulgarian SCARLED survey. The SCARLED sample contains a total of 229 households that all engage in agricultural production. The selection of survey regions and villages followed a two-stage sampling process. In the first stage, three EU NUTS3 level regions were selected according to their degree of economic development: lagging behind, average, and prosperous, based on GDP per capita data for the country reported by Eurostat. Since the study focuses on activity in rural areas, the regions of the capital and other large cities were excluded from the selection. In the second stage, three villages per selected region were chosen, again with a view to capturing variations within the NUTS3 regions based on higher, average, and lower prosperity, in comparison to the regional mean. Households in selected villages were chosen randomly. The second criterion was that the household must have consented to be contacted again for follow-up interviews. We need to point to a potential limitation in our sampling design as more motivated and proactive, usually more successful, farmers may respond positively and take part in the follow-up interview. However, our pool of respondents seems to be representative in terms of geographic coverage, capturing the variation in natural and economic conditions in Bulgaria, as evident from the descriptive statistics provided in the appendix. Furthermore, careful examination of our sample of interviewed households shows a balanced representation of the full spectrum of smallholder farms in Bulgaria

consistent with the SCARLED sample. A further investigation of the households satisfying the selection criteria revealed that the majority of them were located in five villages of two survey regions, at different levels of economic development. Table A1, Appendix B presents an overview of key locational characteristics. Two of the villages were located in the region defined as prosperous in the SCARLED survey based on the criteria of regional GDP per capita being above the national average, and the other three villages were located in the survey region defined as lagging behind with GDP per capita below the national average. Eight households (Cases) were randomly selected for the interviews. To these households, two more households (Cases 10 and 11) were added by random selection from the pool of consenting households who had exited farming by the 2006 SCARLED survey. Since the 2006 SCARLED survey, Case 8 has also disengaged from farming. The households interviewed show great variation between them with respect to consumption and production characteristics, degree of market participation, reliance on subsistence production, attitudes towards farming and constraints with respect to incomes, off-farm labour market participation, and transactions costs.

Table A2, Appendix B presents a quantitative overview of household demographics and subsistence characteristics of the 10 cases, while Table A3, Appendix B provides an overview of household production characteristics. The heterogeneity of the case study households increases the informative value of the QCA that follows.

3. Case Study Evidence

3.1. Commercially Oriented Smallholder Farms

Case 1: Atanas

Atanas is in his late fifties and lives with his wife in a village, located on a lowland in the prosperous survey region. He divides his time between on- and off-farm work, while his wife holds a full-time off-farm job and is not involved in farming activities. Atanas started to farm in the first years of transition with 0.3 ha of land and has since gradually acquired more land, which has allowed him to increase production. Between 2003 and 2006, he expanded from 4.8 to 20.1 ha, and at the time of the interview in September 2010, his landholding exceeded 25 ha, on which he cultivates mainly wheat and sunflower. The increase of his land assets resulted in an increased surplus production which boosted his level of market sales from 40% in 2003 to 60% in 2006. Since 2006, he has liquidated his livestock enterprises and no longer needs to grow any fodder crops as inputs in livestock production.

At the time of the interview, the only agricultural commodity that the household retained for their own needs was eggs from a handful of laying hens. With regard to the marketing channel, Atanas sells his output on an informal contract to the private cooperative in the village. Although Atanas currently works only with this local buyer, he wishes to switch production to high-value crops for direct export. However, this is currently no more than a vision as he does not know how to establish the necessary contacts and overcome the language barrier.

Thus far, Atanas had not applied for any EU policy support. Based on his explanation, although he wishes to receive some subsidies to invest in machinery, he believes that the bureaucratic procedures involved make any kind of support illusory and unattainable. His observation is that the application procedure is very long and that those who have applied have been unsuccessful with their applications. This deters him from applying for policy support himself.

Case 2: Bogdan

Bogdan and his spouse, Elena, are full-time dairy farmers. They are both in their mid-forties and live with their two teenage sons in the lowland village, located in the prosperous region. Since starting farming around the year 2000, they have gradually increased their livestock base, both through keeping calves to adult age and through purchases financed by a loan. Recently, the couple has taken an additional loan to invest in machinery:

a tractor, a combine harvester, a cultivator, a plough, and a baler. They claim that these investments were vital due to the scale of their farming activities. With the view to cover part of their fodder needs, they purchased land and increased their cultivated land area substantially, from 0.3 ha in 2003 to 5.2 ha in 2006. Following the farm expansion, the household's share of output sold increased from 70% in 2003 to 90% in 2006. Since then, the couple has acquired an additional 21 ha of land which they claim is necessary to fully cover the fodder needs of their herd.

With regard to subsistence production, Elena grows a range of vegetables in the house garden, which covers the household's needs and is aimed for household consumption only. The household covers their needs of milk and meat from their own cows and they also keep some poultry. The only foodstuffs the household claims that they need to buy are bread, cheese, and sausages. They assign great value to the organic aspect of their subsistence production but admit that not having it would put them under some financial pressure.

The couple holds a positive attitude towards EU policy support schemes because of their potential but has not yet applied for their own part. All applied cases that they are aware of have failed to obtain support. In their opinion, however, the disturbance they experience in relation to policy support stems from Bulgaria, and they claim national corruption hinders available EU funds to reach small farmers. In their opinion, this is a major problem. They also perceive that the Bulgarian authorities have set up very strict, bureaucratic eligibility requirements. For this reason, they argue that policymakers must be better informed about the reality of day-to-day smallholder farming in order to make decisions and design policy measures which are adequate and that the bureaucratic procedures should be simpler and less time consuming.

Case 3: Boyana

Additionally, located in the lowland village in the prosperous region, this household is a traditional extended family. It comprises of the interviewee Boyana and her husband who are both in their mid-fifties, their adult son, Boyana's husband's brother, and his wife, and the shepherd they employ for looking after their flock of sheep. Boyana's husband registered as a farmer following redundancy from industry in the early 2000s. On her part, Boyana was made redundant from a position as a teacher a few years later. Not having succeeded to find another off-farm employment since then, she works on-farm with her husband whilst claiming unemployment benefits. At the time of the interview in 2010, their flock consisted of around 200 sheep, a size that Boyana and her husband intended to maintain since it qualifies them for agricultural policy support schemes.

Between 2003 and 2006, the household increased their share of output sold from 70 to 80%, following an increase in milk production. Moreover, Boyana and her husband have invested in a cooling tank which allows them to purchase milk from small local producers. This generates a small profit when selling the milk to a regional dairy processing company on a contractual basis. According to Boyana, the size of the household's land holdings (3.85 ha) is not sufficient to produce the fodder required. Consequently, they have to purchase fodder which, Boyana claims, has become very expensive. For that reason, further expansion of their farming activities is unlikely, and, in addition, Boyana and her husband both suffer from poor health which has a negative impact on their prospects of further expansion. Subsistence production is important to the welfare of this household, and what they produce in their house garden is aimed only for self-consumption. The commercial activity of this household is exclusively limited to dairy.

Being a registered farmer, Boyana's husband is entitled to policy support. Boyana claims that without subsidies, they would have been forced to cease farming. Still, they have had some negative experiences with the subsidies they have received. Following the death of some of their sheep due to disease, they were forced to repay, with interest, a part of the policy support which, to them, was not a non-negligible amount. Since this experience, they associate any application and grant of support with a certain risk that they will have to repay it if they, for reasons outside their own control, or personal illness, cannot maintain the size of their herd. Similar to Bogdan, Boyana emphasises that policymakers

must learn more about smallholder farming and that administration should be closer to farmers to minimise transaction costs of obtaining policy support.

Case 4: Iliya

Iliya is another example of a sheep-farming household. He lives in a mountainous village, in the lagging behind survey region. His household consists of himself, his wife, three children in their late teens, and his parents. At the time of the interview, no family member held off-farm employment. Iliya's wife and their children are hence able to help with the farming activities which, Iliya claims, is very necessary as he cannot imagine how would manage without the family labour.

Iliya left his off-farm job in the forestry industry in 2005 when his father fell ill. At that time, the flock counted 70–80 sheep. In 2009, Iliya managed to increase the number to 250. Being on an expansive path, the share of output sold increased from 60% to 80% between 2003 and 2006. Forced by high fodder prices, low output prices, and unreliable payments from contract buyers, since the peak in 2009, Iliya has reduced the number of sheep down to 180. This makes little difference in terms of labour but a big difference in terms of reducing fodder costs.

Not earning any off-farm income, the household benefits from being able to produce food for subsistence needs. Although it is somewhat unclear from the interview to what extent they cover their consumption needs with subsistence production, the SCARLED survey data reveal that in 2006, 70% of the food they consumed was their own production and that they considered this essential for survival.

Iliya does not have a lot of trust in support schemes as financial aid. Although he managed, with the help of some other farmers, to successfully apply for policy support, he does not trust that this will continue to be granted in the future. He also perceives that the requirements are constantly changing which is another element of insecurity that shapes his decision not to depend on subsidies. The decisive factor for whether or not he eventually gives up farming is not as much support as the availability of family labour.

3.2. Semi-Subsistence and Subsistence Smallholder Farms

Case 5: Milka

Milka is in her mid-fifties and lives in a mountainous village, in the lagging behind survey region together with her husband and one of her grandchildren. Due to health problems, her husband cannot work off-farm, nor take on any physically demanding on-farm work. Milka started farming around 2003 when experiencing financial difficulties following redundancy. She has decided not to register as a farmer and is therefore not eligible for any policy support. The main reason for her decision is that off-farm employment will qualify her for both a pension and health insurance. The latter appears to be of particular importance to her since she admits to suffering from health problems that require costly medical treatments that she struggles to cover given her present financial constraints. At the time of the interview, she had enrolled in an unemployment programme that eventually might lead to off-farm employment, although only at the minimum wage.

With regard to the scale of the agricultural activities of the household, Milka is a small producer with only one dairy cow. In addition to the sales of cow's milk, she also sells some vegetables when the cultivation of her house garden generates some surplus. Between 2003 and 2006, her share of output sold increased from 50 to 70% and has since increased to 80%. Milka ascribes this to an increase in the quantity of cow milk and improved quality of the milk, achieved through more and better feed and investments in animal health. Thanks to word of mouth for having good quality cow milk, Milka has benefitted from an increased customer base which has allowed her to sell larger quantities of milk. In addition, between 2003 and 2006, she specialised her production activities by ceasing to process and sell yoghurt and cheese as this was a time-consuming and low-profit activity.

Being a smallholder farmer, Milka generally sells directly to end customers as this achieves a higher price. Only occasionally she sells to the local dairy company. The income

from the milk sales is, however, not enough to sustain the household. For this reason, Milka supplements her income by making and selling knitted garments. However, she has noted a decrease in local demand due to a decline in purchasing power of the local population. Subsistence production is hence of vital importance to this household and Milka also supplies her daughters, who have their own separate households, with food as they are also under tight financial constraints.

In the future, Milka's preferred income strategy would be to maintain her agricultural activities while also having off-farm employment. For this reason, she has no personal interest in agricultural support programmes which favour commercialisation of smallholder farmers. From her personal point of view, she instead assigns a higher priority to policy measures with the potential to generate off-farm jobs in rural areas.

Case 6: Ilarion

Ilarion and his spouse live in a village, located on the plain in the lagging behind survey region. They are both in their late sixties and since the 2006 SCARLED survey, their two adult children have left home. Ilarion exemplifies the end of the farming life cycle, as he is switching from commercial farming to exclusively cultivate the house garden to cover basic subsistence needs. This production is important for the household since their pensions are low, and they struggle to cover their utility bills. In addition, they both suffer from health issues and medical treatment accounts for a large share of their budget.

Nevertheless, between 2003 and 2006, Ilarion was still farming commercially and even increased his share of output sold from 40 to 50%. Since then, he has liquidated all livestock and switched production from fodder crops to a range of vegetables, and further increased his sales. At first, Ilarion himself transported his produce to the wholesale market 20 km away. At the sales point, he established informal contracts with three larger buyers who started buying his produce at the farm gate. Although he achieved a lower price selling at the farm gate, the arrangement reduced his transactions costs, and for this reason, he found this to be a more profitable marketing strategy. Only when he had additional surplus did he travel to the wholesale market. The crucial factors that allowed him to establish these contracts were, first of all, that he was able to travel to the wholesale market. Second, due to the size of his production, he could provide large enough quantities of good-quality produce regularly. Third, he also had a phone. As Ilarion explains, contract buyers need to be able to contact their suppliers to place their orders, and they require certain minimum quantities of produce since, otherwise, the arrangement would not be profitable for them.

Case 7: Rositza

Rositza lives in the same village as Ilarion. She is a pensioner and shares her home with her only son, his wife, and the married couple's two young children. Rositza's son has an off-farm job in the neighbouring town, while her daughter-in-law has been unemployed since the birth of their first child. Rositza used to farm together with her husband while he was still alive. They had a 0.2 ha plot in the village, where they grew fodder crops (hay and maize) for their cow and their donkey. They used the donkey for ploughing but received help from Rositza's brother, who owned a tractor. This pattern of farming came to an end when their house was hit by a flood that drowned all their animals. Around the same time, her husband became sick and passed away. Since that time, Rositza only cultivates the house garden. She works her garden manually and she does not have the machinery to cultivate her village plot, which she is renting out. In addition, she suffers from bad health but still works hard to generate a marketable surplus since the family is under severe financial pressure. Due to their financial situation, the family relies very much on their subsistence production, economising on the foodstuffs that family members buy, limiting this to staples such as milk, yoghurt, and bread. They do not buy meat or cheese as these goods, according to Rositza, are too expensive.

In terms of sales, in the SCARLED survey, Rositza reported that she sold 50% of her production in 2003 and 70% in 2006. She ascribes this increase to agri-environmental factors which made 2006 a year with high yields and thus a larger surplus to sell after seeing to

the household's needs. At the time of the interview, Rositza could not visualise how to increase the share of output sold without decreasing the household's own consumption, and they appeared to already ration their food intake.

3.3. *Smallholders Exiting Farming*

Case 8: Stanko

Stanko's case is the first of the three households that have made a clear break with agriculture both as an income-generating activity and as a means to satisfy household consumption needs. Since 2007–2008, Stanko has ceased farming, and in September 2010, he was operating two allegedly successful businesses in the prosperous region. His decision to cease farming evolved with the growth of his businesses. Although admittedly very attached to his livestock and the idea of being a farmer, Stanko does not regret this decision and claims to be enjoying a better lifestyle this way in comparison to when still being a farmer. The increase in the share of output sold from 80% to 90% between 2003 and 2006, reported in the SCARLED survey, represents his final attempt to increase profitability by increasing his number of dairy cows. Following the exit from dairy farming, the household has kept the land as financial security and is not planning to sell it or rent it out. Stanko's father, who is a pensioner, has the time to keep cultivating it, even if not for a profit, thus not so much for subsistence needs but as a lifestyle choice.

Case 9: Silviya

Silviya and her husband live in a mountainous village, in the lagging-behind survey region. They both work full time off-farm and constitute the second example of disengagement from agriculture. The household's farming activities were carried out by Silviya's parents-in-law and ceased in 2006 when they had both passed away. Out of the 1 ha of land that the household ceased cultivating, 0.6 ha was rented out, and another 0.4 ha left fallow. Although Silviya and her husband consider themselves as people who have exited from farming, they are best described as hobby farmers since they still cultivate two plots of 0.1 ha and 0.03 ha, respectively, where they grow potatoes and maize. Part of the potatoes and all of the maize are used as fodder for the poultry they keep, but the quantities produced are not enough to be self-sufficient in fodder. In addition, Silviya and her husband have a small orchard with only a few trees. It is mainly Silviya's husband who cultivates their land, and he plans to cease crop production and instead expand the orchard as a hobby activity. Silviya states that the reason for not selling their land and exiting farming completely is a combination of both pleasure and need. She and her husband enjoy farming but also need to farm to feed their chickens. After all, they live in a rural village and, as Silviya explains, such activities form part of the traditional lifestyle in the area. Low prices of land also contribute towards the decision of keeping the land.

Even though Silviya's and her husband's hobby farming activities involve the production of only small quantities, their daughter, who is married to a local farmer, does supply them with additional food from her farm. Silviya claims that when she and her husband retire, they will rely more on their daughter's help. Judging from this, it appears as if the couple foresee low pensions and an increased need for subsistence production when they no longer earn an income. Moreover, considering the prevailing economic climate, Silviya and her husband fear that they may eventually lose their jobs. Keeping their land hence forms a part of a backup strategy which could support them in case they were to be made redundant. Similar to Milka, Silviya's prime policy interests are not agricultural support schemes but rather measures that could address the lack of job opportunities in rural areas and help develop rural regions.

Case 10: Elisaveta

Elisaveta is in her fifties and lives in a mountainous village, in the lagging-behind survey region, together with her husband, their son and his wife, and her mother-in-law. Elisaveta and her daughter-in-law are the only family members currently earning an income. The household is the third and final example of disengagement from agriculture. It is also

the only household in the case study with the first-hand experience of international labour migration. Following a long period of unemployment and enduring a harsh financial situation, Elisaveta's husband left Bulgaria in the early 2000s to work in Portugal in order to provide a better life for the family staying behind. Since returning to Bulgaria in 2008, he has remained unemployed.

Elisaveta and her husband used to farm in parallel to having off-farm jobs. When the husband migrated to Portugal for work, the household's agricultural activities ceased, and their land was turned into meadows. Since then, the household harvests the hay to gain an additional income but believes there is low demand, and at the time of the interview in October 2010, the family's 100 bales of hay remained unsold. The size of the house garden is very small, while the farmland has been turned into meadows. Due to this, the household does not produce anything for subsistence needs. The household is clearly financially constrained and would most likely be better off if family members could produce some of their food. The one reason why they manage without it is that they receive financial help from Elisaveta's sister. Turning their meadows back into arable agricultural land is not an option they consider despite having the available labour in terms of the two male household members who are unemployed. The reason given is that they consider such initiatives to be too costly and too risky. Instead, Elisaveta wishes they would all have jobs so that they could live 'a life without worry'. In her opinion, unemployment is detrimental for the rural regions, and she believes that policymakers should take more action to generate viable job opportunities in regions similar to hers to make rural areas an attractive place to live and stop depopulation.

4. Synthesis and Conclusions

Out of the 10 households interviewed, only Cases 1 and 2 represent larger-scale producers who have continued to grow successfully since the SCARLED survey visited them in 2006. In stark contrast, the families in Cases 3 and 4, who have large sheep flocks, have experienced increasingly challenging times brought about by deteriorating domestic conditions and terms of trade. Case 5 represents a small-scale producer who, through strategic choices, has successfully managed to increase marketable surplus production but who has thus reached the limit of market participation unless sacrificing the household's own consumption needs. Cases 6 and 7 are both examples of pensioners who farm. While Case 6 is scaling down and switching from commercial to subsistence orientation, Case 7 makes every effort to cater to the subsistence needs of her household and to generate surplus production that brings a small but valuable income. Despite managing to increase sales in the past, Case 8 saw prospects of a brighter future managing his nonfarm businesses and chose to exit from agriculture. Cases 9 and 10 have also ceased with agricultural production, but their situation following disengagement differs greatly from a successful business trajectory. Especially the latter household, affected by unemployment and with no subsistence production, is enduring severe hardship.

The QCA of the Bulgarian case study is consistent with the findings from a range of quantitative analyses on central and east European transition countries (e.g., [4,10,17–19]) that the sustainability and commercialisation of smallholder farms are facilitated by increased access to productive assets such as land and livestock, as well as of adequate machinery and equipment. Farming large landholdings or livestock herds efficiently requires modern technology. Increased levels of farm mechanisation require access to capital, in the form of savings, credit, or policy support to finance necessary investments. The study indicates that in cases in which smallholder producers secure access to modern machinery, there is a scope for productivity increases. A way to overcome the credit constraint to access adequate machinery could be through cooperation with other farmers to pool resources, although there are indeed constraints on social capital, as noted by several authors. Supporting this hypothesis, we found no evidence of cooperation intent among any of the households interviewed. In line with this evidence, a recent study by [20] reports that although most of the producers they interviewed were aware of the potential benefits of

cooperation and, more broadly, networking, they did not participate in any organisation due to the lack of trust.

Further, there is support for previous findings that commercial activities are facilitated by contract sales (formal or informal) and market access as these reduce both risk and transaction costs. However, contract sales require a steady supply of large and reliable volumes of good quality produce, which makes contract sales out of reach for many smallholder subsistence-oriented farmers. A viable alternative for smallholder farmers could be short supply chains and farmers' markets. For example, there is a farmers' market in Sofia organised once a week and supported by the environmental association *Za Zemiata*. This farmers' market is notable evidence of short supply chains in action. Every week, it is visited by around 800 consumers, and more than 20 producers are offering their produce there [21].

As far as larger commercially oriented farms are concerned, livestock and dairy farmers appear to struggle to make profits in the current market conditions. Depressing profit margins due to increasing fodder prices and low market prices for milk and meat, which interviewees claimed were below the cost of production, act as disincentives for this group of farmers. Consequently, the ability to produce fodder at an opportunity cost below the market price appears to be a key factor for making profits in the current climate. Furthermore, the lack of accessible land is seen as a constraining factor for expansion.

The majority of cases analysed indicate that subsistence production constitutes a valuable safety net for households—especially ones with low disposable incomes. Contributing to the low-income situation were low profits from agriculture and limitations to on-farm labour supply, limited availability of off-farm employment, and long-term unemployment, reinforced by underdeveloped welfare systems with low levels of social protection. Although many households engage in subsistence farming out of necessity, food safety and traditional aspects are also mentioned as reasons to engage in the production of their own food. These concerns were expressed by commercially and subsistence-oriented households alike. Hence, subsistence farming should not be thought of in terms of a phenomenon determined and defined only by agricultural markets. It also depends on the general socioeconomic and demographic characteristics of rural regions.

It is not in the interest of all households if they rely on subsistence production to commercialise their agricultural activities given the socioeconomic conditions in Bulgaria. Although households express concern for the prosperity of rural regions—both with regard to the conditions for farming and to the problems brought about by limited off-farm labour market—the importance assigned to different policies appeared to depend on the preferred livelihood strategies of the households. While registered farmers emphasise a need for adequate policy measures that could support their own farm activities, households tend to assign higher importance to policy measures that address general socioeconomic problems, notably unemployment, than to agricultural policy. Consequently, to achieve increased commercialisation of farming and a structural change in agriculture, the socioeconomic aspects which contribute to the persistence of subsistence farming must also be addressed. However, the longstanding tradition of cultivating the house garden forms part of the rural lifestyle and is unlikely to be affected by policy measures. It is also possible that this may result in a much larger hobby farming sector in the future.

Our analysis provides answers to the three questions we posed in the introduction. These, taken together, cast light on the more fundamental question of why the majority of smallholder farms remain small and subsistent in nature. Our qualitative case study analysis revealed that there are very diverse sets of motivations and drivers of household farming strategies. The study also revealed high volatility of the status and production decisions of the smallholder households driven by a combination of pull and push factors (e.g., [17,22]). Nevertheless, at least in the case of Bulgaria, smallholder farms are an important food security safety net, complementing the limited social security system, for the households directly involved in farming as well as for their extended families [23]. Considering that both pecuniary and non-pecuniary lifestyle considerations affect the

smallholder farming choices, the current structure of the farm sector in Bulgaria is likely to endure for foreseeable future.

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Appendix A

Semi-Structured Interview Methodology

The semi-structured, in-depth interview is widely used in qualitative research. It is particularly useful for obtaining detailed information about individuals' behaviour and exploring issues in greater detail [24]. Through its shared properties with a normal conversation between individuals, the semi-structured interview adopts the style of a 'conversational research journey' [25] (p. 91). The interview guide constitutes the backbone of the semi-structured interview, and its design is crucial to the successful outcome of the qualitative data collection exercise. The guide provides the basic structure of, and commonality between, interviews. The interview guide normally consists of a set of relatively closed introductory questions, followed by a number of open-ended, 'grand tour' questions [26], with associated probes and follow-up questions [25]. The first set of questions ask for short, direct answers with the purpose to create the necessary climate of trust, communication, and self-disclosure, and also to stimulate the respondents' memory about the research topic in preparation for the 'grand tour' questions that follow. The purpose of the 'grand tour' questions is for the respondent to provide as rich a set of information as possible on the research topic. To serve this purpose, these questions should be open-ended, easily understood, descriptive so as to elicit understanding, motivation, and experience. Leading questions should be avoided.

The interview guide applied in the Bulgarian case study was developed by drawing on [25,27], and the checklist recommended by the United Nations World Food Programme [28] (the interview guide and the associated interview transcripts are available from the authors on request). For the purpose of this research, the interviews were first transcribed word for word and then edited in a way that facilitated the analysis of their contents. The interview transcripts aim to represent the narratives presented by the interviewees in as full a sense as possible while also facilitating the readability of their accounts. All topics raised by the respondents during the interviews are included in the transcripts. However, although the order in which the respondents talk about different issues is respected wherever necessary that order has been changed to facilitate the exposition.

There are no specified conventions for analysing qualitative data and different approaches to qualitative data analysis exist. Qualitative content analysis (QCA) is a generic term used to describe the analysis of text data through the systematic classification process of coding and identifying themes or patterns (e.g., [16,29]). Coding is a central concept in QCA, and is described by [30] (p. 270) as the '*deciphering* or *interpreting* data and includes the naming of concepts and also explaining and discussing them in more detail'. QCA can be used in either an inductive or deductive way depending on the purpose of the study—inductively to derive categories from the data and deductively by applying an

analytical structure based on previous knowledge when the purpose is to test a certain theory [31].

Appendix B

Sample Statistics

Table A1. Overview of survey villages.

Region	GDP per Capita (2006)		Village	Area Type	Distance to Nearest Urban Centre		Unemployment Rate	Population (2006)
	(Euro)	(Index) ¹			(km)	(h)		
Prosperous	2266	117	1	Plain	8.7	0.18	2	440
			2	Plain	14.5	0.27	10	1162
Lagging behind	1530	79	3	Mountainous	9.8	0.18	16	4780
			4	Mountainous	13.0	0.25	18	2901
			5	Plain	10.2	0.23	65	790

Note: ¹ 100 = national average (excluding the region of the capital city Sofia). Source: SCARLED unpublished material and SCARLED village database containing data recorded from village officials.

Table A2. Demographic and subsistence consumption characteristics of the case study households.

Case	Household Head (HH)	Other Household Members (2006)	Interviewee	Assumed Name	Subsistence Production (% 2006) ¹	Importance of Subsistence Production for Household Welfare ²	Farming Objective: To Provide Food for the Household ³	Farming Objective: To Generate Cash Income ³
1.	Male, 58	Wife, 58	HH	Atanas	20	Not important	Totally disagree	Totally agree
2.	Male, 43	Wife, 39, sons 10 & 18	HH + wife	Bogdan	65	Very important	Somewhat agree	Totally agree
3.	Male, 75	Son 46, son, 52, his wife, their sons 26 & 28	Son's wife	Boyana	50	Very important	Totally agree	Somewhat agree
4.	Male, 40	Wife, 38, son, 20, daughters, 16 & 18	HH	Iliya	70	Essential for survival	Totally agree	Totally agree
5.	Male, 50	Wife, 52, mother, 72	Wife	Milka	40	Essential for survival	Totally agree	Totally agree
6.	Male, 65	Wife, 63, daughter, 42, son, 38	HH	Ilarion	10	Very important	Totally agree	Totally agree
7.	Female, 64	Son, son's wife, their child (toddler)	HH	Rositza	40	Very important	Somewhat agree	Totally disagree
8.	Male, 59	Wife, 56, son, 33, his wife, 24, their child, 3	Son	Stanko	50	Very important	Totally disagree	Totally agree
9.	Male, 54	Wife, 50	Wife	Silviya	-	-	-	-
10.	Male, 58	Wife, 52, son, 20	Wife	Elisaveta	-	-	-	-

Note: ¹ Household's own estimate of how large a share of the food that they consume comes from their own agricultural production. ² Respondents were asked to assess the importance of their subsistence production for their household's welfare and given three alternatives: 'Not important', 'Very important', and 'Essential for survival'. ³ Reply to Likert-scale statement ranging from 1—Totally disagree to 5—Totally agree, with 3 being a neutral option. Source: SCARLED database.

Table A3. Production characteristics of the case study households.

Case	Share of Output Sold (%)		Main Farming Technology	Livestock	Cultivated Land Area (ha)		Plots (N)	Furthest Plot (km)
	(2003)	(2006)			(2003)	(2006)		
1.	40	60	Machinery (owned by others)	Yes	4.8	20.05	5	3
2.	70	90	Machinery (own)	Yes	0.25	5.15	2	4
3.	70	80	Manually	Yes	3.85	3.85 ¹	1	0
4.	60	80	Draft animals and machinery (own)	Yes	1	1	1	1
5.	50	70	Manually	Yes	0.7	0.7	2	1.5
6.	40	50	Draft animals and machinery (own)	Yes	3	3	1	4
7.	50	70	Draft animals and machinery (owned by others)	Yes	0.25	0.26	1	3.5
8.	80	90	Machinery (own)	Yes	6	6	2	10
9.	-	-	Draft animals and machinery (own)	Yes ²	1	Exited. Rented out 60% of land, 40% unused		
10.	-	-	Machinery (own)	No ²	1.02	Exited. Rented out 50% of land, 50% unused		

Note: ¹ The area recorded by the SCARLED survey was 16.85 ha. During the interview, this figure turned out to be wrong as the household had not increased their cultivated land area between the two reference years. ² Refers to 2003 for Cases 9 and 10 who disengaged from agriculture between 2003 and 2006. Source: SCARLED database.

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