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The Effect of Remittances on Subsistence Farming: The Case of Albania

BACHELOR'S THESIS

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Declaration

I hereby declare that I have done this thesis entitled The Effects of Remittances on Subsistence Farming: The Case of Albania independently, all texts in this thesis are original, and all the sources have been quoted and acknowledged by means of complete references and according to Citation rules of the FTA.

In Prague date

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Alexandra Becková

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Abstract

Migration has emerged as a key livelihood strategy for many Albanian households, particularly in response to economic challenges stemming from the transition to a market economy. Remittance inflows serve as a crucial economic lifeline, constituting a significant income source for numerous households. Despite agriculture's substantial role in Albania's economy and national livelihoods, empirical evidence on the investment of remittances in agriculture remains limited. This thesis aims to address this research gap by investigating the impact of remittances on subsistence farming in Albania. It examines farm asset utilization and investment patterns among 36 subsistence farming households, comparing those receiving remittances from abroad with households not receiving remittances, using statistical analysis employing the Pearson χ^2 test and Fisher's exact test. The results of this study demonstrated no associations between receiving remittances and the utilization of productive assets, nor with the other two chosen indicators of farm investment - employment of farm workers and livestock production. Given limited nationwide data on remittance utilization for agricultural investment, this study provides valuable insights into the role of remittances in shaping farm development and productivity in Albania.

Keywords: remittances, international migration, small-scale farming, Albania, investment, productive assets

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List of the abbreviations used in the thesis

AMAR	Albanian Ministry of Agriculture and Rural Development
EU	European Union
GDP	Gross Domestic Product
HH	household
IMF	The International Monetary Fund
IOM	International Organization for Migration
SDGs	Sustainable Development Goals
UN	United Nations
UK	United Kingdom
UNDP	United Nations Development Programme
USD	United States Dollar
WB	World Bank

1. Introduction

Albania ranks among the top countries with the highest migration rates worldwide, as migration has emerged as a key livelihood strategy for many Albanian households (Lika 2015; Calogero et al. 2009; McCarthy et al. 2009). By 2020, there were over 1.2 million Albanian migrants abroad, which accounts for approximately 43% of the population (Our World in Data 2020). Whether temporary or permanent, migration served as a crucial strategy in coping with livelihood challenges stemming from economic difficulties brought on by the transition to a market economy (Calogero et al. 2009; McCarthy et al. 2009). Nowadays, motivations for migration include seeking higher salaries, improved working conditions and quality of life, better education opportunities and political factors (Gjoni & Kora 2015).

Despite a trend towards urbanization, Albania remains predominantly rural, with a substantial 36% of its population residing in rural areas (Worldbank 2022). Agricuture plays a considerable role in Albania's economy, sustaining a significant portion of its population and contributing to national livelihoods (Miluka et al. 2010). Agriculture engages approximately 35% of the Albanian workforce, a stark contrast to the average of 2-4% in European Union countries (Worldbank 2022; Avdulaj et al. 2021). Despite the sector's substantial contribution to GDP, which accounted for 19% in 2022, Albania ranks the lowest in agricultural productivity compared to other European countries (Worldbank 2024; Avdulaj et al. 2021). The aftermath of collectivization left Albania with a highly fragmented agricultural land, characterized by an abundance of small subsistence family farms averaging a mere 1.1 hectares (Seidu & Önel 2018). The limited scope for growth and profitability, compounded by the unavailability of credit in rural areas, has hindered agricultural productivity and development (McCarthy et al. 2009; Lika 2015).

Remittance inflows represent a substantial economic lifeline for Albania, constituting a crucial source of income for many households (Lika 2015). Often perceived as a survival strategy, remittances alleviate poverty and stabilise families and the national economy (Borici & Gavoci 2015). Despite their magnitude, however, remittances are predominantly used for consumption rather than investment, with only a small fraction directed towards agriculture (Idrizi 2014; Lika 2015).

The impact of remittances on Albanian agriculture remains underexplored. Existing studies highlight a tendency from remittance-receiving countries to shift away from agriculture rather than invest in farm productivity (McCarthy et al. 2009; Miluka et al. 2010). This thesis aims to address this research gap by investigating the influence of remittances on subsistence farming in Albania. Specifically, it examines the utilization of farm assets and investment patterns among households receiving remittances from abroad, comparing them with non-remittance-receiving households.

In light of limited nationwide data on remittance utilization for agricultural investment, this study seeks to provide valuable insights into the role of remittances in shaping farm development and productivity in Albania.

2. Literature Review

2.1. Demographics and social aspects

Albania is a small country with a population of 2.7 million people. The population is rapidly declining, as can be seen in the Figure 1, as a result of continuous outmigration dating back to the 1990s, when the population of Albania was 3.3 million people. Comparing these numbers, it is visible that approximately one-third of the total Albanian population left the country and never returned. The population growth for 2022 was - 1.2% (WB 2024) Another negative effect of outmigration is the ageing population. According to WB (2024), the age dependency ratio, the ratio of people older than 64 to the working-age population, has been steadily growing since 1990 and reached 25% in 2022. At the same time, the birth rate is declining (WB 2024). In 2022, 36% of the population was rural, and the number is still declining. Albania is experiencing large movements of population not just out of the borders but also within. Mainly the rural areas are affected as the urbanisation is high, causing some areas to become depopulated (Lika 2015).

In 2022 Albania's Human Development Index reached 0.789, an improvement of 21.6% since 1990, which put the country in the High human development category (UNDP 2024). The proportion of the workforce employed in agriculture is still high. In 2022, 35% of the working population was employed in agriculture, while the average for European Union countries is 2-4% (WB 2024; Avdulaj et al. 2021).

A traditional family order and patriarchy still prevail in Albania, especially in the rural areas, with women and girls not being fully empowered and being exposed to poverty more than men. However, the situation is improving steadily, with the equality index moving from 0.330 in 1999 to 0.144 in 2021 (UNDP 2023). In the 2022 Global Gender Gap Index by the World Economic Forum, Albania was listed among Europe's three most-improved countries (UNDP 2023).

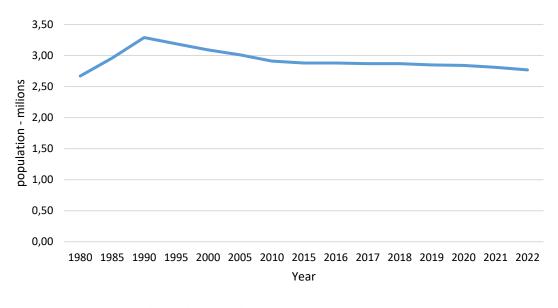


Figure 1: Total population, Albania Source: WB 2024

2.2. Economic situation

Albania's GDP per capita reached 6,810.1 USD with a growth of 4.9% in 2022, experiencing a decline from the previous year's 8.9% (WB 2024). Nevertheless, following the Covid-19 pandemic economic crisis, the Albanian economy showed resilience despite pessimistic expectations due to international turmoil. The expectations for the year 2023 are 3% growth, due to the contribution of tourism, domestic consumption and

construction sectors. Public expenditures experienced a slight decrease from 32.1% in 2021 to 30.5% in 2022 (UNDP 2023).

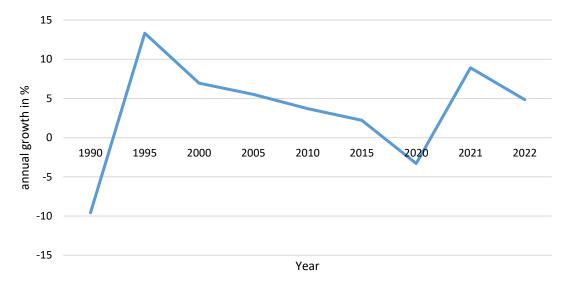


Figure 3: GDP growth, Albania Source: WB 2024

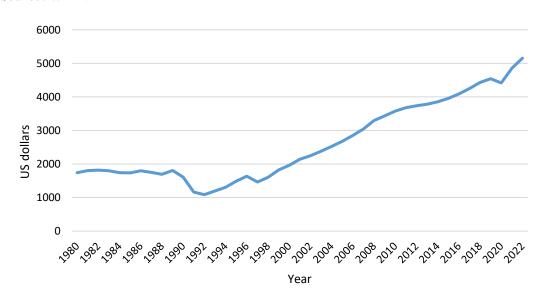


Figure 2: GDP per capita (USD)

Source: WB 2024

The overall poverty levels are high, with more than 43% of the population being at risk of poverty or social exclusion, while girls and women are the most vulnerable (UNDP 2023). The poverty rate has been slightly increasing in recent years, reaching 22% in 2021, with more than 620,000 individuals living below the at-risk-of-poverty threshold (UNDP 2023). Agriculture remains an important sector for the Albanian economy, as it employed 35% of the Albanian population and accounted for 18.6% of the GDP in 2022

(WB 2024). Unemployment has been generally decreasing over last years, reaching 11.6% in 2022 (WB 2024). According to Avdulaj et al. (2021), the increase in employment is mainly driven by women, who have filled 70% of the new positions, as well as the fight against informality, but also as a result of the ageing population. Despite the improvements in women's empowerment, according to UNDP (2023), access to employment opportunities continues to be constrained by gender roles and patriarchal norms. Women in Albania devote 22% to f their daily time to unpaid household tasks, while men contribute just 4%, and women's labour participation is lower by 16%compared to men's labour participation. Around 29% of the workforce was estimated to work in the informal sector (UNDP 2023). The inflation hit 6.7% in 2022, a 4% increase from 2021 (WB 2024).

Albania's economy faced several challenges over the last years as a consequence of the 2019 earthquake, the Covid-19 pandemic, and the price crisis. The government's main focus is now on full recovery with attention mostly on tourism, which is rising steadily as well as on agriculture, and digitization. Despite rising energy and food prices, private consumption, exports, and investment increased.

One of Albania's primary goals is to gain membership in the European Union(Saraci 2015). The process of negotiations was officially opened in 2022 and has been a strong driver for reforms in the country ever since (UNDP 2023).

2.3. Albanian agriculture

Despite the gradual contradiction of the sector since 1990, agriculture remains important for the national economy and vitally important for the livelihood of a large share of the population (Miluka et al. 2010; WB 2024). Albania remains dominantly rural, with 36% of the population living in rural areas (WB 2022). Agriculture still employs 35% of the Albanian population, while the average for EU countries varies between 2-4% (WB 2024; Avdulaj et al. 2021). Despite the relative decline in the total percentage of the population employed in the sector, agriculture still plays a key role in household economic strategies (McCarthy et al. 2009). According to McCarthy et al. (2009), about 60% of all households, urban and rural, have some income from on-farm activities, half of rural households derive their income only from agriculture, while over 90% of rural households undertake some on-farm activity. In the most remote northern parts of Albania, more than 90% of households derive their income from agriculture (Miluka et al. 2010). Nevertheless, the vast majority of agricultural production continues to be for home production (McCarthy et al. 2009). If the share of the agricultural sector in the GDP is compared with other European countries, Albania ranks last in terms of productivity of its agricultural sector (Avdulaj et al. 2021).

2.3.1. Land fragmentation

After the fall of communism, Albania carried out agricultural land reforms that were unique among transition countries due to theirapidity and intensity (Miluka et al. 2010). Unlike other transition countries, Albanian redistribution of land within the decollectivisation (with the de-collectivisation index highest of all transition economies in Eastern and Central Europe) was not based on restitution but the land was equally redistributed between all rural households (Miluka et al. 2010). This led to a highly fragmented sector, creating approximately half a million family farms with an average size of 1.1 hectares (Seidu & Önel 2018). According to Miluka et al. (2010), more than 90% of total farmland was privatised, with 550 state and collective farms split into 460,000 privately owned farms. Many new landlords have never owned any real estate before, therefore the knowledge of taxation and registration mechanisms was rather limited, which discouraged using, leasing or selling the farmland (Seidu & Önel 2018).

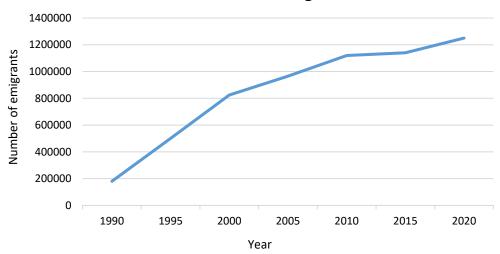
2.3.2. Credit constraints

Another challenge for the farmers when aiming to expand, further develop, or simply sustain the farm is the unavailability of credits and loans. The requirements of banks make it impossible for family farms to access loans. According to Lika (2015), some banks require a business record of twelve to 36 months before they will consider lending, with the level of collateral that must amount to 150% of the value of the loan. Most of the rural areas remain unbanked, as the population density is too low to be acceptable for banks to consider expanding their network in these areas (Lika 2015).

2.4. Albanian migration

Albania is a country on the move, with massive levels of both internal and international migration (Calogero et al. 2009). The intensity of Albanian migration, particularly in the

1990s, makes Albania a special case. In 2020, the number of Albanian emigrants exceeded 1.2 million, accounting for 43% of its current (Our World in Data 2024; Avdulaj et al. 2021). Due to the outmigration, the Albanian population went from 3.281 million inhabitants in 1990 to 2.862 million in 2019 (Avdulaj et al. 2021). That makes Albania one of the countries with the highest level of migration worldwide (Lika 2015). Between 1990 and 2005, 57% of Albanian families residing in the country at that time had at least one member ongoingly or previously engaged in international migration (McCarthy et al. 2009). Although, according to some researchers, the emigration flows from Albania slowed down after the year 2000, according to Avdulaj et al. (2021), the outflows experienced a rapid increase again in recent years.



Total number of emigrants

Figure 4: Total number of emigrants, Albania Source: WB 2024

Many Albanian households have perceived migration, whether temporary or permanent, as a livelihood coping strategy that has served as an important compensation for unemployment and other economic difficulties brought on by the transition to a market economy (Calogero et al. 2009; McCarthy et al. 2009). Since 1990, Albania has experienced large-scale movements of populations both within the country from rural to urban areas and international migration, which has caused at least one-fifth of the total population to live abroad by 2008 (McCarthy et al. 2009). During the first mass movements between 1989 and 2001, the total population fell by 4% and the rural population by 15% (McCarthy et al. 2009). Poverty, high unemployment, periodic political and financial crises of the 1990s, poor access to basic services, political

harassment, personal liberalization and self-expression, as well as the re-emergence of the blood feuds in the north have been the main push factors for immigration (Gërmenji & Milo 2011). The pull factors for the two main destination countries, Greece and Italy, were, at the time of its peak in 1990s, the exposure to the foreign media, significant wage differentials between Albania and its EU neighbours, increasing demand for cheap, flexible, and informal labour in those countries, as well as personal development and better opportunities for the future of migrants' children (Gërmenji & Milo 2011). There is no systematic data to document the year-on-year migration from Albania, except some data on individual emigration episodes such as 'embassy migrants' or the 'boat migrants' which is explained in the following subchapter (Gërmenji & Milo 2011). In recent years, the emigration of Albanians has been a phenomenon driven predominantly by economic factors and not by the attractiveness of host countries (Gjoni & Kora 2015). The desire of Albanians to emigrate is among the highest in the world, with only Togo, Sierra Leone, Congo, Haiti and Syria ranking higher (Avdulaj et al. 2021). According to Gjoni & Kora (2015), nowadays motives for migration from Albania are higher salaries, better working conditions and everyday life, better education and political motives.

2.4.1.1. Ageing of the Albanian population

Albanian migration has some major negative effects on its population structure and economy. One of the emerging problems is an ageing population. Over two-thirds of Albanian migrants are under the age of 30, while up to 16% are under the age of 20, and most of them never return. Therefore, the working-age population is decreasing (by 0.6% for the period 2015-2019) and the number of pensioners is increasing (by 12% for the same period, from the ratio of four contributors to one pensioner in 1990 to 1.5 to 1 in 2019, with a projected ratio 1.2 to 1 in 2030) (Avdulaj et al. 2021). Schools and universities are emptying and forced to shut down as a result of migration. There has been a 13% decrease in the population aged 0-19 only since the year 2015 (Avdulaj et al. 2021) Albania is experiencing a seemingly positive trend of decreasing unemployment. However, the decrease is likely not caused only by economic growth and the fight against the grey economy and informality but also by radical changes in the contributors to pensioner ratio. According to Avdulaj et al. (2021), a negative trend can be observed in the data on employment expressed as a percentage of the labour force, where there has been a considerable reduction since the year 2012.

2.4.1.2. Brain drain and depopulation of rural areas in Albania

Concerns have been raised about the migration of skilled, referred to as the brain drain phenomenon, yet there is no official data available on skilled Albanians abroad (Gërmenji & Milo 2011). According to Gërmenji & Milo (2011), Albania possibly experienced substantial outflows of its human capital, however, the impact migration has had on the development of the country remains unknown. Clearly, Albania is losing a considerable part of the young generations, especially the skilled students and graduates. According to Avdulaj et al. (2021), every year almost 20% of the best high school graduates apply to study abroad and never turn back. 13% of the total number of Albanian university students study outside Albania, which ranks the country first in Europe. About 30% of medical graduates have left Albania in recent years (Avdulaj et al. 2021). About 70% of students want to leave Albania after they finish school, stating as reasons low salary, no visions of a future and career, and loss of hope that the country will ever improve and sustain development (Avdulaj et al. 2021). Outmigration is mainly happening in rural areas. Many rural areas have become depopulated areas (Lika 2015).

2.4.1.3. Returnees to Albania

Nevertheless, Albania has experienced some return migration in the last two decades. According to Idrizi (2014), about 75% of emigrants returned after 2001, when the social and political situation stabilised. Most of the return migration to Albania is due to the declining opportunities in the host countries, for instance during the 2008 economic crisis, especially in Greece and Italy (Idrizi 2014; Seidu & Önel 2018). Nevertheless, most returnees only intend to stay in Albania temporarily until new opportunities abroad arise (Seidu & Önel 2018). In the survey carried out by the European Training Foundation in 2006, respondents indicated as main reasons for return extradition by the authorities, the expiration of their visas, but also to join their families and to live forever in Albania and other family reasons (Idrizi 2014). 57% of returnees stated they had no intention to emigrate again (Idrizi 2014).

According to European Training Foundation survey carried out in 2006, the majority of returned migrants were from Greece (68%), Italy (19%), the UK (6%), and Germany (4%). More than 70% sent remittances from abroad, with 56% sending money to their parents and 16% to their husband or wife. Only 6% stated they returned to Albania to start a new business, while 89% brought savings (Idrizi 2014).

Returnees represent a great potential for Albania, as they bring skills acquired from abroad, financial resources as well as links to networks and a greater commitment to institution building (Gërmenji & Milo 2011).

2.4.2. History of Albanian migration and remittances

Understanding Albanian migration requires exploring its historical context, which has profoundly influenced the nation's trajectory. The post-communist Albanian emigration is a phenomenon with a strong historical background (Vullnetari 2007). From enduring centuries under foreign rule to achieving independence in 1912, Albania's history reflects a struggle to maintain an ethno-national identity amidst battles, wars, successive invasions and occupations (Vullnetari 2007).

The first known significant wave of migration occurred during the Ottoman occupation era, driven by economic hardship and political instability, leading approximately a quarter of the population to flee between 1468 and the early 16th century (IOM 2024; Vullnetari 2007). The declaration of independence in 1912 did not bring relief, as Albania struggled with internal chaos, causing another mass exodus. Forced displacement intensified during conflicts like the Russo-Turkish War and the Balkan Wars, resulting in Albanians seeking refuge in other parts of Albania and Turkey (Vullnetari 2007). The late 19th century witnessed increased labour emigration, especially to Greece, coinciding with rapid industrialization in Europe and North America (IOM 2024; Vullnetari 2007).

Following Albania's independence in 1912, around 20,000-30,000 Albanians returned from the USA, bringing their savings with them, however, disappointed with the state of the first year of independent Albania, at least a third of these returnees re-emigrated, which led to entire villages being deserted, shifting the migration pattern from male-dominated to family-dominated (Vullnetari 2007).

After World War Two, Albania faced severe economic hardships exacerbated by communist rule under Enver Hoxha's dictatorship. The fall of the regime in the early 1990s ushered in a period of rapid demographic shifts and significant emigration. The turmoil preceding the 1991 democratic elections led to a mass exodus of migrants to Italy and Greece (Vullnetari 2007). The fall of communism "unleashed a demographic shift at an unprecedented pace, as individuals and entire households migrated to the cities or left the country altogether" (Calogero et al. 2009). Albania has suddenly experienced large-

scale movements of population from rural to urban areas, as well as international migration (McCarthy et al. 2009).

According to Calogero et al. (2009), within a decade, at least 600,000 Albanians lived abroad, with recent suggestions of over one million. Since 1990, at least one-fifth of the total population has emigrated, significantly impacting remittances, which became a major income source for many Albanian households and the national economy (McCarthy et al. 2009).

Following the fall of communism, Albania experienced record-high remittance inflows, peaking at 27% of GDP in 1993 (Borici & Gavoci 2015). These remittances, primarily intended for immediate family needs, also fuelled investments in private 'saving' pyramid schemes (Vullnetari 2007). Despite economic shocks like low output and high inflation during 1993-95, conditions improved temporarily (Jarvis et al. 2000). However, by 1996, budget deficits and inflation resurged due to illegal currency exchanges and fraudulent investment schemes fuelled by remittances (Jarvis et al. 2000; Blouchoutzi & Nikas 2014). The collapse of these schemes in late 1996 caused a financial meltdown, leading to political and economic turmoil, and inducing another wave of migration to Italy. Remittances played a crucial role in Albania's economic recovery during these years and were instrumental after the fall of the pyramid scheme collapse (Vullnetari 2007).

Ethnic cleansing in Kosovo in 1999 caused around 500,000 refugees to flee to Albania, further straining its fragile economy (Vullnetari 2007). The Kosovo crisis led to a surge in Albanian migrants, exceeding one million (Blouchoutzi & Nikas 2014).

Albania achieved economic and political stability from 2000 to 2007, marking a decrease in mass emigration (Vullnetari 2007; Carletto et al. 2006). Data on post-2000 migration are limited, making it challenging to determine migration patterns (Vullnetari 2007). The 2008 economic crisis decreased migration levels and triggered return migration (Seidu & Önel 2018).

2.5. Remittances

2.5.1. Remittances worldwide

The flow of remittances over the last 15 years has been increasing rapidly, exceeding official development assistance, and steadily exceeding foreign investment flow (Sobiech

2019). They have become even more important as a source of external financing in the post-COVID period and proved to be resilient (WB 2023). The growth of remittance flows to low- and middle-income countries exceeded World Bank's expectation for the year 2022, increasing by 8%, to reach 647 billion USD, following an 11% growth rate in 2021 (WB 2023). Given the seemingly difficult economic environment due to slowing economies around the world, inflation, and the war in Ukraine, the increase is remarkable (WB 2023). The growth of remittance flows just to Europe and Central Asia region reached a record high of 79 USD in 2022, which itself represented a 19% increase from the previous year (WB 2023). Despite Rusia's invasion of Ukraine, the majority of remittances in 2022 originated in the Russian Federation, from where record-high amounts of money were transferred to neighbouring countries, especially to the Commonwealth of Independent States (WB 2023). Nevertheless, the growth of remittances in 2023 is expected to slow down in all regions to an average 1.4%, to a level of 656 billion USD due to slowing economic growth in major source countries, lingering weakness inflows to Ukraine and Russia, and weakening of Ruble against US dollar (WB 2023).

Apart from exchange rates of local currencies with respect to the US dollar, the remittance flows are affected by the economic growth and the employment levels of foreign workers and by the oil prices (especially in the Russian Federation and member countries of the Gulf Cooperation Council) (WB 2023).

The role of remittances used to be relatively underestimated. Only in recent years, more attention was drawn to the subject with the big contribution of the UN Third International Conference on Financing for Development in Addis Ababa in 2015, during which remittances have been recognised as one of the potential sources of funding for the SDGs (Sobiech 2019).

According to Sobiech (2019), the importance of remittances in supporting families in developing countries was recognized and a well-functioning financial sector was considered necessary to boost migrants' transfers through lower costs and better service availability. According to Fromentin (2017), remittances have many positive impacts. It is widely agreed that remittances help ease the immediate budget constraints of recipients, and eventually enable them to access the official financial sector. They are considered the main compensation for the emigration country for the loss of a considerable part of its labour force and human capital, which is why they are seen as even more important than

foreign aid for poverty alleviation in developing countries (Blouchoutzi & Nikas 2014). However, there is no unitary consensus on the impacts of remittances on financial development in the long-run, which I further explain in the following subchapter.

2.5.1.1. Tracking remittances

Officially recorded remittances are generally underestimated since a large proportion of transfers are made through informal channels (Fromentin 2017; Ahmed et al. 2021). According to Ahmed et al. (2021), the amount of informal remittances could be around 50% or more of that recorded. Some researchers incline to even higher numbers. This is primarily due to the high transaction costs of formal channels that cause migrants to use informal channels for sending money back home (Ahmed et al. 2021). However, there are other reasons why migrants choose alternative channels. Migrants tend to rely heavily on informal transfer channels rather than bank transfers, due to a lack of financial sector development in the remittance-receiving countries (Fromentin 2017). According to Ahmed et al. (2021), poor migrants may feel uneasy about using a bank for remittance services and tend to prefer smaller financial institutions, money transfer operators or informal services, such as relatives, friends, transport companies or other alternative systems. Banks are the costliest channel for sending remittances, with an average cost of 12% during 2022, while the average cost of post offices was 6%, money transfer operators 5%, and mobile operators 4% (WB 2023). According to the 2016 UN SDG Report, the worldwide average rate of remittance fees at that time declined to 7% in 2019 (Ahmed et al. 2021). We can observe a negative development in lowering the costs of remittance transfers.

According to Metzger et al. (2019), mobile money transfer channels are often superior in terms of service-related features such as costs of transfers for sending and receiving households, speed of delivery, availability, and access to the remittances by receiving households or security of transactions. Nevertheless, according to WB (2023), mobile operations account for only a small part of the total transaction volume. Another option for migrants is Bitcoin, which is more technically challenging both in terms of infrastructure and literacy and more vulnerable to fraud, therefore it is an incomplete and inferior substitute to which migrants refer to only when their first option is not available or suffers from severe deficiencies (Metzger et al. 2019).

The willingness of migrants to use formal channels depends on the country's financial sector stability. According to Ahmed et al. (2021), recipient countries with well-developed and technologically advanced financial institutions attract larger remittance inflows through formal channels. Further, a country with a stable exchange rate receives higher remittance inflows (Ahmed et al. 2021).

There has been increasing interest in recent years among multilateral institutions such as the WB, IMF, or UN, in formalising remittances, which resulted in reducing the cost of remitting being one of the targets within the 2030 SDGs (Ahmed et al. 2021). According to Ahmed et al. (2021), a 1% decrease in the cost of remitting increases remittances by about 1.6%. Lowering the cost of remitting is beneficial for more reasons: it increases the funds available to migrants and members of their households who stay behind and could contribute to the development of the migrant's country, it helps increase flows through formal channels, especially banks, thereby contributing to the receiving country's foreign account balance, and it helps improve financial access for the poor, thereby expanding the formal financial sector (Ahmed et al. 2021).

Migrants send remittances for two main reasons: altruistic, related to supporting family members who stayed in the home country, and selfish, motivated by portfolio diversification reasons (Sobiech 2019). An altruistic motive can be seen especially during challenging situations in the home countries. A lower government and political stability, investment profile and socioeconomic conditions are associated with a rise in remittances (Ahmed et al. 2021). On the other hand, unexpected depreciation of the home country's currency can lead to a major surge in "portfolio motive" remittances as migrants remit their savings to purchase land, houses, and other durable assets back home (Ahmed et al. 2021). Sobiech (2019) argues, that official remittance data should only reflect the altruistic motive, as the second kind of transfers should be booked in the financial account (however, it is not always possible to determine the purpose of the transfer).

2.5.1.2. Impact of remittances on financial development

There is no clear consensus on the impact of remittances on the financial development of recipient countries, despite many studies carried out over the last decade. The impact proved to vary from the size of the country, level of development, and level of income, as well as from the history of the country's migration patterns and economic background, political situation, overall stability, and regulatory mechanisms. The empirical evidence

suggests that remittances in the short-run have a positive impact in most cases, however, in the long-run, the impact might be rather insignificant.

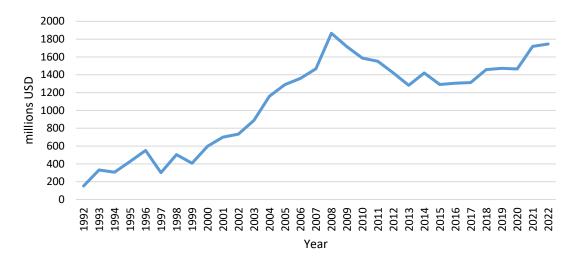
In short-run, remittances are mainly used for immediate consumption, easing the immediate budget constraints of recipients, enabling household and small-scale entrepreneurs to overcome credit constraints and imperfections in financial markets, then potentially providing an opportunity for small savers to gain access to the formal financial sector (Fromentin 2017).

By sending remittances, migrants enable households and small-scale entrepreneurs to overcome credit constraints and imperfections in financial markets (Calogero et al. 2009). Fromentin (2017) argues that remittances have insignificant or negative effects on financial development in the short-run for low-income countries as the remitted funds are not primarily used for financial investment purposes or savings, but rather for consumption purposes, which will not remain in the financial institution for a long time, even if retained. On the other hand, in the long-run, remittances could enable unbanked recipients to acquire certain financial products and services and be devoted to financial investment and savings that involve financial institutions, which can improve financial sector development (Fromentin 2017). The level of financial sector development itself defines the impact of remittances on economic growth. According to Sobiech (2019), there is evidence of a positive correlation between remittances and growth for countries with the least advanced financial sector, but the effect turns negative with increasing financial development and migrants' transfers become irrelevant. Fromentin (2017) argues, that remittances promote financial development by increasing the aggregate level of deposits and credits. However, Sobiech (2019) argues that if a country achieves a very high level of financial development and at the same time experiences an increase in remittance inflows, it could even experience long-run losses. According to Blouchoutzi & Nikas (2014), the positive effects of remittances on development are more important for countries with primitive or well-structured financial systems and less substantial for countries at an intermediate level. Looking at the issue from the perspective of income level, Fromentin (2017) suggests that remittances have a positive impact on financial development in the short run, except for low-income countries. According to Blouchoutzi & Nikas (2014), the impact of remittances on GDP is substantial only for the less developed remittance-receiving countries.

According to Fromentin (2017), remittances provide means through which recipients can open bank accounts, which leads to an increase in domestic credit to the private sector by banks, and liquid liabilities in the financial system, possibly permitting banks to further subsidize loans and further reduce overhead costs, thus improving financial sector development in the short-run. However, as Sobiech (2019) points out, if the financial sector is sufficiently large, additional transfers from migrants are not used in the most efficient way in the domestic economy.

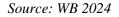
2.5.2. Albania's remittances and its impact on the country's development

Albania is among the top destination countries for remittance inflows (Borici & Gavoci 2015). Remittances to Albania provide important economic support for the families of emigrants as well as for the social and economic stability of the country (Lika 2015). According to Saraci (2015), 55% of Albanian emigrants send money to their families back home. As it can be seen in the Figure 6, the ratio of remittances in Albania's GDP peaked in 1993 when it reached 28%, following a continuous decline, except for another peak of 20% in 1998, followed by a decline in 1999 to 13%. Since 2001, when the ratio hit higher values again (18%), it has been slowly declining, reaching only 9% in 2022. Although remittances have fluctuated over time, they have been a considerable source of income for a large part of Albanian households and the national economy, and therefore have been regarded as a protective instrument for the Albanian economy (Borici & Gavoci 2015). According to WB, remittances for the period 1992-2009 could possibly reach even 27% of GDP, the size of a key sector of the economy, such as manufacturing (Blouchoutzi & Nikas 2014). As Blouchoutzi & Nikas (2014) point out, estimations are based on the official data but a considerable part of remittances was transferred through the informal channels, so the real figures are likely underestimated. Overall, the fact that remittances' percentage value of Albania's GDP has never been lower than 8.3% makes Albania one of the most potential receivers of remittances in Europe (Borici & Gavoci 2015). The 2008 global economic crisis negatively affected remittances to Albania, causing a decline from 14.5% in 2008 to 10% in 2013 (WB 2024; Seidu & Önel 2018). The decline in the ratio of remittances to GDP however, is caused by the slowing GDP growth. If we look at the data on personal remittances received, displayed in Figure 5, the numbers have been growing steadily since 1990, being only negatively affected first by the "pyramid schemes" crisis in 1997, and the 2008 global economic crisis, after which remittances



fully recovered only in the recent years, reaching 1.75 billion USD(WB 2024; Blouchoutzi & Nikas 2014).

Figure 5: Personal remittances received (current USD)



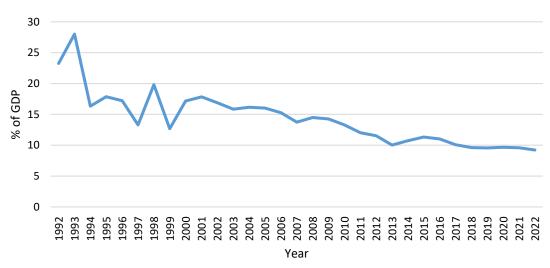


Figure 6: Percentage of remittances received to GDP Source: WB 2024

Despite initial attention that remittances received before the year 2010, considering their potential to improve conditions in the communities of origin and amongst households and individuals left behind (Miluka et al. 2010), as well as the positive effect remittances had on the country's economic growth, in 2014 Albania's Prime Minister Rama announced that remittances are no longer prioritized as a viable resource in the promotion of Albania's economic growth and development and that they no longer hold the potential in promoting the future of the country, so Albania must turn to other resources (Saraci

2015). According to Saraci (2015), remittances have certain characteristics unmatched by other sources, such as the ability to penetrate within the lower classes of society without any sort of hierarchy, to empower local voices through their market purchasing power and to be a non-volatile source of income during crises, therefore the government should focus on better ways of utilisation of remittances. According to Idrizi (2014), remittances should be primarily viewed, in the case of Albania, as an investment in human capital, as they increase access to better education and better health care, and improve the way of celebrating family rituals and celebrations, thus improving live and social status. Furthermore, remittances play a major role, although temporary as it is difficult to predict the flows in the medium-term, in the partial financing of the large trade deficit (Lika 2015).

Remittances also play an important role in the country's macroeconomic stability by financing imports, affecting the value of local currency and influencing the rapid development of the construction and service sectors (Lika 2015). As Blouchoutzi & Nikas (2014) argue, Albania's import of capital and building materials necessary for the reconstruction of its infrastructure was made possible by remittances and the foreign exchange they offered. Furthermore, according to Blouchoutzi & Nikas (2014), remittances contributed considerably to lowering the country's inflation rates and stabilization of its currency during the period 1993-1996, by directly affecting exchange rates and foreign reserves and stabilizing the nominal exchange rate. Saraci (2015) argues that it is important to consider that apart from physical capital, remittances bring social capital, increasing opportunities and the cultivation of new ideas as a result of the interactions between the Albanian diaspora and the country of origin. As Lika (2015) points out, remittances help increase transfers and savings within the banking system, making funds available for productive investment. Summing up the arguments, one simple reason why remittances should not be put aside but rather maintained by the government in the best possible way is as Saraci's (2015) argument that remittances still represent a considerable proportion of country's GDP, which should not be overshadowed by Albania's new sources of income.

As previously mentioned, it is difficult to predict remittance inflows in longer terms as they are affected by many drivers both within the recipient and sending countries. Most remittances sent by migrants are irregular and depend largely on the seasons (Saraci 2015). The observations suggest that migrants in steady jobs remit less money than ones in unsteady ones, while relative deprivation does not affect the size of remittances (Blouchoutzi & Nikas 2014). Seasonal workers for instance are more likely to send more remittances than permanent workers. According to Blouchoutzi & Nikas's (2014), the size of remittances seems to depend on the performance of the domestic banking sector which leads to higher remittances when it is low, the increasing international integration and better-quality institutions which help the inflow of monetary transfers.

2.5.3. The use of remittances in Albania

Whether remittances contribute to the economic development and growth of the recipient country depends on what they are used for (Blouchoutzi & Nikas 2014). As I discussed in the previous chapter, researchers generally agree that direct consumption of remittances might boost the economy of the recipient country in the short-run but to sustain the growth in the long-run, investment and further transactions are needed. According to Idrizi(2014), remittances to Albania serve mainly as a strategy for survival and reduction of poverty, and despite their large amount, they are generally not used for investment or other economic activities.

According to Blouchoutzi & Nikas (2014), the initial remittances in the 1990s were almost exclusively used for financing basic needs, constructing or repairing houses, purchasing clothes and medical care, or acquiring land and livestock, which can be explained by the fact that more than one-quarter of the Albanian population was living below the poverty line. Nevertheless, it appears that the situation has not changed much over the years. Researchers agree that the remittances nowadays are still mostly used for direct consumption, meaning for daily needs such as food, clothing, etc., however, part of them is used to improve quality of life via electronics, furniture and other equipment, part is used to expand and build new homes, and lastly a small portion is kept in the bank or at home as savings (Idrizi 2014; Lika 2015). According to Saraci (2015), 90% of worldwide remittances are used for direct consumption and only 10% for investment. To my best knowledge, data on the proportion of Albanian remittances used for investment are limited, and precise data on investment in agriculture do not exist, as no nationwide research has been carried out.

In 2005, the European Training Foundation conducted a survey covering the usage of Albanian remittances. Respondents were asked to provide four main purposes for the remittances they receive. If all the responses on the usage are examined, the order of priority is as follows: 56% for daily needs of households, 15% for home furnishing, 11% for savings, 8% for investments in economic activity, 7% for buying property, 2% for education and less than 1% for renting a real estate (Idrizi 2014).

2.5.4. Remittance channels to Albania

According to Blouchoutzi & Nikas (2014), the level of education, the stable character of employment, the existence and the use of a bank account and intermediation and the availability of a medium to long-term investment plan are all factors that positively affect the size of the investment. This is a problem in Albania, as the education levels are low in rural areas, where investment is most needed, and the use of banks is limited. According to Saraci (2015), only 26% of the remittances' recipient households have bank accounts. The same study argues that the low use of banking services is partially influenced by a mistrust of households in the Albanian financial system, combined with a lack of knowledge of the products and services that banks offer, so there is a preference to hold cash rather than in bank or saving accounts, and partially by the tendency of banks to see migrant families as low potential customers. Albanian government does not promote the use of formal financial channels for transferring remittances, or the provision of training in financial aspects for migrants and their families (Lika 2015). According to Fromentin (2017), remittances can positively affect the growth of formal financial channels by standardizing the local banking sector up to the international standard by allowing households to accumulate savings and obtain loans for long-term investments. Nevertheless, this is not the case in Albania. There is a growing number of micro-finance institutions providing loans, and money transfer businesses that are preferred by Albanian migrant households over the official state banking system (Lika 2015).

2.5.5. Effects of remittances on agriculture in Albania

Migration from Albania has caused whole villages to be depopulated. Rural areas in particular have been affected by emigration as the majority of outflows originate there (Miluka et al. 2010).

2.5.5.1. Investment of remittances in agriculture

As previously mentioned, evidence suggests that remittances to Albania are primarily used for direct consumption and only a small part is used for savings and investment. The data on the investment of remittances to agriculture are limited. However, several researches have been conducted, suggesting that investment in agriculture is rather insignificant in Albania. According to Miluka et al. (2010), only a small fraction of the remittances is invested in agriculture but they are rather used by rural households as a strategy to move out of agriculture. McCarthy et al. (2009) and Miluka et al. (2010) suggest that Albanians do not invest in agriculture because the sector gives little prospects for growth as it remains underdeveloped and subsistence-oriented with a lack of profitability, combined with lack of infrastructure, incomplete credit and labour markets, and lack of agricultural policy void. As Seidu & Önel (2018) state, the pessimistic approach to international migration suggests that remittances are rarely used for productive investment but they lead to higher consumption and prices for non-tradable goods. According to Carletto et al. (2004), only 12% of households receiving remittances use them for investment or purchase of durable goods. Seidu & Önel (2018) suggest that remittances have potential rather for nonfarm investment in rural areas, however, if the development is to be achieved, remittances need to be supplemented by financial services and government support, and further improvements in property markets and commercial regulations.

2.5.5.2. Decreasing work efforts in agriculture

Remittances serve as a household strategy for diversifying risks and relaxing liquidity and credit constraints, however, these positive impacts can be reversed by adverse effects such as reduced household labour supply, weakened human capital and reduced labour efforts by members left behind (Miluka et al. 2010). As a result of higher income, members of the household might decide to reduce the amount of work and increase leisure time, which raises concerns about the overall productivity at both household and country levels (Miluka et al. 2010). Nevertheless, to my best knowledge, the empirical evidence suggests that migration has rather non or positive impacts on the agricultural incomes of migrant households.

2.5.5.3. Farm efficiency and productivity

Households might manage to work less intensely by relocating land use towards less labour-intensive systems, such as livestock, resulting in higher household income (McCarthy et al. 2009; Miluka et al. 2010). According to Miluka et al. (2010), households rather than investing in farm technology such as chemical fertilisers and equipment invest in purchasing livestock as it is more cost-efficient. Concerns have been raised about decreased productivity as a result of the loss of the youngest and most productive household members, as they are the ones who migrate the most (McCarthy et al. 2009). This is strongly connected to the phenomenon of feminisation of agriculture as migration from rural areas is male-dominated and the women are left behind. As a result, women and teenagers work longer hours in the family plots to compensate for the lack of male labour (Miluka et al. 2010; McCarthy et al. 2009). Miluka et al. (2010) argue that remittances recipient household might decrease their labour effort in agriculture, as their budget improves, so they no longer need to work hard on the land, and not necessarily allocate the resources to more productive non-agricultural activities. However, according to McCarthy et al. (2009), remittances do not negatively affect agricultural incomes, they rather facilitate the transformation of agriculture into less labour-intensive, secondary activity, or transition out of agriculture. Seidu & Önel (2018) state that remittances may allow household members to participate in local off-farm activities. McCarthy et al. (2009) argue that, in the case of Albania, migration is not contributing to agricultural productivity as the sector is not perceived as a viable investment.

3. Aims of the Thesis

3.1. Main objective

This thesis aims to comprehensively investigate the impact of remittances on subsistence farming practices in Albania, with a focus on understanding how remittance inflows influence agricultural investment.

3.2. Specific objectives

The main objective of the thesis will be accomplished through specific objectives:

- a) Examination of the allocation of remittances towards utilisation of agricultural assets and investment patterns in agriculture
- b) Investigation of the relationship between remittance inflows and agricultural investment behaviours among subsistence farmers in Albania
- c) Evaluation of the impact of remittances on household labour dynamics in subsistence farming households in Albania, analysing investment in employment of permanent/temporary workers

4. Methods

4.1. Target area

The research focussed on assessing the impact of remittances on subsistence farming within the context of the whole country of Albania. Albania was chosen as the target area due to its significant reliance on subsistence agriculture as a source of livelihood, coupled with the substantial importance of remittance inflows for the Albanian economy. Respondents were from different regions in Albania. The Majority of respondents were from districts: Vlore (47.2%), Shkoder (11.1%), Lezhe (8.3%) and Berat (8.3%).



Figure 7: The distribution of respondents according to residence

4.2. Data collection and target group

An online quantitative questionnaire survey was designed to gather comprehensive data on various aspects related to the effect of remittances on subsistence farming in Albania. The survey was conducted between September and December 2023. Before the survey, the questionnaire was tested on a pilot group of three respondents, students of the Agricultural University of Tirana, and was subsequently adjusted. The survey was supported by the staff of the Albanian Network for Rural Development, who translated the questionnaire from English to Albanian and helped with its distribution to local farmers. The final sample includes 36 respondents in total from different parts of Albania. Albanian agriculture is characterized by highly fragmented land causing the average farm to be a size of 1.1ha (Seidu & Önel 2018). These are mainly subsistence farms with only some share of the production being sold on local markets. The final sample only includes respondents related to farms that are smaller than five hectares in size.

Non-random snowball sampling was used to select the respondents. Only one member of each household was included in the survey. In the majority of cases, this was the head of the household, who was in most cases male and only a small part of respondents were female (25%), which can be explained by the traditionally patriarchy-based households where usually only in the absence of head man (for instance if he migrated) the women take the lead (UNDP 2023). The majority of respondents were university graduates (47.4%) or high school graduates (34.2%) which does not represent the typical structure of Albanian society, especially in rural areas. Respondents were from various age groups, most frequently from the 60+ age group (31.6%), followed by age group 31-45 (26.3%), 21-30 age group (23.7%), and age group 45-60 (13.2%). All respondents were Albanian citizens.

The semi-structured questionnaire (the full questionnaire can be seen in Annex 1) contains the following information about the respondent and farm characteristics, farm livelihood activities and migration in the survey year 2023:

- a) Respondent characteristics (gender, age, education, citizenship, area of residence, position on the farm)
- b) Household composition (number of members including children (younger than 15 years), adults (between 15 and 60 years old) and elderly people (older than 60 years)), family farm labour

- c) Information about the farm (farm area, number of plots, land ownership, livestock and crops produced)
- d) The proportion of production sold and consumed, processed products
- e) Utilization of productive assets (farm machinery, chemical inputs, irrigation), employed workers
- f) Market characteristics (marketplace, income, family members involved), credits and loan availability, government subsidies
- g) Migration and remittances patterns (migrant characteristics, host country, remittances received, increased labour, impacts on farm)
- h) Utilization of remittances
- i) Constraints faced

4.3. Methods

The collected data were analysed using the Statistical Package for the Social Sciences (SPSS) software. This software facilitated the application of both descriptive and inferential statistical techniques to explore the relationships between remittances and subsistence farming practices.

Descriptive statistics

Descriptive statistical analysis was employed to summarize the collected data. This approach facilitated the characterization of respondent demographics, household composition, farm characteristics, market behaviours, household economic situation, migration patterns, remittance utilization, and perceived constraints in subsistence farming.

The data collected on the respondents' demographic profiles included gender, age, education level, citizenship, area of residence, and role within the family and on the farm. The structure of subsistence farming households and the extent of family involvement in agricultural activities were examined from data on household composition, including the number of household members, the distribution of adults, children, and elderly members, and their involvement in farm activities. Information regarding farm characteristics such as farm area, land ownership status, types of crops and livestock produced, utilization of production for household consumption versus sale, and the use of machinery, irrigation facilities, and agricultural inputs was gathered to analyse the distribution of these farm attributes among the surveyed farmers, providing insight into the diversity of their farming practices. The extent of market engagement of farms was analysed using data on market participation patterns, including sales outlets for agricultural products, reliance on agricultural income, and the distribution of responsibilities for selling farm products within the household. Furthermore, the financial status of respondents was analysed to assess the financial conditions of farmers and the economic viability of farms, using collected data that included access to loans, receipt of government subsidies, sufficiency of farming income for living, and profitability of agricultural production. To analyse the prevalence of migration among farming households, the extent of remittance inflows, and the investment behaviours, the data on migration patterns, remittance receipt, and utilization of remittance inflows were used. The last section included the identification of the most common constraints encountered by farmers, using data on credit constraints, market instability, labour shortages, and environmental challenges.

Inferential statistics

The Pearson χ^2 test (Pearson 1900) and Fisher exact (Fisher 1922) test were applied for binary or categorical dependent variables to explore potential associations between receiving remittances and various aspects of subsistence farming practices and household investment. A specific focus of the inferential analysis was to examine the relationship between the receipt of remittances and investment behaviours among subsistence farmers. This included analysing whether households receiving remittances were more likely to invest in education, health, farm assets, development initiatives, or savings than those not receiving remittances. The Pearson χ^2 test of independence was used to determine whether there is a significant association between migrant households receiving remittances and utilization of productive assets and investment in farm labour. Fisher exact test was used when the expected frequency was lower than five.

5. Results and discussion

The findings have been organized into two sections. Initially, descriptive statistics were employed to analyse the collected data, highlighting key characteristics of the sample and presenting an overview of the survey questions results. Subsequently, inferential statistics were applied to further analyse the variables identified in the descriptive analysis, utilizing the Pearson $\chi 2$ test and Fisher exact test. These results will be compared to the findings of previous empirical studies within the field.

5.1. Descriptive statistics

The descriptive analysis provides an initial summary of the collected data, detailing the outcomes derived from the analysis of survey responses. This section organizes the data using frequencies, presenting specific percentages and means. Additionally, qualitative questions provided valuable insights into the issue under investigation.

5.1.1. Respondent demographics

The majority of respondents were men of their working age. Only 25% of respondents were women. All respondents were Albanian citizens, the majority of them being from Vlorë district, characterised as predominantly rural, however with the lowest poverty level of all regions (AMARD 2022). As of the proportion of households with members residing abroad, Vlore district ranks in the middle as can be seen in the Table 1 (IOM 2020). About 50% of respondents were university graduates and 36% were high school graduates which does not represent the broad rural population where education levels are generally low (Saraci 2015).

District	With members residing abroad				
	No emigrating member	Total	All	Some members	
Total Albania	77.9	22.1	6.6	15.5	
Berat	75.5	24.5	4.6	19.9	
Dibër	74.1	25.9	2.7	23.2	
Durrës	73.7	26.3	7.2	19	
Elbasan	77.4	22.6	5.6	16.9	
Fier	71.5	28.5	5.1	23.4	
Gjirokastër	86.3	13.7	5.4	8.3	
Korçë	85.7	14.3	5.7	8.6	
Kukës	67.9	32.1	2.3	29.8	
Lezhë	85.7	14.3	3.3	11	
Shkodër	71.2	28.8	7	21.8	
Tirana	80.9	19.1	10.3	8.8	
Vlorë	79.2	20.8	4	16.8	

Table 1: Albanian household structure by emigration profile and district (% of total households)

Source: IOM 2020

Variable	Frequency	Valid percentage
Gender		
Female	9	25.0
Male	27	75.0
Age		
21-30	9	25.0
31-45	10	27.8
45-60	5	13.9
60+	12	33.3
Citizenship		
Albanian	36	100.0
Education		
secondary school	4	11.1
high school	13	36.1
university degree	18	50.0
post-university degree	1	2.8
Residence		
Berat	3	8.3
Durrës	2	5.6
Fier	1	2.8
Korcë	2	5.6
Kukës	2	5.6
Lezhë	3	8.3
Shkodër	4	11.1
Tirana	2	5.6
Vlorë	17	47.2

Table 2: Respondents' demographics

5.1.2. Household and farm characteristics, and agricultural production

Respondents' average household consisted of five members with an average of less than one child per household. Family members older than 15 years were considered adults. Every household had on average one elderly member.

Table 3: Household characteristics

Variable	Mean
Family members	5.029
Children 0-15years	0.778
Elderly 60+years	1.167
Active on farm	2.833

The majority of respondents possessed farms smaller than one hectare in size, with only one respondent stating farm-range between three to five hectares. This observation aligns with the prevailing agricultural landscape in Albania characterized by highly fragmented agricultural land, a result of de-collectivization, which led to the creation of roughly half a million family-owned farms, averaging 1.1 hectares in size (Seidu & Önel 2018). The average number of parcels was three to four. Almost 30% of respondents stated that they rent agricultural rent. Exactly half of the respondents stated they do employ workers on their farm, while 36% employ seasonal workers and only 5.6% employ permanent workers. Roughly 78% of farmers utilize machinery, with 26% of farmers renting some of the equipment necessary, while 13% of respondents stated they borrow some of the machinery from neighbours. Almost half of all respondents (44.4%) own an irrigation system. While a significant portion of respondents (71%) recognised the general availability of chemicals, the majority expressed that purchasing of them is expensive for their households. A substantial majority (94.4%) of farmers reported using organic fertilisers. A parallel scenario was observed with seeds, as 73.7% of respondents highlighted the expense associated with purchasing them. Exactly half of the respondents indicated purchasing seeds, whereas 28.9% reported preserving their own seeds. 42% respondents utilise livestock production and 42% further process their products.

Variable	Frequency	Valid percentage	Mean
Farm size			
less than 1ha	12	33.3	
3-5ha	1	2.8	
number of parcels			3.6
Land ownership	30	83.3	
renting the land	10	27.8	
Employees	18	50	
seasonal	13	36.1	
permanent	2	5.6	
seasonal and permanent	2	5.6	
Machinery	28	77.8	
rented machinery	10	26.3	
borrowed machinery	5	13.2	
Irrigation system	16	44.4	
Inputs			
chemicals usage	22	61.1	
organic fertilisers usage	34	94.4	
high costs of chemicals	33	91.7	
availability of chemicals	27	71.1	
preserving seeds	11	28.9	
buying seeds	19	50.0	
high costs of seeds	28	73.7	
Production			
livestock production	16	42.1	
processed products	15	41.7	

5.1.3. Households' economic information

On average, approximately half of the farm production is sold, while the rest is consumed within the household. This supports data from 2009, suggesting that majority of agriculture production in Albania remains for home consumption (McCarthy et al. 2009). However, responses exhibited significant variation, ranging from 90% of production being sold to production solely intended for household consumption. For approximately one-third of respondents, farm income represents their sole source of earnings. Only 19% of respondents reported that farm profits would suffice to sustain their livelihood. Less

than half of respondents stated that credits are easily available. Additionally, 42% of respondents reported receiving some form of subsidies.

When asked to describe their economic situation, respondents often mentioned that the revenues from farms are not high enough to make further investments in farm development. Further, respondents pointed out water scarcity, high costs of fertilisers, chemicals, and fuels, lack of competition on the market, low selling prices, and lack of government support. Many were talking about survival circularity, saying they only make enough income to sustain their fundamental needs.

Table 5: Household economic information

Variable	Frequency	Valid percent	Mean
% of production sold			47
only farm income	11	30.6	
credit availability	17	47.2	
receiving subsidies	15	41.7	
profits make living	7	19.4	

5.1.4. Migration and remittance inflows

Almost 45% of all respondents stated they have a family member who has migrated in the past. Given that by 2020, there were 43% of the Albanian population abroad, this comes as no surprise (Avdulaj et al., 2021; Our World in Data 2024). In all cases, these were males, which supports the evidence that the majority of Albanian migrants are men (Lika 2015). The most frequent migrant's destination country was Greece, followed by Italy, and only two respondents stated their relative migrated to Germany and only one in the United Kingdom. No other destination countries were mentioned. These findings support the empirical evidence of Greece and Italy being the top destination countries, followed by Germany and United Kingdom in recent years (Gërmenji & Milo 2011; Idrizi 2014, IOM 2024). The migration year ranged widely from 1991 up to the year when this survey was conducted. 60% of these migrants had permanent jobs abroad while 40% were seasonal workers. The majority of respondents were employed as manual labourers, primarily in construction, agriculture, or factories. Only two respondents stated that their relatives held more skilled positions, one as a financier and another as a manager. According to Avdulaj et al. (2021), the aspiration of Albanians to migrate ranks among

the highest globally. In this study, a significant majority of respondents (67%) indicated that they are considering emigration, primarily citing economic motives as the driving force. Few respondents mentioned education as a motivating factor. These results align with Gjoni and Kora's (2015) findings that nowadays motives for Albanian migration are higher salaries, better working conditions and everyday life and better education. 19% of respondents reported receiving monetary remittances, and 21% reported receiving remittances in the form of goods. These findings align with Saraci's (2015) research, which suggests that 55% of Albanian emigrants send money to their families (considering that 45% of respondents were from migrant families).

Variable	Frequency	Valid percent
Family member migrated		
yes	19	44.7
no	17	50
Migrant's gender		
men	19	100
women	0	0
Destination country		
Greece	25	69.4
Italy	8	22.2
Germany	2	5.6
United Kingdom	1	2.8
Seasonal/permanent work		
seasonal	8	60
permanent	12	40
Desire to leave		
yes	24	66.7
no	12	33.3
Remittances- money		
yes	29	80.6
no	7	19.4
Remittances- goods		
yes	11	28.9
no	8	21.1

Table 6: Migration and remittance inflows

When asked how respondents utilize the remittances they receive, the majority reported immediate consumption, healthcare, and education. Savings and investment in farm assets were mentioned as the third and fourth most common use of remittances. The least common responses included using remittances for farm development or abandonment of the agricultural sector. These results are similar to the results of European Training Foundation survey conducted in Albania in 2005, in which the priority order was as follows: 56% for daily needs of households, 15% for home furnishing, 11% for savings, 8% for investments in economic activity, 7% for buying property, 2% for education and less than 1% for renting a real estate (Idrizi 2014).

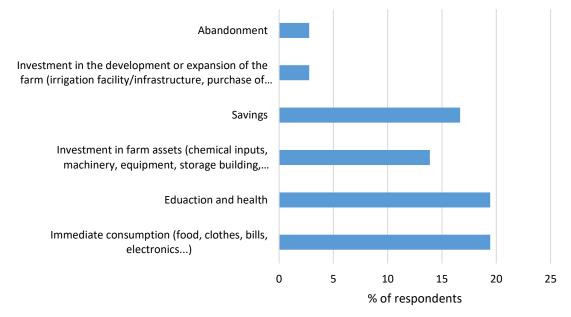


Figure 8: Utilisation of remittances

5.1.5. The effect of remittances on agricultural production

Almost half of the respondents (42%) stated that the migration of family members had some negative effects on the farm, and 10% stated there were no negative effects. In 34% of cases, the migration of family members has caused an increase in farm labour for the household. These results support previous findings that suggest that migration of household members results in reduced household labour supply, decreased productivity, weakened human capital, and reduced labour efforts by members left behind (McCarthy et al. 2009; Miluka et al. 2010). This can be compensated by remittances, which can, by increasing the family's income, enable the household to relax labour efforts (Miluka et al. 2010). The majority of respondents did not specify the original role of the migrant family member on the farm. The limited responses received encompassed a range of roles, including labourers, administrators, marketers, and heads of households.

5.2. Inferential statistics

This section presents the outcomes of the analysis of variables identified in the descriptive part, shedding light on the potential association between remittances and agricultural investment. Five specific variables were selected to assess differences between households receiving remittances and those that do not, particularly focusing on the utilization of assets such as irrigation systems, machinery, employed workforce and livestock production. The table below presents a summary of results, displaying coefficients and corresponding p-values for households that utilized assets, employed workers, or utilised livestock production, differentiated between those receiving remittances and those that do not. The results are further explained in the following subchapters.

	Remittance receiving HH	Non-remittance- receiving HH	Total	Coefficient	p-value
Irrigation	3.1	12	16	0.925	1.000
Machinery	5.4	22.6	28	0.115	0.309
Employees	3.5	14.5	18	0.674	1.000
Livestock	3.1	12.9	16	0.346	0.426

Table 7: Summary of the results of Fisher exact test

5.2.1. Irrigation system vs. remittance-receiving households

The association between the ownership of an irrigation system and remittance-receiving households and households without remittances was investigated using a contingency table analysis. The table below summarizes the observed counts and expected counts for each combination of categories.

Table 8: Utilisation of irrigation systems

	Remi	ttances		
	Yes	No	Total	
Irrigation system: yes	3	13	16	
	3.1	12.9	16	expected count
Irrigation system: no	4	16	20	
	3.9	16.1	20	expected count
Total	7	29	36	
	7	29	36	expected count

Due to the presence of expected counts less than 5 in 2 cells, Fishers's exact test was performed. The exact p-value for Fisher's test was 1,000 (p > 0.05), proving that there was no evidence of an association between receiving remittances and utilisation of the irrigation systems.

The results suggest that there is no statistically significant relationship between the utilisation of irrigation systems and receiving remittances within the households. Fisher's exact test failed to reject the null hypothesis of independence between these variables.

Remittances have a potential to enable farmers to invest in productive assets such as irrigation systems (Ducrot 2017; Böhme 2015; Manivong et al. 2014). However, the results of this study do not support these assumptions. According to Miluka et al. (2010), households rather than investing in farm assets invest in purchasing livestock as more cost-efficient system. However, this study found no association between remittances and livestock production as I expense in following chapter.

5.2.2. Utilisation of machinery vs. remittance-receiving households

The contingency table below summarizes the observed counts and expected counts for an analysis of the association between the utilisation of machinery and receiving remittances. Due to the presence of an expected count less than 5 in one cell, Fisher's exact test was performed. The exact p-value for Fisher's test was 0.309 (p > 0.05) providing no evidence of an association between receiving remittances and utilisation of machinery. The results suggest that there is no statistically significant relationship between the utilisation of machinery and receiving remittances. Fisher's exact test failed to reject the null hypothesis of independence between these variables.

Table 9: Utilisation of machinery

Remittances				
	Yes	No	Total	
Machinery: yes	7	21	28	
	5.4	22.6	28	expected count
Machinery: no	0	8	8	
	1.6	6.4	8	expected count
Total	7	29	36	
	7	29	36	expected count

Similarly as with irrigation systems, there is an evidence that farmers receiving remittances utilise them to invest in assets like machinery (Baird et al. 2019; Qian et al. 2016; Yang et al. 2016), however this study has not proved any association between receiving remittances and utilisation of machinery.

5.2.3. Employees vs. remittance-receiving households

Further investigation focused on the relationship between the employment of workers on the farms and receiving remittances. The contingency table below summarizes the observed counts and expected counts for these variables. Due to the presence of expected counts less than 5 in two cells, Fisher's exact test was performed. The exact p-value for Fisher's test was 1.000 (p > 0.05) providing no evidence of an association between receiving remittances and employing workforce on the farms. The results suggest that there is no statistically significant relationship between the employment of workers and receiving remittances. Fisher's exact test failed to reject the null hypothesis of independence between these variables.

	Yes	No	Total	
Employees: yes	4	14	18	
	3.5	14.5	18	expected count
Employees: no	3	15	18	
	3.5	14.5	18	expected count
Total	7	29	36	
	7	29	36	expected count

Table 10: Employed workers

In some countries, remittances are used to employ farm workers to compensate for lost labour caused by migration (Xu 2017; Thieme 2014; Maharjan et al. 2013). This study does not support these finding in the Albanian context as there is no association of remittances and employed workers on the farms.

5.2.4. Livestock production vs. remittance-receiving households

Lastly, the relationship between livestock production and receiving remittances was analysed, based on the hypothesis that remittance-receiving households might use the remittances for shifting their production towards a more efficient and less labour-intensive system (Ochieng et al. 2017; McCarthy et al. 2009; Miluka et al. 2010) The contingency table below summarizes the observed counts and expected counts for these variables. Due to the presence of expected counts less than 5 in two cells, Fisher's exact test was performed. The exact p-value for Fisher's test was 0.426 (p > 0.05) providing no evidence of an association between receiving remittances and utilising livestock production. The results suggest that there is no statistically significant relationship between livestock production and receiving remittances. Fisher's exact test failed to reject the null hypothesis of independence between these variables.

	Yes	No	Total	
Livestock: yes	2	14	16	
	3.1	12.9	16	expected count
Livestock: no	5	15	20	
	3.9	16.1	20	expected count
Total	7	29	36	
	7	29	36	expected count

The overall findings suggest that households tend not to utilize the remittances for investment in farm development, as indicated by the analysis of the relationship between receiving remittances and four variables (utilization of irrigation systems, machinery, livestock production, and employment of farm workers). These results support the finding of prior research conducted in Albania in 2005 by European Training Foundation, which found that only a very small fraction of remittances is directed towards productive investment (Idrizi 2014). This finding is consistent with empirical evidence from other

countries, which generally concludes that remittances are not typically used for investment purposes (Seidu & Önel 2018; Lika 2015; Saraci 2015; Carletto et al. 2004). Researchers generally concur that remittances rather facilitate off-farm investment (Seidu & Önel 2018; Fromentin 2017; Lika 2015), or, in the context of Albania, transition out of agriculture due to the limited growth prospects in the sector (Miluka 2010; McCarthy et al. 2009)

6. Conclusion

Migration has become a vital livelihood strategy for many Albanian households, serving as a means to cope with economic challenges, driven by the pursuit of higher salaries, improved working conditions, and education opportunities. Albania stands out among countries with the highest rates of migration worldwide. Despite the trend towards urbanization, the country remains predominantly rural, with more than one-third of the population residing in rural areas. The agricultural sector still plays a major role in Albania's economy, employing large part of its workforce and significantly contributing to country's GDP. Despite its significance, agriculture remains underdeveloped with low productivity, largely attributed to the high fragmentation of land following decollectivization, that has resulted in a large number of small family farms.

The poverty levels remain high with almost half of the population at risk of poverty, while the rural areas are the most exposed. Remittances play a crucial role in addressing this hardship by providing an additional income for many households. At least half of all migrants send some form of remittances back home. The empirical evidence suggests that most remittances serve the purpose of direct consumption, with only a small proportion of them directed towards investment. Existent literature on the investment of remittances in agriculture in Albania is limited.

This thesis aimed to address the research gap by investigating the influence of remittances on subsistence farming in Albania, particularly examining the utilization of farm assets and investment patterns among remittance-receiving households compared to nonremittance-receiving households. Despite the assumptions that households might use the remittances for investment in the development of the farm, the results of this study suggest that households do not invest in agriculture. The study did not find statistically significant associations between receiving remittances and the utilisation of farm assets. Previous studies suggested that households receiving remittances might invest in shifting their production to less labour-intensive and more efficient systems such as livestock production. The study did not prove any associations between livestock production and receiving remittances. Furthermore, the relationship between receiving remittances and the employment of workers on farms proved to be insignificant.

In conclusion, the study indicates that remittances do not typically translate into agricultural investments. This finding aligns with previous research indicating that remittances are mainly used for direct consumption and only a small portion is directed towards productive investments. In the context of agriculture, remittances appear to function more as a strategy to transition away from agricultural activities.

7. Limitations

Several limitations must be acknowledged when interpreting the results of this study. Firstly, the sample size was relatively small, consisting of only 36 respondents. This limitation was primarily due to challenges in reaching rural subsistence farmers, combined with language barriers and logistical constraints. Additionally, the limited duration of fieldwork, which spanned only one month, constrained the establishment of sufficient contacts necessary for the widespread distribution of the questionnaire. Moreover, the sample composition is not representative of the broader Albanian

population, particularly rural subsistence farmers. The majority of respondents were university graduates and residents of, among the other districts richer, Vlore district, which introduces a bias toward wealthier and more educated participants. This bias limits the generalizability of the study findings to the broader population of rural subsistence farmers in Albania.

8. Recommendations

Given the high fragmentation of land and the small size of farms in Albania, forming agricultural cooperatives could be instrumental in overcoming challenges related to the market competition and bargaining power. By establishment of cooperatives, farmers could benefit from economies of scale, better access to inputs, and improved market visibility. Cooperatives would also enable farmers to negotiate their interests and lobby for better conditions by strengthening their voices. Government support and capacity-building programs should be provided to encourage the formation of such cooperatives.

Further, the government should prioritize investment in infrastructure in rural areas to enhance market connectivity and convenience of the sector for farmers, as well as to keep people in rural areas by providing better public services. Facilitating access to financial services is crucial for farmers, enabling them to access credits and loans as well as provision subsidies.

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Appendix 1: Survey questionnaire – an English version

This form was created by a student of the Czech University of Life Sciences in Prague, Czech Republic, as a part of her thesis research on the effects of migration on subsistence farming in Albania.

- 1. Information about the respondent
 - a. Gender male/ female
 - b. age
 - c. education
 - i. primary school
 - ii. secondary school
 - iii. high school
 - iv. university degree
 - v. post university degree
 - d. citizenship
 - e. the area of residence
 - f. role (position) on the farm, in the family
- 2. Information about the household
 - a. Household composition: number of members

number of adults (older than 15years)

number of children (0-15 years)

elderly (60+ years)

- b. Number of family members actively involved in the farm activities
- c. Can you describe the activities of each member?
- 3. Information about the farm
 - a. Farm area land size (in ha)
 - b. number of plots
 - c. Do you own the land you are farming at? yes / no
 - d. Do you rent land?

yes / no

e. Crops produced (list them) Livestock produced (list them) f. What percentage of your production do you consume within the household and what percentage do you sell?

% consumed

% sold

g. Do you process your harvest into some added value goods and sell it (such as cheese, jams, fermented veggies...) Can you describe the products you make?

Yes / No

Processed products:

- h. Do you employ any workers? If yes, are these seasonal workers or do they stay with you throughout the whole year?
 Number of permanent workers:
 Number of seasonal workers:
- Do you use any machinery? If yes, can you describe which? Do you own the machinery, or do you rent it or borrow it?

Machinery used:

Machinery rented:

Machinery borrowed:

 j. Do you own any irrigation facility? Can you describe it? Yes/ No

Type of irrigation:

 k. Do you use any chemicals such as fertilizers, pesticides or herbicides? Yes/ No

Do you use organic matter as fertiliser? Yes/ No

Can you describe how much and how often? Are these chemicals easily available for you?

Are the chemicals expensive for you? Yes/ No

1. Where do you get your seeds?

Preserving own seeds / buying seeds

Is buying of seeds expensive for you? Yes/ No

- 4. Market information
 - a. Where do you sell your products?

- b. Is the income you earn from selling your products your only income? Yes/ No
- c. Who sells your products at the market?
- 5. Finances information
 - a. Is it easy for you to access loans? Yes/No
 - b. Do you receive any subsidies from the government? Yes/ No
 - c. Are the gains from your production enough to maintain living? Yes/ No Can you describe the situation?
 - d. Do the gains from selling your goods exceed the costs of production? Yes/ No
- 6. Migration and remittances general information
 - a. Has any of your family members migrated abroad? Yes/ No
 - b. If yes, can you provide more details?
 - Gender Female/ Male
 - Age
 - Country of migration
 - Year of migration
 - Type of job abroad
 - Seasonal/long-term job
 - c. Do you receive any money from them in the form of remittances? Yes/ No
 - d. If yes, can you estimate the percentage of the salary that your relative sends home?
 - e. Do you receive any goods from your relatives abroad, such as electronics, food, clothes, medicine etc.? Yes/ No
 - f. Do you have to work more/ longer now when your relative migrated? Yes/ No
 - g. What were the past responsibilities of your relative on the farm?Did it negatively impact the farm (for example in terms of labour shortage)?

Yes /No

- h. Have you considered leaving the country? Yes/ No
- i. If yes, what is your motivation?

- i. Education
- ii. Economic reasons
- iii. other
- 7. Investment of remittances
 - Can you describe how do you utilise the money your relative/s send you from abroad? Do you use them for:
 - a. Immediate consumption (food, clothes, bills, electronics...)
 - b. Education, health...
 - c. Investment into farm assets (chemical inputs, machinery, equipment, storage facilities, packaging...)
 - d. Investment into farm development or extension of the farm (irrigation facility, buying new land...)
 - e. Abandonment of agriculture, change of livelihood strategy (moving to the city, moving to another country...)
 - f. savings
- 8. Constraints faced
 - a. Do you face any constraints as a subsistence farmer. If yes, can you describe them?
 - a. Credit constraints
 - b. Market instability
 - c. Labour shortages
 - d. Unavailability of loans
 - e. High taxes
 - f. No financial support from national level government
 - g. No support from local authorities
 - h. Lack of expertise
 - i. Lack of cooperation among the farmers
 - j. High inputs costs (chemicals, seeds, electricity, fuels, labour...)
 - k. High transportation costs

- 1. Climate change
- m. Soil infertility, erosion, droughts
- n. Pests
- o. Other

Appendix 2: Survey questionnaire – an Albanian version

Efekti i migracionit në bujqësinë e mbijetesës në Shqipëri

Ky pyetësor është hartuar nga një studente e Universitetit Çek të Shkencave të Jetës në Pragë, Republika Çeke, si pjesë e hulumtimit të tezës së saj mbi efektet e migrimit në bujqësinë e mbijetesës në Shqipëri.

Pyetësori është plotësisht anonim dhe do të përdoret vetëm për qëllime akademike. Pjesëmarrja juaj duke plotësuar këtë pyetësor është shumë e vlerësueshme.

Faleminderit për pjesëmarrjen tuaj në këtë hulumtim.

1. Informacion rreth të intervistuarit

- a. Gjinia: Mashkull /Femër
- b. mosha
- c. arsimi
- d. shtetësia
- e. zona e banimit
- f. roli (pozicioni) në fermë, në familje
- 2. Informacion rreth familjes

a. Përbërja e familjes: numri i anëtarëve

numri i të rriturve (mbi 15 vjeç)

numri i fëmijëve (0-15 vjeç)

të moshuar (60+ vjeç)

- b. Numri i anëtarëve të familjes të përfshirë aktivisht në aktivitetet e fermës
- c. A mund të përshkruani aktivitetet e secilit anëtar?

3. Informacion rreth fermës

- a. Sipërfaqja e fermës madhësia e tokës (në ha)
- b. numri i parcelave
- c. A e zotëroni tokën që punoni?

Po / jo

d. A keni marrë me qira tokë?

Po / Jo

e. Produkte bujqësore(rendisni ato)

Produkte blegtorale (rendisni ato)

f. Sa përqind të prodhimit tuaj konsumohet nga familja dhe sa përqind shisni?

% e konsumuar

% e shitur

g. A i përpunoni prodhimet tuaja bujqësore dhe blegtoralenë produkte me vlerë të shtuar dhe i shisni (siç janë djathi, reçelrat, perimet e fermentuara...)

Po / Jo

Nëse po: A mund të përshkruani produktet e përpunuara:

h. A punësoni punonëtorë? Nëse po, a janë këta punëtorë sezonalë apo qëndrojnë me ju gjatë gjithë vitit?

Numri i punëtorëve të përhershëm:

Numri i punëtorëve sezonalë:

i.A përdorni makineri? Po/Jo

Nëse po, a mund të përshkruani cilën? A keni makinerinë në pronësi tuajën zotëroni makinerinë apo e merrni me qira apoe huazoni?

Makineritë e përdorura:

Makineritë me qira:

Makineritë e marrë me hua:

j. A keni ndonjë objekt/infrastrukturë për vaditjeje? Po/Jo

Nëse Po, mund ta përshkruani llojin e objektit/infrastrukturës?

k. A përdorni ndonjë kimikat si plehrat, pesticidet apo herbicidet? Po/Jo

A përdorni plehra organik? Po/Jo

A mund të përshkruani sa sasi dhe sa shpesh? _____

A janë këto kimikate lehtësisht të disponueshme për ju? Po/Jo

A janë të shtrenjta kimikatet për ju? Po/Jo

Ku i merrni farat?

Ruajtja e farave të veta / blerja e farave

A është e shtrenjtë blerja e farave për ju? Po/Jo

4. Informacioni mbi tregun

a. Ku i shisni produktet tuaja?

b. A janë të ardhurat që fitoni nga shitja e produkteve tuaja i vetmi burimi të ardhurash? Po/Jo

c. Kush i shet produktet tuaja në treg?

5. Informacion mbi financat

a. A është e lehtë për ju të merrni kredi? Po/Jo

b. A merrni ndonjë subvencion nga qeveria? Po/Jo

c. A janë të mjaftueshme fitimet që siguroni nga prodhimi juaj për të siguruar jetesën? Po/Jo

A mund ta përshkruani situatën?

d. A i kalojnë fitimet nga shitja e produkteve tuaja kostot e prodhimit? Po/Jo

6. Informacion i përgjithshëm mbi migracionin dhe remitancat

a. A ka migruar ndonjë nga anëtarët e familjes tuaj jashtë vendit? Po/Jo

b. Nëse po, a mund të jepni më shumë detaje rreth personit që ka emigruar?

Gjinia – Femër/ Mashkull

Mosha

Vendi i migrimit

Viti i migrimit

Lloji i punës jashtë vendit

Punë sezonale / afatgjatë

c. A merrni ndonjë para prej tyre në formë remitancash? Po/Jo

d. Nëse po, a mund të vlerësoni përqindjen e pagës që i afërmi juaj dërgon në shtëpi?

e. A merrni mallra/ produkte nga i afërmi juaj jashtë vendit, si elektronikë, ushqime, veshmbathje, ilaçe etj.? Po/Jo

f. A duhet të punoni më shumë/më gjatë tani kur i afërmi juaj ka emigruar? Po/Jo

g. Cilat ishin përgjegjësitë e mëparshme të të afërmit tuaj në lidhje me punët në fermë?

A ndikoi negativisht në fermë largimi i tij/saj (për shembull në lidhje me mungesën e fuqisë punëtore)? Po / Jo

h. Keni menduar që vetë të largoheni nga vendi? Po/Jo

- i. Nëse po, cila është aryeja?
- i. Edukimi
- ii. Arsye ekonomike

iii. Të tjera

7. Investimi i remitancave

a. A mund të përshkruani se si i përdorni paratë që ju dërgojnë të afërmit tuaj nga jashtë?

A i përdorni ato për:

a. Konsum i menjëhershëm (ushqim, rroba, fatura, elektronikë...)

b. Edukim, shëndetësi...

c. Investimi në asetet e fermës (inputet kimike, makiner, pajisjet, ndërtesë magazinimi paketim...)

d. Investimi në zhvillimin ose zgjerimin e fermës (objekt/infrastrukturë vaditjeje, blerja e tokës së re...)

e. Braktisjen e bujqësisë, ndryshimi i strategjisë së jetesës (lëvizja në qytet, shpërngulja në një vend tjetër...)

f. kursime

- 8. Kufizimet e hasura
 - a. A përballeni me ndonjë kufizim si fermer i vogël? Po/Jo

Nëse po, a mund t'i përshkruani ato?

- a) Kufizime për të marrë kredi
- b) Paqëndrueshmëria e tregut
- c) Mungesa e fuqisë punëtore
- d) Mungesa e kredive
- e) Taksa të larta
- f) Asnjë mbështetje financiare nga qeveria qendrore
- g) Asnjë mbështetje autoritetet lokale
- h) Mungesa e ekspertizës
- i) Mungesa e bashkëpunimit mes fermerëve
- j) Kostot e larta të inputeve (kimikatet, farat, energjia elektrike, karburanti, puna...)
- k) Kostot e larta të transportit
- l) Ndryshimi i klimës
- m) Toka jopjellore, erozioni, thatësirat...
- n) Dëmtuesit
- o) Të tjera