

# Resilience of smallholder farmers: a SWOT analysis in rural Italy

Rafaela Reznik Rocha

*Institute of Systems Sciences, Innovation and Sustainability Research, University of Graz, Austria  
rafaela.reznik-rocha@edu.uni-graz.at*

**Abstract:** *Smallholder farmers play an important role in the context of rural development which is directly related to poverty and hunger reduction. Nowadays, the increasing influence of modern wholesale markets and retailers generates a shift from short local food chains to long and complex ones. In this manner, internationalization of products and services along with economies of scales are incorporated to farm practices. To keep up with such demanding flow, small and medium sized ventures urge to adapt their methods of food production, processing, distribution and sales, presenting a strong resilience towards the maintenance of their rural activities by bringing up several strategies. This research selects the Garfagnana Valley, located in the Tuscany region in Italy, as a case study to identify strengths, weaknesses, opportunities and threats (SWOT) which influence smallholder farmers' decisions upon rural development practices. The findings reveal a balanced SWOT analysis, determining the main factors which shape smallholders' actions, seeking application for further studies and policy advancements.*

**Keywords:** *agrifood systems; Italy; rural resilience; smallholder farmers, SWOT analysis*

## Introduction

Smallholder farmers constantly depend on their agricultural produce to maintain, by some degree, their own consumption (Saravia-Matus et al., 2012). To reach the nutritional status considered adequate for a healthy life, all households should have enough access and availability to sufficient, safe and nutritious food (FAO, 1996). However, food security is not a reality for many small scale producers in the world (Saravia-Matus et al., 2012). The bulk of poor and food-insecure people in Earth remains in rural areas, where agriculture and animal breeding are major sources of livelihood. After a dull decline, global hunger seems to increase again, since chronically undernourished population reached over 800 million in 2016 up from around 770 million in 2015, mostly belonging to the rural sector (FAO et al., 2017). Thus, poverty and hunger reduction are directly linked with rural development, and smallholder farmers play an important role in this context.

The world trend of increasing importance of modern wholesale markets and retailers influences the shift from short and fragmented local food chains to long and complex ones. This regularly involves internationalization along with an increase in scales of farms productivity (Reardon et al., 2012). To keep up with such demanding flow, the ordinary players, usually small and medium sized ventures, need to remodel and adapt their methods of food production, processing, distribution and sales (IFAD, 2016). Furthermore, the rise of consumers' demand for higher standards of food quality and safety (Trienekens and Zuurbier, 2008; Aung and Chang, 2014) entails bigger commitment of rural enterprises to certification schemes. Most small scale farms are partially omitted from the agrifood market system since their engagement towards trading opportunities largely depend on affordable transaction costs (Saravia-Matus et al., 2012), whereas big and traditional producers are easier maintained by economies of scale, advance of modern techniques and favorable

schemes (Moragues-Faus, 2014). The European retail market has been subject to significant shifts which generated possible threats to rural smallholders (Benedek et al., 2017). Although facing resource constraints (e.g., difficult accessibility to markets, inputs, information and credit), limited institutional support and other challenges, small rural holdings persist with their activities. To enable such resilience, smallholders bring up a diversity of farm strategies, particularly fostering short food supply chains (Sellitto et al., 2018) and alternative and local food supply chains (Filippini et al., 2016).

Within the European rural sector, smallholder farmers play an important role by employing a big share of the non-urban population, caring for environmental and social demands (De Castro et al., 2014). However, to the European Union's Common Agricultural Policy (CAP), small scale producers are mostly unnoticed by the major dynamics going on within the rural arena (Dwyer, 2014). Thus, to enhance food security and decrease social inequalities among the sector, gaps among agrifood systems need to be fulfilled. In this backdrop, this research takes the Garfagnana Valley, located in the Tuscany region in Italy, as a model to identify challenges and opportunities of smallholder farmers in order to improve rural practices. To guide this study, the following research question was elaborated:

***“Which are the main factors that influence smallholder farmers’ decisions within the agrifood system towards rural development in the Garfagnana Valley?”***

Basing the research framework on the strengths, weaknesses, opportunities and threats (SWOT) of the case study, this research aims to identify the main internal and external factors which influence the strategies of smallholder farmers within the agrifood system, enhancing development of the sector. This objective will enable the understanding of the policies and governance modes present in the arena, besides revealing the main players involved and the relationship between them. Moreover, the research findings can be applied by scholars and policy makers.

To ease the reading throughout the research, this paper is composed of five sections. First, it introduces the context, background and research objective. Second, the methodology details the tools applied within the study. Third, the results identify the strengths, weaknesses, opportunities and threats of the sector. Forth, the discussion augments key findings brought upon the results. Fifth, the paper is concluded with final remarks and recommendations.

## **Methodology**

This research uses a case study combined with a Rapid Rural Appraisal (RRA) as the design for the research analysis. The case study methodology enables an in-depth evaluation of the subject of study, particularly, an activity limited by space and time within a social context (Creswell, 2014; Silverman, 2016). The case study was performed on the Garfagnana Valley, a mountainous area in Central Italy, located within the province of Lucca, in the Tuscany region. Due to its predominance of small and semi-subsistence farms, innovative and traditional agricultural methods are present, exhibiting the hybridization between alternative and conventional food chains (Filippini et al., 2016). According to the European Parliament (2017), the Rural Development pillar of the current CAP establishes, among its priorities, the promotion of food chain organization, social inclusion, and innovation in rural areas (European Parliament, 2017). Hence, the selection of such site for the case study is relevant due to the activities typically practiced in the region.

A theoretical research, endowed in scientific literature review and analysis, combined with an empirical work, set up the basis for this study. The secondary data was analyzed to enable the understanding of the case study context, so that a later assessment of the empirical findings could be done. The documents selected zoomed down the scope of the research topic from rural development to smallholder farmers, particularly within the European context. Scientific articles and policy reports published by governmental authorities and international bodies such as the European Union Commission, Food and Agriculture Organization of the United Nations (FAO), European Coordination Via Campesina (ECVC), International Fund for Agricultural Development (IFAD) and World Bank were considered for the literature

review of this study, approaching the overarching governance dynamics of the rural sector over small scale farmers. Targeting food security and agrifood chains, the research focused on rural development policies, highlighting the stakeholders, and the conditions which influence small holdings. The reviewed papers firstly provided the main aspects necessary for organization of rural activities, secondly, the success criteria which influence the resilience of smallholder farmers, identifying the variables which compose the explanatory factors.

The empirical work was organized by a RRA due to its positive trade-off between the knowledge generated considering its relevance, accuracy, opportunity and benefits, and the costs spent on the data collection. The RRA emerged as a research tool in the 1970's, entangling several data collection techniques to improve the understanding of the ongoing rural situation (Chambers, 1981). The tool is based on the participatory methods approach which facilitates the participation of common people within society, such as farmers, engaging them as active and significant participants of the study (Edwards and Gaventa, 2014). In this manner, the perception of the rural smallholders is respected, and the wisdom acquired can enhance authentic development actions, contributing to longer lasting interventions. Therefore, the case study counted with observational research field visits of sixteen farms, which involved in-depth face to face semi-structured interviews with both employers and employees of rural holdings. Besides the individual interviews, the study elaborated two focus groups discussions which were composed of local farmers and local institutions. The participants of the case study were selected according to their relevance within the agrifood system, bounded by the logistics and resources available. Hence, the focus groups involved representatives of the town hall of Pieve Fosciana, Union of municipalities of the Garfagnana, regional germplasm bank, Tuscany tourism department, Italian farmers confederation, national agricultural entrepreneurs' organization, Appennino Tosco Emiliano national park, regional joint purchasing groups, Garfagnana beekeepers, agronomy experts, local farmers, chestnut association, and cow breeders' association. The empirical research was conducted during July 2017. The questionnaires handled among the field visits and the focus groups embraced the main relationships between farmers and the administration (authorities), and between farmers and other actors (non-governmental), and also the monetary and non-monetary support farmers received from administration and from other local and international stakeholders.

To better analyze the results encountered from the theoretical and empirical perspectives, this research used the SWOT analysis framework, in which the findings are distributed among strengths, weaknesses, opportunities and threats of the case study. This methodology operates as a fundamental phase of a strategic plan for rural development projects, supporting the scheme by organizing a baseline of indicators which embraces positive and negative conditions of internal and external contexts (Knierim and Nowicki, 2010). In this way, this research tool details relevant characteristics from the rural sector, providing a diagnosis of which are the main factors influencing the targeted group of this work.

## Results

The results generated from this research reveal the main factors which influence the smallholder farmers within the Garfagnana Valley's agrifood system. The findings are grouped by their type of influence (positive or negative) and by their scope (internal and external sphere). Within the internal context, the strengths present the regional geography, the identification and personal satisfaction, the collaborative networks, and gender equity. The weaknesses show regulations not outlined to smallholder farmers, population ageing, unskilled labor, and poor rural infrastructure. Under the external context, the opportunities identified innovative business models, pluri-activity of rural holdings, governmental and non-governmental institutions' support, and exploitation of rural services. The threats present a top-down approach from governmental authorities, overstated bureaucracies, lack of novel specific regulations, and volatility of consumers behavior. A summary of such findings is

displayed on table 1. Details of the results are presented within the following subsections of this section.

**Table 1.** SWOT analysis of rural activities in the Garfagnana Valley.

<b>Strengths</b> ( <i>internal</i> )	<b>Weaknesses</b> ( <i>internal</i> )
Geographic conditions	Regulations not outlined to smallholders
Identification and satisfaction	Population ageing
Collaborative networks	Unskilled manpower
Gender equity	Poor infrastructure
<b>Opportunities</b> ( <i>external</i> )	<b>Threats</b> ( <i>external</i> )
Innovative rural business models	Governmental top-down approach
Pluri-activity	Overstated bureaucracies
Governmental and non-governmental support	Lack of specific regulations
Exploitation of rural services	Volatility of consumer behavior

## Strengths

The Tuscany region counts with a mountain chain along a wide coastline. Although the Garfagnana Valley counts with weak public transportation, the infrastructure within the region is adequate and eases the access through rural properties from the interior to the sea side, transforming the geographic conditions into a local asset.

The feeling of identity is clearly manifested within the interviews on the Garfagnana Valley, where the sense of belonging to a territory becomes a lifestyle. Although not related to genetics, this behaviour encompasses local culture which is passed through generations. In this manner, personality and behaviour of those belonging to the local community are conditioned by tradition, strengthening the relation among producers, and bringing trust, solidarity and cooperation into their living. This lifestyle brings high quality standard for the farmers' lives, which in turn is reflected on the rural activities.

Holding on to these strong values, rural smallholders engage into collaborative networks among themselves and with private businesses. In this way, small scale farmers target non-monetary supports such as trainings, technical, administrative and juridical assistance, strategy planning, and inputs, as an exchange for supply of production. Internally, the exchange of knowledge among rural holders is perceived by themselves as an important factor for sharing traditions, having a distinguished meaning in the rural sector due to generational transmissions. In this manner, smallholder farmers are constantly accessible for collaborations and prefer to unite themselves instead of referring to others as competitors. The association among farmers reveals not only an attitude of solidarity, but also a necessary tool for resilience of their practices.

In the Garfagnana Valley, the relationship between local institutions and rural holders and among small scale producers themselves is positively seen by the local community, mainly treated as a solid friendship. The opportunity to actively participate on fairs, which enable the establishment of partnerships with local restaurants, distributors and shops, and the support received from the solidarity purchasing group are some facilities which enable more advertisement and commercialization of local products and brands. This intrinsic collaborative atmosphere entails the setting up of farmers associations and cooperatives. Besides the local teamwork, governmental authorities also assist to improve the relationships

between regional players, strengthening the emerging networks by establishing partnerships such as the cow breeders' association as reported by a local dairy producer. Accordingly, the synergistic mood strikes down towards the consumers' level, reinforcing the marketing of rural products and services by word of mouth throughout the community. To intensify the collaborative attitude among society, farmers engage into informal relations and sale points within nearby neighborhoods, seeking recognition of their businesses and maintenance of their production. Besides the colloquial move, information technology (IT) platforms are also novel opportunities for the rural sector to reach out for funding and advertisement opportunities (e.g., crowdsourcing and crowdfunding).

Additionally, the role of women within the managing of rural holdings is greatly spread in the studied area. Within the participants of the case study, 54% of the involved within the focus groups were women, whereas nearly 40% of the individual interviewees were female. Hence, gender equity is strongly observed in the region.

### **Weaknesses**

Among the smallholder farmers of the Garfagnana Valley, the low bargaining power is an aspect commonly observed. A typical complaint among producers is the usual regulations outlined for the needs of large scale farms rather than an adapted for small scale demands. Such aspect is frequently delineated by big supply chains (Moragues-Faus, 2014). The competitiveness within the organic market, sector widely spread within the region, together with the difficulties to obtain international certification reflect increased inequalities between large and small scale producers (Blanc and Kledal, 2012). Issues such as high costs for certified labels, lack of knowledge, weak market links, insufficient access to credit, and low incomes during the transition period are emphasized by the fact that many smallholders have poor educational backgrounds and are economically demeaned.

Additionally, the rise of urbanization flow (Davis, 2015) generated increased connections between the rural and urban environments, establishing modern types of lifestyles. Consequently, population ageing of rural areas is strongly perceived as a big concern among the sector. In the Garfagnana Valley, several producers mentioned the incentives provided by authorities prioritizing farmers younger than 40 years old. Despite this governmental strategy, most of the interviewed farmers couldn't benefit from such incentive since they did not qualify due to higher age.

Another common weakness among the rural arena is the poor qualification of manpower. Most of the farms' employees, together with a few of the employers interviewed were farmers with deficient educational backgrounds, lacking proper knowledge neither to manage rural activities nor to provide specialized services. Economically disadvantaged people are an ordinary reality in the rural context (Saravia-Matus et al., 2012), hampering individual investments on technologies. Several participants of the case study presented dependency on financial subsidies from the administration in order to expand or improve their production. Thus, the under skilled capacity of farmers hinders possibilities to reach exigent consumers who are willing to pay higher prices for high quality products and services.

Moreover, the lack of basic infrastructure such as proper internet access and public transportation is also perceived as a regional weakness. These inadequacies harm all levels of stakeholders: from children living in rural areas who aim to reach schools located in urban sites and tourists who wish to access agritourism holdings, to farmers who aim to distribute their produce in further regions. This issue constrains development and future possibilities of expansion for the rural market in the surroundings. A negative consequence of this shortfall is the isolation felt by many smallholder farmers since cooperation and information exchange is limited by such factors.

## Opportunities

With the goal of innovating their practices some rural holdings inaugurate educational projects within the Garfagnana Valley, such as kindergarten farming, as well as invest in the tourism sector with agritourism holdings. The so called “Social farming” practiced in the region includes different activities such as employment of refugees, mentally and physically disabled, and other types of deprived people. Besides the creation of novel business models among the rural sector, smallholders increasingly adopt multifunctionality of their farming systems as a method of livelihood strategy. Hence, pluri-activity is leveraged by the increased urban-rural connection and seen by the local producers as an opportunity to obtain gains besides farming, maintaining their productivity size stable. Such practice is exemplified by part-time employment in a nearby city within the Tuscany region or by product diversification.

Regarding monetary support, farmers report that most subsidies are granted by the government as a practice of the CAP policy. The objective of each subsidy diverges from payment of employees enrolled in social projects such as disabled people and refugees, to loans for equipment, construction material and other devices. Nevertheless, the selection criteria to receive such benefits is rigid and narrowed towards target groups. Some categories receive priority, namely, female rural entrepreneurs and smallholder producers younger than 40 years old. Additionally, some holdings do not undergo any funding opportunities due to their type of business role. However, tax exemptions and/or reductions can be an option if in accordance to the applicable regulation. As observed in the case study, an example of activity which holds this perspective is the agritourism practice.

Considering non-monetary opportunities, most trainings and specialized services (e.g., agronomists, veterinary, coaches) are provided by governmental bodies as like most of the financial support. To cater higher qualification of farmers, the administration imposes such trainings as compulsory practices. However, a common complaint among interviewees is the financial contribution requested for attendance on the trainings. To ensure attendance of rural holders on the trainings, some non-profit organizations frequently contribute with allowances. Such contributions are especially relevant among social projects in rural activities. Furthermore, the non-monetary support is also promoted by supply of land, seeds to cultivate novel plant species, and unique animal breeds (e.g., Garfagnina Bianca sheep, see Degl’Innocenti et al., 2003). This type of aid is also noticed in collaborations of farmers with educational institutions to develop research and stimulate seed varieties cultivation and breeding of certain animal species.

Moreover, the rural sector in the Garfagnana Valley has a potential vaguely undisclosed. While the rural households strive to improve the quality of life in the countryside, leisure activities come into sight as promising opportunities. In the case study, such activities are exemplified with agritourism practices, revealing an increasing external demand. Hence, exploitation of rural services is presented as an alternative for financial gains and resilience of farm practices.

## Threats

Poor communication and harsh relationship between farmers and governmental authorities are reported by the case study as some of the major difficulties faced by rural holders when inquired about the freedom to express their opinions and influence development plans. An exception is made for the good relationship between farmers and the Union of Municipalities of the Garfagnana Valley. By any means, this barrier is reinforced by bureaucracies which seem to be excessively present when concerning administration services such as difficulties for obtaining product certifications, high label costs (e.g., organic certified and biodynamic production), delayed receipt of grants and subsidies, and overly strict regulation standards.

Accordingly, the audit and control of product quality which is done by the local health authority also is target of complaints. Although producers agree that the supervision of rural production is important to maintain the quality of the products, they also reveal an excessive presence of the authorities with overstated regulation standards.

Besides the top-down approach from the administration and the excessive bureaucracy present among the region, some innovative types of rural activities lack specific legislation coverage, for instance, kindergarten farming. In order to trespass such challenge, smallholders reveal high flexibility by adjusting their practices to regulations placed for different activities.

Moreover, threats are also present when concerning the volatility of consumers' preferences. The focus groups stated concerns towards the instable consumption pattern of consumers. Since the region focuses on high quality products and short and alternative food chains, the targeted clients belong to a narrow group of the population, bringing worries to rural producers.

## Discussion

The SWOT analysis detailed in the previous section identified positive and negative factors prevailing over smallholder farmers in the Garfagnana Valley. In order to extract relevant strategic action from this assessment, a plan must be formulated based on accrediting the strengths, eliminating the weaknesses, exploiting the opportunities and mitigating the threats' effects. All the factors extracted from the SWOT analysis are emphasized by the individual perception of those who are embedded in the scenario. The influencing conditions are indeed factors socially constructed among the local community's network, influencing the rural producers' decision-making processes, either in a short-term or long-term (Grando, 2017).

The strengths identified in the case study include the geographic location and characteristics of the region, the feeling of identity and satisfaction among rural small holders, the capacity of organizing collaborative networks, and the prevailing gender equity among farmers. The satisfaction revealed by farmers and consumers is reflected on a study done by Fons et al. (2011), especially among those who attend agritourism holdings. Due to the strong identity feeling, smallholders maintain local traditions, enabling income generation as well as preservation of the countryside values and habits. Accordingly, cultural and environmental elements are embedded as characteristic values in the region, acknowledging it with internationally perceived high-quality food products (Galli et al., 2015). This is justified by the tendency of smallholder farmers to maintain a complete cycle of the production system, preserving high value and product variety. Thus, high added value products are preferred rather than enlargement of production size. Moreover, partnerships present in the region such as cooperatives and local organizations encourage smallholders as a form of support towards commercialization of their products and services. Hence, the establishment of a collaborative network allows them to persist with their ventures within the commercial trade (Dyer, 2013). Concerning the high valued natural heritage, the local topographic features enable exploitation of agritourism in the region, entailing agricultural development. Finally, the observed gender equity rises efforts towards sustainability of the rural sector since gender inequality is strongly confronted within the region. Screening such internal advantages, the local community has the potential to enhance the assets naturally present within the Garfagnana Valley. This attitude can assist the development of the rural areas. Thus, the strengths exhibit the possibility of direct and indirect job creation, diversity of rural activities, and intensification of food quality, safety and security.

The weaknesses highlight the standards and regulations which are mostly outlined to large scale producers rather than to smallholder farmers, the low educational level of manpower available to rural ventures, the poor infrastructure, and the population ageing as a consequence of rural depopulation. In Europe, less than 6% of the rural endeavors are ruled by citizens younger than 35 years old (De Castro et al., 2014). This small share of youngsters among rural holders partially explains why the governmental incentives prioritizes beneficiaries older than the age of 40. Despite this, big sized productions are favored with fewer commercialization costs due to economies of scale, gaining facilitated access to credit, knowledge, and inputs (Reardon et al., 2012). Accordingly, trading opportunities are more available to large scale holdings, enabling easier mechanisms to achieve standards for certification requirements, labels, delivery schedule, etc. These conditions facilitate the execution towards a successful rural enterprise, mainly shared by large holders (ECVC, 2015). Although these factors are frequent within the rural context, a strong resilience of small scale farmers is perceived within the region, maintaining their practices and traditions. An explanation for this resilience is found in the feeling of social and territorial embeddedness (Moragues-Faus, 2014), in which cultural values provoke non-monetary motivations regarding farms' strategic decisions. To keep up with market demands, smallholders promote changes to their farming systems. However, due to such internal constraints, radical shifts are uncommonly done. Rather, practices are gradually adapted to novel requirements by exploring households' manpower (Dyer, 2013), enabling in this way, the commercialization of smallholdings' produce. Additionally, the practice of organic agriculture allows smallholder farmers a wider access to attractive options of commercialization, providing not only higher financial gains but also independence and new partnerships among the value chain. Facing similar challenges, the Brazilian Ministry of Agrarian Development extended its support to smallholder farmers by funding programs which aim to convert traditional agriculture to organic, especially strengthening familiar rural holdings (CNDRS, 2000). The implementation of such policy can be used as a model to propel a correspondent project in order to enhance the organic production among small scale farms in the Tuscany region, hence, leveraging the bargaining power of smallholders.

The opportunities identified in the study embrace the creation of innovative rural business models which turn lifestyle in the countryside more attractive, the multifunctionality activity of the rural sector, the governmental assistance and the partnerships with non-profit and educational organizations resultant of regional integration, and the possibility to exploit a variety of undisclosed rural services. With the depopulation process of rural areas (World Bank, 2017), agritourism emerges as an alternative rural activity for connection to nature and disconnection from the agitated urban life (Fons et al., 2011). This practice may provide not only financial gains but also social benefits such as maintaining cultural heritage by making use of the local authenticity and identity (Cánoves et al., 2004). Hence, the opportunity of strengthening rural tourism in the Garfagnana Valley can be exploited in order to offer unique and high quality products and services to customers. Moreover, to attract youngsters back to the countryside, a social rearrangement of the rural livelihood is observed with novel business models, transforming rural lifestyles attractive once again. Within the goal of making rural activities appealing, the development of social projects among smallholdings has increased (Peters and Gregory, 2014), as observed in the case study. In this way, smallholders generate options to financially maintain their farms, often investing their non-agricultural gains into the farming activities (Ascione et al., 2012; Moragues-Faus, 2014). Concerning financial opportunities, the EU's CAP provides direct support to farmers by income supply and market measures. As an indirect support to rural holdings, the policy contributes separately to each European Member State by elaborating rural development programs (European Commission, 2017a). During the first semester of 2017, the European Commission enabled a consultation over the practices of the CAP aiming to improve it based on real users' opinions. Most replies came from individuals, suggesting active participation of farmers. The results recognize the guideline's strength and commits the policy to the request for simplification and increased flexibility, ensuring fairer living for rural smallholders (European Commission, 2017b). In addition, Member States will earn greater independency to choose where and how to invest within their rural arena due to larger decentralization

mode. This will enable a tailor-made approach which will facilitate measures to be implemented in each State, establishing a higher ground of trust between the European Union and the benefited (European Commission, 2017c). The partnerships between public and private sectors, as well as the conception of cooperatives and associations among producers facilitate the adoption of novel methods and technologies within the rural sector. These networks can improve access to credit, inputs, services and knowledge amid farmers, increasing efficiency of agrifood chains. In this manner, farmers' financial gains can increase through agribusiness integration with governmental and non-governmental institutions. Besides these alliances, the global trading dynamic still requires an upgraded structure enabling stability of food prices and promoting better acceptance by rural holders to continue with their activities (Saravia-Matus et al., 2012).

The threats displayed in the analysis are consequences of a non-optimal and non-efficient state of the existing opportunities. It embraces overstated bureaucracies whilst lacking specific regulations for some farming activities, governmental top-down approach limiting the flexibility and decisions made by smallholders, and volatility in food preferences. To mitigate their negative impacts, a stronger work must be applied towards policy implementation since the current regulations already aim to fairly benefit smallholder farmers, however, it still lacks effectiveness. Hurdles such as excessive bureaucracy undermine development and knowledge transfer, hence, improvements towards the subject should be prioritized. Moreover, consumer's behaviour is not only volatile but also consequence of a set of reasons such as globalization, modernity, and traditions (Knorrington and Guarín, 2014). On one hand there is increasing concern towards food safety and quality (Trienekens and Zuurbier, 2008; Aung and Chang, 2014), on the other hand market pressures and population growth along with global economic crisis tend to reduce consumers' willingness for expensive products. Besides that, many factors can play their role as drivers for consumers behaviour change such as local traditions, globalization, and modern technologies (Knorrington and Guarín, 2014). Thus, the consumption pattern may vary according to several influencing conditions. In this case, the drivers for consumer's behavioral changes can be manipulated in favor of advertising the advantages of purchasing local and high quality products and services from the rural area.

Cooperatives and associations, as the ones encountered in the Garfagnana Valley, are examples of agrifood organizations which enable lower transaction costs by providing better bargaining power with secured volume of produce to sell. They deal directly with registered economic agents that, per se, request fiscal notes (e.g., supermarket chains and modern retailers). However, these institutions require coordination costs in virtue of needed arrangements such as property rights, marketing strategy, and delivery settings. Thus, participation of smallholder farmers in such endeavors is subject to affordable transaction and coordination costs, where profits must be higher than such expenditures (Blanc and Kledal, 2012). In this context, such organizations can assist farmers in several fronts: administrative support, juridical management (improving access to certification schemes and funding opportunities), commercialization strategies, and network building (making the link to groups of consumers and to groups of other rural smallholders).

Moreover, by benefiting from the opportunity of being supported by non-profit organizations such as NGOs, religious groups and civil society organizations, the smallholdings gain facilitated inclusion into beneficial schemes for rural producers. These arrangements offer technical and educational support for specialized services, enable the establishment of market organizations (rural associations and cooperatives), and create a networking bridge between producers, intermediaries and consumers. This backup reinforces the values of trust, solidarity, social welfare and respect by enabling the sharing of best practices and group works. Human beings are living creatures for whom opinions, personal values and social interactions are paramount to establish social groups and communities (James et al., 2012). Corresponding, intense forms of sociability are identified in the case study, exposing smallholders' attachment to values such as empathy, sympathy and sharing of knowledge.

This fulfilling necessity is also inherent to farmers, hence, their values of trust, cooperation, social and environmental concerns are shared aspects which need to be incorporated during the planning of rural development projects, infrastructure and policies.

The fact that the producers in the Garfagnana Valley prioritize quality of their produce rather than quantity entails competitiveness towards high value products and services, supporting local economic development. These strategies prioritize sustainable practices of agrifood systems, which can have an important role as a potential solution to the food crisis. Assuming the improvements planned by the CAP within the rural arena, it is clear that the rural development is currently on the policy agenda, reflecting an advancement towards the sector. Agricultural research can also be a convenient strategy to explore production models which combine agritourism and agrifood practices into rural smallholding' dynamics. By promoting diversification of the rural activities, several natural resources can be sustainably exploited. Therefore, diversification of agricultural practices including non-agricultural activities is an approach which can reduce farmers' risks and increase local food security since off-farming gains are commonly reinvested on farming practices (Saravia-Matus et al., 2012).

## Conclusion

This research points out the main factors that influence smallholder farmers' decisions within the agrifood system towards rural development in the Garfagnana Valley. By presenting the research results through a SWOT analysis, the study concludes that a balanced distribution between strengths, weaknesses, opportunities and threats is present in the region.

Policies which embrace a large portion of the food chain are necessary to provide not only commercialization of smallholder farmers' production but also to decrease social inequalities by distributing high quality food products to those who can't afford buying it. Support of authorities to promote fairs specialized in local products is another opportunity for expansion of regional brands and networking between farmers and consumers and among farmers themselves.

This work reveals the need to include wide participation of farmers in rural development plans. Besides involvement in public policies, farmers also need support which have short-term goals. In this manner, governmental bodies along with non-profit organizations (faith-based institutions, NGOs and civil society groups) must improve their dedication towards capacity building of smallholders to reinforce their current rural activities and promote social inclusion, independent of their developmental stage. The provision of trainings, administrative support to form associations and cooperatives, juridical support to face unavoidable conflicts, orientation strategies to shift among agrifood systems, and employment assistance inside and outside the agricultural sector are actions which must be prioritized to promote ownership among smallholder farmers.

Finally, efforts should be taken in the direction towards provision of a policy framework which effectively supports smallholder farmers, widely including their participation, as well as providing sustainable exit strategies for those who are unable to maintain their practices exclusive to farming activities (thus non-farming and part-time farming opportunities). This framework must ensure solutions to challenges faced by both farmers who are engaged in social development projects and those directed to more profit-oriented markets. Therefore, governmental authorities (local and international levels) should provide an institutional framework which ensures support for all sizes and service types of rural holdings. Small scale farms can be not only positively exploited and enjoyed, but also better examined and designed as an option for a sustainable pathway of rural development. Hence, its strengths,

weaknesses, opportunities and threats must be further worked upon and its solutions effectively implemented, being a demand for future studies.

## Acknowledgement

The University of Pisa, distinctively Francesco Di Iacovo, Simona D'Amico, Paola Scarpellini and Francesca Cofini are acknowledged in this work for their valuable insights and time devoted on the process of conducting the Summer School 2017, enabling the completion of this research. Special thanks for my colleagues Yasmine Abdelaziz, Bianca Souza, and Juliana Luiz who shared their experienced thoughts with me. Gratitude is expressed to those who participated in the case study and shared their time and personal opinions, including farmers, associations, and local institutions of the Garfagnana Valley. Lastly, this work was possible due to the support of the University of Graz (Austria), partially funding this study program through its "Short-term Scientific Work (KUWI) Scholarship".

## References

- Ascione, E., Henke, R. and Vanni, F. (2012) Small farms in Italy: public support, diversification and economic sustainability. *Problems of Small Agricultural Holdings*, (1), 31-42.
- Aung, M. M. and Chang, Y. S. (2014) Traceability in a food supply chain: Safety and quality perspectives. *Food control*, 39, 172-184.
- Benedek, Z., Fertő, I. and Molnár, A. (2017) Off to market: but which one? Understanding the participation of small-scale farmers in short food supply chains—a Hungarian case study. *Agriculture and Human Values*, 1-16.
- Blanc, J. and Kledal, P. R. (2012) The Brazilian organic food sector: Prospects and constraints of facilitating the inclusion of smallholders. *Journal of Rural Studies*, 28(1), 142-154.
- Cánoves, G., Villarino, M., Priestley, G. K. and Blanco, A. (2004) Rural tourism in Spain: an analysis of recent evolution. *Geoforum*, 35(6), 755-769.
- Chambers, R. (1981) Rapid rural appraisal: rationale and repertoire. *Public administration and development*. 1 (2), 95–106.
- CNDRS (2000) Decreto No 3.508, de 14 de Junho de 2000. Dispõe sobre o Conselho Nacional de Desenvolvimento Rural Sustentável - CNDRS, e dá outras providências. Brazil.
- Creswell, J. W. (2014) Research design: Qualitative, quantitative, and mixed methods approaches. 4th ed. University of Nebraska-Lincoln. Sage publications.
- Davis, K. (2015). The urbanization of the human population. *The city reader* (pp. 43-53). Routledge.
- De Castro, P., Adinolfi, F. and Capitanio, F. (2014) Family farming. Issues and challenges in the reformed common agriculture policy. *Economía Agraria y Recursos Naturales*, 14(1), 169-176.
- Degl'Innocenti, P., Diaz Rivera, P., Martini, A., Perez Torrecillas, C., Conti, S. and Giorgetti, A. (2003) Phenotypic diversity of Tuscany's endangered sheep breeds: a descriptive approach. *Italian Journal of Animal Science*, 2(suppl.1), 560-562.
- Dwyer, J. (2014) CAP Reform Proposals for Small and Semi-subsistence Farms. *EuroChoices*, 13(1), 31-35.
- Dyer, K. W. (2013) Supporting small farmers to commercialise. *Future Agricultures*, FAC CAADP Policy Brief 11.
- ECVC - European Coordination Via Campesina (2015) How can public policy support small-scale family farms? Booklet.
- Edwards, M., and Gaventa, J. (Eds.) (2014) Global citizen action. Routledge.
- European Commission (2017a) The Future of Food & Farming - Supporting Farmers and The Rural Community. Agriculture and Rural Development. Fact Sheet. Accessed on 29/11/2017. Retrieved from: [https://ec.europa.eu/agriculture/sites/agriculture/files/future-of-cap/factsheet\\_iii\\_en.pdf](https://ec.europa.eu/agriculture/sites/agriculture/files/future-of-cap/factsheet_iii_en.pdf).

- European Commission (2017b) The Future of Food and Farming – for a flexible, fair and sustainable Common Agricultural Policy. Press release. Brussels, European Commission. Accessed on 29/11/2017. Retrieved from: [http://europa.eu/rapid/press-release\\_IP-17-4841\\_en.htm](http://europa.eu/rapid/press-release_IP-17-4841_en.htm).
- European Commission (2017c) The future of food and farming - Communication on the Common Agricultural Policy post-2020. Fact Sheet. Brussels, European Commission. Accessed on 29/11/2017. Retrieved from: [http://europa.eu/rapid/press-release\\_MEMO-17-4842\\_en.htm](http://europa.eu/rapid/press-release_MEMO-17-4842_en.htm).
- European Parliament (2017) Fact Sheets on the European Union. Second pillar of the CAP: rural development policy. Accessed on 06/04/2018. Retrieved from: [http://www.europarl.europa.eu/atyourservice/en/displayFtu.html?ftuld=FTU\\_3.2.6.html](http://www.europarl.europa.eu/atyourservice/en/displayFtu.html?ftuld=FTU_3.2.6.html).
- FAO, IFAD, UNICEF, WFP and WHO (2017) The State of Food Security and Nutrition in the World 2017. Building resilience for peace and food security. Rome, FAO.
- FAO - Food and Agriculture Organization of the United Nations (1996) Rome Declaration on Food Security and World Food Summit Plan of Action, World Food Summit. Date of access: 09/11/2017. Retrieved from: <http://www.fao.org/docrep/003/w3613e/w3613e00.htm>.
- Filippini, R., Marraccini, E., Houdart, M., Bonari, E., & Lardon, S. (2016) Food production for the city: hybridization of farmers' strategies between alternative and conventional food chains. *Agroecology and Sustainable Food Systems*, 40(10), 1058-1084.
- Fons, M. V. S., Fierro, J. A. M., and y Patiño, M. G. (2011) Rural tourism: A sustainable alternative. *Applied Energy*, 88(2), 551-557.
- Galli, F., Bartolini, F., Brunori, G., Colombo, L., Gava, O., Grando, S. and Marescotti, A. (2015) Sustainability assessment of food supply chains: an application to local and global bread in Italy. *Agricultural and Food Economics*, 3(1), 21.
- Grando, S. (2017) Theoretical Framework. Lecture notes. Summer School in Food and Innovation in Rural Transitions: The Tuscany case. University of Pisa.
- IFAD - International Fund for Agricultural Development (2016) Rural Development Report 2016. Fostering inclusive rural transformation. Rome, IFAD.
- James, P., Nadarajah, Y., Haive, K. and Stead, V. (2012) Sustainable communities, sustainable development: Other paths for Papua New Guinea. University of Hawai'i Press.
- Knierim, A., and Nowicki, P. (2010). SWOT analysis: appraisal of a new tool in European rural development policies. *Outlook on agriculture*, 39(1), 65-72.
- Knorringa, P. and Guarín, A. (2014) Standards and consumer behaviour of the rising middle class in India. *Globalization and Standards* (pp. 23-40). Springer India.
- Moragues-Faus, A. (2014) How is agriculture reproduced? Unfolding farmers' interdependencies in small-scale Mediterranean olive oil production. *Journal of Rural Studies*, 34, 139-151.
- Peters, R. and Gregory, M. (2014) Networking, Small Farms and EU Rural Development Policy. *EuroChoices*, 13(1), 36-39.
- Reardon, T., Timmer, C. P. and Minten, B. (2012) Supermarket revolution in Asia and emerging development strategies to include small farmers. *Proceedings of the National Academy of Sciences*, 109(31), 12332-12337.
- Saravia-Matus, S. L., y Paloma, S. G. and Mary, S. (2012) Economics of food security: selected issues. *Bio-Based and Applied Economics*, 1(1), 65-80.
- Sellitto, M. A., Vial, L. A. M. and Viegas, C. V. (2018) Critical success factors in Short Food Supply Chains: Case studies with milk and dairy producers from Italy and Brazil. *Journal of Cleaner Production*, 170, 1361-1368.
- Silverman, D. (2016) Qualitative research. 4th ed. Sage publications.
- Trienekens, J. and Zuurbier, P. (2008) Quality and safety standards in the food industry, developments and challenges. *International Journal of Production Economics*, 113(1), 107-122.
- World Bank (2017) Rural population from 1960 to 2016 [Data file]. Accessed on 01/12/2017. Retrieved from: <https://data.worldbank.org/indicator/SP.RUR.TOTL?end=2016&start=2016&view=map>.