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The Multidisciplinary Approach of Rural Studies - Research article

The role of farmers: governing the farm enterprise, markets, and networks

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Abstract. Being a farmer is far more complex than we often consider. The job includes the capacity to organise and combine factors of production (land, capital and especially labour) and simultaneously meet the needs of consumers and many other things. To do so, the farmer has to face, time and again, strategic choices related to the "make or buy" decision that concern, and materially affect, the boundaries of the farm's operations. This article argues that agency and networking are crucial concepts in the analysis of such choices. These two concepts are also at the heart of rural studies. Here the focus will be on agency as strategic in the active organisation, combination and development of factors of production. In turn networking is central in the construction of (new) markets and other solutions to day to day or strategic problems. This article will use the experience of nested markets, as seen through the neo-institutional approach with a focus on transaction costs, to highlight that strategically organising production factors is central to being a farmer. It is a capacity that needs to be developed and strengthened rather than replaced and/or externalized. This applies especially when farmers seek to realign themselves with the needs of the environment and society.

Keywords: agency, networking, neo-institutional economics, market, sustainability.
JEL codes: Q12, Q13.

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HIGHLIGHTS

- Italian farmers are increasingly moving towards multifunctionality in order to defend their assets. This process includes developing new market relationships with consumers.
- The neo-institutional approach allows for an economic interpretation of the importance of entrepreneurial capacities in constructing new relationships, both market and political-institutional, that guide production practices and processes.
- The boundaries of farms are dynamic and move in coherence with the entrepreneurial activities of defending the farm's assets, which translates into a strategic choice of what, how and when to produce.

1. INTRODUCTION

At the end of the 1990s both political and scholarly debates increasingly centred on re-conceptualizing agriculture[1]. In an overview of these debates, Flaminia Ventura and myself identified three key points concerning the interrelations between farms and markets (Milone and Ventura, 2000).

1. Market transactions generate transaction costs that force farms to continuously rethink their choices. To successfully carry out a market transaction one needs to know with whom to deal, the quality and quantity that is expected, valorising this quality, how to formulate the contract, what rules need to be observed, and so on. Correctly managing all this is usually complex and costly.
2. Farm enterprises are dynamic systems whose boundaries may expand or shrink, depending on events (external or internal to the farm) and the transaction costs associated with them. Moving the farm boundaries can be realised in either a co-operative or autonomous way (Williamson, 1998).
3. Protecting control over the factors of production (land, family labour, capital invested, know-how, networks and structures) is always central in the entrepreneurial activity of farmers. Maintaining this control over one's assets allows for economies of scope that give the farm enterprise the flexibility needed to overcome moments of crisis.

We argued that these three points were essential in order to properly understand the multi-dimensional diversity in agriculture. While neo-classical agrarian economists regarded these phenomena as being of secondary importance, several new approaches emerged in the 1990s, which put the diversity of the organizational forms of farms centre stage. These included the farming styles approach, initially developed in Wageningen, and the neo-institutional approach, developed in Perugia, that centred on the polymorphism of agricultural production and marketing.

In the first approach, it was shown that within homogeneous environments (characterized by the same set of economic, technological and institutional parameters) different entrepreneurial strategies resulted in the construction of contrasting farming styles[2]. The second approach, in turn, made it possible to *explain* this diversity by putting it in the specificity of both territorial contexts and resources and the presence of transaction costs. The diversity of farming was observed, analysed and explained by Saccomandi (1991) in terms of transactional economics (Coase, 1937; Williamson, 1985) and organization theory (Chandler, 1982; Tirole, 1991).

Thus, the perfect market hypothesis, which argues that the market is capable of performing the function of the most efficient resource allocator with zero transaction costs, was challenged by the imperfect market hypothesis and the possibility to choose other organizational forms as substitutes for the market. These forms are tightly interwoven with the governance structures of transactions, internal and external to the firm, and their implied cost.

In this way, the unit of analysis changes from the neoclassical firm, an entity that maximises profit in a perfect market, to a firm seen as the institution that internalises the processes of production whenever the cost of their acquisition of their output on the market entails transaction costs exceeds the costs 'doing it oneself': *i.e. whenever the market is inefficient*. A dynamic institution can change its boundaries over time in response to changing transaction costs. Such changes are often linked to developments in the technical-scientific system, the institutional context or the nature of resources (such as craftsmanship). This new interpretation of the farm enterprise helps to explain the current forms of multifunctional farms, networks of cooperating farms and the presence of economies of scope. Transaction costs refer to the *use* of the market, whilst organisational costs are internal to the farm enterprise. It is precisely at the intersection of these different costs where Williamson located his make-or-buy "*decision*" (1975; 1981). When the transaction costs of using the market are higher than the organisational costs of the enterprise then the enterprise will have an incentive to internalise the production process rather than purchasing the output of that process in the market.

In the meantime, empirical research provided evidence that the growing dependency of farms on upstream markets (also studied as 'incorporation') as well as the progressively external prescription of entrepreneurial decisions (i.e 'institutionalization') had

[1] This reconceptualization was strongly associated with, and fed into, the emergence of the new paradigm of rural development that gave rise to the new policy framework for European agriculture with the establishment of Pillar II, which was precisely aimed at supporting specific policies for rural development and a new model of multifunctional agriculture. A higher degree of flexibility (in comparison with the First Pillar) enables national, regional and local authorities to formulate individual multiannual rural development programmes based on a European 'menu of measures'. The European Union's Rural Development Policy was introduced under the 'Agenda 2000' reform. It is co-financed by the European Agricultural Fund for Rural Development (EAFRD) and regional or national funds.

[2] Ploeg defines farming styles not on the basis of the capital/labour ratio, but in relation to the weight of external variables of an economic and institutional nature that determine the choice of technologies and forms of governance of market transactions (Ploeg, 1990, 1994, 2000).

strongly affected farmers' choices that regard the make-or-buy decision.

Over time the dynamics of incorporation and institutionalisation (mostly understood as integral aspects of modernization) resulted in processes of disintegration and deactivation of farm enterprises and the loss of strategic capacity on the part of agricultural entrepreneurs.

At the same time, however, it has been shown that alternative solutions are possible. These solutions (that will be illustrated and discussed further in this paper) are based on entrepreneurial behaviour that departs from the path of modernization. This can occur through a combination of three elements:

1. 'non-rationality', linked to the presence of property rights over resources, the stubbornness in defending these resources, and the presence of continuity in terms of family work;
2. the possibility of developing economies of scope that allow for the diversification of production;
3. the possibility to enlarge the economic size of the farm through the creation of networks that can result in new markets rather than through processes of vertical integration or increased scale.

Thus, alongside the specialized, single-product farm that supplies raw materials to agro-industries a new model emerged (both materially and theoretically): the mixed, multi-product farm that is directly linked to consumers, often through new markets embedded in networks that directly link production and consumption.

The shift from the focus on production efficiency towards organisational efficiency (Ventura, 2001) makes it possible to explain links and transactions between enterprises that are not regulated by the market and allow the agricultural enterprise to find original solutions in response to external changes while safeguarding its assets. The objective of the work is precisely to understand these links or transactions, the elements that determine and characterize them. In this, agency and networking are crucial concepts.

The interpretation of this new phenomenon, however, requires a new, multidisciplinary approach (as developed in rural studies; see Ploeg in this special issue). Neo-institutional theory plays a key role in this new approach.

2. THE GOVERNANCE OF TRANSACTIONS WITHIN A FARM ENTERPRISE

The agricultural enterprise is an institution located at the intersection of different networks of economic and social relations that influence its organisational choices over time. There are three major practical and theoretical implications to this. First: if and when the conditions for a perfect market are lacking the enterprise enters the analysis as the *institution* able to organize, combine and develop factors of production[3]. Second (and according to Coase (1937: 390), this institution (in our case the farm enterprise) can seek to draw on its capacity to *reduce the costs of using the market* (i.e. its transaction costs). Theoretically this reduction can be grounded on several mechanisms. The development of multifunctionality is one of these. Third: the role of coordination is played by the *entrepreneur.*

The governance of transactions can take different forms. These are evaluated in terms of their ability to reduce transaction costs. Forms of governance can take two extremes, represented by the market and hierarchy (enterprise) and include hybrid, intermediate, forms of quasi-organisation and quasi-market (Saccomandi, 1998; Ventura, 2001). Williamson wrote that "…[t}*his level of analysis can be thought of as developing the criteria for and defining the 'efficient boundaries' of an operating unit*" (Williamson, 1981: 549). Changes in agriculture and the rural context force the farm into dynamic approaches of adaptation that widen or narrow these 'efficient boundaries': increasing its reliance on the market or re-appropriating functions that were formerly externally delegated. This is the key point of multi-functionality.

Industrial economics theory (or industrial organization as used in US) offers several insights into how farm enterprises may seek to reduce transaction costs (Stigler, 1968; Tirole, 1991; Saccomandi, 1998; Pasini, 2013).

2.1. Transaction costs and the make-or-buy rule

As argued, neo-institutional economics focuses on the variations, over time and space, in the forms of market governance as a function of the attributes/characteristics of transactions and their costs. Transaction costs can be defined as "*the costs incurred by participants in an exchange, in order to initiate and complete the transaction. Such costs occur to some degree in all real-world transactions, and thus affect all real markets. All participants may incur transaction costs, including both buyers (investors) and sellers (hosts). Transaction costs are not only the out-of-pocket expenditures necessitated, but the opportunity costs – the lost time (delay) and resources (e.g. money, managerial attention) – that could have been*

[3] In this sense firm or farm enterprise emerges to minimise transaction costs or to reduce market or exchange uncertainty (Knight, 1921), it merges as a device to coordinate or exploit the worker (Marglin, 1974) or it emerges as an organisational equilibrium of a bargaining process among corporate actors (Aoki, 1984).

devoted to the next best opportunity for that participant" (Dudek and Wiener, 1996: 15). Transaction costs can take many forms but some of the main types are include searching, negotiating, approving, monitoring, enforcement, information, uncertainty reduction and insurance. They can refer to two periods of bargaining: the ex-ante and the ex-post, where in the former the focus in on incentive alignment and efficient risk bearing, in the latter to the governance of the contract (Williamson, 2000).

According to Williamson (1985), there are three main characteristics that determine transaction costs and their variations: asset specificity; uncertainty, and; the frequency with which the exchange takes place. Asset specificity is defined as the value of sunk investments. The uncertainty of a transaction can lead to very high costs that can jeopardise the very existence of the transaction in the absence of rules and an organisation to ensure compliance. As far as frequency is concerned, more frequent transactions are, the lower the transaction cost per transaction. Thus, transaction costs can be expressed in the following equation (Menard, 2006):

$$TC = [\![f(AS,F,U)]\!] \quad (1)$$

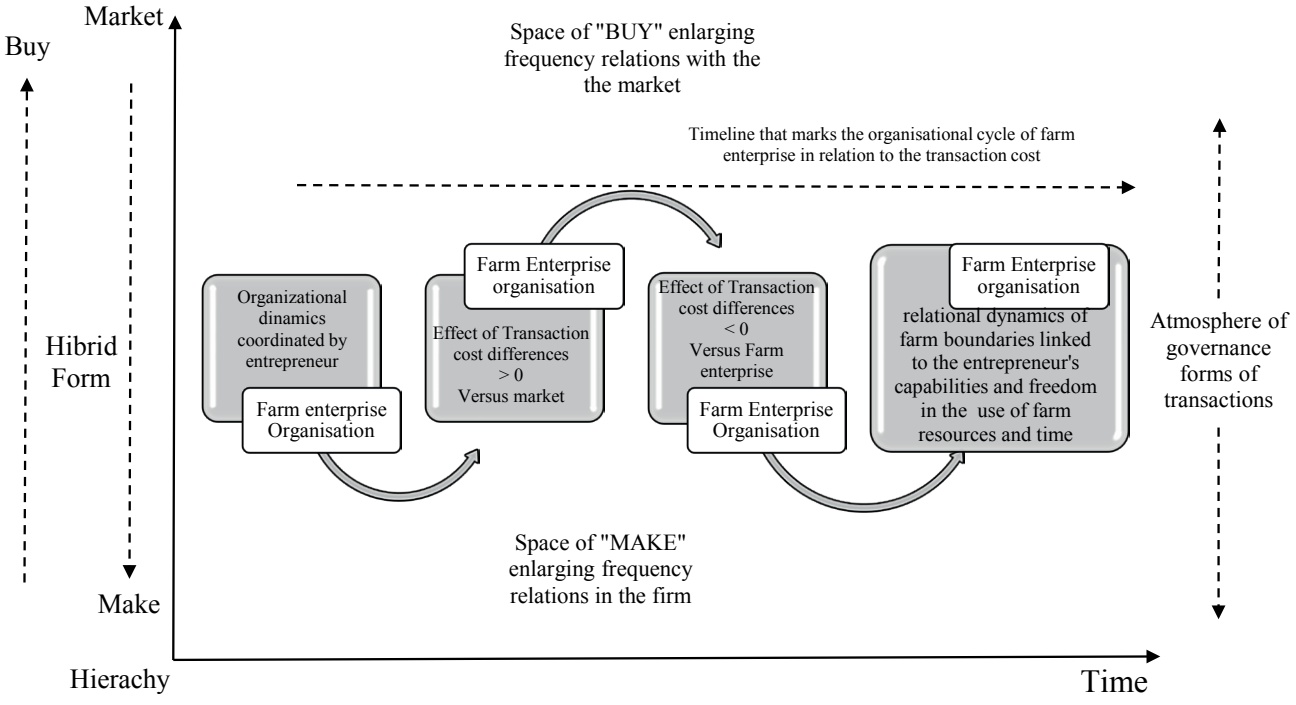
TC: Transaction Costs
AS: Specific Assets: the higher the specificity, the higher the transaction costs
F: Exchange frequency: the lower the frequency the higher the transaction costs
U: Uncertainty: higher levels of uncertainty translate in higher transaction costs

The possibility of a transaction and its form of governance depend on the assessment of the expected costs, which combine differently over time, change at different speeds and are also dependent on other transactions. This generates a dynamic approach of continuous readjustment of the forms of governance and their recursive evolution over time gives rise to the organisational innovation cycle of the enterprise (Saccomandi, 1998). Figure 1, below, shows how, depending on changes in the market environment, technology and transaction costs, the enterprise can adapt by modifying its forms of governance, moving from the market to the enterprise and vice versa, passing through hybrid forms.

The choice of one form over the other is illustrated by Williamson (1985) through an S-function that depends on the degree of resource specificity k (or AS – as mentioned above). The S-function is obtained as the sum of the differences, between vertical integration (hierarchy) and market:

$$S(k) = \Delta CT(k) + \Delta CP(k) \quad (2)$$

Figure 1. Organisational Innovation cycle of firm.



In this equation ΔCT(k) represents the difference between *transaction costs* in the vertical integration condition (hierarchy) and those in the market condition[4]. ΔCP(k) represents the difference between *production costs* in the vertical integration condition and those in the market condition[5]. The presented function (2) defines the make-or-buy rule. The function can take on values higher than, less than or equal to zero. With values of S(k) > 0 the market is more efficient than the enterprise. Conversely, with S(k) <0 the enterprise becomes the more efficient solution (Nisticò, 2009: 362)[6]. In the first case we have the preferred buy condition, while in the second case we have the preferred make condition. This rule expresses the dynamic nature, over time, of the forms of governance of exchanges and the relative changes in market conditions and transaction costs that condition the boundaries of the firm and the use of the market with respect to the exchanges involved.

The optimisation of the choice between make and buy is subject to various constraints. Some of these are of an objective nature, i.e. linked to the institutional context, public and private, within which the enterprise operates, and to the capacity of these external actors to provide the farm with services. Others are of a more subjective nature and are linked to the entrepreneur's capacities and propensity to risk. The first type of constraint resides mainly in the incompleteness of the information to which the entrepreneur has access (Stigler, 1961). The second type of constraint is represented by the entrepreneur's inability to scrutinize all possible alternatives (Simon, 1947).

2.2. Agency and property rights

Following Emirbayer and Mische (1998), I consider agency "*as a temporally embedded process of social engagement, informed by the past (in its habitual aspect), but also oriented towards the future (as a capacity to imagine alternative possibilities) and towards the present (as a capacity to contextualise past habits and future projects within the contingencies of the moment)* (p. 963).

Therefore, agency implies the capacity to build on the past and to shape the future through the organization and coordination of the strategic assets of the enterprise. This capacity might be embodied in the farmer who is controlling the farm's assets, particularly those over which he (or she) holds the ownership or residual rights. However, this same capacity might be strongly conditioned by, and even shift towards external agencies (Ploeg and Marsden, 2008).

In this "temporally embedded process" the present is the outcome of previous choices, just as it builds (partly or completely) on the resources created in the past. Past and present are also linked through (collective) memory, experience, learning, critical judgements, the strength of routine and, most possibly, by path-dependency. At the same time, the present always contains several possibilities for developing different trajectories to construct the future. Here, the choices (the agency) of the farmer are, again, strategic. In short: it is through agency that past, present and future are interconnected and, in doing so, agency itself might also get strengthened. This highlights the ability and potential for its transfer along generations or between different subjects safeguarding the firm's assets.

According to Kabeer (1999) "*enhanced agency can [also] be a mechanism for securing resources [….]. Furthermore, it is helpful to [consider] that agency can be articulated through decision-making, bargaining and negotiation, deception and manipulation, subversion and resistance.* (In Farnworth *et al*., 2020: 275)".

Agency clearly unfolds as a multilevel activity. It shifts from the farm to the context in which it operates, giving rise to rural networks in which different actors create temporal and relational fields: multiple and overlapping ways of ordering time and space. Thus, the different actors engage in, and actively contribute to, several and probably overlapping networks.

Agency is strongly linked to the concept of property rights over resources, i.e. the expression of power to decide on the use of resources (or renegotiate residual rights over time) or to exclude others from their use (Hart and Moore, 1990; Grossman and Hart, 1986).

This feature is especially crucial in agriculture where the farmer holds rights over at least two strategic resources: land and labour – his own labour as well as the labour of family members. These rights can be limited by external effects such as investments, policies, regulations, institutions (market, state, etc.). For example, in the case of specific investments, recourse to bank credit entails a limitation of the right of ownership over the use of resources insofar as the choice of what to do is strongly conditioned by the need to repay the debt created and by the specificity of the investments made, the non-use of which would generate sunk costs. In the same way, adherence to agro-environmental policies[7]

[4] ΔCT(k) = TC in vertical integration – TC in the Market.
[5] ΔCP(k) = CP in vertical integration – CP in the market.
[6] For more details and a graphic representation of the model, see Williamson (1985: 182-188).
[7] Agro-climatic-environmental policies have been established within the framework of rural development financed by the European Structural Funds (European Agricultural Fund for Rural Development-EAFRD).

commits entrepreneurs to specific activities and investments aimed at the policies' objectives generating a lock-in effect in which the policy maker influences entrepreneurial choices. Both sunk costs and external prescription result in incomplete contractual forms that generate high transaction costs. The presence of agency and control over resource property rights (or residual rights in the case of incomplete contracts), allow the entrepreneur to autonomously coordinate and organise resource use and minimise transaction costs. The implementation of economies of scope and/or network economies, as well as the orientation towards multifunctionality and multi-product enterprises fit well in this pattern. It is important to add that making these choices should in no way be seen as an isolated activity of atomized individuals. Making such choices implies involving other actors, sharing experiences, etc. In this respect Darré (1999; 2006) referred to *Groupement Professionnel Local* (GPLs). But again: external condition and prescription is equally possible. In this context the TATE[8] concept developed by Benvenuti (1975) still is most relevant.

2.3. Networking

The activity of organizing, coordinating and developing the productive resources of a farm lead the entrepreneur to create a series of relations and alliances that can be horizontal and/or vertical: horizontal when they concern relations between farms; vertical when they concern relations between the farm and other economic actors in the chain, including consumers (Ventura, 2001). Both horizontal and vertical relations exist within institutional frameworks (and these might strengthen or reduce local specificity). That is, they are themselves part of the construction of the broader social relations that regulate and characterise the territorial context in which the enterprise operates. According to Ventura (2001), both horizontal and vertical relations have two dimensions: the repetitiveness of relations and the exchange of information and knowledge that takes place informally and without specific costs.

The process of transmitting information and experience allows the construction of common knowledge and the repetitiveness of the relationships means that opportunistic behaviour, that would lead to their termination, is prevented. Thus, reputation is built and becomes a key element for the continuity of the relationship over time. In this respect, one must consider that rural areas have become places of both production and consumption (Marsden *et al*., 1993). Consequently, different networks emerge[9], the functions of which are gradually differentiated and segmented, especially in relation to flows of capital, information, people, and goods (Murdoch, 2006). As argued before, each network consistently connects past, present and future in a particular way that often contrasts sharply with that of other networks (Ploeg, 2003: 6). Taken together, these different networks compose a specific (socio-economic) constellation that might be understood as a hybrid pattern (Milone and Ventura, 2010) capable of building coherence between the dimensions that contribute to the sustainable governance of complexity in rural areas. In the literature such a pattern is mostly referred to as the *rural web* (Ploeg and Marsden, 2008; Kanemasu *et al*., 2010; Horlings and Marsden, 2010; Messely *et al*., 2013; Guinjoan *et al*., 2016; Rashid *et al*., 2020; Adai *et al*., 2023). A well-functioning rural web can result in locally specific and promising solutions for the maintenance and development of rural areas and their economies and an enhanced quality of life and attractiveness of these same rural areas.

Being part of a rural web can become an important mechanism for survival. The web can become a space where material and immaterial resources are exchanged (Cook and Whitmeyer, 2003). Being part of a rural web, can help improve one's position in terms of gaining autonomy or reducing dependence on others for access to resources. Within, and through, this rural web, the agricultural entrepreneur builds and enlarges his or her cognitive capacities, skills and autonomy. That is, he or she uses the web to build identity, space for manoeuvre, and specific alliances – and by doing so he or she contributes to changing the environment. In short: the network concept underpins and highlights actors' capacity to coordinate and organise farm resources, create alliances outside the farm, and minimise transaction costs.

These policies provide for multi-annual contracts (up to a maximum of 5 years) with agro-climatic-environmental commitments aimed at strengthening and safeguarding the environment and biodiversity and their resilience to ongoing climate change. However, the contracts are, by nature, incomplete as it is never possible to foresee all the conditions and they are also subject to controls aimed at ascertaining that farmers keep their commitments, thus limiting their right to use their own resources. Monitoring and enforcement imply high transaction costs, while the incentives lend themselves to opportunistic behaviour on the part of farmers.

[8] TATE is an acronym for the Technological Administrative Task Environment. It refers to the technological and administrative context of the farm, which is constituted by a series of entities. The TATE represents the professionally relevant environment for the farmer. Such environment provides the farmer with a pre-defined role. The role refers to the complex of behaviours or functions that are considered socially and technically appropriate for a person that occupies a certain position within a certain social context (Benvenuti, 1975).

[9] For a more detailed discussion of the different types of networks see Ventura and Milone, 2010.

I will further illustrate these points through a case study (below).

3. THE SHEPHERDS OF ABRUZZO

More than 25 years ago, together with Flaminia Ventura, I started to document the developmental trajectory of an emblematic experience in the Abruzzo: the farms of Gregorio and Nunzio which, had already been established for 25 years. The overall 50 year period offers an amazing insight into the dynamics of interlinking past, present and future through agency and network development. At the same time their particular experience is somewhat enigmatic: it shows how a prosperous and self-propelling process of development is possible even under harsh and marginal conditions.

3.1. The past

In 1975, when Gregorio started his farm, his only certainty was that he did not want to follow his father's decision to go to the seminary in order to become a priest. His scant savings only allowed him to buy a small flock of 200 sheep. Apart from that he could count on the knowledge of another shepherd, Nunzio, on how to organize herding in communal pasture lands. At that time building a new farm in the mountains of the Abruzzo National Park in Scanno seemed to be as impossible as heroic. Yet his dream of living in, and working with, nature drove him forward. Regardless of everything, in the first 25 years Gregorio succeeded in increasing his number of sheep, building the required farm structures (stables, shelters, and small units for processing meat and milk) and buying some additional land. In 2000, the farm had more than 1,500 dairy and meat sheep and offered full-time employment for 5 family members and other full-time workers. The farm was self-provisioning in terms of feed, fodder and the reproduction of the animals. Step-by-step its development had avoided taking on large debts, whilst contacts with small and medium enterprises for agricultural machinery assisted in developing small-scale on-farm units for processing cheese and meat. Thus, networking helped to construct additional autonomy. In turn, the on-farm production of cheese triggered the question on how to sell it in the best possible way.

The year 2000 represented, in a way, an important turning point. After his graduation from secondary school, his 18-year-old nephew Dino decided to take the entrepreneurial route with his uncle Gregorio. This, over time, led to important changes in the farm's organizational structure and boundaries. The option of associating with a cooperative for large-scale cheese production was avoided – even though considerable public money was available. Instead, Gregorio and Dino decided to further develop their own small-scale processing units and to extend the basket of products. But it turned out to be increasingly difficult to sell these products in the local markets.

Thus, they faced a context characterized by:

1. low number of farms combined with low numbers of consumers;
2. a high specificity of resources and products;
3. an overly wide range of products and market conditions that were unsuitable for allocating these products correctly;
4. high costs to formally certificate the products in order to assure consumers of their quality, origin and genuine nature.

As a consequence (and in line with Williamson's theory), the transaction costs linked with using this (local) market were far too high and this spurred Gregorio to explore alternative solutions aimed at minimizing the transaction cost. Interestingly, the solution was found in establishing link with *other* local markets characterized by other preferences and possibilities. Gregorio undertook long journeys to various Italian *piazze* in Northern and Central Italy (the *piazza* is the physical, and traditional, square where products are directly exchanged at least once a week). In these squares, especially in the North, Gregorio encountered consumers seeking high quality and distinction and, at the same time, willing to pay good prices. Gregorio increasingly succeeded in meeting these expectations and to find new markets for his ever-expanding product range. Thus, he created reputation and therefore no longer needed formal certification. The costs of reaching these squares were minimized through the use of family labour and, especially, through an alliance with Nunzio with whom transport and marketing costs were shared. Over time, Gregorio's name became synonymous with quality, sustainability, fairness and craftmanship. Thanks to this, the farm diversified further towards services with the opening of agrotouristic facilities and a farm shop. Gregorio also created a local network of shepherds, which over time expanded with the entry of young people who further enlarged the range of products brought to the market.

Even by the year 2000 the economic relevance of the chosen trajectory turned out to be quite promising[10]:

[10] For a complete discussion and in-depth analysis of values, please refer to the PhD book (2004) and publication Agriculture in Transition (Milone, 2009).

1. The quantity of milk per ewe was only 25% of the milk yield obtained in specialized, market-oriented farms, while the number of family labour hours per ewe was higher.
2. On the other hand, feeding costs were lower due to the use of feed and pastures on the farm.
3. Taken together this resulted in a revenue per ewe that was 42% higher than the one obtained in sheep farms specialized only in milk production.
4. The final profit per ewe was more than double that of specialized dairy and market-oriented farms (further details are presented in Milone, 2009).

3.2. The present

Today Gregorio is no longer with us, but his story continues – due to the constructed specificity and the many networks in which the farm is embedded. Dino has continued to operate according to the script build into the farm. In terms of the number of animals the farm remained virtually unchanged with 1,500 sheep. Only the number of cows has been increased slightly: the herd now numbers 40 and they are well supported by the farm's land and pastures. It has become a healthy and well-functioning family farm where the principles of product quality, biodiversity and craft have not only remained intact but, have been actively developed. Over the years, investments have been made to improve product quality and animal welfare. The stables have been enlarged to provide more space for the animals. A new unit was built for processing milk (cheese and mozzarella) and meat (both fresh and processed). The family labour force used in the various farm activities now numbers six full-time equivalents (fte) – that is one more than in 2000. In addition, 3 more family units are involved on part-time basis. The number of non-family workers increased by fte. A new breed of sheep was introduced over the years – this new breed is very apt for pasturing but gives a somewhat higher yield per ewe (now at 35% of yield levels of the specialized and large-scale sheep farms that strongly push yields upwards by using high doses of concentrates). Cheese production from cow's milk increased due to the increase in the number of cattle of the Pezzata Rossa breed, a breed that has a good milk yield with a high content of fat and protein. But here as well the yield per milking is far lower than in specialized dairy farms. In spite of this, however, *revenues* per animal remain well above those recorded for specialized farms. The diet remains almost exclusively based on pastures and mountain hay. The only concentrates used are produced on the farm itself (from cereals). The orientation of farm practices is organic.

The farm's product range has increased: there are now about 40 types of products available as well as services such as home-deliveries, restaurant and agro-tourism. The markets have increased whilst safeguarding the historical ones. The products are all sold *directly* by the farm to (1) specialized shops in Rome and along the Adriatic coast, (2) high quality restaurants with distinguished chefs, (3) in the farm shop and (4) at trade fairs (*piazze*) in several municipalities in Northern, Central and Southern Italy. In 2021, Dino decided to increase prices by 25 per cent as a result of strong increases in both raw materials and energy products. This increase did not reduce sales at all. Consumers and customers, including historic ones, continued to buy – they understood and recognized Dino's need in face of increased costs, especially energy, and to safeguard the continuity of the farm. The bond of trust based on reputation thus helped to maintain and even strengthen the networks that link producers, clients and consumers. This allowed for an increased turnover and more liquidity – thus enabling the entrepreneur to maintain control over organizational choices.

The following table compares the productive and economic results realized in 2000 and 2023 – it synthesizes the trajectory followed by Dino who built on the earlier work of Gregorio:

1. Revenues per head, in the case of both sheep and cows, have been increased. The increases are linked to two elements. First, the sale prices of processed products that allow for a higher remuneration per litre of milk (more than double the market price for non-processed milk). Second, the slow but persistent increase in quantities of milk produced per animal; these remain far below the level of realized in intensive farming, but still for a higher milk quality.
2. The ratio of family and non-family labour remained unchanged but the total amount of employed labour increased.
3. The overall costs per animal increased by about 25%. This is especially due to the costs of meat processing (which involves considerable energy use).
4. Despite these cost increases, the final profit increased – both for sheep and cows.

It is interesting to note that in 2021 the average specialised dairy cow herd in the North of Italy reported a loss of EUR 6.96/100 kg of milk, despite the fact that the yield per head had increased over the past years by 5% (Menghi and Ruffato, 2021). This equals a loss per animal of 708 Euro per head. This is a remarkable difference compared to the profit made per cow on Dino's farm, which stands at + 1,319 euro. This difference con-

Table 1. Comparison of company results 2000-2023.

	2000	2023	Difference
Full-time family work unit	5.00	6.00	1.00
Part-time family work units	1.00	3.00	2.00
Non-family work units	5.00	9.00	4.00
n. of sheep	1,500	1,500	-
n. of cows	6	40	34
Milk per ewe (kg)	50.00	75.00	25.00
Milk per cow (kg)	2,500.00	3,000.00	500.00
Revenue per ewe (euro)	296.00	397.50	101.50
Revenue per cow (euro)	4,200.00	6,200.00	2,000.00
Costs per ewe (euro)	275.60	360.40	84.80
Costs per cow (euro)	3,561.30	4,881.00	1,319.70
Profit per ewe (euro)	20.40	37.10	16.70
Profit per cow	638.00	1,319.00	681.00
no. of products	15.00	40.00	25.00

Source: elaboration on farm accounting data.

vincingly demonstrates, I think, the impact of agency, networking, reputation and the associated reduction of transaction costs. Together these elements made for a smooth trajectory that aligned past and present and carries considerable promise for the future.

3.3. The future: elements that drive success

In 2023, the farm showed further increases in complexity in terms of production range, product qualities and activities. More concern for animal welfare enlarged complexity even further. According to neo-institutional theory, this increased complexity will translate into increased transaction costs This is due to:

1. the farm being grounded on asset specificity and simultaneously having a wide range of products that require heavy investments in terms of communication, certification and marketing;
2. outputs being limited to low trade volumes and frequencies;
3. the presence of information asymmetry which brings uncertainty.

These elements have led the enterprise to pursue alternative avenues in which 'making' dominates over 'buying'. This 'making' translates into the construction and reproduction of an autonomous resource base. It equally translates into the development of networks that sustain suitable nested markets that make prices meet needs. There is a rich spectrum of such markets: on-farm restauration, home-delivery, direct sales to specialised shops and gourmet restaurants, farm shop, on-line sales and trade fair events in Italian municipalities. These are all hybrid forms of exchange in which the costs mentioned above are minimised through (1) the reputation built by Gregorio and further developed by Dino and (2) the availability of family labour, which also allows for flexibility, if needed. In addition (3) the multi-product farm allows the entrepreneur to implement strategies in the different markets that balance the product types and prices. This maintains room for managing different possibilities and thus allows for strategic decision making. Equally, (4) operating in these nested markets generates a mutual relation that guarantees protection and equally distributed levels of satisfaction.

The uniting element here is the agency developed and represented by Gregorio and which was, later on, transferred 'free of charge' to Dino. Dino did not 'buy' agency. His agency was 'made' through his cooperation with Gregorio, that is in working together within the farm, going together to the different markets, learning together, experimenting together, and so on and so forth. This allowed Dino, at the time of Gregorio's death, to take over at the helm of the company and continue without suffering any setbacks.

In this temporally embedded process of social engagement it was not only the capacity to coordinate and organise farm assets that was actively transferred. The involvement in local and extra-local networks and the associated reputation were also transferred. A multilevel and multidimensional process is activated, trough the time and generations, by creating coherence between the different dimensions and levels. This represents the emergence of a rural web.

Thus, a strong resource base (or huge amount of assets) was constructed that, in strict economic terms, would be unthinkable. On turn, this ample resource base (that definitely includes both agency and networks) probably is the best possible starting point for moving to the future.

4. DISCUSSION AND CONCLUSIONS

Recent decades have seen a worrying trend of increasing disconnections between the agricultural system on the one hand, and the environment and food provisioning on the other. These disconnections are at the heart of the 'agrarian question' of our time. They are due to many factors: the many failures brought by the 'modernisation' of agricultural processes of production; the erosion of entrepreneurship (through external

prescription and sanctioning[11]); and the strong impact of modern solutions (intensification, use of genetic engineering and big data). It is increasingly suggested that the way out of this 'agrarian question' will be to bid *adieu* to agriculture as a land-related production system and replace it by advanced food production systems that require less space and have lower environmental impacts.

At the same time there is a strong countermovement. There are new rural movements fighting to defend property and labour rights. These movements are strongly rooted in the (often forgotten or neglected) world of stubborn people defending the dignity of their work, family and capital. It is a world that struggles daily to obtain quality products and food to offer to citizens/consumers who are increasingly interested in the authenticity and environmental sustainability of food production. A world that also constructs new exchange relationships based on aspects of reciprocity, reputation and the redistribution of wealth, circumventing the principles of profit maximisation and replacing them with those of mutual satisfaction.

It is difficult to properly analyse the import of these two conflicting trends in today's modern world. Perhaps, what is critically missing is a more widespread use of *rural studies* as outlined by van der Ploeg in his article in this special issue: a new, multidisciplinary analytical framework, capable of going deep into the complexities of exchange relationships and giving value and economic meaning to the farm enterprise as multi-facetted institution. The farm enterprise is a living, dynamic, and well-coordinated constellation of different factors shaped over time according to the knowledge, experience and needs of the actors involved. A system of relationships, internal and external, that aim to sustainably produce goods and services, whilst remunerating the resources used. Such a remuneration does not include the financial dimension only, but also regards values as diverse as personal satisfaction, pride, dignity, continuity of work, animal health and the sustainability of resources. As Gregorio explained: "*The sheep respond to the care you give them. If you treat them well, without stress and with good stables and feeding conditions then you get milk in return in the right quantity and quality. If you treat them badly you get little milk, poor quality and in time their death*". Would it ever be possible to put a strictly *financial* value on this? What value can be attached to the stubbornness of farmers who continue to work and defend their farm-assets even in the absence of profit? What economic explanation can be given to a consumer who accepts a 25 per cent increase in the prices of products he normally buys without complaining (as occurred with the consumers in Dino's supply network)? The multiple meanings and many expressions of *value* are to be re-explored in order to understand the processes that currently shape the countryside. This is why *rural studies* are badly needed.

The rich work of Flaminia Ventura convincingly shows that there is no creation of value, nor any substantial development without exchange relationships that involve, apart from products and services, also knowledge, values, and customs. These relationships involve different actors with different cultures, roles, blocks of knowledge and a wide array of experiences. This brings subjectivity into the analysis – meaning that the quality of the subjects involved determines the success of the exchange and its development over time.

Agricultural entrepreneurs play a key role in the construction and coordination of relations within and outside the enterprise. I am well aware of the trend towards an erosion of this entrepreneurship – a kind of 'proletarianisation' – that is linked with spurred scale increases, technology-driven intensification and high levels of indebtedness (in short: the 'industrialization' of agriculture). This trend threatens entrepreneurship, whilst it opens the door to speculative free-rider behaviour that aims solely at obtaining extra profits (and/or public money) in the short term and abandoning, when the extra profits run out, the farm enterprise and the territory. The territory is drained to death, or there is ecological disaster and/or the enterprises go bankrupt. By contrast, real entrepreneurs such as Gregorio and Dino represent and create wealth for the territory. They themselves are resources that contribute to the identity, well-being, and promising prospects for the future of the territory.

New spaces for policy implications and research can be opened. Policy instruments should be more focused on human capital and on the preservation of labour and knowledge contained in it. In this respect the rural web, as methodological device and as a tool, can play an important role. Leader approach and new cooperation interventions in CAP policy 2023-2027 can take into consideration rural web concept but also further develop the agency and networking aspects already considered in it. Rural Studies can pave the way for new research that highlights the presence, value and potential of human capital and the relationships it implies – thus shifting the concepts of sustainability and competitiveness from the farm to the territory.

[11] This erosion was theorised by Benvenuti who developed the TATE concept (see note 12). Current versions of such a TATE are represented e.g. by agro-environmental schemes (Pillar 2 of the CAP), Eco-Scheme (Pillar 1), regulatory schemes of agro-industries, financial regulations imposed by banks, etc.

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