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The role of the CAP in fostering the diffusion of institutional hybrid arrangements: three case studies from Italy

The last reforms of the CAP have promoted the diffusion of new regulatory tools to improve the coordination of decisions along the agri-food supply chain. Interbranch organizations, protection consortia, the regulation of the supply for PDO products and the extension of rules represent solutions aimed at fostering the diffusion of institutionalized collective arrangements in the presence of an increasing uncertainty surrounding transactions. In light of New Institutional Economics, this paper describes and evaluates some interesting case studies that refer to some strategic sectors for the primary sectors in Italy: wine, tobacco and cheese. The results highlight that CAP can play a central role in depicting a regulatory framework that provides room for meso-institutions to foster the diffusion of hybrid forms of collective arrangements, especially in sectors that are highly regulated or subsidized.

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1. Introduction

Agricultural products have always raised problems with coordination across the different stages of the supply chain, with high transaction costs as a consequence. Over the past few decades, the increasing deregulation of the European agricultural market, on the one hand, has increased the degree of uncertainty surrounding transactions, while on the other hand, it has further sandwiched farmers between the immense market power of upstream input suppliers and downstream food processors and retailers (Buckwell *et al.*, 2017; Chatelier, 2011).

As a reaction, European authorities have provided new regulatory solutions to improve coordination and increase transparency along the supply chain (Frascarelli, 2012). In this regard, a better functioning food supply chain has become one of the main aims of the Common Agricultural Policy (CAP).

Under the lens of New Institutional Economics (NIE), this paper aims to describe and highlight how the institutional environment established by the CAP affected the establishment of specific organizational solutions aimed at improving the coordination of decision-making and rights along the supply chain of specific agri-food sectors in Italy (Ciliberti and Frascarelli, 2017;

Chiodini and Frascarelli, 2016). The NIE perspective is adopted since it has recently introduced the concept of institutional embeddedness of organizational arrangements and, therefore, may guide the analysis of the interaction between the regulatory framework established by both European and national authorities and the diffusion of specific forms of organizational arrangements in the agri-food supply chain in the last decade. Particular attention is paid to some specific policy tools that have gained momentum thanks to reg. (EU) 1308/2013 (i.e. Common Market Organization regulation, CMO): the extension of rules¹ granted to interbranch organizations (IBOs) and the regulation of the supply of protection consortia for PDO products² and wines. In this regard, this paper aims to contribute to the public debate on the evaluation of these instruments, providing insights to both policymakers and scholars.

The paper is organized as follows. Section 1 reports the theoretical framework of NIE, which is adopted in order to analyse and describe the effects of the recent changes introduced by the CAP in Italy. Section 2 briefly describes the methodology adopted and the source of information used to describe the cases under analysis. Then, the latter are reported and described in Section 3 to shed light on the functioning of the policy tools under investigation. Finally, Section 4 discusses the results and offers useful insights for the debate on the role of public institutions in fostering the adoption of hybrid forms of collective arrangements.

2. Theoretical framework

Having in mind the rules of thumb of transaction cost economics (TCE) – which state that a transaction-specific governance structure is more fully developed where transactions are recurrent, entail idiosyncratic investment and are executed under greater uncertainty – a new awareness is emerging in the NIE field: the institutional embeddedness of a variety of organizational solu-

¹ Article 164 CMO Regulation (n. 1308/2013) provides for the possibility that rules adopted by an IBO can be extended to non-members of the IBO. The member state can only extend such rules for a limited period of time and upon request of the IBO. The extended rules should not cause any damage to other operators in the member state concerned or the union.

² Article 164 CMO Regulation establishes that member states are allowed, under certain conditions, to apply rules to regulate the supply of PDO/PGI cheeses upon request of a producer organisation (PO), an interbranch organisation (IBO) or a PDO/PGI group. This measure is aimed at ensuring the value added and quality of cheeses with a protected designation of origin (PDO) or protected geographical indications (PGI), which are particularly important for vulnerable rural regions.

tions (Ménard, 2014b; Williamson, 2000). Deeply rooted in the Coasian tradition, the Williamsonian approach is aware that organizational arrangements are embedded in their institutional rules. Williamson (1993) certainly recognized that, since there are strategic feedback mechanisms at stake, the macro-institutions matter in influencing the governance of contractual relations. Moreover, it must be considered that, for an arrangement to be implemented and to remain sustainable, there is the need to gain institutional legitimacy on which also depends the capacity to enforce the rules of the game (Royer *et al.*, 2015).

Consequently, the set of rules, laws, policies, customs and norms that determine the rules of the game has to be taken into consideration since organizational arrangements are embedded and enforced in this institutional environment (Davis and North, 1971; Ménard and Valceschini, 2005). Such a topic deserves particular attention where governance forms are highly affected by macro-institutions, as is the case for the agri-food sectors.

Ménard (2012; 2017) clearly gives the example of the macro-institutional rules regarding agriculture that are defined at the level of the European Union through the “Common Agricultural Policy” and are therefore embedded into national laws according to the “subsidiarity” principle. However, since rules are also translated, adapted and implemented through specific institutional arrangements, the concept of meso-institutions is properly introduced. Meso-institutions can be understood as “the set of mechanisms and devices through which general rules and rights established at the macro level are translated, interpreted, adapted and implemented, thus framing the domain within which alternative organizational arrangements, the micro-institutions, draw and operate transactions and through which they transmit their expectations and requirements to the macro-level”. It follows that meso-institutions differ on the one hand from macro-institutions, in that they strictly operate within the general rules defined by the latter, and, on the other hand, from the micro-layer at which other organizational arrangements operate. Indeed, they do not implement actual transactions: they do not produce and deliver actual goods and services that are inputs to other organizations or that are delivered to consumers.

In this sense, some meso-institutional arrangements (such as POs, IBOs, protection consortia) are private in nature and get their legitimacy from the institutions that delineate their role through general rules. They also share a distinctive property since they establish and enforce contractual arrangements identified as “hybrids”, as they combine self-regulation mechanisms operated by private partners along the supply chain with a legal framework that determines the conditions and modalities under which these mechanisms operate (Royer *et al.*, 2015).

What is under investigation is if these meso-institutions, by opting for hybrid forms of collective arrangements, are able to establish optimal conditions for an appropriate alignment between rules of the game established through the CAP and organizational choices in order to reduce transaction costs. Such a process mostly concerns European efforts to improve the functioning of the agri-food supply chain and to address the increasing exogenous uncertainties surrounding transactions in agriculture that make agreeing on price, quality and volume more complex.

In this sense, an organization is very often the way to implement and operationalize the rules of the game, as they are defined by the institutional environment, and this process somehow gives birth to “hybrid forms” (Ménard, 1995). Recent decades have seen an increasing interest in the development of these nonstandard modes of organization in agri-food networks, particularly in Europe where agricultural production is purposefully embedded in various and changing institutional environments, yet producers compete in increasingly global market (Ménard and Klein, 2004). Hybrids are a class of arrangement included by Williamson between market and hierarchies. Such a mode is characterized by semi-strong incentives and an intermediate degree of administrative apparatus (Williamson, 1991). Indeed, modes of collective organization of the hybrid type have spread everywhere in the agri-food industry. Despite the apparent heterogeneity of hybrids, some main characteristics allow us to identify such governance forms: i) parties pool part of their resources while keeping property rights and associated decision rights distinct because they expect higher performance; ii) higher performances can be obtained through reduced uncertainty thanks to risk sharing, joint efforts to master complexity and benefits from spill over effects that not only affect shared assets but can also benefit those assets held separately; iii) mutually advantageous benefits can be obtained thanks to modalities of governance based on a durable relationship through which reputation is built so that the identity of the parties matters; iv) shared rights and decisions do not preclude competition among partners; v) the overlap of rights, the grey area surrounding the usage of shared resources, and the expected externalities make the definition and implementation of rent sharing rules particularly challenging; and vi) the main mechanism implemented for coordination is contractual (Ménard, 2018; Ménard and Valceschini, 2005).

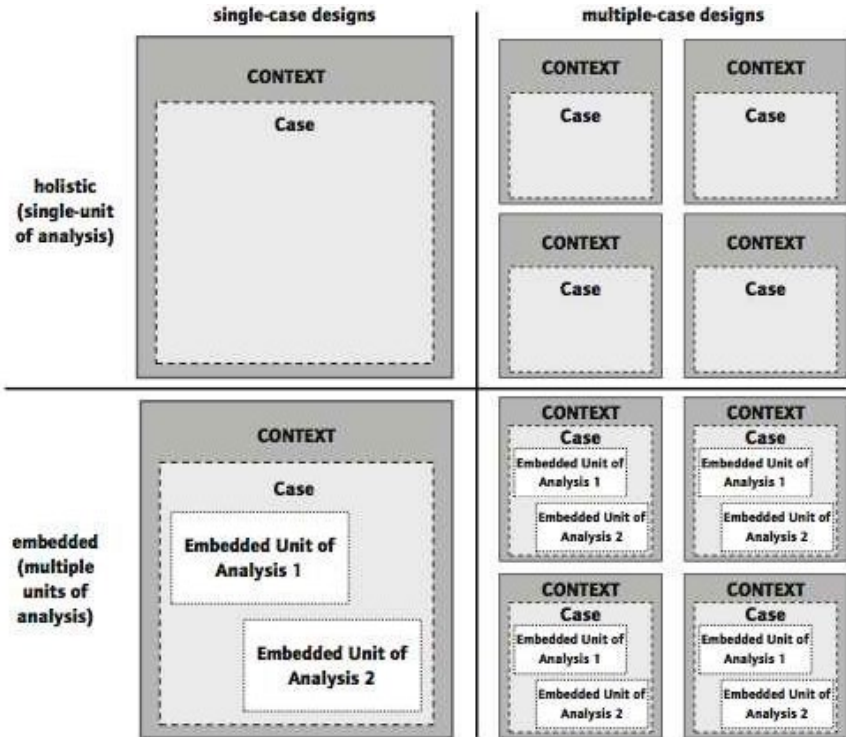
However, more effort is needed in order to shed light on the role of meso-institutions as “chains of transmission” between the institutional environment and hybrid arrangements in an agri-food supply chain faced with increasing and widespread uncertainty (Ménard, 2004; 2014a).

3. Material and methods

Due to its descriptive nature, the most suitable method to pursue the aim of the paper is the case study approach. Specifically, based on the number of case studies under analysis (Fig. 1), a multiple-holistic case study design is adopted (Yin, 2009).

The research design is composed of case studies related to three different sectors (tobacco, cheese and wine). Criteria of selection were twofold. First, these sectors have been highly affected by the transition from an interventionist-CAP (characterized by a high level of subsidies and rules) to a deregulated-CAP (characterized by a low level of subsidies and less prescriptive rules) that increased the role of uncertainty in affecting economic transactions; second, they are all strategic sectors for Italian agriculture (under both the social and

Fig. 1. Types of design for case studies.



Source: Yin (2009).

the economic point of view) and are characterized by a high level of specific investments (for technology, marks, machinery and so on). In more detail, the units of analysis are the following:

- the IBO “Tabacco Italia” is a unique case of an IBO at the European level in the tobacco sector, representing more than 80% of the tobacco contracted in Italy, and benefitting from the possibility of applying the extension of rules contained in a specific contractual agreement to non-members (Ciliberti and Frascarelli, 2017).
- the protection consortium of “Grana Padano PDO” for the cheese sector is one of the few cases of the application of binding rules for the regulation of supply for PDO/PGI cheese which was established by the European Union (Chiodini and Frascarelli, 2016).
- the Protection Consortia for the wine sector represents an interesting case study since in Italy as they can perform functions that are granted to Producer Organizations (POs) and Interbranch Organizations (IOs) at the European level, including the possibility to extend *erga omnes* the effectiveness of their rules (Paoloni and Gioia, 2017).

With respect to materials, the reliability of the case studies is substantiated by means of the triangulation of evidence (Yin, 2009). This method entails the convergence of empirical evidence from multiple sources of data in supporting the event or fact under investigation. Information gathering was conducted from April 2015 to July 2017 using three main sources of evidence: documents, multiple (direct and participant) observations and open-ended interviews. As concerns the documents, they were mainly collected thanks to direct access to both private documents (such as statutes, memoranda, internal regulations) as well to public regulation and official study reports. With regard to direct observation and open-ended interviews, they were carried out by means of direct contact with key stakeholders and privileged witnesses, such as the National Secretary of IBOs Tabacco Italia, the President of the protection consortium of PDO Grana Padano and some directors of the consortia for the protection of Italian wine. In more detail, observations consisted of site visits and participation in formal activities, such as job meetings, briefings, and assemblies. During the aforementioned meetings, members were interviewed and asked their opinions regarding the topic under investigation. In some cases, interviews were repeated in order to update information and data.

4. Cases under analysis and descriptive findings

Case studies are presented in this section, paying attention to the impact of CAP rules on the establishment of specific forms of institutionalized hybrid

arrangements. For each case under analysis, the evolution and the main aspects of the regulatory framework – both at the European and national levels – are analysed and their effects on the organization regarding transaction and allocation of both property and decision rights are described. In this regard, it must be noted that, according to the principle of subsidiarity, member states have a certain degree of freedom in laying down specific rules for the implementation of CAP at the national level so that the objectives of an action can be sufficiently achieved.

4.1 *The IBO Tabacco Italia*

The EU's Common Market Organization (CMO) provided unlimited support for European tobacco production, making this crop the most highly subsidized in relation to the area under cultivation. More recently, the CAP reform 2014-2020 removed all of the justifications for fostering the adoption of contracts between producers and the industry in order to regulate provisions regarding tobacco (Ciliberti and Frascarelli, 2014). Thus, it follows that the absence of a specific incentive may generate two main issues for the tobacco supply chain in Italy, namely, a further decrease in tobacco production, especially in less suitable and less developed areas, and a greater uncertainty about deliveries to first processors and manufacturers. This condition could threaten the functioning of the entire tobacco industry in Italy because without a competitive supply stage that guarantees stable deliveries, no subsequent stage will function effectively. Therefore, to address such a dangerous situation, shareholders have exploited the new rules of the CAP 2014-2020 reform and, more specifically, reg. (EU) 1308/2013 (CMO). This approach resulted in the founding of the *IBO Tabacco Italia* (OIT) in 2015, which aims to reorganize the entire supply chain by fostering a tight and effective coordination between farmers and the industry due to an Interbranch agreement (IA) that oversees the main aspects of deliveries including price, quality, and other factors.

Members of the *IBO Tabacco Italia* are representatives of both producers (UNITAB and ONT) and first processors (APTI)³. The OIT was formally

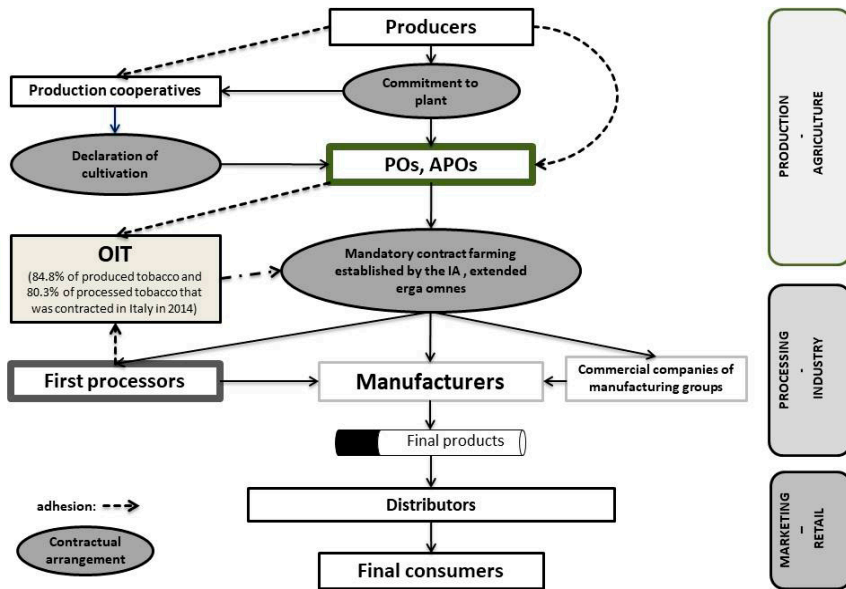
³ Specifically, the UNITAB is an association of Italian producers that are also members of the European association of Tobacco Growers. The ONT was founded in 2002 and was legally recognised by the MAFFP in 2010; it includes tobacco POs from Campania, Umbria, and Tuscany and represents more than 60% of Italian production by volume. Finally, the APTI represents both Italian first processors and exporters. Its members are the biggest firms in this sector (e.g. multinational enterprises as well as cooperatives) and process approximately 75,000 tonnes of tobacco every year (that is, approximately 60% of the national volume processed).

recognized under the legislation previously in force, and in 2015, the newly adopted framework confirmed their recognition. Moreover, according to Article 157 of reg. (EU) 1308/2013, the OIT pursues specific aims that entail the following activity areas: i) organization of supply and market control, ii) coordination of supply chain relationships, iii) quality of production and competition policy, iv) research and development, and v) environmental compliance and sustainable production. The OIT elaborated on two agreements (the so-called interbranch agreement, IA) for the periods of 2015-2017 and 2018-2020, which have been approved by the MAFFP (Ministry of Agricultural, Food and Forestry Policies). The IA established a comprehensive framework for the conclusion of cultivation contracts of raw tobacco and minimum quality requirements for tobacco products. They represent collective arrangements that control many aspects in order to foster the coordination and marketing of raw tobacco in Italy. The IA defines the main elements of contract farming between producers and processors/manufacturers (article 2) as well as qualitative requirements for raw tobacco (article 3). More specifically, the IA shows a model of the contract⁴ valid for the period 2015-2017 and 2016-2019, which involves on the one hand PO and/or APO and on the other hand first processors or manufacturers (Fig. 2).

Furthermore, since it regroups more than two-thirds of the production volume, the MAFFP has allowed IBO Tobacco Italia to extend the rules set out in the agreement to non-members, allowing the payment of a financial contribution (extension of fees) by non-members with a view to finance their institutional objectives and, in particular, to promote the relevant sector, product or product category. As a consequence, the relevant IBO rules are legally binding on all business operators in the sector. Finally, the enforcement of such an extension of rules is ensured by the Central Institute for Food Quality and Food Fraud Repression (ICQRF), which is part of the MAFFP. Sanctions in the form of financial penalties may range from 1,000 EUR to 50,000 EUR. When a non-member fails to comply with IBO's rules regarding the applica-

⁴ Furthermore, according to article 168 of reg. (EU) 1308/2013 and article 62 of decree law 24 January 2012 ("Cresci Italia" Decree), the OIT establishes that every delivery of raw tobacco in Italy by a producer to a processor must be covered by a contract among the parties and that the first purchasers (processors/manufacturers) must make an offer for a contract (Ciliberti and Frascarelli, 2013). Furthermore, any contract or offer for a contract shall be made in writing and shall be made in advance of the delivery as well. Contracts must include, in particular, the following elements: i) the price, ii) the quantity and quality of the products and the timing of deliveries, iii) the duration of the contract, iv) details regarding the payment period, and v) arrangements for collecting or delivering products. However, it should be noted that all elements of contracts for the delivery of agricultural products concluded by producers, collectors, processors or distributors shall be freely negotiated between the parties.

Fig. 2. The Italian tobacco supply chain and the role of the IBO Tabacco Italia.



Source: Ciliberti and Frascarelli (2017).

tion of standard contracts that regulate the purchase of agri-food products, the application of sanctions amounting to 10% of the value of the contracts concluded in breach of those rules is implemented.

4.2 The regulation of supply for the PDO Grana Padano

EU quality policy aims to protect and promote products with unique characteristics linked to their geographical origin as well as traditional know-how. Products can be granted a “geographical indication” (GI) if they have a specific link to the place where they are made. The GI recognition enables consumers to trust and distinguish quality products while also helping producers to better market their products. PDO is a GI that guarantees that the product is from a specific region and follows a particular traditional production process. More specifically, PDO implies that every part of the production, processing and preparation process must take place in the specified region.

In the dairy sector, the so-called “milk package” (reg. (EU) 261/2012 integrated in the reg. (EU) 1308/2013) introduced a specific regulation for the

supply of PDO or PGI cheese. It allows the establishment of a set of rules with the purpose of checking the flow of cheese into the market. More specifically, upon the request of a PO, an IBO or a protection consortium, member states may lay down, for a limited period of time, binding rules for the regulation of supply of a PDO/PGI cheese.

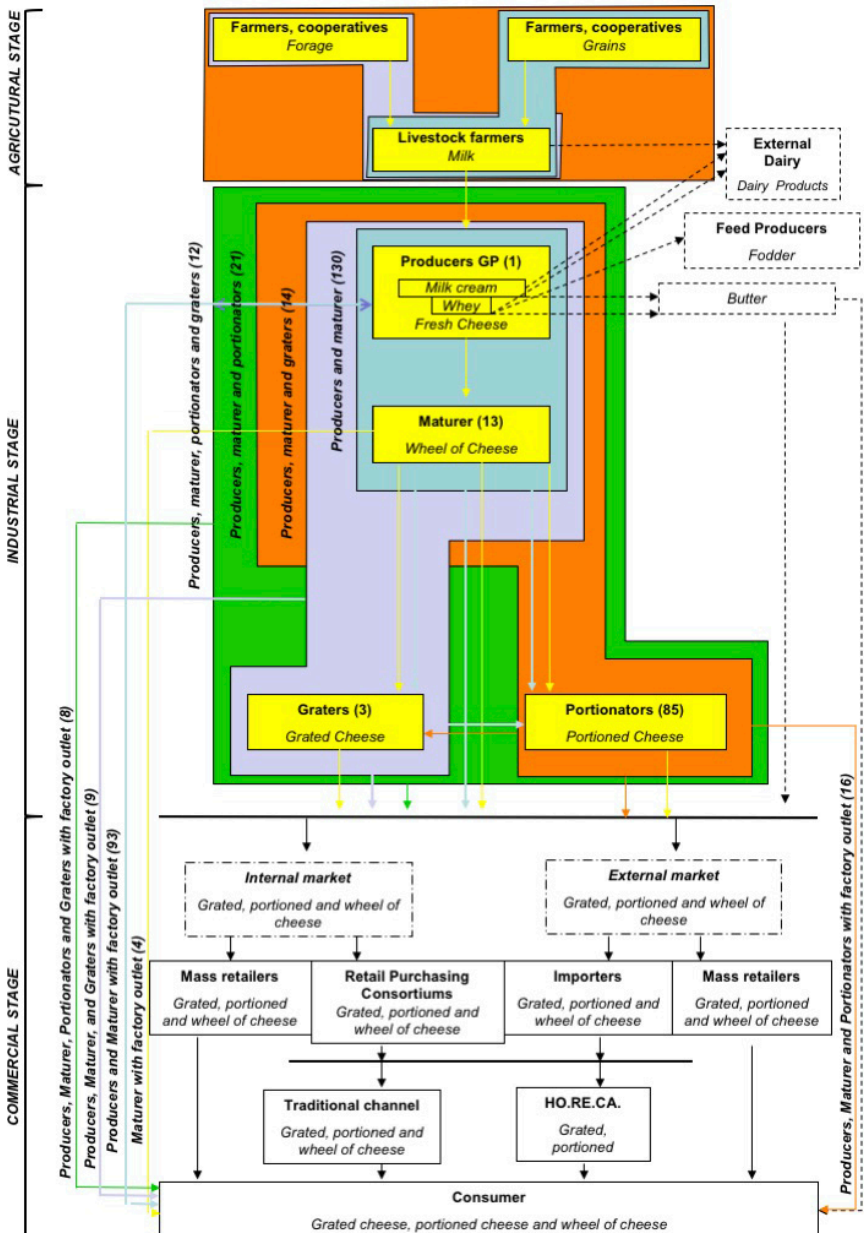
The European and Italian regulatory framework clarifies how to realize productive plans for the regulation of supply. Specifically, article 150 of the CMO states that the regulation of the cheese supply with a protected designation of origin can be introduced upon request by a producer's organization, an IBO or a protection consortium and must comply with the given restraints to avoid violating the rules of competition. This regulation was enforced in Italy through a decree by the Ministry of Agriculture, Food and Forestry on 12 October 2012. It listed the guidelines for devising plans for the regulation of supply.

Regulation of the cheese supply in Italy has been introduced for some cheeses (Grana Padano PDO, Parmigiano Reggiano PDO, Asiago PDO and Pecorino Romano PDO). Among these, regulation of the supply of Grana Padano PDO (Fig. 3) is the most interesting because this regulation has been in effect the longest.

This supply regulation scheme underwent several changes over the years; however, the idea of the consortium for the safeguarding of Grana Padano paved the way for the introduction of this tool in the EU. The supply regulation scheme adopted by Grana Padano includes the certification system that characterizes most of the products with PDO and PGI. The current Grana Padano PDO plan covers the planning period from 2016 to 2018 and strives to control the supply in order to align supply and demand by means of consolidating the presence of the product in the main markets and the acquisition of new marketplaces, quality promotion and safeguards (Chiodini and Frascarelli, 2016). Specifically, regulation of the supply plan utilizes the following four tools:

1. Regular contribution based on the global production level of Grana Padano. The Consortium has assigned a reference point (RP) to each dairy farm to which a so-called "regular contribution" corresponds. Over the course of a year, each dairy farm pays a regular contribution on a monthly basis, on average 5€/wheel (the range varies from 4,82 €/wheel to 5,48 €/wheel, according to the weight of the wheels) for the number of wheels produced per month;
2. Differential contribution. When the production of one or more dairy farms exceeds the reference point assigned, the consortium will levy additional contributions in consideration of the greater allocation of resources for qualitative and promotional improvements to market the surplus produc-

Fig. 3. The supply chain of the PDO Grana Padano: actors and stage.



Source: Martino et al. (2016).

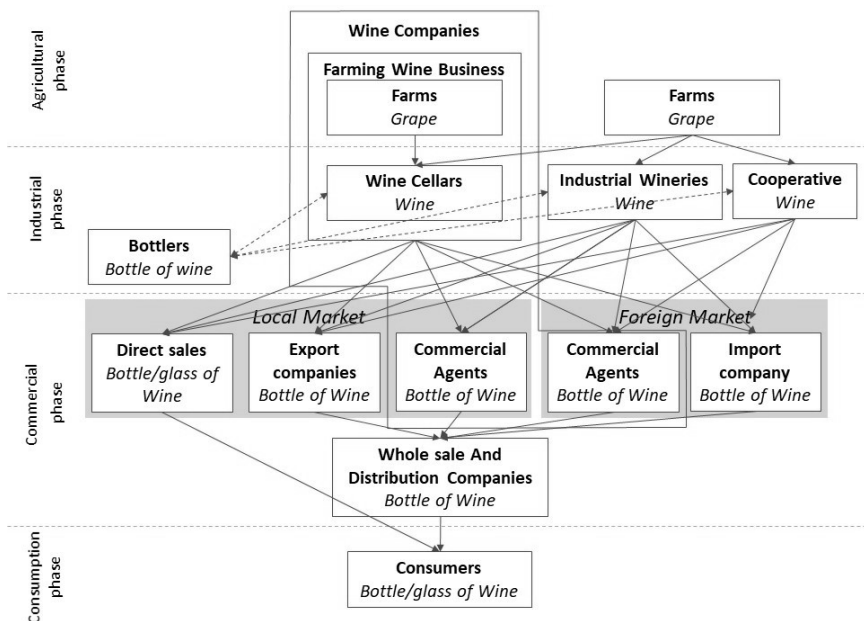
- tion. This system is called “differential contribution”. The differential contribution grows by 1% according to the production levels, with a charge increasing by 7,5 €/wheel per level. Above 8%, each wheel’s differential contribution is 60€;
3. Redistribution of the wheels. The consortium, above the set differential contribution, redistributes a given number of wheels, which will proportionally decrease when the threshold is not achieved;
 4. Quality prize. To valorise quality, the consortium has established a quality valorisation criterion as follows: If the percentage of the dairy farm’s premium cheese is higher than 80% of the total, there is a 25% increase in the distribution of the wheels. If the percentage of premium cheese is 90%, there is a 10% reduction in the contribution charge in addition to the abovementioned bonus.

4.3 *The consortia for protection of Italian wine*

The Italian wine production system is strongly fragmented and a large majority of vine area is still managed by small farms with fewer than 10 hectares. The supply chain of the wine sector (Fig. 4) is characterized by a structural duality since, on the one hand, there are thousands of small farms that often produce for their own consumption and, on the other hand, there are companies with high levels of professionalism and high production of wine (Gori and Alampi Sottini, 2014). For processing, there is a very high number of wine processors that are divided into three different typologies: i) farm wine cellars, which convert grapes produced on the farm; ii) industrial wineries, which exclusively process wine grapes purchased on the market; and iii) cooperative wine cellars, which process both grapes from their members and those purchased on the market. This latter type is the most relevant in terms of wine production, even though farm wine cellars are the most numerous. Moreover, there are also several bottlers because bottling is often a not profitable production stage for small farm wine cellars. All in all, strong fragmentation in both the production and processing stages causes relevant problems of coordination along the wine supply chain with negative consequences for sales.

Against this framework, over the past few decades, the number of Italian wine farms as well as the land used for viticulture has greatly decreased. In the same period, however, it must be noted that areas cultivated for certified wine (PDO and PGI) have increased. In Italy, PDO and PGI wines are classified into four categories: *Denominazione di origine controllata e garantita* (DOCG) e *Denominazione d’origine controllata* (DOC) for the former and *Indicazione geografica territoriale* (IGT) for the latter. These geographical indi-

Fig. 4. The supply chain of wine.



Source: own elaboration.

cations mean that the grapes have to come exclusively from the geographical area where the wine is made. Most importantly, these wines are safeguarded by protection consortia that are also allowed to define and enforce specific internal management policies. As of now, 120 consortia have been recognized in Italy, mainly for PDO wine.

Regulation 1308/2013 (CMO) has opened up new and important perspectives for consortia. The EU legislation has finally provided the definition of IBOs that was later made into law in Italy and assigned for the first time to the consortia. As a matter of fact, reg. (EU) 1308/2013 stated that IBOs can be acknowledged as representatives of the economic activities linked to the production and at least one of the phases of processing or trade. Since consortia are indeed currently represented by categories of growers, winemakers and bottlers, it follows that each of the wine consortium, as an inter-professional organization, is responsible for the designation, the rules (production specification) that are the basis of its identity and its evolution and adaptation to consumer's tastes. Based on article 41 of law 238/2016 (that substituted art. 17 of legislative decree 61/2010), the consortia pursue specific objectives and

Tab. 1. Case studies: main findings.

	Grana Padano PDO	Consortia for the protection of wine	IBO Tabacco Italia (OIT)
<i>EU regulatory framework</i>	Art. 150 reg. (EU) 1308/2012	Art. 167 reg. (EU) 1308/2013	Art. 164 reg. (EU) 1308/2013
<i>IT regulatory framework</i>	MAFFP decree n. 15164/2012.	Art. 41, Legge 12 dicembre 2016, n. 238 (ex-Art. 17, D.Lgs. n. 61/2010)	D.D. n. 2858 del 07/08/2015
<i>Right holder</i>	Protection Consortium	Protection Consortium (IBO, acc. to point (5) of art. 1 of Ministerial Decree, December 16 th , 2010)	IBO
<i>Member (no.)</i>	<ul style="list-style-type: none"> - Cheese factories: 130 - Responsible for cheese-curing: 155 - Exporter: 51 	<ul style="list-style-type: none"> - Wine growers - Bottlers - Winemakers 	<ul style="list-style-type: none"> - Tobacco POs: 2 - First processors: 1 (association)
<i>Capacity</i>	Define and coordinate a productive plan for the regulation of the supply of cheese benefiting from a protected designation of origin or from a protected geographical indication.	<ul style="list-style-type: none"> - Define policies for the regulation of supply and plans for quality improvement; - organization and coordination of the activities of who is involved in production and commercialization; - act to protect and to safeguard the PDO or PGI and to protect producers' interests and rights; - perform supervision, protection and safeguarding of denomination predominantly during the commercial Phase. 	<ul style="list-style-type: none"> - Organization of supply and market control; - coordination of supply chain relationships; - quality of production and competition policy; - research and development; - environmental compliance and sustainable production.

	Grana Padano PDO	Consortia for the protection of wine	IBO Tabacco Italia (OIT)
Representativeness for extension of rules to apply (minimum percentage required)	Two-thirds of the milk producers or their representatives representing at least two-thirds of the raw milk used for the production of the cheese, and, where relevant, at least two-thirds of the producers of that cheese representing at least two-thirds of the production of that cheese in the geographical area.	40% of the vine grower and 66% of the production of registered vineyards within their PDO or PGI, calculated on the declared amount produced in the preceding two years.	Two-thirds of the volume of the production of, the trade in, or the processing of the product or products concerned.
Tool	Plan for the regulation of supply, submitted to the MAFFP.	Production management policy submitted to the MAFFP.	IBO agreement submitted to the MAFFP.
Associative cost	Variable (based on production)	Variable or fixed or mixed	Fixed
Definition of a contract scheme	No	No	Yes
Extension of rules	Who is inserted in the control system	Who is inserted in the control system	All
Level of application	Cheese producers	Grape producers and bottlers, with or without grape processing	Primary producers and primary processors
Tool extension	Relevance area of geographical indication	Relevance area of geographical indication	National
Controls	CSQA	Various subject	ICQRF

Source: our elaboration.

may perform several activities for this purpose. Specifically, they are responsible for the managing of production in respect to the market (also providing, in agreement with the region, restrictive yield measures), stock management, and new registration of vines to a DO at the Land Registry. Finally, they are responsible for increasing the value of the product and for protecting the designation.

Another important aspect is related to the so-called “erga omnes” authorization. National legislation (art. 17, par. 4 of the abovementioned legislative

decreto n.61/2010) specifies that consortia demonstrating a higher level of representativeness (at least 40% of winegrowers and at least 66% of the production of registered vineyards within their PDO or PGI) can get further ministerial authorization to carry out such extended functions towards all subjects included in the control system, even to the ones that are not members of the consortium. Consortia that have received the “*erga omnes*” authorization are allowed to implement supply management policies, to improve the organization and coordination of stakeholders along the supply chain and to undertake judicial or administrative autonomous acts for the protection of the designation.

As concerns the specific actions aimed at managing production, in order to safeguard the quality of the wine as well as to improve the marketing of products, the following rules related to the management of production can be extended to non-members of a consortium that has obtained the extension of rules:

- Storage of a percentage of the production during favourable years to address potential lack of production thereafter;
- Reduction of the maximum grapes/wine yield for PDO/PGI wine (or the maximum yield of grape per hectare) in order to ensure a market equilibrium;
- Control of registration in the “vineyard register” that allows the procurement of the PDO/PGI;
- Establishment of other systems to ensure a proper management of available wine volumes in order to regulate both the supply of grapes and storage.

To sum up, this case study highlights how European and Italian regulation (respectively, by means of article 167 of reg. (EU) 1308/2013 and art. 41 of law 238/2016) allows protection consortia to play a relevant role for guaranteeing the quality of production as well as for managing and regulating the supply of PDO wines (Paoloni, 2012). Most importantly, based on consortia requests, such rules can be extended thanks to specific actions undertaken by administrative regions. What emerges is that consortia for the protection of Italian PDO and PGI wines can take advantage of the European and national regulatory framework to ensure proper management and coordination of the supply of wine. In this regard sense, consortia may enforce a strict internal regulation, based on the limitations of the registration of the vineyards in the “vineyard register for PDO/PGI” with the aim to avoid overproduction.

Finally, Table 1 summarizes the main findings related to the case studies under investigation. It reports information on the regulatory framework that defines specific rules for the establishment and the functioning of the organizational arrangements analysed.

5. Discussion and Conclusions

The new regulatory framework introduced by the CAP has offered some solutions to improve the coordination of decisions along the agri-food supply chains. What emerged in the sector under investigation is the diffusion of specific meso-institutions (e.g. IBO, consortia) that promote hybrid organizational solutions based on contractual arrangements (e.g. IA, regulation of supply) extended to non-members that mix autonomous adaptation, as in markets, and cooperative adaptation, as in hierarchies. These institutional-embedded hybrids are aimed at making parties cooperate since they pool part of their resources while keeping their property rights and decision rights distinct in order to reduce both endogenous and exogenous uncertainty (risk sharing) that increasingly surrounds transactions, realize higher economic performance, benefit from reciprocal learning effects, establish durable relationships that ensure the stability of supply, build a positive reputation and, last but not least, reduce the risk of rent sharing.

What emerged in the three case studies under analysis is that CAP has attributed an increasing role to meso-institutional solutions that promote the diffusion of hybrid forms of collective arrangements. However, this paper also shows that these latter forms mainly spread in the presence of both specific investments surrounding transactions. This is the case in the sectors investigated since these investments would allow the minimization of the costs of governance in the presence of an increasing uncertainty. In other words, these embedded hybrids developed when partners found some advantages in linking some of their investments and in establishing and accepting mutual dependence; that is most likely when asset specificity is high, and uncertainty is gaining momentum.

Finally, some interesting implications for policymakers also emerge. First, the CAP has promptly fostered the diffusion of collective arrangements aimed at addressing increasing uncertainty due to the dismantlement of market interventions (such as the milk quota system for the cheese sector, vineyard planting rights for the wine sector and deficiency payment and coupled support for the tobacco sector) that created several problems of coordination along the agri-food supply chain. Against this backdrop, it is important to note that, in order to foster the diffusion of other hybrid organizational arrangements in the agri-food supply chain, it is strategic that the process of institutional embeddedness of meso-institutions established by the CAP continues.

However, the paper also has some limitations since it is clear that the case studies are descriptive in nature and cannot provide empirical evidence of the effectiveness of the organizational arrangements promoted by the CAP. Further studies supported by quantitative analyses are needed in order to explore

this knowledge gap as well as to investigate and compare similar experiences in member states with long-standing traditions in the use of such policy instruments.

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