

Governance Dynamics of Cooperatives Federations: A Conceptual Framework

Abstract:

Cooperatives have often achieved scale economies or strategic growth by forming federations of cooperatives, i.e. second-tier cooperatives. Cooperative federations have experienced a diversity of fates: centralization via mergers of federated cooperatives, dissociation, fragmentation or subordination via a defensive merger with a competitor. In this paper, we combine recent research on corporate governance and the transaction cost theory of hybrid organization to investigate the governance of cooperative federation. Competitive pressures to pool resources and asset specificity are key determinants of organizational outcomes. We propose a conceptual framework applied on five case studies to reveal the mechanisms of transformation of cooperative federations.

Key-words: Cooperative, Governance, Centralization, Federation, Mergers

Introduction

Cooperatives represent 1 billion cooperative members from any of the 3 million cooperatives worldwide. About one third are in the food industry (Euricse, 2022) and are involved in the processing of around 40 to 50% food products in most Western countries (Bijman and Iliopoulos, 2014). Albeit limited in their ability to raise equity, agricultural cooperatives have expanded their activities through alliances or mergers to gain bargaining power in more and more international and oligopolistic markets (Van Der Krogt et al 2007, Bijman et al 2014). Cooperatives have oftentimes enacted these alliances through cooperative federations, or second-tier cooperatives¹. In 2020, the U.S. account for 123 federations and mixed cooperatives (when members are both cooperatives or farmers) for a total of 1,744 cooperatives (USDA, 2022). In France, the grain industry accounts for 162 cooperatives and 25 cooperative federations while the wine industry accounts for 570 cooperatives, including federations (La Coopération Agricole, 2023). But these numbers may not last. Cooperative structures change. Cooperative federations have experienced diverse fates: many of them have merged to form a centralized cooperatives (centralization); others have been absorbed by a competitor (subordination), generally another cooperative; shared assets have been redistributed to some of the federated cooperatives or sold to other agribusinesses (fragmentation); federated cooperatives have recovered their autonomy (dissociation); or federations have proven to be sustainable organizations (federation).

To focus on the dynamics of hybrid organizations is crucial to have a better understanding of what are the sources of their comparative advantages (Ménard, 2022). Plus, the research on governance must not overlook the processes that are the substance of relationships between actors (Masten, 2022). As such, the complexities emerging in the growing of large cooperative structures are a privileged field to inform the theory: which organizational architecture is better to create value in an increasingly oligopolistic and international market? Should we rely on second-tier cooperative structures, i.e. a cooperative federations, or large and centralized cooperative? Should we recognize that a merger with another organization, cooperative or not, would create more values for the members? The originality of our research is to rely on the most recent results of the corporate governance literature on large shareholding to discuss the governance feature of cooperative federations. We combine it with the life cycle approach of cooperative and the transaction cost theory of hybrid organization to propose a conceptual framework to address these questions.

We focus on the interplay of the competitive pressures to form cooperatives² and asset specificity among federated cooperatives. Our main argument is as follows. Large shareholding and so, federation, is an efficient governance structure for federated cooperatives as long as asset

¹ A federation of cooperatives or a secondary cooperative is a cooperative in which all members are, in turn, cooperatives practicing the following principles: Open and voluntary membership; Democratic control of the membership; Members contribute equity capital in proportion of their usage; Cooperatives are autonomous, self-help organizations controlled by their members; Cooperatives cooperate with each other (International Cooperative Alliance).

² We group under this term the economic justification for cooperatives (market failure) and the rent seeking by collective vertical integration. The first reason typically refers to co-ops à la Nourse while the second refers to co-ops à la Sapiro (Cook, 1995).

specificity is not too problematic and calls for centralization. Plus, the fading perception of the competitive pressures for federating weakens the governance of these organizations and can lead to dissociation. As such, the interplay of competitive pressures and asset specificity determines the transformation of cooperative federation. Based on this, we draw a conceptual framework that we apply to five case studies. It allows identifying tensions or dynamics that precede governance changes. It confirms the role of exit as a key enforcement mechanism. Interestingly, it reveals the capacity of federated cooperatives to weaken or strengthen the federation governance through their relationships with external stakeholders.

Our review of the literature on corporate governance and cooperative leads us to consider competitive pressures to pool resources and asset specificity as key variables of federation governance (section 1). Then, we present the conceptual framework and directions to apply a processual approach through narratives (section 2). We apply this framework on case studies in section 3. Then we conclude.

1. Federation or centralization? Evidence from the literature.

1.1. The competitive pressures to form cooperative federation

Cooperative scholars have long written on the economic justification of cooperatives. Valentinov (2007) provides an original insight by emphasizing the effectiveness of family farms as governance structure as a cause of cooperative. Organizational reasons justify the atomistic nature of the farming sector. However, as this does not apply to the activities at the downstream or upstream of the supply chain, small farmers face oligopolies of large companies, hence the need of cooperatives (Nourse 1922, LeVay 1983, Staatz 1989, Cook 1995, Valentinov 2007 among others). Another reason is the willingness to exploit rents that are not accessible for isolated farmers (Cook 1995, Hendrikse and Veerman 2001, Cook 2018)³. Along this line, many practitioners consider cooperatives as critical to assure a sustainable outlet for farmers. We will group these two reasons under the term competitive pressures to pool resources.

Fading competitive pressures and de-cooperation

The competitive pressures to pool resources play a role in the governance quality of cooperatives (Cook, 1995). The clarity of the purpose is necessary for the commitment of members, which reduces the coordination costs (Cook, 1995; Iliopoulos and Valentinov 2017). A key argument of the lifecycle perspective is that the perception of the economic justification tends to reduce with time, so as the health of cooperative (Cook, 2018). In an economic perspective, cooperatives are not necessary in a competitive market. Cross and Buccola (2004) show that ruins of cooperatives are especially likely in a competitive environment compared to the “monopoloid” environment justifying their creation. Cooperatives' success in making markets fairer would be a reason of their

³ Cook (1995) shows how this perspective had been promoted by Sapiro who advocated for cooperatives with dominant strategic positions, while Nourse promoted cooperatives to correct market failures due to the atomistic structure of the farming sector.

degeneration. In our setting, we interpret this dynamic as a reduction of the competitive pressures to get together.

Cooperative federation and exit via dissociation or fragmentation

To the extent of our knowledge, there is no specific research to explain the move towards cooperative federations versus centralized cooperatives. Cooperative scholars seem to consider this move as a natural continuation of the formation of cooperatives⁴. However, the competitive pressures are different for individual members (farmers) and cooperatives themselves: when cooperatives do business with a private counterpart, individual members depend on the services provided by cooperatives as transacting with limited volume can be prohibitively expensive. By contrast, cooperatives deal with volumes and resources that give market access. As such, exit from federation by cooperatives is much easier than exit from cooperatives by farmer members. Exit by dissociation (when federated cooperatives recover their independence) or fragmentation (when assets of the former federation are unevenly distributed among formerly federated cooperatives or sold to private competitors) are easier for cooperative federations than cooperatives⁵. A crucial dimension of exit is its enforcement effect on governance, as shown in the next session.

1.2. The insight of the corporate governance literature: large shareholding, voice and exit

Large shareholding improves governance by involving shareholders willing and able to have a voice in the organization. Shleifer and Vishny (1986) have long theorized the higher ability and stronger incentives of large shareholders to align the managers' decision with their interests, implying superiority of concentrated ownership versus dispersed ownership. More recent research underlines the role of exit (Admati and Pfleiderer 2009, Edmans 2009). This has led to a wave of empirical papers that convincingly confirm the theory and establish the governance advantage of large shareholding through voice and/or exit.

Willing and able

Large shareholders commit in corporate governance because the benefits of monitoring benefits are higher than their costs. Large shareholders have the incentive "to ask questions first and not automatically sell upon losses." (Edmans, 2009). For Pagano and Roell (1998), only large shareholders exert the efforts required to minimize the diversion costs by managers.

This involvement in monitoring leads to the mitigation of behavioral biases of decision makers (managers or dominant shareholders) like excessive risk aversion, myopic behaviors, and horizon problem. John et al (2008) and Mishra (2011) provide empirical evidence that large shareholders are more efficient in curbing the behaviors of risk adverse managers toward more risk taking by mitigating excessive risk aversion as well as the horizon problem. This effect is even more pronounced in the case of family firms (Mishra, 2011), showing that large shareholding mitigates

⁴ As a matter of fact, many of them ended up as centralized cooperatives, justifying a relative disinterest.

⁵ Cook (1995, 2018) lists four possibilities following introspection phase: exit, status quo, spawn or reinvent.

Relatively to status quo, the probability of exit or spawn is unambiguously higher for cooperative federations than cooperatives. We tend to think that it's also the case for reinvention because of the governance advantage of federation seen in section 1.2.

the risk of biases due to shareholders with a particular relationship with the management. Large shareholding has a positive impact on R&D efforts (Edmans and Holderness, 2017), showing that large shareholding favors long-term value creation. Furthermore, Dou et al., (2018) show that large shareholding reduces the accounting manipulations by managers as large shareholders can detect managerial opportunism regarding performance reporting. In short, the research in corporate governance provides evidence that large shareholding reduces most of the information asymmetry problems that affect corporate governance. How?

Exit as an enforcement device

Exerting monitoring is not sufficient to have a voice in corporate governance. An enforcement mechanism to sanction the management or other shareholders when harmful decisions are taken is necessary. The threat of exit by large shareholders plays this role (Edmans and Holderness, 2017; Dou et al, 2018). Indeed, with large shareholding, shareholders must control the management to avoid the risk of having the value of their shares reduced by large shareholders voting with their feet. By backward induction, the management behaves. But this mechanism works in the long run only if shareholders hold a tradable share, which implies shares limited in size (Edmans, 2009). It also implies several large shareholders so that exit does not mean the end of the organization (Edmans and Manso, 2011). In short, exit is a credible and persistent governance mechanism if several large shareholders hold a significant but limited share of organizations.

Balance of power

In addition to trade-off between exit and incentives to monitor, several authors show that shareholding benefits from an even distribution of power. It mitigates shirking from minority shareholders (Bennedsen and Wolfenzon 2000) and implies a higher contestability of largest shareholders' voting power (Gomes and Novaes 1999, Attig et al 2013). For Dhillon and Rossetto (2015), large shareholders endogenously emerge to balance the power of primary shareholders over the minority shareholders who differ by their risk preferences. As such, large shareholding is not only effective in providing more power to shareholders with incentives to be informed (take better decisions), but also to balance power among shareholders with different risk and time preferences by giving a voice to first-tier owners. These second-tier investors correspond to blockholding financial institutions for corporations, and cooperative federations for cooperatives.

To sum up, the corporate governance literature provides strong theoretical and empirical evidence of the superiority of a balance large shareholding over other ownership structures. Based on that, cooperatives forming an alliance should retain the federation as a governance structure, rather than centralized cooperatives with dispersed ownership or others. But the trick is that cooperative members are not only owners, but also users of the cooperative.

1.3. Coordination to manage specific assets

The corporate governance literature enlightens the mechanisms related to the ownership dimension but misses the issues specific to the transactional dimension of cooperatives implying a collective management of shared assets.

Asset specificity

Menard (2016, 2017) proposes to apply the Transaction Cost Theory (TCT) on cooperative governance. In line with Cook (2018), or Iliopoulos and Valentinov (2018), this perspective makes members heterogeneity a critical issue of cooperative governance. Indeed, the more heterogeneous is the membership, the more cooperatives' investments are affected by asset specificity (site specificity, physical specificity, human asset specificity and dedicated assets (Williamson, 1991 and 2005) and thus influence costs (Iliopoulos and Hendrikse, 2010). For example, the location of a processing unit creates heterogeneity when farmers are geographically dispersed (site specificity); a differentiation policy may generate heterogeneity depending on farmers skills (human and dedicated asset specificity); certification can involve agricultural practices depending on agronomic conditions and technical abilities (physical and human asset).

Centralization and subordination

Because of asset specificity, transaction costs among members appeal for coordination efforts to minimize governance costs. Ménard (2014, 2018) establishes that an effective response to increasing complexity is a higher degree of centralization, and ultimately hierarchy. We here consider that, at the scale of cooperative federations, centralization materializes by mergers of federated cooperatives, and hierarchy materializes by subordination to a superior authority that occurs after a defensive merger with a competitor (cooperative or corporation). Pascucci et al. (2012) provide empirical evidence of the role of asset specificity (proxied by several variables related to location, processing specificity, perishability, specialization...) on cooperative governance: asset specificity explains the switch from no membership to soft membership (cooperatives are an outlet among others), to strong membership (farmers deliver products almost exclusively to their cooperatives) and then hierarchy (upstream integration of farmers by investor-owned enterprises).

Centralization, hierarchy and differentiation

Saitone and Sexton (2017) argue for hierarchy through downstream vertical integration when asset specificity is high. For these authors, the ability to provide differentiated products depends on the capacity of large buyers to drive the industry via extensive contracts. The loss of control by the actors at the upstream of the supply chain (farmers) would be compensated by the need of large buyers to incentivize them to do business on a long-term basis. In this perspective, cooperatives are a too decentralized form of governance. The quasi disappearance of cooperatives in the hog and poultry industry in the US pleads in favor of this argument, but the case of the cooperatives-dominated hog industry in Northern Europe is in stark contradiction⁶. Between the hierarchy

⁶ Frenken (2014) shows how Dutch dairy cooperatives were formed because of quality issues in the processing and then outlive them as cooperatives reduce transaction costs.

established via extensive contracts by “integrators” and decentralized hybrid organizations like the traditional cooperative system can exist organizations with higher degree of centralization (Ménard, 2018) like large and centralized cooperatives.

In this perspective, the asset specificity issues related to the cooperative development should induce a move from relatively decentralized governance structure, like federations, to more centralized forms like large cooperatives, or control allocation to an external authority via a defensive merger, or via the dominance of private integrators in the industry. Compared to the cooperative theory provided by Hansmann (1996) or Cook (1995, 2018)⁷ who establish that governance costs increase with the members heterogeneity, the TCT stresses the role of asset specificity both as a cause and a consequence of heterogeneity.

2. Conceptual framework

2.1. The interplay of competitive pressures and asset specificity

Section 1.1 shows how competitive pressures to pool resources are both a cause of cooperative federation and a factor of commitment that may fade with time. Section 1.2 demonstrates that cooperative federations display governance characteristics that may play at their advantage. Exit possibilities and conditions are key. Section 1.3 points out the benefits of centralization or hierarchy over federations to manage asset specificity among the federated cooperatives. This highlights two determinants of the effectiveness of cooperatives federation: the competitive pressures to pool resources that determine the effectiveness of exit as a governance mechanism and the governance costs related to asset specificity. Based on this, we hypothesize that:

- i. Competitive pressures to pool resources must lead cooperatives to form federation as long as asset specificity does not call for centralization or hierarchy.
- ii. Hierarchy is more likely when asset specificity is high and the “perceived” competitive pressures to federate are low. We name this process subordination. For cooperative federations subordination is achieved through defensive mergers.
- iii. Dissociation of the federated cooperatives is likely to occur when the competitive pressures to federate is perceived as low and the shared assets have no significant value.
- iv. When shared assets have a significant value for some of the federated cooperatives or competitors, but competitive pressures to federate are perceived as low, fragmentation in heterogeneous entities occurs.

These hypotheses establish contingencies based on the competitive pressures to federate and asset specificity. We use them to establish a conceptual framework to apprehend the transformation of cooperative federations.

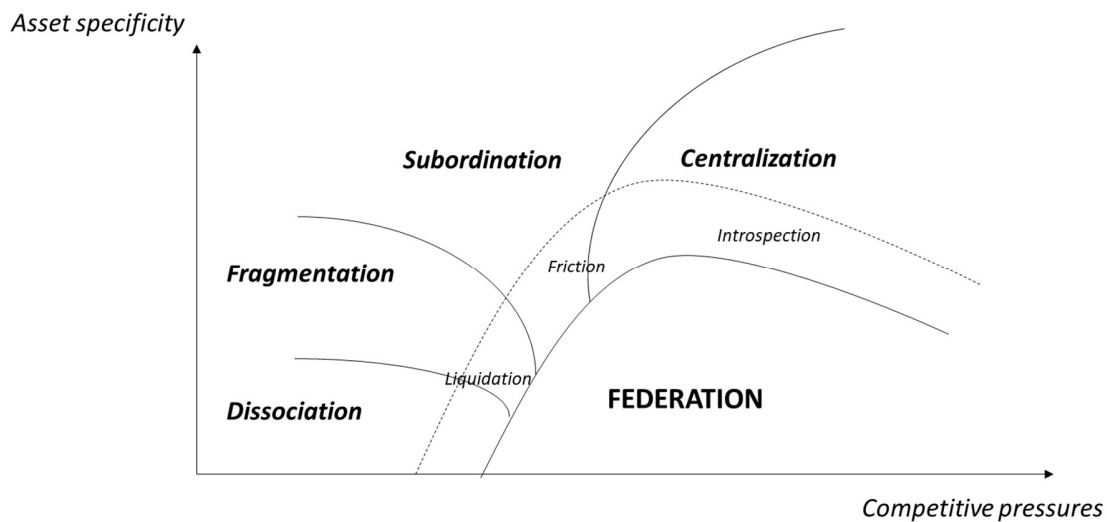
2.2. The mapping of governance dynamics

Our four hypotheses describe governance dynamics based on the changes of competitive pressures to pool resources and asset specificity. We here summarize our proposal in a diagram with the

⁷ For a focus on the different dimensions and causes of member heterogeneity, see Cook (2018).

degree of competitive pressures in x axis and asset specificity in y axis. Then, the diagram can be used as a map where the trajectory is drawn from the change along these two dimensions. The mapping can be used as a tool to explain or anticipate tensions in organizations. We expect tensions when the actual governance structure does not correspond to the one predicted by the model.

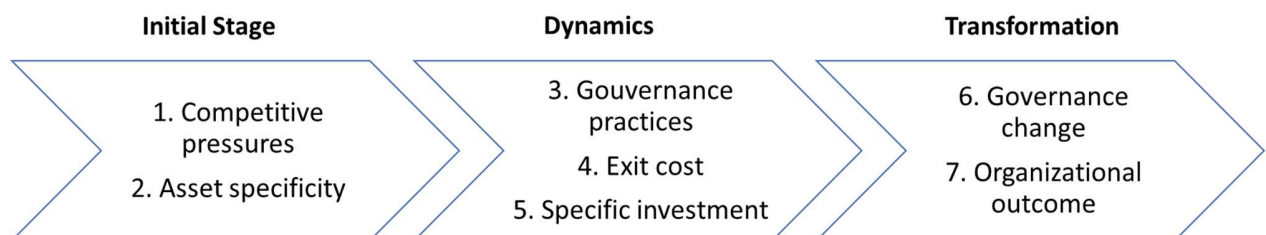
Figure 1. Mapping the governance dynamics of cooperative federations



2.3. Phasing the process

Following Pentland (1999) on the method to analyze processes, we use the following framework to structure narratives:

Figure 2. Phasing narrative



3. Case Studies

We apply this framework on five case studies. They are all large cooperative structures of the French agribusiness industry⁸. In Vivo is still the largest French cooperative (€21 billions of revenue in 2022). The merger of UCCOAR and Val D'Orbieu led to the third largest cooperative structure in the wine industry (€300 millions of revenue in 2012) (Usine Nouvelle, 2012). Sodial is the first dairy cooperative (€4.8 billion in 2020). Cristal Union is the second top sugar cooperative in France (€1.7 billions in 2021). And if the UCCFC would have succeeded, it would certainly have been the largest structure of the Comté cheese industry. After presenting the case studies we specify how to organize the narrative to apply the conceptual framework.

3.1. Case studies selection and information sources

We selected the business cases for their revelatory and exemplar properties to apply our proposition. For each case, we (i) accounted for our level of interactional expertise through past experiences in professional training, extension and/or research, (ii) gathered information from various internal sources (reports) and professional reviews or local newspaper and (iii) complemented with interviews of managers at the time of the governance changes for two of these cases (UCCOAR and Cristal Union).

3.2. Five stories

Case 1: UCCOAR – A successful merger with the local competitor (subordination)

UCCOAR is a wine cooperative federation created in the 1970s. The role of the federation was to assemble and market the bulk wine produced in local coops. The federation successfully went through the 1980s and early 1990s by providing the right responses to the mass marketing of table and medium-priced wine via supermarkets. However, at the end of the 2000s' first decade, UCCOAR entered a crisis which ended up by a defensive merger by Val D'Orbieu, now Vinadeis in 2012. The capacity of the group has allowed the cooperative members to benefit from the 2012-2018 favorable period for the wine industry.

Case 2: UCFFC – Back to traditional practices (dissociation)

UCFFC was a dairy cooperative federation created in the 1950s to group the “Comte fuitieres”, i.e. local cooperatives producing Comte (high quality cheese) in the middle-east of France. The federation accounted for more than 200 cooperative members in the beginning of the 1970s when it decided to accelerate the industrialization of the cheese-processing industry. Not all cooperatives accepted this orientation. They successfully lobbied for regulation in favor of “traditional” Comté instead of industrial processing and collaborated more tightly with traditional private ripeners

⁸ The French cooperatives generate 40% of the turnover of the agribusiness industry (\$88 billion) and seven of them are in the top 20 of the European cooperatives. One over three food brands is owned by a cooperative. Three-fourth of French farmers are member of at least one cooperative (La Coopération Agricole, 2023a).

instead of UCFCC. A price crisis in the beginning of the 80s led UCFCC to an end via a liquidation. Smaller federations with more control by private ripeners emerged (Mélo, 2012).

Case 3: Cristal Union – Expansion of a centralized cooperatives (federation-centralization)

Cristal Union is a cooperative originally formed from 3 cooperatives in the North of France in the beginning of 2000s as the private companies were fleeing from the industry. The 2006 CAP reform includes the end of sugar production quotas in 2017, implying uncertainties on prices and volume distribution. Then, it expanded by integrating cooperatives in other French regions through transitory organizations (co-ownership of subsidiaries or federations) before merging. In some cases, this process was faster than expected. Nowadays, after experiencing some losses in 2018, the cooperative has invested in some innovative projects but has also had to close some first-stage processing facilities like the historical sugar beet-processing plant at Bourdon. Nowadays, Cristal Union is a competitive group (more than \$1billion) with a healthy financial structure.

Case 4: SODIAAL – When centralization becomes unavoidable (centralization)

In 1964, six French dairy cooperatives decided to form the Sodima federation in order to expand and manage their portfolio of brands from local markets to international markets. The 2003 CAP reform includes some steps to end milk production quotas in March 2015. To maintain competitiveness on markets, the 6 cooperatives have to decrease their processing costs. In 2007, to take up the challenge of reducing processing costs in the EU competitive markets, the Board of Directors convinced cooperative members to transform the federation into a centralized cooperative. It enabled achieving economies of scale in investing in some dairy plants specialized on processing a given product (either yoghurt or cheese or liquid milk or butter or milk powder) while shutting down some other plants.

Case 5: In Vivo – A stable federation (federation)

In 2001, 192 French agricultural decided to join together their federation exporting grains and their federation for importing inputs into a unique federation named IN VIVO. The objective was to achieve economies of scale in input purchasing, processing, marketing skills and network in international trading. The federation also expanded its farm input procurement in franchising its brand “Gamm Vert” with its co-op members. In 2015, the federation expanded its activities to export wine from French wine cooperatives. For its co-op members, the federation is an economic tool to coordinate and manage the access to international markets with its know-how and investment capacity. There is a clear separation of the ownership by cooperatives and the management of the operational poles.

3.3. Analysis

Cases	Phase I. Initial Stage 1. Competitive pressures 2. Asset specificity	Phase II. Governance dynamics 3. Governance Practices 4. Exit cost 5. Specific investment	Phase III. Transformation 6. Governance change 7. Organizational outcome
1. UCCOAR	1. Federation in the 1970s while the regional private <i>negociants</i> (wine traders) were disappearing. Toward mass-marketing for medium-price wine in supermarkets. 2. UCCOAR assembles the bulk wine, set up brands in line with the demand for mono-variety medium price wine. Manager recognized for his ability to negotiate with supermarkets.	3. Non-exclusiveness of supply by federated cooperatives, and non-exclusiveness of processing by the federation. 4. Federated cooperatives use other distribution channels. The federation buys a significant part of bulk wines from other processors and invest in facilities abroad. 5. Some successful brands and innovations but geographic specificity because of production constraints. All cooperatives cannot contribute and benefit from marketing initiatives evenly.	6. In the 2000s, disagreement on the internationalization leads to fire the general manager. Then, disagreement on the degree of differentiation leads to fire another general manager. 7. Defensive merger with Val D'Orbieu (a local competitor which benefited from the participation of In Vivo) to form Vinadeis, prominent actor of Languedoc wine.
2. UCFFC	1. In the 60s, context of support for industrialization of cheese processing. Small cooperatives involved in primary processing formed a federation in order to increase their bargaining power vis-à-vis the traditional cheese ripeners who matured and marketed their cheeses. 2. At the beginning of the 1970s, investment by the federation in a large primary processing and ripening facility in the most productive but less qualitative areas of Comté and challenging the traditional system. Many small federated cooperatives that wanted to keep their identity did not want to merge.	3. No commitment to the strategy by half of the federated cooperatives. A fraction of them lobbies for regulation to protect traditional practices (against industrialization). 4. Maintenance of traditional local marketing channels for most of cooperatives. Exit when the federation breaks the contract with the traditional <i>ripeners</i> . 5. Federation's assets not used by all cooperatives.	6. Liquidation of the federation organized by the alliance of small cooperatives and traditional ripeners, both parties seeing the federation as the gravedigger of their productive system. 7. Smaller federations are formed in line with a strategy of local differentiation supported by the PDO Comté legal supports for traditional practices and collective branding but more control by private <i>ripeners</i> (Mélo, 2012).
3. Cristal Union	1. In the 90s, uncertainties related to the end of EU quotas. Withdrawal of private actors. Failure of a first tentative to federate with local competitors. Merger of three cooperatives in 2000. 2. Investment in specialized processing facilities and branding.	3. Allocation of strategic managerial positions accounting for local representations and mobility of managers among local sections. 4. High barrier entries for innovation and market access. 5. Geographic specificity is high. Closings of some facilities, but openings and innovative projects on most sites.	6. Expansion via mergers following federation or other transitory organizations. 7. A centralized cooperative with an internal governance accounting for local sections and innovative initiatives at both the national and local level, but able to rationalize its industrial strategy.

4. SODIAAL	<p>1. In the 60s, six dairy cooperatives federated for managing supply, R&D and marketing together.</p> <p>2. Differentiation implying disparity in the localization of value-added processing facilities.</p>	<p>3. Each federated coop owns its first-stage processing facility.</p> <p>4. Market consolidation that makes exit non-credible.</p> <p>5. Competitiveness improvement by scale economies implying geographic specificity plus a portfolio of products implying different specifications and prices.</p>	<p>6. Merger in 2007 to create a centralized cooperative.</p> <p>7. Sodiaal is the first dairy cooperative and the only one to collect milk almost everywhere in France.</p>
5. In Vivo	<p>1. In the 90s, internationalization of the grain market and end of the European Union direct price support.</p> <p>2. Mutualization of resource to invest in input supply and access global markets by two existing large cooperative federations.</p>	<p>3. A distinction of autonomous operational poles and ownership by cooperatives.</p> <p>4. Exit from one local cooperative would moderately harm the federation and cooperatives could operate outside In Vivo.</p> <p>5. In Vivo expands but reduce asset specificity by setting a culture of member cooperatives as strategic investors via the autonomy of the operational poles.</p>	<p>6. In Vivo diversifies and expands via strategic investments in wine and malt industry. Stable governance structure communicating on its ability to foster the agrifood supply chain and reward its members via cash payment.</p> <p>7. With Euros 5 billion of sales and a reasonable level of debt, In Vivo is the first cooperative group in France.</p>

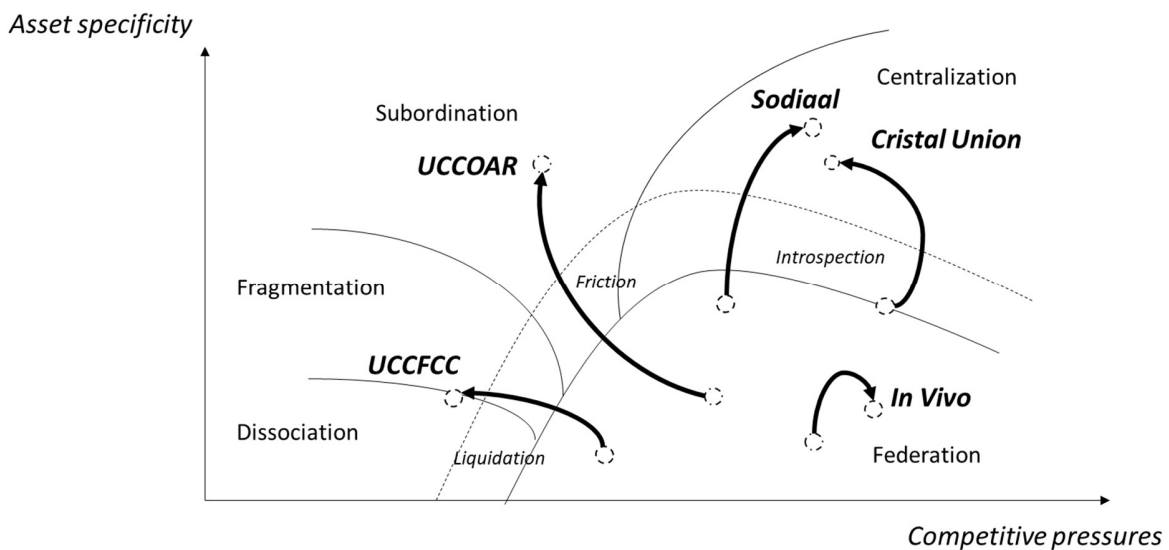
3.4. Mapping

i. The In Vivo case study shows how a federation can thrive as long the investment decisions do not generate conflicts among first-tier cooperatives. The Sodiaal and Cristal Union case studies show how centralization allows to manage asset specificity in a context where pressures to ally are strong. So, cooperative federations are an effective governance structure as long as asset specificity does not require centralization.

ii. The UCCOAR case study shows how the combination of decisions to reduce the competitive pressures to pool resources but maintain initiatives to differentiate via innovation and branding leads to subordination. The shared assets were too valuable to be fragmented, but the commitment to the federation was too low to be sustainable.

iii and iv. The UCFFC case also shows how federated cooperatives took decision to reduce their co-dependence. In this case, the value of shared assets did not justify a takeover. There were not enough at stake. We see the UCFFC liquidation as a dissociation of the federated cooperatives rather than a fragmentation, as the core assets of the initiatives were not preserved, but some of the federated cooperatives formed new alliances. A legacy of the failed federation?

Figure 3. Mapping governance dynamics: application to five case studies



4. Conclusion

Following recent results of the corporate governance literature and of the williamsonian approach of hybrid organization, our research provides a conceptual framework and applies a processual approach to examine how the interplay of competitive pressures to pool resources and asset specificity impacts the governance dynamics of cooperative federations. Our main results are:

- i. Cooperative federations are effective governance structures when a high level of competitive pressure to pool resources is combined to a low level of asset specificity. The case In Vivo shows that this can be handled by setting a strategic investors mindset into

the organization, i.e. a governance where the operational network of subsidiaries is disconnected from the specific local issues of cooperative members.

- ii. A high level of competitive pressures combined with a high level of asset specificity call for centralization. This is the most frequent scenario in a context where consumer markets call for differentiation. The risk is a full delegation of authority to management and the loss of power and commitment of members in their own cooperative. The case Cristal Union shows that cooperatives willing to grow can implement internal governance mechanisms to mitigate this risk.
- iii. A low level of competitive pressures to pool resources and a high level of asset specificity put the governance at risk of a crisis. The UCFFC and the UCCOAR case studies show that the federated cooperatives and the management may deactivate the exit threat, by taking decisions to provide flexibility and autonomy to all stakeholders, while the exit threat is a key governance mechanism of large shareholding. When this process is combined with a significant level of co-specific assets that are worth to be preserved, the best outcome is to fall back on hierarchy via a defensive merger. This generally follows a governance crisis.
- iv. A low level of competitive pressures to pool resources and a high level of asset specificity put federations (or other forms of alliances) at risk of liquidation. This is a form of abortion explained by the reluctance of members to invest in specific assets and decisions to keep their strategic autonomy, in contradiction with the principle of the federation.

These results deserve further investigation. In addition to confirm our research hypotheses, the case studies reveal how meso-institutions can play in the governance of large hybrid organizations by providing actors with tools to manage their interdependences: this requires more theoretical specification, in line with the research agenda proposed by Ménard (2022). As such, our research highlights some of the mechanisms driving the governance dynamics of federated cooperatives, but a lot need to be done to provide cooperative leaders with workable concepts to design the proper organizational architecture of hybrid organizations in a context of growing complexities.

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