

# Chapter 7

## Innovation Under a Protected Label of Origin: Institutional Change in Cognac



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### Regionally Defined Institutions and Firm Behavior

Recent contributions in economic geography have paid much attention to understanding the dynamics of cluster evolution (e.g., Audretsch & Feldman, 1996; Boschma & Fornahl, 2011; Iammarino & McCann, 2006). A growing niche within this literature indicates that the institutional frameworks within which clusters are embedded not only result from evolutionary processes on the actor and network levels, but also contribute strongly to shaping the evolution as such. There is, however, still scope for research analyzing the interplay between institutions and development, firm behavior, and more aggregated outcomes in terms of the growth, decline, stability, and renewal of clusters (Menzel & Fornahl, 2010). With this chapter we contribute to this field of research by analyzing how regionally defined institutions influence firm behavior in clusters and how this affects the evolution of the cluster as a whole. In particular, we analyze how emerging inefficiencies in an established institutional framework of a cluster contribute to shaping that cluster and to influencing its future development. Our findings show that institutionally grounded inefficiencies open paths for reinterpretation and redefinition of existing institutions, leading to change processes, which we disentangle by applying the conceptual framework of layering, drift, and conversion (Mahoney & Thelen, 2009).

Empirically, our analysis draws on a cluster in which the regional institutional framework has been explicit and stable for long periods. However, despite this stability there have been times of change and renewal. New entrants have emerged, largely reinterpreting the rules of the game in the cluster, and gradually influencing

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the behavior of incumbent actors, which initially resisted such external influences. These observations laid the foundation for the main research question addressed in this chapter—namely, (how) do institutions designed to preserve the current state of affairs in a regional cluster influence change and renewal of the cluster over extended periods of time.

The case we use for illustrating institutional change is the spirits industry around the town of Cognac. Firms in the local setting in and around the town of Cognac have been specializing in one product carrying the same name, with strict regulations applying to production techniques and processes. In this laboratory-like regulatory setting, protective laws pertaining to the local label almost entirely preclude product and process innovation. Local firms have nonetheless succeeded in developing new and related products during several periods in the past. In our analysis, we focus on the most apparent of these waves of product innovation, which began in the 1990s.

The Cognac region is a suitable and particularly interesting case for analyzing the role of institutions and institutional change in cluster evolution because it displays highly distinct and controllable features, both in terms of actors and institutional framework and through the presence of well-documented and traceable processes of change and renewal in the cluster over time. The cluster of Cognac hosts a critical mass of actors representing the entire value chain of the spirits industry, including not only suppliers of raw materials (grapes, oak barrels), but also a range of related industries (e.g., vineyards, bottlers, barrel manufacturers, product design companies, cork manufacturers), all located within well-defined regional boundaries. In this respect, it constitutes a textbook example for assessing the dynamics that according to theory are assumed to take place over time in places with strong specialization and product-specific regulation.

## The Theoretical Framework

Most cluster studies focus on the emerging stages of cluster evolution—how and why clusters emerge (Braunerhjelm & Feldman, 2008; Maskell & Kebir, 2006)—and to some extent on how being located in a cluster positively or negatively impacts the performance of firms (e.g., Malmberg & Power, 2005). Few studies have paid attention to how clusters evolve at more mature stages despite the fact that evolutionary processes are inherent to all regional economies (Martin, 2010). Some studies have put more emphasis on lock-in mechanisms in clusters (Coenen, Moodysson, & Martin, 2015; Hassink, 2010; Tripl, 2004), and how they shape clusters over time, often focusing on how they can be unlocked by institutional change (e.g., Martin & Sunley, 2006) or mitigated through regional branching processes (Frenken & Boschma, 2007). What these studies revolve around is a basic assumption that history matters and that past events lay the foundation for self-reinforcing, path-dependent processes, which in turn influence the present and future development of the regional industry.

Although much attention has been paid in recent studies to the dynamics of path dependent processes, less has been paid to how new paths are triggered over time and what causes historical accidents or chance events that spur further development (Martin & Sunley, 2006). Because the theories underlying cluster evolution studies stress that history matters, they also imply that such development is based not on chance, but on previously emerged, sustained, and refined local capabilities and routines and their underlying institutions (Trippl, Grillitsch, Isaksen, & Sinozic, 2015). This argument draws on the basic assumption that new paths may be latent in old ones or spin out from existing ones (Martin, 2010), which also implies that new path creation rarely includes major, or radical, shifts.

The literature on regional cluster evolution concludes that some institutions seem more enabling for such spin-out processes than other ones (MacKinnon, Cumbers, Pike, Birch, & McMaster, 2009; Stam & Garnsey, 2006). In order to explain such differences, there is a need for social theory addressing why some actors are able to renew themselves and thereby also influence others to do the same, while others seem to be constrained by forces of path dependence and do not innovate. Agents embedded in regional economies may collectively contribute to bringing forth new ways of doing business and overcoming barriers by confronting them as the result of historically based constraints, thereby stimulating new path creation (Garud & Karnøe, 2001; Simmie, 2012). The core question is which structural aspects either enable these agents to set such dynamic processes in motion or constrain them from doing so.

This focus on structural aspects enabling and constraining agency-initiated change processes brings institutions and institutional change to the forefront of the explanatory model. Institutions are generally defined as guidelines for social behavior, or “settled habits of thought common to the generality of men” (Veblen, 1919, p. 239). As such they, by definition, influence the way actors behave, as well as the extent to which and how actors are able to identify and adapt to changes in their environment (North, 2005). This understanding of institutions has also had a strong impact on recent and ongoing debates in economic geography, focusing on the behavior of actors embraced by regionally confined institutions. Although Hall and Soskice (2001) provided some convincing groundwork for the role of institutions within nations (with their reference being varieties of capitalism), others have put more emphasis on institutions on different spatial scales, breaking them down from the national (e.g., Freeman, 1995; Lundvall, 1992) to the sectoral (Malerba, 2002) and regional levels (Tödtling & Trippl, 2005). They share the view that there is a need for unveiling the relationships between institutions of different types and scales, arguing that these relationships affect the emergence and development of specific sectors and activities, and allow for their growth by providing adaptive pillars of stability and reliability. Simultaneously, institutions are also among the main causes for lock-in (Grabher, 1993; Hassink, 2010; Tödtling & Trippl, 2005), and most institutional studies on innovation systems actually focus primarily on preservation and continuity rather than on change (Grillitsch, 2015; Streeck & Thelen, 2005; Thelen, 2009).

In recent years, scholars have spent much effort trying to explain incremental institutional change based not only on exogenous shocks, such as economic crises and similar, but also incremental processes caused by new windows of opportunity arising when ambiguity (with regard to interpretation and enforcement of behavioral rules) opens up space for actors to interpret or adopt existing rules in new ways (Mahoney & Thelen, 2009). According to this perspective, change thus takes place when key agents mindfully (or not) deviate from the “settled habits of thought.” We argue that incentives for such deviation may arise due to emerging institutional inefficiencies, when the positive and intended aspects of the institutional framework—in this case the protection of quality and authenticity of products—are overshadowed by the negative aspects, in this case constraints to product development and production efficiency. As actors suffering from such inefficiencies become increasingly aware of them (and of alternatives to being conformant), their incentives for deviating by acting as institutional entrepreneurs also increase (Battilana, 2006; Sotarauta & Pulkkinen, 2011). At the same time, we argue, the opportunity to act as institutional entrepreneurs also increases with such inefficiencies. Martin and Sunley (2006) discussed this relationship between the constraining institutions and the reinforcing mechanisms pertinent to them—and the difficulties of breaking away from the stability provided by the two. The linked concept of hysteresis, originally drawn from physics and explored for economic systems by Setterfield (1993), explains that such reinforcing mechanisms build up around stable physical (in our case institutional) configurations, becoming stronger with time and making it increasingly difficult to break away from the status quo. In times of stability, Glückler and Bathelt (2017) argue, such institutional hysteresis can significantly hamper technological development and cause large scale innovation failure. Only external shocks (in the form of economic pressure, technological change, or other stresses) and emergent institutional entrepreneurs (internal or external to the setting) can help outplay the built-up rigidity. Such external shocks are close to what Geels (2002) would refer to as major changes in landscape conditions.

From an organizational perspective, the constraints on growth resulting from protective regulations that persist despite technological progress and capacity development among the actors generate excess capacity on the system level. This is comparable to slack within an organization (Bourgeois, 1981)—in other words, redundant employees, unused production capacity, unused knowledge in the organization (in our case in the regional economy), and unnecessary capital expenditures (Nohria & Gulati, 1996). It differs, however, from what the literature refers to as unabsorbed or high discretion slack (i.e., buffering resources with high flexibility), the kind of slack built up over the long term because of a static institutional context, and is defined as absorbed slack, being in particular processed inventory, redundant specialized labor, and low-flexibility machine capacity (Herold, Jayaraman, & Narayanaswamy, 2006; Nohria & Gulati, 1996; Sharfman, Wolf, Chase, & Tansik, 1988). This slack does not exist due to actors’ conscious strategic decisions, but is an effect of regulatory limitations that have remained constant while technological capabilities and organizational structures have not. This mismatch between institu-

tional, technological, and organizational development—which we term *institutional inefficiencies*—is in this study perceived as one of the main triggers for radical institutional change and, in parallel, for product diversification in the Cognac cluster.

Inspired by historical sociology and political science, three (often interrelated) microlevel mechanisms are suggested: layering, drift, and conversion. In some (rare) cases these evolutionary processes may lead to institutional displacement, in other words, a situation in which current institutions are abandoned and replaced by new ones (Mahoney & Thelen, 2009). However, institutional displacement is very rare and was not observed in the case this chapter is based on; therefore, the main focus is on understanding the processes of layering, drift, and conversion, which are continuous in all evolving clusters (and economic systems in general).

Layering basically means attaching new rules to existing ones and establishing new institutional layers within a given structure (Mahoney & Thelen, 2009; van der Heijden, 2010). In general, these layers change the ways the original rules structure behavior (Schickler, 2001; Thelen, 2003). Instead of providing entirely new rules, layering, rather, involves revisions, amendments, and additions to existing rules. Layering processes most commonly occur when challenging actors do not have the capacity to actually modify or change existing rules. It is an often observed process, as it is difficult for protectors of the old rules to prevent others from choosing to create amendments or small (layered) modifications instead of entirely rejecting the existing regulation.

Drift describes situations in which the established rules do not formally change (as in conversion), although their impact changes as external conditions significantly evolves (Beland, 2007; Mahoney & Thelen 2009; van der Heijden 2010). These can be shifts in economic or political systems that make regulation redundant or put it into a new and diverted context. Drift particularly occurs when actors choose not to respond to these external changes (van der Heijden, 2010). This inaction can, in fact, over long time periods lead to significant changes in the meaning of institutions. Drift is an important indicator for inefficiencies that have emerged over time and that have been called into question by changes in the external environment. Conversion is described as the process of reinterpretation of existing institutions (Mahoney & Thelen, 2009; Thelen, 2003). Here, the rules remain formally the same, but are enacted and interpreted in a new way. This is not primarily a result of an external change of setting (as in drift), but is mainly encouraged by actors who react to endogenous ambiguities in their established institutional setting. Those actors actively exploit gaps and discontinuities in the institutional framework to transform existing institutions into tools for their own purpose. Typically, such actors are institutional innovators that are particularly good at working within existing structures to craft unexpected solutions to emerging problems. The evolution of the ice cube industry from the 1800s to the mid-1900s (as described in James, 1984) is a good example of conversion and actors reinterpreting the existing setting. The first wave of development in this industry was dominated by large capital-intensive companies that extracted ice from Canadian lakes and transported it by train to the

larger cities to serve restaurants and households, but which were outplayed some decades later by firms that developed facilities right outside the cities to produce ice locally. In a third step, electronic equipment firms developed small-scale refrigerators and freezers, making both prevailing systems redundant.

In a concrete attempt to analytically disentangle these layering, drift, and conversion processes this study draws on Scott's (2008) conceptual model of regulative, normative, and cognitive pillars of institutional frameworks. Regulative institutions (or pillars of institutions) are usually legally sanctioned and most often territorially confined. Instrumentality and conformity to rules are the main coercive mechanisms. Normative institutions are morally governed and sustained through appropriateness and social obligations in ongoing systems of social relations (e.g., families, communities, and business networks). These are not necessarily territorially confined, but maintained through continuous interaction in networks and other forms of social groups, with varying geographical configuration. Cognitive institutions, understood as shared conceptions and frames through which meaning is made, are sustained by the logic of orthodoxy and taken-for-grantedness. Similar to normative institutions, the territorial dimension of these institutions is not easy to pinpoint (Scott, 2008). Some would argue that the cognitive dimension is the "deepest," because it rests on preconscious, taken-for-granted understandings. It is however important to note that the regulative dimension in many respects has strong coercive power and might, thus, shape the normative and cognitive dimensions, at least when, as in the case presented in this study, the regulative dimension remains stable through many generations. Scott himself (2008) and most studies building upon that framework have argued that the institutional layers cannot be understood separately, but rather as affecting each other in numerous ways. Due to its homogeneity of actors and stable institutional framework (particularly on the regulative layer), our current study allows disentangling and analyzing such change processes on the normative and cultural-cognitive layers emerging from and relating to the given regulative stability.

Based on the operational framework outlined in Table 7.1, our study analyzes the evolution of the Cognac cluster over a period of several decades, with particular focus on the moments in history when large scale changes are identifiable (the 1970s and the 1990s). While the regulative framework of cognac production has remained unchanged since the early 1900s, our main analytical focus is geared toward understanding the processes of layering, drift, and conversion that have taken place and influenced the normative and cognitive dimensions of the institutional framework, as well as firm establishment and industry orientation, with accentuated speed and impact during these transformative periods.

Although institutional reconfiguration is somewhat complicated to observe directly, the analysis is based on interpretations of changed behavior in the empirical case and thus uses these observations as indications of institutional reconfiguration.

The remainder of the chapter applies this framework to the Cognac cluster, with particular focus on the change processes taking place as of the 1990s.

**Table 7.1** Operational framework for understanding the processes of institutional layering, drift, conversion, and displacement in cluster evolution. Design by authors

Indication			
Layering	Drift	Conversion	Displacement
<b>Condition</b>			
Challenging actors do not have the capacity to modify or change existing rules.	External conditions change; actors choose not to respond to these external changes.	Inefficiencies emerge in the institutional framework.	The institutional framework is outcompeted by changes in the environment, or internally replaced by a new framework.
<b>Institutional Change Process</b>			
Actors create new institutional layers in addition to the existing ones.	Inaction of institutional actors leads to significant changes in the meaning of institutions.	Actors actively exploit inefficiencies in the institutional framework.	Actors exit the old framework and, if applicable, enter an entirely new one.
<b>Aggregate Outcomes</b>			
Revisions, amendments, and additions are made to existing institutions; multiple layers are generated within the same system.	The changed meaning of institutions creates pressures or new incentives for actors embedded in the framework.	Reinterpretation of existing institutions leads to change among challenging actors.	The old framework disappears, and is replaced by a new one.

## Research Design and Methods

We became interested in this case through a previous study examining product innovation in the beverage industry that was conducted by one of this chapter's authors in 2010–2012. What we found particularly interesting in Cognac was the homogeneous (regulative) institutional framework that had dominated the local cluster and impacted its firms ever since local production rules were made explicit in 1909. We were also aware that major change processes had taken place in the cluster at several points in the past, with the most marked ones occurring in conjunction with the oil crisis in 1973 (concentration of firms in the cluster during a period of considerable crisis) and in the mid-1990s (major product diversification among some local firms, again following a significant crisis on one of the strategic export markets for local firms). The homogeneity of the context and the explicit regulation of all firms in the cluster mean that institutional change processes are particularly discernible over time and can be illustrated with examples on different levels of the cluster.

With the product's strong historical embeddedness in the region and many local firms still family run, there is detailed data available on the history of local firms, trade organizations, and established product regulations. For cognac, as well for its close relative champagne, traditional and locally confined rules of production apply,

whose entire development from their initial explicit introduction is precisely documented in local trade organization archives. To supplement a comprehensive dataset on local firms' current activities still accessible from the previous study, we gathered historical information on local regulations reaching back to the time of their establishment, gained access to regulatory documents, and collected data on the history of firms from local trade organizations. We reexamined a range of firms that we found had undergone particularly interesting developments over the past decades within the cluster (based on our insights from the previous study of product development over time) and conducted semi-structured interviews with their current and former managers. We distinguished between firms that (1) complied (and still comply) with established local regulation, (2) worked on the fringes of that regulation (or even disrespected it at times) and (3) disregarded local regulation as of the 1990s and used their skills and resources to develop other food and beverage products. We conducted 41 interviews with managers and local professionals, following up 12 with further detailed questions about the companies' historical developments. One of the authors collected this data and returned to the firms on several occasions, obtaining further information in informal conversations with local professionals from different parts of the value chain. This helped us triangulate information and obtain a more in-depth understanding of local developments over time.

In addition to the qualitative insights from the interviews and observations, we accessed a descriptive dataset provided by a local trade organization, including balance sheets of local firms and cornerstone data about their historical development (number of employees, annual turnover, type of products). We also sought information on firms that disappeared in the past, but had more difficulty obtaining comprehensive data. We judged that the sample of existing firms was solid enough to provide internal validity for our analysis, because the essential elements of the local industry had proved fairly stable and homogeneous over time. The compilation of all of Cognac's firms in industry datasets and national tax registers gave us certainty that we had not overlooked essential actors in the cluster.

## **The Case and Observations**

Cognac's principal standardized production techniques emerged in the seventeenth century, when the first larger export firms were established, essentially by foreign traders frequenting the region for its salt reserves. Individual producers using distinct distillation techniques were the source of gradually developing production norms, which local vineyards had to follow in order to fulfill the traders' requirements. In the early nineteenth century, Cognac became a global label and was recognized for its quality in the spirits industry. To protect this label, Cognac firms worked on the formulation of written laws binding on all firms producing and trading cognac in global markets. Non-explicit regulation started in the middle of the nineteenth century. The first written law was passed in 1909, becoming one of the



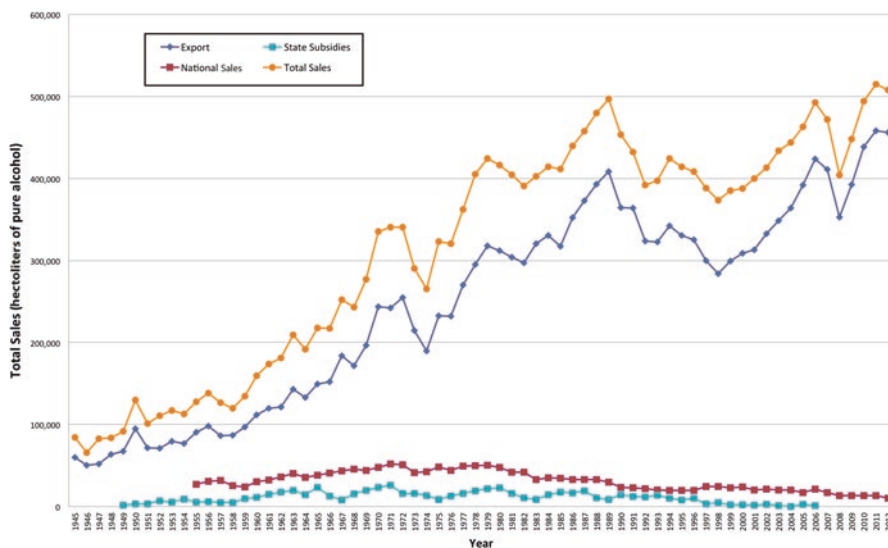
first protected labels of origin regulations worldwide and defining the geographical origin of the grapes. A second one was passed in 1937, with more explicit rules regarding specific production techniques (Coussié, 2011).

The initial intention of these regulative institutions was rather simple: to target those who mislead or tend to mislead the consumer [and to protect the] quality and dignity of local products (from Coussié, 2011, p. 58; decree of 1909). Despite its relatively simple foundation, the consequences of this decision were profound in the long run, as is shown in the analysis. The Appellation d'Origine Contrôlée (AOC) regulations resulted in a shared identity and image among local firms, and solidified the trust of their external customers. In addition, although less deliberate, it created a local system of exchangeable goods, which led to an important increase in confidence among local services (such as banking and insurance) and strongly amplified localization economies. The use of the same raw material and production techniques generated similar needs and challenges among local firms, which in turn led to the creation of numerous specialized service and supply firms (e.g., coopers, cork firms, packaging firms, aroma specialists), as well as, over time, a thick set of local inter-firm organizations and public support structures. In that sense, the protective regulations created a stable “comfort zone” in which firms could focus on other central parts of their activity (such as entering new export markets, refining quality within given regulatory boundaries, building up stocks). But, and importantly, it also created a regulatory setting that was primarily rather hostile to change of a more radical and explorative nature.

The laws from 1909 and 1937 formalized rules that had already long existed locally as norms and habits among vintners, distillers, coopers, and other traditional professions. The regulation made these rules explicit—and prevented insiders and outsiders from infringing the label. A number of distinct normative institutions, nevertheless, have developed over time, and go far beyond the formal regulation. Many unwritten rules have been created and are respected by local firms and among different professions within the local system, with some of them subsequently being included in official AOC regulation.

The institutional framework described above has defined much of local development until today. One of its main features, from an institutional change perspective, is its generation over time of a range of inefficiencies (and, as a consequence, of unexploited capacities among local firms) that have put both the institutional framework and its embedded actors under pressure. These inefficiencies (and the reaction of incumbent firms to them over time) are examined in the analysis section as a condition for different types of institutional change. They range from limitations on when distillation may occur to inefficient aging techniques and complexities of the aging process in general. Their structure and impact are further elaborated in the analysis section later in this chapter.

One must say that despite such inefficiencies (or even because of them, for they keep the label exclusive), cognac sales have grown significantly since the 1950s. Overall, they have gradually increased by an average 5.5% per year, growing a total of 400% between 1950 and 2010 (see Figure 7.1). It is interesting to look at periods

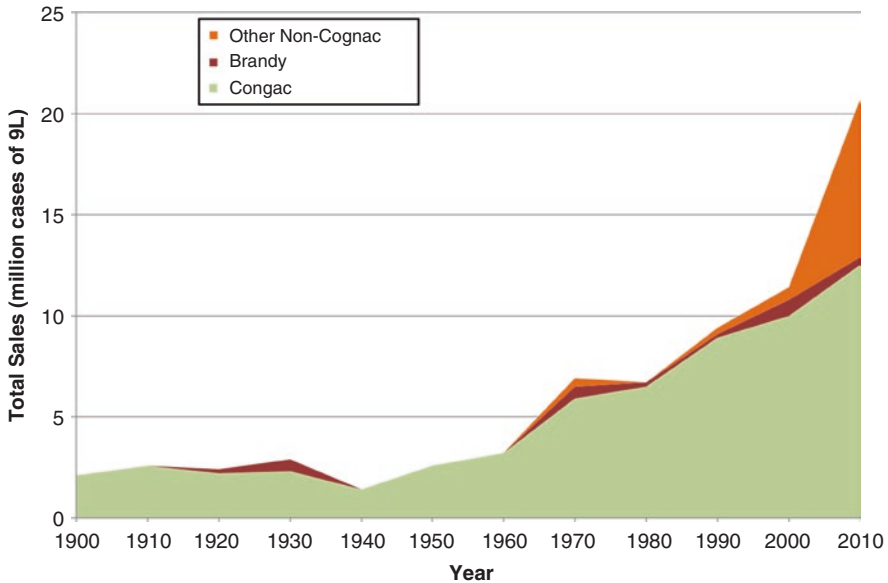


**Fig. 7.1** Sales of AOC Cognac, 1945–2012. Source: Data from Bureau National Interprofessionnel du Cognac, 2012. Design by authors

of more radical change during this development, as in the oil crisis after 1973 and the East Asian crisis in the early 1990s.

In these moments of crisis and in the aftermath, the following aggregate developments are observed in the cluster (see Figure 7.2).

The wave of diversification after the 1990 crisis is particularly interesting for this study. Following the crisis, a handful of firms started to break away from the traditional cognac label and used their capabilities for different, but related products (mainly other premium spirits). This change did not occur without resistance from established firms and interfirm organizations. One of the early movers was high-end vodka producer Grey Goose (GG), which applied local knowledge and benefited from the area's image, while not following traditional cognac regulations. Within a few years, GG had become a global market leader in its segment, and was sold after eight years to a global corporation in the industry. A range of other actors in the cluster went through similar developments, diverging from the traditional label (and its regulatory implications) to create a distinct new path of development for local and non-local firms. Resistance by the established players in the local arena against the new development was strong. It ranged from unsuccessful attempts to have non-cognac production in the geographic area officially forbidden by local governing bodies (according to interviewed managers of companies working with GG) to a range of small actions trying to keep the new agents from deviating from established practice. One firm traditionally producing Cognac at its vineyard and distillery lost its delivery contracts with one of the largest local cognac brands after the latter discovered it was attempting to produce other premium spirits (according to an interviewed manager of the firm, 18 years after the event). One of the new firms, with



**Fig. 7.2** Sales of Cognac, brandy and other non-Cognac products by local firms 1900–2010. Source: Data from Bureau National Interprofessionnel du Cognac, 2012, with additional data from authors' research in 2012 on product innovation among local firms. Design by authors

several years of fast growth in a non-cognac brand, was barred from having a reception area for their invited customers at a local jazz festival, after the four largest established firms threatened to cancel their sponsorship for the entire event (according to an interview with concerned manager of an excluded firm). An entertaining reaction to the rise of nontraditionist firms was a several-year-long ecological enquiry emphasizing that the production site of the most prominent nontraditionist firm was located in the ecosystem of a rare frog variety, with the initiators arguing that the production site permit could therefore not be extended and that the facility should ultimately be relocated.

It took several years for new developments to be tolerated and adopted, first mainly by small and medium-sized firms that saw an opportunity (or were under economic pressure), and then, much later, by the larger and more powerful players in the local setting. It was possible to observe a sequence of institutional changes contributing to the emergence of this new path and influencing its subsequent development as well as its integration into established production structures. The new and nontraditional production is today contributing almost 50% of the cluster's output. Firms did not change the established rules of the games on the regulatory level by adopting new production techniques and breaking away from established institutions. But they did trigger changes on the normative and cultural-cognitive level, with many firms having adopted the new production techniques and added them to their portfolio of activities. As a consequence, this changed mindset also influenced

the discourse in the governing board of the formal rules of the game, where traditional rules started to be challenged and new practices established.

## Analysis—Periods of Incremental and Radical Change

We were able to identify and isolate many of the features of institutions and institutional change in clusters within the theoretical framework provided by the Cognac case, allowing us to make a detailed analysis of the development of the actors within the system and of how they interacted with established institutions over time and ultimately shaped cluster evolution. We found particularly interesting how actors reacted to the observed and built-up institutional inefficiencies at different times and what aggregate outcomes these generated among actors in the cluster.

In periods of incremental change of the industry and its local environment, the institutional framework remained rather stable and was characterized by features of layering and drift. Examples of layering were firms creating sublabels within the Cognac regulatory framework, (such as *single vineyard*, *single estate*) or soil-related classifications of the final product (i.e., Fine Champagne, Fine de Cognac), which were all in accordance with established rules and created more specific subrules for producers wanting to use those labels. Simultaneously, drift took place because the environment changed and some established rules became redundant. The introduction of cooling equipment, for instance, technically extends the distillation period, which local regulation limited to the winter months (because the wine used for distillation would overferment if not cooled). Yet, the regulations were not adapted. As a result of the stability, continuous rationalization processes within the given rules took place; interfirm organizations managing label-related regulation were founded, and contributed to reinforcing established institutions. Such processes lay the foundation for more thorough processes of change set in motion in periods of external stress, because they accentuate the tension between technological, organizational capacity and institutional constraints, thereby increasing the organizational slack built up within the local production system (Herold et al., 2006; Tan & Peng, 2003).

In periods of more radical transformation more thorough change can be observed, as was seen during both periods of crisis outlined in Figure 7.1, but in particular in the immediate aftermath of the 1990 crisis. A concrete and well-documented example was the change of attitude toward firms that partially broke with tradition and entered new fields of production. These changes also widely impacted the more aggregate development of the industry composition in the cluster, leading to today's situation in which about 50% of total production value is composed of non-cognac products (products breaking away from the traditional institutional configuration). Important to note is that fundamental triggers for change—previously described as inefficiencies—in the periods of both incremental and radical transformation are similar, although their impact differs because the pressure or incentives to adapt differs. When the status quo is radically challenged, as during the crises of the 1970s

and the 1990s, new windows of opportunity are uncovered. To take advantage of those windows of opportunity, or to exploit the organizational slack (Bourgeois, 1981; Sharfman et al., 1988), major cognitive change is necessary. Normative and regulatory change, on the other hand, plays a more dominant role in incremental change processes, which largely explains the long periods of stability between the crises.

Our analysis revealed that the incremental changes, as well as the radical ones described above, can be traced back to the basic composition and interpretation of the AOC regulations. In particular, three core aspects of the AOC are worth highlighting. Firstly, the limited distillation period creates inefficiencies and windows of opportunities, which are realized when incentives—due to external pressures—grow strong enough. Cognac can only be distilled between the harvest of the grapes and March 31 of the following year. This regulation has a historical-technological background. The grape juice used for cognac needs to be stored in a cold location after initial fermentation and before distillation (to avoid overfermentation), so it is forbidden to distill in the months after March, when outside temperatures increase significantly. Today this problem has been largely overcome by using cooling containers, but the regulation remains unchanged, with the consequence that distilleries can only use their distilling equipment and knowledge six months per year. This results in significant unexploited resources among cognac producers, although most of these resources are in the form of process inventory, specialized labor, and low flexibility machine capacity, or what the literature refers to as low discretion slack (Sharfman et al., 1988), which is not always easy to transform into increased productivity. From the interviews with distillers, we understood that this is not a major problem when demand is high and distilleries run 24 hours, seven days a week, during the allowed distilling period. Yet, when demand is lower than normal (e.g., at times of diminishing demand) this can cause significant competitive stress for distilleries, putting them under pressure to use their specialized knowledge and production capacity during the other months of the year. Traditionally, a large part of the distillery staff would work in the vineyards or in other related professions during the summer months. However, when the crises—especially that of the 1990s—hit the cognac market, attempts to utilize unexploited capacities for other types of spirits production began, first on a small scale in the face of heavy resistance, but then with gradual acceptance in large parts of the community. This conversion indicates a shift in the perception of this institutionally based slack, from an asset guaranteeing the quality and authenticity of the regional production to an unnecessary cost to be eliminated through new forms of exploitation (Nohria & Gulati, 1996).

Secondly, cognac must be aged in barrels made of certain types of oak. According to local aroma specialists and cellar masters, this is to ensure the consistent quality of cognac, although it also certainly has symbolic value for its customers. The equation of the aging process is relatively simple: The liquid must be exposed to a certain amount of oak surface and in indirect contact with the surrounding air in the cellar. Barrel aging is a fairly inefficient and historical way of ensuring this exposure. Competitors from outside of Cognac can use more modern techniques, for instance

aging the liquid in steel tanks and using oak extracts or oak chips that affect the liquid very similarly. This is much more efficient in terms of precision and use of space, but would certainly interfere with the traditional image of cognac. Although the inefficiency of barrel aging does not create a window of opportunity to the same extent as the distillation period, it is still seen as beneficial for new path creation because it contributes to maintaining the exclusivity of cognac and, thus, adds to its luxury and quality image. Producers diverging from the cognac norm cannot, therefore, draw directly on this inefficiency, although their incentive to tap into the local production system is strengthened by a desire to have their products associated with the luxury and authenticity of the Cognac region. And their capacity to do so depends on the availability of highly skilled and specialized employees with reserve capacity—unabsorbed slack—during parts of the year (Tan & Peng, 2003).

Thirdly, the defined aging periods: Cognac has a minimum aging time of two years, with official age categories being VS (at least two years), VSOP (no less than four years) and XO (six years or more). In many cases, the cognac used is older than its minimum specified age. The aging process in general, however, makes planning of production complicated and fairly inefficient, because increases in production will only have an effect on sales in two, four, and six years (or more). For their long-term financial planning cognac firms therefore rely heavily on five-to-ten-year forecasts and struggle with the uncertainties these involve. Also, this limitation creates incentives for alternative and/or unorthodox production, for it is one strategy of spreading risk and balancing investment in order to cope with market fluctuations during the long aging period. The aging imperative is thus an incentive for reducing excess absorbed slack in the form of inflexible investments (Sharfman et al., 1988), while still being able to demand a higher marginal price for the main product on the basis of its reputation for quality and authenticity (Bourgeois, 1981).

All of the above rules have, as indicated, a strong impact on the incentives and opportunities for changed behavior among local firms. However, institutional change regarding the interpretation and observance of the rules is required for these incentives to have a real impact and for the opportunities to be realized. Our study observed that the imposed regulation creates natural tensions within the system and, in addition, particularly exposes it to technological and organizational changes in the industry. Our research also revealed that outsiders (or those locals not using the cognac label) are less constrained by the AOC regulations, and therefore have more possibilities to reconfigure their production, to improve processes, and to act upon or initiate changes in markets. In other words, those actors demonstrate a higher degree of interpretive flexibility and contribute more to the processes of layering, drift, and conversion than the more embedded actors that have built their entire identity and competitiveness on the cognac label (Strambach, 2010). This is an important part of the reason why the change agents (i.e., institutional entrepreneurs) identified in this study were either newcomers to the region or incumbent actors that left the region for a while and subsequently returned with new perceptions and experience.

Table 7.2 specifies the institutional change processes that we identified both as the results of the incentives and opportunities that the regulations bring and as nec-

**Table 7.2** Causes and aggregate outcomes of transformation processes in the Cognac cluster

Indication			
Layering	Drift	Conversion	Displacement
<b>Condition</b>			
Regulation is controlled by the most influential actors in the cluster; smaller firms need to comply or exit the label.	Actors decide to stick to existing regulation, while the external context undergoes significant changes.	Regulatory inefficiencies open windows of opportunities for change agents.	Regulation becomes outcompeted due to major changes in the environment (not observed in the Cognac case).
<b>Processes</b>			
<b>Regulative</b>			
Established regulation remains unchanged.	Established regulation remains unchanged.	Established regulation remains unchanged.	Established regulation remains unchanged.
<b>Normative</b>			
Different labels within the cognac category emerge (e.g. single estate, single vintage, French brandy).	Changes in the beverage industry (uprating of traditional low-cost drinks).	New practice slowly becomes a norm among local firms (after cognitive change below).	A new institutional framework becomes a norm and potentially leads to new regulation (not observed).
<b>Cognitive</b>			
Actors become comfortable with new labels, slowly adopting change on the normative and regulatory dimension.	Embedded firms come under pressure and need to react to emerging changes in the environment.	External actors use local production capacity and knowledge in a new way (e.g. Grey Goose).	Adaptive firms reject old rules and generate or integrate an entirely new institutional framework (not observed in study).
<b>Aggregate Outcomes</b>			
A multitude of institutional layers emerges within the cluster over time (some staying within the given framework, others going beyond it).	A multitude of firms looks into incremental change within the given framework; others become ready for more radical change.	New opportunities emerge within the cluster; a need arises for change agents to exploit them.	A major shift occurs in the cluster from one (disappearing) institutional framework to an entirely new one (not observed in study).

Source: Design by authors

essary conditions for the actors' abilities to realize those opportunities. The overview compares changes in the regulative, normative, and cognitive dimensions with the subsequent outcomes in terms of layering, drift, and conversion, as well as displacement, which was not observed. As touched upon above, it is important to note that the regulative dimension in the Cognac case has remained largely unchanged over time because of region's regulatory specificities and AOC status, with only minor incremental changes or legal adaptations to current requirements occurring. Thus, main attention is paid to changes in the normative and cognitive dimension of the institutional framework.

One of our key observations in the study was that incremental institutional change processes (layering and drift) were mainly driven by the regulatory and normative pillars (cf., Mahoney & Thelen, 2009), while more radical change processes (conversion, displacement) are prompted much more by major changes on the cognitive level (e.g., through external entrants, returning locals). Observed processes of institutional layering were the consequence of power relations in the cluster, in which the largest established players control regulation, while smaller, less powerful actors (in institutional terms) can only abide by the imposed structures, or create their own institutional layers within the given framework (Battilana, 2006). In Cognac, this could be observed with small and medium-sized firms creating sublabels of regulation (often with stricter rules than the largest players could commit to), such as single vintage or single estate products—the latter meaning that the cognac produced and sold in bottles only comes from one single vintage, or even just one estate (where the largest cognac firms source their cognac from several hundred vineyards in order to produce enough quantity).

Drift mainly relates to changes occurring in the external environment, while local regulation remains the same, with the result of this being that the meaning (or purpose) of regulation changes, not explicitly, but by being moved into a new and different context. In the cognac case, there have been many examples of firms external to the cluster (and to its regulation) innovating in production techniques or product concepts (such as avoiding the complex ageing process in oak barrels) and entering new market segments or, in particular, developing higher profit margins. These changes put firms subject to cognac regulation under significant pressure (e.g., through their marketing budgets falling far behind those of their external competitors in relative terms), forcing them to engage in incremental change within the given institutional framework or to prepare for more radical change. Many of the firms that engaged in more radical change at later stages (i.e., after the 1990s crisis) had, significantly, undergone processes of layering and drift in preceding years. In general, the different institutional change processes described in this section are not to be seen as separate from each other, but are, rather, occurring simultaneously and provide aggregate among firms that shape the cluster (and its institutional framework) over time (Martin, 2010).

Conversion differs in many ways from layering and drift. Where the main driving forces in the latter two are general (and rather incremental) changes in institutions, conversion found its driving energy in change agents with radically different mindsets (often external entrants or local returners) that perceive the local production system differently and exploit windows of opportunity provided by the local institutional framework (Sotarauta & Pulkkinen, 2011). One can, for instance, name the radically divergent products that emerged after the 1990s crisis, when a wave of foreign entrants started using local skills in a new way, particularly by producing beverage products that can be distilled throughout the year, therefore also after March 31, when cognac distillation, by regulation, must cease. They also recombined local skills in a way that eliminated general institutional inefficiencies in the local system (e.g., the complex aging process or constraints in terms of sourcing raw materials), which allowed them to generate additional value representing close to



50% of the local cluster's current production output. Established actors in the Cognac cluster initially reacted with much skepticism and resistance to new developments. Only with time and some highly successful developments among "new" firms did local actors start adopting the new practices and accepting institutional change of more radical nature. The last ones to adopt the new practices were the largest players in the cluster, those with the most influence (and stake) in the old and established regulatory structure.

## Conclusions

We have argued in this chapter that the institutional framework in a given regional cluster is crucially important for the behavior and development of firms there. Consequently, it is also one of the factors decisively shaping the evolution of the cluster in a wider sense. Yet, at the same time the evolution of the cluster requires adaption of the institutional framework, for changed behavior depends by nature on changed perception of and adherence to behavioral rules. In other words, the rules of the game set the limits and define the possibility of change taking place, while change intrinsically also influences the rules of the game. In the case of the Cognac cluster and its recent evolution as presented and analyzed in this study, the institutional framework's regulative dimension has been stable and largely unchanged for a very long period, which made it possible to disentangle particular developments related to actors' responses to emerging institutional inefficiencies and with institutional change in the nonconstrained layers (the normative and cultural-cognitive).

Despite this stability of regulative institutions, there have been major behavioral changes among the cluster's actors during the last two decades, which in turn have led to substantial transformations in the composition and orientation of the local industry. These changes have been imposed—and generated—by incremental as well as more radical changes in the normative and cognitive dimensions of the institutional framework. Incentives and opportunities for such change are always present because of the institutional inefficiencies that result with fixed and inflexible industry regulations and because of the organizational slack this generates, although the actors in the regional setting have differing capabilities to act upon these incentives and realize new opportunities. The most established and powerful incumbents display a low degree of interpretative flexibility and inclination to renew themselves and challenge established behavioral rules because of their high stakes in the current state of affairs, whereas newcomers and returners are more likely to act as change agents or *institutional entrepreneurs*. This is because their incentive for and potential gain from challenging established norms and regulations are greater than their stake in preserving the status quo.

Three interrelated processes of institutional change were identified in Cognac. Layering is the process of adding new layers to an existing institution, thereby incrementally influencing its form and direction. In Cognac, this process was mainly

rooted in the normative dimension of the institution, when new attitudes toward and interpretations of the regulations were added, which initially generated subgroups of actors with different modes of behavior that then, however, were gradually diffused to wider parts of the cluster to become normalized. It was usually a matter of small modifications that over time generated cumulative processes. A closely related process of institutional change is defined as drift, a process in which the consequences of existing institutions are adapted to changes in the exogenous environment, such as global crises or altered market conditions, which generate fresh incentives for change within established regulations. In Cognac, these were also incremental, but had an important impact on the cluster because they were cumulative over time. A more radical change process is referred to as conversion. Although its roots are mainly in the cognitive dimension of the institution—through actors being able to identify and exploit new windows of opportunity arising from inefficiencies in the current system—this process also feeds into the normative dimension when new practices are diffused to wider groups in the cluster. In principle, these three inter-related processes also have the potential to generate comprehensive institutional change in the regulative dimension, in the literature referred to as displacement (Mahoney & Thelen, 2009), yet this was not observed in the present study. Despite quite far-reaching transformation of the composition and direction of local industry, the formal regulations defining its rules of the game have remained unaltered.

This study of relatively recent change processes in Cognac provides insights into the general understanding of the relation between institutional and industrial change, in particular in regional economies. One specific observation requiring a concluding comment is the obstinate and sluggish nature of institutional change and the severe challenges thus facing institutional entrepreneurs. The maintained stability of the regulative institution—the protected label of origin—can indeed be interpreted as if no or very minor institutional change has actually occurred in the region and as if the layering, drift, and conversion observed among local actors in this study merely illustrate industrial branching in Cognac, rather than institutional change. We argue, however, that the observed developments imply more thorough institutional change, because the industrial branching, or diversification process, takes place within a dense and historically homogeneous community of local producers, substantially influencing their market strategies and modes of production and, thus, spilling over into the way they handle their traditional business. The actors and companies populating the local cluster are largely the same families that have been there for hundreds of years and acted as gatekeepers protecting the authenticity of their production and the identity of the region. The fact that those same gatekeepers adapt their interpretation of what is actually possible within the regulatory framework; add new layers to their historically based routines and modes of production; and expand their horizons while preserving the authenticity underpinning the cluster's competitive advantage indicates more thorough institutional change.

While the Cognac case is rather specific when it comes to both geographic location and institutions, the findings of this study raise questions of a more general nature that require further investigation. One such question has to do with the role

of institutions as either barriers or enablers for transitions within modern industries aimed at addressing what are referred to as the grand societal challenges. The recent change processes in Cognac at the focus of this study were largely triggered by external shocks in the form of economic crises in the 1970s and 1990s. These shocks primarily generating economic pressure on a local production system were quite concrete through their immediate impact on its short and medium-term profits. According to our analysis, this mobilized institutional entrepreneurship in the local community. While the current grand challenges connected to climate change, energy, environment, demographics, security, health, and education will require radical changes in the way we produce, consume, live, and interact, the pressures these challenges generate are less well defined in terms of both urgency and geographic impact zones. Questions that arise are whether such pressures would mobilize the same type of locally embedded institutional entrepreneurship; where these movements are most likely to occur; and what impact any institutional change eventually initiated by those institutional entrepreneurs will have—either regionally, or globally. Addressing such questions would provide fruitful ground for advancing our understanding of the relation between agency, space, and institutions.

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