Social science, innovation and sectoral transformation approaches

In a ‘tradition-oriented’ wine world, human science researchers in Montpellier (France) readily refer to historical figures such as Jules Milhau who first modelled wine prices in the first half of the 20th century. That was at the time when wine from the South of France—often considered simply as ‘raw material’—was destined to accompany the industrial revolution and was seriously marked by the trauma caused by the post-phylloxera overproduction phenomenon that occurred in 1907. Economists thereafter monitored viticulture patterns, first by taking into account the official division (in 1935) between wines with an appellation of origin and table wines, as set out in the ‘Wine Statute’, which was a guarantee of regular support by unwavering public policies, even until present time with its inherent new challenges. It is in this setting that public policies, which are now—since the first common market organization in 1970—under European authority, are still being analysed, along with current aspects such as vine planting rights, which have recently been questioned.

It is hard to study wines from the huge Languedoc wine-growing region without conducting an in-depth analysis of the activities of its structures and stakeholders, including wine cooperatives, the first of which was founded by visionary vine growers from Maraussan in 1901. New analyses of the current cooperative setting in the 21st century are emerging: new governance arrangements, cooperative groups and subsidiaries, quests for new guarantees associated with local development, corporate social responsibility and sustainable production. Some researchers have conducted studies on innovation processes and are active monitors of these changes, while others are more focused on the managerial approach, analysing ‘coopetition’ phenomena (see p. 44) and building collective reference frameworks that can be monitored between stakeholders within the same areas.

The winemaking sphere will soon, however, be globalized and economists in Montpellier—experts with a history of commitment to the International Organisation of Vine and Wine dating back to 1924—began studying changes under way over the last 20 years driven by ‘New World’ winemakers and the emergence of the World Trade Organization. Market globalization, concomitant to the profound quantitative and qualitative changes in national consumption patterns under way, has precipitated French wine companies into unknown waters concerning marketing, export to new markets and the importance of ‘brands’, which until now have been quite discrete with regard to designations of origin in the French wine sector. Subsequent to findings of regular analyses on consumption patterns in France, international comparative studies were launched on visual codes, in addition to new semiotic analyses that highlighted the impact of different label designs on the purchasing habits of Asian consumers with very different cultural references.

Globalization has also prompted reconsideration of firmly anchored premises in the sector. France has refocused the spotlight on variables that link grapevine yield with the profitability of wine production units as a response to trends in competing products on world markets. Moreover, it has become clear that the usual wine innovation pathways taken since ancient times are even more numerous than initially perceived—ranging from grapevines resistant to fungal diseases to fermentation-inducing yeasts, AOC wines promoting ‘terroir’ flavours to wines with or without a geographical indication (GI), seeking a competitive edge on the world market, wines more tailored to meet the demand for ‘natural’ products, to viticulture practices capable of addressing the effects of climate change, which are already being felt and are forecasted to become even more severe.

These changes and innovations are supported and promoted by Montpellier researchers, including economic analysts, observers involved in systemic interactions (between stakeholders and disciplines), marketing advisers serving companies, and prospective analysts of the Institute for Higher Education in Vine and Wine Sciences (IHEV) responsible for forecasting the sector’s future.

Hervé Hannin (Montpellier SupAgro-IHEV)

* More or less long-term cooperation between competitors
Social science, innovation and sectoral transformation approaches

Innovation for agroecological and climatic transitions

The joint research unit Innovation and Development in Agriculture and the Agrifoods Sector (UMR Innovation – INRA, Montpellier SupAgro, CIRAD) conducts multidisciplinary research in France and worldwide on technical, organizational and institutional innovation processes. The research is focused on all processes, from stakeholders’ innovation motives, to concrete ways to implement change, and to the impacts of these innovations on development.

Researchers of this unit who participate in these projects share a systemic vision of innovation and conduct in-depth analyses on its economic, geographical, agronomic and sociological aspects. Innovation processes are thus pinpointed, analysed and sometimes supported (research-action projects), based on monitoring and surveys of stakeholders (wine growers, researchers, advisers, suppliers, etc.).

The research findings have confirmed the impacts of innovation and associated training networks on the competitiveness of vineyards and their ability to adapt to climatic and ecological issues. In all vineyards, collective action and interprofessional organizations have a clear role in different, and relatively efficient, ways. The research has also revealed that innovation is an inherent factor in different technological models that coexist in the sector (PDO labels terroir, technological PGI, organic agriculture, etc.). New types of collaboration between agricultural research and other stakeholders of this sector are even offered to address the need to combine practical and scientific knowledge according to the features of each vineyard.

The UMR has always conducted innovation studies on viticulture and wine. The first studies concerned the conditions needed to transform the sector in order to enhance quality at vineyard, wine cooperative, wine-growing region and market scales (geographical indications). Research was then reoriented towards innovations addressing challenges regarding agroecological transitions and climate change. The research unit has thus been instrumental in giving new impetus to research on:

- climate change: joint coordination of the Long-term Adaptation to Climate Change in Viticulture and Enology (LACCAVE) project (see p. 58)
- winegrowers’ commitment to programmes to reduce pesticide treatments: DEPHY project—demonstration farm networks, experiments and production of benchmarks on low-pesticide input systems (see p. 62); and the Panoramix project—design and development of viticulture systems that combine resistant varieties and complementary crop protection methods (see p. 63).
- the evolution of wine-growing landscapes in response to these challenges in Mediterranean regions: the Mediterranean Landscapes and Terroirs project (PATERMED; see next page).

Main teams

UMR Innovation
Innovation and Development in Agriculture and the Agrifoods Sector
(INRA/Montpellier SupAgro/CIRAD)
30 scientists, with 4 involved in the topic

UMR MOISA
Markets, Organizations, Institutions and Stakeholders Strategies
(CIRAD/INRA/Montpellier SupAgro/CIHEAM-IAMM)
65 scientists, with 8 involved in the topic

Wine Business Group
(Montpellier Business School)
8 scientists

From “Viticulture and Wine” - Les Dossiers d’Agropolis International - October 2016 - 76 pages
PATERMED project – vineyard landscapes embedded in agricultural systems in Mediterranean France

The Mediterranean Landscapes and Terroirs (PATERMED) programme (2010-2014) aimed to analyse and promote vineyard and olive grove landscapes in the Mediterranean South of France. Research carried out in Montpellier by Innovation and AGAP joint research units, in collaboration with different teams*, highlighted the cultural and operational quality of these landscapes at different geographical scales (from individual sites to the entire French Mediterranean area). Moreover, the studies revealed the processes that transform these landscapes: urbanization, fragmentation of agricultural areas, maintenance of wine-and olive-growing activities, uprooting, environmental issues, labelling and geographical indications, the development of tourism and recreational activities, etc.

The studies gained further insight into two topics of importance for wine-growing regions like Languedoc that are in the conversion process: agricultural, territorial and landscape impacts of vineyard land clearing; and the use of vineyard and olive grove landscapes in local development policies, especially in the Pic Saint-Loup and Terrasses du Larzac wine-growing areas.

A major contribution of PATERMED is the publication (in French) of the Atlas des paysages de la vigne et de l'olivier en France méditerranéenne (Ed. Quæ, 2014), which describes the different types of landscape and their changes as a result of issues such as urbanization, wine sector development and biodiversity, and heritage protection.

The results and deliverables of the PATERMED project, especially this landscape atlas, offer land-use managers and viticulture sector managers some food for thought and a decision-support tool to address landscape issues, which are also primary concerns for many local authorities.

* UMR TELEMME - Temps, Espaces, Langages, Europe Méridionale, Méditerranée (Aix-Marseille Université / CNRS) ; UMR ESPACE - Étude des structures, des processus d'adaptation et des changements de l'espace (CNRS / Aix-Marseille Université / Université d'Antignan et des pays du Vaucluse / Université de Nice Sophia-Antipolis) ; UR LOTERR - Centre d'étude et de recherche sur les paysages (Université de Lorraine) ; Afidol - Association française interprofessionnelle de l'olive ; Syndicat des vins de Côtes de Provence ; INAO - Institut national de l'origine et de la qualité.

Contact: Lucette Laurens, lucette.laurens@supagro.inra.fr
For further information: http://patermed.over-blog.com
Economy and management of the viticulture and wine sector

The joint research unit Markets, Organizations, Institutions and Stakeholders Strategies (UMR MOISA – CIRAD, INRA, Montpellier SupAgro, CIHEAM-IAMM) encompasses five social science disciplines economics, management, sociology, political science and anthropology. The unit has three teams focused on: research on consumer, agrifood, rural business and supply chain governance; coordination and policies for sustainable agriculture and food; and changing farming systems, household strategies and resource management.

The UMR conducts research on the common theme of sustainable agrifood and rural development in developed and developing countries. It has a long tradition of collecting quality primary data via direct field surveys, underpinned by its large international cooperation network.

The fact that the teams are based in institutions with a strong technical component has enhanced interdisciplinary collaboration and awareness of the technical dynamics.

The wine theme has benefitted from an accumulation of knowledge and expertise on the economic aspects of this sector since the 1950s. Economists are currently focusing research on:

- wine consumption, with participation in the national FranceAgriMer survey, which has been conducted every 5 years since 1980
- international trade, markets and the global economic situation with, over the last 20 years, annual publication of the Cyclope World Commodity Yearbook, as well as competitive and economic market summaries
- production structures—population, family, work, setting up of young farmers with: (1) an assessment of wine estates under way according to the level of pesticide use and crop insurance; and (2) an assessment of the economic and environmental performance of wine businesses, and characterization of the economic model that differentiates wines with a PDO label and those without a GI classification
- European wine policy via several assessments, supplemented by studies on vineyard clearing, vine planting rights and their impact on wine estate development patterns and income
- market launching, with studies on cooperation and negotiation, multinational corporations and groups, designing quality management contracts
- the dynamics of research-intensive innovations: dealcoholization techniques and disease-resistant varieties.

Management science specialists focus on the following topics:

- trademark rights, especially regarding the rights of the Sud de France collective
- product packaging and consumer responses to the emergence of novel products
- financial performance of businesses, especially cooperatives, and governance-performance relations
- regional viticulture economic information mapping
- foresight studies in the sector.

The Wine research team also takes part in the Vin Montpellier Group—an informal multi-institutional network focused on the economics and management of exchanges concerning wine-related research, expert groups of the International Organisation of Vine and Wine (OIV) and Vinelink International.

Analysis of the commercial feasibility of launching Novinpak® bottled rosé

A project aimed at marketing and launching PET bottles is being conducted within the framework of a collaboration between UMR MOISA and the company Val d’Orbieu-UCCOAR (VINADEIS). This component of the 3-year Novinpak® project is focused on R&D aspects and on technical feasibility, with marketing aspects handled at the end of the project. The study on the commercial feasibility of this innovative packaging aims especially to analyse the reactions of potential consumers, perceived advantages and drawbacks. The aim is also to identify the purchasing and consumption conditions for an innovative product that is out of line with the traditional social codes regarding wine in France.

From a methodological and empirical standpoint, beyond the factual records and literature reviews on new wine packaging launches and innovations, four surveys were conducted from March to June 2014: two focus group surveys (experts and novices), an in situ survey involving interviews with 49 consumers questioned in the wine sections of supermarkets and hypermarkets, and an online questionnaire survey (148 respondents).

Wine in PET bottles generally has a poor to very bad image associated with low grade or culinary wine. Novinpak® bottles are, however, attractive and considered esthetically pleasing, of trendy design, slender and elegant. The concept was considered suitable for a rosé product launch because this wine market segment is the one most open to new product launches and innovations. Surveyed consumers were not very concerned about the eco-friendly aspects of the plastic bottle, which were considered to be offset by the quality of the wine product. The convenience feature (lightness, solidity) was more recognized and valued by consumers.

Contact: Foued Cheriet, cheriet@supagro.inra.fr

For further information: www.novinpak.org/?set_language=en
STRATECOOP LR 2013 Programme
Governance, strategy and performance of wine cooperatives in Languedoc-Roussillon

This study was carried out in the framework of a management PhD thesis at UMR MOISA in a setting marked by profound changes (vineyard clearing, trade globalization, mergers) and by an original governance system associated with the cooperative status. The findings shed light on changes under way regarding wine cooperatives in Languedoc-Roussillon (France) in terms of corporate governance, strategic positioning and performance. This provides wine cooperative professionals an accurate update of the situation, but above all effective management assistance and a prospective approach.

The study was based on a close partnership with the Coop de France LR and Dyopta (a company specialized in processing and analysing data from the computer-based viticulture registry), and on funding from France AgriMer and the Compte d’affectation spéciale développement agricole et rural (CASDAR). It involved a sample of 87 wine cooperatives (45% of the total number of wine cooperatives in the region).

The STRATECOOP LR 2013 programme resulted in identification of the most effective trajectories for the regional wine cooperatives sector and for the sustainability of member vineyards. The results highlighted certain governance and commercial positioning options that were more effective than others in terms of upstream, downstream and financial performance. A typology was sketched out that remains to be specified in greater detail. Links were also established between the cognitive dimension of governance (decision-making process based on sometimes informal advisory bodies) and the long-term financial performance.

Contact:
Louis-Antoine Saïsset, louis-antoine.saisset@supagro.fr


PRECOVISION project (2009-2013)
Economic performance of wine estates and reduction of pesticide inputs

A benchmarking method was developed by UMR MOISA to measure the economic performance of wine estates and assess possibilities of reducing pesticide inputs without changing the production technology, while shifting towards technology requiring lower pesticide usage.

This method enables multidimensional quantitative assessment of the performance of vineyards relative to all of those monitored, while also characterizing the most efficient and identifying those that could serve as benchmarks. It can also be implemented to find ways of improving the least efficient vineyards, especially from a technical standpoint, to reduce production costs and the use of polluting inputs. For public policymakers, this analytical framework facilitates measurement of the potential impact of regulations geared towards reducing pesticide usage according to the type of wine producer.

It was applied to survey data on viticulture cropping practices in Languedoc-Roussillon and Provence-Alpes-Côte d’Azur regions in order to assess the possibility of reducing pesticide input quantities—at least one pass and an average 15% of quantities used without any change in production structure, and at least two passes and an average 31% of quantities used when shifting towards another economically viable production structure.

The performance of wine estates is currently being modelled in pesticide input reduction situations for protected designation of origin (PDO) vineyards and those without a geographical indication (GI), which enables:

- characterization of economic models of PDO vineyards and those without GI
- assessment of possibilities for reducing pesticide inputs for PDO vineyards and identification of limiting production factors that hamper this reduction unless current practices or production technologies are changed
- assessment of economic and environmental benefits derived from a specialization in PDO wine or table wine versus coproduction of both types of wine at vineyard and territorial scales.

For the empirical part of the project, data from the Farm Accountancy Data Network (FADN, France). Several pesticide reduction scenarios will be implemented to assess the potential impact on wine estates according to the type of wine produced.

Contact:
Isabelle Piot-Lepetit, isabelle.piot-lepetit@supagro.inra.fr

* Service central des enquêtes et études statistiques (SCEES), 2008.
Vine planting rights

In 1935, France and Spain implemented regulations for controlling vine planting, which were ‘temporarily’ adopted by the Common Market Organisation for Wine in the European Union, with the exception of a short break (1970-1976). The definitive suppression of these vine planting rights (enacted in the 2008 reform), set for 2016 or 2018 at the latest, was highly justified but also highly discussed as the deadline approached, with many professionals and elected representatives fearing dire consequences—unbridled planting, market instability, smallholder producers, etc. A major study that was carried out by UMR MOISA for the European Association of Wine-growing Regions and the European Parliament (in collaboration with Italian universities) to focus on these key issues.

Long-term case studies in Europe and the ‘New World’* enabled the team to:

1. analyse the operational procedures of these regulations
2. test economies of scale associated with the size of wine-growing farms based on data derived from the Farm Accountancy Data Network in France
3. monitor the growth dynamics of these farms at the European level
4. address the main criticisms of vine planting rights.

The study showed that:

1. the size of the company is not a primary economy of scale factor, nor is the extent of income growth
2. the cost of vine planting rights does not significantly increase the cost of setting up a vineyard
3. a vine planting rights system, if used in a lax way, does not avoid overproduction (case of Alentejo, Portugal), and has negative impacts on compliant regions
4. the absence of a vine planting regulation system in the New World did not prevent the market imbalance
5. other countries have set up different market regulation mechanisms (Argentina)
6. the planting rights system did not make the wine region inflexible, but enabled reallocations in regions where there seemed to be increasing opportunities (France, Italy, Alentejo).

These results were confirmed by other studies carried out in Italy, Germany and Hungary.

* Australia, Spain, Portugal and Argentina.

A wine management research group

The Wine Business research group of the Montpellier Business School consists of teacher-researchers from the Montpellier Research in Management (MRM) laboratory. The research groups play a key role in the organization and development of research at the Montpellier Business School.

Meetings are thus open to professionals of the wine sector invited by members. The research findings are promoted with field managers in workshops, during interviews or in publications. Exchanges and visits of international professors and members of prestigious academic associations facilitate international recognition.

The research projects involve various disciplines such as entrepreneurship, strategic management, marketing and finance. Academic publications are mainly focused on co-operation strategies between small and medium enterprises (SMEs), consumer perception of wine label designs or innovative marketing channels, such as websites. A recent collective publication has focused on wine sector management.

Publications of researchers of the group have received academic honours, such as the Best Paper Award at the Academy of Wine Business Research Conference or a PhD prize from the Association pour les recherches en économie agroalimentaire. Several joint research projects are under way in various areas: co-operation strategies between wine companies, Chinese wine consumer expectations, collective implementation of corporate social responsibility, the role of wine as a financial investment asset, etc.
Social responsibility of wine cooperatives

This research project is focused on implementing a collective reference framework for corporate social responsibility (CSR) via wine cooperatives.

Vignerons en Développement Durable, an association of wine-producing cellars devoted to sustainable development which currently pools 18 cooperatives, was studied. Fifteen of these cellars participated in the study and 29 semi-structured interviews were conducted from March to June 2015. The interviews involved salaried executives as well as quality-control managers and/or vineyard managers in charge of CSR implementation. The study was aimed at understanding how cooperatives—sometimes competing—manage to unite to build a collective CSR frame of reference.

The diverse range of stakeholders involved in the collective effort—from cooperating wine growers to cooperative employees—foster the sharing of best practices and the adoption of innovative tools.

The study revealed that successful CSR implementation depends on the commitment of three types of stakeholders in the collective action—leaders of cooperative structures, cooperating wine growers and employees. It showed that the collective CSR strategy was hinged on a cooperative identity backup strategy, providing a powerful tool for dialogue with key stakeholders. The research results concerned collective action management modalities and the impacts on stakeholder involvement.

This project involved researchers of the Wine Business Group (Montpellier Business School) associated with professionals of the wine sector.

Contact:
Maryline Meyer, m.meyer@montpellier-bs.com
For further information: www.montpellier-bs.com/groupe/le-centre-de-recherche/groupes-de-recherche/wine-business

Wine labels tailored for the Chinese market

Programme 6, cofunded by the French Foundation for Management Education (FNEGE) in the framework of the Junior Professor Award and by three Bordeaux wine merchants (Maison Sichel, Cheval Quancard and Grandissime), resulted in a study visit to China (in 2014) to gain insight into Chinese consumer preferences regarding wine label designs.

This market research was conducted by an associate professor of the Montpellier Business School and involved:
- a semiotic study on the design of wine labels in the ‘imported wine’ category on the Chinese market
- the creation of eight wine labels representative of different types of labels on the Chinese market
- a quantitative market research and a test of the eight created labels on 1,400 Chinese imported wine consumers
- drafting of a report—presented to the three wine merchants and FNEGE—of the market study results and recommendations to help them create wine labels tailored for the Chinese market
- writing of two academic articles based on the collected data.

Contact:
Franck Celhay, f.celhay@montpellier-bs.com