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Economics of Retailing

JURY

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Contents

1 Introduction

The purpose of this note is to present my research perspectives and research itinerary, its consistency and its evolution since my doctoral defense until today. My research has always been in the field of Industrial Organization. I began working on my dissertation entitled "Analyse théorique du rapport de force dans les relations verticales et applications au secteur agroalimentaire", in September 1996 at the University of Paris I under the supervision of Professor David Encaoua and the co-supervision of Eric Giraud-Héraud from INRA. The defense took place on September 27, 2000. During my doctoral work, I had the opportunity to benefit from multiple research environments. For the first three years, I worked both at the University of Paris I and, thanks to Eric Giraud-Héraud, at both INRA Grignon and the Ecole Polytechnique where he was an associate researcher. I then obtained a fellowship from the Laboratoire d'Economie Industrielle (LEI) at CREST for the final year of my PhD. During this stay at LEI, I met Marie-Laure Allain who was working on a dissertation on a subject similar to mine. We have been working together ever since. Although part of my dissertation was applied to the Champagne wine sector and, more specifically, to the relationships between growers and merchants, I also began to investigate the regulation in the retail sector, especially the ban on loss-leading.

In 2000, I was recruited to be a researcher at INRA in the former laboratory LORIA of Ivry-sur-Seine (i.e., the Laboratory of Organization of Agro-food Industries); simultaneously I became an associate researcher at the Ecole Polytechnique. Afterwards, I chose to specialize in the economics of retailing for two main reasons.

First, the products sold in supermarkets represent a large share of households' budgets and this sector gathers the biggest companies in the world, such as Wal-Mart and Carrefour. As written by C. Fishman : "[...] *Wal-Mart is a giant. In the first one hundred days of 2010, Wal-Mart generated more revenue than Google has had in its entire ten-year history*". Second, the retail sector appeared to be particularly attractive for Industrial Organization. In most Western economies, merger waves have led to the constitution of a small oligopoly of retail chains with a substantial market power towards consumers. The issue of retail competition in

itself is particularly rich because retailers compete on several dimensions: retailers are multi-product firms, and retail chains are multi-format and multi-market. Retailers are also intermediaries between manufacturers and consumers, and through the concentration waves, retail chains have acquired significant buyer power towards their suppliers. Therefore, the analysis of the vertical channel constitutes another key dimension. Moreover, the horizontal and the vertical dimensions are often mixed in the analysis because the competition at one level directly affects the balance of power in the vertical chain. For instance, the two dimensions are tightly interlocked on the issue of private labels: retailers are then both distributors and direct competitors with manufacturers. Finally, the regulation of the French retail sector was regularly and intensely debated in the first decade of the millennium.

To begin, together with Marie-Laure Allain, I wrote a book in French aimed at a broad audience, and part of the Repères series, entitled "Economie de la distribution"published in 2003 (ed. *La découverte*). Our purpose was to provide a complete picture of the consumer packaged goods' retail sector, by consolidating its main features and important statistics. The first half of the book is descriptive and highlights the recent evolution of the retail sector. The second half analyzes the competition among retailers, their relationships with manufacturers and the sector-specific regulations from an IO perspective. Writing that book enabled me to acquire a deeper knowledge of the retail sector and refine my research issues.

During the ten years that followed, I worked in the field of IO theory, mainly as applied to the retail sector.

My research spans three main themes.

In line with my dissertation, I first developed researches on the retail sector regulation. I built IO models to represent either the competition among retailers or the complete vertical channel with competition at both the upstream and downstream levels. I then analysed how producers and retailers' behavior was affected by a specific regulation, namely the ban on loss-leaders, to understand its pros and cons. This part of my work sought to bring my arguments to the public debate, because the ban on loss-leaders, which had been redefined in France through the Galland law in 1996, was being questioned at that time. I was then

directly involved in the discussion on the reform of the loss leader banning and other sector-specific regulations.

Second, and as a continuation of my dissertation work, I wrote several papers seeking to understand the determinants and consequences of the balance of power between producers and retailers. Bargaining between producers and retailers are a regular source of conflicts transmitted by the medias. In particular, tensions between retailers and manufacturers ran high every year, notably for agro-food producers that were subjected to production crises such as for milk or fruits and vegetables. The buying power of retailers also became a major issue in competition policy. My research has analysed the structural determinants of the balance of power between producers and retailers but also how the balance of power could affect firms' strategies within the channel. My purpose here was to better understand firms' private strategies in the retail sector and to study their consequences for welfare.

Finally, I have studied how the evolution of structures in the vertical channel, i.e., both horizontal and vertical mergers, could harm competition and hurt welfare. My motivation for this final group of studies was clearly their implications for competition policy .

In conducting these researches, I have benefited from stimulating work collaborations with several French researchers including Marie-Laure Allain (CNRS, Ecole Polytechnique), Fabian Bergès-Sennou (TSE), Clémence Christin (University of Caen), Guy Meunier and Sylvaine Poret (INRA, ALISS), Stéphane Turolla (INRA, SMART), Patrick Rey (TSE) and Thibaud Vergé (CREST). I have also interacted regularly with other French researchers working on closely related subjects, such as Eric Avenel (University of Rennes), Olivier Bonroy (INRA, Grenoble) and Stéphane Caprice (TSE).

Moreover, I have had the opportunity to develop relationships with foreign researchers working on similar topics. In the 2006-2007 academic year, I was a visiting scholar in the University of California at Berkeley's Agricultural and Resources Economics department where I worked with Sofia Villas-Boas. Because she was working in empirical IO applied to the retail sector, our collaboration

allowed me recently to work with her on a first empirical paper.

In 2009, Stéphane Caprice coordinated a French-German project with Christian Wey (DIW) and Roland Strausz (Humboldt University) that was financed by the ANR and the DFG on the theme "Market Power in Vertically Related Markets". I was much involved in this project and in particular, in 2011, I organized a workshop in Paris with all the members of the project. This project ended in 2012; however, in 2013, I began coordinating another ANF-DFG project with Christian Wey and Hans-Théo Normann (DICE) on the theme "Competition and Bargaining in Vertical Chains". This project will continue through mid-2016. We have been meeting our German partners yearly since 2009 for a workshop at which we present our ongoing work and to which we also invite other researchers who are not involved with the project but are working on related issues. Thanks to these projects, I have begun working in collaborations with German researchers such as Vannessa Von Schlippenbach (DICE) and Ozlëm Bedre (ESMT) and I have built a real international research network.

In the future, I plan to continue my studies on the economics of retailing. Most of my projects are included in the ANR-DFG project that began in April 2013, but some projects have stemmed from new opportunities that have come to me through my laboratory ALISS at INRA. My perspectives of research encompass two main themes: the analysis of investments in the vertical channel, and the analysis of retail mergers. From a methodological point of view, I plan to develop both theoretical and empirical IO works as well as research in experimental economics.

The first part of this note presents a research summary of my work in economics of retailing from my dissertation until today as revolving around three axes: first, the analysis of the retail-specific regulations; second, the determinants of the balance of power in vertical chains and their consequences for firms' strategies and welfare; and third, the analysis of mergers in the vertical channel. The second part of this note presents my main research perspectives.

2 Research summary

The research works that I present in this summary fall in the field of IO applied to the retail sector. To briefly contextualize the theoretical IO literature to which I will refer to, I would first like to mention the literature on vertical relationships and then, the literature on retail competition. My research refers mainly to the literature on vertical relationships. The oldest studies go back to Spengler's (1950) concept of double marginalization, Galbraith's (1952) notion of countervailing power, and the hold-up externality that was brought forward by Williamson in the 1970s. Most of the literature on vertical contracting (e.g., Mathewson and Winter (1985), Rey and Tirole (1986)) and vertical integration (e.g., Ordover Saloner and Salop (1990), Hart and Tirole (1990)) was developed during the 1980's and 1990's. However, this literature highlight contracts as a coordination device rather than a tool to share profits within the vertical chain. Since the beginning of the new millennium, the IO and marketing literature has explicitly modelled bargaining within the vertical chain to better account for buyer power issues (e.g., Marx and Shaffer (1999), Iyer and Villas-Boas (2003), Inderst and Shaffer (2007)). Moreover, the most recent literature on vertical channels attempts to account for imperfect competition at both the upstream and downstream levels with interlocking relationships (see Rey and Vergé (2010)). Indeed, the vertical structures analysed previously were often simplified by considering imperfect competition at either the upstream or the downstream level exclusively, or by limiting the relationships within partners to specific contracts.

In contrast, the IO literature that accounts for the other dimensions of retail competition, i.e., that retailers are multi-product, that there is competition between different retail formats or that retailers compete in different geographical markets, is sparse. Although there is a body of literature on multiproduct pricing (e.g., Ramsey (1927), Bliss (1988)) and product line competition (e.g., Brander and Eaton (1984), Champsaur and Rochet (1989), Klemperer (1992)) few papers account for the other dimensions of retail competition such as retail competition among multi-formats (e.g., Chen and Rey (2012), Inderst and Valletti (2011) or in several markets (e.g. Dobson and Waterson (2005)).

I now present my research works on the "economics of retailing" proceeding in three parts. The first part is devoted to the analysis of the retail sector-specific regulation in France. The second part focuses on the structural determinants of the balance of power and its consequences for firms' strategies and welfare. In the third part, I present my works on mergers and their implications in terms of competition policy.

2.1 Analysis of the retail sector regulation

Regulation in the French retail sector has been one of the main themes of my research throughout my career. The retail sector is particularly heavily regulated in France. Among others, the entry of new stores with a surface over a threshold (this threshold being regularly modified) is subject to authorization from a local commission (at the department level), gathering elected representatives and qualified leading figures and, watching the balance between different retail formats. This regulation of entry is highly restrictive compared with other European countries. Moreover, the "Code de Commerce"regulates the relationships between producers and retailers. Most of my studies on that topic seek to capture the ambiguous impact of the ban on retailer's loss leading that prevailed in France since 1963 and that was redefined by the Galland law in 1996. I have used the theory of industrial organisation to understand the logic of loss leading practices and to discuss the banning of loss leaders, pointing out its impact on the competition between retailers, on the relationships between producers and retailers and on consumers' surplus. I first present my theoretical research papers on that topic and then develop my practical involvement in reforming the regulation of the French retail sector.

2.1.1 Theoretical analysis of resale below cost laws

My first paper "Stratégies de revente à perte et réglementation"was published in 2005 in *Annales d'Economie et Statistique*. This article focused on the effect of the loss-leader ban on competition between retailers of different formats, namely a large retailer and a small store. Indeed, one of the main motives for loss-leader

banning was to protect small independent stores from too fierce competition by large retailers. The exit of small independent stores was a concern for the government because it was accelerating the concentration of the retail sector in the hands of a few large retail groups. Moreover, loss-leading could be easily used by large retailers but not by small stores. Indeed, because they offer a large number of products, large retailers can afford to make negative margins on some products as they compensate with positive margins on the sale of other products.

To model the competition between different formats, I use a spatial differentiation model with two points and one store at each point. On one side, a large store offers two independent goods and on the other side, a small store sells only one of the two goods. Consumers are located either around the large store or around the small store. They incur no transportation cost to reach the store around which they are located and a fixed transportation cost to reach the other store. All consumers have the same valuation for the good that is sold at both stores, but the consumers' willingness to pay for the good that is sold only by the large store is uniformly distributed on the interval [0,1].

The article shows that there is an equilibrium at which the large store sells the product that its rival does not offer below cost. In this equilibrium, the large store compensates the loss on the sale of the loss-leader by a positive margin on the sale of the other product. The result derives from a Ramsey pricing monopoly rule extended to an imperfect competition setting. Indeed, with the Ramsey rule, a multi-product monopolist that offers complementary goods may have an incentive to sell the good with the highest direct price elasticity below cost and compensate with a higher margin on complementary goods with less elastic demands. In my paper, consumers located around the small store perceive the two products sold by the large store as complementary: they must spend one transportation cost to access the two goods.

In this model, banning loss-leaders have a mitigated effect on welfare. On the one hand, the price of the good that was sold below cost increases but it is compensated by a lowering in the price of the other good, so that the sum of the two prices is unchanged. However, more consumers benefit from the price decrease,

and therefore the surplus increases. It is also beneficial to the small store because some consumers are discouraged from visiting the large store. On the other hand banning loss-leaders may provoke a switch towards a local monopoly equilibrium where all prices are higher. In the latter case, banning resale below cost would clearly raise prices.

Two other papers on loss-leader banning laws, "Loss-Leaders Banning Laws as Vertical Restraints"and "Anti-Competitive effects of Resale-Below-Cost Laws", were written in collaboration with Marie-Laure Allain. In contrast with the previous paper, these articles focus on the vertical effects of the ban. The Galland law, enacted in 1996, forbids a retailer to resell a good below cost, the cost being defined as the unit price invoiced by the manufacturer; however, the unit price invoiced does not integrate the discounts and rebates obtained by the retailer or commercial services often paid by the manufacturer to the retailer. In most cases, the real unit price paid by the retailer to the manufacturer is much lower than the unit price invoiced. Discounts, rebates and commercial services are all part of the so-called "backroom margin"which, while being opaque, were known to reach 60% of the unit price invoiced. A graphic proposed in annexe 5.1 represents the division of the retailer's margin.

Additionally, the law prevents a manufacturer from offering discriminatory general terms of sales to "similar"customers. In other words, it was forbidden for a manufacturer to offer a different unit price invoiced to its various retailers. Together, these laws have made licit an industry-wide price-floor practice, close to resale price maintenance (henceforth RPM) which is forbidden *per se* in European countries. Together with Marie-Laure Allain, we have therefore written two papers analysing potential anti-competitive effects of this industry-wide price-floor practice. First, the paper "Loss-Leaders Banning Laws as Vertical Restraints", published in 2005 in the *Journal of Agricultural and Food Industrial Organization*, examines a simple vertical chain with an upstream monopolist and two competing retailers. We consider a game in which a monopolist sets an industry-wide price-floor to its retailers, i.e., the unit price invoiced in the general terms of sales, and then bilaterally bargains with each retailer secret linear discounts. Two forces

are opposed here to determine the retail prices. On the one hand, with linear contracts, there is a double-margin effect that tends to raise prices. On the other hand, because contracts are secret, opportunism arises that tends to lower prices (e.g. O'Brien and Shaffer (1992)). We show that when the bargaining power of the retailers (producer) is high (low) enough, the industry-wide price-floor can be used as an RPM restraint and therefore cancels retail competition. When the producer's bargaining power is low and, the double-margin effect is reduced and combined with the opportunism effect, the retail prices are lower than the industry monopoly price. Therefore, the RPM wholesale price, i.e., the monopoly industry price, is more likely to be binding when the retailer's bargaining power is high enough. In this paper, loss-leader banning laws unambiguously decreases the consumer's surplus and welfare.

The article "Anti-Competitive effects of Resale-Below-Cost Laws", published in the *International Journal of Industrial Organization* in 2011, goes one step further by adding the competition among producers to the analysis. This paper uses a model with both upstream and downstream imperfect competition and interlocking relationships in the spirit of Dobson and Waterson (2007). We study the same game as before with and without (as a benchmark) the industry-wide price-floor. We show that industrywide price-floors may still cancel downstream competition but also soften upstream competition. Again, retailers' buyer power must be strong enough for the price-floor to be binding. Our results are also shown to be robust when authorizing bargaining between producers and retailers on two-part rebates. This is also one of the strengths of our model because Rey and Vergé (2010) have shown the inexistence of pure strategy equilibria in a vertical structure with imperfect competition at both levels, interlocking relationships and producers who offer take-it-or-leave it public two-part tariff contracts to retailers. With secret contracting, however, we are able to characterize an equilibrium with two-part tariffs in such a vertical structure and then have a proper benchmark. Moreover, we show that when buyer power is large enough, a price-floor works out as an RPM, but otherwise price-floors implement corner solutions that yield higher retail prices and lower welfare than those under RPM. Indeed, producers

set a higher wholesale price in order to ensure that it will be binding; because when retail prices are constrained, retailers have a lower bargaining power as they cannot adjust freely their prices in case of a breakdown in negotiation. In these cases, the price-floor is even more profitable for producers than a RPM. Again, highlighting that a price-floor could be worse than an RPM is one of the main contributions of this article.

2.1.2 Implications in the debate on the regulation of the French retail sector

I was directly involved in the debate on the regulation of the French retail sector through my participation in the Commission Canivet in 2004, in the Commission Hagelsteen in 2008 and, more indirectly, larger audience publications.

The last chapter of my dissertation which was devoted to a survey of regulation in the French retail sector was combined with Marie-Laure Allain's dissertation chapter on the same topic to write an article titled "Les relations entre producteurs et distributeurs : bilan et limites de trente ans de régulation". This article, published in 2003 in the *Revue Française d'Economie*, is a critical review of the regulation in the retail sector separating the rules that surround the behavior of producers and retailers from the regulation of the retail structure. At that time, the 1986 order that founded the French competition rules, the Galland law enacted in 1996, and part of the "Loi sur les nouvelles régulations économiques"in 2001 constitutes the regulatory corpus of the relationships between producers and retailers. Merger control and specific laws, such as the 1996 Raffarin law that controls the authorization of new store openings, determine the evolution of the retail structures.

Another article, "Faut-il interdire la revente à perte?", which was published in 2003 in the *Revue Française d'Economie*, surveys the loss-leading strategic motives offered in the literature. I identify three strategic motives for retailer's loss-leading: predatory pricing (e.g., Milgrom and Roberts (1982)), optimal pricing of complementary goods by a monopolist (Ramsey rule (1927)), and advertising strategy (e.g., Lal and Matutes (1994)). In each case, the pros and cons of resale below-

cost laws are discussed.

I was then called to be a member of the Commission Canivet from July to October 2004. The Commission Canivet was in charge of writing a report to suggest potential methods to reform the regulation of the retail sector, particularly the ban on below-cost pricing, which was highly criticized at the time for its inflationary effect. The Commission was directed by Guy Canivet, premier président de la Cour de cassation, and gathered 9 members, all of whom were either economists or lawyers:

- **Lawyers**:

  Emmanuelle Claudel, professeur des Universités, Guillaume Daieff, magistrat au ministère de la Justice.

  Maître Francis Delbarre, CMSbureau Francis Lefebvre.

  Patrick Hubert, ancien conseiller auprès du ministre de l'Écologie et du Développement durable.

  Yves Picod, professeur des Universités, directeur de l'Institut d'études judiciaires de Perpignan.

- **Economists**:

  Claire Chambolle, chercheur INRA, & École polytechnique.

  Frédéric Jenny, ancien vice-président du Conseil de la concurrence, conseiller à la Cour de cassation en service extraordinaire.

  Patrick Rey, professeur des Universités.

  Rémi Toussain, directeur de l'Institut national agronomique Paris-Grignon.

Over three months, the Commission interviewed representatives from all retail groups and industrials, in addition to unions from both sides and consumers' association. Moreover, members of the commission were debriefing on the interviews and debated about the writing of the report "*Restaurer la concurrence par les prix - Les produits de grande consommation et les relations entre industrie et commerce*", which was published in 2004 in *La Documentation française*. I learned a great deal

in serving on this Commission. First, hearing producers and retailers talk about their businesses and their relationships was a unique experience. Second, within the Commission, economists and jurists were confronting their views which I also found very interesting. And finally, certain political perspectives came into play because the report was to be delivered to the French ministry of economics: some reforms that would make sense in theory could not be recommended politically.

After serving on the Commission Canivet, I wrote a chapter entitled "Le nouveau seuil de revente à perte: vers une abolition progressive de l'interdiction ?"in the book in "Le nouveau droit des pratiques restrictives de concurrence", published in 2007, by Yves Picod, *éditions Dalloz*. This chapter summarized the main changes in the resale below cost law that were implemented following the recommendations made in the report from the Commission Canivet. I have regularly participated in the debate on regulatory reform in the retail sector that followed (Dutreil II- 2005, Chatel- 2008, Loi de Modernisation économique LME-2008). Moreover, in 2008 Marie-Laure Allain and I were invited by the Commission Hagelsteen to provide our opinion about a reform centering on whether "general terms of sales of the producers should be discriminatory".

The *opuscule du Cepremap*, "La loi Galland sur le commerce: Jusqu'où la réformer ?", written in 2008 with Marie-Laure Allain and Thibaud Vergé, is a summary of our views on these reforms based on both theoretical and empirical works. It was presented in a debate with Jacques Attali who had just published the "Commission report "Rapport pour la libération de la croissance française"which included a whole chapter dedicated to the retail sector. To briefly summarize our opuscule, we first observe that the Loi de Modernisation Economique in 2008 authorizes a certain degree of discrimination by producers within "particular"terms of sales. Second, the threshold of cost that was used as a reference to apply the resale below-cost banning in the Galland law is modified in the Loi Chatel in 2008 and now includes all of the rebates obtained by the retailer. Therefore, the two components of the industry-wide price-floor mechanism described above have been dismantled. The main conclusion of our opuscule is that the reform of the Galland law is over. However, we note that there is now a need to intensify the competition

in the retail sector at the local level, because the concentration is often too high. In other words, the new priority is a reform of the retail structure.

2.2 The balance of power and firms' strategies in the vertical channel

Over the last half century, the retail sector in Western countries has undergone a rapid wave of mergers that have reinforced the buyer power of retailers over manufacturers. Buyer power has become an important topic for competition policy, for instance when considering the abuse of economic dependency from the retailer towards small manufacturers or retail merger control. Among the determinants of buyer power, the literature often argues that larger size firms could obtain larger discounts from a negotiation partner (Chipty and Snyder (1999), Inderst and Wey (2007)). A bottleneck position (i.e., a monopolist position on some local markets) can also confer strong buyer power to a retailer . Of course the buyer power of a retailer also depends on the characteristics of the negotiation partner, and in particular the number of its competitor, the strength of the brand. Draganska et al. (2012) find that bargaining power is not an inherent characteristic of a firm but rather depends on the characteristics of the negotiation partner.

Moreover, retailer's buying power directly affects firms' strategies and has an ambiguous impact on welfare. Buyer power enables a retailer to obtain lower input prices from its producers; this is the so-called countervailing power effect (Galbraith, 1952). However, a countervailing power effect lowers final prices only if retail competition is sufficient to guarantee that economies of costs are passed through to consumers. For instance, buyer power may deter manufacturers' upstream innovation, through a hold-up effect. Buyer power may by contrast push the retailer to reduce the variety of products offered to consumers: a merged retailer may have an incentive to commit to restrict the number of products it put in its shelves in order to reinforce the competition between the manufacturers to get the slot and therefore its buyer power in the negotiation (c.f. Inderst and Shaffer, 2007).

This part of my research is organized around two main questions:

1. How does the structure of the vertical channel impact the balance of power between producers and retailers?

2. What are the interactions between firms' strategies and the balance of power in the vertical chain?

Although these works focus on firms' private strategies, I also analyze the consequences of retailer's buying power for welfare.

2.2.1 Structural determinants of the balance of power

A paper, "Threat of exit as a source of bargaining power", which was co-authored with Fabian Bergès-Sennou, was published in the *Louvain Economic Review* in 2009. This article examines a simple vertical channel where two upstream manufacturers produce an homogenous good and compete to supply a downstream monopolist retailer that resells the good to final consumers. One of the producers is assumed to be less efficient, i.e., it incurs a higher marginal production cost than does the other. We analyse a simple two-period game. The timing for each period is the following. In stage 1, manufacturers simultaneously make take-it or leave-it wholesale price offers to the retailer. In stage 2, the retailer decides his supply strategy, i.e., he can either buy exclusively from one manufacturer, or he can purchase one unit from each of them. In stage 3, the retailer sets the final price and resells the purchased units to consumers. In a one-shot game, the classic equilibrium is the Bertrand solution. The retailer buys only from the most efficient manufacturer, who sets its wholesale price slightly under its rival's cost. In a two-period game, the possibility for one manufacturer to exit the market at the end of period 1 if he fails to sell one unit to the retailer generates new equilibria. We show that if the intertemporal discount factor is higher for the manufacturers than it is for the retailers, which is consistent with our assumption of manufacturers' economic fragility, there are a range of accommodation equilibria in which the retailer buys one unit from each manufacturer in the first period to maintain an effective upstream competition in the second period. Therefore, we show that if the producers' dependency on a retailer is such that they can credibly threaten to

exit the market in the case of a temporary breach in their relationships, the threat can be a source of bargaining power for manufacturers. Such a source of bargaining power is strong enough to enable manufacturers to entirely relax upstream competition. This kind of strategy is prejudicial for social welfare, however, because an inefficient supplier is artificially maintained on the market for the sole reason of providing positive future profits to the retailer. Our results are robust when considering two-part tariff contracts or when manufacturers only have a probability of exiting the market in the case that they are not active in one period. We also consider an extension with a linear demand, such that a firm needs a minimum of orders to be able to maintain its activity in the future.

This paper puts the notion of a manufacturer's "economic dependency"on a retailer in perspective. In theory, with a unilateral definition, a manufacturer is in a situation of economic dependency if it has no similar outlets outside its relationships with a given retailer. According to this definition, manufacturers are in a situation of economic dependency on the retailer in our paper. However, we show that even if a manufacturer is weak (inefficient and exposed to exit), it may be the gatekeeper for future competition which prevents the retailer from fully exerting its buyer power. Therefore, the notion of economic dependency should always be defined bilaterally in the sense that it should also require that the retailer has sufficient alternatives outside its relationship with a particular manufacturer. Economic dependency should also be defined accounting for the dynamic perspective, i.e. the potential future entry or exit. Today, a situation of economic dependency is still defined mostly unilaterally in France. In article L. 420-2 of the Code de Commerce, we find several criteria to define a situation of economic dependency, among which are, the percentage of the firm's market share realized with its partner, the absence of other equivalent options for the firm, and the market share and the notoriety of the partner. A good illustration for our model would be the manufacturers of private labels. Although the private label manufacturers are highly dependent on a sole retailer because they are often dedicated to one retailer, they may not all be in a situation of economic dependency. It also crucially depends on how many other manufacturers would be able to produce a similar quality private

label in a sufficient quantity for the retailer.

Another interesting determinant of retailers' buyer power is the constitution of buying groups. The article "Concentration horizontale et puissance d'achat", which was co-authored with Lucie Muniesa and Marie-Astrid Ravon, who were both students at ENSAE at that time, resulted from a work group that I was directing and was published in *Economie et Prévision* in 2007. One issue that this paper examines is the profitability of the constitution of a buying group in a simple vertical chain where two producers compete and offer imperfect substitutes to an oligopoly of downstream firms who compete a la Cournot. Each of the Cournot downstream firms offers both products in equilibrium. Members of a buying group are still competitors in the downstream market, but they negotiate together with a manufacturer: in case of a breakdown, none of the members sell the product. Outside the buying group, the contract between the manufacturer and each retailer is secret. Within the buying group, contracts between the producer and the members of the buying groups become public. We show that paradoxically the constitution of a buying group is never profitable for the retailer because it restores the ability of the producer to commit to a public wholesale price. Indeed, the negotiations are grouped and publicly observed internally. Therefore, each member of the buying group, who is also a rival on the downstream market, no longer fears opportunism from the manufacturer, i.e., a secret undercut for any of the other members of the buying group. In our model, a buying group gives commitment power to the manufacturers who raise their prices to the detriment of retailers. This result derives from Hart and Tirole (1990) or O'Brien and Shaffer (1992) who have shown that secret contracts create opportunism. This may be well illustrated by the fact that the main retail groups competing on the French market are not members of the same European buying group, or as an example that Lucie provided (a buying group between Système U and Leclerc) that was quickly abandoned after its creation. However, we believe that other traditional arguments, such as economies of scale that would be realized through the negotiation over larger volume, could also counterbalance our effect and make the creation of buying groups profitable.

2.2.2 Balance of power and firms' strategies

The paper "Buyer Power through Producers' Differentiation"written with Sofia Villas-Boas is now *in revision at the International Journal of Industrial Organization*. This work was initiated during my time at Berkeley in 2006-2007. In this paper, we provide a theoretical argument that may help explain why private labels often replace national brands on retailers' shelves and, which happens in particular in the hard-discounters. Indeed, retailers have been confronted with the rise of hard discounters, first in Germany in the 1990s, with the German groups Lidl and Aldi which have expanded throughout EU, and more recently in the U.S. with Aldi's U.S. retail chain Trader Joe's or Aldi stores. In 2009, hard-discounters represented more than 20% of grocery sales in Belgium, Austria and Denmark and more than 10% in France, Spain, Portugal and the Netherlands. Hard discounters typically offer a small assortment of grocery products primarily consisting of generic and private label goods. For instance, in Aldi, the private label product assortment exceeds 90%.

This paper argues that a retailer that has a capacity constraint in its shelf space may choose to differentiate its supplying producer from its rival's, even at the expense of downgrading the quality of the products it offers to consumers, to improve its buyer power. We show that through the differentiation of suppliers, the retailer obtains a larger share of smaller total profits. The wish to differentiate is thus only to gain increasing buyer power.

The argument developed in the paper seeks to explain the rise of private labels or hard-discounters. The literature on this topic is quite abundant (cf. Bergès et al. (2004) for a survey). One of the motives most often advanced is that retailers sell a private label to gain buyer power vis-à-vis the national brand producers (Mills, 1995). Indeed, the profit that they can make on the sale of their private label is used as an outside option in their bargaining with the producer. We try to explain why private labels could replace national brands in the retailer's shelves, however, which is particularly prevalent at hard-discounters. The first insight is that, given the capacity constraint on the shelves, selling a private label instead of a national brand may simply be the most profitable option for a retailer: the retailer has to share

the joint surplus with the national brand producer, whereas with a small producer dedicated to the production of its private label, the retailer can simply buy the product at its marginal cost and keep the whole surplus. However, we provide a new argument. Even if the retailer had *ex ante* the same bargaining power vis-à-vis the national brand manufacturer and towards the private label manufacturer, say, a retailer could be better off by selling the private label instead of the national brand. To show this, we build a simple model in which retailers have limited shelf space that enables the sale of only one good. To model imperfect competition at the downstream level, we assume that retailers are competing à la Cournot. Upstream, two manufacturers produce vertically differentiated goods, and we assume that they incur constant and identical marginal costs. If the two retailers could simply supply at cost, they would both choose to offer the high quality product. Therefore, the classic motive for differentiation to relax competition among retailers is not relevant here because Cournot competition is sufficient to maintain a rent for each retailer. As in Avenel and Caprice (2006) retailers would always choose to compete head-to-head rather than to differentiate their product lines in a Cournot competition absent any strategic consideration in the vertical relation. The paper provides a complete discussion of the strategic effects at work in the model. Now, consider the vertical relationship with the two producers. The game is such that the retailer first publicly commits to dealing with one of the two manufacturers and bargains with this manufacturer on a contract specifying a quantity and a tariff in the second stage. We show that as long as the differentiation in quality is not too strong, there are asymmetric equilibria where each of the retailers commits to dealing with differentiated suppliers. The buyer power motive generates these asymmetric equilibria. If one retailer has committed to dealing with the high quality product, the rival retailers' best response is to commit to selling the low quality product because if the revenue from selling the low quality good is lower, the share of the revenue that the retailer obtains is larger when bargaining with a differentiated supplier. The insight is simple: when the two retailers bargain with the high quality manufacturer, it gives a positive outside option profit in its bargaining to the manufacturer.

The same result would hold without vertical differentiation among producers, but introducing vertical differentiation enables us to show that this differentiation of suppliers may be harmful for consumer surplus and social welfare. In particular, we find that the low quality product, namely the private label, is offered too frequently compared with what would be socially optimal, a result also found in a different context by Gabrielsen and Sørgard (2007).

In another paper, "When Fairtrade Contracts for Some are Profitable for Others", which was written with Sylvaine Poret, and published in 2012 in the *European Review of Agricultural Economics*, we examine the strategy of development for a Fairtrade channel.

Fairtrade channels enable small farmers from the southern countries to gain access to markets in the northern countries at "fair "conditions. Currently, the Fairtrade Labelling Organizations (FLO) certify firms that offer a guaranteed minimum price (GMP) to small farmers and that attempt to reduce the number of intermediaries between farmers and consumers (Raynolds, 2000, Renard, 2003). There are many interesting issues surrounding Fair Trade, but the topic of our paper can be summarized by a citation of Bowen (2001: 31) : "[...] *by paying a fair price for even a small part of production, there is often a snowball effect on prices paid for the rest of production. [...] This effect has been experienced in the case of honey sales in Chiapas in Mexico, Brazil nuts in Peru, cocoa in Bolivia, tea in Zimbabwe etc. This means that not only is it possible for producers who are lucky enough to have made contact with fair trade outlets to sell all their production at better prices, but other producers in the region, often equally marginalized, benefit also.*"This quote perfectly illustrates the main insight of this article. The positive indirect effect of Fairtrade on spot prices is often called a "snowball effect". This article highlights several theoretical arguments that may explain this snowball effect.

We model a vertical channel with three levels: perfectly competitive farmers at the upstream level, an oligopoly of industrials who transform and produce the finished product at the intermediary level and a downstream monopsonist retailer who sells the good to consumers. We assume that farmers have no strategic role in

the model. Their production cost is normalised to zero and, their aggregated production level, the harvest, is a uniformly distributed random variable level that is exogenously determined by, for example, climate. We consider a situation without a Fairtrade channel as a benchmark. We then introduce a Fairtrade channel that offers small farmers a GMP clause as insurance against poor states of nature (i.e. in case of overproduction) and that eliminates the intermediary (i.e. the manufacturer level) by enabling farmers to deal directly with the retailer. In fact, the labeling organization serves as an intermediary, but it is a nonprofit organization that does not take a margin on the product's sales. We assume that the Fairtrade organization chooses the GMP that maximizes the expected profits of Fairtrade certified farmers. We then study the effects of the introduction of the Fairtrade channel on the spot price and show that a snowball effect could arise and benefit all farmers. The issue of our paper is to determine the conditions under which the introduction of a Fairtrade channel can restore the balance of power in favor of upstream competitive farmers.

Given the structure of the vertical chain, we study the following game:

- Stage 1: the level of the harvest is revealed, and, offer and demand equalize and determine the spot price for the raw product.

- Stage 2: the brand manufacturers maximize their profits; they compete in price but are horizontally differentiated. Manufacturers offer take-it-or-leave-it contracts to the retailer; contracts are either two-part tariffs or simple unit wholesale prices.

- Stage 3: the retailer accepts or refuses each manufacturer's contract and chooses its prices for each brand on the final market.

If there is a Fairtrade channel, we had a stage 0 where the Fairtrade certifier establishes his contract price (GMP), but the Fairtrade price cannot be lower than the spot price. The Fairtrade price therefore plays a role only when the harvest is large enough (or when the spot price is low enough). In all of the frameworks studied, we highlight a negative effect related to the GMP that is offered to the farmers by the Fairtrade system. When a harvest is good, the spot

price decreases, and the GMP becomes operational for the Fairtrade farmers. Thus, the Fairtrade product becomes more expensive and the distributor increases the Fairtrade retail price in response. This increase leads to a reduction in demand for this specific good. The outcome is a shift in the supply from the Fairtrade channel to the spot market. Thus, this direct GMP effect leads to a decrease in the spot price. To balance this direct negative GMP effect, we successively analyse several mechanisms that may explain the snowball effect. We first focus on the influence of the introduction of a Fairtrade product on demand. Two different assumptions are alternatively considered. The Fairtrade good is either (i) an additional available variety that increases consumers' utility by widening the choice set or (ii) a higher-quality good for which consumers are willing to pay a premium with respect to other goods. We show that a snowball effect can arise in both scenarios. Indeed, the introduction of a Fairtrade good increases consumer demand, which in turn raises the spot price. In equilibrium, this positive demand effect is larger than the direct negative GMP effect. Second, our article analyses the effect of the introduction of a Fairtrade channel on the market structure. Although the demand effects could be illustrated with manufacturers offering two-part tariff contracts, we restrict our attention to linear wholesale contracts to illustrate the structural effects. We show that a snowball effect can arise as a result of (iii) a competition effect or (iv) the disintermediation process. By intensifying competition at the manufacturer level, the entry of a Fairtrade manufacturer increases demand on the spot market which in turn pushes the spot price upward. Moreover, by suppressing double-marginalisation, disintermediation lowers prices in the final market, which tends to increase the demand on the raw market and to push the spot price upward. These two positive effects more than compensate for the direct negative GMP effect, and this compensation leads to a snowball effect in equilibrium.

Although we acknowledge that none of these four effects is specific to Fairtrade, the specificity of a Fairtrade channel is perhaps that these effects arise simultaneously; in this case, their cumulative effects would be even stronger. By assumption, we neglect any supply effect, i.e., a potential increase in the farmers' production in reaction to the better conditions of Fairtrade. Such a supply effect would go

in the opposite direction and drive the spot market price downward. However, absent any of these supply effects, we show that small farmers can benefit from the existence of a Fairtrade channel even if they are not involved in the Fairtrade channel.

2.3 Mergers and Competition Policy

Merger control played a particular place within competition policy. The European Union (EU) adopted a specific merger regulation process in 1989 (Merger Regulation 4064/89), that similar to the US procedure, requires firms willing to merge to notify it and request an authorization from the competition authorities. During the merger review, the competition authorities evaluate all of the merger's potential effects on the relevant market. After this review process, the competition authority may reject, allow, or allow subject to certain conditions (remedies) the merger. The EU's merger policy was first established to prevent the creation or reinforcement of a dominant position. In 2004, however, the EU adopted new merger guidelines stating that any effects through which a merged firm (insider, hereafter) would lessen competition and raise prices would be an issue, a regulation more in line with the US approach detailed in the 1992 Merger Guidelines.

In part two, I have gathered my recent works that have direct implications for merger control. The first article is an empirical horizontal merger analysis, and the second article is a theoretical analysis of the anticompetitive effects of vertical mergers.

In 1999, Marie-Laure Allain and I were invited by Anne Perrot, one of the few economists at that time to be involved in the decisions of the Conseil de la Concurrence, to make a short theoretical and empirical survey of retail mergers in front of the members of the Conseil de la Concurrence. Our main conclusions were that two particular features of the retail sector, namely the local dimension of competition and buyer power, would make retail merger analysis a priori more complex than a merger between producers. First, because supermarkets compete at the local level, the effects of a merger must be analyzed for each local relevant market. Second, antitrust authorities must balance potential anticompetitive ef-

fects against efficiency gains due to synergies, as in all merger analysis, and against potential economies induced by buyer power. Indeed, the merged retailer is likely to obtain better terms and conditions from its suppliers and to pass on part of this price reduction to consumers. Increased buyer power can thus lead to a welfare-enhancing reduction in final prices, an effect that is specific to the vertical structure of the retail industry. Moreover, it was clear that among all sectors, retail mergers were an important issue for competition authorities given their potentially large impact on consumer surplus. Indeed, food expenditures represent a large share of household budgets - approximately 13% on average in European countries in 2012, and 7% in the US in the same year. In 2010, we therefore began to work on a retrospective analysis of this retail merger which is the first paper presented below.

The second paper devoted to vertical mergers and foreclosure was also inspired by the retail sector. The starting point was the issue of brand manufacturers' innovation when confronted by competing private labels, also called "me-too", which often replicate the brand manufacturers' products. Brand manufacturers must often provide information about their new product launches, in advance, i.e., at the time of their bargaining with the retailers. Moreover, most of these retailers have developed their private labels (which is a form of backward integration). Therefore, the risk for brand manufacturers is that retailers could take advantage of information they have obtained concerning their innovation during the bargaining process to reduce or even eliminate the lead time before the appearance of "me-too"private labels. Such a risk would indeed deter innovation by brand manufacturers. However, innovations are rarely drastic in the food industry but rather gradual quality improvements, and this issue proved to have a wider scope for innovative industries, where information disclosure can foster imitation.

2.3.1 Horizontal merger

In the year 2000, a large retail merger between the second and the fifth largest retail groups was approved by the Conseil de la Concurrence. The divestments required were not all pressed by the French ministry of Economics (only 8 hy-

permarkets and 26 supermarkets, mainly franchisees). After the merger, the new group had almost 30% market share. The merging firms retain almost all of their existing store locations, but rebranded two of the pre-existing retail chains: one hypermarket chain and one supermarket chain disappeared and were rebranded. In 2010, we began working on a retrospective analysis of this retail merger. The article, titled "The impact of retail mergers on food prices: Evidence from France", which was written with Stéphane Turolla, Sofia Villas-Boas and Marie-Laure Allain, has been submitted to *the Rand Journal of Economics*. The aim of this paper is to retrospectively analyze the impact of a merger among retail groups on food prices in France. Our research question is twofold: first, we investigate whether this approved merger caused prices to increase. Second, we empirically assess the potential economic forces inducing the price changes due to the merger. We benefit from an exceptional database that provides a unique setting to define local markets as catchment areas around each store, enabling us to capture the local dimension of retail competition. The data record food consumption and prices at the store level from a consumer panel (Kantar TNS-WorldPanel) and data on the French retail sector (location address and characteristics of the stores) for the years 1998-2001, i.e., before and after the merger. In our identification strategy and empirical analysis, we take advantage of the fact that, before the merger, the two merging firms were not operating in all local areas. Local areas were defined based on the definition of the Conseil de la Concurrence. The catchment area of a hypermarket (a supermarket) is a 20 km (10 km) circle around the store. Therefore, all stores within these circles are considered as direct competitors of the store located at the center. Because the merger was approved at the national level, it was implemented in all local areas where merging firms were present. As a result, local markets were affected by the merger to the extent that the merging firms were in business there in the pre-merger period. In what follows, we refer to the merging firms as the insiders and the other stores as the outsiders . We define the control group as the set of outsiders' stores that do not compete directly or indirectly with a store belonging to the merging firms. In the treatment group, we find the insiders' stores on the one hand and the outsiders' stores located in the

same catchment area as a store belonging to insiders on the other hand.

In our estimation strategy, we separate the impact of the merger on outsiders' prices and insiders' prices. For outsiders, we quantify the price effects caused by the merger using a difference-in-differences approach. In particular, we compare the price changes of outsiders in treated areas to price changes of outsiders in control areas. For the insiders, we examine the changes in prices that are correlated with the merger in a simple first difference approach because we do not have a control group for insiders. The treatment and control groups differ in the pre-period in terms of population and the Herfindhal Hirschmann Index. The control group areas are less densely populated and because there are few stores in these areas, the HHI is much higher. Because the pure difference-in-differences may be affected by these disparities among control and treatment groups, we conduct an additional estimation approach using the propensity score matching estimator developed by Hirano, Imbens and Ridder (2003).

Our paper first shows that the approved merger affected competitors' prices positively and significantly, between 1.5% and 2.5%, and is correlated with insiders' prices increasing by 4 to 5%. The second contribution of our paper was to test several of the economic mechanisms at play behind the price responses to the retail merger. By decomposing this price effect even further, we show that while on the one hand, the merger is correlated with similar price increases for merging firms across all markets, on the other hand, outsiders' prices increase more in local markets that experienced larger structural changes. These structural changes consist first of variations in the number of local competitors, resulting in higher concentration. Second, irrespective of changes in the number of competitors, the total number of chain names may drop in a local market due to the rebranding operation, resulting in higher store differentiation.

Our findings are perfectly consistent with the effect of a merger in a price competition model in which some firms (the insiders) set their prices at the national level and others (the outsiders) set their prices locally. We have found a positive correlation between the local HHI and prices in the pre-merger period for all firms except the firm that proposed a friendly take-over bid of the other merging. This

test shows that insiders' reactions to the merger are not local in contrast with the rivals' reactions, who are used to adapting their prices to local competition structure. At the national level, the insiders internalized the competitive externality that they were exerting on each other in the pre-merger period, which explains the national price increase at insiders' stores. The reaction of the outsiders who face an insider, i.e., outsiders located the treatment areas, is to increase their prices in reaction to the insider price increase. In theory, it is the classic effect of a merger in a price competition model, because prices are strategic complements. The outsiders' price reactions are thus greater when the local market structure has also changed after the merger towards either a greater concentration (smaller number of competitors) or more differentiation (for instance, more distance between firms that relocate after a merger in a spatial model à la Salop (1979)).

In terms of competition policy, one of the major challenges is being able to assess the impact of an approved merger on prices. Many empirical papers use both pre- and post-merger data on prices to directly estimate the effects of structural changes and mergers (such as Focarelli and Panetta (2003) for retail banking; Hastings (2004) and Hastings and Gilbert (2005) for retail gasoline; Basker and Noel, 2009 for retail entry; Ashenfelter and Hosken, 2010 for food and non-food grocery sectors. The most closely related study to date is by Hosken, Olson and Smith (2012), who examine the price effects of a large set of national US retail chain mergers occurring over a period of time. They find geographically heterogeneous price effects. The implication of these findings is that mergers should be analyzed at the local level, as we do. A second challenge is to predict the potential price effects when antitrust authorities are notified of a merger, to impose relevant remedies and to better protect consumers. In this setting, a retrospective merger analysis is not possible. Several approaches could be taken in this direction. First, using our detailed data, we can perform a simple prediction of how the local concentration changes induced by the merger would affect local market retail prices. Using our estimation of the correlation between HHI and prices pre-merger, we perform an out-of- sample price prediction, given the post-merger local HHI levels. We find a predicted price increase of 2.11% with the new HHI, with a standard

error of 0.05%. We conclude that these predictions using a simple method based on the variation in the local HHI index are rather close to the 2.5% price increase obtained in our expenditure weighted DID specification. Hence, using the HHI as a preliminary screen for merger analysis appears to be an attractive tool - a finding consistent with that of Hosken, Olson and Smith (2012).

2.3.2 Vertical merger

The article "Vertical Integration, Information and Foreclosure"was written with Marie-Laure Allain and Patrick Rey and deals with vertical mergers and foreclosure. This paper is in revision at the *Review of Economics Studies*.

The paper highlights the impact of vertical mergers on information flows and the resulting anticompetitive effects for rivals. The issue has been raised in a number of vertical mergers, and is stressed by the European Commission in its Guidelines on the assessment of non-horizontal mergers : *"The merged entity may, by vertically integrating, gain access to commercially sensitive information regarding the upstream or downstream activities of rivals. For instance, by becoming the supplier of a downstream competitor, a company may obtain critical information, which allows it to price less aggressively in the downstream market to the detriment of consumers. It may also put competitors at a competitive disadvantage, thereby dissuading them to enter or expand in the market.*"

The merger between Tom-Tom, a leading manufacturer of portable navigation devices, and Tele Atlas, one of the two main providers of digital map databases for navigation in Europe and North America is an excellent example. In its decision, the European Commission stressed that Tele Atlas's customers must share information on their future competitive actions with their map supplier. The Commission then notes that third parties feared that " *certain categories of information* [...] *could, after the merger, be shared with TomTom", which would allow the merged firm to preempt any of their actions aimed at winning more customers (through better prices, innovative features, new business concepts, increased coverage of map databases). This would in turn reduce the incentive of TomTom's competitors to cooperate with Tele Atlas on pricing policy, innovation and new*

business concepts, all of which would require exchange of information. This would strengthen the market power of NAVTEQ, the only alternative map supplier, with regards to these PND operators and could lead to increased prices or less innovation".

The model is a duopoly of upstream firms that compete to serve a duopoly of downstream firms. To develop an innovation, firms must share some information that cannot be protected by traditional intellectual property rights with their supplier,. We also assume here that each downstream firm single source to limit also their exposure to information leakage. In a first stage firms innovate, and in a second stage, each supplier offers a take-it-or-leave-it contract that is either accepted or rejected.

At first, we use the working assumption that vertical integration exacerbates the risk of imitation through information leakages and show that it does indeed lead to foreclosure. The integrated supplier being less reliable, the alternative supplier gains market power and appropriate part of the value of downstream rivals' innovation. In turn, the rivals' innovation efforts are reduced and the integrated firm's profit increases at the expense of independent rivals. This foreclosure effect harms consumers and reduces total welfare. This result may also hold when the independent rivals can "fight back"and integrate. This is particularly true in a more general structure where there would be a larger number of downstream competitors than potential suppliers: this fight back strategy would simply not be available to all downstream firms. It also holds when integration is costly and the first integration move is more profitable than the second. This arises when partial vertical integration increases industry profit.

We then discuss several reasons why an integrated firm may indeed be more likely to exploit its customers' information. For example, vertical integration may facilitate the transmission of information to its own subsidiary or make it more difficult to prevent leakages. It may also enhance coordination between the upstream and downstream efforts required for a successful imitation. It is the strategic motive, however, or the benefit induced from the foreclosure effect described above, that is the heart of our paper. An integrated firm may therefore choose an action

that degrades its reputation towards its customers to benefit from the foreclosure effect. In particular, we explore the possibility for the integrated supplier to publicly invest in a costly reverse engineering technology or to publicly refuse to adopt a guarantee system that could protect a customer against information leakage before the investment stage. The integrated firm therefore chooses to commit to being unreliable to benefit from foreclosure.

Our paper relates to the literature on foreclosure and, in particular, to the seminal paper by Ordover, Saloner and Salop (1990), henceforth referred to as OSS. They argue that a vertical merger can be profitable because it enables the integrated firm to increase rival's costs, by limiting their access to its own supplier, and thus increase the market power of alternative suppliers. In turn, the downstream rival raises its prices which softens downstream price competition to the benefit of the integrated firm. Moreover, Hart and Tirole (1990) and Reiffen (1992) stress that foreclosure in OSS relies on the assumption that the integrated firm can somehow commit itself to limiting its supplies to downstream rivals. Without commitment, the integrated firm would have an incentive to keep competing with the alternative suppliers.

Our paper departs from OSS analysis in its interpretation of limiting access to the integrated suppliers; the downstream independent rival diverts from the integrated supplier because it is unreliable. So far, our results also rely on a commitment assumption. To have foreclosure in equilibrium, we have assumed that, before the investment stage, the integrated firm makes a public decision that makes it appear unreliable to its independent customers. To go further and rule out any form of commitment, we have developed a two-period model in which we show that vertical integration can distort suppliers' decisions and induce them to build a reputation of unreliability. To degrade its reputation, the integrated firm can imitate the independent rival's innovation at the end of the first period, even at a reverse engineering technology cost, to benefit from foreclosure in the second period. This threat of imitation creates equilibrium with complete foreclosure in the first period.

This paper has direct implications for antitrust policy. For example, even

if tools exist to protect firms against information leakage, such as a firewall or the possibility of offering a compensation scheme, an integrated firm may have an incentive not to use them to build a reputation of unreliability and benefit from foreclosure. Therefore, the adopting of these types of protections may be a remedy that is required for a merger authorization. One of the main conclusions of our paper is that firms should indeed be prevented *ex ante* from exploiting their customers' information. Indeed, in our model, there is no information disclosure in equilibrium, but the threat of it is sufficient to create foreclosure. It is therefore impossible to control *ex post* for anticompetitive practice from the integrated firm.

3 Research perspectives

In this section, I present my research perspectives that are largely encompassed in the ANR-DFG project "Competition and Bargaining in Vertical Chains"(CBVC) which began in 2013 and will continue until 2016. First, in terms of methodology, the CBVC project gathers theoretical, empirical and experimental industrial organization projects. In line with the project, I wish to continue my work in the field of applied theoretical IO, but I also plan to conduct both empirical and experimental research. Indeed, my first empirical paper with Marie-Laure Allain, Stéphane Turolla and Sofia Villas-Boas on the retrospective analysis of a retail merger in France which I presented above, was a rich experience that convinced me to intensify my future work in empirical IO. Moreover, my laboratory ALISS at INRA recently recruited researchers in the field of experimental economics and I plan to develop collaborations with them.

One of the main themes I plan to study in the next years is *Investment choice in the vertical channel*. This theme constitutes the first workpackage of the CBVC project. In particular, I wish to analyse the impact of retailers' buyer power on manufacturers' incentives to innovate. The effect of buyer power on producers' investments appears to be ambiguous. On the one hand, buyer power increases the hold-up effect on producers' investments (e.g., Batigalli et al (2007)). On the other hand, large buyers may encourage suppliers' investment in an attempt to

make up for their loss of bargaining power (e.g., Viera-Montez (2008), Inderst and Wey (2003, 2007)). This first research theme will contain theoretical, empirical and experimental research projects.

The other main objective of my future research is to go further in the theoretical economic analysis of retail by incorporating the specific features of retail competition (multi-product, multi-format and multi-market) to better understand retail mergers.

3.1 Innovation in the vertical channel

Innovation in the consumer-packaged-goods industries primarily consists of ensuring constant quality improvements; radical innovations are rare events (e.g. Pauwels and Srinivasan, 2004). However, these innovations still cover a wide range of improvements from better packaging or a superior recipe (tastier, healthier) to the integration of corporate social responsibility (CSR) in the production or distribution process.

National brand manufacturers constantly invest in improving their products, but retailers are also becoming increasingly innovative on their private labels (often through dedicated suppliers). Indeed, the sale of private label goods in supermarkets has been increasing since the seventies. In some European countries these products exceed half of total sales (Switzerland, 53%, and Spain, 51%). Moreover, if private labels were initially positioned as low-quality "me-too" products, their quality has significantly improved and private labels are increasingly innovative.

Having defined innovation in the retail sector and noting that it can arise both in national brands and private labels, below I present successively my theoretical, empirical and experimental projects on the analysis of investments in the producers-retailers vertical chain.

3.1.1 Theoretical projects

First of all, I plan to explore the relationships between investments in national brands by the manufacturers and investments in private labels. I have several issues of interest in that direction. One of my project is to better understand the

retailer's choice of private label production channel, i.e (i) backward integration with a small firm, (ii)the national brand producer who enters into dual branding, or (iii) by a large specialized firm dedicated to the production of private labels for retailers. I wish in particular to analyse the consequences of such production channel choice on both investments on the national brand and on the private label. Another project is based on the idea that private labels are often called me-too; I wish to explore further the imitation issue in the analysis of the investments along the vertical chain.

The other main theme I wish to explore are how ethical or green investments, which are part of a firms' Corporate Social Responsibility (CSR), may be realized at different levels of a vertical channel. The challenge is to account for some specific features of CSR investments with respect to usual quality investments.

Private label production channels and innovation

The two main channels for the production of private labels are small firms and, increasingly, national brand producers themselves. Each channel accounts for 40% of private label production. The remaining 20% corresponds to large firms that specialize in the production of private labels and that have reached a critical mass through successive mergers represent a growing part of total private label production. According to Quelch and Harding (1996), more than 50% of U.S. national brand producers also make private label goods. Some national brand manufacturers are leaders in the private label goods production, such as Heinz in baby food.

My project in collaboration with Clémence Christin and Guy Meunier is to analyze the main drivers of a retailer's choice of its premium private label production channel and the consequences of that choice for product innovation and welfare. There is only little literature on that topic but the paper whose focus is mots similar to this goal is that by Bergès and Bouamra-Mechemache (2012) who consider the consequences of a private label production channel on the private label's quality investment. However, in the case that the national brand manufacturer also produces the private label, they assume that the quality is contractible,

i.e., it can be chosen by the retailer. We assume instead that when the retailer contracts with a national brand producer for the production of its private label, the retailer relies entirely on the producer's capacity to innovate, i.e., the quality is not contractible. In contrast, when the retailer purchases a private label from a (small) dedicated manufacturer, it is as if the retailer were vertically integrated; thus the innovation process for the private label relies entirely on the retailer. The buyer power of the retailer may therefore have opposite effects. On the one hand, retailers' buyer power limits the incentive to innovate of national brand manufacturers, regardless of whether it also offers the private label. On the other hand, when the retailer integrates backward and innovates on its private label, it has an incentive to overinvest to reinforce its outside option profit when bargaining with the national brand producer; however the retailer entirely bears the entire investment cost. This over-investment effect will be even stronger when the retailers' buyer power is low. The choice between the two production channels may therefore be crucially dependents on the balance between these two forces. We also plan to analyse the consequences of the choice of private label production channel for welfare.

Innovation and imitation

Another interesting issue when considering innovation in the retail sector is imitation. First, there is a risk that the producers' innovations will be imitated by the retailers' private labels as examined in Allain et al. (2012). Indeed, the producer often reveals sensitive information about its new product in the early stages, and an integrated retailer could then exploit this information and develop the private label itself at a lower cost (cost of imitation rather than the innovation cost). Anticipating such a risk, the manufacturers' investment in the private label would be limited.

Another imitation issue may arise between brand manufacturers themselves. Indeed, retailers often entrust one of their suppliers, the "category captain", to advise them on organizing a product category. The FTC (2003) states that among

the seven largest retailers in the U.S. five resort to category management arrangements. However, becoming a category captain may bring access to strategic information about competing manufacturers. In particular, obtaining advance information about new rival products may help foster imitation. This risk may distort upstream innovation incentives in favor of the category captain. Studying the potential anti-competitive effects of category management arrangements is indeed an important issue that we plan to analyse with Marie-Laure Allain and Patrick Rey. A recent report by the French competition authority notes the potential anti-competitive effects of category captainship, among which a risk of collusion among manufacturers and the risk of rivals' exclusion by the category captain (cf. Autorité de la Concurrence (2010)).

CSR investments in the vertical chain

Some retail companies are particularly involved in realizing sustainable investments. According to Fishman (2011), Wal-Mart, for instance,[...] *has committed to reduce its greenhouse gaz emission by 20 million metric tons by 2015.* [...] *has launched several ambitious programs in which it use its leverage over suppliers to pry open the supply chain and the environmental impact of the supply chain.*

This project in collaboration with Clémence Christin and Guy Meunier aims at identifying the drivers and impediments that influence firms' decisions about CSR investments, including consumer preferences and retailers' buying power. Labels, which certify that products satisfy certain requirements, may be an efficient tool to convey information about a firms' CSR to consumers. However, such information may have a negative impact on consumers' demand. For instance, in case of green investments, a firm choosing to convey information about its CO2 emissions may experience a negative demand effect that may be compensated by a positive business stealing effect through (vertical) product differentiation whenever rivals' pollution levels are greater. It may thus be interesting to understand the labeling strategies of asymmetric firms, or firms within the vertical chain as studied for instance by Bonroy and Lemarié (2011). We could also compare the impact of the voluntary adoption of labeling on welfare with public policies imposing labeling with environmental information.

3.1.2 Empirical projects

After a first empirical work that assessed the impact of a retail merger on prices, I wish to develop other empirical works on the impact of the retail structure on food product innovation. Indeed, the price is not the only decision variable of firms and in particular product characteristics should also be treated as endogenous, and for instance, could be affected by a merger. Some recent papers endogenize the product choice decisions of firms in equilibrium (cf. Seim (2006), Draganska et al. (2011)). When considering the retail sector in particular, a merger between retailers may change the assortments of products on the shelves (variety of products, proportion of private labels), or the innovation (frequency and types of new products launched).

My laboratory ALISS at INRA has access to two databases precisely related to innovation on food products to develop research projects in this direction:

- First, the Global New Products Database monitors product innovation in consumer packaged goods markets worldwide. The typology of innovations adopted by the GNPD database has the following categories: (1) new products and re-launches, (2) new ingredients, (3) new packaging, (4) new variety/product range extension. Using this typology the GNPD shows that in France, for instance, 44% of innovations in the food and drink sector referred to new products, 12% to new packaging, 8% to new ingredients and 36% to new varieties or range extensions.

- Second, the "Observatory of the quality of food products", **Oqali**, which is located within the offices of ALISS, is responsible for monitoring food products in the French retail market and the evolution of their nutritional quality (ingredients, labeling,...). The database has existed since 2008.

The other databases TNS Kantar, consumers panel data, and Trade dimension on the French retail network are also available at INRA.

The main issue that I wish to explore is the impact of retailers' buyer power on manufacturers' incentives to launch new products (frequency, innovation type). According to the theory, a balance of power in favor of the retail sector is likely to

discourage the launching of new products through hold-up effects. I would like to identify whether across product categories, which vary in terms of balance of power, we could identify a variation in the level of innovation that would corroborate the existence of a holdup effect. To achieve that goal, we could use recent works by Bonnet and Dubois (2010) that attempt to assess endogenously the buyer power between a producer and a retailer in a given product category. The private label market share could also appear as a good proxy to measure the buying power of retailers towards manufacturers for a given product category. A second, but tightly related project is to analyse the role of private labels on the manufacturers' incentives to innovate. On the one hand, a large private label market share, if correlated with a strong buyer power, could discourage manufacturers' innovation. On the other hand, because private labels directly compete with national brands on the retailers' shelves, it may reinforce the manufacturers' incentives to innovate. It is therefore difficult a priori to identify which effect would lead, which would be a challenge for an empirical study. Finally, studying the time lag between manufacturers' launching of new products and the launching of me-too private labels also appears as an attractive issue.

Other issues that could be further developed along the same line are the impact of a public policy (taxes, voluntary agreements, norms, mandatory labeling, ...) aiming at improving the environmental or nutritional quality of food products on the retailers' offer in the spirit of the recent works by Dubois et al (2013).

I have contributed to writing a profile on that theme for a research position at INRA that will be filled in the next years. In the meantime, I plan to offer a post-doctoral position on this topic that will be financed by the ANR-DFG project.

3.1.3 Experimental project

The literature on incomplete contracts (e.g., Grossman and Hart (1986)) has emphasized the role of vertical integration as a possible solution to hold-up problems. Yet Allain et al. (2014) have built a model that shows that vertical integration may create (or exacerbate) hold-up problems for rivals.

The toy model that we wish to test is as follows. First, a monopolistic supplier

can choose to commit itself *ex ante*, i.e., before the investment stage, to a given profit-sharing rule –say fifty-fifty; if it does not do so, then the sharing-rule is offered *ex post*. Then, given the pre-commitment decisions, two downstream players choose either to invest at a cost or not to do so. We show that a monopolist may take advantage of the commitment option to mitigate the hold-up problem (as it may be desirable to encourage investment, and get a smaller share of a bigger pie), but if integrated the supplier will never do so to fully expose the downstream rival to hold-up and discourage its investment. Second, we consider the case of perfectly competing suppliers. Absent vertical integration, two competing suppliers would never take the pre-commitment option and *ex post* would offer a more generous sharing-rule; when vertically integrated, a supplier will instead take advantage of the option, to put the downstream rival at the mercy of the other supplier. Hence, in both cases vertical integration generates greater hold-up concerns for the rival.

We now wish to conduct three experiments to test these theoretical predictions: (1) a bilateral monopoly (2) a monopolist supplier with two downstream independent investors, (3) two competing suppliers with two downstream investors. In cases (2) and (3), we will test the cases of both vertical separation and vertical integration. Our experiment will be based on the previous experimental works on hold-up (Siemens (2009), Hoppe and Schmitz (2011) and the few experimental papers on foreclosure (Normann (2011), Martin, Normann and Snyder (2001)).

3.2 Retail mergers

This part of my research perspectives gathers projects that aim to more closely examine retail mergers by further incorporating the specific features of retailing (multi-products, multi-formats and multi-markets).

Our empirical paper on a retail merger in France exhibited particularly interesting strategies that are in no way present in the existing body of IO literature on mergers. These original effects stem mainly from the fact that retail groups compete in multiple local markets and that they may have a more or less centralized pricing strategy. The first interesting issue with which we were confronted to is that the merging firms behaved with centralized pricing whereas the outsiders'

price reaction was occurring on local markets. More precisely, the welfare effects of a merger between firms may depend on whether they price locally or nationally. In particular the pricing strategy of the merging firm may influence the potential gain in buying power. Often this pricing strategy is directly linked to the internal organization of the groups, i.e whether the stores are managed by employees of the group or by independent managers exploiting a franchise contract for the group; it can be observed to a certain extent by competition authorities. Therefore integrating this dimension of several retail groups with different pricing strategies could bring helpful elements for the retail merger control analysis.

A second interesting topic we were confronted with is the rebranding strategy of certain retail chains. Relocation after a merger has been previously studied in the literature. Levy and Reitzes (1992, 1995) consider mergers between neighboring Bertrand competitors in a Salop (1979) model and find that the outsiders make lower profits than do the insiders, except for the two adjacent rival firms, whose profits increase. Lommerud and Sørgard (1997) show that in a Bertrand competition model, merged firms may decide to withdraw a brand to dampen competition and this is particularly likely when brands are close substitutes. Gandhi et al. (2008) conclude that post-merger repositioning increases product variety, which is consistent with recent empirical studies of product line changes after a horizontal merger (cf. Berry and Waldfogel (2001) who analyse a concentration among radio stations). Finally, the merger is less anti-competitive in the price-location model than in the price-only model. However, if these models are well adapted to represent multi-products firms (or retail groups that own multiple retail chains), they do not not represent well retail groups that also compete on multiple markets. I believe that there is scope to enrich the analysis of retail mergers in that direction and to derive merger policy implications. In particular, forbidding the rebranding of some retail chains after the merger could be considered as potential ex-ante commitment from the merging firm for the merger clearance.

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5 Annexes

5.1 ANNEXE 1 - Retailer's margin

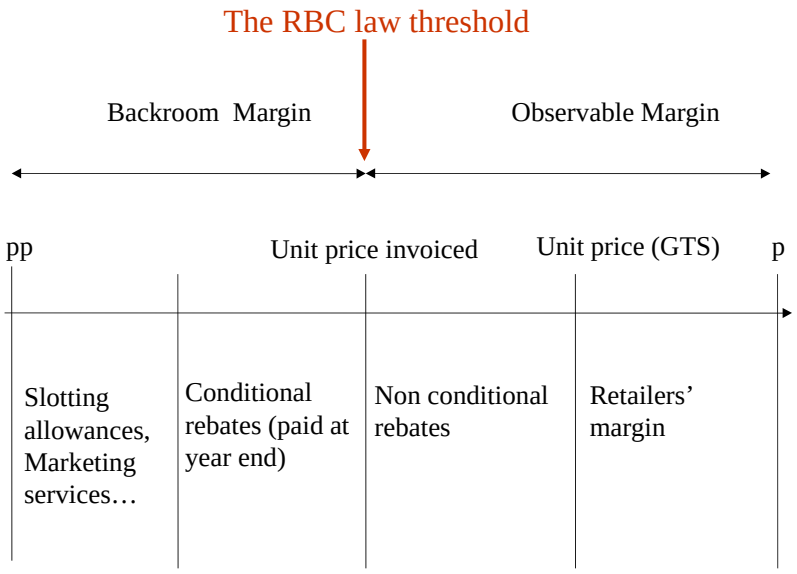

Figure 1: Retailer's margin.

5.2 ANNEXE 2 - Curriculum Vitae

EDUCATION

- Ph.D in economics: "Analyse théorique du rapport de force dans les relations verticales et applications au secteur agroalimentaire", under the supervision of David ENCAOUA and the co-supervision of Eric GIRAUD-HERAUD, University of Paris I Panthéon-Sorbonne, 2000.

- D.E.A (Post Graduate Degree) in Mathematical Economics and Econometrics, University of Paris I Panthéon-Sorbonne, 1996.

APPOINTMENTS

- April 2006-June 2007
  Visiting Scholar at UC Berkeley, in the department ARE (Agricultural and Resource Economics).

- September 2004 →
  First class researcher at INRA in the laboratory ALISS (ALImentation et Sciences Sociales).

- September 2001 →
  Associate researcher at Ecole Polytechnique, Economic Department, Palaiseau.

- September 2000-2004
  Researcher Second class at INRA in the laboratory LORIA (Laboratoire d'ORganisation des Industries Agroalimentaires).

PRICE and DISTINCTIONS

– France-Berkeley FUND 2013 for the work "The impact of retail mergers on food prices: evidence from France", Cahier n° 2013-32 with M-L Allain, S. Turolla and S.B Villas-Boas. 9000$

PUBLICATIONS

Article in revision

– "Vertical Integration, Innovation and Foreclosure", with M-L Allain and P. Rey, revise and resubmit to *Review of Economic Studies*.

- "Optimal production channel for private labels: too much or too little innovation?"with C. Christin and G. Meunier, revise and resubmit to *Journal of Economics and Management Strategy*.
- "Buyer Power through Producers' Differentiation ", 2007, CUDARE Working Papers, 1042, with S.B. Villas-Boas, revise and resubmit to *International Journal of Industrial Organization*.

Publications

- "When fairtrade contracts for some are profitable for others". 2013. *European Review of Agricultural Economics*, 40, 5, 835-871, with S. Poret.
- "Anti-Competitive effects of Resale-Below-Cost Laws", 2011, *International Journal of Industrial Organization*, 29, 4, 373-385, with M-L Allain.
- "Analyse critique des réformes de la règlementation de la distribution française", *Concurrences* N° 4-2011 I Tendances 16- Régulation concurrentielle du secteur de la grande distribution", with M-L Allain and C. Christin.
- "Threat of exit as a source of bargaining power", 2009, *Recherches Economiques de Louvain*, 75 (3), 353-368 with F.Bergès-Sennou.
- "The Recent Economic Debate on the Welfare Effects of Resale Price Maintenance", with M-L Allain, *Concurrences* 3-2008, p14-16.
- "Concentration horizontale et puissance d'achat", *Economie et Prévision*, 2007, 178-179, 2-3, 79-92, with Muniesa L. and M-A. Ravon.
- "Fair Trade labeling, Inside or Outside Supermarkets", *Journal of Agricultural and Food Industrial Organization*, 2007, 5, (1), with S. Poret.
- "Growers vs. Merchants Bargaining on the price of Champagne Grapes and The Role of Contracts when Bargaining is Unbalanced", *Journal of Wine Economics*, 2006, Vol. 1: 2, 95-113, with O. Saulpic.

- "Certification of Origin as a non-Tariff Barrier", *Review of International Economics*, 2005, 13, (3), p 461-471, with E. Giraud-Héraud.
- "Stratégies de revente à perte et réglementation", *Annales d'Economie et Statistiques*, 2005, 77, p 59-79.
- "Loss-Leaders Banning Laws as Vertical Restraints", *Journal of Agricultural & Food Industrial Organization*, 2005, 3: 1, 5, with M-L Allain.
- "Economie Industrielle: Quels outils pour réglementer les prix de la grande distribution?", La microéconomie en pratique, 2005, *Les Cahiers Français*, 327, p54-57.
- " Faut-il interdire la revente à perte ?", *Revue Française d'Economie*, 2003, XVII, 89-107.
- " Les relations entre producteurs et distributeurs : bilan et limites de trente ans de régulation", *Revue Française d'Economie*, 2003, XVII, 169-212, with M-L Allain.
- "Approches théoriques des rapports de force entre producteurs et distributeurs ", *Economie Rurale*, 2003, 277-278, 3-11, with M-L Allain.
- "Certification de la qualité par une AOC : un modèle d'analyse", *Economie et prévision*, 2003, 3, 159, 83-91, with E. Giraud-Héraud.
- "Internet et la grande distribution française", 2002, *Economie Rurale*, 272, 42-56, with M-E Dumans.

Books

- "La loi Galland sur le commerce: Jusqu'où la réformer ?" Editions de la Rue d'ULM, *Collection Opuscule du Cepremap*, 2008, 13, with M-L. Allain and T. Vergé.
- "L'économie de la distribution", 2003, Repères, 121 pages, *Editions la Découverte*, with M-L Allain.

Chapter of Book

- "Le nouveau seuil de revente à perte : vers une abolition progressive de l'interdiction ?", in ≪Le nouveau droit des pratiques restrictives de concurrence ≫, 2007, by Yves Picod, éditions Dalloz.
- "Economic analysis of certification by an AOC", with Eric Giraud-Héraud, dans Gatti, S., Giraud-Héraud E., Mili S. (eds), Wine in the old world: new risks and opportunities, 2003, Milano, Franco Angeli, 111-123.

Others Publications

- "Les relations entre producteurs et distributeurs : conflits et réglementations", 4-pages INRA Sciences Sociales, march-2004, with M-L. Allain.
- "Les rapports de forces entre producteurs et distributeurs : aspects économiques et réglementaires", Editorial de la Lettre du CREST n°39, 05.2001, with M-L Allain.
- "Food retailing in France" with Marie-Laure Allain, in Buyer power and competition in European Food Retailing", Clarke, R., Davies, S., Dobson, P. and Waterson, M., Edward Elgar Publishing, 2002.

Working papers

- "Vertical Integration as a source of hold-up", with M-L Allain and P.Rey.
- "Category captains", with M-L Allain and P.Rey.
- "The impact of retail mergers on food prices: evidence from France", Cahier n° 2013-32 with M-L Allain, S. Turolla and S.B Villas-Boas.
- "Downstream Competition, Buyer Power and Upstream Collusion", with M-L. Allain et C. Christin.
- "Buyer power and category captainship"with, P. Bazoche and V. Schlippenbach.

PROJECTS and RESPONSIBILITIES

- Coordinator of the franco-german ANR-DFG untitled "Competition and bargaining in vertical Chains". The project gathers 17 participants on the French side from INRA ALISS (Paris), TSE (Toulouse) and CREM (Rennes). German coordinators are Christian Wey and Hans Theo Norman from the Düsseldorf Institute of competition economics (DICE). This project started in April 2013 for 3 years and benefits from 240 000 euros funding.
- Responsible at l'Ecole Polytechnique of the franco-german ANR-DFG untitled "Market Power in Vertically Related Markets"over 3 years (2009-2011) gathering French researchers from TSE (Toulouse), Ecole Polytechnique (Paris) and German researchers from the DIW (Berlin), Humboldt University, DICE (Düsseldorf).

  Organisation of the 3rd workshop of this project in Paris the 3 and 4 february 2011.
- Organizer from 2010 to 2012 with L. Linnemer of the IO seminar joint with l'Ecole Polytechnique and CREST-LEI.
- Responsible of the cohabilitation of Master M2 "Economie des marchés et des organisations"of TSE by Ecole polytechnique, organization of the students exchanges programs.
- Organizer of the seminar in ALISS from 2010 to 2013.

CONFERENCES, WORKSHOPS and SEMINARS

- Presentation of "The Impact of retailer mergers on food prices: evidence from France"at the International Industrial Organization Conference (IIOC) 2013 in Boston, and at the European Association for Research in Industrial Economics (EARIE) 2013 in Evora. Presentation at the workshop of the ANR-DFG project in DICE in 2013, at seminars in Caen, in Montpellier and in Anvers.
- Presentation of "Optimal production Channel for private labels: too much or too little innovation"at the annual conference EARIE 2012 in

Roma.

- Presentation of "Vertical Integration, Innovation and Foreclosure" at the annual conference of the European Association for Research in Industrial Economics (EARIE) 2009, Workshop ANR-DFG in Berlin 2010, Conference CEPR in Toulouse, May 2010, Invited conference at EEA 2011, Oslo.
- Presentation of the opuscule "La loi Galland sur le commerce: Jusqu'où la réformer ?"at the conference de l'Ecole Nationale Supérieure des Télécommunications in Paris, 2009.
- Presentation of "Buyer Power Through Producer's Differentiation"at EARIE 2007, AFIO seminar 11/2007 in Toulouse, IIOC 2008 in Washington, Lunch Seminar of Ecole Polytechnique, 05/08 and annual conference of the European Economic Association (EEA) 2009.
- Presentation of "Anti-Competitive effects of Resale-Below-Cost Laws", at the 88th seminar of the EAAE, EEA 2004, EARIE 2004 and in the IO Lunch seminar in Berkeley in 2007.
- Presentation of "Threat of exit as a source of bargaining power"at EEA 2006.

OTHER FORM OF COMMUNICATION

- DP-Concurrence seminar, May, 27th 2004 in Bercy, on the theme "Loss-leading, backroom margins, regulation of the opening of new stores,mergers. The competition in the French retailing sector "followed by a debate with Maître V. Sélinsky under the direction of Professeur F.Jenny.
- Intervention at Conseil d'Etat the 18/01/2008 in front of the Commission Hagelsteen on "Negotiability of tariffs and General terms of sales".
- Intervention at Conseil de la Concurrence on "The economic analysis of RPM: Recent developments ", 23/11/2007, followed by a debate between economist and jurists on the Leegin decision.

REPORT and EXPERTISE

- Business Economics Chair, Ecole Polytechnique : member of the chair, on "Vertical relations", 2007-2010.
- Consulting report for De Pardieu, Brocas et Maffei (2010): Evaluation des dommages dans un cas de cartel présumé (le cas des farines).
- Participation at the Commission Canivet on "l'examen des réformes potentielles de la réglementation dans le secteur de la distribution", settled by the minister of Economics and Finances (from 07/04 to 10/04). Participation to the report : "Restaurer la concurrence par les prix - Les produits de grande consommation et les relations entre industrie et commerce", La Documentation française; Collection des rapports officiels, 2004,164 p.
- Consulting report for Lafarge on "Mergers in the Cement industry", with J-P. Ponssard and M-L. Allain.
- Report for the Conseil de la Concurrence on "The Carrefour-Promodès merger", with M-L Allain.

TEACHING ACTIVITY, WORK GROUPS, TRAINING

- CEPE: Training on "The French retailing sector" (24h).
- Ecole Polytechnique, since 2009 : Petites classes - Microeconomics (40h) - 2nd year. Petites classes- Introduction to economics (28h) -1st year.
- Ecole Nationale des Ponts et Chaussées (ENPC): 3h- Competition and Markets 2005-2006, for J.Pouyet and B.Caillaud.
- Ecole Normale Supérieure (ENS) de Cachan : 24h- Industrial Organization, in 2nd year in 2003-2004.
- Ecole Nationale de la Statistique et de l'Administration Economique (ENSAE) :

* "Applied Industrial Organization"with Laurent Linnemer and Thibaud Vergé, ENSAE (3 classes of 2h on: "Economics of retailing ", 2011-2012.
* Microeconomics, 1st year, 2006 (14h).
* Work group 3rd year (20h) with P.Bazoche on the theme: "Rachat stratégique dans les relations verticales"in 2005.
* Seminars on "Vertical Relationships"(2h) for 3rd year in 2003 and 2004.
* Work group 3rd year (20h) on: "Horizontal mergers and vertical relationships "in 2002.
* Work group 2rd year (8h) on: "Vertical Integration and Foreclosure".