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Market Power in the Funeral Industry »

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DR n°2012-12

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How Consumer Information Curtails Market Power in the Funeral Industry

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April 2012

Abstract

The purpose of this article is to show, based on the case of the French market, that consumer perception of different funeral service offers, along with new entry in a special storing facility service (“*chambre funéraire*”), can be sufficient to impose competitive pressures on the various suppliers, including the former monopolist. With a discrete choice experiment implemented in Lyon, France, we find evidence that, contrary to widely shared beliefs about this specific market, demand for funeral services seems characterized by relatively high price elasticities, at least as soon as consumers are fully informed about the opportunities open to them in this market. Consumer behavior has actually changed in favor of a better assessment of the different possibilities of services supplied and of their relative price. We then implement simulations in local markets and show that, with good consumer information, the market power of the supposedly dominant firm is much less important than it is generally believed. Furthermore, simulations stress the procompetitive effects of setting up a new storing facility by any businesses. We finally show that, if some improvements can still be brought to the functioning of this market, they should come from a better regulation of consumer information and of the entry of firms.

Keywords: Funeral industry, Deregulation, Local competition, Market Power, Discrete choice models

JEL Codes: C25, D12, K23, L43.

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1 Introduction

As noted by the late John McMillan (2002), “*markets are subtle organizations*”... “*they do what they are supposed to do, however, only if they are well structured*”... “*It is the details of market design that determine whether or not they work well*”.¹ The industry of funeral services in France offers a very interesting case illustrating the difficulties of designing and sustaining efficient rules in some types of complicated markets. Since the beginning of the years 1990, several important regulatory changes have been implemented in order to improve the working of this market, but there is still a strong belief that there remain important failures.

Like in many other countries, the French funeral industry has for a long time been subject to heavy regulations, justified by matters of public order, such as the control of deaths certificates and the public consequences of burials and cremation, and also for protecting vulnerable consumers. It was even believed that the need for regulation was as high as to require collectively owned (state or municipal) monopolies or at least private local monopolies with a delegation of public service and strong corresponding constraints. In the 1980s and beginning of the 1990s, it was understood that a more efficient outcome should require competition instead of monopoly, while maintaining strict regulatory constraints for consumer protection and a vigilant supervision by the antitrust authority.

This process of radical change in the regulation of this industry had indeed several major effects that seemed to operate in the direction of a more competitive and efficient outcome. If one considers the whole French market, it is quite likely that the market has become globally competitive. However, there are still many complaints about the behavior of suppliers of funeral services. Consumer associations complain about the constant rise of prices for many years; the antitrust authority raises issues of abuse of dominant positions in different local markets; the government is forced to propose new rules concerning the transparency of information, the need to present clear estimates of funeral costs, and the need to clearly separate the management of the *chambres funéraires*² and other funeral services (because hospitals which do not possess mortuary rooms often end up sending the deceased to the *chambres funéraires* managed by private firms, generating a risk of capture of the corresponding customers).

One may wonder if the current complaints come from a bad functioning of competition inherent in this particular type of market, or if they originate in badly designed regulations. If the former explanation is true, one needs to restrain competition further, but if the latter is true one only needs to improve the rules and the way they are implemented. Interestingly, the burgeoning literature on the economics of the funeral industry (especially in the United States) raises the same kind of issues about the effects of regulations on the corresponding markets.

At this stage, the available data about the French funeral industry do not allow to proceed to a complete empirical study, contrary to what has been achieved in the American case. However, we think that it is possible to throw some light

¹McMillan (2002), Preface, p. ix and Chapter 1, p. 14.

²Thereafter, we will use the French term ‘*chambres funéraires*’ to refer to the special parlors where bodies are temporarily stored and shown before burial or cremation. See Section 2.2.

on the working of this market through an experimental survey conducted in the area of Lyon, where the French Antitrust Authority has raised serious issues of antitrust violations. Our survey and the econometric study presented on its results allow us to test empirically the effects of consumer information on the competitive outcome and on the market power of the supposedly dominant firms. The study will also contribute to the assessment of some regulatory devices, such as the rules favoring consumer information or the ease of starting some new businesses like the opening of new *chambres funéraires*.

The paper proceeds as follows. Section 2 provides an economic and legal overview of the funeral industry. Section 3 gives some insights into the leader firm pricing policy in regards to market power issues and how consumer behavior could impact its strategy. Section 4 presents the discrete choice experiment that allows for simulating the demand for funeral services. Section 5 implements hypothetical price increases and then introduces the possibility of entry of a new funeral home by estimating its impact on competition. Finally, Section 6 provides some conclusions and policy implications of our study.

2 Industrial Organization of Funeral Business: General Issues and the Special Case of France

Throughout the 20th century, governments in numerous countries have implemented substantial changes in the regulation of the funeral markets. These markets were heavily regulated, very often as state-owned or municipally owned local monopolies. A process of deregulation has been achieved, followed by the implementation of new regulations in order to favor competition and to protect consumers. The general issues involved in the regulation of this industry and a first summary of the empirical assessments attempted, mostly in the United States, will be presented below (2.1). Then, we will briefly introduce the legal framework surrounding the funeral business in France (2.2), and we will finally summarize the major economic issues currently raised about this industry (2.3).

2.1 The major issues regarding the regulation of the funeral industry

The different motives for regulation of the funeral business are well acknowledged,³ although they may be somewhat exaggerated. In many countries, like France, these motives were believed to be important enough to justify municipally owned monopolies of funeral services. However, when one properly examines the reasons for public intervention in this industry, one should not feel compelled to consider something as extreme as state or municipal ownership.⁴ A better understanding of the issues at stake has probably led countries

³An early attempt to justify public intervention in this industry can be found in the writings of Chadwick (1800-1890) who first introduced the concept of franchise bidding contracts (Ekelund and Ford, 1997).

⁴See Shleifer (2005) for general principles on the extent of regulation in some industries and the possible option of state-ownership.

like France to implement a general move from local municipally owned monopolies toward privatization and competition (Trompette, 2008). But governments seem to have a hard time to find the rules that can both favor an efficient competitive outcome and ensure consumers information and protection.

The economic research on the funeral industry, mostly done in the United States, has tried to assess the working of the market in regard to some of its major characteristics: conditions of entry (Chevalier et al., 2010), vertical relationships (Parcel, 2008), the bundling of goods and services (Chevalier and Scott Morton, 2008).

As can be expected, the research has mainly focused on the assessment of various regulations. One prominent example is in the United States, with the 1982 FTC's Funeral Rule,⁵ where the regulator sought to lower the cost of information for grief-stricken consumers. Under this rule, funeral providers have to inform consumers about all the itemized prices. Since 1945, several States have also required funeral businesses selling any type of service to have embalming preparation rooms, and all funeral directors to be trained as embalmers.⁶ Using real-world data, Harrington and Krynski (2002) show that these States have lower percentage of cremations than the other States and that the embalming regulations reduce the cremation activity by roughly 16 percent. Since burials are more expensive than cremations, the amount spent on funerals is on average 2.6 percent higher than in other States. Funeral home directors may be also inclined to steer customers away from lower-cost cremation services. In addition, Harrington (2007) had access to data from a survey of one Internet funeral retailer, Funeral Depot. He measures whether the embalming room requirement— the so-called 'ready-to-embalm laws'— constitutes a barrier to entry and unnecessarily raises costs. He finds that these laws happen to be "*blatantly anticompetitive*". They increase the price of direct cremations by \$313 and the cost of traditional funerals by \$546.

In some American States, only licensed firms are allowed to sell funeral goods, such as caskets and urns, while in other States no license is required to enter the market. Chevalier and Scott Morton (2008) study the effects of these rules on the relative prices and revenues of funeral homes selling together funeral goods and services in the different type of States. The authors had access to actual prices of funeral goods and services from 562 funeral homes in the United States. They examine whether consumers have been harmed when regulators permitted only licensed funeral homes to sell funeral goods. They find that funeral directors charge higher service prices and lower goods prices when free participation in the funeral goods market is permitted. Furthermore, they check whether the total funeral spending is invariant to the institution of funeral goods sales restrictions. They show that when restrictions on funeral goods sales are removed funeral home revenues are negatively affected.

There is thus a growing literature on the effects of deregulation and other structural changes in funeral markets in the U.S., but not in countries like France where much change has also occurred, with an industrial structure that has switched from local legal monopolies to a more open market.

⁵The Act was effective in 1984. See McChesney (1990).

⁶See Harrington and Krynski (2002, pp. 203).

2.2 The French legal framework

Before 1904, the French clergy provided everything concerning funeral arrangements, including all ceremonies up to the burial. On December 28, 1904, the law of separation of Church and State gave local authorities the complete monopoly of the funeral market. At that time, local authorities had two options to ensure their public service obligation. One option was to do it by themselves and have their own businesses or associations (in French: “régies”). Or they could delegate all the funeral arrangements to a private operator (a concessionary dealer, in French and thereafter “concessionnaire”). For instance, Boissin and Trompette (2002, pp. 43) highlight that, in the late 1980s, 85% of cities containing more than 30,000 people turned to concessionaires. However, the largest cities such as Paris, Marseilles, Lyon, and Toulouse had their Régies look after funeral services.

The law of January 8, 1993 put an end to public utility monopolies and allowed private firms to freely charge for their services. Due to the opening to competition, the public service obligation is ensured either by the city itself (*régies*), the incumbent concessionaire or any new private operators that are allowed to enter the market. The 1993 law includes the management and the use of a *chambre funéraire* in the definition of external funeral service (Art. 1). In the French definition of the term, a *chambre funéraire* refers only to a facility with refrigerated rooms dedicated to temporarily storing and showing the bodies before burial or cremation. In 2006, 1,903 *chambres funéraires* were available in France, with space to store up to 10,026 refrigerated bodies.⁷ The importance of such facilities has increased in recent years because more and more persons end up their lives in hospitals or other medical centers or rest homes (INSEE, 2010) and most of these establishments do not have mortuary equipment. Furthermore, the 1993 Act specifies that the *chambres funéraires* must be physically separated from the business office, in order to avoid the capture of customers by the managers of these facilities.

In 1994, the French government stated that any licensed funeral firm had access to a private or public *chambre funéraire*. This rule allows the bereaved to freely choose a funeral services provider, even if it is not the one that runs the facility. Entry in the business of managing the *chambres funéraires* is relatively easy, but not entirely free, since it requires a license given by the local State representative (“*Préfet*”) and it must be recognized as corresponding to a public need. Some companies invested in the building of *chambres funéraires*, while others decided to use the facilities built and run by their competitors.⁸

Lastly, since 1999, mirroring the FTC Rule that had been imposed fifteen years earlier in the United States, suppliers have been under the obligation to give a detailed and free of charge estimate for the funeral. This standard form

⁷In: Min. de l’Intérieur (2007).

⁸However, this rule does not work exactly as planned. Sometimes, the families of persons deceased in hospitals cannot be reached and informed rapidly. The bodies are then sent to a *chambre funéraire* without the agreement of the relatives. In addition, the companies managing the *chambres funéraires* are in a good position to influence the families concerning the choices of burial or cremation services. It appears that the regulation is, at this stage, is probably not strong enough to avoid a capture of customers by the managers of the *chambres funéraires*. This state of affairs may shift the competition process to the ownership and management of these facilities.

document must include prices for every item, whether or not they are mandatory, and all additional third-party fees like police or cemetery and crematoria charges.⁹

2.3 Economic issues on French funeral markets

Most of the discussions raised by the functioning of the market of funeral services in France bear on the same issues as in the United States: the effects of deregulation and the effects of the remaining rules or of the new rules implemented in the recent years on the market performances.

Without any doubt, the changes initiated in 1993, after the removal of the local monopolies, have generated a strong move in favor of a competitive landscape. There was first a change in the structure of supply through the entry of many new firms in the market all over France, and the arrival of new competitive challenges for the former local monopolies. For instance in 1993, 2,471 funeral suppliers were operating in the industry whereas 3,496 were active in 2009.¹⁰ Overall, in the years 2009-2010, these firms had over 14,000 local branches across the country.¹¹ The new entrants were mostly small independent businesses. Among these new businesses, some national chains, such as *Roc'Eclerc* or *Le Choix Funéraire*, started offering discount rates for standard funerals. Consequently, the leader's (OGF-PFG) market share shrank from 50% to 25% of the total market. In 2006, the funeral industry consisted of 11,850 funeral homes and branches, including 1,592 municipally owned (also called *régies*) and 10,258 private businesses.¹² Secondly, many municipally owned firms have remained in the market, especially in large cities, offering a remarkable source of competition since they are supposed to act for the public service rather than for the pure quest for profit.¹³ Thirdly, there was a change in consumer behavior, people progressively acknowledging the opportunities of choice available to them in this particular market and daring to ask for price estimates and to compare more systematically the various offers. As our study will show, it is certainly the major change that can sustain the new competitive conditions of the market. As a response to these changes, firms have been forced to clarify their consumer information, especially about the prices. Many of them already have easy and free estimates available online. Some companies like the leader PFG have online, for the whole French territory, a choice of seven formulas, from a low-cost to a luxury package.¹⁴ Many websites (most of the time linked to some companies) provide free estimates to the potential customers. Consumer associations also give online very useful information on the best way to compare

⁹From January 1, 2011 onwards, the estimate has to provide precise prices for direct burial and/or cremation, and transporting of the body. See the *Arrêté du 23 août 2010 portant définition du modèle de devis applicable aux prestations fournies par les opérateurs funéraires*.

¹⁰See the article "Les nouveaux entrants," *Le Nouvel Economiste*, n°1587, November 3-9, 2011.

¹¹Source: *Association française d'information funéraire*, the French association on funeral information.

¹²Source: Min. de l'Intérieur (2007).

¹³For instance, Gal (2001) suggests that a publicly owned firm may play the role of a maverick in order to stimulate competition in small local markets, where the number of viable firms is inevitably low.

¹⁴See PFG's website, www.pfg.fr.

and choose funeral services companies.¹⁵ Finally, as noted above (see section 2.2), the government has implemented a series of rules designed to improve the protection and the information of consumers in this new market environment. If these new rules really help in the diffusion of information to consumers, they can reinforce greatly the previous point.

On top of these deep changes in the market, two major forces have contributed to make the funeral market more difficult for the suppliers: a) families opt more often than ever for cremation instead of burial, and it is known that the former is globally less expensive than the latter; b) people choose to manage the issues of their funerals earlier in life, by addressing to insurance companies (e.g. preneed contracts), this process leading to a more cautious choice of the funeral operator and a closer look at the price of services.

The outcome of all these changes should naturally be a more competitive landscape with more opportunities available to consumers and better prices for goods and services. Actually, all the economic and financial analyses of the industry tend to show that the average profitability of the business has been declining. As an example, the study done by the French economic expertise group Xerfi shows that the operating margins have fallen in the end of the years 2000 and that the average ROE (return on equity), although remaining at a comfortable level, has fallen to its lowest level for years: from 18.8% for instance in 2005 to 14.2% in 2009.¹⁶ Another recent study of group Plimsoll has ranked a representative sample of 836 funeral services companies according to their economic and financial situation.¹⁷ One third of them are recorded as being in a “worrying” or “dangerous” situation. Between 10% and 20% of them are reported as selling at a price lower than the costs for the second year in a row.

All these facts seem to describe the picture of a globally competitive markets somehow restructuring after excess entry during many years. But there is another (darker) side of the story. The complaints about a bad functioning of this market are still numerous, coming from customers and their associations, especially *Que choisir*,¹⁸ from small competitors and finally from the Antitrust Authority.

The consumer associations emphasize the important and regular rise in prices from the 1990s to now, the index of increase in the prices of funeral services being each year superior by 1 to 2 points above the general consumer price index in France. This observed increase in price of funeral services has been interpreted as a sign of a badly functioning of competition. This interpretation is disputable since the increase in price from 2000 to 2010 is in line with the increase in the price of other services in industries that have not been characterized by strong market powers (Café, Hotels and Restaurants, Culture and Education): Consumer Price Index + 18.5%, Funeral Services + 33.3%, CHR + 32%, Education,

¹⁵See, for instance, www.afif.asso.fr (website of the Association française d’information funéraire, *op. cit.*), or www.quechoisir.org (website of the consumer association “Que Choisir”), where people can search for a guide on funeral services.

¹⁶Xerfi (2011), *Services funéraires*, étude Precepta, January 2011 (www.xerfi.fr/etudes/OSME28.pdf).

¹⁷See Plimsoll (2011), *Pompes funèbres et services funéraires*, étude de Portefeuille Plimsoll, October 1, 2011.

¹⁸See, for instance, the report “Pompes funéraires : des épines dans la couronne,” *Que choisir*, n°497, October 2011.

Culture, Leisure + 31%. It must also be acknowledged that the increase in the price index for Funeral services may be partly due to a change in the nature of the service itself: more and more people dying in a hospital, or another medical place, there are more and more expenses due to the storage and exposure of bodies in the *chambres funéraires*. Also, in this particular industry, where total demand is invariable with respect to price, competition is mostly on non-price consideration, such as quality of services, extent of personal service provided, location, reputation and consumer prior experience rather than on price. This type of competition harms suppliers' margins due to the corresponding increase in variable costs and fixed costs (for instance building of a *chambre funéraire*).

However, whatever the explanation of the relatively high prices, it is undisputable that there were also relatively high ROE, and accusations of abuses of dominant positions in some local markets. Actually, if the national landscape looks like having moved towards a more competitive state than ever, the industry remains globally profitable and some firm positions seem to be still characterized by high returns. Obviously, some firms perform much better than others, probably because of true competitive advantages, such as a strong reputation of quality, but may be also because of a particular ability to attract and keep customers.

Most of the antitrust cases raised by the Antitrust Authority bear upon the management of these *chambres funéraires* and their use by the local dominant players as a clever device to capture consumers, once the bodies of their bereaved relatives have been sent there from the hospitals.¹⁹ Today, it is about 70% of all the death registered in France that take place in hospitals or other medical places (INSEE, 2010). But most of these places are not equipped with a mortuary, so they send the bodies to the next *chambres funéraires*. Despite the regulations about the working of these facilities, the companies that manage them can take advantage to keep the customers captive. Unfortunately, the legal environment of these *chambres funéraires* do not favor competition, in the sense that to open a *chambre* in a town, one needs a special license given by the municipality or the local representative of the state ("préfecture") and the public need of the new facility must be established. In other words, it is not very likely to see several *chambres funéraires* in a single town and its neighborhood.

Between competitive features and remains of monopolistic positions, the state of the funeral industry in France is rather puzzling. Some companies lose money, while others sustain relatively high economic profits, and it is not entirely clear whether the latter come from true competitive advantages or from entrenchments in monopolistic rents and disputable capture of consumers. There is an interesting feature of the market that can nevertheless be exploited to tell more about the functioning of competition. The leader OGF/PFG has the same pricing policy all over France, either in the more competitive areas where it has only a small market share or in areas where it can possibly benefit from its dominant position. The area of Lyon and its surrounding towns, where OGF/PFG has a strong market share and where it has already been accused of dominant position (although only on the two very small relevant markets defined by the deceased sent from hospitals to the *chambres funéraires* of Venissieux and Saint-

¹⁹See, for instance, the French Competition Authority's decision n°11-D-14 of October 20, 2011 (<http://www.autoritedelaconurrence.fr/pdf/avis/11d14.pdf>).

Priest) offers an interesting case to test some aspects of the potential market power of this company. More precisely, we want to test if the information of consumers and/or the entry of new *chambres funéraires* can curtail the supposed market power, as we shed further light on this in the next section of the paper.

3 Leader's Pricing Strategies and Market Power

The French market of funeral services displays some interesting characteristics that can be analyzed to provide an initial evaluation of the effects of deregulation and privatization on the performances of this market. Two undisputable facts are especially puzzling: 1) The leader of the national market (a chain resulting from the merger of a world specialist and smaller French companies) has a uniform pricing policy all over the country, except for Paris and its surroundings, where prices are 25% higher on average. 2) Relevant markets, in terms of antitrust policy, are geographically distinct, as it is often the case for services and retailing sectors. This means that across the whole French territory there may be quite competitive conditions in some places, and dominant suppliers or even remaining monopolies in other areas.

How can these two facts be reconciled? If a national chain sells its services both in very competitive markets and in areas where it exerts a dominant position, a profit-maximizing behavior should impose different sets of prices in these extreme opposite cases. How, then, can we explain the uniform pricing policy? First, it could result from systematic management mistakes. But for obvious reasons, we can discard this kind of assumption. There remain three potential explanations: 1) the local markets, despite the differences emphasized by the antitrust authorities, are all imperfectly competitive; and indeed in this kind of situation, there is at least one good theory of uniform pricing by a chain operating in various oligopolistic markets (Dobson and Waterson, 2005); 2) some markets could be a potential source of monopoly profits, however their number and/or their dimensions may be too small to justify the administrative costs of price discrimination policy; 3) the competitive conditions in the various markets are not as different as antitrust authorities suggest and the markets are all competitive enough.

3.1 Applying the SSNIP test to local markets

Another advantage of the uniform pricing policy by the leader is that it allows us to easily implement a test similar to the SSNIP test²⁰ used in antitrust economics. Usually this test is not suitable for cases of dominant positions, since the dominant (monopoly) firm should already be implementing a monopoly price at the market equilibrium. Any further price increase should therefore appear as unprofitable since it would depart from the profit-maximizing pricing policy. The issue is known in antitrust economics as the "Cellophane Fallacy" after

²⁰SSNIP stands for "Small but Significant Non-transitory Increase in Price". This test has been intensively used by antitrust authorities, first in the United States and then in Europe and other countries, to define the so-called antitrust relevant markets. For a thorough presentation of the SSNIP test, see for instance Motta (2004). As for the theoretical differences of market definition analysis between the EU and the U.S. approaches, see Elizalde (forthcoming).

first being encountered in a case dealing with the production of cellophane in the United States. When an abuse of dominant position, or an attempt to monopolize, is likely to happen in a given market, one can still apply the SSNIP test, but only by starting the experiment with the prices that would apply in a competitive environment and not with the actual ones. Fortunately, when the supposedly dominant firm is practicing a uniform pricing policy over the whole territory, the SSNIP test can be applied directly in the less competitive local markets with a real chance of being positive (that is to show that an increase in local prices would be profitable).

When applied to the three situations where uniform pricing is justified (see above), the SSNIP test would be positive in the two first cases (i.e. the oligopoly model of Dobson–Waterson and the choice of non-discrimination because of administrative costs), and it would be negative in the last case (when the situation is globally competitive enough). We will argue below that the Dobson–Waterson model does not apply to our case; therefore the SSNIP test can help to discriminate between assumption 2) and assumption 3).

3.2 The Dobson–Waterson model does not apply to French funeral services

Although the Dobson–Waterson model of uniform pricing in a set of local oligopolistic markets is an attractive option for explaining our puzzling observations, Dobson and Waterson (2005) contemplate a situation characterized by oligopolies competing in a series of local markets. They assume that the intensity of competition is different in each market, even though a monopoly or a small oligopoly is operating in each of them. Since monopolistic equilibria and Nash equilibria are theoretically different between market areas, a firm operating over several of them should price discriminate. Can there be a theoretical reason for a uniform pricing in these circumstances? Marketing cost adjustments could be a possibility. But the authors doubt that, in modern marketing practices, adjustments to various local situations could be so costly that they could prevent large chains to exploit local monopoly positions. They instead investigate more strategic explanations. They show that a uniform pricing policy could credibly commit the dominant firm to relatively high prices in the more contested markets, while sacrificing some potential profits in the monopoly markets. Under certain conditions, the outcome could be beneficial in terms of aggregated profits over the national market.

Dobson and Waterson (2005) stress that their result is not limited to the specific market structure of monopolies in some markets and duopolies in others. The result also holds when one considers more than two firms competing in the most contested markets. However, it does not hold any more when there are too many competitors or, by extension, when entry is easy.²¹

In our case of local markets for funeral services in France, it is undisputable and also acknowledged by the antitrust authority that some local markets are

²¹“Assuming for instance that the chain-store faces two independents in contested markets while continuing to be a monopolist in its others [...] The consequence is that the area where uniform pricing is preferred by the chain-store is smaller [...] than when there is just one independent retailer.” (Dobson and Waterson, 2005, pp. 109–110).

extremely competitive. Entry is relatively easy; there are many competitors and new entrants every year. For instance, in the city of Montpellier, there are approximately ten independent funeral homes and ten more in the surroundings; same in Clermont-Ferrand where the leader has less than 10% of market share, and nine different suppliers on this relatively small market are active. A funeral chain like Roc-Éclerc (that used to belong to the retail group Leclerc) is reputed for being aggressive on prices and for bringing competition into many local markets.²² Under such circumstances, it is hard to believe that the leader could commit itself to a high price policy in the most contested market areas, while expecting a softer pricing reaction by competitors.

We are now in a better position to interpret the results of SSNIP tests implemented in local markets. If they reveal that an increase in price by the dominant firm would increase its profits, it means that the administrative costs of fine-tuning prices to tiny markets would more than offset the potential gains. If they reveal that an increase in price has negative effects on profits, then the test shows that the market is widely competitive.

4 Data Collection through a Discrete Choice Experiment

The unavailability of real-world data led us to implement a discrete choice experiment (DCE). As stressed by Hoyos (2010), the DCE methodology results from advances in different disciplines: axiomatic conjoint measurement and information integration theory in psychology, random utility theory-based discrete choice models in economics, and discrete multivariate models for contingency tables and optimal experimental design in statistics. DCEs belong to the class of stated preference methods implying that actual individual behavior is not observed. Instead, individuals are asked to consider hypothetical scenarios. Consequently, the DCE approach involves the generation and analysis of choice data through the construction of hypothetical markets using questionnaires (for more on DCEs, see Hensher et al. (2005)). Over the last decade, DCEs have become a popular stated preference method in many areas: psychology, marketing, health, and economics.²³

4.1 The relevancy of discrete choice experiments

Since the works of Louviere and Hensher (1983) and Louviere et al. (2000), DCEs have been used to generate data that lead to valid inferences about actual market shares under specific conditions. They are particularly suited to simulate new product demand or the impact of public policies (Hensher et al., 2005, pp. 93). Ideally, the stated and revealed preference data sources should be considered together to study consumer choice. Combining them allows the experimenter to

²²See the article “Roc-Eclerc,” *Capital Finance*, May 3, 2010, and Trompette (2008, pp. 87).

²³For a discussion on the use of survey methods in antitrust, see Rubinfeld (2008, pp. 735–737). The DCE methodology was used in several U.S. antitrust cases. See, for instance, the competitive impact statement in *United States v. Vail Resorts*, 62 Fed. Reg. 5037, 1997WL36727 (D. Colo. 1997) (No. 97-B-10); *United States v. Dentsply Int’l*, 277 F. Supp. 2d 387 (D. Del.), rev’d, 399 F.3d 181 (D. Del. 2003).

take advantage of stated preference data's ability to provide attribute variation across respondents, while revealed-preference data provides a reliability check on market share predictions.

Taking into account these stated advantages of a DCE, one may still wonder whether this method can fit the special circumstances involved with purchasing funeral services. For example, presenting prices of alternative funeral firms to respondents might appear less realistic than requiring respondents to actually search for prices. Consequently, we consider a high representation of participants that had already experienced arranging funerals because they may be more familiar with funeral pricing and the different services available.

For those who have not faced such an experience, when placed in the real circumstances of the sudden death of a close relative, it is very unlikely that they could be totally ignorant of the possibility of competing suppliers of services and of a certain range of qualities of services and prices. Since the opening of competition, the main funeral operators in France have launched significant advertisement expenses that cannot be without persuasive effects on the potential users of services. In addition, as previously mentioned, more people are now using the Internet to obtain quick information about the different suppliers of services in this particular business.

Lastly, as we will see below where sample descriptive statistics are presented, 13 percent of the respondents have subscribed to a preneed funeral plan. Therefore, they are already aware of the different services available and their corresponding prices.

The recent changes in this industry contribute to a significant reduction in the costs of shopping around. Given all these changes on the demand side of the market and the care we have taken in the selection of respondents, choice attributes and their corresponding levels, we are assured that there is a good correspondence between the choices revealed in the DCE survey and the actual choices in real life. In the same vein as the work of Mentzaki et al. (2010), the DCE approach allows for consideration of tradeoffs between attributes, as well as potential substitutability between funeral services. All things considered, we can be quite optimistic regarding the external validity of the results.²⁴ It is noteworthy that the DCE methodology does not necessarily imply any bias in the results concerning the extent and intensity of substitutions between the various brands.²⁵ When they are well designed, the studies using this method can reveal a strong potential of substitutions or, at the other extreme a total lack of substitution between the involved brands.²⁶ And even if in some real circumstances, consumer choices are limited by their lack of information or by a kind of lock-in inside the package of services of a firm managing a "*chambre funéraire*", our DCE and its results represent closely the situation of consumers

²⁴Carson et al. (1994, pp. 363) give the following definition for external validity: "*External validity was defined as evidence that the choice process and utility estimates obtained in a discrete choice experiment are the same as the process and estimates that apply in the real market of interest.*"

²⁵For technical details about substitution patterns in discrete choice modeling, see Brownstone and Train (1999).

²⁶For instance, the same type of method led to a clear lack of substitution in the French tourist housing market (see the Pierre et Vacances/Maeva merger case, Lettre Min. Nov. 24, 2001).

choosing with full information, either at the stage of the preneed arrangement, or after the experience of previous funeral services, or finally well informed through the implementation of transparency (disclosery) rules about prices and quality of services.

4.2 Study area description

In order to realistically produce results that represent the French funeral industry, we need to look at a local market that represents the typical conditions of a market that has been recognized as containing some firms with supposedly significant market power. We therefore choose to carry the analysis in Lyon and surrounding towns, an area that is often called the Greater Lyon Urban Community– GLUC (Figure 1). The GLUC, with a population of 1.3 million, is currently the second-largest urban area in France, after Paris. The GLUC, which is located in the center of the Rhone-Alps region, includes 57 cities and covers 201.3 square miles. The area consists of 63 health care centers (private and public) and about 60 retirement homes.²⁷

Figure 1: Overview map of the GLUC



In France, an increasing number of people spend their final days in these hospitals, and are then transported to their home or to *chambres funéraires*, before the last stage of the funeral process. In 2009, 57.5% of deaths took place in medical centers, compared with only 26% at home (INSEE, 2010). Consumers of funeral services usually choose a supplier either in the place where the person died, in the place where he or she used to live, or in the town where the person is going to be buried or cremated.

²⁷We observe that in the GLUC area there is a significant flow of dead bodies from hospitals to funeral rooms and then from funeral rooms to cemeteries or crematories. Consumers of funeral services are supposed to choose a supplier either in the place where the person is deceased, in the place where he or she used to live, or in the town where the person is going to be buried or cremated.

This geographic area is structured in a way that allows good competition among different suppliers. Four funeral businesses, which represent 22 offices and 7 *chambres funéraires* in the GLUC, are involved in the study. They are renamed with the following labels. 1) Group OGF is the “Private Incumbent” that used to be a concessionaire before the law of 1993. Actually, at that time, the private incumbent was active throughout the GLUC except in the city of Lyon where it was forbidden. Today, it can also operate in Lyon. The local authority’s business is called “Régie”. The *Régie* only operates in the city of Lyon and one suburb called Villeurbanne (*cf. supra* Figure 1). The third firm is a discount national chain that is named “National Discount” in our study. The last firm is a local family-owned business (“Family-Owned”) that in the study represents a few other very small businesses competing with the three local main operators. Overall, the aggregate market share of the four funeral businesses involved in the study accounts to 94%.

4.3 Design of the discrete choice experiments

DCEs are based on the premise that first, any good or service can be described by its characteristics or attributes, and second, the extent to which an individual values a good or service depend upon the nature and levels of these attributes. Consequently, the study aims to identify conflicts and tradeoffs involved with funeral arrangement decision-making. The choice of funeral services brands by consumers depends on several attributes such as price and quality of services. Based on expert opinions, including that of Boissin and Trompette (2002), we choose to focus the investigation on just three attributes: prices, quality of services, and the availability of a *chambre funéraire*. In addition, socio-economic variables- such as income- obviously impact users’ behavior. Thus, we have collected certain socio-economic characteristics (household monthly net income, the socio-professional group, location. . .) for all questioned individuals. Finally, some questions were asked about the characteristics of the local funeral markets (preneed contracts, funeral businesses’ notoriety. . .).

For each of the four brands in the study, we retain two attributes (price and quality) at three levels and one attribute (availability of a *chambre funéraire*) at two levels. The choice of these levels is of particular importance because one can ensure a certain consistency between hypothetical situations that are proposed to the respondent and the current situation of the funeral market. Several market studies allow us to set the different attribute levels presented in Table 1. They constitute a rather faithful transcription of the current funeral market in the GLUC.

Table 1: Attribute levels of the DCE

Attributes	Private Incumbent	Régie	National Discount	Family-Owned
Prices (€)	1,750	1,630	1,490	1,965
	3,680	3,250	2,940	3,830
	6,960	6,290	5,700	7,190
Quality	Economical	Economical	Economical	Economical
	Standard	Standard	Standard	Standard
	Prestige	Prestige	Prestige	Prestige
Availability of a chambre funéraire	Yes/No	Yes/No	Yes/No	Yes/No

As for the quality of services, we define the three following types of package:

- *The Economical Package*: This first package includes the mandatory documents and notices (certificates and permits), a first-price casket (made of pine), the dressing and casketing of the body, a service car and driver, and three pallbearers in suits. The digging of the grave and burial service are also part of the package.
- *The Standard Package*: All of the above items and services are included, though with this package the casket is made of solid oak wood instead of pine. Additional services include advanced care and preparation of the body, the removal and repositioning of the gravestone, a master of ceremonies, obituaries in the local press, and a set of bereavement cards.
- *The Prestige Package*: All of the items from the Standard Package are included, though with this package the casket is customized. A large arrangement of flowers is also provided, as well as a second service car and driver, a stone carving, and obituaries in the national press.

For psychological purposes, we have renamed the Economical, Standard, and Prestige packages with the letters E, S, and P (as we can see in Figure 2). Indeed, some people may decide against a cheap burial for a relative due to the negative connotation that would imply (they fear being judged or not showing enough love for the deceased). Consequently, using different names allows us to reduce the potential effects of this psychological bias.

Prices of the different packages have been calibrated on the basis of actual estimates by the four funeral businesses in the GLUC market.

People involved in the study have to choose between four brands characterized by three attributes (price, quality, and the availability of a chambre funéraire) on three levels or two levels. If one wishes to consider all possible combinations of all attribute levels, we have to propose $3^8 \times 2^4 = 104,976$ different hypothetical situations to individuals. These 104,976 scenarios of choice constitute what is called the *Full Factorial Design*. This structure is the only one that guarantees the statistical independence of the estimation from the effects of each attribute on the given answers. Unfortunately, such a structure

quickly becomes nontractable. Thus, the researcher has to build a reduced set of hypothetical situations, which is called *Fractional Factorial Design*. This, however, is at the price of a statistical efficiency loss (Louviere et al., 2000). Using this methodology, we can reduce the choice set to 36 hypothetical situations.

4.4 Data collection and survey administration

Data collection was performed by the Survey Institute BVA, which was able to obtain high-quality data within a reasonable period of time. BVA used *Computer Assisted Personal Interviews* (CAPI). This method is usually appropriate for DCE studies. The respondents can see all the different alternatives on screen, which makes their choice easier. Furthermore, for our specific survey, we provided a separated page that recapped all the different attributes (see Appendix A).

Figure 2: Screenshot of a scenario

"We are going to show you some different services provided by several funeral operators. We are asking you to imagine that you just lost one of your relatives so that you have to make a choice for the arrangement of his or her funeral. The different scenarios will vary in function of the funeral operator, the level of services, the availability of a funeral room, and the total price."

	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Funeral operator	"Private Incumbent"	"Régie"	"National Discount"	"Family-Owned"
Type of package	P	S	E	E
Availability of a funeral room	YES	YES	NO	YES
Total price	€ 3,680	€ 3,250	€ 1,965	€ 2,940
Your choice:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

In the screenshots presented to the participants, the real names of the businesses appeared instead of labels Private Incumbent, Régie, National Discount, and Family-Owned.

Figure 2 gives an example of a typical screenshot scenario presented to the potential consumers. Overall, the Institute BVA conducted 500 face-to-face interviews in the GLUC from February 18 to February 29, 2008. Interviews lasted approximately ten minutes. Each respondent was randomly assigned to complete one of three blocks of twelve scenarios ($3 \times 12 = 36$ hypothetical situations). The sample consisted of 5,610 valid observations that corresponded to the choice of a provider of funeral services by a consumer: $500 \times 12 = 6,000$ observations minus 390 that were missing or incompletely captured amounted to 5,610 valid observations.

In Tables 10 to 15 from Appendix B, we can now provide some socio-economic descriptive statistics of the sample. The average household income accounts for €2,443, which is close to the national value, €2,359 in 2008. In addition, the average participant is 58. Forty-four percent out of the 500 respondents are retirees. As for anticipating their own funeral, 13% of the sample participants have bought a preneed funeral contract. This is close to the national estimation of 15%.

Forty-nine percent of survey participants have experienced the arrangement of at least one funeral in the past three years. Among them, 82% have used the service of a *chambre funéraire*.

As for brand notoriety, brands “Private Incumbent”, “Régie” and “National Discount” are known in equal proportions. Only “Family-Owned” has a lower notoriety.

All of these figures confirm that the local characteristics of the GLUC market are rather close to the national trends, which makes the choice of funeral services realistic.

5 Modeling Demand for Funerals and Simulating Price Changes and Entry

In this section, we present the econometric modeling based on the data described above. Estimation results will be then used to compute market shares and price elasticities, and simulate the entry of one of the rivals of the leader with the management of a new *chambre funéraire*.

5.1 An econometric analysis of demand for funeral services in the GLUC market

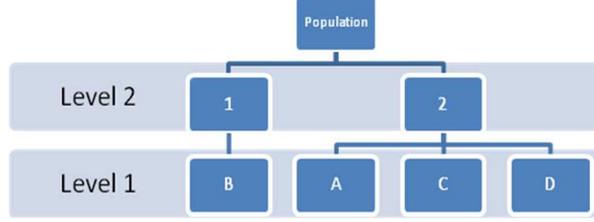
As discussed above, we use a DCE survey in order to model consumer choice behavior. This methodology allows us to take into account the key variables of the decision-making process. The choice of a funeral services firm by a consumer depends on several supply attributes (price, quality, etc.) as well as on certain socio-economic characteristics (personal income, gender, age, etc.).

As the dependent variable is qualitative, a discrete choice model is appropriate. We specifically use a nested logit model.²⁸ To be more specific, we first estimated a multinomial logit model that did not satisfy the classic IIA (*Independence of Irrelevant Alternatives*) assumption. This often occurs when certain products are close substitutes. The nested logit model then constitutes the most used alternative method.

As seen in Figure 3, level 2 of the nested tree specifies the dual structure of the market: private operators vs. the Régie. And at level 1, consumers have to choose between different funeral products that are contained in the nest previously chosen at level 2.

²⁸See McFadden (1981) and Hensher (1986) for a detailed presentation of this model.

Figure 3: Structure of the nested logit model



All the alternatives of the choice set are partitioned in groups with common characteristics. Then, the functional form of the indirect utility must be specified: For each brand i ($i = 1, \dots, 4$),²⁹ the functional form accounts for the sum of a group component that does not vary for the alternative of this group, and of a component that can vary among the alternatives of the group. We get:

$$V_i = V_l + V_{i(l)} + \varepsilon_i \quad (1)$$

In equation 1, the subscript l is a group index ($l = 1 \dots L$) and within every group, there are I_l possible choices, indexed by $i(l)$. ε_i is a random term following the cumulative density function:

$$F(\varepsilon_i) = \exp \left(- \sum_{l=1}^L \left(\sum_{i=1}^{I_l} \exp(-\varepsilon_i/\lambda_l) \right)^{\lambda_l} \right) \quad (2)$$

For a given consumer t , the probability of the chosen alternative i is given by the following expression:

$$P_i(t) = \frac{\exp(V_i/\lambda_l) \times \left(\sum_{i=1}^{I_l} \exp(V_{i(l)}/\lambda_l) \right)^{\lambda_l - 1}}{\sum_{l=1}^L \left(\sum_{i=1}^{I_l} \exp(V_{i(l)}/\lambda_l) \right)^{\lambda_l}} \quad (3)$$

More precisely, we choose a linear form for the indirect utility V_i , associated with the choice of brand i by a consumer, depending on the supply attributes presented in the DCE.³⁰ For each funeral service firm i , we get:

$$V_i = \alpha_i + \beta_i (\text{INCOME} - \text{PRICE})_i + \gamma_i \text{PACKAGE}_i + \delta_i \text{CHAMBRE_FUNERAIRE}_i + \varepsilon_i \quad (4)$$

In equation 4, the intercept term α is present in all of the alternatives minus one ($i = 4$ *i.e.* “Family-Owned”).

Results of the estimation process are given in the following table.

²⁹The subscript $i = 1$ stands for “Private Incumbent”, $i = 2$ for “Régie”, $i = 3$ for “National Discount”, and $i = 4$ for “Family-Owned”.

³⁰One of the attributes is the net income (*i.e.* income minus price). Remember that is an indirect utility function. This type of function usually incorporates the exogenous variables of the consumer microeconomic program.

Table 2: Estimation results of the nested logit model

Variables	Estimated Parameters
$INTERCEPT_1$	0.6612 (*)
$INTERCEPT_2$	0.7080 (*)
$INTERCEPT_3$	0.5504 (*)
$(INCOME - PRICE)_1$	0.000678 (*)
$(INCOME - PRICE)_2$	0.000729 (*)
$(INCOME - PRICE)_3$	0.000699 (*)
$(INCOME - PRICE)_4$	0.000775 (*)
$PACKAGE_1$	0.4525 (*)
$PACKAGE_2$	0.5664 (*)
$PACKAGE_3$	0.4153 (*)
$PACKAGE_4$	0.5247 (*)
$CHAMBRE_FUNERAIRE_1$	0.8203 (*)
$CHAMBRE_FUNERAIRE_2$	0.5259 (*)
$CHAMBRE_FUNERAIRE_3$	0.1890 (*)
$CHAMBRE_FUNERAIRE_4$	0.6099 (*)
λ_1	1
λ_2	0.9662 (*)
<i>Goodness of fit</i>	
Log likelihood (restricted)	-15554
Log likelihood (unrestricted)	-5014
Pseudo R^2 (McFadden)	0.6776
Number of observations	5610

(*) 5% significant parameters

All estimated parameters are significantly different from zero at the one-percent level.³¹ The parameter λ_2 is less than one, which shows the good specification of the selected nested logit. The McFadden R^2 is relatively high for this type of model.

5.2 Choice probabilities, elasticities of demand, and price increase simulations

The econometric model allows us to compute the choice probabilities and any firm product's own- and cross-price elasticity at the sample average point. We get the following results from the whole sample:

Table 3: Choice probabilities of the funeral firms in the GLUC

	Private Incumbent	Régie	National Discount	Family-Owned
Probability	35.75%	35.04%	18.56%	10.65%

³¹We also estimated the model that incorporated a distance variable (minimal distance until a funeral office of brand i). Results were not statistically significant.

The two funeral businesses “Private Incumbent” and “Régie” that were in place before the 1993 Act have similar market shares. In the third position, we have the “National Discount”: a firm that took advantage of the liberalization of the funeral sector by entering the market and developing a significant market share. Finally, the local family-owned business has the last position in terms of market share. These results are consistent with the observed market shares of the various firms in the GLUC.

Then, we compute the firms’ own- and cross-price elasticities. These values are presented in the following table.

Table 4: Price elasticities in the GLUC

<i>Own- and cross-price elasticities</i>				
	$Price_A$	$Price_B$	$Price_C$	$Price_D$
A	-1.8378	0.9489	0.4609	0.3731
B	0.9983	-1.7595	0.4374	0.3541
C	1.0521	0.9489	-1.9777	0.3731
D	1.0521	0.9489	0.4609	-3.0686

The signs of own-price and cross-price elasticities are consistent with economic theory. In absolute value, price elasticities are relatively high for both own- and cross-price elasticities. Absolute values of own-price elasticities are between 1.75 and 3.06, which means that potential consumers of funeral services appear to be relatively sensitive to price changes in their choice of a given operator. This is worthy of notice because this result is at odds with the funeral consumer stereotype. They may not be as price insensitive as some commentators say. The cross-price elasticities are also relatively high, between 0.35 and 1.05, which is consistent with this counterintuitive result and sheds some light on potential buyers’ substitution patterns. For instance, an increase of 1% in the price of the Private Incumbent’s brand would result in an increase of 1.05% of National Discount’s market share.

Opportunities for substitutions among funeral services providers reveal that none of them are able to disregard their active competitors and the possibility their consumers may switch to other funeral companies.

Furthermore, we estimate the model on different subsamples of respondents.³² On the subsample of people who had already experienced funeral arrangement in the past three years, results are qualitatively the same even though it may be hard to compare the estimation results because of a change in the decision tree of the nested logit model. We also estimate the model on the subsample of people who had bought preneed funeral contracts. Results are relatively the same, too, with the exception that the coefficients of the “Package” variables are more significant than they are on the whole sample. It seems that having preneed funeral contracts makes people more sensitive to the quality of funeral services.

Lastly, we carry out simulations of an increase in price (SSNIP) of the private incumbent’s brand and look at the effects on its profits and market shares,

³²For the sake of clarity, detailed estimation outputs are available upon request.

assuming no change in the prices of competing firms. Of course, changes in profits depend on the relative importance of variable and fixed costs. We made calculations for various splits between the variable and fixed costs. On Table 5 below, we present the simulations results for the proportion of 60% of fixed costs and 40% of variable costs, which seems the most appropriate given the data we could obtain on the cost structure. We made simulations of significant price increases of the leader Private Incumbent’s brand in the whole GLUC area for the complete sample of participants.

Table 5: Simulations of price increases of the leader’s product in the GLUC

10% price increase of private incumbent’s brand	
Initial probability of choice	0.3575
Choice probability after the price increase	0.2948
Market share variation	-17.54%
Profit variation (under 40% MC)	-18.33%
5% price increase of private incumbent’s brand	
Initial probability of choice	0.3575
Choice probability after the price increase	0.3254
Market share variation	-8.97%
Profit variation (under 40% MC)	-7.42%

As we have seen in Section 3, here price increases simulations allow us to discriminate between assumptions 2 and 3 regarding the leader’s uniform pricing policy. More precisely, we have showed that if the SSNIP test results in a negative variation in the leader’s profit, then we can conclude that the concerned market is quite competitive, otherwise the potential gains would not make up for the administrative cost of fine-tuning prices. Table 5 indicates that the different price increases result in more than proportional market share variations. Thus, changes in profit of the private incumbent show that it does not exert market power in the GLUC area. For instance, a price increase of 10% of its brand results in a decreasing market share of 17.54% and a drop in profit of 18.33%. Clearly, the private incumbent cannot ignore its competitors when setting its prices. In the event of a significant and sustained increase in its prices, the private incumbent may lose a substantial portion of its potential customers. Price increases of 5% or 10% are not profitable for the incumbent operator given the cost structure.³³ Consequently, the third explanation of uniform pricing seems to apply to the GLUC area: the leader’s pricing policy is compatible with a strong competitive environment.

5.3 Simulating the entry of a *chambre funéraire*

We now simulate the entry of a new storing facility (*chambre funéraire*) by one of private incumbent’s rivals. To do so, we take the case of the small town

³³As mentioned in Footnote #23, a similar DCE led to poor substitution among alternatives offers, which made price increases simulation profitable for the leader firm (see the *Pierre et Vacances/Maeva* merger case, *op. cit.*).

Vénissieux that is located in the GLUC.³⁴ In certain towns within the GLUC area, such as Vénissieux (57,600 inhabitants) or Saint-Priest (40,212 inhabitants), the French former competition authority (*Conseil de la concurrence*) identified specific relevant antitrust markets for dead persons sent to a *chambre funéraire* without the consent from their relatives. In these markets, according to the authority, the leader exerted a dominant position.³⁵ Thus, a strong market power would supposedly result from the management of the local *chambre funéraire*. In this section, econometric simulations review these issues, including the role of a *chambre funéraire* and its related competitive effects.

5.3.1 Initial situation before entry of Private Incumbent's rivals

We calibrate the model presented in Subsection 5.1 in order to take into account the local characteristics of Vénissieux. First of all, we run the DCE on a subsample of respondents, carefully chosen as people living in Vénissieux (123 respondents, which represent one quarter of our sample). The other major change is that we consider that only one firm (the private incumbent) is operating a *chambre funéraire* in this area. That is to say that we calibrate the model according to the assumptions made by the French antitrust authority, which comes in particular to admit that the customers living in Vénissieux have a restricted set of choices among firms actually located within this town. It is however clear that with consumers fully informed about their potential choices all over the GLUC, we would turn back to the calibration of the previous section. Once we admit the restricted choice in Vénissieux, we are then in a position to compute the funeral operators' market shares taking into account these new data. Results are grouped into the following tables.

Table 6: Choice probabilities of the funeral firms in the town of Vénissieux

	Private	Régie	National Discount	Family-owned
Probability	51.36%	17.42%	27.03%	4.19%

We also compute price elasticities. They are presented in Table 7.

Table 7: Price elasticities in the town of Vénissieux

<i>Own- and cross-price elasticities</i>				
	$Price_1$	$Price_2$	$Price_3$	$Price_4$
A	-1.3999	0.4744	0.6630	0.1470
B	1.4393	-2.2492	0.6361	0.1410
C	1.5003	0.4744	-1.7724	0.1470
D	1.5003	0.4744	0.6630	-3.3378

We simulate price increases of the private incumbent's brand. We then get:

³⁴For an overview map of the GLUC, see Figure 1 in section 4.2.

³⁵See the decision n°08-D-09 of May 6, 2008 (<http://www.autoritedelaconcurrence.fr/pdf/avis/08d09.pdf>).

Table 8: Simulations of price increases of the leader’s product in the town of Vénissieux

10% price increase of private incumbent’s brand	
Initial probability of choice	0.5136
Choice probability after the price increase	0.4419
Market share variation	-13.96%
Profit variation (under 40% MC)	-2.39%
5% price increase of private incumbent’s brand	
Initial probability of choice	0.5136
Choice probability after the price increase	0.4777
Market share variation	-6.99%
Profit variation (under 40% MC)	0.85%

Unlike in the GLUC area, the main operator (“Private Incumbent”) may exert some market power in Vénissieux. A 5% price increase yields to a positive profit variation of 0.85% (still under the assumption of 40% marginal costs). What happens if rivals are allowed to set up their own *chambre funéraire* in this city? This question can be tackled thanks to the flexibility of the discrete choice experiment.

5.3.2 Simulation of entry

Table 9 below gathers all the simulations results. The first column recaps the initial situation in Vénissieux while the three others present the situation following the entry of just one operator (“Régie”, “National Discount”, and “Family-owned”).

The establishment of a new *chambre funéraire* appears procompetitive. The opening of a *chambre funéraire* by any businesses contributes to the removal of all market power issues (negative profit variations for 5% and 10% price increases in Table 9). Note that among the three simulations of entry, the one by the Régie leads to the highest negative profit variation of the private incumbent. Unfortunately, the Régie is not currently allowed to open a *chambre funéraire* outside the city of Lyon and its Villeurbanne suburb. The Régie becomes as large as the private incumbent. Consequently, allowing the Régie to open new *chambres funéraires* in any cities within the GLUC area would bring more competition.

To summarize, managing a *chambre funéraire* gives funeral businesses a competitive advantage but at the price of an increase in fixed costs. Simulations of entry in this business in the town of Venissieux clearly confirm that this strategic decision would invigorate the competition process, even without considering the other possibilities of choices that would be open to consumers if they were fully informed and conscious about the availability of suppliers outside Venissieux. More and more companies operating in the funeral services business have decided to enter into the business of the *chambre funéraire* management. This process is in accordance with our results in this section.

Table 9: Simulations of entry of different operators in the city of Vénissieux

	Initial situation	Entry of Régie	Entry of National Discount	Entry of Family-owned
Prob. firm A	51.36%	38.78%	45.44%	46.41%
Prob. firm B	17.42%	37.64%	15.49%	15.80%
Prob. firm C	27.03%	20.41%	35.37%	24.42%
Prob. firm D	4.19%	3.16%	3.70%	13.37%
<i>10% price increase of private incumbent's brand</i>				
Market share variation	-13.96%	-16.89%	-15.43%	-15.21%
Profit variation (under 40% MC)	-2.9%	-15.44%	-8.92%	-7.97%
<i>5% price increase of private incumbent's brand</i>				
Market share variation	-6.99%	-8.61%	-7.79%	-7.69%
Profit variation (under 40% MC)	0.85%	-5.89%	-2.48%	-2.07%

6 Concluding Remarks and Policy Implications

This article has shown that the current perceptions of the alternative offers of funeral services that consumers can find on the market can be sufficient to impose competitive pressure on the various suppliers, including the former monopolist. We show that, contrary to widely shared beliefs about this market, demand for funeral services can be characterized by relatively high price elasticities, as soon as consumers are sufficiently informed about all the opportunities of choice open to them. This result confirms that consumer behavior has likely changed in favor of a better assessment of the different possibilities of services supplied and of their relative price. The dense network of suppliers in the GLUC allows potential consumers to learn about the competitive packages available to them. When they have choices, they are in a position to put serious pressure on the pricing policy of supposedly dominant firms, therefore curbing any abuse of dominant positions possibly inherited from the period of regulated local monopolies.

Furthermore, our simulations stress the procompetitive effects of setting up new *chambres funéraires* by any business. Even though the entry of a new *chambre funéraire* by the Régie is the most appropriate for generating an active competition with the leader firm, the Régie cannot intervene in the whole urban community due to current legislation. Therefore, strengthening competition in the market should be implemented through the enlargement of the Régie's work zone. The public business should be allowed to freely operate in the 57 cities of the GLUC, even if this change implies a kind of privatization of the former public undertaking. Licenses to operate new *chambres funéraires* can also be granted to new entrants in the GLUC areas.

From a more general perspective there seems to be a discrepancy between the results of our econometric study and some complaints heard in France about the functioning of the funeral services market. We find that competition can perform relatively well, at least as soon as consumers are fully informed about their choices, though some complaints are still heard about high prices and other kinds of abuses supposedly perpetrated by the major operators in this industry. We must keep in mind that our conclusions are based on a discrete choice experiment and not on real-world market data. Although we are very confident

about the significance of the experiment, it may happen that in real markets, some consumers are not in a position to actually choose freely among the available alternatives. This may especially be the case when healthcare centers and funeral companies managing the *chambres funéraires* make some arrangements (such as the municipal Régie of Lyon that was punished for arrangements with surrounding hospitals³⁶).

Finally our main conclusion is that, despite of the special characteristics of the market of funeral services, we can be fairly confident in the competitive process, but only if the regulation of this market allows good information to go out to the consumers and the ease of entry of new suppliers in local markets. Our study suggests that the remaining issues concerning possible improvements in the process of competition in the funeral services markets are linked to current regulations: better information of consumers about the possibilities of choices and ease of entry.

³⁶The fine amounted to 50,000 euros, decision n° 08-D-09 of May 6, 2008 (city of Lyon), *op. cit.*

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Appendix A: Instructions for Completing Survey

“We are going to show you some different services provided by several funeral operators. We are asking you to imagine that you just lost one of your relatives and you have to make a choice for the arrangement of his or her funeral. The different scenarios will vary in function of the funeral operator, the level of services, the availability of a chambre funéraire, and the total price.

In the different scenarios, you can see three different levels of services: Level E, Level S, and Level P. Below are what these levels consist of.

Services	E	S	P
All the mandatory documents and notices (certificates and permits)	X	X	X
A first-price casket in pine	X		
A casket in solid oak wood		X	
A customized casket in solid oak wood			X
Advanced care and preparation of the body		X	X
The dressing and casketing of the body	X	X	X
A service car and driver, and three pallbearers in suits	X	X	X
A second service car and driver			X
A master of ceremonies		X	X
A large arrangement of flowers			X
The digging of the grave	X	X	X
The taking off and rebuilding of the stone		X	X
A stone carving			X
Obituaries in the local press		X	
Obituaries in the national press			X
A set of bereavement cards			X

The availability of a chambre funéraire managed by the operator is also provided.

- A “chambre funéraire” is a public or private facility in which the body is stored until the funeral services. The objective of a chambre funéraire is then to host the body, either because the family does not have room enough to receive it or because the body is delivered from a health care institution (hospital, hospice, retirement centers, etc.). The chambre funéraire is also used to provide the bereaved with a beautiful and peaceful environment that is conducive to the grieving process, whatever their religion may be.
- According to French legislation, the business that manages the chambre funéraire is not necessarily the one that deals with burial and cremation services. In any case, whichever the chambre funéraire the body is brought to, the family remains free to go and see an operator of its choice for the arrangement of the funeral.

Lastly, we will give you the different prices of the alternatives.”

Appendix B: Sample Descriptive Statistics

Table 10: Socioeconomic characteristics of the sample

	Mean	SD	Min	Max	Obs.
Age	58.32	10.86	24	92	500
Monthly Income (€)	2,443	1,312	400	8,000	500

Table 11: Location of respondents

	Frequency	Share
Lyon	168	0.34
Vénissieux	123	0.25
St. Priest	115	0.23
Others	94	0.19
	500	1

Table 12: Marital status of respondents

	Frequency	Share
In couple	288	0.58
Single	99	0.20
Widow	113	0.23
	500	1

Table 13: Respondent's experience in funeral arrangements

	Frequency	Share
Experienced	244	0.49
<i>With the use of a chambre funéraire</i>	199	0.82
<i>Without using a chambre funéraire</i>	42	0.17
No answer	3	0.01
Inexperienced	256	0.51
	500	1

Table 14: Respondent's use of preneed contracts

	Frequency	Share
With Preneed contracts	67	0.13
<i>Experienced in funeral arrangements</i>	39	0.58
<i>Inexperienced in funeral arrangements</i>	28	0.42
Without Preneed contracts	433	0.87
<i>Experienced in funeral arrangements</i>	205	0.47
<i>Inexperienced in funeral arrangements</i>	228	0.53
	500	1

Table 15: Socio-professional groups of the respondents

	Frequency	Share
Employees	78	0.156
Executive	39	0.078
Intermediate profession	61	0.122
Non-working	30	0.06
Retirees	221	0.442
Trade	31	0.062
Workers	36	0.072
	500	1

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