



Make or Buy: Political hazards and the choice of governance of municipal services

Emmanuel Raynaud, Yoan Robin, Carine Staropoli

► To cite this version:

Emmanuel Raynaud, Yoan Robin, Carine Staropoli. Make or Buy: Political hazards and the choice of governance of municipal services. 10. Journées de recherches en sciences sociales (JRSS), Société Française d'Economie Rurale (SFER). FRA., Dec 2016, Paris, France. hal-01603022

HAL Id: hal-01603022

<https://hal.science/hal-01603022>

Submitted on 3 Jun 2020

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



Distributed under a Creative Commons Attribution - ShareAlike 4.0 International License

1 Make or Buy: Political Hazards and the Choice of Governance of
2 Municipal Services

3 Emmanuel Raynaud¹, Yoan Robin², Carine Staropoli³

4 University Paris 1 – La Sorbonne and INRA UMR SADAPT

5 10th JRSS, Paris, 8th and 9th December 2016
6
7

¹ Directeur de recherche INRA UMR SAD-APT, équipe Proximités, emmanuel.raynaud@agroparistech.fr

² Doctorant INRA UMR SADAPT – Paris 1 La Sorbonne – IAE de Paris, yoan.robin@agroparistech.fr

³ Chercheure UMR 8174 – CES – Centre d'économie de la Sorbonne – Ecole d'Economie de Paris, Carine.Staropoli@univ-paris1.fr

8

Abstract

9

10 We study the link between the choice of governance and political hazards using
11 municipal school canteens. We provide evidence that in politically contested cities, mayors are
12 more likely to choose to “make” rather than “buy” to avoid challenge of the contract with a
13 private partner. A higher probability of losing office – proxied by close victory margins and
14 political concentration – increases the probability to “make”. We also provide evidence that in
15 cities where the potential challenge on sustainable supply is high, mayors tend to “make” also
16 to signal trustworthiness to the voter. A higher presence of ecologist’s citizens and alternative
17 supply organizations – proxied by the presence of Agenda 21 and the presence of alternative
18 and organic food shops – increases the probability to “make”.

18

19 *Keywords:* Political Oversight, Make or Buy, School Canteens

1 Introduction

Is that apple organic? Where does this meat come from? Am I eating fresh or frozen vegetables? These are some of the questions people may ask themselves when they eat out in an institutional catering facility. As they do not buy the food themselves, they must trust the provider of the meal as to the unobservable characteristics of the ingredients. The trustworthiness towards the provider of a public service is an important matter that impacts the governance of public services when unobservable quality is important, as we will show.

Cities, departments, regions, and states provides canteens services for children, the elderly, the sick, the army, and a lot of other publics. Institutional catering to social purpose in France is much democratized and consequently represent a large part of the eating out. In 2004, institutional catering was of 10 billion euros, representing 300 000 jobs with an average annual growth of 4%. School canteens also concern directly 60% of children⁴ and indirectly their parents, for about one billion meals served each year in France. Municipal school canteens expenses represent half of institutional catering, being about 5 billion euros and 2.3% of the annual expenses of French municipalities.⁵

At the risk of oversimplification, municipal school canteens can be categorized in two main types: direct and delegated governance. These two types of governance imply different contractual characteristics toward the food supply and the choice is eventually at the discretion of the elected official. Delegated governance necessitate to contract both preparation of the food and food supply to the same private partner. The sustainability of the supply depends then on the private contractor. It is her task to furnish the quality of the food asked in the contract by the municipality. However she is not attached to suppliers and can switch from a supplier to another without the approval of the municipality supposedly as long as the quality remains the same.

On the contrary, direct governance necessitate to contract only for food supply since the municipal employee would cook the ingredients⁶. In that case the municipality tenders for the food and chooses directly the suppliers. It is then stuck with those suppliers for four years unless

⁴ La restauration des usagers du service public scolaire ou à caractère social en Alsace », Rapport Public de la Cour des Comptes, 2005, pp. 653-672.

⁵ With 180 days of school a year (<http://eduscol.education.fr>), 60% of the 6 760 600 pupils (<http://www.education.gouv.fr>), for a cost per meal between 6 and 8 €, municipal school canteens for the 5 to 10 years old accounts for 2 to 2.6% of the 220 billion spent each year by municipalities (<http://www.collectivites-locales.gouv.fr>).

⁶ We let apart the case of the municipality Mouans-Sartoux that grows its own fruits and vegetables.

there is an important breach in the contract from the supplier⁷. Direct governance prevent the municipality from choosing ingredients to cook from another supplier that has not been selected in the auction, and thus cannot integrate new types of products during the operation of the contract⁸. The power of decision of the ingredients and their type is stronger for direct governance at the condition that it has been anticipated in the supply food contracts.

Therefore, tradeoffs emerge between adaptability to the demand and political oversight. A public body might choose to produce a service in-house in presence of skeptic citizens when it rigidifies the provision of this service and diminish his discretionary power of decision. This aims at preventing challenge on his governance of the service that could endanger his re-election or the re-election of his majority. For instance, a municipality may choose the delegated governance and be able to ask for local food through unformal renegotiation when the pressure for such ingredients becomes louder. It may, however, lead to suspicion from the population toward his choices since they are off the record. A direct governance is, on the contrary, not as flexible. This type of governance prevent from introducing local food if there is no local supplier in the bunch of suppliers, unless there is a new tender. On the other side, direct governance implies to always buy the food to the same suppliers which increases the traceability of the food for the citizens, and thus, mitigates the risks of suspicion toward the public body. As a consequence, we consider delegated governance to be a flexible-type contract, potentially leading to suspicion, and direct governance as a specific-type contract that mitigates challenges on the mayor's choices.

A significant body of previous work on make-or-buy focuses on concerns related to efficiency, such as the choice to integrate or not an activity when faced with over specification costs of contractual rights. From an incomplete contract theory's perspective, Grossman and Hart (1986) argue that "firm 1 purchases firm 2 when firm 1's control increases the productivity of its management more than the loss of control decreases the productivity of firm 2's management". Within this framework Hart, Shleifer and Vishny (1997) show that a private partner engages in both cost reduction and quality improvement, but when it comes to noncontractible quality the private partner tends to mitigate the adverse effect of cost reduction. Recent works highlight other determinants of make-or-buy choice and their impact on efficiency, such as the ability to discipline franchisees. Chong et al. (2012) show that as the size

⁷ Texte de loi

⁸ Municipalities can integrate new products that do not come from the suppliers selected by the auction at the condition that it is for a thematic meal or special event, such as "Chinese new year", it is less than 15 000€.

of a city increases, so increases its ability to prevent the private partner from extracting quasi-rents. Using data on the make-or-buy decision for municipal school canteens in France, we explore whether political considerations can play a role in governance decisions. If today's politicians have the desire to demonstrate probity to the voting public, we would expect mayors in more contested municipalities to use more transparent and specific-type of governance for public services such as direct governance. Under this type of governance, food suppliers are selected through competitive auctions and will supply the municipality for a type of ingredient until the next tender. Direct governance is a more rigid way to get the food supply than delegated governance. On the contrary, for delegated governance it is up to the private partner to choose and change the suppliers.

Another prominent strand of literature related to governance of public services centers on how political considerations may influence the choice of elected managers. Lopez-de-Silanes et al. (1997) show with U.S. municipalities that laws to enforce public denies restriction favor privatization, whereas strong public unions discourage it. According to them, this points to the important roles played by political patronage and taxpayer resistance to government spending in the privatization decision. Similarly, Picazo-Tadeo et al. (2010) show for the provision of water in Spain that ideology matters, as for Bel and Fageda (2007) and Dubin and Navarro (1988) before them.

We offer empirical evidence for a complementary explanation and empirically test for the importance of electoral considerations in public contracting, specifically in the make-or-buy decision. We draw on recent theoretical work about the threats imposed by third parties and political opponents on public officials (Spiller, 2009; Moszoro and Spiller, 2014), and conjecture on several reasons why elected officials select direct governance when elections are close. First, by choosing direct governance, city officials signal "probity" (i.e., transparency and trustworthiness to supply food for school canteens), limit speculation on the discretionary use of public monies to enrich themselves and buy political favors from private enterprises. Second, earmarked suppliers limit the discretion of a successful political challenger in the event that the incumbent loses the next election. For example, consider a city where the incumbent's constituents care about organic food while the challenger's constituents care about local food. If the incumbent's winning margin is close (so the mayor's seat is more contestable), she will choose direct governance to lower the challenger's discretion to favor local food instead of organic food *ex post*. In the case of a delegated governance, the challenger may directly ask the private partner to redirect her supply from organic to local food as it is the case for Saint-Etienne

(France Bleu, 2015). Third, when suppliers are known and traceable, it increases the confidence in the political manager who has less *ex post* impact on the supply.

This article proceeds as follows. We begin this topic with a discussion of the theoretical literature. We then describe the model as well as the institutional setting in which we will test it. A description of the data and proposed empirical test follows, and then the results of this estimation exercise. Finally we provide some concluding remarks.

2 Theoretical Framework

2.1 Relevant Literature and Proposed Contribution

This study relates to two streams of research on governance. One common view in economic literature is that the size of the firm is economically determined to exploit gain of productivity. Economies of scales have been at the center of this analysis, and have been shown along with transaction costs to influence the choice of governance of public services by local governments (Bel and Fageda, 2007; Bel and Fageda, 2009). When a service is to be procured in a suboptimal jurisdiction, which is often the case with small municipalities, the exploitation of economies of scale requires the aggregation of the service (Donahue, 1989). This goal can be attained by either privatizing public services to a larger private firm that would attain the optimal size, or by aggregating the public demand of several local governments through larger public entities. However, this is true only when the gain of economies of scale are shared with the municipality. Chong et al.'s results (2012) on the provision of water service in France show that large municipalities are better equipped to exploit competition between firms, whereas small municipalities pay a quasi-rent to private partners. Lack of competition on the market and difficulties to control the private partner can lead to a lesser use of privatization if the quasi-rent is above the in-house price. Moreover, the choice to delegate a public service depends on the complexity of the transaction (Crocker and Masten, 1996 pp. 6): "As the exchange setting becomes increasingly complex or the negotiation of future duties more costly and problematic, the parties may elect to bear the organizational costs of effecting exchange through internal administration." This reinforces the problems for small municipalities to delegate public services as they have less capacities and competencies to control and specify the service.

Another substantial body of literature on governance of public services has focused on political choices made by public authorities and ideology (Bel and Fageda, 2007; Bel and Fageda, 2009). Ideology considerations are important for the choice of governance of public services. Political color of the mayors influences statistically the choice made by public bodies

as to public services (Levin and Tadelis, 2010; Gonzalez Gomez et al., 2011). This also holds true for political choices. Political choices are made to please a pressure group important to be elected. Studies on that matter have shown a positive influence of unemployment, poverty, strength of public unions on the propensity of municipalities to procure internally public services (Dubin and Navarro, 1988; Chandler and Feuille, 1994; Lopez-de-Silanes et al., 1997). However those results tend to be less significant. One explanation could be that economic rationality is now preferred by politicians.

These studies are part of the literature exploring the determinants of the governance of public services on the basis of economic and political considerations. There has, however, been less focus on the tools to measure political considerations and pressure groups. Those are almost always proxied by the political color of the mayor, the size of public bodies, unemployment and inequalities.

Spiller (2009) and Moszoro and Spiller (2012, 2014) have recently proposed a theory of feature of public contracts in the presence of competitive political market. According to their theory, the feature of a public contract is also determined by the political hazards perceived by the official. Political hazards may come from two different players involved indirectly in a public contract between the public authorities and a private firm: political opponents and the voting public. The voting public and political opponents are implicated in any transactions made by the public authorities as it affects public monies and social welfare. Political opponents are also interested in discrediting the public authority so as to retrieve votes for the next election. Political opponents participate in the public auditing of political incumbent. They scrutinize transactions made by the political incumbent to discredit her results, on true or false basis. This may politically cost to the official in power either because she losses some votes, or because she has to defend herself and her choices. In some cases, incumbents may be vulnerable to losing office so it is in their interest to mitigate *ex ante* the possible attacks on their results.

This “third-party opportunism” framework developed by Spiller and Moszoro implies that the more contested the political environment is, the more the political incumbent will try to prevent their mandates from being attacked and gossiped on governance choices and misuse of public funds. This theory has been confirmed on the choice of political bond in the U.S. (Aneja et al., 2015) and on the specificity of French procurement contracts (Beuve et al., 2015). We contribute to the literature on make-or-buy of public services by empirically examining how the choice of governance of public services correlates to political competition or pressure groups’ size. We also contribute to the literature on rigidity features of governance by

empirically measuring how citizen pressure groups may influence the mode of governance of a public service.

We use municipal school canteens to test this hypothesis as this service is relatively highly subject to scrutiny from third parties. For instance, according to a study from the French *Agence Bio*, the school canteens are the place where people would like to see the largest introduction of organic products to 87% of them (Agence Bio, 2016), way ahead from work (73%), fast food (63%) or vending machines (56%). It is a particularly high number of people interested in the introduction of organic products at school given that interviewed people are not all parents.

2.2 Institutional Settings: French Governance of School Canteens

School canteens are both young and old. It begins in 1844 with the creation of the first canteen for the young (IRCEN⁹). The necessity of school canteens becomes higher with Jules Ferry's laws that make instruction mandatory in France in 1880. However, no law leads the lunch time and its supervision is let to associations. At the end of the World War II, French children are among the worst fed and suffer from several vitamin deficiencies. The urge to feed correctly the children increases the local initiative towards school canteens. The baby boom consecutive to the end of the war accelerates school canteens policies. In 1970 and until the early 80's the local initiatives are progressively integrated to municipal competencies. The market gets bigger and viable, so private firms structured themselves to compete for the market. In the early 2000's, nutrition comes back in the debate to fight against obesity with several nutritional recommendations from the government. In 2007, the *Grenelle de l'Environnement* adds new objectives for school canteens. They now have to provide organic and seasonal food for 20% of the components of a meal each before 2012. Those objectives are far from being reached but contribute to the generalization of organic food since the part of institutional catering restaurants proposing organic food moved from 4% in 2006 to 58% in 2016 (Agence Bio, Key Numbers¹⁰). In 2012, institutional catering in France is 3 billion meals, 73 000 restaurants, a revenue of 17 billion, an average of 4% of annual growth for the private firms of institutional catering since 2000, and a total annual revenue growth of 0,4% (Ministry of

⁹ Historique de la restauration scolaire, www.ircen.com/_media/historique.pdf

¹⁰ <http://www.agencebio.org/la-bio-en-restauration-collective-les-chiffres>

203 Agriculture¹¹, 2014). The private market is really concentrated with a share of more than 80%
204 for the three biggest companies (Néorestaurant, April 2013).

205 There are two ways for French municipalities to provide school canteens services: in-
206 house provision with private suppliers for the ingredients, and delegated provision and supply
207 to a unique private firm. Those two alternatives differ in the control and flexibility of the
208 ingredients supply. Delegated provision of the meals implies also to delegate the supply chain.
209 The private partner handles the supply as it pleases her. The relationships with wholesalers or
210 producers is of her concern and can evolve during the implementation of the contract. She can
211 choose to switch from one supplier to a new one if she is not satisfied with the first one. The
212 supply is then very flexible as she can change her address book according to the will of the
213 municipality. If the municipality desires more organic food, she can satisfy this will quickly
214 without costly renegotiations.

215 In-house provision does not allow the municipality to do without auction since the
216 municipality still has to buy the ingredients to cook. The auction is divided into several lots,
217 generally to match the demand for local and organic food, or to attract some specialized
218 suppliers such as frozen food suppliers. Once the market is awarded to different suppliers, the
219 municipality has to deal with those suppliers and only with them. The municipality has the
220 obligation to buy a given ingredient from the supplier that has won the market for this
221 ingredient. The catalog cannot evolve with the demand of the municipality. For instance if the
222 municipality has not anticipated its demand for fresh seasonal local strawberries, it will not be
223 able to get some¹². As a consequence, adaptation costs to the demand are high since adaptation
224 necessitate to go through formal new auctions.

225 Those differences on the way to control and act on the supply chain have other
226 consequences on the scrutiny of the supply process. Since suppliers may change over the
227 implementation of the contract, the traceability of the ingredients is less easy in the delegated
228 case. The quality demanded for the food might be altered or diminished compared with the
229 objectives given by the municipality. On the contrary, the municipality that controls the supply
230 chain, that is the in-house governance, may not be able to switch dramatically its supply policy

¹¹ <http://agriculture.gouv.fr/guide-de-la-restauration-collective-favoriser-proximite-et-qualite>

¹² There are some exceptions to that rule. A municipality can buy food for special events (picnic, Taste week, etc.) to certain conditions, but it can affect the supply only temporarily and with no significant extent.

but its suppliers are known and identified over time. The supplier that delivers strawberries will always be the same. So the quality of the product is known as long as the market lasts.

The delegated governance is, then, less transparent than the in-house governance. The municipality may still ask for quality and traceability indicators, the cost of control are high especially as those controls would have to be done for each meal. Moreover, in that case the scrutinizers will have to trust both the municipality and the private firm that relays the information on quality. A documentary on institutional catering has shown that trust is not always conceivable (France 5, 2016¹³), especially when the mayor has been elected on a close race or is highly contested.

In sum, in-house governance rigidifies the supply chain for school canteens to the detriment of adaptability to the demand. This type of governance also imposes extra transactions costs as there are many partners and many contracts, and that those contracts must be much specified and should anticipate any variation in the demand. Thus, we propose that in-house governance for school canteens can be conceptualized as a rigid supply contract.

3 A Model of Contractual Rigidity Applied to Make-or-Buy

3.1 Model Description

Spiller (2009) identified the risk of third party opportunism as the key difference between public and purely private contracts. Third parties make the public authority cautious to mitigate political hazards when faced with potential contestation. This takes the form of more specified and rigid public contracts compared with a situation with no political hazards for the public authority. Following this intuition, Moszoro and Spiller (2012) modeled politicians' contractual choices in presence of political risks. Politicians adapt their contractual choices to mitigate hazards from opportunistic political opponents or pressure groups. We present their model adapted to the make-or-buy choice.

Moszoro and Spiller open the path to an application of their theory to Public Private Partnerships (2014, pp.17): "In the presence of TPO, public agents would pursue private provision of public goods mostly in projects where — assuming internalization of contract expenses by the public agent — expected political benefits gains from lower contract specification and better private management offset increased *ex ante* contracting costs related

¹³ Les casseroles de la Restauration Collective, 3 May 2016, France 5.

to compliancy with cost-benefit assessment and higher *ex post* rigidity related to Key Performance Indicators.” Internal provision thus serves to protect public officials from allegation of misuse of public denies in heavily contested political markets. This is supported by numerous reports on the inefficiency of privatization of public services in general (Economic Planning Advisory Commission 1995; Harris 1996; House of Representatives’ Standing Committee on Communications Transport and Microeconomic Reform 1997; Industry Commission 1996; Quiggin 1996), and for French institutional catering as well (Report of the *Cour des Comptes*, 1998, 2004, 2005; Arte, 2015; France 5, 2016). In that context, an in-house school canteens service is considered as more specific and rigid than externalization to a private firm.

As contract specifity and rigidity increase, the cost of the contract increase through contracting and implementation costs. Schwartz and Watson (2012) highlight the trade-off made by mayors between the gains for compliant performances and the costs of writing contracts. In Moszoro and Spiller’s model, public officials know the risk of opportunism and the expected cost linked to it, and thus adapt the rigidity of the contract to minimize total costs that encompass writing costs and political costs:

$$R^* = \arg \min_R [T_0 \rho(R) \tau(R) + K(P, R)]$$

$$P \in [P^{min}; P^{bud}] = K_{pr} | R^*$$

Where R is the rigidity of the governance mode. T_0 is third parties’ benefits from an opportunistic challenge, corresponding to the political cost for the mayor. ρ is the likelihood of opportunistic challenge that decreases in governance rigidity. τ represents the likelihood of success of an opportunistic challenge and also decreases in governance rigidity. K is third parties’ adaptation costs that increase expenses associated with the contract. It represents the cost to a public official of internalizing the school canteens service and is composed with public adaptation costs K_{pu} and adaptation costs bore by the private firm K_{pr} . P is the price of the service, which is between the minimum price economically sustainable for the private firm and the price budgeted for this service by the municipality.

Several hypotheses come with that model. First, T_0 is known to third parties but unobserved by the mayor prior to the realization of opportunistic behaviors. Second, the gains from an opportunistic challenge for third parties depends on the local political environment. A too fragmented political opposition decrease the potential gains from an opportunistic challenge. Similarly, there has to be a political opposition to have third parties opportunism.

This second hypothesis implies that third parties challenge the governance of the service only if the costs related to this challenge are lower than the expected benefits of this challenge:

$$\rho \equiv \Pr[\tilde{T}_0 \zeta \tau(R) > c(R)]$$

Where \tilde{T}_0 represents the parties' overall benefits from an opportunistic challenge, randomly and normally distributed. ζ is the concentration parameter of third parties competitive environment, comprised between 0 (infinity of political opponents) and 1 (bipartisan political market). Finally, c are the costs related to a challenge and increase with the rigidity R . These costs include funds mobilized for a campaign against the choice of governance, lobbying, reputational costs and time borne by the challengers.

Increasing the rigidity, thus, increases the costs of a challenge at the same time that it decreases the likelihood of a success of this challenge, making a challenge less profitable and consequently less likely.

3.2 Hypotheses: Governance Features under Political Contestability and Political Groups' Pressure

We argue that the choice of governance of public services impacts the flexibility and adaptation of the service to citizen's demands along with the discretionary power of the elected official, and thus, the challenges she may face. As a consequence whether a service should be procured in-house or externalized depends not only on the characteristics of the assets, public finances, or ideology, but also on the potential local contestation. As the risk of challenge and critics of the mayor's choices increase, the propensity of the mayor to internalize a public service also does in order to protect herself and her majority from harmful contestations.

In the model presented in section 3.1 the likelihood for a political opponent to challenge the mayor's choices will decrease with the level of rigidity of the feature of the public service. When the potential gains (\tilde{T}_0) from a challenger are high, the mayor should then choose a more rigid way to supply the service. These gains are potentially higher for politically contested cities that is to say in cities where the mayor has been elected on the edge, or where change in power are frequent. Indeed, for that case the local majority may switch during the next election if the mayor loses only few of her political supporters. She, then, will be more watchful as the risk to lose essential support become more serious leading to the following hypothesis:

Hypothesis 1 *Elected officials are more likely to provide the school canteens service in-house in politically contested municipalities.*

Moreover, the gains of a challenge have to be higher than the costs, but as the political opposition is atomized (ζ decreases) the potential gains from a challenge become less likely. Indeed, a challenge on a mayor's choice from a party might benefit to another one. Thus, we test the following hypothesis:

Hypothesis 2 *Elected officials are more likely to provide the school canteens service in-house in an aggregated political opposition environment.*

Furthermore, groups of organized citizens besides political parties are also able to challenge efficiently a mayor. Citizens do not have the same political sensitivity to every subjects, but most of them have only few programmatic points of the mayor's program that are able to make them shift their vote to another candidate or party. As one of the school canteens' main issues are about quality of the food, regarded as sustainable supply or sanitarian issues, we test the following hypothesis:

Hypothesis 3 *Elected officials are more likely to provide the school canteens service in-house where citizen's sensitivity to quality is high.*

Those groups have a higher influence in politically contested municipalities as their vote might have a higher effect on the incumbent's score, leading to test the following corollary:

Corollary *Elected officials are more likely to provide the school canteens service in-house where citizens sensitive to quality represent a relatively large group in politically contested municipalities.*

We now discuss our empirical methodology and the data used to test these hypotheses.

4 Data and Empirical Methodology

4.1 Data Description

To carry out this study, we built a dataset of municipal school canteens, local and national elections, as well as economic and demographic characteristics for the French region *Île-de-France*. We choose this region as it concerns 12 million inhabitants, being almost 20% of the French population, it is a very diverse geographic area with small (121 inhabitants) and large (2 million inhabitants for Paris) cities, rich and poor, from the left and the right, etc. Municipalities' characteristics are very heterogeneous in every aspect we are interested in. In this section we describe the dataset used in our empirical analysis.

In this article, we aim at analyzing the effects of political hazard on the choice of governance of local public services using the case of French school canteens, by considering an in-house service to be of the rigid type. To do so, we first had to collect the mode of governance of municipal school canteens as there are no aggregated data about it¹⁴. We used the municipalities' website to find the information between in-house and externalization for the 920 municipalities of *Île-de-France* that have a school, which we know thanks to the database *Base Permanente des Equipements 2012 de l'INSEE* that informs us about the number of school canteens in a municipality, if any. We managed to collect 703 mode of governance with that method, giving us 184 school canteens in-house and 519 externalized. The missing observations are mainly very small municipalities that do not have a proper internet website to exploit. We gathered under the 'in-house' label the municipalities that produce their own meals with municipal or intercommunal employees. We also gathered under 'externalization' the cities that buy their food or do a public private partnership, meaning that the private partner exploit the city's facilities to cook the meals, as we cannot distinguish between those two cases. It is not an important matter to us as a PPP is used when the mayor wants to externalize the service but still has facilities to be exploited. Moreover, we used those data to construct a Local Preferences variable to account for the influence of the neighboring municipalities on the choice of a mayor to 'make' or 'buy' the school canteen service:

$$Preferences_i =$$

$$\begin{cases} \frac{\text{Number of 'Make' in the Arrondissement}-1}{\text{Number of municipalities with school canteens in the Arrondissement}} & \text{if 'Make' = 1} \\ \frac{\text{Number of 'Make' in the Arrondissement}}{\text{Number of municipalities with school canteens in the Arrondissement}} & \text{if 'Make' = 0} \end{cases}$$

The electoral base used in this paper come from the French Home Office. We have the votes share per candidate and political label for the first and second rounds of 2014 and 2008 municipal election. For this latest, we only have the results for the municipalities with more than 3,500 inhabitants. We aggregate the left labels to obtain the ideological share of the left at the municipal election. We also generated a dummy for the municipalities with a voting system by elimination, which are the municipalities with less than 3,500 inhabitants in 2008 and 1,000 inhabitants in 2014. We also have the results for every municipality at the 2014 presidential election. Those databases help us to take into account the ideological drivers in the choice of

¹⁴ We would like to thank Catherine Pasquier (INRA) who has helped us to collect the data on the mode of governance. She made us win months of work.

the mode of governance for school canteens. We used this dataset to build our contestability variables.

We also use the database *Population et Aire* of the INSEE so we could build the variable *Complexity_i* that is the number of school canteens in the municipality divided by its superfcy, and have the population. We get unemployment data through the dataset *Chômage 2011* from the INSEE, and financial data thanks to Buso, Marty, and Tra (2014).

Finally, we got the third-parties dataset through *Familles* from the INSEE. We also collected data for the number of shops directly on the brand's website. Idem with the presence of an Agenda 21 at the municipal level¹⁵.

We now can test the link between mode of governance of school canteens service and political hazards faced by local political majority.

4.2 Empirical Strategy

Our goal in this article is to highlight the impact of political contestability and pressure groups on the mayor's choices regarding the governance of public services, particularly for school canteens governance. To test this idea, we use a logit model:

$$P('Make_i') = \alpha + \beta PC_i + \gamma X_i + \varepsilon_i$$

Where i represents a municipality, β a set of variables that measure the exposition of the elected mayor to political contestability, X is a set of control variables, and $P('Make_i')$ is the probability for a municipality to choose the 'make' mode of governance instead of the 'buy' one.

To estimate the coefficient on PC , we use a set of variables that captures the different hypothesis of 3.2. We define *MarginOver6* as follows:

$$\begin{aligned} &MarginOver6_{i,t} \\ &= \begin{cases} 1 & \text{if } W_{i,t} - RU_{i,t} > 0.06 \text{ for one - vote elections and with opposition} \\ 0 & \text{else} \end{cases} \end{aligned}$$

Where $W_{i,t}$ is the winner's vote share of the first round for the municipal election t of municipality i , and $RU_{i,t}$ is the runner-up parties' vote share at the same election. As a large margin of victory means more flexibility in the choice of governance, then *MarginOver6* shall decrease the propensity of the municipality to procure the school service in-house, *i.e.* to

¹⁵ Agenda21, Amap, Biocoop, Naturalia, La Ruche qui dit Oui !, Ventes à la ferme

‘make’. We put the value 0 to elections where the voter vote for several persons. That is to say for municipalities with less than 1,000 inhabitants in 2014 and less than 3,500 inhabitants in 2008. We have to do so because for those elections the first and second may have the same votes as they compete to be at the municipal council and not to be mayor.

We then define the Herfindahl-Hirschman Index *HHI* as follows:

$$HHI_{i,t} = \begin{cases} A_{i,t}^2 + B_{i,t}^2 + C_{i,t}^2 + D_{i,t}^2 + \dots & \text{for one - vote elections and with opposition} \\ 0 & \text{else} \end{cases}$$

Where $A_{i,t}$ is the vote share of the first candidate at the municipal election i at time t , $B_{i,t}$ is the vote share of the second candidate, etc. The Herfindahl-Hirschman Index accounts for the concentration of the political offer. The larger it is, the more the political power is concentrated. We should then observe a negative sign of its coefficient.

With the same variables, we also define the Residual Herfindahl-Hirschman Index:

$$ResidualHHI_{i,t} = \begin{cases} \frac{B_{i,t}^2 + C_{i,t}^2 + D_{i,t}^2 + \dots}{1 - A_{i,t}^2} & \text{for one - vote elections and with opposition} \\ 0 & \text{else} \end{cases}$$

Unlike the HHI, ResidualHHI is larger when the political market is not concentrated. We shall then observe a positive impact on the propensity to ‘make’ as the less concentrated a political market, the more rigid the mode of governance to prevent from opportunistic behaviors from the political opposition. We finally add the variables *NumberList_{i,t}* and *SquareNumberList_{i,t}* to take into account the number of lists in competition. They take the value 0 when they are not for one-vote elections.

Concerning the citizen potential contestations, we created a dummy of the presence of at list one organic shop or alternative distribution point:

$$Shops_i = \begin{cases} 1 & \text{if there is at least one organic or alternative shops in the municipality} \\ 0 & \text{else} \end{cases}$$

We also created a dummy for the case there are at least 2 organic shops or alternative distribution point, one dummy in case there is at least three of them, one dummy for the presence of a municipal Agenda21:

$$2PShops_i = \begin{cases} 1 & \text{if there is at least two organic or alternative shops in the municipality} \\ 0 & \text{else} \end{cases}$$

434

$$3PShops_i = \begin{cases} 1 & \text{if there is at least three organic or alternative shops in the municipality} \\ 0 & \text{else} \end{cases}$$

437

$$Agenda21_i = \begin{cases} 1 & \text{if there is a municipal Agenda21} \\ 0 & \text{else} \end{cases}$$

439 We also crossed this last dummy with *MarginOver6* to test the corollary:

$$Agenda21xMarginUnder6_i = Agenda21_i * (1 - MarginOver6_i)$$

441 Finally, we measured the percentage of families in the municipality *i* that have at least one
 442 children, *Families_i* that we also crossed with *MarginUnder6* to see if the importance of this
 443 pressure group is the same in contested and uncontested municipalities:

$$FamiliesxMarginUnder6_i = \begin{cases} Families_i & \text{if } MarginOver6 = 0 \\ 0 & \text{else} \end{cases}$$

445 We then get the following results.

446 5 Results

447 5.1 Descriptive Statistics

448 **Table 1:** Descriptive Statistics

| Variable | Mean | Std. Dev. | Min. | Max. | N |
|----------------------------------|---------|-----------|------|-------|-----|
| HHI ₂₀₁₄ | .2356 | .2245 | 0 | .7592 | 703 |
| MarginOver6 ₂₀₁₄ | .4552 | .4983 | 0 | 1 | 703 |
| ResidualHHI ₂₀₁₄ | .1870 | .2332 | 0 | .8565 | 703 |
| NumberList ₂₀₁₄ | 2.2034 | 2.2883 | 0 | 11 | 703 |
| SquareNumberList ₂₀₁₄ | 10.0839 | 15.7381 | 0 | 121 | 703 |
| Shops ₂₀₁₆ | .4822 | .5000 | 0 | 1 | 703 |
| 2PShops ₂₀₁₆ | .2319 | .4223 | 0 | 1 | 703 |
| 3PShops ₂₀₁₆ | .1280 | .3344 | 0 | 1 | 703 |
| Agenda21 ₂₀₁₆ | .1906 | .3931 | 0 | 1 | 703 |
| Agenda21xMarginUnder6 | .0541 | .2263 | 0 | 1 | 703 |

| | | | | | |
|------------------------------|--------------------|--------------------|---------|-----------------------|-----|
| Families | 43.4069 | 6.9843 | 18.6504 | 66.6414 | 703 |
| FamiliesxMarginUnder6 | 24.2067 | 22.6912 | 0 | 66.6414 | 703 |
| Service Firm (x1000) | 1312.66 | 4190.933 | 7 | 58063 | 703 |
| Preferences | .2491 | .1941 | 0 | .8889 | 703 |
| LeftPresidential2012 | .4147 | .1007 | .1390 | .7211 | 703 |
| LeftMunicipal2008 | .3115 | .4634 | 0 | 1 | 703 |
| DebtInhabitant2009 | 1.9480 | 9.6303 | -.0424 | 151.8824 | 703 |
| NotList2014 | .4083 | .4919 | 0 | 1 | 703 |
| Complexity | 1.2402 | 1.8866 | 0 | 12.5418 | 703 |
| UnemploymentRate2011 | 8.1508 | 1.6117 | 4.6 | 10.8 | 703 |
| Population2011 | 14,861.46 | 26,660.81 | 131 | 236,715 | 703 |
| SquarePopulation2011 | 9.31×10^8 | 4.20×10^9 | 17161 | 5.60×10^{10} | 703 |

5.2 Empirical Model

Every regression we made takes the control variables of the regression (1). Political variables are of the right sign and statistically significant. A left mayor in 2008 and the score for a left candidate at the last presidential election increase the propensity of the mayors to internalize the school canteen service.

Municipalities where voters elect the municipal council rather than the mayor, however, have a lesser propensity to internalize the service. This might be due to the fact that this variable also captures a population effect since those municipalities have less than 1000 inhabitants. We saw by adding this variable that the effect of the population is smaller than without. Still, the larger the population, the higher the propensity to internalize thanks to the exploitation of economies of scale. Yet, after a certain level this effect does not seem to work anymore and we see a non-linear effect of the population. It seems then that there is a minimum level of population needed to be able to exploit economies of scale. If we change the variable Population by the number of canteens in the city we obtain very similar results.

Another cause of modification of the choice of governance of the service highlighted by our model is the local preferences of privatization. That is to say that the propensity of a municipality to internalize the service is led by other municipalities' choices. Municipalities tend to imitate the behavior of the neighbors.

Moreover, as the complexity of the service increases, measured as the density of school canteens in the municipality, the propensity to externalize this service increases as well. More surprising, the propensity to internalize the service increases with the number of services companies. This might be explained by the fact that mayors enjoy a local expertise that enables them to internalize the service instead of exploiting the local firm competition. The municipalities then exploit the competition on the labor market rather than the competition on the firm market.

The amount of debt by inhabitants and the unemployment rate are of the expected sign but not enough significant. A larger debt at the beginning of the mandate implies a smaller propensity to internalize during the mandate, while higher unemployment rate increases the propensity to internalize so that the mayor have a higher control on local employment. We get similar results with the deficit. The sign of the coefficient tend to change and be less significant as long as we take the data closer to the next municipal election.

When testing the hypothesis 1 and 2 (Table 2), we find coefficients of the right sign, but not always significant. We correctly find that a higher concentration of the political market leads to less internalization of the service. HHI is close to being significant but it is not. However, a large margin implies less internalization as expected, and the propensity to externalize increases with the atomization of the political opposition. We then might say, accordingly with our hypothesis 1 and 2, that political contestation increases rigidity and consequently the propensity of mayors to internalize the school canteen public service. We obtain similar results with other measures of margins.

| Table 2: Political contestation and influence on the propensity to ‘make’ the municipal school canteens service <i>(Dependent Variable: ‘Make’=1 ; ‘Buy’=0)</i> | | | | | | |
|---|-----|-------------------|---------------------|------------------|-------------------|-----|
| | (1) | (2) | (3) | (4) | (5) | H |
| HHI₂₀₁₄ | - | -.2060 (-1.50) | - | - | - | 1-2 |
| Margin Over6₂₀₁₄ | - | - | -.0916** (-2.01) | - | - | 1 |
| Residual HHI₂₀₁₄ | - | - | - | .1629* (1.88) | .3498** (2.14) | 1-2 |
| Number | - | - | - | - | -.0537 | 2 |

| | | | | | | |
|--|---------------------|---------------------|----------------------|--------------------|---------------------|---|
| List₂₀₁₄ | | | | | (-1.32) | |
| Square Number List₂₀₁₄ | - | - | - | - | .0061 (1.14) | 2 |
| Service Firm (x1000) | .012* (1.72) | .0121* (1.74) | .0125* (1.79) | .0127* (1.81) | .0125* (1.79) | |
| Preferences | .5396*** (4.84) | .5371*** (4.82) | .5468*** (4.91) | .5375*** (4.83) | .5477*** (4.91) | |
| Left Presidential₂₀₁₂ | .6254*** (2.70) | .6323*** (2.73) | .6707*** (2.89) | .6128*** (2.65) | .6135*** (2.65) | |
| Left Municipal₂₀₀₈ | .1063*** (2.77) | .0995*** (2.57) | .0925** (2.37) | .1130*** (2.93) | .1094*** (2.83) | |
| Debt Inhabitant₂₀₀₉ | -.0027 (-1.29) | -.00287 (-1.39) | -.0029 (-1.38) | -.0027 (-1.30) | -.0031 (-1.39) | |
| NotList₂₀₁₄ | -.0745** (-1.96) | -.1638** (-2.32) | -.1445*** (-2.80) | -.0331 (-0.75) | -.0442 (-0.99) | |
| Complexity | -.0270* (-1.83) | -.0269* (-1.82) | -.0261* (-1.77) | -.0284* (-1.92) | -.0298** (-1.99) | |
| Unemployment Rate₂₀₁₁ | .0098 (1.06) | .0100 (1.07) | .00897 (0.97) | .0096 (1.04) | .0092 (0.99) | |
| Population₂₀₁₁ | .0035* (1.79) | .00319 (1.63) | .00332* (1.71) | .00287 (1.46) | .00217 (1.63) | |
| Square Population₂₀₁₁ | -.137 (-1.45) | -.129 (-1.37) | -.132 (-1.41) | -.106 (-1.12) | -.154 (-1.51) | |
| Observations | 703 | 703 | 703 | 703 | 703 | |
| Adjusted R ² | .2320 | .2334 | .2353 | .2348 | .2346 | |

In Table 3, we want to test the Hypothesis 3 and its corollary. First, we see that the number of organic shops and alternative way of distribution has an impact on the choice of governance of the school canteen service. Having at least one of such a shop on its territory increases the propensity to internalize the service. This is normal as there are such shops where the citizens are willing to buy in it. They are then more sensitive to the quality of the food and more willing to vote for an internalization of the school canteen service. However, once there

are more than one shop in the municipality, the propensity to internalize diminishes. This might be explained by two ways. First, when there is an important local offer of good quality of the food, then the citizens are less preoccupied with food at school since they still can have a good quality meal at home. Second, when those shops are well developed in a municipality, the trust toward the mayor and its relation to food might increase as she is considered to have attracted those shops. According to Spiller and Moszoro (2012), when trust toward public power increase, then rigidity decreases, and in our case it is the propensity to internalize that decreases.

Similarly, with equations (8) and (9), we see that an Agenda 21 seems to decrease the propensity to internalize. This might be because Agenda 21 is already a source of rigidity that do not need to be added in the mode of governance. Furthermore, we see that when the margin is low the Agenda 21 increases the propensity to ‘make’. This seems coherent since in that latter case, citizens sensitive to environmental issues are a swing electorate that could make the election. The mayor thus rigidifies the service to prevent those citizens to vote against her.

Equations (10) and (11) give another interesting result. Surprisingly, as the part of families with children increases in the population, the propensity to ‘make’ decreases when we would expect it to increase. In fact, we have to remember that the school canteen service is paid by every citizens through taxes. When the children are not a large part of the population then the mayor may reject the presumed over cost of internalization on the citizens with a limited impact on taxes. In the case where families with children are a large part of the population, the mayor should increase taxes by a lot since there are less people who contributes without benefitting of the service. Then, it is normal that the propensity to ‘make’ decreases with the increase in the part of families with children in the population. Nevertheless, when the margin is too low, the mayor cannot alienate the families with children, consequently the propensity to internalize increases with the part of families with children in the population in the case where there is a relatively high political contestability.

| Table 3: Trust, sensitivity to the environment, and influence on the propensity to ‘make’ the municipal school canteens service <i>(Dependent Variable: ‘Make’=1 ; ‘Buy’=0)</i> | | | | | | | | |
|---|-----|------------------|-------------------|-----|-----|------|------|---|
| | (1) | (6) | (7) | (8) | (9) | (10) | (11) | H |
| Shops₂₀₁₆ | - | .0580* (1.73) | .0849** (2.33) | - | - | - | - | 3 |
| 2PShops₂₀₁₆ | - | - | -.1060** | - | - | - | - | 3 |

| | | | | | | | | |
|---|---------------------|--------------------|--------------------|---------------------|---------------------|---------------------|----------------------|------|
| | | | (-2.32) | | | | | |
| 3PShops₂₀₁₆ | - | -.0832 (-1.44) | - | - | - | - | - | 3 |
| Agenda21₂₀₁₆ | - | - | - | -.0610 (-1.41) | - | - | - | 3 |
| Agenda21x Margin Under6 | - | - | - | - | .0898* (1.86) | - | - | Cor. |
| Families | - | - | - | - | - | -.0053** (-2.05) | -.0064** (-2.45) | 3 |
| Familiesx Margin Under6 | - | - | - | - | - | - | .0020* (1.95) | Cor. |
| Service Firm (x1000) | .012* (1.72) | .0125* (1.79) | .0123* (1.76) | .0126* (1.80) | .0129* (1.85) | .0113 (1.62) | .0116* (1.66) | |
| Preferences | .5396*** (4.84) | .5490*** (4.92) | .5579*** (5.01) | .5366*** (4.81) | .5419*** (4.87) | .5334*** (4.79) | .5404*** (4.86) | |
| Left Presidential₂₀₁₂ | .6254*** (2.70) | .6088*** (2.60) | .5947** (2.56) | .6456*** (2.79) | .6572*** (2.84) | .7123*** (3.04) | .7768*** (3.28) | |
| Left Municipal₂₀₀₈ | .1063*** (2.77) | .1034*** (2.69) | .1046*** (2.73) | .1049*** (2.73) | .0999*** (2.59) | .1173*** (3.03) | .1041*** (2.65) | |
| Debt Inhabitant₂₀₀₉ | -.0027 (-1.29) | -.0023 (-1.11) | -.0024 (-1.17) | -.0024 (-1.15) | -.0024 (-1.18) | -.0035* (-1.67) | -.0037* (-1.78) | |
| NotList₂₀₁₄ | -.0745** (-1.96) | -.0613 (-1.59) | -.0686* (-1.79) | -.0790** (-2.07) | -.0846** (-2.20) | -.0676* (-1.77) | -.1365*** (-2.63) | |
| Complexity | -.0270* (-1.83) | -.0275* (-1.86) | -.0277* (-1.88) | -.0255* (-1.72) | -.0251* (-1.70) | -.0325** (-2.17) | -.0327** (-2.19) | |
| Unemployment Rate₂₀₁₁ | .0098 (1.06) | .0108 (1.17) | .0099 (1.06) | .0105 (1.13) | .0111 (1.20) | .0127 (1.36) | .0118 (1.26) | |
| Population₂₀₁₁ | .0035* (1.79) | .00377* (1.80) | .0038* (1.87) | .0038* (1.95) | .00360* (1.85) | .00318 (1.63) | .00304 (1.57) | |
| Square Population₂₀₁₁ | -.137 (-1.45) | -.140 (-1.43) | -.142 (-1.48) | -.147 (-1.56) | -.137 (-1.46) | -.130 (-1.38) | -.128 (-1.36) | |

| | | | | | | | | |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|--|
| Observations | 703 | 703 | 703 | 703 | 703 | 703 | 703 | |
| Adjusted R ² | .2320 | .2344 | .2380 | .2331 | .2347 | .2355 | .2386 | |

523

524 6 Limitations and Prospective Research

- 525 - We noticed that ResidualHHI seems to ‘eat’ the effect of Population and the voting
- 526 mode on the choice of governance. This might be due to the fact that it takes the value
- 527 0 for small municipalities.
- 528 - Dig into the differences of voting mode.
- 529 - Do the regressions with election 2008.

530 7 Concluding Remarks

- 531 - Results coherent with ‘make’ being more rigid than ‘buy’ in the case of municipal
- 532 school canteens.
- 533 - Larger political contestability increases rigidity of the mode of governance of public
- 534 school canteens, whether it is because of close race or a large number of political
- 535 opponent.
- 536 - There are other ways of measuring political contestability than voting results.
- 537 - Political officials are more prone to do electoral gifts when they are in a close race and
- 538 that they cannot alienate some voters groups.
- 539 - Corruption might not be corruption but only protections against political hazard. A
- 540 mayor might favor a local supplier only because if he does not the contract would be
- 541 challenged.
- 542 - It can be extended to private firms. Indeed, a private firm needs to protect its image
- 543 against rumors or issues with a subcontractor. After the Bangladesh’s earthquake that
- 544 stroke the clothing manufacturing sector, some enterprises signed the constraining
- 545 Accord on Fire and Building Safety to show the efforts they are doing to the public.
- 546 - Make may not be always the specific-type contract, so this make-or-buy analysis should
- 547 be adapted to each case of make-or-buy rigidity.

548

8. Bibliography

Agence Bio, 2016. La Bio en France, des Producteurs aux Consommateurs. Les Carnets de l'Agence Bio.

Abhay Aneja & Marian Moszoro & Pablo T. Spiller, 2015. "Political Bonds: Political Hazards and the Choice of Municipal Financial Instruments," NBER Working Papers 21188, National Bureau of Economic Research, Inc.

Bel G., Fageda X. 2007. Why do local governments privatize public services? A survey of empirical studies. *Local Government Studies*, 33:4, pp. 517-534.

Bel G., Fageda X. 2009. Factors explaining local privatization: a meta-regression analysis. *Public Choice* 139, pp. 105-119.

Beuve Jean, Moszoro Marian, Saussier Stéphane, 2015. Political Contestability and Contract Rigidity: An Analysis of Procurement Contracts. EPPP DP No. 2015-2.

Buso Marco, Marty Frédéric, Tra Tran-Phuong. 2014. Public Private Partnership from Budget Constraints: Looking for Debt Hiding?

Chandler, T. D., & Feuille, P. (1994). Cities, unions, and the privatization of sanitation services. *Journal of Labor Research*, 15, 53–71.

Chong Eshien, Saussier Stéphane, Silverman Brian S. 2012. Water Under the Bridge: City Size, Bargaining Power, Prices and Franchise Renewals in the Provision of Water. EPPP DP No. 2012-05.

Crocker K.J., Masten S.E. 1996. Regulation and administered contracts revisited: Lessons from transaction-costs economics for public utility regulation. *Journal of Regulatory Economics* 9(1). pp. 5-39

Donahue, J. D. (1989). The privatization decision. Public ends, private means. New York: Basic Books.

Dubin, J. A., & Navarro, P. (1988). How markets for impure public goods organize: the case of household refuse collection. *Journal of Law, Economics, & Organization*, 4, 217–241.

Economic Planning Advisory Commission. 1995. Final Report of the Private Infrastructure Task Force. Canberra: Australian Government Publishing Service.

577 González Gómez, F., Picazo-Tadeo, A.J., Guardiola Wanden-Berghe, J. (2011): ‘Why do local
 578 governments privatize the provision of water services? Empirical evidence from Spain’. Public
 579 Administration, vol. 89(2), pp. 471-492.

580 Harris, A.C. 1996. Financing infrastructure: private profits from public losses. In Public/Private
 581 infrastructure financing: Still feasible? Sydney: Audit Office of NSW, Public Accounts
 582 Committee, Parliament of NSW.

583 House of Representatives Standing Committee on Communications Transport and
 584 Microeconomic Reform. 1997. Planning not Patching: An Inquiry Into Federal Road Funding.
 585 Canberra: Australian Government Publishing Service.

586 Industry Commission. 1996. Competitive Tendering and Contracting by Public Sector
 587 Agencies. Canberra: Australian Government Publishing Service.

588 Levin J., Tadelis S. 2010. Contracting for government services: Theory and evidence from U.S.
 589 cities. Journal of Industrial Economics, 58(3), pp. 507-541.

590 López-de-Silanes, F., Shleifer, A., & Vishny, R. W. (1997). Privatization in the United States.
 591 Rand Journal of Economics, 28, 447–471.

592 Montagnon Mathilde, France Bleu, 13 Octobre 2015.
 593 [https://www.francebleu.fr/infos/education/saint-etienne-des-menus-100-bio-la-cantine-mais-](https://www.francebleu.fr/infos/education/saint-etienne-des-menus-100-bio-la-cantine-mais-pas-assez-locaux-1444742187)
 594 [pas-assez-locaux-1444742187](https://www.francebleu.fr/infos/education/saint-etienne-des-menus-100-bio-la-cantine-mais-pas-assez-locaux-1444742187)

595 Moszoro, M. W. and Spiller, P. T. (2012). Third-party opportunism and the nature of public
 596 contracts. NBER Working Paper 18636, National Bureau of Economic Research.

597 Moszoro, M. W. and Spiller, P. T. (2014). Third-party opportunism and the theory of public
 598 contracts: Operationalization and applications. In Brousseau, E. and Glachant, J.-M., editors,
 599 The Manufacturing of Markets: Legal, Political and Economic Dynamics. Cambridge
 600 University Press, Florence.

601 Quiggin, John. 1996. Private sector involvement in infrastructure projects. Australian
 602 Economic Review (1st quarter):51–64.

603 Report of the Cour des Comptes. 1998. 2004. Chapitre XII (pages 643 à 670): Collectivités et
 604 organismes relevant du contrôle des chambres régionales et territoriales des comptes: Le
 605 Service public communal en Provence-Alpes-Côte d'Azur. « La gestion déléguée du service
 606 public communal de la restauration collective en Ile-de-France », rapport public 1998, pages

607 469 et ss.; « Le service public communal de la restauration collective en Provence-Alpes-Côte
608 d’Azur », rapport public 2004, pages 645 et ss.

609 Schwartz, A. and Watson, J. (2012). Conceptualizing contractual interpretation. Research Paper
610 447, Yale Law & Economics.

611 Spiller Pablo. 2009. “An Institutional Theory of Public Contracts: Regulatory Implications,” in
612 M. Ghertman and C. Menard, Eds. Deregulation or Re-regulation: institutional and other
613 approaches, Edward Elgar Publishing.

614

615

9. Data Sources

Agenda21: <http://www.agenda21france.org/agenda-21-de-territoire/agenda-21-local/communes.html?order=4>

Amap: http://www.amap-idf.org/trouver-une-amap_33.php

Biocoop: http://www.biocoop.fr/magasins-bio/Trouver-mon-magasin-Biocoop?postal_code=®ion=1047&department=0

Naturalia: http://www.naturalia.fr/entreprise/nos_magasins.asp

La Ruche qui dit Oui!: <https://laruchequiditoui.fr/fr/assemblies#10/48.4875/2.3305>

Ventes à la ferme: <http://www.acheteralasource.com/vente-directe-producteur/region-ile-de-france-1>; <http://www.bienvenue-a-la-ferme.com/>; <http://www.mon-producteur.com/recherche/91-essonne>

629 10. Annex

630 Equation (1):

| Source | SS | df | MS | Number of obs | = | 703 |
|----------|------------|-----|------------|---------------|---|--------|
| | | | | F(10, 692) | = | 22.20 |
| Model | 32.9985945 | 10 | 3.29985945 | Prob > F | = | 0.0000 |
| Residual | 102.842088 | 692 | .148615734 | R-squared | = | 0.2429 |
| | | | | Adj R-squared | = | 0.2320 |
| Total | 135.840683 | 702 | .193505246 | Root MSE | = | .38551 |

| Regie | Coef. | Std. Err. | t | P> t | [95% Conf. Interval] | |
|----------------------|-----------|-----------|-------|-------|----------------------|-----------|
| EtabService | .000012 | 6.99e-06 | 1.72 | 0.086 | -1.70e-06 | .0000258 |
| RegieARR | .5395695 | .1115198 | 4.84 | 0.000 | .3206118 | .7585273 |
| GaucheTl2012 | .6254174 | .2313881 | 2.70 | 0.007 | .1711104 | 1.079724 |
| Left2008 | .1062942 | .0384192 | 2.77 | 0.006 | .030862 | .1817265 |
| DPop2009 | -.0026768 | .0020684 | -1.29 | 0.196 | -.0067379 | .0013844 |
| DummyScrutinList2014 | -.0744917 | .0380585 | -1.96 | 0.051 | -.1492158 | .0002324 |
| ComplexitySuperficie | -.0270267 | .0147888 | -1.83 | 0.068 | -.056063 | .0020095 |
| TCHOMB1T12 | .0098273 | .0092867 | 1.06 | 0.290 | -.0084063 | .0280608 |
| Pop | 3.48e-06 | 1.94e-06 | 1.79 | 0.073 | -3.30e-07 | 7.29e-06 |
| Pop2 | -1.37e-11 | 9.42e-12 | -1.45 | 0.147 | -3.22e-11 | 4.81e-12 |
| _cons | -.2308958 | .1108363 | -2.08 | 0.038 | -.4485115 | -.0132801 |

631

632 Equation (2):

| Source | SS | df | MS | Number of obs | = | 703 |
|----------|------------|-----|------------|---------------|---|--------|
| | | | | F(11, 691) | = | 20.43 |
| Model | 33.3341642 | 11 | 3.03037857 | Prob > F | = | 0.0000 |
| Residual | 102.506519 | 691 | .148345179 | R-squared | = | 0.2454 |
| | | | | Adj R-squared | = | 0.2334 |
| Total | 135.840683 | 702 | .193505246 | Root MSE | = | .38516 |

| Regie | Coef. | Std. Err. | t | P> t | [95% Conf. Interval] | |
|----------------------|-----------|-----------|-------|-------|----------------------|-----------|
| HHI | -.2060359 | .1369898 | -1.50 | 0.133 | -.475002 | .0629303 |
| EtabService | .0000121 | 6.99e-06 | 1.74 | 0.083 | -1.59e-06 | .0000258 |
| RegieARR | .5370629 | .1114307 | 4.82 | 0.000 | .3182795 | .7558462 |
| GaucheTl2012 | .6322848 | .2312225 | 2.73 | 0.006 | .1783018 | 1.086268 |
| Left2008 | .0995177 | .0386478 | 2.57 | 0.010 | .0236366 | .1753989 |
| DPop2009 | -.0028763 | .0020708 | -1.39 | 0.165 | -.0069421 | .0011895 |
| DummyScrutinList2014 | -.1638307 | .0705278 | -2.32 | 0.020 | -.3023053 | -.0253561 |
| ComplexitySuperficie | -.0268688 | .0147757 | -1.82 | 0.069 | -.0558795 | .0021418 |
| TCHOMB1T12 | .0099636 | .0092787 | 1.07 | 0.283 | -.0082542 | .0281815 |
| Pop | 3.19e-06 | 1.95e-06 | 1.63 | 0.103 | -6.42e-07 | 7.02e-06 |
| Pop2 | -1.29e-11 | 9.42e-12 | -1.37 | 0.172 | -3.14e-11 | 5.62e-12 |
| _cons | -.1433819 | .1250919 | -1.15 | 0.252 | -.3889877 | .1022239 |

633

634 Equation (3):

| Source | SS | df | MS | Number of obs | = | 703 |
|----------|------------|-----|------------|---------------|---|--------|
| | | | | F(11, 691) | = | 20.64 |
| Model | 33.5934697 | 11 | 3.05395179 | Prob > F | = | 0.0000 |
| Residual | 102.247213 | 691 | .147969918 | R-squared | = | 0.2473 |
| | | | | Adj R-squared | = | 0.2353 |
| Total | 135.840683 | 702 | .193505246 | Root MSE | = | .38467 |

| Regie | Coef. | Std. Err. | t | P> t | [95% Conf. Interval] | |
|----------------------|-----------|-----------|-------|-------|----------------------|-----------|
| Marginp6 | -.0916286 | .0456988 | -2.01 | 0.045 | -.1813537 | -.0019034 |
| EtabService | .0000125 | 6.98e-06 | 1.79 | 0.074 | -1.21e-06 | .0000262 |
| RegieARR | .5467833 | .1113354 | 4.91 | 0.000 | .3281871 | .7653795 |
| GaucheT12012 | .6707177 | .2319876 | 2.89 | 0.004 | .2152326 | 1.126203 |
| Left2008 | .0924939 | .0389486 | 2.37 | 0.018 | .0160221 | .1689658 |
| DPop2009 | -.0028503 | .0020657 | -1.38 | 0.168 | -.0069061 | .0012056 |
| DummyScrutinList2014 | -.1445398 | .051601 | -2.80 | 0.005 | -.2458533 | -.0432262 |
| ComplexitySuperficie | -.0261233 | .0147635 | -1.77 | 0.077 | -.05511 | .0028634 |
| TCHOMB1T12 | .0089704 | .0092764 | 0.97 | 0.334 | -.0092428 | .0271837 |
| Pop | 3.32e-06 | 1.94e-06 | 1.71 | 0.088 | -4.91e-07 | 7.12e-06 |
| Pop2 | -1.32e-11 | 9.40e-12 | -1.41 | 0.160 | -3.17e-11 | 5.24e-12 |
| _cons | -.1692419 | .1147903 | -1.47 | 0.141 | -.3946215 | .0561378 |

635

636 Equation (4):

| Source | SS | df | MS | Number of obs | = | 703 |
|----------|------------|-----|------------|---------------|---|--------|
| | | | | F(11, 691) | = | 20.58 |
| Model | 33.5210288 | 11 | 3.04736625 | Prob > F | = | 0.0000 |
| Residual | 102.319654 | 691 | .148074753 | R-squared | = | 0.2468 |
| | | | | Adj R-squared | = | 0.2348 |
| Total | 135.840683 | 702 | .193505246 | Root MSE | = | .3848 |

| Regie | Coef. | Std. Err. | t | P> t | [95% Conf. Interval] | |
|----------------------|-----------|-----------|-------|-------|----------------------|-----------|
| ResidualHHI | .1628528 | .0867001 | 1.88 | 0.061 | -.0073746 | .3330801 |
| EtabService | .0000127 | 6.99e-06 | 1.81 | 0.070 | -1.05e-06 | .0000264 |
| RegieARR | .5374595 | .1113223 | 4.83 | 0.000 | .318889 | .7560301 |
| GaucheT12012 | .6128296 | .2310638 | 2.65 | 0.008 | .1591583 | 1.066501 |
| Left2008 | .112987 | .0385144 | 2.93 | 0.003 | .0373677 | .1886063 |
| DPop2009 | -.002674 | .0020647 | -1.30 | 0.196 | -.0067277 | .0013798 |
| DummyScrutinList2014 | -.0330853 | .0439218 | -0.75 | 0.452 | -.1193214 | .0531509 |
| ComplexitySuperficie | -.0284039 | .01478 | -1.92 | 0.055 | -.057423 | .0006153 |
| TCHOMB1T12 | .0096327 | .0092704 | 1.04 | 0.299 | -.0085688 | .0278342 |
| Pop | 2.87e-06 | 1.97e-06 | 1.46 | 0.145 | -9.89e-07 | 6.73e-06 |
| Pop2 | -1.06e-11 | 9.54e-12 | -1.12 | 0.265 | -2.94e-11 | 8.08e-12 |
| _cons | -.2658717 | .1121904 | -2.37 | 0.018 | -.4861467 | -.0455967 |

637

638 Equation (5):

| Source | SS | df | MS | Number of obs | = | 703 |
|----------|------------|-----|------------|---------------|---|--------|
| | | | | F(13, 689) | = | 17.55 |
| Model | 33.7938568 | 13 | 2.59952745 | Prob > F | = | 0.0000 |
| Residual | 102.046826 | 689 | .148108601 | R-squared | = | 0.2488 |
| | | | | Adj R-squared | = | 0.2346 |
| Total | 135.840683 | 702 | .193505246 | Root MSE | = | .38485 |

| Regie | Coef. | Std. Err. | t | P> t | [95% Conf. Interval] | |
|----------------------|-----------|-----------|-------|-------|----------------------|-----------|
| ResidualHHI | .3497753 | .1636921 | 2.14 | 0.033 | .02838 | .6711705 |
| NumberList | -.0536579 | .0404994 | -1.32 | 0.186 | -.1331749 | .0258591 |
| NL2 | .0060801 | .00533 | 1.14 | 0.254 | -.0043848 | .0165451 |
| EtabService | .0000125 | 7.00e-06 | 1.79 | 0.074 | -1.21e-06 | .0000263 |
| RegieARR | .5476708 | .1115916 | 4.91 | 0.000 | .3285705 | .7667711 |
| GaucheTl2012 | .6134779 | .231188 | 2.65 | 0.008 | .1595605 | 1.067395 |
| Left2008 | .1093901 | .038642 | 2.83 | 0.005 | .0335199 | .1852603 |
| DPop2009 | -.0030625 | .0022053 | -1.39 | 0.165 | -.0073924 | .0012674 |
| DummyScrutinList2014 | -.0442034 | .0446841 | -0.99 | 0.323 | -.1319367 | .04353 |
| ComplexitySuperficie | -.0298134 | .0149476 | -1.99 | 0.046 | -.0591617 | -.0004652 |
| TCHOMB1T12 | .0092201 | .009277 | 0.99 | 0.321 | -.0089945 | .0274347 |
| Pop | 3.54e-06 | 2.17e-06 | 1.63 | 0.103 | -7.19e-07 | 7.79e-06 |
| Pop2 | -1.54e-11 | 1.02e-11 | -1.51 | 0.131 | -3.55e-11 | 4.63e-12 |
| _cons | -.2532737 | .1126414 | -2.25 | 0.025 | -.4744353 | -.0321121 |

639

640 Equation (6):

| Source | SS | df | MS | Number of obs | = | 703 |
|----------|------------|-----|------------|---------------|---|--------|
| | | | | F(12, 690) | = | 18.91 |
| Model | 33.6127951 | 12 | 2.80106626 | Prob > F | = | 0.0000 |
| Residual | 102.227888 | 690 | .148156359 | R-squared | = | 0.2474 |
| | | | | Adj R-squared | = | 0.2344 |
| Total | 135.840683 | 702 | .193505246 | Root MSE | = | .38491 |

| Regie | Coef. | Std. Err. | t | P> t | [95% Conf. Interval] | |
|----------------------|-----------|-----------|-------|-------|----------------------|----------|
| PVzero | -.0579694 | .0335557 | -1.73 | 0.085 | -.1238528 | .0079141 |
| PVptrois | -.0831986 | .0579173 | -1.44 | 0.151 | -.196914 | .0305167 |
| EtabService | .0000125 | 6.99e-06 | 1.79 | 0.074 | -1.23e-06 | .0000262 |
| RegieARR | .5490221 | .1116351 | 4.92 | 0.000 | .3298369 | .7682074 |
| GaucheTl2012 | .608833 | .2338598 | 2.60 | 0.009 | .1496707 | 1.067995 |
| Left2008 | .1033756 | .0384299 | 2.69 | 0.007 | .0279219 | .1788292 |
| DPop2009 | -.0023227 | .0020974 | -1.11 | 0.269 | -.0064408 | .0017954 |
| DummyScrutinList2014 | -.0612705 | .0385574 | -1.59 | 0.113 | -.1369744 | .0144335 |
| ComplexitySuperficie | -.0275224 | .0147824 | -1.86 | 0.063 | -.0565463 | .0015016 |
| TCHOMB1T12 | .0108432 | .0092922 | 1.17 | 0.244 | -.0074012 | .0290876 |
| Pop | 3.77e-06 | 2.10e-06 | 1.80 | 0.072 | -3.42e-07 | 7.89e-06 |
| Pop2 | -1.40e-11 | 9.79e-12 | -1.43 | 0.153 | -3.32e-11 | 5.21e-12 |
| _cons | -.203196 | .111574 | -1.82 | 0.069 | -.4222612 | .0158693 |

641

642 Equation (7):

| Source | SS | df | MS | Number of obs | = | 703 |
|----------|------------|-----|------------|---------------|---|--------|
| | | | | F(12, 690) | = | 19.27 |
| Model | 34.103686 | 12 | 2.84197383 | Prob > F | = | 0.0000 |
| Residual | 101.736997 | 690 | .147444923 | R-squared | = | 0.2511 |
| | | | | Adj R-squared | = | 0.2380 |
| Total | 135.840683 | 702 | .193505246 | Root MSE | = | .38399 |

| Regie | Coef. | Std. Err. | t | P> t | [95% Conf. Interval] | |
|----------------------|-----------|-----------|-------|-------|----------------------|-----------|
| PVzero | -.0849326 | .0364443 | -2.33 | 0.020 | -.1564876 | -.0133776 |
| PVun | 0 | (omitted) | | | | |
| PVpdeux | -.1059593 | .0455857 | -2.32 | 0.020 | -.1954627 | -.016456 |
| EtabService | .0000123 | 6.96e-06 | 1.76 | 0.078 | -1.39e-06 | .000026 |
| RegieARR | .5578582 | .1113981 | 5.01 | 0.000 | .3391383 | .7765781 |
| GaucheT12012 | .5947039 | .2326254 | 2.56 | 0.011 | .1379653 | 1.051443 |
| Left2008 | .1045849 | .0383428 | 2.73 | 0.007 | .0293023 | .1798675 |
| DPop2009 | -.0024197 | .0020703 | -1.17 | 0.243 | -.0064845 | .0016452 |
| DummyScrutinList2014 | -.0686475 | .0382563 | -1.79 | 0.073 | -.1437603 | .0064653 |
| ComplexitySuperficie | -.0276547 | .0147445 | -1.88 | 0.061 | -.0566042 | .0012949 |
| TCHOMB1T12 | .0098569 | .0092762 | 1.06 | 0.288 | -.0083561 | .0280698 |
| Pop | 3.79e-06 | 2.03e-06 | 1.87 | 0.062 | -1.92e-07 | 7.77e-06 |
| Pop2 | -1.42e-11 | 9.65e-12 | -1.48 | 0.140 | -3.32e-11 | 4.69e-12 |
| _cons | -.1603825 | .1136535 | -1.41 | 0.159 | -.3835308 | .0627658 |

643

644 Equation (8):

| Source | SS | df | MS | Number of obs | = | 703 |
|----------|------------|-----|------------|---------------|---|--------|
| | | | | F(11, 691) | = | 20.39 |
| Model | 33.292836 | 11 | 3.02662146 | Prob > F | = | 0.0000 |
| Residual | 102.547847 | 691 | .148404988 | R-squared | = | 0.2451 |
| | | | | Adj R-squared | = | 0.2331 |
| Total | 135.840683 | 702 | .193505246 | Root MSE | = | .38523 |

| Regie | Coef. | Std. Err. | t | P> t | [95% Conf. Interval] | |
|----------------------|-----------|-----------|-------|-------|----------------------|-----------|
| Agenda21 | -.0609848 | .0433106 | -1.41 | 0.160 | -.1460208 | .0240513 |
| EtabService | .0000126 | 7.00e-06 | 1.80 | 0.073 | -1.16e-06 | .0000263 |
| RegieARR | .5365676 | .1114611 | 4.81 | 0.000 | .3177246 | .7554106 |
| GaucheT12012 | .6455536 | .2316658 | 2.79 | 0.005 | .1907003 | 1.100407 |
| Left2008 | .1048864 | .038405 | 2.73 | 0.006 | .0294819 | .1802909 |
| DPop2009 | -.0023903 | .0020769 | -1.15 | 0.250 | -.0064682 | .0016876 |
| DummyScrutinList2014 | -.0789766 | .0381647 | -2.07 | 0.039 | -.1539093 | -.0040439 |
| ComplexitySuperficie | -.0255373 | .0148161 | -1.72 | 0.085 | -.0546273 | .0035527 |
| TCHOMB1T12 | .0105347 | .0092937 | 1.13 | 0.257 | -.0077127 | .028782 |
| Pop | 3.80e-06 | 1.95e-06 | 1.95 | 0.052 | -3.55e-08 | 7.64e-06 |
| Pop2 | -1.47e-11 | 9.44e-12 | -1.56 | 0.120 | -3.32e-11 | 3.83e-12 |
| _cons | -.2372686 | .1108501 | -2.14 | 0.033 | -.454912 | -.0196252 |

645

646 Equation (9):

| Source | SS | df | MS | Number of obs | = | 703 |
|----------|------------|-----|------------|---------------|---|--------|
| | | | | F(11, 691) | = | 20.57 |
| Model | 33.5086991 | 11 | 3.04624538 | Prob > F | = | 0.0000 |
| Residual | 102.331984 | 691 | .148092596 | R-squared | = | 0.2467 |
| | | | | Adj R-squared | = | 0.2347 |
| Total | 135.840683 | 702 | .193505246 | Root MSE | = | .38483 |

| Regie | Coef. | Std. Err. | t | P> t | [95% Conf. Interval] | |
|----------------------|-----------|-----------|-------|-------|----------------------|-----------|
| Agenda21xMarginp6 | -.0897554 | .0483612 | -1.86 | 0.064 | -.184708 | .0051972 |
| EtabService | .0000129 | 7.00e-06 | 1.85 | 0.065 | -7.90e-07 | .0000267 |
| RegieARR | .5419433 | .1113307 | 4.87 | 0.000 | .3233562 | .7605303 |
| GaucheT12012 | .6571848 | .2316138 | 2.84 | 0.005 | .2024335 | 1.111936 |
| Left2008 | .0998584 | .038508 | 2.59 | 0.010 | .0242517 | .1754651 |
| DPop2009 | -.0024489 | .0020684 | -1.18 | 0.237 | -.0065101 | .0016122 |
| DummyScrutinList2014 | -.0845785 | .0383783 | -2.20 | 0.028 | -.1599306 | -.0092265 |
| ComplexitySuperficie | -.0250957 | .0147993 | -1.70 | 0.090 | -.0541527 | .0039614 |
| TCHOMB1T12 | .0111221 | .0092966 | 1.20 | 0.232 | -.0071308 | .029375 |
| Pop | 3.60e-06 | 1.94e-06 | 1.85 | 0.064 | -2.11e-07 | 7.40e-06 |
| Pop2 | -1.37e-11 | 9.40e-12 | -1.46 | 0.146 | -3.22e-11 | 4.76e-12 |
| _cons | -.2425617 | .1108194 | -2.19 | 0.029 | -.4601449 | -.0249784 |

647

648 Equation (10):

| Source | SS | df | MS | Number of obs | = | 703 |
|----------|------------|-----|------------|---------------|---|--------|
| | | | | F(11, 691) | = | 20.66 |
| Model | 33.6231475 | 11 | 3.05664977 | Prob > F | = | 0.0000 |
| Residual | 102.217535 | 691 | .147926969 | R-squared | = | 0.2475 |
| | | | | Adj R-squared | = | 0.2355 |
| Total | 135.840683 | 702 | .193505246 | Root MSE | = | .38461 |

| Regie | Coef. | Std. Err. | t | P> t | [95% Conf. Interval] | |
|----------------------|-----------|-----------|-------|-------|----------------------|-----------|
| Penfants | -.0052579 | .0025589 | -2.05 | 0.040 | -.0102819 | -.0002338 |
| EtabService | .0000113 | 6.98e-06 | 1.62 | 0.106 | -2.39e-06 | .000025 |
| RegieARR | .5334289 | .1113012 | 4.79 | 0.000 | .3148998 | .751958 |
| GaucheT12012 | .7123448 | .2346957 | 3.04 | 0.002 | .2515426 | 1.173147 |
| Left2008 | .1173278 | .0387044 | 3.03 | 0.003 | .0413355 | .1933202 |
| DPop2009 | -.0035069 | .0021028 | -1.67 | 0.096 | -.0076355 | .0006218 |
| DummyScrutinList2014 | -.0675993 | .0381181 | -1.77 | 0.077 | -.1424405 | .007242 |
| ComplexitySuperficie | -.0325097 | .0149938 | -2.17 | 0.030 | -.0619486 | -.0030708 |
| TCHOMB1T12 | .0127151 | .0093712 | 1.36 | 0.175 | -.0056843 | .0311144 |
| Pop | 3.18e-06 | 1.94e-06 | 1.63 | 0.103 | -6.39e-07 | 6.99e-06 |
| Pop2 | -1.30e-11 | 9.40e-12 | -1.38 | 0.167 | -3.15e-11 | 5.46e-12 |
| _cons | -.053701 | .14023 | -0.38 | 0.702 | -.3290289 | .2216269 |

649

650 Equation (11):

| Source | SS | df | MS | Number of obs | = | 703 |
|----------|------------|-----|------------|---------------|---|--------|
| | | | | F(12, 690) | = | 19.34 |
| Model | 34.1848954 | 12 | 2.84874128 | Prob > F | = | 0.0000 |
| Residual | 101.655787 | 690 | .147327228 | R-squared | = | 0.2517 |
| | | | | Adj R-squared | = | 0.2386 |
| Total | 135.840683 | 702 | .193505246 | Root MSE | = | .38383 |

| Regie | Coef. | Std. Err. | t | P> t | [95% Conf. Interval] | |
|----------------------|-----------|-----------|-------|-------|----------------------|-----------|
| Penfants | -.0064223 | .0026224 | -2.45 | 0.015 | -.011571 | -.0012735 |
| PenfantsxMarginm6 | .0020474 | .0010485 | 1.95 | 0.051 | -.0000113 | .004106 |
| EtabService | .0000116 | 6.97e-06 | 1.66 | 0.097 | -2.10e-06 | .0000253 |
| RegieARR | .5403596 | .111132 | 4.86 | 0.000 | .3221621 | .7585572 |
| GaucheT12012 | .7767712 | .2365319 | 3.28 | 0.001 | .3123625 | 1.24118 |
| Left2008 | .104077 | .0392174 | 2.65 | 0.008 | .0270772 | .1810768 |
| DPop2009 | -.0037423 | .002102 | -1.78 | 0.075 | -.0078694 | .0003847 |
| DummyScrutinList2014 | -.1365487 | .051903 | -2.63 | 0.009 | -.2384554 | -.034642 |
| ComplexitySuperficie | -.032749 | .0149639 | -2.19 | 0.029 | -.0621293 | -.0033688 |
| TCHOMB1T12 | .011816 | .0093635 | 1.26 | 0.207 | -.0065683 | .0302003 |
| Pop | 3.04e-06 | 1.94e-06 | 1.57 | 0.118 | -7.72e-07 | 6.85e-06 |
| Pop2 | -1.28e-11 | 9.38e-12 | -1.36 | 0.174 | -3.12e-11 | 5.65e-12 |
| _cons | -.0393071 | .1401394 | -0.28 | 0.779 | -.3144579 | .2358437 |