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The rollout of the multilevel governance system: a source of reworking the Contingent Valuation Method?

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The aim of this paper is to analyze the repercussions of a multilevel governance method (characterized by the joint production of public goods by several government level types) on the use of the Contingent Valuation Method (CVM). It is shown here that the CVM, conceived for a single-level governance system, is adaptable as a common tool to help with the public decision. Indeed it allows various public decision-makers to discuss the relevance of jointly producing public goods, from a shared basis. The difficulties of this application, due to the intrinsic complexity of the method, the highly unequal levels of expertise of actors and the reservations that it can provoke amongst some of the latter, are also analyzed.

Keywords: Valuation, Public Policies, Multilevel Governance, Individual Preferences, Monetization, Agreement to Pay, Public Decision

L'objet de ce papier est d'analyser quelles sont les répercussions d'un mode de gouvernance multi-niveaux, caractérisé par la production conjointe de biens publics par plusieurs types niveaux de gouvernement, sur l'utilisation de la Méthode d'évaluation contingente (MEC). On y montre que la MEC, conçue pour un régime de gouvernance mono-niveau, y est adaptable en tant qu'outil commun d'aide à la décision publique. **1.** Elle permet en effet aux différents décideurs publics de dialoguer sur une base commune de la pertinence de produire ensemble des biens publics. On y analyse également les difficultés de cette application du fait de la complexité intrinsèque de la méthode, de niveaux d'expertise très inégaux des acteurs et des réserves qu'elle peut susciter chez certains d'entre eux.

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Introduction

The search for efficiency in financing public goods is a central issue in economic analysis. The current climate of budgetary constraints gives even more importance to this drive for efficiency. It is necessary for public authorities to be able to fund public goods by taxing citizen-consumers. As Samuelson (1954) and the theory of public goods have demonstrated, the intrinsic characteristics of public goods, namely non-rivalry and non-exclusivity, have for effect that their production cannot be realized in an efficient way by the market. Their provision is the responsibility of the public authority who, by rolling-out public policy programs, look to satisfy the needs of citizens so to optimize social well-being. The decisionmaker should be, from this perspective, justifying the efficient use of public funds by responding to citizens' expectations. They must be able to measure the benefits and the social utility of the policies to be pursued, to know whether it is advisable to improve or to let go of certain programs. The Contingent valuation method (CVM) of the cost-benefit analysis, is part of this process. It bases the decision of a central public authority to produce public goods upon an ex-anté monetary evaluation of its utility for citizen-consumers. The CVM aims, thanks to questionnaires that citizen-consumers are invited to complete, to determine this monetary value of public goods. The aggregation of citizen-consumers' willingness to pay allows the identification, or not, of a social surplus sourced from public goods, by deducting the costs of producing these goods. Supported by the information gathered, the public decision-maker is supposed to be able to arbitrate for the production of different public goods, by retaining the most efficient solution in response to citizens' expectations.

The rollout of *multilevel governance* (MLG) is, however, a phenomenon that profoundly modifies the methods of assessment of this process of implementation of public policy. Regarding its deployment in Europe, MLG results in significant transfer of competences from states towards other levels of government (infra or even supranational). It is in this manner that, since the 1980's, the central state in France saw its powers reduced in two ways. On the one hand, the increase of EU powers came about by transfers of powers from the state to EU level and by the development of jointly funded public programs. On the other hand, the process of regionalization granted the French regions a growing capacity to lead their own territorial policies. (Bance, 2016).The loss of the state's sovereignty over public policy changes the procedures for allocating public goods: decisions are no longer taken by a central actor in sole possession of privileges which allow a response to citizens' expectations.

Decision-making is a product of several public actors who together must evaluate and decide on the programs to carry forward. So it is advisable to take into account the different public stakeholders (state, local and regional authorities, supranational decision-makers, even operators) to take decisions and to implement them. But in broader terms, in the system of MLG, it is about ensuring that, with the involvement of several actors, the evaluation centers upon an approach that is participative and involves collective learning (Monnier 1992), and to avoid the citizen appearing only *« like a watermark as « a recipient »* (Fabre *et al.* 2003 p.45).

The aim of this contribution is to specify in this context how the transformations induced by MLG modify the methods for implementing the CVM. It also concerns analyzing in what way the MLG could allow the evaluation by the CVM to be more participatory in its nature, while specifying that this does not completely remedy certain limitations of the method. This analysis will draw upon an empirical application relative to the adoption of education policies based in Normandy (France). The study is conducted by firstly explaining the characteristic traits of the roll-out of MLG, then by examining the leading repercussions on the conditions of undertaking public policy and its evaluation, particularly on the conditions for application of the CVM. Thereafter, the study will specify how the CVM can be adapted to a system of multilevel governance. Finally, the study examines the limitations that nevertheless remain, ,with the application of this methodology.

The rollout of the multilevel public governance system

For Christiansen (1996), multilevel governance is defined as, "non-hierarchical systems of negotiation, regulation and administration, going beyond the traditional acceptance of the hierarchical and sovereign state, as the ultimate arena for making decisions and resolving conflicts" (p.13). Currently this method of governance appears in many countries, as the reference model for making public decisions. In Europe, European construction has aroused the emergence of an "additional", supranational decision-making level, for implementing public policies. Transformations often double up as a process of decentralization, which strengthens the infranational decision-making level, for specifying and implementing public policies. France, known for its national, centralist tradition coming from Jacobinism, illustrates the breadth of the transformations which have thus been able to come about, through this dual movement of bringing the traditional supremacy of state authority into question. The increasing significance of European policies has firstly made national public policies lose a large part of their substance.

The majority of legal texts from EU countries are based on the transposition of European directives. Since the Single European Act (1986), policies that fell under the full sovereignty of the nation state have progressively been led and directed by Community legislation. With the laws, known as the Gaston Defferre laws of 1981 to 1983, the French state also lost a large part of its traditional prerogatives, in favor of regions that saw themselves equipped with their own authority to lead public policies. The a priori tutelage of the prefect on regions or departments has firstly disappeared to give way to a posteriori compliance monitoring. Transfers of authority have also been performed in areas of town planning, professional training and spatial planning. In the 1990s, regional authority was strengthened and extended to economic development (planning and scheduling of equipment). Since 2002, new authorities have appeared in the areas of heritage protection, development of ports and airports, preservation of air quality and natural reserves. More recently, regions were granted authority in the digital field, managing European programs and the monitoring and sustainable development of territories. The desire to equip regions with an ability to exercise fully this authority in 2016 has triggered the merging of the latter, with the main objective being to reach a critical size, which facilitates the rollout of tools and regional-own strategies, enabling these regions to act more effectively. Public policies, known as territorialized, are consequently transforming progressively into territorial policies (Autès 2005). The territory is no longer a simple space for applying public policies, but has become the place of their specification and their implementation by actors.

If the state still wants to preserve its prerogatives to manage public policies, it has lost the power to unilaterally impose its choices and must come to a compromise with its other public partners. Other public communities are thus able to lead their own policies, which are fundamentally different from those policies being carried out, or they should agree with how the national authorities carry them out. European authorities endeavor to make EU policy primacy prevail, by asserting their own interpretation of European texts. They can do this by mobilizing the powers of control and sanction on the states or other public communities, which are given to them by treaties. As contracting authorities and often project managers of their own policies, the infranational public powers themselves have the means to act. It is from this point, through discussions, negotiation and coordination of public policies that concrete policies must be developed and implemented rationally. The new method of governing public policy is henceforth, in France, as in Europe, but also in many other countries, the load-bearer of a pluralistic blueprint of "shared" co-construction and implementation of public policies (Bance 2016).

It makes new forms of specification and administration of general interest emerge, which claim to be "adjusted" to the territories and public policy needs, more democratic than that of the centralist model. Political arbitration must be able to take place by understanding citizens' preferences in a relevant way. In addition, the involvement of citizens in the decision-making process is supposed to be an important part of this, allowing the public authorities to lead a policy of offer of public goods better aligned with social needs.

A context suitable for the revival of decision-making processes and valuing public policy

With multilevel governance, it is a question of responding to new requirements from citizens regarding public policies: to be involved more directly in their development and their implementation. "Negotiation, persuasion and encouragement replace coercion as a method of public intervention" (Enjolras 2008 p.24). Public policies are indeed more strongly contested by knowledgeable citizens, who are better informed than in the past, and who consider themselves as hardly consulted. Multiple interactions with civil society are proving to be more necessary than before, particularly in the form of consultations and citizen contributions, involving individuals and representative organizations. But the interest in community governance is also to make a break with traditional dichotomy between, on the one side, the development, and on the other side, the implementation of public policies. The ongoing dialogue with partners of civil society is not only a way to co-construct the policy program, but also to adapt it during the implementation phase, to readjust the legislation, even to review the public policy by placing it closer to citizens' preferences. Citizen participation has, from this moment, a cognitive perspective, "an enrichment of the problem identification and deliberation phases, which are consequently no longer based on substantial and universal rationality, but are conceived in the form of distinguished logic, integrating the management of information" (Laroche and Nioche 2006 p. 99). And the involvement of citizens, who are forces of proposition, adaptation, inclusively managing public policies, is similar to a "common good", in other words, to revisit Ostrom's analysis (1990), a source of developing participative processes, based on community principles, in response to the needs of the people (Weinstein 2015).

In Europe, through the Maastricht Treaty (1992), then through the Lisbon Treaty (2009), the effectiveness of public policy has incidentally led subsidiarity to be given as a fundamental principle of the Union. This principle "consists of only reserving to the upper tier, what the lower tier could only do less effectively".

Despite this, the entanglement of different levels of authority and responsibility, which is the result of multilevel governance, is a source of major questioning about the methods of implementation and assessment of public policy programs. The development of the multilevel governance method does not fully remove what Barroche (2008) calls "very contemporary tensions between technocratic effectiveness and democratic community" (p.4). Authorities (in particular, infranational authorities) must acquire new abilities to access the necessary information and expertise to act effectively. The process, of course, is costly, and the source of uncertainty, as regards their ability to act effectively. Moreover, the process encourages them to re-center their policies on their own interest or on the interests of the community involved, to the detriment of a wider concept than general interest. This trend is amplified by the implementation of the New Public Management doctrine that centers the diagnosis of management on performance indicators specific to their own institution. In a context of budgetary rationalization, where transfers of authority from the state to regional or infraregional communities are made without compensation (at least partial) for the costs incurred, the re-centering of the strategy extends to being carried out more and more based on the sole interest of the latter.

Interaction between public authorities is therefore a source of potential tensions and conflicts that we can analyze like a set of actors in a coopetition context², in other words, characterized both by cooperation and competition. Regional, national and European public powers are indeed led to cooperate to implement public policy, according to the legislation defined by treaties and national texts. But they are also in competition in a dual role. On the one hand, they defend local, regional or national interests, which they support. National or regional strategies which look to benefit the advantages of the Union to the detriment of the partners, like when they look to attract productive activity by carrying out fiscal or social dumping are illustrations of this. On the other hand, competition happens between lower and higher levels of authority in defending their own desiderata. The history of the construction of Europe is thus defined by examples of political crisis conflicts, which have resulted from this. Strict controls that the European Commission exercises on state aid is another illustration of the desire of the supranational institution to make its policy prevail over other tiers of public authority. This new institutional context reminds us about the methods of valuing public policy as a tool for specifying the policies to implement. As with coopetition, how do we value the production of public goods and define their allocation in response to the needs of the people together? The methodology recommended by CVM is called into question.

² The concept, which comes from company strategy, was introduced by Noorda, then was popularised by Brandenburger and Nalebuff.

What are the impacts on applying the CVM?

The existence and interaction of actors and various levels of government calls into question the method of centralist specification of policies in which the ex-ante valuation of public policies, and more specifically, the CVM, fall into. These are indeed intrinsically based on, in particular, a theoretical reference source in which the central state is the decision-maker that questions citizens and consumers to decide on the social utility of public goods, to rank their production in order to best allocate them based upon their social utility. The state here is the sole custodian, perfectly rational, omniscient, unaffected by pressures and is itself able to express the general interest on the basis of preferences revealed by individuals. Methods of public policy and its valuation are different in the multilevel governance system: it should take into account the diversity of the decision-makers, their interactions, their links with people over territories to evaluate the relevance of producing public goods, in the framework of a "proximity governance" (Quermonne 2001).

All considered, the application of the CVM still remains relevant and topical. The new institutional context arouses, in public decision-makers, in particular infranational ones, a growing interest for economic valuation tools in their desire to claim ownership of economic analysis tools, to justify discussing their programs for producing public goods, on a solid basis, with the other decision-makers. Indeed, it encourages the development of skills in economic expertise enabling clearer decisions based on the understanding of citizens' preferences. The CVM can, in this institutional context be a tool, amongst other things, with which to lean on civil society and make the stakeholders jointly responsible for the development of public policy programmes, in the public decision-making process. It is in this way, a structured framework bringing ex ante information and discussions between stakeholders, which facilitates actors being jointly responsible in an open area for making decisions.

Applying the CVM invites each decision-maker to contribute to the process of specifying the public goods to produce, to specify the necessary concerns so that each level of government brings its own knowledge from the desired programs. It then enables the costs and benefits coming from alternatives to jointly led policy programs to be compared, to be explained and finally to respond as best as possible to the interests of the citizens. It brings elements of information that ensure it is in a position to define the common objectives to respond to the needs thus identified. Co-constructing public policies consequently relies on the ex-ante monetary valuation of programs, around common and shared tools, based on a recognized economic methodology. By participating, in the framework of ex ante valuation procedures to specifying considered program types and developing concerns over hypothetical scenarios, it is about considering the interest of the people in the territories as best as possible, by providing authorities sitting at a relevant level with powers enabling them to specify and effectively implement public policy. By measuring the monetary value of non-market public goods, based on individual preferences, this again relates to facilitating discussion and communication around the measure of social utility of public programs. The final decision can, with this in mind, be coconstructed by different levels of authority, the state, local decision-makers, even supranational authorities, discussed between themselves, on the basis of standard valuation criteria. The CVM, in this process, constitutes a tool that can fall into the framework of cooperative strategies to co-construct the public decision-making process, based on the common reference of standard economic analysis. But its methods of implementation are seriously challenged by two main factors: the diversity of the public decision-makers involved; the fact that citizens are not sufficiently included in the evaluative and decisionmaking process.

Renewed methods of implementing the CVM: applying them to a priority education program

To explain the renewal of methods of applying the CVM, which is a result of considering the multilevel context, we will specify, what remains unchanged in its foundations and in the implementation of the method, thereafter detailing what is modified. The CVM developed at the instigation of the federal government of the United states within the framework of the environmental policy and more particularly of the "Environment Protection Agency", being inspired by the founding works of Ciriacy-Wantrop 1947; Davis 1963; Randall, Ives, and Eastman 1974; Arrow and Solow 1993. Its expansion was large-scale, by virtue of being used by the American courts in the application of the following legislation: the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and especially by its large, worldwide diffusion. Thus Carson (2000), over a period of around thirty years on, more than 2000 studies of the contingent valuation concerning the natural assets in about forty countries.

The CVM consists in establishing hypothetical markets to assess the utility of public goods according to citizens where by respondents are given the prospect of a trade transaction. To do this, the principle of substitutability (Mäler 1974) based upon the "General purchasing power" of Hicks (1939) is applied to public goods that have no market price the individual arbitrates between the quality of the public goods and his consumption of other goods. The value associated with the public goods is linked to the individuals' perception of their quality. In this way, these hypothetical markets are understood, based on questionnaires in which public authorities question citizens - a sample of potential beneficiary consumers - on their Willingness to pay (WTP) to benefit from public goods. Equally, we can also look to understand the *Willingness to accept* from these citizens as compensation from a reduction in provision or quality of public goods. Traditionally, we carry out these questionnaires by a telephone survey, a "face-to-face" interview, or through the post. The quality of the questionnaire here is vital, as these questionnaires represent the "explanatory model of the value" (Bonnieux 1998 p.54). The public good being considered must be described correctly and must be comprehensible to citizens, in order to collect the preferences of citizens and consumers surveyed (Boyle, 2003). It is about using such surveys to have helpful information, enabling the authorities to choose which public goods to produce. By the aggregation of individual WTP (if necessary, Willingness to accept), the CVM indeed enables "the shadow price" of public policies to be measured monetarily, in a cost and benefit analysis perspective. The public decision-maker thus works out a social surplus or deficit (X), by calculating, for each program, the difference between the expected benefits shown (B) and its expected costs (C):

$$X = B - C$$

With a *social surplus* (X > 0), the public decision-maker can conclude that the public policy is socially desirable, therefore useful. In contrast, *a social deficit* shows that this policy is not desirable overall, and therefore useless.

The CVM is a measuring tool that also enables public decision-makers to compare public programs and rank them, based on social surpluses that we expect to draw-out from them. To help in making the public decision in a way that is relevant, the transposition of the CVM to the multilevel system assumes that four conditions are fulfilled. The first condition is that hypothetical scenarios give relevant information, which enables each decision-maker to make their decision, having a good understanding of the issue. The second condition is that each decision-maker is involved in developing scenarios, can give advice regarding the type of public goods to produce and concerns with decisions. The third is that the information supplied by questionnaires is of quality and therefore, must be comprehensible to citizens. Scenarios must, in this perspective, correspond to real needs in order to collect preferences from survey(s). It is essential, so that decision-makers can respond to the social demand, while exercising their responsibilities on an assessable basis. The last condition is to have the ability to break down social surpluses extrapolated between different levels of government, to enable each one to understand the costs and benefits of its contribution to producing public goods. Consequently, it is about enabling each one of the decision-makers to position themselves, based on information which is their own, as part of discussions and negotiations with other public actors.

To specify the methods of adapting the CVM to the multilevel system under these conditions, the results of a contingent valuation carried out in France, in the framework of a territorialized education policy are presented below (school support, cultural activities and hobbies, etc.), which fall under the city policy over two territories in Normandy (Chassy 2014). The experimental public policy program aims to measure the social utility of cultural support to disadvantaged people, by funding a Youth and Cultural Centre (YCC) in each area. It characterizes a stylized context, where multilevel public decision-makers co-finance the program, and subsequently want to measure ex ante its social utility as regards their own expectations. It is, in the framework of the multilevel system in question, co-financed by the state, urban communes (Rouen in Seine-Maritime and Evreux in Eure), departmental territorial communities (Departmental Council) and another public institution (Family Allowance Fund³). In this illustration, the amount of contributions from actors to create two YCCs is centered on regulations. The contributing share of communities outside of the communes cannot exceed 80% of the overall funding. The financial contribution of each one of the two cities is established here at $20\%^4$. However, this distribution, that could be called "ideal" for communes, is adjustable, according to the territories, since often resulting from negotiations beforehand between decision-makers. These negotiations are based on the project type, the extent of the needs identified over the territory of implementation and the funding plan developed within the limits set by legislation.

³ The *Family Allowance Fund* is distinguished by the fact that it is a public body of private law, which handles public funds mainly coming from the State.

⁴ According to the type of project, a percentage of contribution is set per funder. This is led by the State and the *General Local Authorities Code*. According to the CGCT, the community's participation must be no less than 20% of the total amount.

The two field surveys carried out with citizens from the areas of Rouen and Evreux have consequently enabled the agreement to pay for the program to be valued for citizens, and to distribute the surplus (benefit or deficit) between public actors. The results are as follows:

Boxed text: Calculation on two areas of social surplus or deficit expanded for the construction of a YCC in a multilevel system

Choice of hypothetical scenario

Territorialized education policies are known by education professionals, but hardly known by the general public. The theory here is that decision-makers have jointly identified, over the communes of Rouen and Evreux, a federative good, assessable, known, therefore adaptable to the people as a whole. The scenario for constructing a YCC here is positioned outside of the usual framework proposed as part of the contingent valuation studies. It is not about valuing the damage connected to the deterioration of a natural good, for example, but about funding the supply of a new educative good, aiming to improve priority education.

Modeling of the social surplus expanded by the construction of a YCC

The WTP obtained in the field survey (Chassy 2014) were obtained by telephone surveys (n = 192) and self-administered (n = 144) for a total of 336 households. The different scenarios (S1, S2, S3) aim to assess the impact of the location of the people surveyed on their acceptance or not to take part in the education program (YCC) and on the WTP amount. The level of contributions is calculated for households that are potentially beneficiaries of using the goods or not.

Starting from the theory that the cost obtained (C) for the city of Rouen or Evreux is sufficient to obtain a total positive benefit (X) from this program, we have valued the aggregated benefits (B), in other words, the sum of WTP_m for the households concerned by the program, with:

and:

$$B = \sum_{m=1}^{M} WTP_m$$

X = B - C

where WTP_m is the agreement to pay, which would actually be observed from household *m*, and *M* means the total number of households concerned by the good, estimated by the method shown:

 $B = M \times \overline{WTP}$

where \overline{WTP} means the average estimated agreement to pay in the sample.

In addition:

 $WTP_{1,m}$ the agreement to pay from households *m* that reside in the inter-municipality

 $WTP_{2,m}$ the agreement to pay from households *m* that reside in the commune

 $WTP_{3,m}$ the agreement to pay from households *m* which reside in the district

and indicators:

 $I_{1,m} = 1$ if the household *m* resides in the inter-municipality, 0 if not,

 $I_{2,m} = 1$ if the household *m* resides in the commune, 0 if not,

 $I_{3m} = 1$ of the household *m* resides in the district, 0 if not.

Then we have:

$$B = \sum_{m=1}^{M} \left[\left(I_{1,m} - I_{2,m} \right) \times WTP_{1,m} + \left(I_{2,m} - I_{3,m} \right) \times WTP_{2,m} + I_{3,m} \times WTP_{3,m} \right]$$

that we estimate by:

$$\hat{B} = \left[\sum_{m=1}^{M} (I_{1,m} - I_{2,m})\right] \times \overline{WTP_1} + \left[\sum_{m=1}^{M} (I_{2,m} - I_{3,m})\right] \times \overline{WTP_2} + \sum_{m=1}^{M} I_{3,m} \times \overline{WTP_3}$$

where $\overline{WTP_j}$ means the average agreement to pay for the scenario *j* estimated in the sample.

Comparative approach on the two areas⁵

Areas of study	Number of inhabitants	Number of households	Population concerned in the CBA		
Urban area of Rouen	405 308 (2009)	185 645 (2009)	125 374		
Urban area of Evreux	81 965 (2009)	34 974 (2009)	11 729		
City of Rouen	110 688 (2009)	60 271 (2009)	55 932		
City of Evreux	51 193 (2009)	23 245 (2009)	19 247		
La Grand'Mare district (ZUS)	11 164 (2006)	4 339 (2006)	4 339		
La Madeleine district (ZUS)	10 848 (2006)	3 998 (2006)	3 998		

Data <u>EQUICES</u>. National institute of the statistics and the economic studies (<u>Insee</u>) - Population concerned (CBA): number of <u>households</u> of <u>urban</u> area <u>outside</u> of the commune, <u>then</u> districts <u>outside</u> of the commune. <u>WTP</u>.; WTP S1 (€21,04) /WTP S2 (€30,24) / WTP S3 (€31,15) (<u>Chassy</u> 2014).

Cost		CBA S1	CBA S2	CBA S3	Enlarged social surplus	
Туре	Amount	Aggregated benefits	Aggregated benefits	Aggregated benefits	1	
štate (30%)	€252,000.00	€791,360.70	€507,415.20	€40,548	€1,087,323.90	
CAF (FAF) (30%)	€252,000.00	€791,360.70	€507,415.20	€40,548	€1,087,323.90	
General Council (20%)	€168,000.00	€527,573.80	€338,276.80	€27,032	€724,882.60	
City (20%)	€168,000.00	€527,573.80	€338,276.80	€27,032	€724,882.60	
TOTAL	€840,000.00	€2,637,869	€1.691.384	€135,160	€3.624.413	

Table 3 : Construction of a YCC in La Madeleine (Evreux) (average ATP)

Cost		CBA S1	CBA S2	CBA S3	Enlarged social deficit	
Туре	Amount	Aggregated benefits	Aggregated benefits	Aggregated benefits		
State (30%)	€630,000.00	€74,033.40	€174,608.70	€37,361.40	-€343,996,50	
CAF (FAF) (30%)	€630,000.00	€74,033.40	€174,608.70	€37,361.40	-€343,996,50	
General Council (20%)	€420,000.00	€49,355.60	€116,405.80	€24,907.60	-€229,331	
City (20%)	€420,000.00	€49,355.60	€116,405.80	€24,907.60	-€229,331	
TOTAL	€2,100,000.00	€246,778	€582,029	€124,538	-€1,146,655	

⁵ The Cost Benefit Analysis is based on the calculation of a static, single benefit, corresponding to the year of constructing a YCC. For lack of tangible information, we have not been able to include a discount rate regarding working expenses. The WTP amounts, known as used preservatives, come from the merging of two surveys, in order to grow the sample and improve the precision of estimates from the model parameter.

The program from the commune of Rouen gives a social surplus and Evreux's program gives a social deficit. By putting such differences in perspective, the public decision-makers have a tool to help with the decision, based on taking into account the utility expected from citizens to supply a "shared reflection and dialogue process" (Bommelaer et al. 2010 p.76). Thus, for the program concerning the commune of Rouen, the social surplus enables public decision-makers to observe that the production of the public good is desirable overall, to compare this programme to other programs and therefore identify the routes of improvement, taking into account the funding constraints. This acts as leverage for the program's social acceptability. A contrario, the results in the commune of Evreux push decision-makers to not retain the program in this area: the social deficit leads public decision-makers to consider that the production of this public good is not desirable. The allocation of resources, to each one, seems ineffective, since there is a decrease in social well-being. However, the opportunities of the CVM which have just been presented are based on a central hypothesis decision-taking falls under a common desire from different public decision-makers to claim ownership of the method to make it a common tool for co-constructing public policies and co-deciding linked with citizens. Yet, this is not necessarily the case, and that limits the impact of the method in a multilevel system.

The limitations of the CVM in a multilevel governance system

Two main limitations, sources of actors rejecting the CVM, call into question the benefits of the CVM in a multilevel governance system: one concerns the imbalance of competences and differences in opinion of decision-makers in a coopetition context; the other, the place of citizens in the decision-making process.

The first limitation concerns the characteristics of public decision-makers, whose actions fall into a coopetition environment. Each decision-maker works with their other public partners by rolling out a strategy guided by their own interests. And, as Peyrefitte (1998) underlines, "political decisions are only the result of actors' strategic behavior during the program's negotiation phase" (p.74). Strategic interactions "can be carriers of losses to wellbeing more or less large for the community as a whole" (Madiès *et al.* 2005 p.284). Imbalances in decision-makers'expert abilities are, however, very strong here regarding the CVM, which subsequently becomes an opportunity for actors having the best technical skills in asserting their supremacy.

The techniques for prioritizing programs, negotiation with other actors, as well as technical aptitude to capture the CVM, are indeed a lot better understood by the state (or by the supranational authority, such as the European Commission) than by other actors. However, certain infranational authorities mark their interest for this type of valuation, as well as a desire for effective implementation. According to Mouterde (2015), in France, "around 20% of the large cities practice systematic valuation, and have comprised a specialist cell or operation. 80% of regional councils and 40% of general councils also resort to this" (p.18). But their expertise capacity is often very far away from that of the state. For decision-makers of local communities, and in particular for the mayors of municipalities, the CVM is very technical, difficult to access, even inaccessible, due to the lack of availability and readily accessible skills to draw from it.

These decision-makers subsequently consider the CVM as too complex and hardly understandable. They feel even less interested by the method when the territory is small, the number of representatives low and the direct discussion with the people, comfortable. The responses made by those elected from the communes (urban and rural) during field survey interviews carried out on the implementation of priority education policy are, in this regard, clear. They show the difficult understanding, even the misunderstanding of local public decision-makers towards the CVM : "I do not understand this method really (urban mayor); can you define to me what you mean by the term: non-market public goods; I do not know about this way of working (suburban mayor)?"; "I have had problems in understanding the document [CVM presentation] (rural mayor)" (Chassy 2014 p. 270-271). We also note that the local elected representatives questioned have sometimes shown themselves as not very interested in the report on the possibilities in using the results that can emerge from it. This stance is also explained by the fact that applying the CVM is a source of diluting a major comparative advantage of local decision-makers: knowledge through a "direct community relationship" with citizens about their personal preferences. Consequently, they can see CVM as a hindrance to expressing their full prerogatives and a source of strengthening the capacity of the authorities which are the furthest away from citizens in prevailing over the set of actors, thus imposing their own strategy in the decision-making process. This is one of the major reasons which pushes the local decision-makers to refuse to take part and negotiate, based on the CVM.

Another reason for certain local decision-makers rejecting the CVM resides in the calling into question of principles of treating citizens equally, which can be due to its application. In processing the results of the field survey, the two areas of studies (previous boxed text) illustrate this perspective, through the effect of the size of the two urban areas (Rouen and Evreux). Rouen is the metropolis of Normandy, the most populated agglomeration in this region and the twelfth most populated agglomeration in France. Evreux, much more modest in size, is the fourth largest agglomeration in the region of Normandy. Yet, the more the number of households increases, the more the project has chances to extract *a social surplus*, whereas a low number of households is a source of *social deficit*. Indeed, if we reverse the number of households from the two programs, the diagnosis based on the city of Evreux is modified, as the following boxed text shows:

Boxed text: The impact on making the decision from the number of beneficiaries – the effect on the surplus of a reverse of the number of beneficiaries

For the YCC program in La Grand'Mare (Rouen): \notin 953,345 (number of households in Evreux) - \notin 840,000 = \notin 113,345 (*a diagnosis remaining a social surplus diagnosis*)

For the YCC program in La Madeleine (Evreux): $\notin 4,464,413$ (number of households (Rouen)) - $\notin 2,100,000 = \notin 2,364,413$ (going from a social deficit to a social surplus)

These results show that applying the CVM potentially brings inter-local authority tensions and conflicts (Bance and Chassy 2016). Its indiscriminate application can also provoke a surge in disputes, as regards a state that would no longer be, by application of the method, responsible for territorial equity and equality of citizens before the law. The method is also a source of calling into question the capacity of territorial communities in exercising their own authorities. The population from disadvantaged districts in low-population density areas would consequently be especially affected by the calling into question provisions for solidarity and social cohesion. These arguments are of the type which provoke, from an elevated number of decision-makers, a strong rejection of the CVM as a tool for helping to make the public decision. Crozier and Friedberg's analysis (1977) confirms this point of view, "if the rationality of a decision is not clear and unequivocal, it becomes a lot more difficult to maintain the rational model" (p.310). Not understanding the method, the potential tensions and conflicts between decision-makers is the source of blockages, particularly as the socioeconomic and electoral challenges are, in this regard, potentially strong. The second significant limitation of the CVM in a multilevel governance system, comes from the failings and the low impact of citizen consultation in such a decision-making process, while it specifically aims to base the public decision on their own preferences. This difficulty is positioned on two levels: in the development of questionnaires, more specifically hypothetical scenarios, by public decision-makers and the participation of citizens in the final decision.

As previously indicated, the scenarios must be credible, "at the risk of provoking responses without any real meaning" (Terreaux and Brahic 2009 p.132) and prove to eventually be unusable for public decision-makers. Bourdieu (1973 and 1980) considers, that the opinion marked by a questionnaire -is the result of an offer and a demand. Yet, on the offer side, we find for a CVM applied to the multilevel system, decision-makers having technical and political skills of a very different quality, which only makes their collaboration difficult, but also asks the question of the capacity to effectively develop clear and relevant questionnaires for citizens together. The variety of program-related concerns from actors, also radically complicates the correct specification of programs. On the demand side, the respondents also have very different aptitudes for both personal and social reasons, and have an interest for questions asked (capacity for processing information, sensitivity to subjects...). As Bourdieu (1973) indicates here once again, it is difficult to make the content of questionnaires accessible to a vast population. This is all the truer, as it is generally difficult to question the citizen beforehand in order to, develop hypothetical scenarios as part of a process based upon multiple multilevel public actors. Non-responses to questionnaires, in this regard constitute good indicators of difficulties in understanding that citizens can encounter regarding the scenarios proposed by public decision-makers.

A high rate of non-responses is subsequently a root of lack of information detrimental to the correct use of the survey results obtained from citizens. Nevertheless it would be advisable to place citizens at the center of the decision-making process by improving the technical quality of consultations with them and by ensuring their real involvement in taking the final decision. From then on it would be a matter of reconsidering the evaluative process so that citizens feel more concerned by, and are more involved in, this process. In this way the idea that citizens consider the CVM as an external process and fundamentally political decisionmaking could be avoided. To do so, it would be advisable, in the implementation of the CVM, to ensure that citizen participation is not limited to responding to questionnaires. It would be a case of ensuring that this participation can also take place upstream (for the development of questionnaires) and downstream by interaction with public decision-makers to lead to the final decision-making.

Boxed text: Understanding questionnaires in the survey about constructing a YCC

The rate of non-response, according to two methods of survey administration

According to the method of questioning, the results are as follows: 219 non-responses, which is 8.77% for the telephone survey; 333, which is 16.72% for the "self-administered" survey (Chassy 2014).

The general interpretation over the whole of the questionnaire⁶

The results obtained here in the field of education are those commonly observed in the traditional framework of environmental studies. The method suffers from a number of biases and methodological limits which reduce the reliability of the results. The main criticisms concern the collection and the interpretation of results and more particularly on the difficulty in placing individuals in hypothetical situations accurately reflecting the thoughts of the individual (Mitchell and Carson 1989; Diamond and Hausman 1993; Milgrom, 1993; Harrison 2002).

According to the experts⁷ from the *National Oceanic* and *Atmospheric Administration* (NOAA) Panel, the surveyor (here, public decision-makers) who carries out the questionnaire must prove that it is valid. However, the results are deemed not very reliable, if there is a significant rate of non-response (for the questionnaire as a whole, or the agreement to pay).

Generally, the non-responses remain few and far between, whatever the method of questioning. Nevertheless, we observe that on questions based on the monetary valuation of the program, and, more specifically, on two important questions, the rate of nonresponse tends to bring its validity into question.

The citizens' difficulty in responding to two questions based on the interest and monetary valuation of the program: an interpretation

- The two questions:
 - do you feel concerned by the program?

This questions aims to detect the level of interest of citizens and consumers in relation to the good valued (use of good, symbolic attachment even knowledge of the good). if, to achieve this socio-cultural structure, we decide to increase your local taxes (council tax, for example), would you be ready to pay?

This question asks those surveyed to place themselves in a hypothetical monetary valuation situation.

		%NA (P)	NA (SA)		Proportion equality test (p-value)			
Variables	NA (P)			%NA (SA)				
					Equal variances		Unequal variances	
Monetary valuation								
of the program								
Person concerned - scenario 1	11	5,73	26	18,60	0,0003 *	***	0,0008	***
Person concerned - scenario 2	6	3,13	25	17,36	0,0000 *	***	0,0000	***
Person concerned - scenario 3	14	7,29	18	12,50	0,1081		0,1206	
Funding - scenario 1	12	6,25	12	8,33	0,4646		0,4731	
Funding - scenario 2	5	2,60	21	14,59	0,0000 *	***	0,0002	***
Funding - scenario 3	18	9,38	20	13,89	0,1411		0,2083	

For the three scenarios outlined (1, 2 or 3), the rate of non-response is the same for the first, whatever the method of administering the survey. For the other scenarios, this rate is higher for the self-administered survey, with a more significant difference for scenario 2. This result, very certainly comes from the difficulty that the people questioned have in responding, with no help, to the question of valuing the public good (insufficient information, problem with understanding the hypothetical scenarios or capacity to have an opinion).

The differences in the rate of response seem to indicate a distinguished capacity of individuals in understanding the scenarios proposed and their socio-economic repercussions.

Yet, the resistance of the results of the CVM to compare alternative hypothetical scenarios strongly depends on them being well understood, which proves to be a subject of caution, when goods that are valued are badly understood in their effects on the daily life of individuals.

⁶ The robustness of the method can be tested by crossing several modes of survey (McClelland *et al.* 1993; Carlin 1994).
⁷ Experts responsible for this expert assessment work on the validity

⁷ Experts responsible for this expert assessment work on the validity of the CVM are: Kenneth Arrow, Robert Solow, Paul Portney, Edward Leamer, Roy Radner (economists) and Howard Schuman (sociologist) (all defenders of the method).

To finish, we will note that in a multilevel system it proves to be even more difficult than in a single-level system to include citizens in a final arbitration between public decision-makers: the diversity of actors adds complexity and technicality to the procedures at work. The responses given by elected representatives of communes (urban and rural) during field survey interviews, in this regard, show that certain local decision-makers are reluctant to involve citizens and doubt their abilities in involving them in decisions: "individuals are not pragmatic (suburban mayor)"; "this method brings into question the role of elected representatives. We can request people's opinion, but it is down to the elected representatives to decide (rural mayor)" (Chassy 2014 p. 272-273). A lack of final discussion from citizens in the decision-making process thus poses a risk of a radical rejection of final decisions made by the public authorities. This requires, even more so than in the single-level system, the need to complete the method in more complementary ways of taking citizens' preferences into account.

Conclusion

This article highlights two main results of the analysis of pubic decision-making under a multi-level governance system, characterized by joint decisions from different levels of government for the production of public goods. It shows that the CVM is useful in enabling the public authorities to decide together on the production of these goods. Secondly it specifies how the CVM can be adapted to this multilevel governance system according to an approach which nevertheless has certain limits.

The analysis reveals that this method of measuring the utility of public goods monetarily, based on the individual preferences of citizens, presents several types of interest in a multilevel governance system: offering a basis for the common specification of public goods as part of developing hypothetical scenarios; bringing common information to different levels of government to understand the social utility of public goods; enabling decision-makers from these levels of government to decide together on the public goods to jointly produce. So that this joint development process can be led to its conclusion, specific conditions are to be put together regarding the traditional use of the CVM in a single-level context. It is advisable that hypothetical scenarios can be jointly developed, while remaining relevant and understandable for surveyed citizens and also that the social surplus obtained can be understood by each level of government. Regarding this last point, this article shows how to, in the framework of fieldwork applied to public production for priority education, distribute social surplus by type of public decision-making actors.

It remains that the CVM presents significant limitations in a multilevel system, which compromises its operational bearing. By its very nature, the application of the method, in a context characterized by coopetition between public authorities, increases power asymmetry between infra and supra-territorial levels. Deep disparity in expertise capacity, understanding and technical mastery of the tool that constitutes the CVM between local territorial communities and upper-level authorities are its main reasons. Tensions and conflicts in levels of authority can subsequently occur and impede leading the decision-making process to its end through a refusal to take part by certain actors. Moreover, citizen preferences can find themselves paradoxically hardly considered, or highly revalued in this type of complex, multi-actor decision-making process, which is potentially conflictual and marked by asymmetry in authority and influence. The lack of comprehension shown by citizens regarding decisions made is of such a nature to limit the implementation of the CVM more still, as a public decision-making tool.

These results show that the methods of adapting the CVM to the multilevel governance context should be explored earlier, and this particularly under two perspectives: letting it fall into a community learning process, which facilitates its acceptability by decision-makers; positioning it as a tool to help in making the decision, associated with other methods of understanding the social utility for citizens.

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