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**“On line and off line participation at the local level: a first
quantitative analysis of the Catalan municipalities”**

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Abstract

This paper presents a first analysis on local electronic participatory experiences in Catalonia. The analysis is based on a database constructed and collected by the authors. The paper carries out an explanatory analysis of local initiatives in e-participation and off line participation taking into account political variables (usually not considered in this kind of analysis) but also classical socio-economic variables that characterise municipalities. Hence, we add a quantitative analysis to the numerous case studies on local e-participation experiences. We have chosen Catalonia because is one of the European regions with more initiatives and one that has enjoyed considerable local governmental support to citizen participation initiatives since the 80s. The paper offers a characterisation of these experiences and a first explanatory analysis, considering: i) the institutional context in which these experiences are embedded, ii) the characteristics of the citizen participation processes and mechanisms on-line, and iii) a set of explanatory variables composed by the population size, the political adscription of the mayor, the electoral abstention rate, age, income and level of education in the municipality. The model that we present is explanatory for the municipalities with more than 20,000 inhabitants but it is not for the fewer than 20,000 inhabitants. Actually, the number of participatory activities developed by these last municipalities is very low. Among all the variables, population size becomes the most influential variable. Political variables such as political party of the mayor and the local abstention rate have a certain influence but that have to be controlled by population size.

Key words: electronic participation, citizen participation, web sites, Information and Communication Technologies (ICTs), participatory processes.

1. Introduction

In the last decades, our representative democracies have been unable to maintain citizens convinced that existing institutions deserve acceptance and support. In this context of crisis, many institutional citizen participation initiatives, including those based on information and communication technologies (ICTs from now on), have been developed with the aim to revitalise democracy, increase transparency in the public management and spread new political communication and participatory spaces.

The local level of government has been a prolific arena for these activities. However these processes and their results have been heterogeneous and no data has been systematically collected on them. Thus, on the one side, it is necessary to elaborate a map with all the electronic participation experiences by municipalities. On the other side, it is crucial to analyse the factors that influence their deployment. In order to be able to approach this double objective this research is focused in Catalonia, one of the Autonomous Communities with more electronic initiatives and with greater governmental support¹ for citizen participation since the 80s.

Specifically, we will analyse: i) the evolution of the institutional context in which these initiatives are developed, ii) the electronic participation initiatives and mechanisms on line and off line (participation processes; interactive, deliberative and participative channels in local government web sites; and the consultative councils); and iii) the explanatory variables that influence the deployment of the initiatives (such as population size, the mayor political colour, the level of electoral abstention, age, income and level of education in the municipality)². We based the selection of the variables on the existing literature and its availability through public databases.

2. The State of the Art: Democratic Renewal through ICTs and Research on Electronic Participation.

As we mentioned before, in the last decades, some of the main actors and institutions of the representative democracy are suffering a constant loss of confidence by the citizenry. That is, democratic systems are experiencing difficulties to interact with the citizens and maintain their acceptance (Lipset, 1992). Some basic elements that exemplify this situation are: lack of interest in politics, the decrease in electoral turnout

¹ Mainly at the local level, but nowadays the support comes also from the Catalan government.

² These results are part of a research in progress. It is hoped that the scope of this study eventually analyse more explanatory variables and other Autonomous Communities in Spain.

since the 80s (in OECD countries), distrust towards institutions, authorities and representatives, and the fall of partisan and union affiliation (Dalton and Watenberg, 2000; Putnam 2003; Huse 2003; Hague and Loader 1999; Kaase and Newton, 1995; Clark and Inglehart 1998). In addition, new forms of participation are being developed, very frequently on the margins of or outside the institutionalised polity.

At the same time, public administrations are immersed in modernisation processes seeking to improve relations with the citizenship, offer more effective services and reduce costs. Throughout this process, social actors and citizens are starting to be integrated in decision-making and into public management, as a mechanism to increase effectiveness and favour implementation of policies (Riley, 2003; Goss, 2001; Kooiman, 2005; Brugué and Gomà, 1998). Thus a certain change on the citizen participation's image is taking place among politicians and officers in charge of public administration. It is considered that the elaboration and implementation of public policies cannot be made effectively without engaging the citizens, the groups and associations at stake.

In this context, the rise of ICTs is provoking numerous studies on its real influence for improving the relations between citizens and their representatives, for promoting citizen participation and for the changes within public administration. Following this interest, several studies have been carried out on local electronic participation. The local level is a privileged space for participation because this scale of government, so close to the citizenry, facilitates the dialogue between the actors (Schneider, 2007). Also individual citizens' commitment to the local agenda is more frequent than to the national one (Parry, 1992; Mabileau et al, 1989).

Nevertheless, empirical studies are scarce due to their technical difficulty and the fact that these e-participation initiatives are very recent in time. In Spain, few studies have been carried out and most of them are focused on specific cases: C. Ramilo (2003) has examined several electronic participation initiatives led by Basque local governments; I. Martín (2005) and Martín et al. (2006) have analysed the local electronic forums called "Ciudadanos.net"; C. Colombo (2006) has studied a Catalan digital platform called "Consensus"; R. Borge (2006) has classified and evaluated diverse local experiences in Spain; and Barrat and Reniu (2004) and Reniu (2005) have studied the "Madrid Participa" and "Hortaleza2004" experiences.

On the other hand, up until now, quantitative studies with a representative sample of cases are even more scarce: J. Ignacio Criado (2004) has analysed the city councils'

web sites in the Autonomous Community of Madrid and M. Salvador and his team (2004) have studied the Catalan city councils' web sites. These studies analyse in detail interactive channels, administrative functionalities and services offered in the city councils' web sites.

Both type of studies -those based on specific cases and the ones based on a representative sample- are basically descriptive or evaluative. That is, these studies describe the main characteristics of the participatory experiences and the functionalities in the web sites or evaluate the good practices contributing to favour communication or participation. However, they do not include explanatory variables and only J. I. Criado or M. Salvador's analysis shows empirically the important influence of population size on the development of web sites.

But apart from these empirical studies, some theoretical and compilation efforts have been made in Spain with the objective of ordering the explanatory factors affecting local political participation initiatives, both on line and off line. C. Colino and E. del Pino (2003) have examined the evolution of local participatory experiences in the last two decades in Spain, Germany, France and United Kingdom. Although their study analyses citizen participation off line, many of the explanations compiled could be applied to e-participation. R. Borge (2007) has collected and ordered the explanatory factors influencing ICTs' usages by political institutions and actors. Borge agrees with Colino and del Pino that apart from national and local socioeconomic and cultural characteristics, political factors are very influential. These factors can be institutional (constitutional status and level of decentralisation, local government's attributions and competences), ideological (local government's political colour) and strategic (electoral competition, benefits foreseen by the city council, actors' objectives, coalitions in government, role of the opposition, etc.).

In this sense, it is necessary to make reference to other empirical literature about off line participation's explanations, which shows the importance of political variables. In Spain, I. Blanco and J. Font (2005) have analysed 15 Catalan municipalities and 7 municipalities from the rest of Spain. This study considers factors belonging to the municipality³, the ideology of the parties and people who initiate participatory processes, and the strategic reasons to do it so. There are also case studies such as the one carried out by C. Schneider (2007), which analyses the conditions and factors

³ Among the local factors and in addition to municipality size, there are also political variables such as electoral abstention (in the sense that the impulse for participation can be related to governmental interest in reducing abstention), electoral competition and the existence of technical, logistic and financial networks that support participatory initiatives.

affecting institutionalised off line citizen participation in Buenos Aires and Barcelona. This study also emphasizes the relevance of institutional political factors (degree of autonomy, competencies, resources), ideological factors (city council's political colour) and strategic ones (political conflict or fragmentation, leadership).

Outside Spain, among the descriptive and classificatory studies on electronic initiatives, Coleman and Gøtze's (2001) report stands out. In addition, there are some few research groups doing comparative studies on local electronic participation and with explanatory intentions (Pratchett et al., 2006, Pratchett, 2007; Jensen et al., 2005, 2007; Peart and Ramos, 2007). All these teams take into account not only the classical socioeconomic variables, but also political factors, both institutional or more strategic and circumstantial.

In this context, our objective is to collect and describe systematically the local participatory experiences (either electronic or in person) taking place in Catalonia and to explain them considering socioeconomic and political variables. We wish to make a contribution to the literature mentioned above and to add a quantitative analysis to the already existing case studies in Spain.

3. Recent local government's evolution in Catalonia and Spain: the institutional context for participation.

In Spain, since 1995 local administrations have reinforced their capacities, functions and resources due to political and legal changes but also to a mentality change (Colino and Del Pino, 2003: 11). On the one hand, principles of subsidiarity and decentralization are being applied throughout, while new laws for the modernization of local government have been passed by the autonomous and central Parliaments. On the other hand, city councils have become aware of their strategic position and influence in relation to public policies and to citizens' welfare, so they strongly claim for more financial and legal resources. The reinforcement of local administrations' agenda, strategic roles and its control over public policies have, consequently, led to the development of different participatory initiatives.

With respect to the legal framework that has accompanied and, in numerous cases, encouraged the process referred to above, it has to be noted that the 1978's Spanish Constitution conceives participation as both a fundamental citizen right and duty of a public institutions. However, governments do not have the obligation to impel citizen

participation processes in public decision making. For this reason, in practice, the development of participatory initiatives depends to a larger extent on the will of governmental teams (Paricio, 1999).

However, in the last years important legislation, measures, and regulations that support participatory processes have been adopted at different levels of government in Spain. Of all these measures, emphasis should be given to two. The first is the law 57/2003 of Measures of Modernization of the Local Government⁴, which modifies the 1985's Law of Bases of Local Regime. Law 57/2003 sets up specific participatory mechanisms and processes that municipalities should carry out: a consultative City Board which includes individual citizens, participatory budgets, better communication channels with the citizens through ICTs, a Commission for collecting and solving complaints and suggestions, popular petitions and consultations, etc.

The second measure that deserves special attention is the Orders of the Generalitat of Catalonia⁵ that establish financial and technical support to local plans of participation and to the use of ICTs for participatory purposes. The first Order dates from 2005, but also it has been issued again in 2006 and 2007 and it is intended to continue in future years. This support is provided for the municipality to be able to develop a strategic planning for citizen participation including the regulation of participation, setting up City Boards, and the development of projects and instruments specifically based on ICTs. The Department of Institutional Relations and Participation offers this financial aid every year and also awards prizes for democratic innovation. That is, prizes are awarded to the best local initiatives in citizen participation. In 2006, this Department financed 309 municipalities for the development of participatory processes, 6 of which received the prize for the best participation experiences.

In addition, since the 90s the *Diputació de Barcelona*⁶ and numerous city councils have enacted different regulations for promoting citizen participation. The existence of knowledge and technical networks that have given support to the municipalities has been particularly important (Blanco & Font, 2005)⁷. For example, the large majority of

⁴ Law 57/2003, 16th December, 2003, of Measures of Modernization of the Local Government. Available on line at: <http://www.boe.es/boe/dias/2003/12/17/pdfs/A44771-44791.pdf>

⁵ 1st Order REP/119/2005, 14th March, 2005.

Available on line at: <http://www.gencat.net/diari/4357/05067212.htm>

⁶ The "Diputació" of Barcelona is a kind of provincial government which main attribution is to help municipalities.

⁷ Some institutions have become the first driven force of these networks: a governmental institution ("Flor de Maig" Patronage of the Diputació de Barcelona), a private foundation (Fundació Jaume Bofill) and the Postgraduate Programme on Citizen Participation (at the Autonomous University of Barcelona).

the municipalities currently belong to *Localret*, a consortium for the local development of ICTs and the exchange of know-how, which is supporting an important digital platform for citizen participation called *Consensus*.

In Catalonia, the existence of numerous local participatory experiences “in person” (or off line) has created a good environment for using ICTs for participation. Nowadays, ICTs are being used to support in-person initiatives (intranets, information provision and agendas, forums and surveys on “in-person” processes) but they also constitute new channels for participation (electronic voting and consultations, electronic debates and forums about new plans on local development of information society, etc.). The already mentioned platform *Consensus* is currently used by 70 municipalities and is a good example of how web sites and the Internet can help and improve “in-person” participation⁸.

In conclusion, in Catalonia there are numerous participatory initiatives on line and off line but also there are networks for cooperation and exchange, a common general strategy for the development of participation defined by the Catalan government, financial resources for participation, and a basic political consensus for maintaining the participatory initiatives. It can be said that Catalonia is reaching the same level of promotion, organization, and extension of participation as Germany or Great Britain (Colino and Del Pino, 2003: 22-23).

4. Methodology

Citizen participation refers to any voluntary action by citizens more or less directly aimed at influencing public decision making and the management of collective affairs (Verba, Schlozman and Brady, 1995). In this sense, citizen participation could be understood as taking part in those public affairs that affect society as a whole. Therefore, local citizen participation is aimed at influencing public decisions affecting the reality of the municipality. We will analyse on line and off line initiatives⁹ and the functionalities of the web sites developed by Catalan local governments seeking to engage citizens into public decisions. The time frame analysed will be from 2000 until

⁸ "Consensus" is a project that was initiated in 2000 by the Fundació Jaume Bofill, the Localret Partnership and the Catalan Institute of Technology. It is a shared interactive tool that provides information and allows consultation, debate and citizen participation through the municipalities' web site. See the new edition at <http://www.consensus.cat> and the previous ones at: <http://www.e-consensus.org>).

⁹ We regarded as off line initiatives the processes and experiences that included at least two electronic elements: for example, a contact e-mail and the possibility of downloading documents.

July 2007¹⁰. The participatory initiatives and processes can be very varied: from participating in urban plans or into the municipality's budget to specific activities related to the promotion of women or the young people, etc... The initiatives or processes can also be continuous or limited in time.

4.1. Variables and hypothesis.

Specifically, the study analyses the following variables:

1.- The dependent variables are:

- a) Local on line and off line initiatives or processes, whose compilation has been made basically from the information available on the web sites of city councils or belonging to municipalities. In addition, this compilation has been completed with information from the databases developed by the IDIGOL from the Catalan government¹¹ and the OIDP from Barcelona's City Council¹².
- b) Consultative Boards, or formal citizen participation organs for consultation –not necessarily for decision- that get together representatives of the associations, elected officers, municipal technicians and individual citizens.
- c) City council's web site functionalities and channels for interaction and participation. The functionalities and channels collected are: mailbox for complaints and suggestions, mailboxes or electronic mails addressed to the alderman, the mayor or the city council in general, mailboxes or electronic mails associated to online services, debate forums, blogs, surveys and online consultations.

2.- The explanatory variables are sociological, economical, and political. We try to gather the main explanatory factors of the generation and diffusion of electronic and "in person" citizen participation processes that have been described in the literature. Information has been compiled from databases of the Spanish National Statistics

¹⁰ In 2000 the number of Internet users in Catalonia arrived to 30% of the population over 15 years old and this number can be considered as a minimal threshold of ICTs implementation. From then until now the number of users surpassed 40% of the population (IDESCAT, <http://www.idescat.net>).

¹¹ IDIGOL (Democratic Innovation and Local Government of Catalonia) database is available on line at <http://www16.gencat.net/idigol/cat/main.htm>

¹² OIDP (International Observatory for Participative Democracy) database is available on line at <http://www.oidp.net>

Institute (INE)¹³ and the Catalan Statistics Institute (IDESCAT)¹⁴. The following variables will be analysed:

- Municipality size: the hypothesis guiding the analysis is that the greater the population size, the greater the probability of finding municipalities with citizen participation initiatives (Salvador et al, 2004; Criado, 2004; Blanco and Font, 2005; Brown and Schelin, 2005).
- The political composition of the municipal government. We use the proxy of the mayor's party. The literature shows that usually the municipalities with more initiatives belong to the left (Blanco and Font, 2005; Colino and Del Pino, 2003; Schneider, 2007)
- Percentage of electoral abstention in each municipality in local elections. Blanco and Font (2005) point out that municipalities with higher abstention rate develop more initiatives, maybe because the city council or the mayor try to regenerate the participatory culture in the municipality.
- The sociological, economic and cultural context given by the level of education (measured by the percentage of population with a university degree), the citizens' employment status (measured by the percentage of citizens with a job), family income per capita and average age .

4.2- The sample

In 2006 Catalonia had 946 municipalities. Fifty-two percent of these municipalities have less than 1000 inhabitants. Despite the spread of small municipalities, however, 89% of the population is concentrated in municipalities with more than 20000 inhabitants and 55.5% in municipalities of more than 50000 (see Table 1). Taking these data into account, for this research we decided to study all municipalities with more than 20000 inhabitants and take a sample of the municipalities with a population between 1000 and 20000 inhabitants. The smallest municipalities (less than 1000 inhabitants) were not included due to the difficulty of analysing this group, often without web sites.

We considered very important to analyse the municipalities with populations between 1001 and 20000 inhabitants because the systemic information drawn from this

¹³ <http://www.ine.es>

¹⁴ <http://www.idescat.net>

municipalities is scarce in comparison to municipalities with larger populations. On the other hand, surveys from the Observatory of Information Society (OBSI) (2003, 2004, 2006) indicate that the threshold in Catalonia for the development of participation and deliberative channels within web sites remains at 20,000 inhabitants. Also, other studies made not only in Catalonia but also in Spain and other countries¹⁵, show that population size is a determining factor for the development of web sites, online services and channels of interaction. Therefore, we have selected the municipalities for our sample following standard population sections. This kind of selection will allow us to check the explanatory weight of population size¹⁶.

The composition of the sample, as we can see in Table 1, includes 123 municipalities distributed along 4 population groups. All the municipalities, that is, the whole universe, were selected inside the group from 20,001 to 50,000 and the group from more than 50,001 inhabitants. With respect to the group from 5,001 to 20,000 and the group of less than 1,000 inhabitants, a sample was chosen inside each group according to systematic procedures that seek to select a similar number of municipalities with initiatives and without them¹⁷.

Table 1: Sample and distribution of municipalities according to population size

Sections	Population	% population	Nº municipalities	% municipalities	Nº municipalities in the sample
More than 50,001	3,957,477	55'5%	23	2'4%	23
50,000 to 20,001	1,094,217	15'3%	37	4%	37
5,001 to 20,000	1,309,489	18'4%	137	14'5%	33
1,001 to 5,000	575,556	8'1%	253	26'7%	30
Less than 1,000	197,958	2'8%	496	52'4%%	0
Total	7,134,697	100%	946	100%	123

Source: Own analysis with data from INE (2007)

¹⁵ M. Salvador *et al.* (2004); J.I. Criado (2004); M.M. Brown & S. Schelin, 2005.

¹⁶ The selected sections are the usual ones in studies of municipalities and they come from article 26 of Law 7/1985, which regulates the bases of the local government in Spain.

¹⁷ The sampling objective was to obtain at least 30 municipalities per each population section but keeping maximum variability regarding the existence or not of participatory activities. Hence a serial of random numbers were generated and following them we carried out several selection turns, so we finished up with a balanced sample of municipalities with or without participatory initiatives.

5. Analysis

5.1. Processes and mechanisms for participation by population size.

The distribution of the three dependent variables by population size is the following:

Table 2: Participatory initiatives, webs and boards by population size

Sections	Web functionalities	On line participatory initiatives	Consultative Boards	Participatory initiatives (including on line and off line)	No initiatives	Total
More than 50.001	23 (100%) ¹⁸	17 (73%)	21 (91'3%)	22 (96%)	1 (4%)	23
50.000 to 20.001	37 (100%)	9 (24'3%)	33 (89'2%)	16 (43'2%)	20 (54%)	37
20.000 to 5.001	33 (100%)	11 (33'3%)	5 (15'2%)	16 (48'5%)	17 (51'5%)	33
5.000 to 1.001	25 ¹⁹ (83'3%)	7 (23'3%)	2 (6'6%)	12 (40%)	18 (60%)	30
Total	117	44	61	67	56	123

Source: Own analysis

In the case of both higher sections, all municipalities have web sites and at least one interactive channel in their web sites. However, participatory processes predominate among the municipalities of over 50,001 inhabitants: 96% of municipalities of over 50,001 inhabitants have developed participatory processes whereas only 43% of municipalities from 50,000 to 20,001 inhabitants have undertaken these initiatives. Therefore, more than half of the municipalities (54%) of this last section have not decided to set up participatory processes. With respect to the electronic initiatives and in a similar way, 73% of the municipalities from more than 50,001 inhabitants have developed them, whereas only 24% of the municipalities with 50,000 to 20,001 inhabitants have deployed electronic participatory processes. Thus, it is evident that population size influences considerably both types of initiatives. We also have to take into account that the 4 provincial capitals are in the higher section.

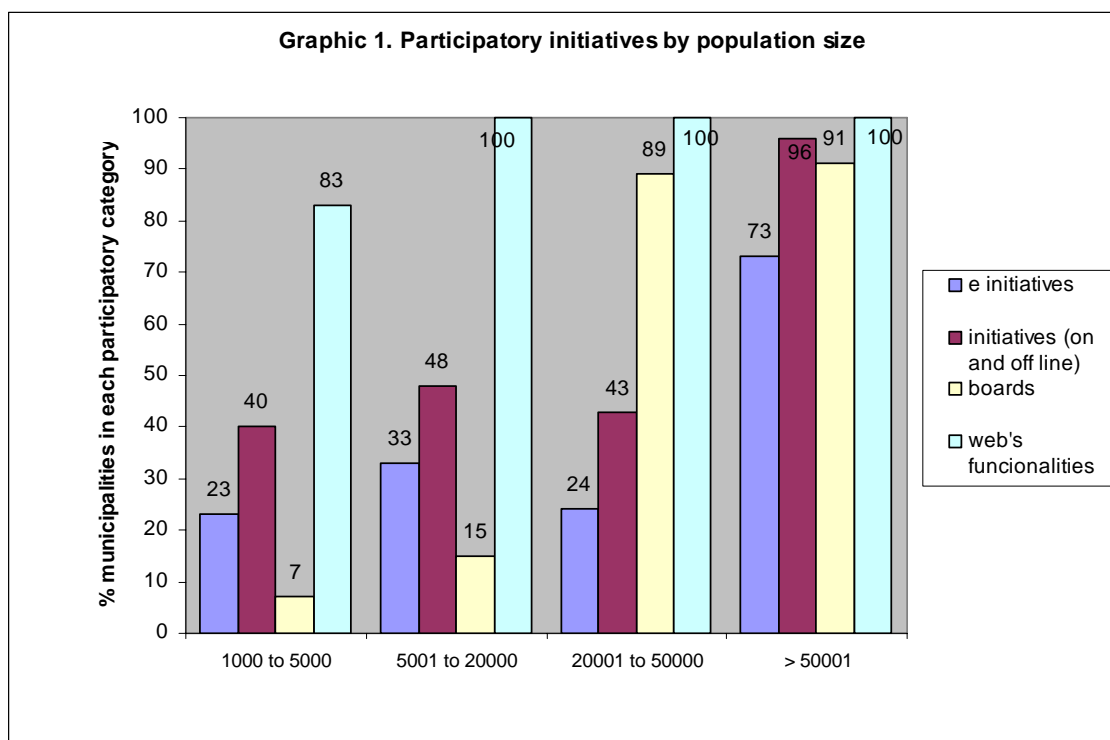
In the case of the other two sections, the importance of population size can also be observed. 48'5% of municipalities from 20,000 to 5,001 inhabitants display participatory processes and the same applies to 40% of municipalities from 5,000 to 1,001 inhabitants.

¹⁸ The percentages are calculated over the total number of municipalities in each population section. For example, in this case means that 100% of the municipalities with more than 50,000 inhabitants have at least one interactive channel in their web site.

¹⁹ In the sample of municipalities from 5,000 to 1,001 inhabitants, it has also been included two municipalities -Seva and Ivars d'Urgell- that do not have city council's web sites but they use instead a rudimentary web site supported by the provincial government (Diputació) that provides at least some basic electronic service such as a contact email.

Also, 33% of municipalities from 20,000 to 5,001 inhabitants have developed electronic participatory processes in contrast with only 23% of the municipalities from 5,000 to 1,001. The existence of interactive channels within web sites is also less frequent in the case of the smallest municipalities: 83% as opposed to 100% of municipalities in the higher section. Nevertheless, we have to take into account that these numbers are not representative of the real proportion of municipalities with and without processes because we conducted the selection of cases so as to obtain a similar number of municipalities with participatory processes and without them²⁰.

The graphic representation of Table 2 is:



With respect to the Consultative Participatory Boards, the relation between population size and the existence of boards in the municipalities is even stronger, as we can see in the graphic. The majority of municipalities from more than 20,001 inhabitants (96% of the municipalities of the highest section and 89'2% of those from 20,001 to 50,000 inhabitants) have Consultative Boards, whereas in the municipalities of both lower population sections their absence predominates: only 15'2% of the municipalities from 5,001 to 20,000 inhabitants and 6'6% of the municipalities from 1001 to 5,000 inhabitants do have them. Most of the boards are sectorial, that is, devoted to a specific collective, issue or

²⁰ However, in order to obtain a sufficient number of municipalities with participatory processes it was necessary to carry out up to 3 turns of random selection, so it becomes clear again that the smaller the population the less the number of participatory initiatives.

problem. However, there are also boards at city or district level that design and supervise community and territorial plans.

With respect to the amount of initiatives undertaken by the municipalities if we differentiate between the two main population groups²¹ there is a sharp contrast that again reminds us of the relevance of population size.

Table 3. Distribution of participatory initiatives by the two main population groups.

	> 20,000		< 20,000	
Number of on line initiatives				
0	56.7%	34	71.4%	45
1-3	31.7%	19	26.9%	17
> 4	11.7%	7	1.6%	1
Total	100%	60	100%	63
Number of initiatives (on line and off line)				
0	36.7%	22	55.6%	35
1-3	38.3%	23	39.7%	25
> 4	25%	15	4.8%	3
Total	100%	60	100%	63

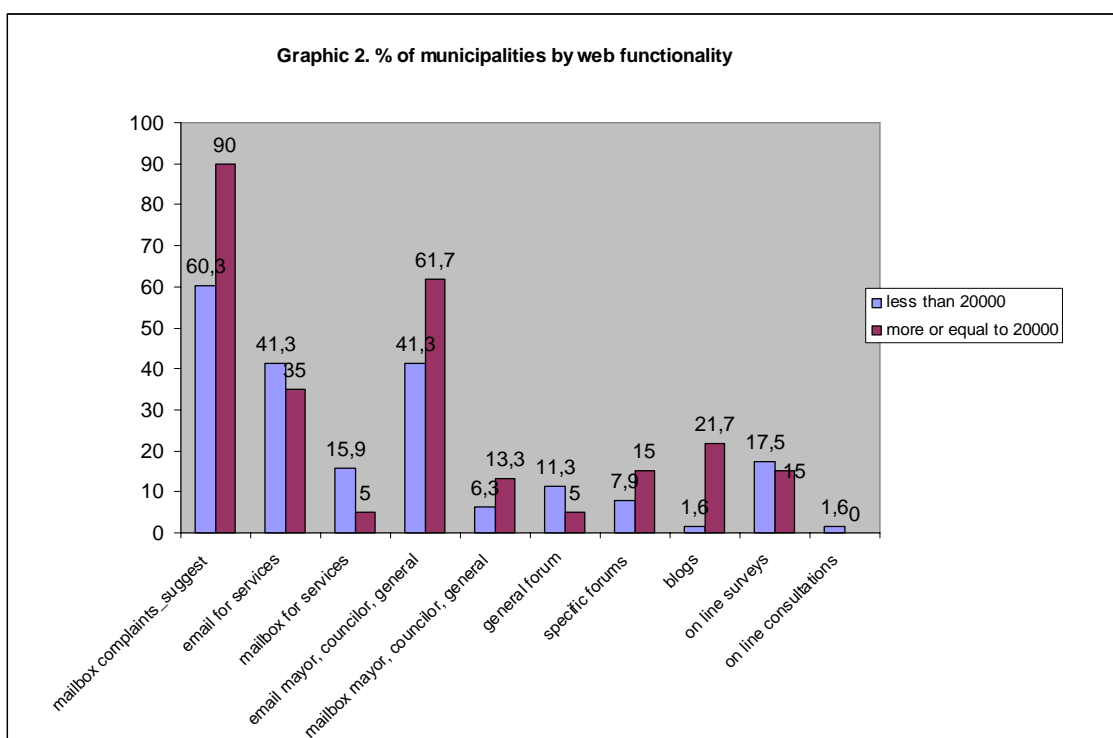
As we can see 56% of towns and cities with fewer than 20,000 inhabitants have not undertaken any form of participation and only 5 % have carried out more than 4. The proportion is even lower in the case of electronic initiatives for participation: 71% have not displayed any initiative and only around 2% have displayed more than 4. The municipalities with more than 20,000 inhabitants show much higher percentages: 25% have undertaken more than 4 participatory initiatives and 12% more than 4 on line initiatives, whereas 37% have not carried out any form of participation.

²¹ Actually, we will conduct all the analysis into each of the two population groups because they belong to different samples (in the first group we have the universe and in the second we selected a sample) that can not be added.

5.2. City Council web sites functionalities.

Regarding the interactive and participative functionalities that city councils make available on their web sites, we have checked whether they have this and, if so, how many of the following channels they have: a mailbox for receiving complaints and suggestions; a mailbox or an email address for citizens to contact municipal officials (mayor, town or city councilor) or the town or city council in general; a mailbox associated to municipal services; forums to debate on specific and general issues; blogs from politicians or citizens associated to the municipality's web site; and, finally, on line surveys and consultations.

In the description of the existence and number of these functionalities we will again differentiate between the two main population groups: municipalities with more than 20,000 inhabitants and the ones with fewer than 20,000 people. The following graphics show the distribution of the web sites functionalities:



As we can see, the communicative functions are the most frequently available on the web sites. These are: mailboxes for complaints and suggestions, email addresses for contacting the mayor, councilors or the council in general, and email addresses for

obtaining services and conducting transactions. These results are in line with what other studies in Catalonia have found (Salvador et al, 2004, OBSI surveys).

With respect to the deliberative mechanisms, such as general or specific electronic forums and blogs, there are fewer municipalities that have them in the two population groups. If we compare the two groups, it is worthy to note that 22% of the larger municipalities have blogs on their web sites in contrast to the only 1.6% of the smaller ones. Regarding the consultative type of functionalities, such as on line surveys and consultations, there are more frequent among the municipalities with less than 20,000 inhabitants. 17.5% of these municipalities have displayed surveys in their webs in contrast to 15% of the larger counterparts. Here it is worthy of note that there are several small towns such as Sant Bartomeu del Grau or Callús that frequently make use of these mechanisms, which could be easier –technically and politically- to use in a controlled and reduced territory than in a big city. Interestingly enough, there are other three channels where the smaller municipalities surpass in number the larger municipalities: email and mailbox for services and the generic forums. The reasons for these differences have to be investigated, taking into account that the sampling procedures can have some impact on the results.

5.3.- Explanatory analysis.

First of all we have examined the relationship between political variables (level of abstention in the local elections and party of the mayor) and the number of participatory initiatives (on line and off line). The crosstabulation shows that the relationship between these variables and the participatory initiatives is not statistically significant but the distribution of percentages, the -at least- weak Cramer's V and the adjusted residuals show some relevant interactions as we can see in the tables included in the appendix.

Table 4 from the appendix shows that, among municipalities with less than 20,000 inhabitants, the higher the rate of abstention²² the more participatory initiatives municipalities undertake: 52% of the municipalities with abstention rates of more than 34% have carried out from 1 to 3 initiatives, whereas only 21% of the municipalities with abstention rates of less than 23% have done so. Also, 79% of the municipalities with the lowest abstention rates have not undertaken any form of participation but only

²² We consider a high abstention rate a percentage of 34% of the electorate that have not voted, a medium abstention rate is between 34% and 23%, and a low abstention rate is lower than 23%.

38% of the municipalities with the highest abstention rates are in the same case. The adjusted residuals are statistically significant at 95% level of confidence in these two cells.

In the municipalities with more than 20,000 inhabitants (see table 5 in the appendix), 100% of the municipalities that have a medium abstention rate (from 23 to 34% abstention rate) have not undertaken any participatory initiative. The contrast is very sharp with the municipalities with higher abstention rates: 36% have initiatives, 39% undertake from 1 to 3 and 25% from 4 to 12. But, again, the relationship is not statistically significant.

With respect to the party affiliation of the mayor, the results are again not statistically significant and not even the Cramer's V or the adjusted residuals are high enough to denote a relationship between the variables. Nevertheless, as is shown in table 6 in the appendix, among the municipalities with fewer than 20,000 inhabitants, 35% of the municipalities with majors belonging to CiU²³ have undertaken 1 to 3 initiatives compared with 43% of the municipalities on the left and 44% with mayors belonging to local or independent candidatures. So, the impulse towards participations is stronger among the parties on the left and the local and independent candidatures.

Within the municipalities with more than 20,000 inhabitants, the same tendency is observed, albeit not as marked. As we can see in table 7, 36% of the municipalities with mayors belonging to CiU have undertaken 1 to 3 initiatives compared with 40% of the municipalities on the left and 25% of the municipalities with mayors belonging to local or independent candidatures. In addition, 13 municipalities from the left-leaning parties have organized from 4 to 12 participatory processes in contrast with only 1 municipality from CiU.

Therefore, the rate of abstention and the political affiliation of the mayor affect the existence of participatory initiatives and the number of them undertaken. That is, the higher the abstention rate the more initiatives will exist and, also, the mayors on the left and from local and independent candidatures carry out more participatory processes than CiU. Nevertheless, the lack of statistical significance and the interaction of the political variables with population size indicate some controls are needed. We have to take into account that 98% of the municipalities with more than 20000 inhabitants have

²³ Convergència i Unió (CiU) is a center-right nationalist party, which has a presence throughout Catalonia and an especially strong presence in small towns.

an abstention rate of 34% (see table 5) and 75% of these municipalities have mayors belonging to parties on the left, mainly the Socialist Party (PSC) (see table 7).

Taking all of this into account, we conducted a regression analysis with all the possible explanatory variables mentioned in previous pages: population size, mayor's party affiliation, electoral abstention rate, percentage of population with a university degree, percentage of citizens with a job, family income per capita and the average age in the municipality.

The results are statistically significant for the municipalities with more than 20,000 inhabitants and this entire set of variables explained half of the variance of the dependent variable -54%- (see table 8), but is not significant for the municipalities with fewer than 20000 inhabitants (see table 9).

Table 8 shows that, among municipalities with more than 20,000 inhabitants, three independent variables are statistically significant: population size –which is the most significant-, age and whether the mayor belongs to ICV²⁴. That means that as population increases and age decreases the number of participatory initiatives grows. In addition, the probability of undertaking participatory initiatives increases 2.4 times with respect to CiU –which is the control category- when the mayor belongs to ICV.

In the case of municipalities with fewer than 20000 inhabitants neither the model nor any of the variables is statistically significant. In this case, due to the few municipalities having more than 4 initiatives and more than half not having any (see table 3), we decided to recode the dependent variable into having or not having initiatives and conduct a logit analysis. The results are also not significant (see table 9). We also carried out a variance analysis but found no significant differences between the means.

6.- Conclusions

The participatory initiatives and processes in Catalonia are widespread, though their expansion depends on population size. 96% of municipalities with more than 50,000 inhabitants have undertaken off line and on line participatory activities, 43% of municipalities from 50,000 to 20,001 inhabitants, 48% of municipalities from 20,000 to

²⁴ Iniciativa per Catalunya- Els Verds (ICV) is a small left-leaning party, concentrated in larger cities, which strongly defends the carrying out of participatory initiatives.

5,001 inhabitants and only 40% of municipalities from 5,000 to 1,001. The impact of population size is even stronger if we take into account only on line initiatives: 73% of municipalities with more than 50,000 inhabitants have undertaken on line participatory activities, 24% of municipalities from 50,000 to 20,001 inhabitants, 33% of municipalities from 20,000 to 5,001 inhabitants and only 23% of municipalities from 5,000 to 1,001.

Web sites and their interactive channels for communication with citizens are much more widespread than participatory initiatives. 100% of municipalities in the three highest population sections have set up web sites and at least one communicative channel, but 83% of the municipalities from 5,000 to 1,001 inhabitants have a city council web site or a municipality web site.

The communicative functions such as mailboxes for complaints and suggestions and a contact email with the city council officials (mayor, councillors, in general) are the most frequent channels on the web sites. For example, 90% of municipalities with more than 20,000 inhabitants and 60% of municipalities with fewer than 20,000 have mailboxes for complaints and suggestions. But the deliberative mechanisms such as electronic forums and blogs or consultative mechanisms such as on line surveys and consultations are much less frequent (between 22% and 2% of municipalities). In the case of on line surveys and consultations, generic forums, email and mailboxes for services, there are more municipalities with fewer than 20000 inhabitants that have displayed these kinds of initiatives. Could it be that for the smaller municipalities these electronic channels are more necessary than for the larger ones? Further investigation on this should be carried out and also we have to take into account the bias in the way we selected the sample of municipalities with fewer than 20,000 inhabitants.

Apart from the description of the prevalence and types of participatory initiatives, this paper has attempted to explain them and, in that sense, to complete part of the knowledge gap that case studies have not filled in. We have collected a set of variables considered as the most relevant in the literature. They are sociological, economic and political variables that characterise the municipalities. Regarding political variables, we have found that the higher the abstention rate the more initiatives will exist and, also, the mayors on the left and from local and independent candidatures carry out more participatory processes than CiU. But in these relationships, the population size is playing again an important role that needs to be controlled because the majority of

municipalities of over 20,000 inhabitants have a high abstention rate and their mayors generally belong to the PSC.

In order to ascertain the impact of our set of variables, we carried out a regression analysis, a logit analysis and an analysis of variance. The results are explanatory for the municipalities with more than 20,000 inhabitants but are not significant for the municipalities with fewer than 20,000 inhabitants. Among municipalities with more than 20,000 inhabitants, three independent variables have a significant impact on participatory initiatives: population size –which is the most significant-, age and whether the mayor belongs to ICV. This confirms that population size is a very relevant variable. Also the probability of undertaking participatory initiatives increases when the mayor belongs to ICV, the party with parliamentary representation which is the furthest to the left in the political spectrum. In addition, the average age of the population has an impact in the organization of participatory initiatives by the city council: when the average age of a population rises the number of initiatives decreases.

To conclude, in Catalonia there are numerous participatory initiatives both on and off line but their expansion depends on population size. Lately, the local and autonomic governmental support and regulations for participation on and off line have become more planned and strategically integrated, but there is still some fragmentation and a lack of coordination in many initiatives. Also, e-participation initiatives are not so widespread and the most frequent web functionalities are mailboxes for complaints and the contact email, leaving behind more participatory channels. Finally, many small municipalities neither have a web nor they have participatory initiatives. In that sense they have a long way to go.

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8.- Appendix

Table 4. Participatory initiatives x % abstention in 2003 local elections (fewer than 20,000)

		abstention rate in 2003 local elections			Total	
		< 23%	23% to 34%	> 34%		
Initiatives	0	Frequency	11	16	8	35
		% of Initiatives	31,4%	45,7%	22,9%	100,0%
		% of % abstention rate in local elections	78,6%	57,1%	38,1%	55,6%
		% of the total	17,5%	25,4%	12,7%	55,6%
		Adjusted residuals	2,0	,2	-2,0	
	1 to 3 initiatives	Frequency	3	11	11	25
		% of Initiatives	12,0%	44,0%	44,0%	100,0%
		% of % abstention rate in local elections	21,4%	39,3%	52,4%	39,7%
		% of the total	4,8%	17,5%	17,5%	39,7%
		Adjusted residuals	-1,6	-,1	1,5	
	4 to 12 initiatives	Frequency	0	1	2	3
		% of Initiatives	,0%	33,3%	66,7%	100,0%
	% of % abstention rate in local elections	,0%	3,6%	9,5%	4,8%	
	% of the total	,0%	1,6%	3,2%	4,8%	
	Adjusted residuals	-,9	-,4	1,3		
Total	Frequency	14	28	21	63	
	% of Initiatives	22,2%	44,4%	33,3%	100,0%	
	% of % abstention rate in local elections	100,0%	100,0%	100,0%	100,0%	
	% of the total	22,2%	44,4%	33,3%	100,0%	

Chi-squared test

	Value	df	Significance
Pearson's Chi-squared	6,280	4	,179
Number of valid cases	63		

Phi and Cramer's V

	Value	Significance
Cramer's V	,223	,179
Phi	,316	,179

Table 5. Participatory initiatives x % abstention in 2003 local elections (more than 20,000)

			abstention rate in 2003 elections		Total
			23% to 34%	< 34,1%	
Initiatives	0	Frequency	1	21	22
		% of Initiatives	4,5%	95,5%	100,0%
		% of % abstention rate in local elections	100,0%	35,6%	36,7%
		% of the total	1,7%	35,0%	36,7%
	1 to 3 initiatives	Adjusted residuals	1,3	-1,3	
		Frequency	0	23	23
		% of Initiatives	,0%	100,0%	100,0%
		% of % abstention rate in local elections	,0%	39,0%	38,3%
	4 to 12 initiatives	% of the total	,0%	38,3%	38,3%
		Adjusted residuals	-,8	,8	
		Frequency	0	15	15
		% of Initiatives	,0%	100,0%	100,0%
Total	% of % abstention rate in local elections	,0%	25,4%	25,0%	
	% of the total	,0%	25,0%	25,0%	
	Adjusted residuals	-,6	,6		
	Frequency	1	59	60	
	% of Initiatives	1,7%	98,3%	100,0%	
	% of % abstention rate in local elections	100,0%	100,0%	100,0%	
	% of the total	1,7%	98,3%	100,0%	

Chi-squared test

	Value	df	Significance
Pearson's Chi-squared	1,757	2	,475
Number of valid cases	60		

Phi and Cramer's V

	Value	Significance
Cramer's V	,171	,415
Phi	,171	,415

Table 6. Participatory initiatives x party of the mayor (fewer than 20,000)

			Party of the mayor			Total
			CiU	Left (PSC, ERC, ICV)	Others	
Initiatives	0	Frequency	17	14	4	35
		% of Initiatives	48,6%	40,0%	11,4%	100,0%
		% of party	65,4%	50,0%	44,4%	55,6%
		% of total	27,0%	22,2%	6,3%	55,6%
	1 to 3 initiatives	Standardised residuals	1,3	-,8	-,7	
		Frequency	9	12	4	25
		% of Initiatives	36,0%	48,0%	16,0%	100,0%
		% of party	34,6%	42,9%	44,4%	39,7%
	4 to 12 procesos	% of total	14,3%	19,0%	6,3%	39,7%
		Standardised residuals	-,7	,5	,3	
		Frequency	0	2	1	3
		% of Initiatives	,0%	66,7%	33,3%	100,0%
Total	% of party	,0%	7,1%	11,1%	4,8%	
	% of total	,0%	3,2%	1,6%	4,8%	
	Standardised residuals	-1,5	,8	1,0		
	Frequency	26	28	9	63	
	% of Initiatives	41,3%	44,4%	14,3%	100,0%	
	% of party	100,0%	100,0%	100,0%	100,0%	
	% of total	41,3%	44,4%	14,3%	100,0%	

Chi-squared test

	Value	df	Significance
Pearson's Chi-squared	3,432	4	,488
Number of valid cases	63		

Phi and Cramer's V

	Value	Significance
Cramer's V	,233	,488
Phi	,165	,488

Table 7. Participatory initiatives x party of the mayor (more than 20,000)

			Party of the mayor			Total
			CiU	Left (PSC, ERC, ICV)	Otros	
Initiatives	0	Frequency	6	14	2	22
		% of Initiatives	27,3%	63,6%	9,1%	100,0%
		% of party	54,5%	31,1%	50,0%	36,7%
		% of total	10,0%	23,3%	3,3%	36,7%
		Standardised residuals	1,4	-1,5	,6	
	1 to 3 initiatives	Frequency	4	18	1	23
		% of Initiatives	17,4%	78,3%	4,3%	100,0%
		% of party	36,4%	40,0%	25,0%	38,3%
		% of total	6,7%	30,0%	1,7%	38,3%
		Standardised residuals	-1	,5	-,6	
	4 to 12 initiatives	Frequency	1	13	1	15
		% of Initiatives	6,7%	86,7%	6,7%	100,0%
% of party		9,1%	28,9%	25,0%	25,0%	
% of total		1,7%	21,7%	1,7%	25,0%	
	Standardised residuals	-1,3	1,2	,0		
Total	Frequency	11	45	4	60	
	% of Initiatives	18,3%	75,0%	6,7%	100,0%	
	% of party	100,0%	100,0%	100,0%	100,0%	
	% of total	18,3%	75,0%	6,7%	100,0%	

Chi-squared test

	Value	df	Significance
Pearson's Chi-squared	3,147	4	,534
Number of valid cases	63		

Phi and Cramer's V

	Value	Significance
Cramer's V	,162	,534
Phi	,229	,534

Table 8. Regression analysis (more than 20000)

Coefficients(a)

Model		Coefficients		Standardised	t	Sig.
		B	Standard error	Beta		
1	(Constant)	-,965	11,055		-,087	,931
	%WorkingPopulation	-,040	,087	-,060	-,460	,648
	PSC	,274	,732	,047	,375	,710
	ICV	2,462	1,210	,226	2,035	,047
	Others	1,470	1,106	,135	1,329	,190
	Lnpopulation	2,854	,436	,848	6,542	,000
	%university	,188	,147	,243	1,278	,207
	Age	-,554	,197	-,319	-2,815	,007
	FamilyIncome_thous€ d'euros	-,191	,366	-,109	-,523	,604
	%localabsten_rate	-,110	,101	-,153	-1,088	,282

a Dependent variable: On and off line initiatives (total number)

N = 60
R² = 0,543
Standard Error = 1,855
F = 8,782
Sig. = 0,000

Table 9. Regression analysis (fewer than 20000)

Coefficients(a)

Model		Coefficients		Standardised	t	Sig.
		B	Standard error	Beta		
1	(Constant)	-5,502	3,743		-1,470	,147
	%localabstention_rate	,031	,032	,172	,960	,341
	%university	,098	,055	,249	1,778	,081
	Lnpopulation	,261	,288	,163	,904	,370
	PSC	,628	,405	,222	1,551	,127
	ERC	,868	,574	,205	1,512	,136
	Others	,744	,513	,195	1,450	,153
	%workingpopulation	-,072	,044	-,226	-1,638	,107
	Age	,120	,068	,259	1,776	,081

a Dependent variable: On and off line initiatives (total number)

N = 63
R² = 0,082
Standard Error = 1,286
F = 1,689
Sig. = 0,122