Farmers' Involvement in Online Public Consultations and the Corresponding Configuration of the Democratic Divide

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Abstract. The institution of online public consultations was adopted in Greece in 2009 (www.opengov.gr.) Participation or non-participation of citizens in this institution constitutes part of the digital divide, referred to as democratic divide. This paper attempts to disclose components of the democratic gap in the Greek agricultural sector, with particular reference to farmers. This disclosure is attempted by two approaches. The first approach was to perform content analysis on 5078 comments that have been posted on 21 public consultations by the Greek Ministry of Rural Development, in order to identify the participation frequency of farmers. The second approach was part of wider research, and relates to the collection of primary data from 112 farmers of Heraklion, Crete, using a structured questionnaire. The objective of the second approach is to study the farmers' digital and socio-professional profiles and the correlation with their awareness about the institution of online public consultations. The results indicate the existence of a democratic divide, and identify proposals for its reduction.

Keywords: Digital divide, democratic divide, online public consultation, farmers

1 Introduction

2500 years ago, the institution of Ecclesia originated in Ancient Athens. This institution was the main democratic assembly of the city-state, where the political issues of the time where put to debate. The main feature of the Ecclesia was the direct participation of the citizens in the legislative and judicial procedures of the city-state.

Today, ICTs represent a kind of reintroduction of the Ecclesia into the political process, serving the need to redefine the relationship between state and citizens, to

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restore confidence between them. A survey by Transparency International in 64 countries showed that political parties are seen as the most corrupt institutions in the world (Transparency International, 2004). Especially in Greece, citizens strongly question the role of political parties and are doubtful about their usefulness as representational and promotional bodies for citizens' aspirations (Transparency International, 2004:9). Tapscott (2000:303) argued that democracy in many countries of the modern world is stagnant because governments, in their entirety, appear inefficient and remote. The social consequences of the above, define the need for open dialogue and an exchange of views between governments and citizens. In this context the institution of online public consultations was adopted.

2 e-Democracy

Since the early 90s, the implementation of information and communication systems in the operation and organization of the public sector and government has brought significant changes to the organization and functioning of states (Robison & Crenshaw, 2002). Thus, in political terminology there appear terms such as egovernment and e-democracy (Bellamy, 2003; Lasse et al., 2006). The shift by states in technology to broaden democracy coincides with the social need for a redefinition of the relationship between governments and citizens. The use of ICT in an effort towards open and public policy is applied more and more often as a means of redefining this relationship (Kingham, 2003; Hoff, 2004; Ward & Lusoli, 2005; Welch et al., 2005; Tolbert & Mossberger, 2006; Kikuchi, 2007). The redefinition of this relationship is defined as a need both by the observed decline in the interest of citizens in politics (McAllister, 2002; Dahlgren 2009) and by the weakening of public confidence in politicians and institutions (Gibson et al., 2004; Parent, 2005).

The United Nations define e-Government as the permanent commitment of the government to improve relations between citizens and the public sector through the effective and efficient provision of services, information and knowledge (Durrant, 2002:101). In this context, the power of online public consultation has already proven to be a means to influence citizens to government policy (Botsiou, 2011).

However, the overall efficiency of online public consultation is related to the existence of the democratic divide. Norris (2001:4) defines the democratic divide as the third form of digital divide, and is described as the difference between those people who use ICT for their participation in public life, and those who do not. In countries where voting is not compulsory firstly, and secondly vote only by electronic means, the democratic gap is widening between those who have access to ICT and technology insiders, and those that do not have these privileges. This element can result in an abnormal reflection of public opinion in online public consultations, while creating a new type of economic and political elite which, through ICT access privileges, will be able to exercise effective influence in shaping government policy, promoting in this way their own interests.

As an expansion of democracy, the institution of online public consultations was established in Greece in 2009 (www.opengov.gr). Through this institution, 475 public consultations have been performed until now, and 127,205 comments have

been posted (OpenGov, 2015). The Greek Rural Development Ministry conducted 21 consultations, on which 5078 comments have been posted. This paper studies the democratic divide in the Greek agricultural sector, and particularly for farmers.

3 Research

3.1 Aim and Objective

The purpose of this study is to investigate the democratic divide in the agricultural sector, especially in relation to the institution of public consultations. The study was conducted in two phases. At first, the 5078 comments posted in 21 public consultations by the Greek Ministry of Rural Development were analyzed in order to identify the frequency of participation of Greek farmers in these. Then, personal interviews were conducted using structured questionnaires with farmers of the Heraklion prefecture (Crete, GR). The objective was to study their digital features, but also to ascertain if they were aware of the institution of online public consultations. The interviews took place in April 2015 and numbered 112.

3.2 Methodology

As mentioned above, the study was conducted in two phases. At first, the 5078 comments posted in 21 public consultations by the Greek Ministry of Rural Development were analyzed in order to identify the frequency of participation of Greek farmers in these. According to Coleman (2004:2), in order to be effective, the study of public consultations should apply a combined analysis system on the quantitative and qualitative axes. So it was necessary to use methods to permit a pooled study of the comments on the axes of quantitative and qualitative analysis. The methods chosen were Content Analysis and Text Semiotics. To ensure the validity of the results, the following were defined as attributes: i) the systematic basis of criteria which clearly define the decision on whether data from the content of the comments is to be included in the analysis or not, data constituting the commentator's occupation in the online public consultations, and consisting of researchers in this decision; and ii) the assurance of validity and reliability through rules to guarantee the reappearance of identical results when repeated on the same content. Based on the above, if the commentator's occupation was not explicitly mentioned by him, then it resulted from the content of the comment. For example: "[...] Unfortunately, I am still waiting for the registration notification [...] due to my authorization as a new farmer" (comment posted on 2010-04-19 18:40:21h).

In the second phase of the survey, interviews were conducted using a structured questionnaire on a sample of 112 farmers (Heraklion Prefecture, Crete, GR). The municipal district selection, which was drawn in the survey sample, followed the methodology of proportional stratified random sampling, based on four criteria that

are described below. Then, sampling of the population within those municipal districts, was based on random sampling.

The first criterion for the selection of municipal districts, of which the sample was drawn, was its level of urbanization. As the study related to farmers, it was decided to select rural municipal districts. According to the Greek Statistical Authority, rural districts are those whose population is less than 2000 inhabitants. According to data from the Population Census 2011, the districts of Heraklion Prefecture numbered 479. In all these, 3 are classified as urban, 20 as semi-urban and 466 as rural (population up to 1,999) (Table 1). Thus, the first criterion of the sample selection drew a distinction of 466 districts.

The second criterion for municipal district selection was its hilliness coefficient. The Greek Statistical Authority provides hilliness coefficient data for 182 of the 466 districts of Heraklion Prefecture, and therefore the selection of the sample was limited to 182 of 466 districts. Amongst these 182 districts, 89 are lowlands, 45 are semi-mountainous and 48 mountainous (Table 1).

Table 1. Criteria 1&2: Urbanization and hilliness coefficient

Hilliness Coefficient *	Urban** Frequency	Semi-urban** Frequency	Rural** Frequency
Lowlands	3	4	89
Semi-mountainous	0	3	45
Mountainous	0	3	48
No data available	0	0	284
Total (hilliness coefficient)	3	10	182
Total	3	10	466

Source: Compilation of data from the Greek Statistical Authority

The third criterion for municipal district selection was the exclusion of very small districts, as they do not have supporting infrastructures (schools etc.). Based on the census of the year 2011, 89 out of 182 municipal districts of Heraklion Prefecture had more than 300 inhabitants (i.e. 48.9%). The hilliness coefficient of these 89 municipal districts is about 48 lowlands, 21 semi-mountainous and 20 mountainous (Table 2).

The fourth criterion was the municipal districts' inclusion in the broadband network. Based on the GIS Broadband Map (Hellenic Telecommunications & Post Commission, 2015), 72 of the 89 districts have access to the broadband network (i.e. 80.89%), 39 of the 48 lowland districts have access to the broadband network (i.e. 81.25%) and 14 of the 20 mountainous districts have access to the broadband network (i.e. 70.00%) (Table 2).

^{*} Pre-census data (1980 reference year)

^{**} Population census data 2011

Table 2. Criteria 3&4: Municipal districts with a permanent population >300, hilliness coefficient, integration in broadband network

			Within broadband network		Outside broadband network	
Hilliness Coefficient	Frequency	%	Frequency	%	Frequency	%
Lowlands	48	53.9	39	81.3	9	18.7
Semi- mountainous	21	23.6	19	90.5	2	9.5
Mountainous	20	22.5	14	70.0	6	30.0
Total	89	100	72		17	

Source: Data synthesis from the GIS Broadband Map and 2011 population census.

Finally, it was decided to select 10% of these 89 municipal districts, which resulted in the four stratification criteria, i.e. 9 rural municipal districts (89*10%=8.9). Mutatis mutandis of hilliness coefficient and broadband (Table 2) selected: i) five (5) lowland municipal districts (9*53.9%= 4.8) four (4) of which have access to the broadband network (5*81.3%=4.065) and one (1) has not (5*18.7%=0.935), ii) two (2) semi-mountainous municipal districts (9*23.6%=2.1) that have access to the broadband network (2*90.5%=1.81), iii) two (2) mountainous municipal districts (9*22.5%=2.025) of which one has access to the broadband network (2*70.0%=1.4) and one (1) has not (2*30.0%=0.6).

The final decision on the selection of nine municipal districts of Heraklion prefecture was defined using the random number generator in an Excel program. The method of random sampling then followed, where 112 interviews were conducted using a structured questionnaire.

3.3 Content analysis of the online public consultations

In Greece, the institution of online public consultation was launched in 2009. Until today, 475 consultations have been carried out, 21 out of which by the Greek Ministry of Rural Development. In total, 5078 comments have been posted. These consultations are: (1) Changing the institutional framework for the integration and rehabilitation of the agricultural trade union movement; (2) Farmers' register; (3) Reconstruction of agricultural cooperative organizations of Greece; (4) Protection and security of agricultural activity; (5) Establishment of single registry of agricultural trade; (6) Framework law on pesticides; (7) Pets and stray animals, animal welfare from exploitation or use for profit; (8) Institutional framework for agricultural cooperatives, collective organizations and entrepreneurship of rural society - Organization of the state supervision; (9) Arrangements for livestock and livestock facilities; (10) Rational use of pesticides; (11) Health and safety of food and animal feed, animal health and animal welfare, management of animal by-products; (12) Integrated Crop Protection Guidelines I; (13) Integrated Crop Protection

Guidelines II; (14) Recommendation by the organization "Hellenic Agricultural Organization - DIMITRA"; (15) Management competence of the Ministry estate Rural Development; 16) Integrated Crop Protection Guidelines III; (17) Integrated Crop Protection Guidelines IV; (18) Aquaculture development; (19) Authorizing the marketing of plant protection products formulated for amateur use; (20) Organization and operation of ELGO-DIMITRA; (21) Integrated Crop Protection Guidelines V (Table 3).

Content analysis of the posted comments in these public consultations revealed 5 main groups of participants, based on the capacity in which, in a statement or content, they were consulted. These are: a) Farmer; b) Farmers' collective (professional, cooperative and trade unions); c) Scientist (agronomists, technologists agronomy, biologists, veterinarians, lawyers, surveyors); d) Collective scientific institutions (business, trade unions, learned societies, research groups); e) Other (public bodies and their employees, agricultural products traders (non farmers), commercial companies, environmental and animal welfare organizations, but also cases we were not able to identify). Note that, although there is substantial difference between professional associations and trade unions, in this paper it was not considered appropriate to make the distinction, as the subject of the research did not affect the quality of participation in the consultation, but its quantity (representation frequency of the agricultural sector).

Table (3) presents the results of content analysis of these 21 consultations. The first column of Table 3 shows the s/n of each consultation as it was presented in the first paragraph of this section. The second and third columns of Table 3 show the frequency of posted comments in each consultation and the relative frequency. The remaining columns concern the commentary frequency per occupation group. As can be seen from the table, in 14 of the 21 consultations, farmers or collective bodies thereof participated. Higher participation of farmers (relative frequency >10%) is displayed in consultations s/n 1 (43.4%), 2 (68.8%), 3 (36.1%), 4 (21.1%), 5 (41.2%), 8 (66.0%), 9 (11.5%), 17 (21.1%), 18 (16.6%). These consultations related to the integration and restructuring of the agricultural trade union movement, the farm register, the reconstruction of rural cooperatives in the system of protection and security of agricultural activity, the establishment of the single registry of dealers in agricultural products, regulations for animal husbandry, instructions on integrated pest management, and the development of aquaculture. The participation of farmers was nil in the consultations concerning the adopting and stray pets, in four consultations relating to guidelines for integrated crop protection, and in both consultations concerning the establishment of the Greek agricultural organization DIMITRA.

Table 3. Greek Ministry of Rural Development, public consultations: commentators grouping and participation frequencies.

S/N	Total comments	%	Farmers	%	Farmers coll. bodies	%	Scientists	%	Sci. coll. bodies	%	Other	%	Total %
1	113	2.2	49	43.4	7	6.2	19	16.8	0	0.0	38	33.6	100
2	80	1.6	55	68.8	3	3.8	11	13.8	0	0.0	11	13.8	100
3	36	0.7	13	36.1	9	25.0	11	30.6	0	0.0	3	8.3	100
4	38	0.7	8	21.1	1	2.6	28	73.7	1	2.6	0	0.0	100
5	17	0.3	7	41.2	0	0.0	0	0.0	0	0.0	10	58.8	100
6	59	1.2	5	8.5	0	0.0	46	78.0	4	6.8	4	6.8	100
7	2663	52.4	0	0.0	0	0.0	15	0.6	8	0.3	2640	99.1	100
8	47	0.9	31	66.0	1	2.1	8	17.0	0	0.0	7	14.9	100
9	200	3.9	23	11.5	1	0.5	51	25.5	29	14.5	96	48.0	100
10	130	2.6	8	6.2	10	7.7	65	50.0	11	8.5	36	27.7	100
11	962	18.9	20	2.1	23	2.4	196	20.4	8	0.8	715	74.3	100
12	14	0.3	0	0.0	0	0.0	14	100.0	0	0.0	0	0.0	100
13	3	0.1	0	0.0	0	0.0	3	100.0	0	0.0	0	0.0	100
14	235	4.6	0	0.0	0	0.0	174	74.0	29	12.3	32	13.6	100
15	136	2.7	3	2.2	9	6.6	67	49.3	0	0.0	57	41.9	100
16	28	0.6	0	0.0	0	0.0	28	100.0	0	0.0	0	0.0	100
17	19	0.4	4	21.1	0	0.0	12	63.2	0	0.0	3	15.8	100
18	199	3.9	33	16.6	37	18.6	21	10.6	1	0.5	107	53.8	100
19	6	0.1	0	0.0	0	0.0	6	100.0	0	0.0	0	0.0	100
20	80	1.6	0	0.0	2	2.5	35	43.8	39	48.8	4	5.0	100
21	13	0.3	0	0.0	0	0.0	13	100.0	0	0.0	0	0.0	100
Total	5078	100	259	5.1	103	2.0	823	16.2	130	2.6	3763	74.1	100

2.4 Fieldwork results

The sample consisted of 112 farmers, 101 of which were male, and 11 female (90.2% and 9.8% respectively). The age of the participants ranged from 20-78 years old, where 27.7% were under the age of 35, 36.6% aged 35-50, 32.1% aged 50-65, 3.6% older than 65 (Table 4).

Table 4. Farmers' age groups

Age group	Frequency	%
<35	31	27.7
35-50	41	36.6
50-65	36	32.1
>65	4	3.6
Total	112	100

Of the total participants, one person was illiterate (0.9%), 36.6% were elementary graduates, 21.4% middle school graduates, 30.4% high school graduates, 10.7% graduates of tertiary education (higher education). In total, 40.1% were at least high school graduates (Table 5).

Table 5. Farmers' educational attainment

Educational attainment	Frequency	%
Illiterate	1	0.9
Elementary	41	36.6
Middle School	24	21.4
High School	34	30.4
Higher Education	12	10.7
Total	112	100

Concerning ICT access, 88.4% of the respondents (i.e. 99 farmers) stated that there is access to a PC at home (including tablet and laptop), 33.9% declared themselves smartphone owners (Table 6). 94 of the 99 participants who declared that there is PC in their home, also have Internet access (broadband network or USB stick), while 1.8% do not know whether online access is available at home. In total, 112 participants 67 (i.e. 59.8%) declared themselves ICT users, while 40.2% had never used ICT.

Table 6. Farmers' access to and use of ICT

	PC at home (dealaptop, tablet)	* '			Smartphone	;	Use of ICT	
Access or Use	Frequency	%	Frequency	%	Frequency	%	Frequency	%
No	13	11.6	20	17.9	74	66.1	45	40.2
Yes	99	88.4	90	80.4	38	33.9	67	59.8
Don't know			2	1.8				
Total	112	100	112	100	112	100	112	100

As mentioned in the previous table, 40.2% of respondents have never used ICT. Table 7 shows that in contrast to these 40.2%, 8.9% declared themselves ICT users in

the last year, 10.7% 1-3 years, 6.3% 3-5 years, 8.9% 5-8 years, and 25% have been ICT users for more than 8 years.

Table 7. Farmers' experience in ICT usage

Experience group (years)	Frequency	%
I do not use ICTs	45	40.2
<1 year	10	8.9
1-3	12	10.7
3-5	7	6.3
5-8	10	8.9
>8	28	25
Total	112	100

Regarding the participation of farmers in rural collective bodies, it appears that 65.2% of the sample are members of professional associations (cooperatives and producer groups) and 6.3% are also members of farmers' trade unions (Table 8). Of the total of 112 surveyed, 39 (i.e. 34.8%) are not members of a professional or trade union.

Table 8. Farmers' participation in rural collective bodies

Professional Associations Trade Unions						
Participation	Frequency	%	Frequency	%		
Non-member	39	34.8	105	93.8		
Member	73	65.2	7	6.3		
Total	112	100	112	100		

Regarding the participation of the sampled farmers in public consultations, it appears that 84.8% were not aware of the online public consultation (Table 9). Aware of the existence of the institution were 15.2%, of which 52.9% follow public consultations and 23.5% participate in them.

Table 9. Farmers' self-reference for public consultations www.opengov.gr

	Aware of P.C.		Follower		Annotator	
Self-reference	Frequency	%	Frequency	%	Frequency	%
Yes	17	15.2	9	52.9	4	23.5
No	95	84.8	8	47.1	13	76.5
Total	112	100	17	100	17	100

Correlations. The relationships among age, educational attainment, usage of ICT, experience in ICT, participation in professional and trade unions, and the overall

experience in the institution of public consultations, were examined using Pearson correlations. The awareness of the existence of the institution of public consultations shows a small positive relationship with educational level (r=0.300, p>0.01) and with experience in the use of ICT (r=0.326, p>0.01). A moderately positive relationship shows awareness of the existence of the institution of public consultations with participation in trade unions (r=0.405, p>0.01). This indicates that people who are members of a trade union are more likely to be aware of the existence of the institution than someone who has no trade union involvement. It is possible that the information on the existence of the institution spreads faster among trade union members than among members of professional organizations, since normally the role of trade unions concerns the preservation of vested interests and the promotion of collective interests, which is connected with the philosophy of the institution of public consultations. Finally there is strong positive correlation between awareness of the existence of public consultations and the following of and participation in these consultations (r=0.943, p>0.01). It is normal for farmers who do not know of the existence of this institution not to attend or participate.

 Table 8. Correlations for Study Variables

Variable	1	2	3	4	5	6	7	8	9
1. Age	-								
2. Educational attainment	384**	-							
3. ICT use	323**	.470**	-						
4. ICT experience	367**	.557**	.852**	-					
5. Member in professional associations	.275**	262**	116	181	-				
6. Trade unionist	.051	.107	.153	.129	.189*	-			
7. Aware of www.opengov.gr	.059	.300**	.223*	.326**	004	.405**	-		
8. Following www.opengov.gr	.054	.312**	.259**	.363**	030	.341**	.943**	-	
9. Annotator in www.opengov.gr	.012	.307**	.235*	.343**	067	.366**	.937**	.944**	-

^{*}p<0.05, **p< 0.01

4 Conclusion

The institution of online public consultations was introduced in 2009 in Greece (www.opengov.gr). Under this institution, the Greek Ministry of Rural Development has conducted 21 consultations, on which 5078 comments have been posted.

This paper does not aim to assess the involvement of farmers in electronic public consultation, in the sense of quality participation in the formulation of laws that

concern them, but the emergence of democratic divide probability within the rural world. These public consultations involve farmers and their collective bodies in a proportion that reaches up to 68.8%. It can be argued that participation rates of farmers and their collective bodies in public consultations are high, and indeed in many public consultations constitute the majority of commentators. However, field research revealed the existence of a democratic divide among farmers, as the vast majority of farmers do not know of the existence of the institution of electronic public consultations. Although the awareness of the existence of the institution of the farmers does not necessarily mean active participation in it, moreover participation is a personal choice of each farmer, consistent with the attitude to life, the information deficit of the existence of this institution is a structural expansion material the democratic divide.

The institution of electronic public consultation promotes the participation of citizens in shaping public policy and is part of a new form of democracy, edemocracy. Freedom of expression and formulation of ideas, thoughts and suggestions of citizens is the basis and foundation of any type democracy. The possibility of creating dialogue, not only between citizens and the initiator of the consultation, but also between the citizens themselves, gives the online public consultation a special dynamic feedback of ideas and policy. In this sense, the institution of electronic public consultation is an important rural development tool in the hands of farmers, element defines the need to reduce the democratic divide.

Within the context of closing the democratic divide in the agricultural sector, we propose to intensify the publicity of the public consultations institution, press releases to local communities and promotion in local and national media. We also propose the organization of seminars in the context of lifelong learning, in coordination with the informal lifelong learning schools of the municipalities, where we promote the ideal of the institution of public consultations.

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