Digital active participation in different cultural activities. The case of Spain

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Abstract: Active involvement in cultural activities is one dimension of cultural participation that has received comparatively little attention in the academic literature. This paper attempts to redress this gap by exploring the determinants of active practice of cultural activities in Spain, using data from the 2014-15 Survey of Cultural Habits and Practices by the Spanish Ministry of Education, Culture and Sports. First, we explore the relationships between different practices; then, we model the determinants of the intensity/variety of active engagement; last, we concentrate on the digital practices. Results indicate a different impact of the explicative variables on several dependent variables.

Keywords: active cultural participation, Survey of Cultural Practices and Habits in Spain 2014-15, count models, probit models, Heckman selection, Spain

JEL codes: C55, D12, Z11.

1. Introduction

Cultural participation has traditionally been conceptualized under different aspects: participation through attendance at live arts events; participation through the media by watching or listening to arts programs; and personal (or active) involvement. The first aspect has been investigated in deep for different cultural activities (i.e. theatre, cinema, museum, etc). Media consumption has also got wide research, with an increasing emphasis on the changing consumption and expenditure habits due to digitalization. Some recent studies have also tried to disentangle the impact of digitalization on the on-line and in-site attendance to cultural goods (second way to participate). However, less is known on the determinants of active consumption of these goods, though typically it is claimed that active engagement in individual or social practice of cultural activities is extremely beneficial for individuals and communities. Even less is known about how digital skills and the digital divide may offer new possibilities or impose further hurdles for cultural practices. This is particularly interesting, given that the barriers between amateur and professional artistic practice are becoming blurred, and the deep penetration of digital devices (particularly mobile and handheld devices) are driving some cultural practices (such as photograph and video) extremely popular.

The aim of this paper is to fill this lacuna and to explore the determinants of active participation in Spain. We use data derived from the Survey of Cultural Habits and Practices by the Spanish Ministry of Education, Culture and Sports (last edition available is 2014-2015). We consider different forms of cultural engagement: writing, painting, other plastic activities, photograph, video, web, other audiovisual activities, theatre, dance, flamenco, playing instrumental music, singing choral music, other music activities, and other artistic activities. Following an individual decision making model, we describe and explore different cultural practices in Spain. Explanatory variables are

divided in socio-demographic and socio-economic characteristics and individual cultural capital, as well as cultural equipment and physical and digital cultural contents in the household.

We perform descriptive analysis and estimate binary models. In what refers to the digital practices, we estimate models that explicitly account for the selection in the sample of Internet users.

The plan of the paper goes as follows: Section 2 reviews the literature on the types, drivers and benefits (at the individual and social level) of active engagement with artistic practices. This section also includes a brief quantitative overview of active cultural participation in the European Union, and a more detailed analysis for Spain. Section 3 describes the data and the econometric strategy followed in this study. Section 4 contains the main results and a final section provides the conclusions.

2. Active cultural participation: a review of literature

The research on active arts participation is limited. In 1991, Eckstein and Feist began the process of culturally mapping the amateur arts and crafts in the United Kingdom, examining both the role of various umbrella organisations and national interest groups in this sector and the means by which amateur arts organisations were supported and financed.

In more recent years, in Belgium and the Netherlands large scale studies have been undertaken to describe the core aspects of amateur arts participation. In Flanders (the northern region of Belgium), sociological research carried out by Vanherwegen et al. (2009) showed that no fewer than 1 in 3 people practised the arts. Among the wide range of research results, the authors reported that people who practised the arts were much

more active as receptive cultural participants and that amateur artists were less individualistic, and were more socially aware than those who did not practise arts.

Other countries have mainly focused their research on the social impact of active arts participation. Since Matarasso's long-term study on the social impact of participatory arts projects in the United Kingdom, Ireland, Finland and the US (Matarasso, 1997), a considerable body of research has been conducted on the social impact of participation in amateur arts. The evidence suggests that arts participation has a positive effect on social cohesion (bringing people together, developing networks and understanding), on community empowerment (building local capacity for organisation and self-determination) and on local image and identity (celebrating local culture and traditions and strengthening cultural life). From individual grounds, research on active participation has also showed benefits on personal development (leading to enhanced confidence, skill-building and educational developments which can improve people's social contacts and employability).

The positive effect on social cohesion, many studies suggest, is visible in the essential contribution that participatory and amateur arts have made to the development of vibrant and inclusive communities (Jeanotte, 2003, for Canada; Convenio Andrés Bello, 2004, for Colombia: McCarthy et al., 2004, for the USA; Dodd et al., 2008, for England) and to juvenile crime prevention and conflict resolution (Alemán et al. 2016, for Venezuela).

The positive effect on community empowerment is visible in how involvement in an arts group in the UK has a statistically significant effect on trust in civil institutions and in people (Delaney and Keaney, 2006). In the United States, Taylor (2008) has maintained, the arts can create enjoyable public spaces and shared experience, and encourage intergenerational activity.

The positive effects on local image and identity have also been evidenced in the literature. In their study on the voluntary and amateur arts in England, Dodd et al. (2008) described the important artistic and creative value of the voluntary arts sector, both in terms of sustaining cultural traditions and developing new artistic practices. Waldron and Veblen (2009) found a sense of community and belonging by joining people in the learning and playing of traditional folk music in Australia. More recently, Brown et al. (2011) reported that in cities and towns across the United States participatory arts practice is gaining recognition as an important aspect of quality of life and a means of building civic identity and communal meaning.

Participation in the arts can also have a significant impact on people's self-confidence and, therefore, on their social lives (Matarasso, 1997). Individuals who engage in arts practice are usually more trusting in general and political terms and are more optimistic and tolerant (Stolle and Rochon, 1998).

Because of their limited nature, none of these studies on the social impact of active arts participation have been exempt from criticism. Frequently, they address a single organisation or local programme, concentrate solely on community development arts programmes with one intended social outcome (Ramsey, White and Rentschler, 2005; Ramsden et al., 2011) or cannot establish causality between arts and culture and the wider societal impacts (Arts Council of England, 2014; Taylor et al., 2015).

In recent years, this limited scope of the research on active arts participation has gone hand in hand with a growing use of digital devices, especially among younger generations, which has favoured the participation in creative activities (such as photography, video, designing websites, etc.). Although evidence regarding such participation is still limited, recent studies outline differences in motivation, access, skills, and usage that appear to underlie and perpetuate differences in online content creation

practices between social groups. From a review of existing evidence and drawing on theoretical frameworks used in digital divide studies, Brake (2014) shows that active online content creators are a minority of internet users, and they tend to have higher socio-demographic status than the broader Internet-using populations they come from (which in turn tend to be of a higher status than non-internet users).

Quantitative overview of active cultural participation in Europe

The data in this section come from the Special Eurobarometer nº 399 entitled "Cultural Access and Participation", requested by the European Commission. This is part of Wave EB79.2 and covers the European Union population residing in each of the Member States and aged 15 years and over. In each country, a number of sampling points were selected with probability proportional to population size (for a total coverage of the country) and to population density. Thus, the survey represents the whole territory of the countries, and the distribution of the population in metropolitan, urban and rural areas. The reference year was 2013. In comparison to other European statistics, such as the Adult Education Survey, the Eurobarometer covers a broad age range (15 onwards) and includes 27 European countries. Despite some limitations, such as a possible overestimation of participation rates (Brook, 2011; Vanherwegen et al., 2011), which affects all countries equally, it provides valuable comparative data regarding active participation in some public performances and artistic activities.

In general terms (see Table 1), the most popular activity is dancing (13% have danced at least once in the last 12 months). Photography or film making (12%) and singing (11%) rank in second place. Fewer respondents had played an instrument (8%), participated in creative writing (5%) and acting (3%) in the last year. However, a majority of 62% of Europeans did not take part actively in any of these artistic activities. Therefore,

the 38% who did participate in these individual artistic activities were often taking part in multiple activities and not just the one.

[Table 1 around here]

The evolution along the 2007-1013 period shows a general trend towards declining participation in almost cultural activities. The differences in behavior are remarkable: in 2007, 27% of Europeans had made a film or were involved in photography (12% in 2013); 19% had danced (compared with 13%) and 15% had sung (compared with 11%) – and all had participated in this activity at least once in the past year.

The country analysis clearly shows that Denmark has the highest figures for all artistic activities. Apart from Denmark, other North Western countries, such as Sweden, Finland or the Netherlands, registered high levels of amateur participation. Specifically, Swedish habitants are enthusiastic participants in creative activities and are the most likely to use their computer for designing websites, blogs and other creative purposes (26%). Approximately half of respondents in Estonia, France, Slovenia and Luxembourg are also actively engaged in one or more artistic activity.

The Eurobarometer also provides information about a set of socio-demographic characteristics of participants in amateur activities. However, the information is presented in general terms with no breakdown by country. As shown in Table 2, participation in artistic and performance activities is generally higher among the youngest age group. Regarding the specific activities surveyed, this pattern is most marked for dancing and creative computing activities, in which there is a 15-point and a 12-point difference

respectively amongst those aged between 15-24 and those aged over 55. Education is also a determining socio-demographic factor that has an impact on active cultural participation. The longer a respondent has spent in education, the more likely he or she is to be involved in artistic or performance activities. This relationship is particularly true in photography and filmmaking activities, in which the difference between those educated beyond the age of 19 and those educated up to age 15 is about 14 points. Education is also a discriminating factor among those still studying who are the most likely to take part in creative computing activities (19%) and those who left education at age of 15 or before (2%). There are also some variations between sexes; for example, women are more likely to participate in singing (13% against 9% for men), dancing (16% against 10%) and painting, doing handicrafts or sculpture (13% against 7%). Men are more likely to play a musical instrument (10% against 7% for women) and doing creative comuputing (9% against 6%).

[Table 2 around here]

Active cultural participation in Spanish statistics

The *Survey on Cultural Habits and Practices (SCHP)* is the main tool for measuring cultural participation in Spain, and has undergone several changes over the following editions: 2002–2003, 2006–2007, 2010–2011, and 2014–2015 (Ministerio de Cultura 2003, 2007, 2011, 2015). In all four editions, the Ministry reports on indicators of active cultural participation. However, the reference period (the last quarter in the 2002–2003 edition or the last year from 2006–2007 onwards) and the kind of practices (web design was included as of 2006–2007, other audiovisual practices since the 2010-2011 edition

or flamenco dancing since the last edition) has experienced changes over the past 15 years (for more details see Ateca-Amestoy and Villarroya, 2017).

The analysis of indicators on active cultural participation shows that the most popular activity is photography (28.9% in 2014–2015), followed by video (15%), painting (13.7%), other plastic activities (8.3%) and playing an instrument or writing (7.8%). Less common activities are flamenco dancing (1.7%), acting on the stage (2.2%), choral singing (2.4%), other audiovisual activities (2.5%) or designing a website, blog or other creative computing activities (3%).

In all four editions of the survey, there is a positive trend in almost all the indicators considered. Thus, photography increased by 12.3 percentage points from the 2006–2007 edition to the 2014–2015; video by 9.3 over the same period and painting and other plastic activities by 4.5 and 3.8 points respectively. Designing a website, blog or other creative computing activity remains fairly constant engaging between 2 and 3% of the Spanish population.

[Table 3 around here]

3. Data and descriptive statistics

The data used in this analysis are derived from the last edition of the *Survey of Cultural Practices and Habits in Spain,* carried out by the Spanish Ministry of Education, Culture and Sports during the period 2014-2015. In each quarter of that period, a new random sample of people over fifteen years is interviewed, resulting in a final sample of 15,154 individuals. People interviewed are representative of the Spanish population aged above 15 years in terms of sex, education level, economic activity, type of residence, and other factors (see Ateca-Amestoy and Villarroya, 2017). The survey covers a large parte of cultural activities both through live attendance and through the internet, and is

complemented by a set of socioeconomic and demographic characteristics, as well as information about the household.

[Table 4 around here]

4. Method

The aim of this study is to investigate the determinants of fourteen types of active participation. We test this hypothesis by estimating the following model:

$$\text{Participation}_i = \alpha_0 + \beta_1 \text{De} + \beta_2 \text{S} + \beta_3 \text{Se} + \beta_4 \text{He} + \beta_5 \text{Ge} + \beta_6 \text{O} + \delta_{it,} \quad (1)$$

We account for 14 different types of participation: *write, paint, other plast, photo, video, web, other audio, theatre, dance, flamenco, music, choral, other music, and other arts*.

We explain these types of participation with the following explanatory variables: *De* indicates a vector of demographic characteristics: age, sex (male and female) and nationality (Spanish and not Spanish); *S* represents a vector of cultural variables, four educational categories: less than compulsory schooling, compulsory schooling, more than compulsory schooling, vocational training, university; *He* indicates the vector variables for health status: good health status and bad health status; *Ge* represents a vector for geographical variables: *ccaa* indicates 17 regional dummies; and *habitat* indicates four dummy variables regarding the number of inhabitants: <10000 habitants, 10000-50000, 50000-100000, >100000 inhabitants. Finally, the vector *O* indicates the *quarter* and the computer skills (*comp*). The description of the variables used in this analysis is reported in Table 5.

[Table 5 around here]

Previous studies on cultural participation have demonstrated the importance of gender (in favour of female), age effect, education and cultural capital variables, labour status, nationality, health, urbanization, regional and seasonal differences to the participation of cultural goods (see Seaman, 2005 for a review of the literature). However, in this paper we want to verify whether the determinants of active participation are the same for cultural participation, and further we want to explore the different impact, both in terms of sign and magnitude, of these explicative variables on each type of cultural participation.

To approach to active cultural participation in Spain we will perform four complementary analysis. First, a cluster analysis that will consider all alternative ways of participation (we will remove residual categories and analyse the ten that we consider "practicepure"), and how they relate. The results of the clustering will be visualized in a dendrogram, at the bottom of which, each cultural activity will be considered its own cluster. The connection between the vertical lines will indicate the similarity within activities. Following the previous empirical specification (1), we will perform a probit analysis for the fourteen different forms of cultural participation. It will allow us to measure the impact of the explanatory variables on different artistic activities. The following step of this analysis will be to account for the intensity of the engagement. Given the particularity of our data (high level of zero) we will apply the methodology proposed by Long and Freese (2006) to choose between different types of count models: Poisson Regression Model, Negative Binomial Regression Model, Zero Inflate Model and Zero Inflated Negative Binomial Model (see also Ateca-Amestoy, 2008). By using a Zero Inflated Negative Binomial Model (the model more appropriated for our data), we

will characterize two distinct behaviours for participation: a group that has a positive probability of participate and a group of never-goers. The last step of our analysis will be to perform a Heckman selection probit for those activities that are susceptible to be performed on or with a computer: writing, photography, video and web. The model will be constructed in such a way that we can see the influence that each explicative variable has on the probability of cultural involvement through the internet, accounting for the fact that there is a previous process (the selection part of the model) that explains the probability of internet usage. Both processes will be jointly estimated in a single model, a Heckman probit model (Heckman, 1979). A similar approach is adopted by Ateca-Amestoy and Castiglione (2016) to study the consumption of cultural goods through the Internet.

4. Results

4.1. How do active cultural practices relate?

Dendogram in Figure 1 shows which active cultural practices are more associated when they are practiced by the same individual. Results highlight that dance and flamenco, as expected, are similar and are also connected with theatre performances. On the other side, photography and video are the most similar activities, and they are related with painting, hence with writing, then with playing an instrument and with choral activities and finally with web.

[Figure 1 around here]

4.2. How does variety of engagement depend on individual characteristics?

Table 5 presents the estimated results for the probit model for the fourteen different forms of cultural participation. As expected, some differences emerge within the impact of the explicative variables on different cultural involvement. For example, male have a higher probability to participate in photography, video, web, other audiovisual activities and playing instrumental music compared with female. Also the age effect displays a different impact: whilst the probability of participate in other artistic activities, photography, theatre, dance, flamenco and choral is increasing with age, it is decreasing for the remaining activities. It is also important to draw the attention to the fact that to have a lower level of education increases the probability to practice flamenco and dance, whilst the highest level of education increases active involvement in all artistic activities. Different impact on the probability to be engaged is found for the labour status and for the nationality. In terms of occupation, students are the most likely to participate in all artistic activities. Retired people have also a higher probability to take active part in writing, painting, doing some photography and video, dancing, playing a musical instrument, singing choral music and practicing another artistic activities. No Spanish people have a higher probability to be actively engaged in painting, video, theatre and dance, whilst to be Spanish people decreases the probability to be involved in other cultural events. People with bad health status are most likely to be active participants in many artistic activities such as writing and other plastic activities, designing websites and other audiovisual activities, theatre, dancing flamenco, playing a musical instrument or singing choral music. A high level of heterogeneity is found for the number of inhabitants, regions and time period.

[Table 5 around here]

4.3. How to explain the number of different practices an individual chooses?

The estimated results for the ZINB model are reported in Table 6. The second column of the table reports the results for the "not always zero" (*activenum*) part of the model, whilst the third column reports the always zero part of the model (*inflate*).

[Table 6 around here]

Among the group of activenum, being man decreases the probability of taking part at least in one type of performance by -0.0103, age highlights the usual non linear effect with cultural participation. Own formal education has the expected effect, the positive probability of active engagement strongly increases with the level of education. In terms of occupation, unemployed, retired and students have a higher probability to attend compared with worker, whilst people out of the labour force have a lower probability. This is probably due to the time consuming effect, the first three categories have more leisure time to spend, compared with people involved in some worker activities. No Spanish people have higher positive probability to be active participants compared with Spanish people. People in bad health status have a positive probability, this is maybe due to some of the activities included in our basket of artistic activities. The positive probability is increasing with the number of inhabitants, this maybe due to the fact that people living in city spend less time to take active part in an artistic activity compared with people living in the suburbs. A strong heterogeneity is also found within the regions, compared with the region of Madrid, all people living in the other regions have a lower positive probability to attend. Finally, also a time effect with the quarters is found.

Turning now to the *inflate* part of the model, it is important to draw the attention to the opposite sign that we found in some variables compared with the probability to practice more. The opposite impact is found for man, age squared, the own educational level, the occupational variables and a slight difference is also found for the number of inhabitants. The apparent contrasting result within these variables is a robustness for our findings (i.e. weather being male decreases the positive probability to take part, should increase the probability to be always zero).

4.4. How do digital practices depend on individual characteristics, once digital skills determinants are controlled?

The second and third columns in Table 7 present the results for the writing activity, the fourth and fifth display the results for photography, and the sixth and seventh columns present the results for the video, whilst the last two columns show the results for the web. As expected, being a male decreases the probability of writing, while age squared, to be unemployed and student increase the same probability. On the other side, the selection component is positively influenced by being man and the highest level of education, and negatively by age, and the lower level of education (*edu1* and *edu2*). The determinants of the probability to be involved in photography are very similar to those of writing, with the only difference that the highest level of education is negatively correlated with the probability to take part and a high level of heterogeneity between regions is found, same results are also found for the selection part. The probability of taking part in video activities is significantly influenced only by the highest level of education (negatively) and by people retired from work (positively), and also in this case a regional heterogeneity is found. Finally, as expected the participation in designing websites or blogs is positively strongly influenced by age, the lower level of education (*edu1* and *edu2*) and being

unemployed, whilst negatively by the highest level of education. The selection component of the last two estimations is similar to the first two.

[Table 7 around here]

6. Conclusions and discussion

This work contributes to the still scarce literature on active cultural participation, even though participation in amateur arts has numerous potential benefits in individual, communal or civic life. It adds to that strand by first analysing the most important activities on active cultural participation in Europe and then, by investigating for the case of Spain the determinants of fourteen types of engagements: writing, painting, other plastic activities, photography, video, web, other audio visual activities, theatre, dance, flamenco, playing instrumental music, singing choral music, other music activities, and other artistic activities.

In the descriptive analysis for Europe the results demonstrate that there are significant variations between northern and southern Europe in terms of active involvement in cultural and artistic activities. There are also a number of interesting differences in engagement when socio-demographic factors are considered: younger citizens and those still studying or with higher levels of education are most likely to take active part in artistic activities. Sex is also relevant: women are more likely to participate in singing, dancing and sculpture, painting, drawing or handicrafts, while men are more likely to participate in playing a musical instrument and creative computing.

For the econometric part, we have used data derived from the Survey of Cultural Habits and Practices by the Spanish Ministry of Education, Culture and Sports for the 2014-2015 and we have applied different techniques to better analyse the determinants of

participation. Whilst, the explicative variables (socio-demographic, socio-economic characteristics and individual cultural capital) turn to have a different impact on the fourteen types of participation, we can certainly summarize that the intensity of participation is negatively influenced by being male, we found the usual non linear effects of age, and education is shown to be a strong determinant. The occupational characteristics are also important and finally, we found a strong heterogeneity within regions.

These results are very similar to those found in studies on receptive cultural participation. This means that there are significant variations among socio-demographic socio-economic groups in terms of cultural and artistic activities, whether these are experienced as part of an audience or through active involvement as creator or performer.

One interesting aspect dealt with this study is that related to health status. Results show that people with bad health are most likely to be active participants in many artistic activities such as writing and other plastic activities, designing websites and other audiovisual activities, as well as in theatre, dancing flamenco, playing a musical instrument or singing choral music. One tentative explanation for these results could be that linked to the positive impact of applied arts and cultural interventions on specific health conditions which include dementia, depression and Parkinson' disease (Arts Council England, 2014). A similar explanation could apply to the higher probability of retired people to take active part in many artistic activities. There are numerous pieces of research that evidence the positive impact that the arts can have on the physical, mental and social wellbeing of older people and many that focus on the merits of participation in dance activities in particular (Mental Health Foundation, 2011).

Another aspect addressed in this study is that related to digital activities. The Heckman probit model analysis has shown a number of interesting differences in

participation when socio-demographic factors are considered. In all activities that can be performed on the Internet or using digital devices, except for writing, the highest level of education is negatively correlated with the probability to participate. In terms of occupation, unemployed people are most likely to take active part in writing and creative computing and retired people, in making videos. These results, which will deserve further analysis, seem point to the fact that those in less privileged positions (lower levels of education and occupational categories) are taking advantage of digital media.

The descriptive analysis has shown that the most popular activity in Spain is photography followed by video, being both activities those which have experienced a more positive trend over the 2006-2015 period. The growth of these practices is probably related to the integration of digital media and Internet into everyday lives. The use of digital technologies may influence civic engagement (Hargittai and Hsieh, 2013), in the sense that benefits usually attributed to active participation in arts and culture can be undermined in decreasing people's social capital at both individual and societal levels. Some evidence suggests that the more time one spends online, the less one can spend socializing with others (McPherson et al., 2006). However, other studies have found that digital media uses are associated with an increase in interpersonal communication and community participation (Kraut et al., 2002). Given the myriad of individual and societal benefits initially attributed to active participation in arts, more research is needed on the effects that the use of digital devices can have in civic engagement and on how these digital practices can become more social due to the "socially shared digital culture".

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Figure 1. Dendogram for practicepure cluster analysis

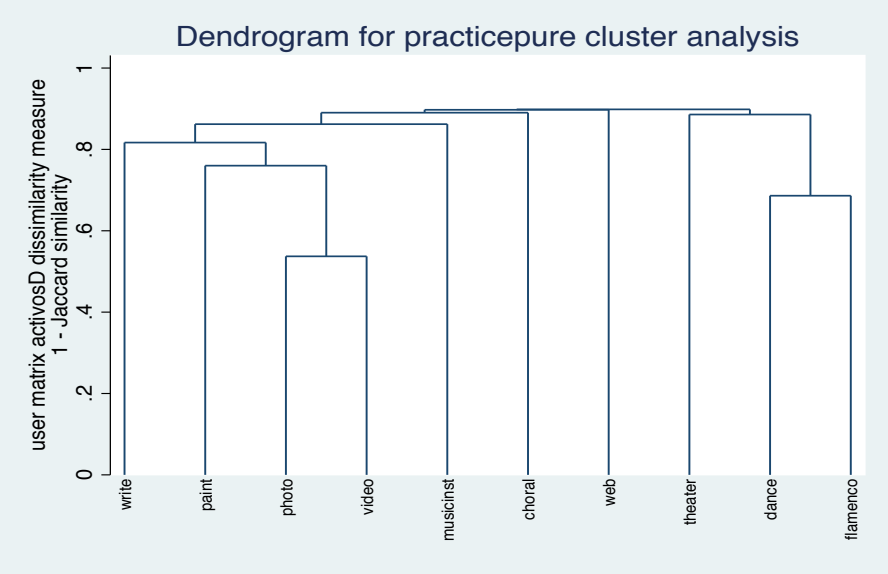

Table 1. Annual active participation rates for various artistic activities, European Union (27), 2013.

	Danced	Made a film, done some photography	Sung	Done any other artistic activities like sculpture, painting, handicrafts or drawing	Played a musical instrument	Done creative computing such as designing websites or blogs, etc.	Written a poem, an essay, a novel, etc.	Acted on the stage or in a film	Other (Spontaneous)	None (Spontaneous)	Don't know
Austria	16	14	12	10	12	7	2	2	4	56	0
Belgium	16	10	11	15	11	10	6	3	3	54	2
Bulgaria	7	1	5	2	2	2	1	1	0	86	1
Croatia	6	9	2	7	4	5	4	2	3	79	0
Cyprus	17	7	11	7	7	5	3	3	1	67	0
Czech Republic	15	13	12	4	8	8	2	2	1	63	1
Denmark	35	49	38	27	21	23	13	5	1	26	0
Estonia	19	10	15	20	9	12	8	4	2	50	4
Finland	15	19	23	26	16	16	12	3	6	37	0
France	20	20	16	20	10	11	7	4	1	49	1
Germany	16	19	11	10	10	10	4	3	1	58	0
Greece	17	4	12	5	3	2	1	1	0	74	2
Hungary	7	8	5	4	3	3	1	1	0	79	0
Ireland	16	8	13	9	12	4	7	3	2	59	1
Italy	3	2	4	3	6	2	2	1	2	80	1
Latvia	13	13	14	11	7	6	4	4	0	58	4
Lithuania	5	4	7	7	4	2	3	2	5	71	2
Luxemburg	18	21	16	19	15	9	7	3	6	43	0
Malta	2	4	2	5	5	3	3	4	1	82	0
Netherlands	15	20	17	23	14	20	9	5	1	42	0
Poland	9	8	9	3	3	2	2	1	6	68	2
Portugal	10	5	6	3	3	2	2	1	1	78	0
Romania	14	7	7	3	4	4	3	1	2	74	3
Slovakia	16	12	15	6	7	6	2	1	1	62	1
Slovenia	21	22	21	14	9	8	4	3	4	49	0
Spain	14	3	10	10	7	5	3	2	2	68	1
Sweden	22	35	28	24	22	26	12	9	1	32	0
United Kingdom	11	12	9	14	10	9	8	3	3	59	0
UE 27	**13**	**12**	**11**	**10**	**8**	**8**	**5**	**3**	**2**	**62**	**1**

Source: European Commission (2013). *Cultural Access and Participation. Special Eurobarometer nº 399.*

Table 2. Annual participation rates for various artistic activities, European Union (27), 2013: Analysis by sex, age and education.

	Danced	Made a film, done some photography	Sung	Done any other artistic activities like sculpture, painting, handicrafts or drawing	Played a musical instrument	Done creative computing such as designing websites or blogs, etc.	Written a poem, an essay, a novel, etc.	Acted on the stage or in a film	Other (Spontaneous)	None (Spontaneous)	Don't know
UE 27	**13**	**12**	**11**	**10**	**8**	**8**	**5**	**3**	**2**	**62**	**1**
Sex											
Male	10	12	9	7	10	9	4	2	2	64	1
Female	16	12	13	13	7	6	5	3	2	61	1
Age											
15-24	23	18	16	13	16	15	11	6	2	45	1
25-39	14	13	11	10	10	10	5	2	2	59	1
40-54	13	12	12	10	8	7	3	2	2	63	1
55 +	8	9	8	9	5	3	3	2	2	71	1
Education (end of)											
15-	8	4	6	5	2	2	1	1	1	79	1
16-19	12	10	10	8	6	5	3	2	2	67	1
20+	15	18	14	15	12	12	6	3	3	51	1
Still studying	25	196	17	16	21	19	15	8	3	38	1

Source: European Commission (2013). *Cultural Access and Participation. Special Eurobarometer nº 399.*

Table 3. Indicators of active cultural participation in the last four editions of the *SCHP*, as a percentage of the total population in the last year and the last quarter.

	% of people during last year			**last quarter**
	2014-15	**2010-11**	**2006-07**	**2002-03**
Writing	7.8	7.1	7.5	3
Painting	13.7	13.2	9.2	
Other plastic activities	8.3	7.7	4.5	7.7
Photography	28.9	29.1	16.6	8.1
Video	15	12.8	5.7	2
Web design	3	2.6	2.2	
Other audiov. Activities	2.5	1.9		
Theater	2.2	2.1	2.1	1
Dance, ballet	4.9	3.9	3.8	1.5
Flamenco dancing	1.7			
Playing an instrument	7.8	8	5.9	4
Choral signing	2.4	2.4	2.8	1.7
Other music activities	4	3.6		
Other artist activities	3	2.9	8.1	
NONE				75.4

Table 4: Variables used in the analysis.

Variable		Definition
Dependent variables		
write		Writing
paint		Painting
otherplast		Other plastic activities
photo		Photography
video		Video
web		Web
otheraudio		Other audiovisual activities
theater		Theater
dance		Dancing
flamenco		Dancing Flamenco
musicinst		Playing instrumental music
choral		Singing choral music
othermusic		Other music activities
otherarts		Other artistic activities
Explanatory variables		
De - Vector of demographic variables		
	Sex	Female, Male
	Age	Age, Age squared
	Nationality	Spanish, not Spanish
S - Vector of cultural variables		
	Edu	Four categories: Less than compulsory schooling, Compulsory schooling, More than compulsory schooling, Vocational training, University
Se - Vector of occupational variables		
	Labour	Five categories: worker, unemployed, retired, student, out of the lab force
He - Vector of health status		
	Health	Good health status (healthg), Bad health status (healthb)
Ge - Vector of geographical variables		
	Ccaa	Dummy variables for the regions: Andalucía, Aragón, Principado Asturias, Baleares, Canarias, Cantabria, Castilla-Leon, Castilla-La-Mancha, Cataluña, Comunidad Valenciana, Extremadura, Galicia, Madrid, Murcia, Navarra, País Vasco, La Rioja, and Ceuta-Melilla
	Habitat	Four categories: <10000 habitants, 10000-50000 habs, 50000-100000 habs, >100000 habs
O - Vector of Other Variables		
	Comp	Computer skills: for work and for leisure
	Quarter	Quarter1: march14-may14; Quarter2: june14-aug14.; Quarter3: sept.14-nov.14; Quarter4: dec14-feb15

Table 5: Probit Estimations

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Variables	write	paint	otherplast	photo	video	web	otheraudio	theater	dance	flamenco	musicinst	choral	othermusic	otherarts
male	-0.126***	-	-0.343***	0.00671***	0.0725***	0.347***	0.368***	-0.241***	-0.521***	-0.303***	0.267***	-0.217***	0.173***	-0.188***
	(0.000632)	(0.00054	(0.000634)	(0.000468)	(0.000546)	(0.000939)	(0.00100)	(0.000984)	(0.000778	(0.00113)	(0.000650)	(0.000945	(0.000793)	(0.000864)
age	-0.0150***	-	0.0119***	0.0150***	-	-0.0137***	-0.0271***	0.00793***	0.00524**	0.0146***	-0.0183***	0.0148***	-0.0330***	0.0214***
	(0.000112)	(9.84e-	(0.000114)	(9.45e-05)	(0.000121)	(0.000248)	(0.000226)	(0.000192)	(0.000139	(0.000204	(0.000125)	(0.000167	(0.000148)	(0.000157)
age2	0.000106**	-1.57e-	-	-	-	-8.22e-	8.55e-	-	-	-	5.28e-05***	-	0.000209**	-
	(1.11e-06)	(9.87e-	(1.13e-06)	(9.83e-07)	(1.33e-06)	(2.93e-06)	(2.56e-06)	(1.99e-06)	(1.42e-06)	(2.07e-06)	(1.32e-06)	(1.57e-06)	(1.55e-06)	(1.52e-06)
edu1	-0.289***	-	-0.156***	-0.583***	-0.456***	-0.295***	-0.382***	-0.193***	0.0807***	0.228***	-0.303***	-	-0.261***	-0.176***
	(0.00112)	(0.00093	(0.00105)	(0.000836)	(0.00103)	(0.00184)	(0.00195)	(0.00172)	(0.00122)	(0.00174)	(0.00118)	(0.00163)	(0.00142)	(0.00142)
edu2	-0.104***	-	-0.107***	-0.243***	-0.194***	-0.332***	-0.318***	-0.258***	0.0152***	0.0967***	-0.141***	0.129***	-0.103***	-0.169***
	(0.000815)	(0.00067	(0.000778)	(0.000573)	(0.000671)	(0.00127)	(0.00129)	(0.00128)	(0.000931	(0.00139)	(0.000812)	(0.00123)	(0.000974)	(0.00109)
edu4	0.370***	0.181***	0.0799***	0.226***	0.137***	0.411***	0.292***	0.173***	0.0358***	0.0467***	0.291***	0.316***	0.0899***	0.0604***
	(0.000838)	(0.00073	(0.000845)	(0.000623)	(0.000706)	(0.00111)	(0.00118)	(0.00122)	(0.00104)	(0.00161)	(0.000835)	(0.00131)	(0.00105)	(0.00115)
unemployed	0.169***	0.155***	0.137***	-0.0326***	0.0448***	0.0532***	0.0544***	-0.0609***	-	-	0.0724***	-0.131***	0.000399	0.277***
	(0.000925)	(0.00077	(0.000870)	(0.000663)	(0.000751)	(0.00129)	(0.00139)	(0.00149)	(0.00107)	(0.00154)	(0.000918)	(0.00158)	(0.00113)	(0.00118)
retired	0.153***	0.163***	-0.0403***	0.0119***	0.0680***	-0.256***	-0.0918***	-0.150***	0.0843***	-	0.0855***	0.166***	-0.0417***	0.0375***
	(0.00132)	(0.00114)	(0.00130)	(0.00101)	(0.00132)	(0.00316)	(0.00287)	(0.00229)	(0.00162)	(0.00231)	(0.00148)	(0.00172)	(0.00188)	(0.00172)
student	0.595***	0.576***	0.278***	0.266***	0.135***	0.323***	0.278***	0.535***	0.296***	0.167***	0.395***	0.492***	0.0917***	0.535***
	(0.00131)	(0.00114)	(0.00137)	(0.00104)	(0.00114)	(0.00173)	(0.00179)	(0.00195)	(0.00154)	(0.00233)	(0.00129)	(0.00212)	(0.00153)	(0.00192)
outforce	-0.0326***	0.0956**	0.116***	-0.261***	-0.136***	-0.321***	-0.0623***	-0.134***	-0.104***	0.0237***	-0.259***	0.0490***	-0.106***	0.115***
	(0.00141)	(0.00111)	(0.00117)	(0.00103)	(0.00129)	(0.00350)	(0.00297)	(0.00214)	(0.00147)	(0.00200)	(0.00183)	(0.00177)	(0.00195)	(0.00166)
noSpain	-0.0119***	0.0394**	-0.0805***	-0.0193***	0.0169***	-0.0348***	-6.10e-05	0.0312***	0.0402***	-0.243***	-0.161***	-	-0.0995***	-0.0178***
	(0.00120)	(0.00098	(0.00121)	(0.000850)	(0.000974)	(0.00171)	(0.00174)	(0.00176)	(0.00133)	(0.00250)	(0.00128)	(0.00202)	(0.00154)	(0.00161)
healthb	0.0892***	-	0.0653***	-0.118***	-0.0825***	0.0694***	0.124***	0.00654***	-	0.0615***	0.00256***	0.0569***	-0.0850***	0.0722***
	(0.000876)	(0.00076	(0.000841)	(0.000684)	(0.000858)	(0.00156)	(0.00154)	(0.00143)	(0.00107)	(0.00149)	(0.000974)	(0.00118)	(0.00124)	(0.00112)
habitat1	-	0.00550*	-0.0484***	0.0904***	0.0640***	-0.0348***	0.165***	-0.0642***	-	-0.146***	-0.0314***	-	0.0793***	0.0959***

	(0.000726)	(0.00062	(0.000716)	(0.000540)	(0.000629)	(0.00106)	(0.00111)	(0.00112)	(0.000850	(0.00127)	(0.000746)	(0.00104)	(0.000904)	(0.000984)
habitat2	-0.150***	-	-0.0570***	-0.0637***	-0.0555***	-0.195***	0.0173***	-0.215***	-0.132***	-0.178***	-0.104***	-0.283***	-0.0936***	0.175***
	(0.00116)	(0.00097	(0.00110)	(0.000824)	(0.000971)	(0.00179)	(0.00175)	(0.00183)	(0.00135)	(0.00203)	(0.00117)	(0.00194)	(0.00148)	(0.00140)
habitat3	0.0254***	0.102***	0.0282***	0.154***	0.0877***	0.0865***	0.0178***	0.0391***	-	-0.165***	-0.00456***	-0.111***	0.00915***	0.000113
	(0.00101)	(0.00084	(0.000973)	(0.000748)	(0.000869)	(0.00142)	(0.00164)	(0.00149)	(0.00121)	(0.00180)	(0.00104)	(0.00156)	(0.00129)	(0.00144)
ccaa1	-0.0515***	-	0.182***	-0.316***	-0.194***	-0.128***	-0.134***	-0.101***	0.0192***	0.189***	-0.0856***	0.162***	0.122***	-0.0282***
	(0.00106)	(0.00092	(0.00109)	(0.000817)	(0.000913)	(0.00157)	(0.00164)	(0.00166)	(0.00130)	(0.00179)	(0.00111)	(0.00166)	(0.00141)	(0.00145)
ccaa2	-0.167***	-	0.0356***	-0.0889***	-0.0560***	-0.0278***	-0.374***	-0.239***	-	-	-0.188***	0.0530***	-0.122***	-0.129***
	(0.00199)	(0.00165)	(0.00198)	(0.00142)	(0.00160)	(0.00278)	(0.00351)	(0.00337)	(0.00232)	(0.00356)	(0.00210)	(0.00292)	(0.00276)	(0.00277)
ccaa3	-1.97e-05	0.0525**	0.307***	-0.0546***	-0.0581***	0.109***	-0.161***	0.274***	-	-0.654***	0.0762***	0.0451***	0.217***	-0.108***
	(0.00206)	(0.00172)	(0.00190)	(0.00156)	(0.00179)	(0.00295)	(0.00360)	(0.00268)	(0.00269)	(0.00677)	(0.00208)	(0.00333)	(0.00259)	(0.00292)
ccaa4	-0.0724***	-	-0.229***	-0.376***	-0.509***	-0.170***	-0.248***	-0.414***	-0.255***	-0.342***	-0.236***	-	-0.166***	0.141***
	(0.00211)	(0.00195)	(0.00245)	(0.00160)	(0.00198)	(0.00332)	(0.00368)	(0.00425)	(0.00282)	(0.00460)	(0.00235)	(0.00358)	(0.00310)	(0.00262)
ccaa5	-0.191***	-	0.0880***	-0.0386***	0.00126	0.128***	-0.131***	-0.165***	0.365***	0.425***	-0.0550***	0.0510***	-0.124***	-0.199***
	(0.00168)	(0.00134)	(0.00159)	(0.00117)	(0.00130)	(0.00213)	(0.00255)	(0.00262)	(0.00165)	(0.00221)	(0.00163)	(0.00250)	(0.00230)	(0.00240)
ccaa6	-0.347***	-	-0.214***	-0.663***	-0.745***	-0.210***	-0.355***	-0.394***	-0.368***	-0.653***	-0.322***	0.0858***	0.00796**	-0.166***
	(0.00319)	(0.00286)	(0.00317)	(0.00231)	(0.00304)	(0.00463)	(0.00551)	(0.00556)	(0.00422)	(0.00859)	(0.00330)	(0.00398)	(0.00372)	(0.00417)
ccaa7	-0.306***	-	0.245***	0.136***	0.123***	0.0923***	0.184***	-	0.147***	0.211***	0.0800***	0.258***	0.316***	0.0443***
	(0.00166)	(0.00128)	(0.00145)	(0.00112)	(0.00124)	(0.00211)	(0.00207)	(0.00226)	(0.00173)	(0.00233)	(0.00150)	(0.00209)	(0.00180)	(0.00198)
ccaa8	-0.296***	-	-0.145***	-0.464***	-0.517***	-0.415***	-0.378***	-0.0790***	-0.206***	-0.153***	-0.301***	0.123***	-0.0295***	-0.145***
	(0.00185)	(0.00148)	(0.00183)	(0.00133)	(0.00160)	(0.00303)	(0.00316)	(0.00258)	(0.00219)	(0.00300)	(0.00191)	(0.00246)	(0.00229)	(0.00246)
ccaa9	-0.143***	-	-0.126***	-0.321***	-0.536***	-0.374***	-0.219***	-0.00299*	-0.125***	-0.426***	-0.168***	-	0.0532***	-0.0468***
	(0.00111)	(0.00096	(0.00119)	(0.000826)	(0.000997)	(0.00181)	(0.00175)	(0.00164)	(0.00138)	(0.00241)	(0.00116)	(0.00182)	(0.00147)	(0.00148)
ccaa10	-0.184***	-	0.0628***	-0.338***	-0.297***	0.0352***	0.00920***	-0.124***	-	-0.126***	-0.0855***	0.170***	0.105***	-0.0678***
	(0.00126)	(0.00107)	(0.00125)	(0.000937)	(0.00107)	(0.00173)	(0.00182)	(0.00194)	(0.00148)	(0.00225)	(0.00127)	(0.00184)	(0.00161)	(0.00169)
ccaa11	-0.467***	-	-0.253***	-0.879***	-0.721***	-0.390***	-0.339***	-0.257***	-0.441***	-0.691***	-0.372***	-0.148***	-0.205***	-0.229***
	(0.00263)	(0.00224)	(0.00249)	(0.00191)	(0.00227)	(0.00396)	(0.00414)	(0.00380)	(0.00331)	(0.00644)	(0.00256)	(0.00371)	(0.00326)	(0.00340)
ccaa12	-0.00271*	-	0.154***	-0.0805***	-0.146***	0.138***	0.0982***	-0.0910***	-	-0.231***	0.00390***	0.0774***	0.268***	-0.00340*
	(0.00144)	(0.00131)	(0.00145)	(0.00110)	(0.00128)	(0.00202)	(0.00214)	(0.00232)	(0.00181)	(0.00286)	(0.00149)	(0.00224)	(0.00180)	(0.00196)
ccaa14	-0.117***	-	0.227***	-0.299***	-0.313***	-0.0196***	0.110***	-0.140***	-	-	-0.135***	0.0328***	0.0901***	-0.00214

	(0.00190)	(0.00164)	(0.00176)	(0.00141)	(0.00165)	(0.00265)	(0.00254)	(0.00303)	(0.00223)	(0.00336)	(0.00198)	(0.00296)	(0.00238)	(0.00248)
ccaa15	-0.180***	-0.00193	0.305***	-0.175***	-0.222***	0.0399***	-0.00959**	0.0441***	0.178***	-	0.0960***	0.174***	0.295***	0.0960***
	(0.00278)	(0.00221)	(0.00241)	(0.00200)	(0.00233)	(0.00366)	(0.00395)	(0.00377)	(0.00288)	(0.00476)	(0.00255)	(0.00363)	(0.00303)	(0.00338)
ccaa16	-0.159***	-	-0.00425**	-0.346***	-0.376***	0.0191***	-0.174***	-0.344***	-	-0.542***	-0.117***	-0.112***	-0.0674***	-0.137***
	(0.00163)	(0.00139)	(0.00166)	(0.00122)	(0.00145)	(0.00222)	(0.00258)	(0.00289)	(0.00199)	(0.00418)	(0.00167)	(0.00265)	(0.00224)	(0.00232)
ccaa17	-0.114***	-	0.211***	-0.353***	-0.438***	-0.124***	-0.366***	-0.115***	-0.00680	-0.327***	-0.0775***	0.175***	0.0152***	-0.0269***
	(0.00375)	(0.00326)	(0.00346)	(0.00288)	(0.00357)	(0.00586)	(0.00720)	(0.00603)	(0.00443)	(0.00834)	(0.00389)	(0.00502)	(0.00498)	(0.00504)
ccaa18	0.163***	-	0.111***	-0.445***	-0.439***	-0.235***	0.135***	0.0844***	0.118***	0.247***	-0.295***	-	0.0574***	0.0546***
	(0.00471)	(0.00437)	(0.00514)	(0.00405)	(0.00477)	(0.00874)	(0.00650)	(0.00749)	(0.00566)	(0.00734)	(0.00611)	(0.00933)	(0.00634)	(0.00655)
quarter1	-0.0273***	0.0295**	0.0310***	-0.0568***	-0.146***	-0.0491***	-0.0418***	0.0321***	0.0536***	0.00964**	-0.0404***	0.0167***	0.0624***	-0.0394***
	(0.000859)	(0.00073	(0.000850)	(0.000635)	(0.000744)	(0.00124)	(0.00134)	(0.00132)	(0.000991	(0.00142)	(0.000890)	(0.00129)	(0.00105)	(0.00117)
quarter3	-0.0168***	-	0.0531***	-0.110***	-0.159***	-0.114***	-0.0496***	0.0276***	-	-0.191***	-0.000638	0.119***	-0.0240***	0.0625***
	(0.000852)	(0.00073	(0.000840)	(0.000637)	(0.000743)	(0.00125)	(0.00133)	(0.00131)	(0.00101)	(0.00154)	(0.000876)	(0.00123)	(0.00108)	(0.00112)
quarter4	-0.0708***	0.0247**	0.0600***	-0.0832***	-0.0664***	-0.110***	-	-0.0308***	-	-	0.0123***	0.0183***	-0.0907***	-0.0641***
	(0.000864)	(0.00073	(0.000838)	(0.000632)	(0.000726)	(0.00125)	(0.00130)	(0.00134)	(0.00101)	(0.00142)	(0.000869)	(0.00128)	(0.00110)	(0.00117)
Constant	-0.926***	-	-1.490***	-0.141***	-0.135***	-1.240***	-1.186***	-1.897***	-1.340***	-2.092***	-0.792***	-2.530***	-0.880***	-2.417***
	(0.00304)	(0.00263)	(0.00308)	(0.00242)	(0.00293)	(0.00546)	(0.00521)	(0.00496)	(0.00366)	(0.00543)	(0.00319)	(0.00477)	(0.00378)	(0.00432)
Observations	38,956,278	38,956,2	38,956,278	38,956,278	38,956,278	38,956,278	38,956,278	38,956,278	38,956,27	38,956,27	38,956,278	38,956,27	38,956,278	38,956,278

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 6: ZINB estimations

	(1)	(2)
VARIABLES	**activenum**	**inflate**
male	-0.0103***	0.294***
	(0.000516)	(0.00143)
age	-0.00826***	-0.0146***
	(0.000119)	(0.000241)
age2	-4.37e-05***	0.000273***
	(1.31e-06)	(2.44e-06)
edu1	-0.0442***	1.246***
	(0.00101)	(0.00217)
edu2	-0.0774***	0.575***
	(0.000672)	(0.00180)
edu4	0.113***	-0.991***
	(0.000677)	(0.00333)
unemployed	0.0740***	-0.0686***
	(0.000734)	(0.00188)
retired	0.0363***	-0.0683***
	(0.00132)	(0.00271)
student	0.246***	-1.311***
	(0.00103)	(0.00418)
outforce	-0.0633***	0.0870***
	(0.00127)	(0.00280)
noSpain	0.00528***	0.166***
	(0.000952)	(0.00239)
healthb	0.0291***	0.107***
	(0.000770)	(0.00169)
habitat1	-0.0227***	-0.213***
	(0.000585)	(0.00156)
habitat2	-0.133***	0.0176***
	(0.000949)	(0.00228)
habitat3	-0.0134***	-0.364***
	(0.000826)	(0.00236)
ccaa1	-0.0948***	
	(0.000763)	
ccaa2	-0.126***	
	(0.00136)	
ccaa3	0.0612***	
	(0.00147)	
ccaa4	-0.429***	
	(0.00163)	
ccaa5	0.0173***	
	(0.00110)	
ccaa6	-0.617***	
	(0.00245)	
ccaa7	0.106***	
	(0.00101)	
ccaa8	-0.409***	
	(0.00132)	
ccaa9	-0.307***	
	(0.000811)	
ccaa10	-0.162***	
	(0.000894)	
ccaa11	-0.805***	
	(0.00196)	
ccaa12	-0.0192***	
	(0.00105)	
ccaa14	-0.134***	
	(0.00135)	

ccaa15	-0.0219***	
	(0.00182)	
ccaa16	-0.253***	
	(0.00120)	
ccaa17	-0.227***	
	(0.00279)	
ccaa18	-0.134***	
	(0.00384)	
quarter1	-0.0487***	
	(0.000615)	
quarter3	-0.0615***	
	(0.000618)	
quarter4	-0.0402***	
	(0.000615)	
Constant	1.074***	-0.953***
	(0.00277)	(0.00616)
lnalpha	-0.965***	
	(0.00165)	
Observations	38,956,278	38,956,278

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 7: Heckman selection probit estimations

	(1)		(2)		(3)		(4)	
Variables	**write**	**nocomp**	**Photo**	**nocomp**	**Video**	**nocomp**	**web**	**nocomp**
male	-0.185***	0.240***	-0.129***	0.244***	-0.0157	0.242***	-0.0156	0.239***
	(0.0512)	(0.0251)	(0.0400)	(0.0251)	(0.0609)	(0.0251)	(0.0936)	(0.0251)
age	-0.0161	-0.0368***	-0.00957	-0.0369***	-0.0112	-0.0369***	0.0288***	-0.0369***
	(0.0241)	(0.000843)	(0.0112)	(0.000841)	(0.0133)	(0.000842)	(0.0106)	(0.000841)
age2	0.000446**		0.000227**		0.000121		-0.000136	
	(0.000195)		(0.000110)		(0.000127)		(0.000134)	
edu1	0.805***	-1.222***	0.348*	-1.222***	0.379	-1.223***	0.876***	-1.224***
	(0.257)	(0.0497)	(0.190)	(0.0497)	(0.252)	(0.0497)	(0.182)	(0.0497)
edu2	0.410**	-0.722***	0.239**	-0.724***	0.209	-0.723***	0.425***	-0.723***
	(0.181)	(0.0304)	(0.106)	(0.0304)	(0.150)	(0.0304)	(0.142)	(0.0304)
edu4	-0.358	0.834***	-0.272***	0.835***	-0.266*	0.835***	-0.496***	0.835***
	(0.235)	(0.0328)	(0.0989)	(0.0328)	(0.150)	(0.0328)	(0.150)	(0.0328)
unemployed	0.251***		0.137**		0.102		0.170**	
	(0.0914)		(0.0576)		(0.0638)		(0.0717)	
retired	0.211		0.248*		0.352**		0.110	
	(0.141)		(0.129)		(0.153)		(0.144)	
student	0.160*		-0.0933		-0.0854		0.0796	
	(0.0901)		(0.0675)		(0.0744)		(0.0680)	
outforce	0.206		0.0393		-0.121		-0.0634	
	(0.134)		(0.133)		(0.169)		(0.169)	
noSpain	0.133		0.00913		0.0284		-0.00295	
	(0.0817)		(0.0692)		(0.0787)		(0.0662)	
healthb	0.100		-0.0218		0.0170		0.0609	
	(0.0624)		(0.0546)		(0.0624)		(0.0585)	
habitat1	-0.0400		0.0268		0.0393		-0.0229	
	(0.0404)		(0.0377)		(0.0428)		(0.0381)	
habitat2	-0.135		-0.0438		-0.0676		-0.106	
	(0.0842)		(0.0651)		(0.0745)		(0.0789)	
habitat3	-0.0293		0.136**		0.0127		0.0342	
	(0.0549)		(0.0543)		(0.0607)		(0.0504)	
ccaa1	0.0308		-0.0769		0.0163		0.0511	
	(0.0632)		(0.0652)		(0.0707)		(0.0670)	
ccaa2	-0.0330		0.0452		0.0223		0.108	
	(0.0907)		(0.0863)		(0.0948)		(0.0889)	
ccaa3	-0.0277		0.0161		0.0488		0.218*	
	(0.0958)		(0.0944)		(0.105)		(0.115)	
ccaa4	-0.0432		-0.374***		-0.360***		0.0781	
	(0.101)		(0.106)		(0.124)		(0.0986)	
ccaa5	-0.0233		0.0717		0.140		0.234**	
	(0.0886)		(0.0870)		(0.0950)		(0.103)	
ccaa6	-0.0565		-0.420***		-0.580***		0.00613	
	(0.105)		(0.111)		(0.147)		(0.105)	
ccaa7	-0.259**		0.283***		0.232**		0.143	
	(0.127)		(0.0855)		(0.0905)		(0.0926)	
ccaa8	-0.171		-0.251***		-0.465***		-0.129	
	(0.115)		(0.0894)		(0.116)		(0.107)	

ccaa9	-0.0559		-0.161**		-0.395***		-0.0849	
	(0.0723)		(0.0672)		(0.0885)		(0.0800)	
ccaa10	-0.108		-0.150**		-0.104		0.176*	
	(0.0822)		(0.0738)		(0.0823)		(0.0926)	
ccaa11	-0.320*		-0.708***		-0.491***		-0.00415	
	(0.175)		(0.126)		(0.132)		(0.0980)	
ccaa12	0.0647		0.139*		0.0345		0.153	
	(0.0813)		(0.0831)		(0.0901)		(0.0942)	
ccaa14	-0.0523		-0.0679		-0.0150		0.110	
	(0.0879)		(0.0842)		(0.0929)		(0.0937)	
ccaa15	-0.0474		-0.0778		-0.129		0.131	
	(0.0940)		(0.0923)		(0.105)		(0.0963)	
ccaa16	-0.130		-0.156*		-0.148		0.130	
	(0.0982)		(0.0811)		(0.0917)		(0.0849)	
ccaa17	-0.0176		-0.219**		-0.243**		0.0669	
	(0.0992)		(0.103)		(0.119)		(0.102)	
ccaa18	0.177		-0.374***		-0.466***		-0.118	
	(0.112)		(0.109)		(0.135)		(0.135)	
quarter1	-0.00140		-0.0325		-0.0765		0.0185	
	(0.0437)		(0.0441)		(0.0510)		(0.0425)	
quarter3	-0.0251		-0.0545		-0.0735		-0.0301	
	(0.0449)		(0.0445)		(0.0512)		(0.0447)	
quarter4	-0.0716		-0.0675		-0.0388		-0.0371	
	(0.0486)		(0.0442)		(0.0499)		(0.0442)	
Constant	-0.230	1.307***	0.575**	1.307***	0.192	1.308***	-1.190***	1.311***
	(0.284)	(0.0416)	(0.225)	(0.0415)	(0.244)	(0.0415)	(0.247)	(0.0416)
athrho	-1.215*		-0.738***		-0.575*		-1.563***	
	(0.676)		(0.281)		(0.347)		(0.591)	
Observations	15,154	15,154	15,154	15,154	15,154	15,154	15,154	15,154

Standard errors in parentheses

***** p<0.01, ** p<0.05, * p<0.1**