Governmental promotion of the Information Society in the Spanish Region of Valencia

Natalia Papí-Gálvez [CV] [ID] [G] Professor at the Department of Communication and Social Psychology, University of Alicante, Spain / natalia.p@ua.es

Emilio Feliu-García [ID] [G] Professor at the Department of Communication and Social Psychology, University of Alicante, Spain / emilio.feliu@ua.es

Abstract: Regional spheres are considered essential in the governmental promotion of the Information Society at the international level. The regional initiatives in Spain aim to strengthen and complement the initiatives promoted at the national level. This article analyses ICT penetration in the Valencian Community from 1996 to 2008. The objective is to identify which of the actions carried out by the Valencian Regional Government have had a positive effect on its society. The methodology employed in this study is benchmarking.

The selection of indicators is based on the policies evaluation model proposed in the *Plan Avanza* (Spain's national Information Society strategy). Data were collected from official statistical sources (like Spain's National Statistics Institute, *INE*). Three statistical tests were applied to verify the hypotheses (Pearson's r^2, Chi-square and Student's t). The results indicate that it is not possible to affirm that the actions implemented by the Valencian Regional Government have had a more positive effect on its society than those implemented by the Spanish Central Government. A reason for this may lie in the specific objectives of the political strategy implemented by the Valencian Government, which has focused primarily on e-Government and does not include enough projects centred on the implementation of new technologies in the private sector. Moreover, the integration of new technologies in everyday life is placed in a second level of importance despite citizens are central actors in the international agenda.

Keywords: impact assessment; policies; ICT; Information Society.

Summary: 1. Introduction. 1.1. The promotion of the Information Society and the regional sphere. 1.2. Measuring the Information Society and evaluating public policy. 1.3. Priority action lines of the Valencian Regional Government. 2. Methodology. 3. Results. 3.1. Linear associations between the Valencian Community and Spain. 3.2. Differences between the Valencian Community and Spain: Goodness of fit. 3.3. Differences between the Valencian Community and Spain: Central tendencies. 4. Discussion and conclusion. 5. References. 6. Notes.

Translation by **Cruz Alberto Martinez-Arcos, M.A.** (University of London)

1. Introduction

1.1. The promotion of the Information Society and the regional sphere.

The present study is part of a project of greater importance that analyses and compares the initiatives to promote the Information Society (IS) and their results in 17 autonomous communities of Spain. This article focuses on the analysis of ICT penetration in the Valencian Community from 1996 to 2008, and in particular to the framework defining the political strategy to promote the IS in this region.

The concept of "Information society" strongly reappeared in the 1990s to refer to a new reality generated by the changes produced by the new ICTs, which deeply affected the social systems and relations (for example, Castells, 1997).

The information sector is one of the two parts constituting our society. It combines three processes: the development of the contents industry, the increase in the IT industry, and the emergence of a network that distributes and gives access to information (Cornella, 2002). The IS has been regarded as an opportunity for economic growth and innovation. However, this economic process must be complemented with a more cultural process that forces us to focus on knowledge and its implications, such as the integration of new technologies in everyday life.

From a similar perspective, the international community supports a citizens-centred construction of the IS in accordance to the two World Summits on the Information Society held in Geneva and Tunisia. Although the mechanisms to reach citizens are not always direct, citizens must be the ultimate beneficiary of all initiatives. Under this premise, the ICT preparation and promotion in societies is one of the most important objectives in the international political agenda. Therefore governments have been urged to ensure an adequate coverage through the promotion of information and communication infrastructures. In this context, the local authorities play an important role in the provision of ICT services for their populations, according to the Bilbao Summit of 2005. However, all this does not always results in the promotion of the information culture.

In fact, the IS promotion policies, even at the international level, have been fundamentally technocentric (Becerra, 2005, 2008). They have forgotten a large part of its cultural mission (De Moragas, 2009), even if it were to the detriment of the development of the information culture, which is key in the development of the IS (Cornella, 2002). This issue acquires special significance when it is assumed that the governmental support is necessary to stimulate these processes (Jordana and Sancho, 1999). The information policies are public policies that gather a heterogeneous set of documents (laws, decrees, plans) with more or less direct effects on its

media system and citizens. So the analysis of public policies in this field is relevant and necessary.

Based on the analysis of information policies for the promotion of IS, a great part of the latest communication studies in Spain have focused on specific projects that involve changes in the media landscape, such as those related to the digitalisation of television.

The study of the typology of such policies at the European level and their implementation in several countries has been deepened (e.g. García Leiva, 2009; Fernández, et. al., 2008). Scholars have examined the process and the effect of the national policies implemented in the audiovisual field (Zallo, 2010; Fondevilla, 2009) and in particular in DTT (Franquet, et. al., 2009; Marzal and Casero, 2009). Other scholars have exposed the processes to grant licenses of DTTP (Digital Terrestrial Television of Proximity) at the regional level, and of Local TV at the local level (Ortega, 2009; Corominas et. al., 2007). Some others have analysed the regulation of these media (Sanmartín and Reguero, 2009) and showed the interest and relevance of the regional sphere in this entire process, as well as the lack of coordination at various levels.

Other interesting lines of debate are located within this same framework to continue the reflection on the Internet as a tool for accessing the services and contents of the IS, and its governance (Soria and García, 2009). These studies have shown the relevance of the Internet in the development of the IS.

The international, national and regional agendas set 2010 as the deadline to achieve the agreed priority objectives, which should answer to the development of both the information sector and citizens' access and frequency of use [1]. Now is the time, therefore, to observe the social impact of the IS promotion policies implemented as a whole according to the different geographical areas of action for whom they were designed.

1.2. Measuring the Information Society and evaluating public policy

In light of the theoretical framework and the political agenda, several models for the systematic measurement of the IS have been proposed, and they highlight the main factors and their relationships. Common dimensions have been extracted from the different proposals (e.g. UN, 2005; Meroño and Sabater, 2004).

The parties interested and involved in this process are, broadly speaking: the private sector (industry and financial institutions), the public sector (governments) and society (citizens and SMEs). Three interrelated areas stand out: development (infrastructures, application and

contents), uses (government, SMEs and citizens) and resources (mainly economic, but also capacities).

The measurement of the IS is especially relevant in the evaluation of public policies because it allows evaluating the suitability of the strategy and proposing changes, when necessary. In order for the governmental intervention to have an effect on the system, the government needs, at least, a clear political strategy, included in the master or strategic plans for the promotion of the IS, and a realistic budget, whose results must be measured and evaluated (Orna, 2008; Cacaly and Le Coadic, 2007; Aoyama, and Castells, 2002).

During these years the strategy carried out by the European Union to assess the process of IS promotion policies has been based in benchmarking, which is a comparative evaluation of different companies, countries or governments implementing policies that have the same objective (Kouzmin et. al., 1999).

According to the latest European report (EC, 2009), Spain obtained good results in the development and implementation of e-Government, but is below the European average in the services offered by enterprises over the Internet and the use of new technologies by the citizens (according to data from 2008). In addition, in Spain the standardisation of ICT use in these areas (enterprises and citizens) has been slower than in other countries, at least, since 2004, despite the implementation of the *Info XXI* plan in 2001 and *Plan Avanza* in 2005.

1.3. Priority action lines of the Valencian Regional Government

The Valencian Community (hence VC) is one of the first autonomous communities in Spain to implement specific plans for the promotion of the IS. It has implemented three plans in this area: the Strategic Modernization Plan for the Valencian Government (*PEMAV*), from 1996 to 1999; the Modernization Plan (*Moderniza*), from 2000 to 2003; and the Master Plan for Advanced Telecommunications (*Avantic*), from 2004 to 2010.

The document prior to the development of the first plan (*PLANTEL* − Master Plan for Telecommunications) mentioned three roles that the government must play in this new journey: user, promoter and guarantor (table 1).
From the first plan for the promotion of the IS, the political strategy has focused on the innovation of the government, which is configured as the "user" (since 1996). However, the Master Plan for Telecommunications highlights the need to direct the efforts also towards the citizenry and enterprises.

The Valencian Government and the Spanish Administration both had to play the role of promoters of the IS; but this "promoting" role, in terms of uses and integration in everyday life, did not become truly effective until years later, with the implementation of the second and third plans.

Similarly, according to the Strategic Modernization Plan for the Valencian Government (*PEMAV*), governmental actions had to be aimed at ensuring services in terms of information and communication, for which it was essential to promote the development of the necessary telecommunications infrastructures. This objective corresponds to the government's "guarantor" role. And although this role is already reflected in some projects of the second Plan, the implementation of programmes addressing the coverage of telecommunications and the quality of the infrastructures only became evident with the Master Plan for Advanced Telecommunications (*Avantic*).

Table 1: Strategic plans for the promotion of the IS

Year	Plans	I. P.	Main role	Main beneficiary	Budget of the Autonomous government of Valencia
1996 1999	*PLANTEL* *PEMAV*	40	"User"	Government	9,500 – 10,981 million pesetas
2000 2003	*MODERNIZA*	90-107	"User" "Promoter"	Government (Citizen)	Initial 38,400 million pesetas - final 120 million euros
2004 2010	*AVANTIC*	63	"User" "Promoter" "Guarantor"	Government (Citizen) (Company)	2,741.05 million euros

Source: Authors' creation based on official documents. I. P. = number of included programmes.

The first Strategic Plan was constituted by diverse projects grouped into four areas: efficient administration, responsible administration, interrelated administration, and decentralised administration. The second plan incorporated in its objectives the Strategic Plan for Telecommunications. But it was the last plan, *Avantic*, which collected more resources. The budget destined for its 63 initial projects was of 2,741 million euros. If we compare this figure with the figures in the previous plans, we can see that the difference is really significant (see table 1).

Avantic is structured in three parts. The first one collects all the programmes related to development of infrastructure (PEVTA). The second (PETIC) is aimed at three types of beneficiaries: Government, citizens and enterprises. The third consists of a series of horizontal programmes that are defined by the common aspects of the previous two programmes.

The first group includes 19 projects for which 41% of the plan's total budget was assigned. The second group is the worst affected by the distribution of the plan's total budget (9%). Finally, more resources are assigned for the horizontal programmes than for the specific lines of the Plan: 50% of the plan's total budget.

Based on the previous information, the objective of this study is to assess the support of the Valencian Government by paying attention to the impact of its actions and the main areas highlighted by the

models designed to measure the development of the IS. The object of study is relevant not only because the promotion of the IS has constituted a strategic line of priority in the last twenty years, but also because it has been proved to be one of the greatest political bids of the Valencian Government. Therefore, this research should verify whether the actions carried out by the Valencian Government have had a positive effect, based on the following two hypotheses:

H1: The situation of the Valencian Community, measured according to the selected indicators, is different from the national one.

H2: The Valencian Community stands out significantly in the indicators belonging to the categories that are most closely related to the Valencian Government's policy for the promotion of the IS included in the last plan, which had the greatest budgetary contribution (uses and infrastructures).

2. Methodology

The methodological strategy of this study is based on the principles of benchmarking, following the methodology of the impact assessment reports on the policies promoting the IS in the European Union. The data provided by the indicators for the Valencian Community (VC) will be compared to the national-level data.

The indicators used in this study have been selected based on the joint action of several criteria. We included, on the one hand, the indicators that are part of the IS assessment model used by the Ministry of Industry, Tourism and Commerce to evaluate the compliance of the *Plan Avanza* (MICT, 2009) and, on the second hand, the indicators used by the *Localcom* model.

The model in which the development of the index *Localcom* was based summarises the international and national proposals but adjusted to the regional sphere (Murciano, 2009). The index aims to show the development in terms of the IS of the Spanish Autonomous Communities through 23 indicators grouped in three categories (uses, infrastructures and opportunities) and six subcategories (economic capacity, skills and competencies, networks, terminals, intensity of use, quality of access and participation) (see table 2).

The index is a map of indicators whose synthetic version allows drawing conclusions related to the development of new technologies in Spain in comparative terms, and, in turn, provides an idea of the results of the plans implemented by the regional governments in the field of new technologies.

We will use the indicators with the same object of observation, provided that all the subcategories of the model are included (see table 3). For operational reasons, from the indicators with the same objects of observation the most synthetic will be selected (e.g. GDP per capita instead of GDP in millions of euros and the number of people separately).
The data were obtained from secondary statistical sources. At the national level, from Spain's National Institute of Statistics (*INE*), which undertakes three surveys: surveys of enterprises (since 2001), survey

of households (since 2002), and survey of products (since 2003). However, we also consulted other studies to complement the necessary information (see table 3). Yearly data of the period under study were collected (1996-2008), although it should be noted that there were no data related to infrastructure and uses for this period (1996-2008). The availability of data affected the selection of the indicator.

Table 2: Theoretical and metric Model

Categories Localcom	Subcategory Localcom	Indicators Localcom Model	Indicators Monitoring of *Plan Avanza*
Opportunities	Economic capacity	▪ GDP per capita*; ▪ IT market* ▪ Internal Expenditure on R&D; ▪ Population over poverty threshold;	☐ GDP (million euros)* ☐ Number of population* ☐ Number of households ☐ Income of the ICT macro-sector* ☐ Income of the ICT sector* ☐ Income of the ICT and Telecommunications sector* ☐ Budget dedicated to the promotion of the IS
	Skills and competencies	☐ Literacy rate; ☐ Population with Secondary education and vocational training; ☐ Population with higher studies	
Infrastructure	Networks	☐ Household penetration of fixed telephone lines; ☐ Household penetration of mobile telephony*; ☐ Internet household penetration*; ☐ Internet penetration in enterprises*	☐ Number of mobile lines per 1000 inhabitants ☐ Internet household penetration* ☐ Population with capacity to get access to broadband* ☐ Internet penetration in businesses* ☐ Number of broadband lines per 1000 inhabitants
	Terminals	☐ Households with a computer*; ☐ Households with satellite dish; ☐ Households with DVD ☐ Households with television	☐ Households with a computer*
Uses	Intensity of use	☐ Intensive Internet users*; ☐ People with e-mail; ☐ People who shop on the Internet; ☐ Children PC users	☐ Population commonly using the Internet* ☐ Population who have used Internet in the last three months ☐ Enterprises using the Internet to get information from the government ☐ Individuals using the Internet to get information from the government
	Quality of access and participation	☐ Households with broadband*; ☐ Enterprises with broadband*; ☐ Enterprises with website*; ☐ Councils with website*	☐ Households with broadband* ☐ Enterprises with broadband Internet* ☐ Enterprises with Internet and website* ☐ Availability of the 20 basic digital public online services* ☐ Non-university educational centres with broadband

Source: Authors' creation based on official documents and the LOCALCOM model. (*) These are indicators with the same object of analysis.

Table 3: Indicators selected by subcategory

Subcategories	Period	Indicator	Source	N	Source N
Economic capacity	1995- 2008 [EUR]	1. GDP per capita	INE (economic accounts)	Euros/ population figures 1 July of each year	INE, (economic accounts)
	1998- 2007 [thousand euros]	2. IS Business volume	INE (annual report on services)	All groups*	INE (annual report on services)
Skills and competencies	1995-2007	3. Literacy >= 16	INE (social indicators)	Population of 16 or over in Spain and the VC by years 98-07	INE, Register
	1995-2006	4. Average level of education at 17 years of age	INE (social indicators)	Population of 16 or over in Spain and the VC by years 98-08	INE, Register
	1995-2007	5. 25 to 34 year-old population with higher education	INE (social indicators)	25-34 y/o population in Spain and the VC by years 98-07	INE, Register
Networks	2002-2008	6. Households with mobile telephony	INE (survey of ICT equipment and use in households)	Effective sample of households in Spain and the VC by years**	INE, Survey
	2002-2008	7. Households with Internet	INE (survey of ICT equipment and use in households)	Effective sample of households in Spain and the VC by years**	INE, Survey
	2001-2008	8. Enterprises with Internet	INE (survey of ICT equipment and use in companies)	Theoretical sample in Spain and the VC 2008	INE, Survey
Terminals	2002-2008	9. Households with computer	INE (survey of ICT equipment and use in households)	Effective sample of households in Spain and the VC by years**	INE, survey
Intensity of use	2003-2008	10. Population using Internet 5 days a week	INE (survey of ICT equipment and use in households)	Population aged 16-74	INE, Register
Quality of access and participation	2002-2008	11.Households with broadband	INE (survey of ICT equipment and use in households)	Effective sample of households in Spain and the VC by years*	INE, Survey
	2002-2007	12. Enterprises with broadband	INE (survey of ICT use in companies)	Theoretical sample in Spain and the VC 2008***	INE, Survey
	2002-2007	13. Enterprises with website	INE (survey of ICT use in companies)	Theoretical sample in Spain and the VC 2008***	INE, Survey
	2007-2008	14. E-Government	Orange Foundation	-	-

Source: Authors' creation. The data in 1998-1999 refer to the telecommunications sector. In the VC: Business volume of locals in that community.

*The VC excludes "Transports" in 1998.

**Effective sample of the total number of households in Spain of all the years (average of the two reports in 2005 and 2006). Effective sample of the total number of households of the VC from 2008 to 2004 (average of the two reports from 2005 and 2006) and theoretical sample of 2002 and 2003.
***Percentage of enterprises with Internet.

Once the indicators were selected (see table 3), we applied three tests to verify the hypotheses of the study. The tests show the (association and distance) correlation between the evolution of the data from the VC and Spain as a whole.

Three estimators were used. Firstly, the Pearson's correlation between the VC and Spain. The calculation of correlations using Pearson's R^2 represents the degree with which a variable is explained by another variable in a linear function. If the R^2 scores equal 1, the linear association would be perfect.

Secondly, the statistical estimator Chi-square (X^2) to observe the existence of changes across years in the VC in relation to Spain. This estimator measures the goodness of fit of a distribution of data (the observed frequencies) with the frequencies that should be expected in order for such distribution not to be different. In this case, the observed frequencies are the data from the VC; and the expected frequencies are the data from Spain. For ease of calculation this test was performed with the help of Excel.

Thirdly, since the data were measured at the interval level, ratio or proportion, the calculation of mean differences for related samples was applied to complete the analysis. This test compares the central tendencies of the two distributions (VC and Spain) and the Student's t provides information on whether the observed differences can be considered significant. We used the statistical programme SPSS-15 to perform the calculations of Pearson's R^2 and Student's t.

3. Results

3.1. Linear associations between the VC and Spain

By focusing the analysis on the selected variables we can notice a close relationship between the data from the VC and Spain in most cases.

The GDP per capita ($R^2= 0.994$) co-varies to a significant level of correlation. Above 0.9 are also the population with higher education ($R^2= 0.902$), households with mobile telephony, computer and Internet ($R^2= 0.991$, $R^2= 0.992$, R2=0.990), enterprises with Internet (R2 = 0.995), broadband (R2=0.989) and website ($R^2=0.978$), and frequent users ($R^2=0.948$). Near this score is only the degree of literacy among the population over the age of 15 ($R^2= 0.897$).
Households with broadband do not follow a linear association ($R^2= 0.468$) just like the business volume in the IS ($R^2=0.375$). The lowest score is provided by the average level of studies at the age of 17 ($R^2= 0.044$).

Table 4: Correlations of the VC and Spain between indicators

Categories	Subcategories	Indicator	R^2
Opportunities	Economic capacity	1	0.994
		2	0.375
	Skills and competencies	3	0.897
		4	0.044
		5	0.902
Infrastructure	Networks	6	0.991
		7	0.990
		8	0.995
	Terminals	9	0.992
Uses	Intensity of use	10	0.948
	Quality of access and participation	11	0.468
		12	0.989
		13	0.978
		14	-

Source: Authors' creation. Codes of indicators in table 3.

3.2. Differences between the Valencian Community and Spain. Goodness of fit

All the goodness-of-fit tests indicated that we cannot consider the distributions of the VC and Spain to be different, except in three cases in which X^2 is very high: the GDP per capita, the volume of investment in the IS, and households with broadband (see table 5).

Table 5: Chi-square of the VC and Spain between indicators

Categories	Subcategories	Indicator	X^2	DF
Opportunities	Economic capacity	1	1078.0547	13
		2	31.584	9
	Skills and competencies	3	0.2961	12
		4	8.1585	10
		5	8.3971	12
Infrastructure	Networks	6	0.1021	6
		7	1.8729	6
		8	0.1131	5
	Terminals	9	1.4853	6
Uses	Intensity of use	10	0.4905	5
	Quality of access and participation	11	21.2718	5
		12	0.4503	5
		13	2.0412	5
		14	0.3559	1

Source: Authors' creation. Codes in table 3. DF = degrees of freedom.

3.3. Differences between the Valencian Community and Spain. Central tendencies

The test applied for the GDP per capita shows that the means of the VC and Spain in the analysed period (1995-2008) are different to a level of significance of 95% (t=- 5.581).

At the same level (95%) there are differences in the means of the business volume in the IS (t=- 4.932), the literacy level among adults (t= -3.759), population with higher education (t= -9.825), households with computer (t= 9.168), Internet (t= -6.467) and enterprises with website (t= - 9.591).

For the rest of the indicators we cannot affirm that the means of each indicator between the VC and Spain are significantly different (see table 6).

Table 6: Test of related samples, Student's test (VC-ES)

Categories	Subcategories	Indicator	Student's t	DF
Opportunities	Economic capacity	1	-5.581*	13
		2	-4.932	9
	Skills and competencies	3	-3.759	12
		4	-.698	10
		5	-9.825	12
Infrastructure	Networks	6	1.048	6
		7	-6.467	6
		8	-1.958	5
	Terminals	9	9.168	6
Uses	Intensity of use	10	0.170	5
	Quality of access and participation	11	-1.576	5
		12	-1.513	5
		13	-9.591	5
		14	3.000	1

Source: Authors' creation. Summary of results provided by SPSS. Codes in table 3. *negative sign = the mean of Spain is greater than the mean of the VC.

4. Discussion and conclusions

This study uses a system of indicators to measure the main strategic actions with an evaluative purpose. In this sense, one of the major difficulties of the evaluation of any programme is to establish the extent to what the effect was actually produced by the programme. In other words,

it is not known whether the observed change, in case it exists, would have occurred in the absence of the implemented measures. In order to know this effect, in an experiment the control group is often used, but this methodological approach has many limitations for the case under study due to the social nature of the governmental intervention.

These limitations intrinsic to this type of studies have been overcome, nonetheless, through the use of benchmarking, under the protection of the strategy used by the European Union in the field of technological development. This research used benchmarking with the purpose of evaluating the alleged impact of the specific plans of the Valencian Community. The element of comparison, in this case, is data of greater geographical coverage (from the whole of Spain). With this methodological strategy as base, we made statistical calculations that provided conclusive results, so it must be understood that the methodology adequately respond to the objectives of the study and, consequently, it is also relevant, appropriate and valid. The methodological strategy and the estimators used in this study provided a model for the analysis of the impact of the policies for promotion of the information society that could be applied in other autonomous communities and countries.

Regarding the results, the data lead us to reject the first hypothesis. The tests show associations in most of the indicators selected between the VC and Spain, and few differences.

In particular, with the exception of three indicators (business volume of the IS, average level of studies at the age of 17, and households with broadband), the rest are closely related (according to Pearson's R^2), although in the case of the GDP per capita the progression of the indicator by years is not the same (goodness of fit).

In other words, when measuring the goodness of fit, the few statistically significant differences are located in the two indicators that constitute the subcategories "economic capacity" (GDP per capita, and the business volume in the IS) and "households with broadband". Only in these three cases we can consider that the distribution of data by years is different in the VC and the whole of Spain. Of these three cases we dismissed the GDP per capita because it showed a strong linear association with the mean of Spain. As a consequence, only the data from "business volume in the IS" and "households with broadband" may have been modified, a priori, throughout the period under study by some intervention of the Valencian Government.

However, the results offered by the central tendency of the indicator (the mean) lead us to reconsider this difference of the "households with broadband" since it does not provide significant mean differences. Only eight of the 14 indicators show that the situation of the Valencian Community is different (and usually inferior) from the national mean (Student's t).

The distance between means was confirmed once again for the two indicators of the "economic capacity" subcategory (GDP per capita and the business volume in the IS). In addition, the mean is statistically different for two of the three indicators that form the "skills and competencies" subcategory (Literacy among adults and population with higher education). Both subcategories belong to the "opportunities" category and all of them appear with a negative sign. In the other two categories (infrastructure and uses) we can only observe mean differences in three of the nine analysed indicators (households with computer, households with Internet and enterprises with website).

As a consequence, the second hypothesis would only be valid for households with computer. The rest of the Student's t scores that provide significant differences are negative. Moreover, if we take into consideration only the negative sign of the estimator (without considering whether the mean difference is significant or not) 10 of the 14 indicators would be below the national mean.

In short, none of the hypotheses has been confirmed. In light of the statistical analysis, there are no differences between the data from the VC and Spain to suggest, in an overall assessment, that the plans implemented in the VC have in some sense provided more benefits than the national policies.

The indicators providing information about the sector from a macroeconomic approach place the Valencian Community, in any case, below the national mean, to a statistically significant extent. If we focus on the indicators related to individuals and households the only outstanding difference, in positive terms, would be households with computer, which is a figure that is immediately overshadowed by the negative sign of households with Internet. Moreover, there are no statistically significant differences in the frequency of Internet use by individuals. The indicators about enterprises neither provide particularly positive data in the Valencian Community.

Therefore we cannot say that the actions carried out by the Valencian Government have had a positive effect, at least, with greater intensity than the actions carried out by the central Government. In other words, with the intention of knowing the impact of the political intervention in the field of information society, by observing minimal differences between the VC and Spain and even a lower position of this community, it is understood that he regional intervention may not be producing the desired effect, or produces an effect in the same direction than Spain's central government.

One of the reasons may lie in the specific objectives of the political strategy carried out by the Valencian Government that, in the light of the European reports, does not differ from the effects

achieved by the national policy when compared with other countries. The general strategy, from the first plan, of the VC has focused on e-Government. As clearly shown in the analysis of the budgetary distribution, the main beneficiary of the various plans has been by far the governmental authorities, which suffices to affirm that the government has continued to be primarily a user, and not a promoter or guarantor of the IS in the Valencian Community.

Despite the fact that the business network of the Valencian Community is made up of small and medium-sized enterprises, which could hinder the implementation of innovative processes, there is not a predominance of projects related to the implementation of new technologies in the business sector as a necessary competitive tool, and/or an opportunity of economic growth. Likewise, the integration of new technologies in everyday life is situated in a second level of importance, despite the fact that the citizens are central actors in the international agenda. Therefore, many of the factors that should be taken into account for the promotion and development of the IS have been excluded.

Thus, in the near future the major budgetary efforts should be applied to those programmes and actions aimed at improving the indicators in which the VC is significantly behind the national average. According to the results of our analysis, it is necessary, therefore, to focus the different actions on the other main beneficiaries (citizens and enterprises), as the international agendas propose, in order to achieve a greater promotion of the IS in the Valencian Community. It is necessary, therefore, to adjust the strategy by taking into account the reality of the VC, but without missing the opportunity, in line with the proposals and predictions of some authors, to consider the convergence of the policies of communication and culture in the future, in order to achieve the full development of the IS.

5. Bibliographic references

Aoyama, Y. and Castells, M. (2002): "An empirical assessment of the informational society: Employment and occupational structures of G-7 countries, 1920-2000", *International labour review*, 141(1-2), pp. 123-159.

Becerra, M. (2005): "Las políticas de infocomunicación ante la Cumbre Mundial de la Sociedad de la Información (CMSI)" (Policies of info-communication in the World Summit on the Information Society (WSIS)), *Quaderns del CAC*, *XXV aniversari de l'Informe MacBride. Comunicació internacional i polítiques de comunicació,* 21. Retrieved on 10 June 2010 from: http://www.cac.cat/pfw_files/cma/recerca/quaderns_cac/Q21becerra_ES.pdf

--- (2008): "Information Society policies: the digital divide after the World Summit", in Several Authors. *Communication and Cultural Policies in Europe* (Eds. I. Fernández Alonso and M. De Moragas), Barcelona: UAB, Generalitat de Catalunya.

Cacaly, S. and Le Coadic, Y. F. (2007): "Fifty years of scientific and technical information policy in France (1955—2005)", *Journal of Information Science*, 33 (3), pp. 377–384.

Castells, M. (1997): *La era de la información: economía, sociedad y cultura*. *Vol. I: La sociedad red* (The information age: economy, society and culture. Volume 1: The network society). 1st edición. Madrid: Alianza.

Corominas, M. et. al. (2007): *"*Televisión digital terrestre local (TDT-L) en España: los concesionarios privados" (Local Digital Terrestrial Television in Spain: private operators), in *Zer. Revista de estudios de comunicación*, 22, Bilbao: UPV / EHU. Retrieved on 10 January 2010 from:
http://www.ehu.es/zer/zer22/zer22_corominas.htm

Cornella, Alfons (2002): "¿Economía de la información o sociedad de la información?" (Information economy or information society?), in *Planificación y evaluación de políticas de información. Documentos de lectura* (Planning and evaluation of information policy. Reading documents) (Several authors). Barcelona: FUOC, pp. 62-76. Retrieved on 20 June 2010 from:
http://cv.uoc.es/cdocent/721T8TKCPD9G_XOEUKHY.pdf

De Moragas, M. (2009): "De la comunicación a la cultura: Nuevos retos de las políticas de comunicación" (From communication to culture: new challenges in communication policy), *Telos. Cuadernos de Comunicación e Innovación*, nº 82, Madrid. Retrieved on 20 June 2010 from:
http://sociedadinformacion.fundacion.telefonica.com/seccion=1268&idioma=es_ES&id=200910 3010040001&activo=6.do

Fernández, I., et. al. (2008): "DTT Implementation Policies in Europe and the Transformation of the Television Landscape. Analysis of Five Experiences: the United Kingdom, France, Spain, Italy and Germany". In *Communication and Cultural Policies in Europe* (several authors, Eds. M. De Moragas and I. Fernández). Barcelona: UAB, Generalitat de Catalunya.

Fondevila Gascón, J. F. (2009): "La adaptación regulatoria de los operadores de cable histórico en España. La competencia de los grandes operadores" (Regulatory adaptation of the historic cable operators in Spain. The competition of the large operators), *Telos. Cuadernos de Comunicación e Innovación*, 80, Madrid. Retrieved on 20 June 2010 from:

http://sociedadinformacion.fundacion.telefonica.com/seccion=1268&idioma=es_ES&id=2009092817010001&activo=6.do

Franquet, R., et. al. (2009): "Servicio público e interactividad en la TDT: la política del laissez faire, laissez passer" (Interactivity and public service in DTT: the laissez faire, laissez passer policy), *Sphera Pública,* 9, Murcia: Universidad Católica San Antonio, pp. 191- 205.

García Leiva, M. T. (2009): "El dividendo digital: desafíos, oportunidades y posiciones nacionales" (The digital dividend: national challenges, opportunities and positions), RLCS *Revista Latina de Comunicación Social*, 64, La Laguna (Tenerife): University of La Laguna, Retrieved on 10 June 2010, from:
http://www.revistalatinacs.org/09/art/35_834_37_ULEPICC_19/Trinidad_Garcia_Leiva.html
DOI: 10.4185/RLCS-64-2009-834-424-436

Jordana J. and Sancho, D. (1999): *Políticas de telecomunicaciones en España* (Telecommunications policies in Spain). Madrid: Tecnos.

Kouzmin, A. et. al. (1999): "Benchmarking and performance measurement in public sectors: Towards learning for agency effectiveness", *International Journal of Public Sector Management,* 12 (2), pp. 121-144.

Marzal, J. J. and Casero, A. (2009): "Las políticas de comunicación ante la implantación de la TDT en España: balance crítico y retos pendientes" (The communication policies in view of the introduction of DTT in Spain: critical assessment and remaining challenges), *Sphera Publica*, 9, Murcia: Universidad Católica San Antonio, pp. 95-113.

Meroño, Á. L. and Sabater, R. (2004): "Medición integrada de la sociedad de la información" (Integrated measurement of the information society), *Boletín ICE Económico*, nº 2795, February, Madrid: MITYC, pp. 17-27.

MICT (2009): *Dossier: Indicadores de seguimiento de la sociedad de la información. Observatorio Nacional de las Telecomunicaciones y de la Sociedad de la Información* (Dossier: Information society monitoring indicators. National Observatory of Telecommunications and the Information Society)*,* Madrid: Ministry of Industry, Commerce and Tourism.

Murciano Martínez, M. (2009): "Sociedad de la Información y desarrollo desigual en los espacios comunicativos locales: una aproximación cuantitativa" (The information society and uneven development in local communicative spaces: a quantitative approach), in *Comunicación*

e interdisciplina (several authors, edited by C. García Hernández and R. Gómez García). Monterrey-México: Autonomous University of Nuevo León.

ONU (2005): *Measuring ICT: the global status of ICT indicators*, United Nations Information and Communication Technologies Task Force, New York: United Nations.

Orna, E. (2008): "Information policies: yesterday, today, tomorrow", *Journal of Information Science,* 34(4), pp. 547-565.

Ortega Mohedano, F. (2009): "La televisión de proximidad en España. Procesos concesionales, análisis de la población y PIB" (Television of proximity in Spain. Concessional processes, analysis of population and GDP), RLCS, *Revista Latina de Comunicación Social*, 64, La Laguna (Tenerife): University of La Laguna, Retrieved on 15 June 2010 from: http://www.revistalatinacs.org/09/art/48_847_ULEPICC_10/41Ortega.html
DOI: 10.4185/RLCS-64-2009-847-585-601

Sanmartín Navarro, J. and Reguero i Jiménez, N. (2009): "La regulación de los medios audiovisuales de proximidad ante la digitalización en España. Antecedentes y perspectivas" (Regulation of the audiovisual media of proximity in view of the digitization in Spain. Background and perspectives). RLCS, *Revista Latina de Comunicación Social*, 64, La Laguna (Tenerife): University of La Laguna. Retrieved on 3 June 2010 from: http://www.revistalatinacs.org/09/art/36_835_45_ULEPICC_18/Sanmartin_y_Reguero.html
DOI: 10.4185/RLCS-64-2009-835-437-443

Soria, B. and García, M. (2009): "La gobernanza de Internet. Inversión y universalización de las infraestructuras de telecomunicación" (Internet governance. Investment and universalisation of the telecommunications infrastructure), *Telos. Cuadernos de Comunicación e Innovación*, 80, Madrid. Retrieved on 20 June 2010 from: http://sociedadinformacion.fundacion.telefonica.com/seccion=1268&idioma=es_ES&id=2009100109050001&activo=6.do

Zallo, R. (2010): "The Audiovisual Communication policy of the Socialist Government (2004-2009: a neo-liberal turn)", *Revista Latina de Comunicación Social*, 65, La Laguna (Tenerife): University of La Laguna. Retrieved on 20 April 2010 from: http://www.revistalatinacs.org/10/art/880_UPV/02_ZalloIng.html
DOI: 10.4185/RLCS-65-2010-880-014-029-Eng

6. Notes

[1] The indicators proposed by the integral measurement model for the IS respond to the design of policies. The more symbolic aspects of the IS are not collected in such models due to both operational reasons (the indicators subject to perceptions are usually depreciated) and consistency with the evaluated object. However a first approach to ICT knowledge and integration in the everyday life can be made through the access and frequency of use.

_____

HOW TO CITE THIS ARTICLE IN BIBLIOGRAHIES / REFERENCES:

Papi-Gálvez, N. and Feliu-García, E. (2011): "Governmental promotion of the Information Society in the Spanish Region of Valencia", at _Revista Latina de Comunicación Social_, 66, pages 275 to 292. La Laguna (Tenerife, Canary Islands): La Laguna University, retrieved on ___th of ____ of 2_____, from
http://www.revistalatinacs.org/11/art/933_Alicante/12_PapiEN.html
DOI: 10.4185/RLCS-66-2011-933-275-292-EN

Note: the DOI number is **part** of the bibliographic references and it must be cited if you cited this article.

_____