IN SEARCH OF THE POLICY APPLIED AND SPATIAL CORRELATIONS OF ELECTRONIC GOVERNMENT APPLICATIONS IN GREECE

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Abstract
Following the demands of contemporary economy, public administration gradually adopts the applications of information and communications technology. This paper deals with the policy concerning the development of electronic governance (eG) applications and how their use is affected by and determines spatial correlations. The adopted methodology includes a bibliographical approach and a case study analysis based on the use of taxation electronic applications, particularly popular as eG applications, in Greece.
In the EU, ICT in fact functions merely as a means of realisation within pre-existing political, social and economical structures a fact posing restrictions in terms of the results of their potential use. E-Government applications are a more immediate way for the citizen to get in contact with public services and a mechanism of accelerating administrative procedures. There is a lack of contribution to the cohesion of policies and actions.
The constitution of telematic nets and the use of technological applications are the main mechanisms leading to the notion of "electronic space" challenging at the same time the traditional view of accessibility and the functional organisation of space. The inferior position concerning conventional accessibility as well as the multifragmentation of a spatial unity are distinguished as major factors for the development of eG applications together with the existence of a major urban centre. Moreover there is at least some evidence that the use is related to the predominant activity of the area in question with tourism acting as a familiarisation tool with the internet and its applications.

Key words: e-government, governance, accessibility, Information & Communication Technology, electronic city
***JEL classification*: R10, R11.**

1. Introduction

This paper is about the contribution of ICT and more specifically the e-Government (eG) applications to the function of public administration and the process of space networking. Initially, the possibilities of ICT contribution to the function of public administration are investigated, in order to analyse and evaluate the respective policy and the use of services in the E.U and especially in Greece. Secondly, there is an attempt to identify geographical parameters in the use of eG applications in order to reach an overall evaluation of the spatial dimensions of the immaterial flows that the development of the ICT applications results in. This evaluation will be achieved through the case study of taxation electronic applications in Greece and the identification of the geographical distribution of their use.

2. A new approach of space organisation and public administration function

Back in 1990' Nicholas Negroponte (1996) argued that the telecommunications technologies will remove the limitations of geography driving to an era of digital living which will include less and less dependence upon being in a specific place at a specific time eliminating the need for a physical presence and spatial proximity. Forming a different view of the same notion Kotkin (2000) sees the "death of distance" as a chance people will have for more spatial options concerning residence establishing.

Communications consist of carriers of spatial networking, overcoming the handicaps imposed by physical space. Kellerman (2004) assumes that high levels of internet access and penetration, presented by the city of Halifax, Canada, are related to its remote location from major urban centres. However, the findings of research related to the internet presence in Portuguese cities (Nunes, 2006) question advanced communications' role in increasing accessibility to The Web and the Local Economy peripheral areas, since they suggest that the role of the internet in the struggle against traditional spatial inequalities in the country is less relevant than expected.

Table 1: "Space of flows": the three layers of material supportive structures

The transportation and telecommunications network.	The infrastructure based on advanced technology defines the new space in a way similar to the process of economic space formation by the railways in the industrial economy.
Nodes and hubs.	The space of flows is based on an electronic network which links up specific places with self - defined social, cultural, physical and functional characteristics. Some places function as hubs of coordination for the network's elements and others are nodes which accommodate key activities and functions.
The spatial organisation of the dominant, managerial elites.	The space of flows is presented as the dominant spatial logic expressing the dominant functions and interests of society.

M. Castells, (1996)

The advanced potentials and the reduction of the cost of ICT applications is expected to alter the way economy functions, society is structured and civilisation is developed, redefining, in this way, their spatial dimensions (Winger, 1997; Crang, 2000; Graham, 1995, 1997). The effect of the ICT applications on the networking of the economic space should be considered significant in terms of its contributions in the function of economy as a whole (Asprogerakas & Ioannou, 2007). Through the development of telecommunication infrastructures, the constitution of telematic nets and the use of technological applications, a different way of viewing space seems to be imposed, which was deconstructed so as to be reconstructed and reorganised through the nets, thus forming the notion of "electronic space". The position in space is not significant; the position in the net hierarchy or better access potentiality is what matters (Asprogerakas, 2002; Graham & Marvin, 2002; Little, 2000).

A dynamic construction system is gradually developed, which, according to M. Castells (1996: 412) is defined as the "space of flows" or, in other words, a "material composition of simultaneous social practices which function through flows". According to M. Castells, this system consists of three layers of material supportive structures (1996: 412-413):

But in this space of flows the new geographic space continues to require a space of places (Castells, 2000). Which are the nodes of this network? Technological networks as a whole and especially information networks seem to have a tendency to spatial selectivity which favours a series of powerful nodes mainly important urban centres (Hall, 2002; 2000). Related research (Asprogerakas & Ioannou, 2007) argues that the most important administrative centres of the urban network have an advantage especially when they play the role of dynamic, economic nodes of their region. This advantage is directly connected to the choice criteria of the web access providers and the fact that the main target is not the relevant services' spatial balanced provision but the maximisation of the profit from their investment. Moreover, differences of the spatial types of urban

nodes based on allocation, size and role create a corresponding range of differences in accessibility and activity of the internet in these centres (Asprogerakas & Ioannou, 2007).

In any way, adopting technological innovations is directly linked to the effort made to improve productivity and increase profits in a competitive economy (Castells, 1996). The significance of the competitiveness of public administration itself was also recognised in an attempt to provide services accurately and effectively and thus to promote innovation as its policy (IDABC, 2005).

There has been a general delay in improving the technological infrastructure of the public sector and more specifically in exploiting ICT and using internet as the basic tool. The causes can be identified in the way public administration functions. The services provided by the public sector are usually of monopolistic nature as public organisations are never in danger of becoming non-competitive and losing their "customers".

At the same time, the adoption of practices related to the use of technologically developed applications requires the public's acquaintance with technology. As public organisations usually address all citizens or wide groups of population, acceptance of technological applications introduced in everyday life and their use by the majority of the population seems to be a necessary prerequisite. Digital Divide is an important research filed (Compaine, 2001, Hoffman et. al. 2000, Servon 2002) although the main issues assessed were related more to the existence of gaps than the difference they make. The computer and internet gap can be closed rapidly but it cannot be eliminated (Powell, et. al. 2001). Although lack of access to ICTs and the internet is not the cause of social exclusion it has the potential to exacerbate individuals' isolation (Foley, 2004).

3. Points of the EU policy on eG into Public Administration In the case of public administration in Europe (EPAN, 2004; IAP, 2002) and in the USA (IAB, 2003) it has been obvious, since the decade of 1990, that the ICT can be a significant tool to achieve its overall improvement (CEC, 2004). After identifying the need for improving competitiveness in European economy - the main objective of the Lisbon agreement - all governments took a great deal of action towards this objective. They initially tried to make better use of the traditional means of improving competitiveness, taxation, R&D, education, infrastructures and the regulatory principles of the function of economy.

Both EU and OECD have been widely concerned about the introduction of practices based on ICT in the function of public administration and thus they invested large amounts of funds on promoting specific programmes (Dai, 2003). Electronic Government practices were initially mentioned in the European council of Lisbon (March, 2000), during the "eEurope" initiative, placed within the wider framework of "Information Society". The "eEurope 2005" initiative presented in the European Council of Seville followed as part of the effort. One of the most important points of the application plan (CEC, 2002) is the need for making the best use of the accumulated information in the public sector, as it was pointed out. As a whole, the "eEurope" initiative produced a specific strategy in terms of the EU goals towards the development of eG practices; however, no regulative frame of applications was made while the funding of the actions suggested remained independent of this specific initiative (Alabau, 2004).

At the end of 2003, EU made an attempt to form a specific policy on eG (CEC, 2003). This policy included both a cohesive map of actions which were either programmed or currently put into practice and also new actions which aim at the support and reinforcement of the project in the direction of any new relevant initiative. At this stage eG is defined as (CEC, 2003: 7): "the use of information and communication technologies in public administrations combined with organisational change and new skills in order to improve public services and democratic processes and strengthen support to public policies." It is presented as the means to achieve a "better and more efficient administration" with its basic directions being the improvement of productivity and the provision of personalised services in an open and transparent manner. In April 2006 the "Action Plan" (CEC, 2006) introduced the major objectives for eG emphasising on convenient and secure access to public administration for all European citizens through e-applications (CEC, 2006: 4). The implementation of the first Action Plan has seen governments across all Member States exchange good practice, and has resulted in a number of large-scale pilot projects which are developing concrete solutions for rolling out cross-border eG services. In 2010 the Commission proposed a second eG Action Plan which aims to "realise the ambitious vision contained in the Declaration made at the 5th Ministerial Government Conference ("Malmö Declaration", 2011). According to this ambitious vision, by 2015 European public

administrations will be "*recognised for being open, flexible and collaborative in their relations with citizens and businesses. They use eGovernment to increase their efficiency and effectiveness and to constantly improve public services in a way that caters for user's different needs and maximises public value, thus supporting the transition of Europe to a leading knowledgebased economy."* (EC 2010: 4):

Table 2: Principles of good governance

Openness	The Institutions should work in a more open manner, using accessible and understandable by the general public language. This is of crucial importance when it comes to improving confidence in complex institutions.
Participation	The quality, relevance and effectiveness of EU policies depend on ensuring wide participation throughout the policy chain – from conception to implementation.
Accountability	Roles in the legislative and executive processes need to be clearer. There is a need for greater clarity and responsibility on the part of Member States and all those involved in developing and implementing EU policy at whatever level.
Effectiveness	Policies must be effective and timely, delivering what is needed on the basis of clear objectives, an evaluation of future impact and, where available, of past experience. Effectiveness also depends on implementing EU policies in a proportionate manner and on making decisions at the most appropriate level.
Coherence	Policies and actions must be coherent and easily understood. The need for coherence in the Union is increasing due to the diversity expansion through enlargement and the increase of the related policy tasks. Coherence requires political leadership and a strong responsibility on the part of the Institutions to ensure a consistent approach within a complex system.

Source: White Paper on European Governance (CEC 2001: 10-11)

In Greece the term ‘‘electronic governance’’ established (MEF, 2002; MEF, 1999) in reference to the introduction of electronic applications in the function of public administration. It is presented as a process of Public Administration’s adjustment to the frameworks of wider socio-economic changes of the post-fordism production model (Piore & Sabel, 1984). The term ‘‘government’’ describes the prevalence of state authority, institutionally and hierarchically structured through the function and operation of public sector organisations and bureaucratic procedures. The term ‘‘governance’’ refers to the emergence of overlapping and complicated relations which involve sectors and organisations outside the political system (Painter & Goodwin, 1995). The main principles of good governance are proposed in the White Paper on European Governance (CEC 2001: 10-11) (Table 2). Each principle is important for establishing more democratic governance, and it applies to all levels of government. Although each principle is important by itself, they cannot be achieved through separate actions. It is stated that policies can no longer be effective unless they are prepared, implemented and enforced in a more inclusive way. An arising question is whether and to what extent public administration electronic applications reflect these principles or are simply a more immediate way for the citizen to get in contact with public services and a mechanism of accelerating administrative procedures.

4. Effectiveness and Prospects

A research on specific case studies in EU countries (EPAN, 2004) reached the conclusion that as a whole the use of ICT in public administration can improve the services offered by reducing their production cost. Public organisations are directly benefited from the adoption of eG applications, without having to make any great improvement especially in the case of services of great demand. Currently, joint action on eG raises as a means of contribution to overcoming the economic crisis by using public resources more efficiently and reducing public expenditures. eG services can be developed more economically by coordinating and pooling public and private resources. (EC 2010). For individual citizens the benefits from the investments made on eG applications are still limited. Enterprises benefit more as they are usually in regular contact with public administration, while, at the same time, the expected reduction of administrative restrictions and bureaucratic delays equals to an immediate reduction of the production cost (EPAN, 2004). Independent research (Pina et. al., 2006; Dai, 2003; Komito, 2005) on the ICT practices in public administration emphasises on the existing restrictions in terms of the results of their potential use. ICT in fact functions merely as a means of realisation within pre-existing political, social and economical structures and it cannot be viewed as a means of promoting democratic procedures or affecting, directly or not, the citizen-administration relation. For example, the V. Pina (et. al., 2006) research comes to the conclusion that ICT cannot possibly reinforce fiscal reliability on the public sector more than expected from compatible procedures due to legal and institutional restrictions. E-Government effectiveness is going to depend on its accession into the process of administrative structures reformation and on how intense this will be. It is obvious that the procedures involved in the change of administrative organisation and function are time consuming (CEC, 2003b: 9). When the use of such applications is not combined with relevant changes in the way office work is organised, any benefits gained are rather limited and they mainly concern the immediacy and the cost of the services provided (IDABC, 2005; EPAN, 2004).

Gil-Garcia (2007) indicates two basic characteristics of the eG development process: (a) The internet presence of public administration is developed into more complete and interactive applications. (b) As a general principle, local authorities follow the central administration concerning the adoption of technologically developed applications.

The development of eG applications is referred to by Fingerm & Pecoud (2006: 8) as a dynamic process of reinforcing the interaction among various agencies (civilians and administration) at different levels (local, national, international) and different functions (development of rules, control, policy formation). Gradually the whole effort made to develop new applications is oriented towards such procedures which allow the participation of non-government agencies in the decision – making process and in the formation of policy at any levels of administration through the use of deliberations software and electronic voting (Keskinen, 2004; Bouras et. al., 2003; Garlitz & Gunn, 2002). There can be found some relevant examples of applications in the United Kingdom (Liptrott, 2006) and Ireland (Komito, 2005b), but still, as a whole, the efforts remain to be at a research or piloting stage of development and use.

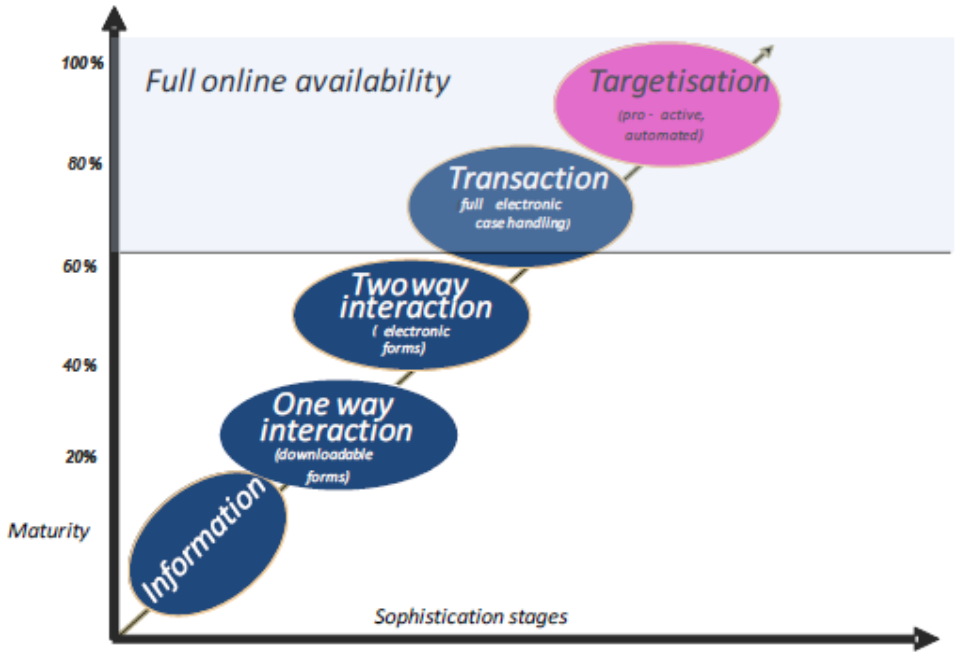
In order to achieve these goals there is a basic requirement apart from the change of the structures and relations within public administration; that is, the human – centred structure of the system in contrast to the initial approach which mostly stresses the role of technology. This role has to focus on the development and use of knowledge and not on the use of information; it has to support, in other words, interaction of knowledge and not merely automatic procedures (EIPA, 2003). All these goals are of no business nature; however, they are a standard direction towards the final formation of eG mechanisms, on a long term base. It must also be stressed that according to the EU "the benefits of electronic governance exceed the very first achievements of the electronically provided public services" (CEC, 2003b: 29). In this way, the process of adopting eG practices is differentiated from simple ICT applications in public administration. **5. Availability of eGovernment applications in Greece**

Electronic Government in Greece is part of a wider information society strategy to enhance Greece's competitiveness and improve quality of life under the Ministry of Finance. The Digital Strategy 2006-2013 is compatible with the "Growth and Jobs" Lisbon Strategy and the i2010 policy. It utilises financing instruments, such as the Operational Programme for "Information Society" in the context of the 3rd Community Support Framework, and the Operational Programme "Digital Convergence" which is within the National Strategic Reference Framework (NSRF) 2007-2013. It comprises two main strategic objectives: (a) Enhanced business productivity through the use of ICT and new skills and (b) Improved Quality of Life through ICT.

However eG policy belongs to the remit of the Ministry of the Interior suggesting that it is also seen as an instrument for government reform. The national Government's Information Technology Committee is the highest policy making authority for Information Technology strategy development. The eG Forum of the Ministry of Interior is a multi-stakeholder forum specific to eG. eG is deployed in a prescriptive manner, by legally defining what services should be developed. Implementation support across levels of government is provided by two agencies, Information Society S.A. and Digital Aid S.A.

The development process of eG applications by the Greek administration has presented steady progress during the last decade although there is belatedness in the progress of the local authorities in relation to the central government (Hahamis et. al., 2005), a fact in conformity to Gil-Garcia's (2007) observations. In the same report (Hahamis et. al., 2005), the lack of familiarisation of the personnel with new technologies and the lack of financial resources and support from the leadership are mentioned as the basic barriers.

Figure 1 : Availability stages of public services online



Source: EC, 2009

It has to be mentioned that Greek households have internet access at 39%, which is rather low compared to the equivalent percentage in EU27 (60%) As particularly positive has been considered the fact that the compound annual growth rate in the period 2005-2008 in the country has been 17.6 % compared to 7.7 % at European level (ISO, 2010). Analysing their spatial distribution it becomes obvious that Athens (59%) and Thessaloniki (57%) present significantly high rates compared to the rest of urban areas (39%) and rural ones (33%) although the rural areas feature the biggest growth rate compared to the past. Among the thirteen Regions (NUTS II level), Attica (57.0%) is first and South Aegean (47.2%) and Crete (43.8%) follow. The percentage of households with Internet access was almost doubled compared to the year 2005, in 9 out of the 13 Greek Regions. Particular increase has been observed in the Regions of Attica (56 %), North Aegean (38.9 %) and South Aegean (44.1 %). The lowest increase is observed in the Regions of West Macedonia (21.6 %), Thessaly (25.3 %) and Epirus (26.2 %). These results are directly related to the GDP per inhabitant in the Greek Regions. As expected, citizens of areas with higher standards of living are most likely to invest on an Internet connection (ISO, 2010).

In order to evaluate the extent of citizens and enterprises service by the electronic applications of public administration, E.U. has some annual relevant research related to twenty basic public services using a five-stage framework (Figure 1). The online availability of public services will thus be determined by the extent to which it is possible to provide the service electronically, or, in other words, the sophistication of the online service provision (Table 3).

Greece achieves 45% in the full online availability indicator ranking 27th among EU27+ countries (EU Member States, Croatia, Iceland, Norway, and Switzerland) which present an average of 71%. This score comprises a full online availability of 33% for citizens and 63% for businesses. In terms of online sophistication, Greece achieves 68% for all services (83% for EU27+), 62% for citizen services and 78% for business services. Greece's figures have remained largely unchanged compared to the 2007, indicating that eGovernment development is stagnating. The availability of eGovernment services, for both citizens and enterprises, is below the EU average, though it has grown substantially in recent years. There is a series of initiatives under way to further e-enable governmental processes and services, among them, a project to e-enable the start-up procedure for businesses (EC, 2009, 2009b).

Table 3: Availability stages of public services online

Stage		description
5	Targetisation	The fifth level provides an indication of the extent to which front- and back-offices are integrated, data is reused and services are delivered proactively.
4.	Full electronic case handling	The publicly accessible website offers the possibility to treat the public service completely via the website, including decision and delivery. No other formal procedure is necessary for the applicant via "paperwork".
3.	Two-way Interaction:	The publicly accessible website offers the possibility of an electronic intake with an official electronic form to start the procedure to obtain this service. This implies that there must be a form of authentication of the person (physical or juridical) requesting the services in order to reach stage 3.
2.	One-way Interaction	The publicly accessible website offers the possibility to obtain, in a non-electronic way (by downloading forms), the paper form to start the procedure to obtain this service.
1.	Information	The information necessary to start the procedure to obtain this public service is available on-line.

Source: EC, 2009

6. Geographical distribution of the e-Government applications use6.1 TAXISNET electronic service

Electronic services for taxation are particularly popular as eG applications. They are addressed to a specific citizens group with consistent and constant transaction with public administration, a fact that makes them a stable, crucial team of users. In Europe there is a constant widening of the rates of the function of the applications which generates income for the public sector. Tax services have been among the first to be made available online in all European Union Member States and the first to reach the fully transactional stage of sophistication. Greece is no exception to this trend and ever since the end of 1999, with the launching of the online transmission of periodic VAT declarations, it has steadily moved to the digitalisation of all processes related to taxes, reaching later the fully transactional stage in almost all of them (ISO, 2008). Currently, the services related with the citizens and enterprises' taxation are available through the TAXISnet website (www.taxisnet.gr) developed by the General Secretariat for Information Systems (GSIS) of the Ministry of Finance (MEF).

The relevant research conducted targeted at defining spatial factors in the use of TAXISnet applications. The data used derives from the General Secretariat of the Ministry of Finance and it includes (MEF, 2006):

- The enrolled users of the electronic services of each Public Taxation Services office (Dimosia Oikonomiki Ypiresia - DOY)
- VAT statements submitted within April 2006
- The number of statements electronically submitted (per DOY).

The data concerns 280 DOYs from all over Greece. Sixty-nine DOYs are in the prefecture of Attica (Greater Athens Area) accounting for around the 40% of the taxation electronic services users and 18 DOYs are in the prefecture of Thessaloniki (12% of the users).

Table 4: Use of TAXISnet applications

TAXISnet Services Users (VAT application users included)	VAT application users	Total VAT statements (31/03/2006)	VAT statements submitted electronically	
			number	%
1.492.140	744.364	832.487	429.771	51,62

Source: MEF, 2006

From the enrolled users in the TAXISnet application (1.492.140, March, 2006) almost 50% are enrolled in the service concerning VAT statements application. From the total VAT statements that were to be submitted in April 2006, 51.62% were electronically submitted (Table 4).

6.2 Users' distribution inside the prefecture

The research included the estimation of an index of users' accumulation (users' percentage of the total population) which is indicative of the general inflow of the use of the application in the population. Another relevant figure was specified by those VAT statements which were electronically submitted operating as an index of the use of the application by the professionals and enterprises.

Except for Magnesia and the prefecture of Larissa, those prefectures that include the major urban centres of the country (Thessaloniki, Heraklion, Kavala, Attica, Ahaia) present a users accumulation index well above the average. This is also the case with 8 out of 12 purely insular prefectures of the country, whereas the most popular tourist destinations such as Cyclades, Zakynthos, Corfu, Dodekanissa, Halkidiki and Crete, have a percentage equal and even greater than the average one. Lower percentages are mostly found in mountainous prefectures of the mainland (Florina, Grevena, Arcadia, Karpenissi) and also in regions which promote the primary sector (Fokida, Aetoloakarnania, Helia). In the case of the percentage of VAT statements, the parameters which help ensure excellent performance are, apparently, not differentiated to any significant extent. Index above the average is presented by the prefectures of the major urban centres and six out of 12 purely insular ones. There is also a profound stability concerning the indexes in Crete, where electronic services have been making a substantial contribution to the production process (Asprogerakas, 2004).

It is also interesting to view the inner prefectural differentiations. The prefectures of the Medium Sized Cities (Patra, Heraklion, Ioannina, Volos, Larissa, Kavala as defined by E. Asprogerakas, 2005) were chosen as case studies for this task and then the data on urban and non-urban regions was collected and analysed. In all cases, except for the Larissa prefecture, the urban centre has an indicator higher than the average one of the prefecture. However, the higher percentages per specific DOY is presented by DOYs outside the capital of the prefecture. In the prefectures with tourist economy oriented areas (Hersonissos of Heraklion, Skiathos in Magnessia) DOYs have the highest percentage. There is an additional view that should not be excluded: The particular part of the research is mainly about the behaviour of the professionals and the enterprises. A major part of this category of users is possible to be served in accounting services by professionals of the main urban centre of the region. These professionals have no immediate access to the local DOY and as a result, it is more probable that they will use the internet. In any case, it becomes widely obvious that internet helps in the increasing of the services' mobility.

. Table 5: TAXISnet applications users in Cyclades Prefecture Islands

DOY	TAXISnet Services Users	Population (ESYE, 2001)	index	VAT statements submitted electronically (%)
Milos	2.739	9.396	29,15%	57,91
Paros	3.791	13.890	27,29%	64,33
Keas	1.010	4.025	25,09%	85,40
Thera	4.144	16.738	24,76%	61,45
Mykonos	2.247	9.320	24,11%	70,50
Naxos	3.947	20.933	18,86%	23,36
Syros	3.559	19.782	17,99%	51,69
Tinos	1.374	8.574	16,03%	72,91
Andros	1.437	10.069	14,27%	68,13

Source: MEF, 2006; elaboration by the author

Discovering that the multifragmentation of an area is a major factor of differentiation concerning the use of the services in question, the demand in the interior of the Cyclades prefecture was investigated. The highest indicator concerning services by the electronic applications of TAXISnet is that of the Milos DOY (29,15%) in which 49% of the population served lives permanently on another island from the one offering the service (Serifos, Syfnos, Kimolos). Similar is the case with the Kea DOY in which the island of Kythnos belongs, though 40% of the served population live there (Table 8). The use of eG services by professionals and services seems to depend less on the factor of fragmentation, despite the fact that the DOY of Kea ranks first in this category (see Table 5, VAT electronically submitted). It is estimated that what determines the use of the applications by the professionals on the islands, has to do with the peculiarities of the locally offered accounting services. There is also an arising speculation related to how active the users enrolled in the system are. It is also pointed out that the users indicator is illustrative of the resident's general interest on the residents' part in new applications while the percentage of VAT electronic submissions corresponds to very recent active users and thus, presents a more reliable use indicator.

6.3 Users distribution in urban centres

From the 30 DOYs with the highest percentages concerning electronic submission of VAT, seventeen are in the economic area of Athens and Thessaloniki. Outside the wider area of the two metropolitan centres the average percentage of electronic submission decreased (44.64%). Among the 30 DOYs outside the metropolitan centres with the highest percentage of electronic VAT submissions, sixteen serve insular areas and six of them serve areas of Crete. From the 30 DOYs with the lowest percentage of electronic submissions only 2 serve insular areas (Kythira, Ithaka).

Cities of Medium Size (CIMES) concentrate almost 19% of the users (138,953) outside metropolitan centres with an average use of 49%. The highest ranks are found in the one and only insular centre of the category (Heraklion), in a remote from the metropolitan centres one (Kavala) and finally in the centre wit the highest population (Patra). Viewed from an intraurban perspective, the differences among the DOYs, are not considered to be great in the case of Kavala, Patra, and Ioannina. The centres in Thessaly (Larissa, Volos) rank last with their local DOYs being the only ones with percentages below the average. These is no relation arising between the size of the DOY and the indicator's percentage, although Heraklion, which ranks first, has the biggest DOY and presents the greatest number of submissions. Socio – economic characteristics of urban centres have to be analysed in order to specify other than spatial factors which determine the use of eG services (see Kellerman, 2004).

7. Conclusions

Electronic services availability in Greek public administration is overwhelmingly inferior to the EU average equivalent. However there is a series of positive initiatives under way. As for the use of electronic public services, it is satisfactory especially in the case of enterprises.

The formulation of the operational framework of eG applications follows the general attitude of the country's adjustment to the basic principles of the EU initiatives. Besides, the immediate expected consequences of the eG application (cost reduction, quality enhancement of services), the reinforcement of democratic principles and transparency in public administration as well as the general improvement of competitiveness in the field of economy are the supreme and upper goals of the policy followed by the EU.

The goals are compatible with the basic principles of "good governance". These applications mostly serve the objective of "open" and "responsible" governance and, thus, facilitate transparency and immediacy during contact with citizens or in the function of public organisations.

There is an apparent lack of contribution to the cohesion of policies and actions, together with the participation in the process. Participation could be achieved through improved applications which constitute part of the decision - making mechanism, a process of a rather not systematic or regular use. In fact, developed electronic applications concerning administration not only in Greece but also in Europe, in general, mainly serve mere bureaucratic procedures or information giving. The most popular ones concern taxation services which ensure income for the public sector. These are services that could be more accurately termed as "electronic government" or "electronic administration" ones.

Apparently, the nature of the application which was used as a case study by the research narrows significantly the potential conclusion, as far as both the development of eG applications at the level of spatial entities and the interrelation with specific local formed governance structures are concerned. However, it has become obvious that the existence of a major urban centre is a significant factor of formulating the demand for electronic services of governance. Moreover, the examination of the intraprefectural differentiations has proved that the highest indicator can be found, apart from the area of the prefecture capital, at least in the case of medium sized cities. This is a fact that reinforces the attitude according to which internet functions as a means of improving accessibility.

The inferior position concerning conventional accessibility as well as the multifragmentation of a spatial unity are distinguished as a major factor for the development of eG applications. Such an ascertainment was the result of previous research (Asprogerakas & Ioannou, 2007; 2008) and it is an element of reinforcing the democratic nature of the particular mechanisms allowing the uniform distribution of the services in problematic, in terms of accessibility, spatial unities. The factors determining the percentage of electronic services use are not limited only to accessibility but are also related to the structure and composition of the regions economy. The predominant activity plays a major role in the use of these particular applications with tourism and the relevant activities acting as a familiarisation tool with the internet and its applications. On the contrary, areas specialised in the primary sector present a rather low use of electronic services.

Further future research could focus on space correlations concerning the inner cities in an effort to access the peculiarities related to the use of these specific services, determined by the socio-economic profile of the regional unities inside urban centres and the citizens' potential concerning mobility and access.

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