

**Evaluating the “Citizens’ Service Centers” within the strategic
frameworks of the “Information Society”**

*Impact and Cost-Benefit analysis of an e-Government initiative in sub-urban
and rural areas of Greece.*

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Executive Summary

e-Government is the framework within which governments use and utilize Information and Computer Technologies to make public administration and public services better, more cost-effective and more accessible to all citizens. The European Union is being developing e-Government since 2000 within the strategic frameworks of the “Information Society”.

In mid 2002 the Greek government utilizing European Union’s e-Government funds established “Citizens’ Service Centers” (KEP in Greek) that is a new type of public service which operates as a platform of access to the public information and the public services for the inhabitants of Greece. KEP is currently offering access to the public sector being itself accessible through internet, by telephone and person-to-person through about 1000 decentralized service points (KEP Units) dispersed all over Greece.

This thesis evaluates the impact of KEP as an e-Government initiative within the strategic frameworks the Information Society. The author explored the European Union’s aims and expectations of the Information Society concept in order to set the evaluation framework and researched within it whether KEP is inclusive; whether KEP Units of rural and sub-urban areas of Greece are cost-effective for the citizen “as a tax-payer”; and whether there are direct benefits from KEP Units’ operation for the citizen “as a user”.

For the needs of this research the author researched EU’s documents; utilized the author’s personal experience as a KEP Unit’s employee to describe KEP analytically; and developed assessment models based on eGEP’s guidelines to assess KEP’s direct benefits and cost effectiveness.

KEP was proven to be an inclusive platform that offers access to the Information Society and to the public sector. There are direct benefits in time and cost savings at least for the users-inhabitants of the aforementioned areas while there were found strong indications that KEP Units of these areas are cost effective public services. There is field for further research on the cost-benefit topic as such whether KEP’s network may promote the public sector’s accessibility. KEP’s model is recommended as an inclusive initiative both for developed and underdeveloped countries.

The author argues that KEP is beneficial for the citizens of rural and sub-urban areas and suggests that the Greek Government should keep KEP operational and acceptable.

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Chapter 1 Introduction

1.1 Project background

The European Council of Lisbon on 23 and 24 March 2000 set a new strategic goal for the decade 2000-2010 for the European Union (EU) “to become the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion”. The implementation of the overall strategy to the achievement of this goal should aim to prepare the transition to a knowledge-based society, to combat social exclusion and to sustain the economic outlook and growth prospects of the EU.

The “Information society for all” and “i2010 – European Information Society 2010” were the strategic frameworks within the Lisbon Strategy that would enhance the transition to a competitive, dynamic and knowledge based economy. It was the framework within which the EU would develop an “active and dynamic welfare state” based on the Information and Computer Technologies (ICTs) to ensure that every citizen would have access to an “inexpensive, world-class communications infrastructure and a wide range of services” through different means of access that should prevent info-exclusion.

The EU activated itself towards the Information Society by developing and implementing the eEurope2002, eEurope 2005 and i2010 Action Plans that aimed to the extended use of Internet both by public administrations and by citizens. These Action Plans set the “e-Government” framework within which the Member States should reorganize their administrations making efforts to provide generalised electronic access to main basic public services and public information efficiently, effectively and inclusively.

Greece, being a Member State aligned its strategy towards the Information Society and developed the Operational Programme for the Information Society (OPIS) Action Plan run during the 3rd programming period and co-financed by the Structural Funds (ERDF & ESF) aiming to improve the Public Sector, bring the Public Sector online and facilitate access to it. One of the first e-Government initiatives undertook by the Greek Government

at mid-2002 within OPIS was the development of the ‘Ariadne’ Project that anticipated the establishment of the KEP¹ institution in order to facilitate citizens’ transactions with the public administration by utilising ICTs. KEPs would be a platform that would offer through its services alternative access to a wide range of public sector’s services and information. The citizens would access KEP through the internet, through telephone and through “service points” for person-to-person service. By the end of 2006 all three access solutions were operational. As for the service point access solution there were about 1000 operational service points all over Greece the so called “Citizens Service Centers” or KEPs in Greek (KEP Units). KEP Units are ICT enabled administrative units staffed with personnel which act as intermediaries between the public sector and the citizens and serve citizens requests for several types of public sector related services.

The author has been working for KEP as an employee of a KEP Unit at a rural area of Greece since September 2002, that is, an early stage of KEP’s operation. During the last years the author has witnessed the author’s fellow citizens to use KEP’s services that are offered in a KEP Unit more and more and the author’s personal feeling has been that KEP Units are valuable for those who don’t live at the administrative centres of their wider regions, since KEP offers access to the public sector within the geographic limits of a municipality. As far as the author knew, there had never been an evaluation of any kind of KEP as an e-Government initiative and it would be within the spirit of the European Strategy to assess whether KEP’s and KEP Units’ operation offers any benefits to the citizens of these areas as users and to the local societies as potential users of KEP Units’ services and at what cost. If KEP’s operation was properly assessed and found beneficial within the above framework, then the KEP concept could be used in the framework of providing access to high-quality public services efficiently, effectively and inclusively in both developed and undeveloped countries.

1.2 Aims and Objectives

The aim of this research is twofold; to assess whether KEP is beneficial for the citizen of rural and suburban areas of Greece “as a user” and for the Greek citizen “as a tax-payer”; and to evaluate KEP’s role to the promotion of inclusion the way inclusion is framed within the context of the “Information Society” strategic frameworks.

¹ KEP are the initials of “Kentra Exipiretissis Politon” in Greek, or Citizens’ Service Centres.

More specifically

- To assess whether there are any benefits for the citizen “as a user” there will be developed a model to estimate the “direct benefits” in time and cost savings for the citizen. To assess whether KEP Units as public administration units are cost-effective for the taxpayers’ money there will be developed a cost-benefit model on the operation of a KEP Unit based on ABC guidelines. The model will estimate the average cost versus the average benefit of the processing of a “citizen’s case” at a KEP Unit level.
- To evaluate KEP’s role as an e-Government initiative to inclusion, there will be explored the characteristics of the term inclusion as it is framed within the Information Society strategic framework; and the KEP will be analysed in order to reveal KEP’s e-Government and inclusive characteristics. There will be estimated whether KEP as a platform of access to a wide range of services of the public sector contributes to inclusion of the inhabitants of rural and sub-urban areas of Greece.

1.3 Structure of dissertation

Chapter 2 provides a literature review on the Greek and EU strategies toward the Information Society and e-Government and a detailed description of the KEP concept and the KEP Units’ operation. Chapter 3 presents the methodology that was followed for the achievement of the objectives of this research in terms of modelling, data requirements / collection / analysis. Chapter 4 contains the findings that that come from the elaboration of data and discussion on these findings. The conclusions of the research are in Chapter 5.

Chapter 2 KEP in the Information Society

The “Information society for all” (Presidency Conclusions, 2000a) that was launched as a European Commission’s initiative has been evolving to a mainstream priority for the European Union’s direction to growth and development. The Information Society concept is being discussed, revised and developed since its early days and terms like e-Government, inclusion, accessibility, impact, costs and benefits are being analysed, revised and seen under diversified perspectives and definitions in an ongoing process fed back by new findings and concerns. As a consequence the basis of the studying material has been EU’s Communication documents from the Commission to the European Council, Action Plans, Proposals, Progress reports and Conferences’ Conclusions in an attempt to analyse the latter terms within the framework set by the EU. Moreover since KEP is the Greek initiative within the above concept, there have been studied corresponding Greek Government’s documents like the Greek Strategy on Information Society, the Greek Action Plans and documents relevant to KEP institution. The study of these documents along with the authors experience on KEP’s operation had as a result the development of the literature review as it follows.

2.1 The Development of EU strategy for the information society 2000-2005

The Information Society (IS) initiative was the EU’s response to the urgent need for Europe to quickly exploit the opportunities of the new economy and in particular the Internet. The EU took under consideration the far-reaching and global changes that the new economy was bringing to the lives of everyone everywhere, and activated itself towards bringing Europe into the digital age and online. The public sector would have to play an active role to this direction so it should exploit new technologies to make information as accessible as possible providing the citizens with several means of access to prevent info-exclusion.

The European Commission developed the eEurope 2002 Action Plan (Council of the European Union & Commission of the European Communities, 2000) that would be a step to the direction of the implementation of the principles of the IS. The Action Plan was presented to the Santa Maria Da Feira European Council at 21 and 22 June 2000 (Presidency Conclusions, 2000b) at a time that 56% of local authorities had a website, only 28% had electronic versions of official forms and only 8% allowed citizens to send these forms back by e-mail while internet penetration at home in EU15 was 18% (Commission of the European Communities, 2001a). Figures indicated that the public administrations did not fully exploit ICTs and especially the internet to facilitate citizens' access to their services; and that citizens were not ready to access these services in case that these were offered online. Member States should encourage their citizens to obtain ICTs skills and establish publicly available Internet Access Points (PIAPs) for those that for any reason would not have internet access in their homes so that to insure that the citizens - the "demand side" of the public services and information - would be capable of receiving the benefits of public services' online presence.

The European Commission recognized that the current Action Plan would be an urgent solution so before the completion of eEurope 2002 the Commission pre-acted and developed the eEurope 2005 Action Plan (Commission of the European Communities, 2002) introducing the Policy "Modern on Line Public services – e-Government".

The new term –e-Government – was broadly defined by the EU as "*the use of information and communication technology 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*" (Commission of the European Communities, 2003).

e-Government as a concept has not been a European "invention" but rather the European response to the mainstream that appeared in the late 1990s as a very "interesting concept in the field of public administration" (Moon, 2002).

2.1.1 e-Government outside the EU

e-Government is a concept that is rather described as a driver of changes than defined strictly. Since its early days there has been big discussion on two subjects; how to bring the public sector online and how to give access to public sector to practically everyone,

effectively and efficiently. More and more governments invest in e-Government design and implementation (Chen et al., 2006) and commit themselves to the improvement of the relationship between the citizen and the public sector through “enhanced, cost-effective, and efficient delivery of services, information, and knowledge”.

Chen et al. (2006) describe e-Government as an Internet tool that governments utilize to “reinvent their structure and efficiency” considering e-Government as a driver of change of strategy within the new network environment. Okot-Uma (2002), connects the term with reorganization of “the processes and structures pertinent to the electronic delivery of government services to the public” and the World Bank says that e-Government is the use of ICT by government agencies to “better serve the citizens and empower them through access to information and more efficient government management” (The World Bank, 2006). Basu (2004) says that among the many definitions e-Government’s ultimate aim is “to enhance access to and delivery of government services to benefit citizens”.

However according to Basu (2006) e-Government implementation is not as simple as government’s commitment to it but is mostly a matter of resources. Developed countries like the US, Australia and Canada are bringing the public sector online and as a result they “reap the gains of e-Government” according to Chen et al., (2006). Developing and underdeveloped countries on the other hand have problems on establishing and promoting e-Government due to lack of information infrastructure and low internet penetration and computer literacy among citizens. Basu (2004) denotes that in most of the developing countries there is ‘digital divide’ between those who already have access and those who would not gain access for long time. However the ‘digital divide’ is not a problem of developing countries only; at the end of 2004, 57% of the EU’s of 25 households did not have access to the internet (Demunter, 2005) and the EU ascertains that “all Member States have problems in terms of digital divides” (Information Society Benchmarking report, 2005).

The literature around e-Government reveals that e-Government is the framework within which governments use and utilize Information and Computer Technologies to make public administration and public services better, more cost-effective and more accessible to all citizens. The EU has been developing several benchmarking activities since the early

days of e-Government, in order to ensure that its actions are carried out efficiently and that they have the expected impact.

2.1.2 Benchmarking e-Government

The Internal Market, Consumer Affairs and Tourism Council on 30 November 2000 (Council of the European Union, 2000) in a first approach of measuring e-Government's development approved a list of 23 indicators to monitor whether the eEurope 2005 Action Plan achieved its objectives. Five (5) of these indicators are presented in the following Table 2.1 as relevant to citizens' access to internet and to online availability public services as such the source of data.

Table 2.1: e-Government indicators

	Indicator	Source
1	Percentage of population who regularly use the Internet	Sample survey/Eurobarometer
2	Percentage of households with internet access at home	Sample survey/Eurobarometer
3	Number of Public Internet Points (PIAPs) per 1000 inhabitants	Member States
4	Percentage of basic public services available on-line	Study in cooperation with Member States
5	Public use of government on-line services - for information/ for submission of forms	Study in cooperation with Member States

Additionally, The Internal Market/Consumers/Tourism Council of 12 March 2001, developed a primary set of 20 basic public services (Common list of Basic Public Services, 2001) 12 of them aiming to citizens (APPENDIX B, Appendix Table 2) and 8 of them aiming to businesses that were offered online and that should be measured in alignment to the 4th and 5th indicators of Table 2.1.

The European Commission, DG Information Society assigned to Capgemini, a consultancy, the measurements related to the availability of these public services - the

supply side - while Eurostat's surveys would provide the Commission with data relevant to the correspondence of the public to these services – the demand side. Capgemini (2002) developed a four stage framework in order to measure the level of online sophistication (APPENDIX A, Appendix Table 1) of each one of the services of APPENDIX B, Appendix Table 2. For every Member State and for each service there would be an indicator (the online availability indicator) expressed as a percentage that would indicate the extent to which the service had progressed towards full electronic case handling. An overall online availability indicator expressed as the mean of the 12 indicators would represent the Member State's progress. In this early stage of e-Government the EU meant to monitor the overall progress in building a public sector as much available online as possible as such the correspondence of the public to the online services with no reference to offline accessibility of public services.

Additional indicators were proposed in a Communication from the Commission to the Council and the European Parliament (2002) to be endorsed by the eEurope 2005 Action Plan. These indicators meant to capture the information of how many citizens utilized the interaction opportunities that were offered by online public services and for what purpose (obtaining information, obtaining forms and returning filled forms) seeking for information about the penetration of e-Government services among the citizens that could access these services online.

Reis (2005), in a Eurostat released survey, has shown that 45% of the citizens of EU of 25 obtained information, 20% of them downloaded official forms and 12% of them returned filled forms. In June 2006, Capgemini (2006) issued the last of a series of reports based of the 6th measurement of these indicators. According to this study, the mean online sophistication of public service delivery was 68% and full online availability was 36%.

This e-Government score indicates that until recently, although 43% of the European households were on average online with households of rural areas to present a lower score of 32% (Demunter, 2005), only a few citizens used internet to interact with public services. Moreover two out of three public services were not fully available online so the citizens should have to access their services through some other platform. So far the implementation of 2002 and 2005 Action Plans had managed to bring a part of the public sector online an a part of it fully available online but they did not have any convincing

answers to questions like what about the citizens that for any reason won't use internet as an access mean to the public sector and what about the accessibility of public services that are not offered online? The Brussels 22-23 March 2005 European Council (Presidency Conclusions, 2005) revised its perspective of e-Government and gave directions of a new approach on these matters.

2.2 The European Strategy on information society 2005-2010

The European Council detected the need of re-launching the Lisbon Strategy and re-focus priorities on growth and employment within the emerging digital convergence of information society and media services, networks and devices. The Council required policy convergence in order “to build a fully inclusive information society, based on widespread use ICTs in public services, SMEs and households”.

The Commission responding to the latter call, proposed the new strategic framework “i2010 – European Information Society 2010” at 1/6/2005 (Commission of the European Communities, 2005) emphasizing onto ICT as a driver of “inclusion and quality of life”. The EU recognized that the growth of the use of ICTs may have positive impacts on society as far as the EU makes sure that ICTs benefit all citizens; make public services more cost effective and more accessible; and improve quality of life.

Within the scope of this new strategic framework the Commission's presented the “i2010 e-Government Action Plan” (Commission of the European Communities, 2006) that focused on five major objectives-signposts two of which asked for “No citizen left behind” and “Make efficiency and effectiveness a reality”. It was considered that efficient public services save time and money and effective ones deliver benefits to the citizens to the administrations and society and the economy at large and asked for a new assessment model based on two new types of activities: measurement and sharing.

2.2.1 Measurement

The Commission recognized that “providing relevant information, quantifying, benchmarking, measuring and comparing impact and benefit is essential for mainstreaming e-Government” and accepted two models that were developed within the above framework.

The first model was the “i2010 Benchmarking Framework” proposed by the i2010 High Level Group (2006) as a revision of the previous benchmarking model. This revision was considered to be necessary to imprint the shift of EU’s focus from the provision of the use of ICT enabled public Services to the use of them by all citizens.

The second model was developed under the need for further research into the economics of e-Government for a better understanding of costs and assessment of benefits and performances as it was expressed by the Commission of the European Communities (2003) in a Communication entitled “The role of e-Government for Europe’s future”. Within the scope of this context the EU funded a study titled “e-Government Economics Project” (eGEP) managed by the e-Government unit in DG Information Society and Media that was funded by MODINIS. The eGEP responding to the latter need developed a Measurement Framework (Codagnone et al., 2006a) in order to assess the impact and possible benefits to the citizen assessing the delivery of e-Government services to user as tax-payer, to user as citizen and voter and to user as a consumer. Measurement Framework was supported by a theoretical Economic Model to assess the impact of the ICTs of e-Government within the public sector, providing in parallel a model for the analysis of the costs of e-Government in an Expenditure Study (Corsi et al., 2006). The Project was developed in order to establish a European reference for the future e-Government development.

2.2.2 **Sharing**

The need for greater sharing of good practice experiences and transfer of good practice solutions was also widely recognised (e-Government research, 2004). Mechanisms such as the e-Government Good Practice Framework are put in place in EU’s quest for successful paradigms of well-defined e-Government cases (e-Government Good Practice Framework, 2007).

In the following two paragraphs we will investigate the EU’s perspective on costs and benefits of e-Government.

2.3 e-Government: Benefits for the Citizens

The Measurement Framework Model developed within eGEP was based on the assumption that the ultimate mission result of e-Government is to produce “enhanced public value” for citizens as tax-payers and users.

Within the “enhanced public value” context eGEP proposed an “Indicators Full Template” of ninety four (94) indicators taking under consideration the signposts of i2010 e-Government Action Plan. e-Government services were expected to “reduce administrative burden” and this was proposed to be measured with effectiveness indicators that would imprint time and cost savings as direct benefits for the citizen. It is the author’s estimation that these benefits derive from the diminishment of the distance that the citizens have to cover in case that the citizens use alternatively e-Government services instead of the conventional person-to-person contact with the public service.

2.4 e-Government: Costs

eGEP issued the Expenditure Study in order to identify and analyse the costs of “setting up, providing and maintaining” e-Government services in the EU within the later three fold distinction. This study underpinned that there are two prerequisites for cost analysis:

- The clear definition and delimitation of the ‘cost objective’ for which the data will be gathered and organized. The term cost objective is a fundamental concept of accounting and management literature and is defined as “anything for which a separate measurement of costs is sought” while “anything” could be a department, a service, a product or a project.
- The clarification of the direct and indirect costs for every cost objective. Direct costs are defined by eGEP as the costs that are associated strictly with a given cost objective. Indirect costs or overheads are costs that “cannot be associated specifically and exclusively with a given cost objective” according to eGEP but they should be imputed parametrically to more than one cost objective.

It seems that the real matter with costing is the allocation of indirect costs since direct costs can be traced to a distinct cost objective. Snyder and Davenport (1997) argue that a fundamental problem in determining costs of services is that there must be taken a decision about how indirect costs should be assigned to the total cost of the service since the allocation decision determines the cost of the service. They also propose a three steps process –known in the accounting literature as cost allocation - in making this decision. That is to select a cost objective where indirect costs will be allocated; collect the indirect

costs that are associated to this cost objective (known as cost pool); and select some method for connecting these costs to the objective. eGEP proposes “Activity Based Costing” (ABC) as an “advanced and sophisticated methodology” of monitoring the costs of e-Government. eGEP claims that an ABC analysis, both generates a reliable assessment of the full cost of providing a service and enables the levers of improving the service provision in terms of efficiency and effectiveness. eGEP also proposes that a Value Chain Analysis is recommended for a thorough mapping of a service so that all costs generated by a service to be traced and denotes that people that operate eGovernment services may contribute to the understanding of costs generation.

2.5 E-Government: Costs vs Benefits

The Structural Funds-ERDF, Cohesion Fund and ISPA (2006) “Guide to cost-benefit analysis of investment projects” prepared for Evaluation Unit DG Regional Policy European Commission asks a critical question: can we say that the overall welfare gains arising from a project are worth its cost? Within the spirit of the latter question this research will assess whether there are any “overall welfare gains” deriving from the operation of KEP as such what does KEP’s operation cost to the taxpayer’s money.

In the following paragraph there will be described the KEP concept in detail in the framework of the Greek administrative system.

2.6 The KEP concept in detail

2.6.1 Greece and the Information Society

At the end of 1998 the back-office ICT infrastructure of the public sector in Greece was minimal and characterised by a relatively small number of installed IT – mostly management – systems. The central services of almost all Ministries maintained a presence on the Web however administrative Information and services offered to the public were minimal at a Stage1 or Stage2 online sophistication as it is defined in APPENDIX B as it is justified by the Greek Government’s objectives which were to raise the proportion of interconnected Ministries from 75% to 100%, Prefectural Governments from 2% to 100% and Municipalities from 0.2% to 100% by 2006 (Operational Program ‘Information Society’, 2001), an objective that was largely achieved. At the same time only 12% of the population in Greece used a PC while only 5% of the Greeks had access to internet. These

figures indicate that the access to the public services and information was available mainly through person-to-person services at the service points that were available for each service.

According to The European Parliament and the Council of the European Union (2003) regulation ‘on the establishment of a common classification of territorial units for statistics (NUTS)’, Greece consists of 4 NUTS1 units, 13 NUTS2 units called "Peripheries" (Regions) and 51 NUTS3 units called "Nomarchies" (Prefectures). Greece’s smaller Administrative Units (AU) are called “Dimoi /Koinotites” (Municipalities). The Municipality AUs were established by the ”Kapodistrias” reform in 1999 that condensed 5775 mainly small municipalities into 1031 new decentralized authorities using mainly geographic criteria like the distance among them or the ease of access to a geographic centre that became the administrative center of the AU according to the Central Union of Municipalities & Communities of Greece (2006). The small municipalities that were abolished through the reform are recognized as geographical and administrative subdivisions of the new Municipalities, now called “Municipal Departments”.

Most of Greek public sector organizations and services are decentralized at a Nomarchies level and the central offices at this level are, as a general rule, located at the administrative centres of Nomarchies which are usually the largest towns in the prefectures and the most important urban centres. The central offices are the unique service points available to citizens. There is an exception to this “rule” and it concerns Tax-Offices that operate dispersed within the limits of Nomarchies’ units. 65 of these offices operate at the broader area of the Greek capital city –Athens and Piraeus Prefectures - and 218 of these Tax-offices operate in the 49 remaining Prefectures as Tax-Services’ service points.

The inhabitants of sub-urban and rural regions had to cover some distance to have person-to-person access to these service points which is “especially problematic” as Chen et al. (2006) underline. Moreover, this is not unusual for the Greek administrative system that the issue of one single public document requires submitting a number of supporting public documents, which means that multiple visits to several Public Administrations are required and considerable time is needed for the completion of a citizen’s case. Boufeas et al (2004) denote that the majority of the existing Information Systems in Greek P.A. operate independently preventing the re-use of information at the administrative level. In addition it is necessary for the citizen or the citizen’s authenticated representative to visit the service

point twice since documents are not issued right away but within a time limit of one to ten days.

Reacting to this status the Greek Government issued in February 1999 a White Paper entitled “Greece in the Information Society; Strategy and Actions Draft 1999 ” (1999) that was updated in 24 January 2002 in line with the eEurope 2002 action plan as “Greece in the Information Society; Strategy and Actions 2002”(2000). The overall government strategy towards the Information Society and an “open and effective government” should be based on the basic principles of equal opportunities and access for all.

In order both to implement the essential features of the White Paper and to achieve the targets set in the Europe 2002 Action Plan of the European Union the Greek Government launched an Action Plan called “Operational Programme of Information Society 2000-2006” (Operational Programme ‘Information Society’, 2001) in the context of the 3rd Community Support Framework (CSF). Over €2,2b of public and EU funds would be utilised during the next seven years.

One of the OPIS Axes in a premature e-Government was ACTION LINE 2 – Citizens and Quality of Life (APPENDIX C, Appendix Table 3) financed with €850mil. Measure 2.2: “Government on line” aimed to develop on-line, to use ICTs to simplify and redefine procedures and communications within and between public services, to network PA agencies at central, regional, prefectural and local levels, to install the infrastructure required for the correct operation of the systems and to take the required measures for improved service delivery contacts to citizens and firms. In order to implement these measures and in the light of the need for further e-government actions, the Ministry of the Interior, Public Administration and Decentralisation (MIPAD, 2001) proposed Project ‘Ariadne’ which would improve the communication and the service quality that citizens received from Public Services. The following Table 2.2 contains the subprojects of Ariadne and their budgets (Ergorama, 2005).

Table 2.2: Sub-projects of Ariadne

Sub-project	Budget (€ mil.)
Operation of Ariadne Offices	58,080
Development and operation of the System of Information, Support and Interconnection	7,434
Hardware for Ariadne Offices	5,044
Furniture for Ariadne Offices	2,487
Development and Operation of the Application of Handling the citizens' cases in Ariadne Offices	2,990
Ariadne's operating expenses	900
Publicity actions	2,000

2.6.2 The KEP as a temporary solution

In early 2002 the Greek Government still confronted the problem of accessibility to the public sector services. Accessibility through internet was insufficient because only a few – mostly income taxes - public services were available online at any stage and the citizens were not familiarized with the use of internet as a mean of access to online services; person-to-person accessibility was problematic since the citizen had to deal with the bureaucracy and the centralization of the public services.

The idea behind the ‘Ariadne Project’ was the operation of a platform (KEP) that was meant to give to the Greek citizens the ability to access administrative information and public sector services. The platform itself would be an ICT enabled public service established within the framework of e-Government. The platform would be accessible by three different access solutions: person-to-person, by a toll free phone call and via the internet. The person-to-person access solution would be given through about 1000 service structures at the local level that would operate as a type of one-stop-shops and would be an alternative service point to the public sectors services. The Project’s implementation anticipated the development of a so called “Central System of Information, Support and Interconnection” (The System) to support KEP’s operation that was finally implemented by NEWSPHONE HELLAS S.A. (NHSA) along with the development and the operation

of e-KEP an internet platform that would support the System with €12.3 mil. project budget (NEWSPHONE, 2006). The project started in early 2002 and was completed by the end of 2005. A second phase was launched in May 2005 for a 33 months period with a total budget of €10.2 mil. In parallel the Ministry introduced a Ministry's Department called "Team of Administration of the KEP Project" (ODEKEP) having the mission to coordinate the actions that are relevant to the KEP Project and to the support of their productive operation.

KEPs operations are supported by a wide and consistent standardization activity that covers approximately the entire set of interactions between public administration and the citizen in Greece. In this context, the services of the Ministry of Interior (MIPAD) worked together with all other Ministries in simplifying and standardizing complex processes of the Public Administration and formalized them with agreed rules and procedures for public documents delivery, that are now widely applied (electronically available). The results of the standardization process are called "certified procedures": their workflows are digitally encoded within e-KEP readily available for use.

The System's modules include:

- The creation of a series of Portable Document Format (PDF) templates adaptable to any "certified procedure". The series contain the application form, the routing document, the confirmation that a request has been submitted and the receipt of the delivery of a final document to the citizen.
- A logged access interactive website (its current URL is <http://ekep.kep.gov.gr/KEPWEB/>) supported by a database that manages all KEPs transactions and internal processes (System).
- The delivery of an e-mail account with logged access for every workstation at every KEP unit and email accounts for ODEKEP.
- The operation of a Help Desk for KEP agents.

- The support of the operation of e-KEP portal. This portal is an e-Government application that operates as an electronic citizens' guide to administrative information and administrative procedures and as logged access portal to the e-Government services that are provided by the KEP Unit. (its current address is <http://www.kep.gov.gr/portal/page/portal/MyNewPortal/?lng=el>)
- The setup of a toll free information and service provision phone service (Call Number 1564). This facility is also a logged access portal to the e-Government services that are provided by the KEP Unit.

In 2002, the Greek Parliament passed law 3013/2002 which anticipates that every Prefecture and Municipality of Greece should establish a one-stop-shop called “Citizens’ Service Centre” (KEP Unit) with the mission to offer all KEP’s services. Municipalities and Prefectures were encouraged to establish and operate their own KEP Units utilizing funds of projects ‘Ariadne’ and “Politeia” of Measure 2.2 and National funds through MIPAD. By the end of June 2002, 652 municipalities and 51 prefectures had their KEP Units operational. By the end of 2005, the figures were 934 for municipalities and 51 for Prefectures or an average of 19 operational KEP Units within the geographic limits of a Prefecture.

2.6.3 **KEP’s services and access**

KEP is a two-sided market platform that offers to the citizen as a user access to non classified public information and to a wide range of services of the public sector the online services included. This access is succeeded through KEP’s services that are delivered after a citizen’s request. In this sense, KEP offers three types of services. These services correspond to three types of “citizens’ cases”, according to KEP’s nomenclature:

- **Non Information cases Services (NIS)**. These are authentication services – that are also offered at the AU’s offices – and Tax-stamps sales services that are also offered at any location that operates a Tax-office. These services are accessible and processed only through a KEP Unit
- **Information cases Services (IS)**. The service is provided when the citizen asks for public information. Information must be searched by any available mean and there

must be an answer to the citizen either right away or within due time. These services are accessible through KEP Units, through telephone and through e-KEP and are processed by the corresponding mechanisms.

- **Final Document Delivery cases Services (FDDS).** The service is provided when a citizen asks for the delivery of a final document. This service concerns only “certified procedures” These services are accessible through KEP Units, through telephone and through e-KEP and they are assigned to be processed to any KEP Unit that the citizen chooses. FDDSs demand the KEP Unit’s interaction with the System; and they require some back office activities like communication with the public service that is responsible for the issue of the final document. If any complementary documents are required KEP Unit has the obligation to seek for these. By the end of 2005, 998 different types of documents could be issued by KEP Units through 998 certified procedures.

2.6.4 **The KEP Unit**

The KEP Unit is an administrative unit that belongs to the AU that has established it in application of Law 3013/2002 having as a mission to offer all of KEP’s services. The unit is accommodated in the premises of the AU or in rent facilities and follows a pattern developed by MIPAD that is common to all KEP Units. The supervision of the reconstruction of the premises was assigned to the local Technical Service of Municipalities and Communities (TSMC) that is the Service responsible for the implementation of technical projects within the limits of a Prefecture. The site is usually located at the administrative centre of the AU and has easy access and facilities for the disabled. KEP Units are equipped with furniture, an air-condition unit, one fax device and one printer. There are one telephone device and one PC work station per employee connected in LAN to a local server KEP. All work stations have logged access to the Internet and to an Intranet to the System’s server.

2.6.5 **KEP Unit’s Operation**

The AU to which the KEP unit belongs is responsible for KEP Unit’s operation as an administrative unit. Unit’s operational costs, including maintenance and consumables, are paid by the AU budget. The rent, if applicable, is being paid by the AU being subsidized by MIPAD’s budget. Each AU applies its own policy regarding the provision of technical

support. Common formal administrative operations are accomplished within the frame of the public administration system.

The unit is run by an appointed supervisor that is an employee that has already been working for the AU. The basic criterion for supervisors' selection is their seniority in Service and their working experience according to law 3200/2004 while no training is required to the System's operation. Their expenses are covered by AU's budget and their compensation is determined by a working contract common for all Municipalities' staff. Moreover every KEP unit is "temporarily" staffed with personnel with ICTs skills (Temps) whose expenses are covered by MIPAD and are currently agreed to 12.000 €/year. Table 2.3 shows the personnel that works in a KEP unit as such the working hours of the unit.

Table 2.3: KEP staffing requirements and operation hours

Administration Unit Population			
Employees	Up to 10.000	10.000-20.000	Over 20.000
Supervisor	1	1	1
Temps	2	4	8
Total	3	5	9
Working Hours	07:30 to 15:00	08:00 to 20:00	08:00 to 20:00

Beyond KEP unit's operation as an administrative unit there is a bunch of procedures that derive from KEP Unit's mission as the intermediate between the citizen and the Public Sector. This could be defined as KEP unit's operational perspective and is supervised by ODEKEP through the System.

2.6.6 KEP Unit's Service Delivery

The process of a service causes some activities that consume resources and generate activity related direct cost. Some data are registered to the System's database. The data that are registered to the system and the resources of indirect cost are described in the services' Value Chain in the following tables Table 2.4, Table 2.5 and Table 2.6.

Table 2.4: The NIS Value Chain

NIC Stage Description	Registered Data	Resources
Citizen's Request	No registration	Temps, Supervisor
Handler's Correspondence to the request	No registration	
Completion	No registration	
Registration pendency		

Table 2.5: The IS Value Chain

IS Stage Description	Registered Data	Resources
Citizen's Request for the Information	No registration	Temps
Search for the Information	No registration	Internet, Telephone, Electronic Equipment
Information Delivery	No registration	Paper, Printer, Fax
Completion	No registration	
Registration pendency		

Table 2.6: The FDDS Value Chain

FDDC Stage	Data	Resources
Description		
Registration	Unique System Protocol Number	System, Temps
	Temp's ID	
	Procedure's Name and Code	
	Citizen's ID	
	Relevant authority	
	The mean by which the service will correspond	
	Modality of document delivery	
	Date of registration	
Forwarding	Mean of forwarding	Post/Courier, Fax, email,
	Date of forwarding	
Collection of response	Date of collection	
Notification of the citizen	Date of notification	Telephone
Completion	Date of completion/delivery	

NISs and ISs remain as a registering pendency till the end of the working hours. At the submission of the day the handler of NISs and ISs registers to the System the daily volume of every “detailed service” as detailed services are described in Table 2.7

Table 2.7: Detailed NISs and ISs

Case Type	Sub-Type	Detailed Service
Non Information Case	Authentication	Authentication of Citizen's Signature
		Document's Photocopy Authentication
	Tax-Stamps (T-S)	TS1, TS2, TS3
Information Case	Social Security Information (Six Social Security Organizations)	SS1, SS2, SS3, SS4, SS5, SS6
	Tax Information	TI
	Public Administration Information	INF1, INF2, INF3
	General Information	GI1, GI2, GI3, GI4, GI5

2.6.7 Data availability in KEP Units

KEP Units have limited access to the data that the KEP Unit registers to the System in a printable format through the System. More specifically

- As for the FDDSs there is information about the total annual volume for every type of FDDS that has been processed.
- As for the NISs and ISs there are available monthly totals per detailed service.

2.6.8 KEP's acceptance

KEP is considered to be a valuable tool of the Greek Government in its attempt to facilitate the access to the public sector's services either they are provided online or conventionally. It is a "definitely successful institution" that is "universally acceptable" by the Greek society according to the introduction of the presentation of the results of a National survey that was conducted in the period between the 24 October and 10 November 2005 (MIPAD, 2005). According to these results 63% of the citizens recognize and name voluntarily KEP as the "official State office that is authorized to facilitate their dealing with the public sector" with a satisfaction index of 90% regarding the in-time of the delivery and the soundness of; and a satisfaction index on the reflex of its delivery of 85% in case that they

ask for any other type of public services. More specifically the public believes that KEPs are essential (97%), effective (94%) and supporting to the modernization of the public administration (91%) while the “general satisfaction” index of the institution is 94%.

By the end of 2005 23% of the Greek urban households had access to the internet. The figures for the sub-urban and rural areas were respectively 19% and 12% (Demunter, 2005). It seems that Greeks do not “reap the gains of e-Government” (Chen et al., 2006). Moreover a big portion of the public sector is not available online so the inhabitants of rural and sub-urban areas compared to those of urban areas have to cover some distance to have access to the public sector and confront with its status.

On the other hand, KEP offers enhanced access to a wide range of services diminishing the distance parameter. In that case the following questions complement the ones set at session 2.5: what does ‘offering enhanced access’ mean within the Information Society’s strategic framework? What is the impact of KEP’s operation to the inhabitants of these areas? do they use KEP’s services and for what reason? And are there any direct benefits from KEP’s operation for them? The research that follows is trying to answer these questions.

Chapter 3 Methodology

3.1 Overview of the methodological framework

This research's first objective was to assess whether KEP Units of rural and sub-urban areas of Greece are beneficial for the citizen as a user and cost-effective for the citizen as a taxpayer. It was decided the development of two models.

The first model would be a "direct benefit" model that would estimate the time and cost savings for the citizen as a user. Its development was based on the assumption that in case that the citizen will not access a service online, then the citizen has two different access solutions: either to access the public service directly or access its services through a KEP Unit. Benefits – if any – were supposed to derive from the difference of the distance between the two alternative access solutions.

The second model would be a cost-benefit model that would assess the average cost versus the average monetary benefit for the citizen as a tax-payer for each one of the three types of KEP's services that are offered in a KEP Unit. For the development of the cost part of the model, there were defined three cost objectives corresponding to the three types of KEP's services and there were identified and analysed the costs of setting up, providing and maintaining within the guidelines of eGEP's Expenditure Study. These costs would be allocated to the cost objectives using the Activity Based Costing methodology. The model would calculate the average cost for each cost objective as the quotient of the cost over the volume of the services that generate this cost. The benefit part of the model would be based on the results of the "direct benefit" model and would estimate the average monetary benefit for the citizen as a tax-payer for each one of the three service types. Average costs and benefits would be compared for the cost-benefit analysis purpose.

The second objective of the research was the evaluation of KEP as an inclusive initiative within the context of the "Information Society" strategic frameworks. To accomplish this objective, it was considered to be necessary the investigation of EU's perspective of the term and especially how is inclusion defined, who does it involve, how could inclusion be

succeeded and what is done to this direction. There would be an evaluation whether KEP as it has been described responds to the findings of this investigation.

3.2 Data requirements

For the assessment of the time and cost savings for the citizen there should be available data about the location of the residence of the citizen, the location of the KEP Unit that the citizen used as an access point and the location of the public service that the citizen applied to, for every case that it was served in a KEP Unit. Full data could be available only through the System or through the KEP Units. In case that location data would not be available there should be done some assumptions about the distance parameter.

The data that would be necessary for cost-benefit analysis would be secondary data that would have to do with the detailed volume of the services that had been processed in every KEP Unit, the costs of the operation of the System, the costs of setting up the KEP Unit and the costs of every KEP Unit's productive operation for every KEP Unit. Data could be available in the internet, at the files of TSMC and in the records of the Municipality as the KEP Units' administrative authorities respectively. As for the detailed volume of the services data could be found through the System or through KEP Units. All of the latter sources were reliable and data had never been characterized as confidential so access to those had only to do with the eagerness of data handlers to provide those.

The data that were required for the inclusion objective would be relevant to the terms inclusion and accessibility and should be searched in official documents like the European Commission documents, Ministerial Declarations, Action Plans and Workshops' Conclusions that dealt with inclusion and accessibility and would be available in EU's Information Society website.

3.3 Methodological review, data collection and analysis

Considering the "direct benefit" model the author himself developed a model that would assess time and cost savings as indicators of "reducing administrative burden" according to eGEP since the literature could not provide the research with a model that would fit to the author's objective. This decision could be justified by eGEP's ascertainment that "a strict measurement framework cannot fit with the different models, objectives and stage of e-

Government developments” (Codagnone et al., 2006a) and that the “quantification of efficiency impacts presupposes a differential analysis between the cost of providing the same service traditionally and digitally” (Codagnone et al., 2006b). In the second case the author made an adjustment on this the ascertainment and analysed the differences between the benefits of receiving the same service traditionally and through KEP.

For the cost-benefit analysis, it was decided that since the establishment of KEP Units came as a result of an initiative within the framework of e-Government as for the costing there should be followed the costing methodology based on Activity Based Costing as it is proposed by eGEP and is described in the following paragraph 3.3.1; as for the benefit the author developed a model of his own based on the guidelines and the results of the author’s “direct benefit” model.

3.3.1 Activity Based Costing

Kaplan (1984, cited in Gunasecaran 1999) says that “the ABC system is based on the premise that products consume activities, activities consume resources and resources consume cost”. According to Turney (1996, cited in Gunasecaran 1999) ABC assigns costs to activities based on the recourses that they use and then it assigns costs to cost objectives based on the activities that they use. Gunasecaran (1999) refers to activities as aggregations of tasks- bunched in processes or procedures - that cause work to be performed by people or machines to produce services.

According to Snyder and Davenport (1997) in order to allocate costs in ABC one should select the cost objective, assign the direct costs, associate each overhead cost to the cost objective and apply any remaining overhead using some standard basis of allocation.

The association of overhead costs to the cost objective presupposes the identification of activities that are required for the system to operate. Identification is the first and basic step of the development of an ABC system since it sets the structure and the scope of the costing system and determines how the resources that are committed in the overhead area are used. The next step is to link each activity to the specific recourse that is required for the activity to reach its purpose. It is profound that an activity will most likely use more than one resource and will share all of its resources with other activities. Every link from a resource to an activity demands a “cost driver” that has direct influence on the allocation of

the cost on the activity. The cost drivers are coefficients that are defined properly like for example using information about the time spent that staff spend on each activity.

Additionally, according to eGEP, if activities and are analyzed and mapped thoroughly and the data gathering methods are identified, then the cost drivers of each activity can be identified and assigned in a way that will estimate costs with accuracy. The links between a certain activity and its resources leads to the definition of each activity’s “cost pool” that comprises of every traced cost which becomes a “cost element” of the cost pool.

The last step is the connection of activities to the cost objectives. An activity may be linked to more than one cost objectives and vice versa. In that case this connection demands the definition of secondary cost drivers that are measures of the frequency of demand that is placed on activity and assign the cost of activity to the cost objective (Innes et al., 1994, in Gunasecaran, 1996). Secondary cost drivers’ rate can be calculated from: $\text{Cost driver rate} = \frac{\text{activity cost for period}}{\text{cost driver volume for period}}$. The following Figure 3.1 represents the ABC concept at a three level analysis. We remark that secondary cost drivers are needed only for Activity n that is linked with more than one services.

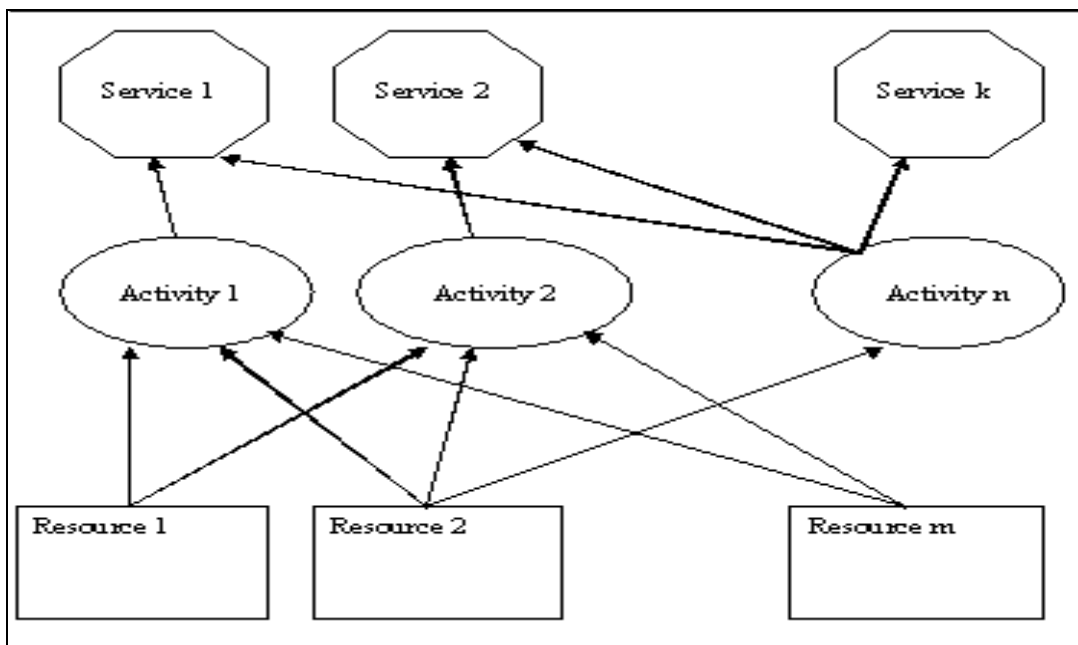


Figure 3.1: Activity Based Costing

In ABC the cost for each service can be traced and estimated in a “top-down” approach. For example, costs generated by Service 1 derive from Activities 1 and n which demand Resources 1, 2 and m in a way that the corresponding cost drivers define.

3.3.2 Data sources

The cost-benefit analysis would be based on data coming from the KEP Units of the Prefecture of Larissa, shown in Figure 3.2, that was considered by the author to be a typical sample of a Greek Prefecture as these were described in paragraph 2.6.1. The Prefecture's population according to latest census of 2001 is 277.973 (which is about 2,5% of Greece's population), 124.376 of which lives in Larissa and the rest of it in the 30 rural and sub-urban municipalities (Perifereia Thessalias, 2006). At the end of 2005, there were 7 operational Tax-offices (3 of which in the capital city Larissa and 4 of them within a range of about 40 km from Larissa) as such 27 KEP Units (or 2,7% of the total number for Greece) within the geographical boundaries of the Prefecture of Larissa - 2 of them in the city of Larissa and the rest of them in the 25 out of 29 remaining Municipalities. These KEP Units served the 2% of the total volume of FDDSs that were served by all KEP Units in Greece during 2005.

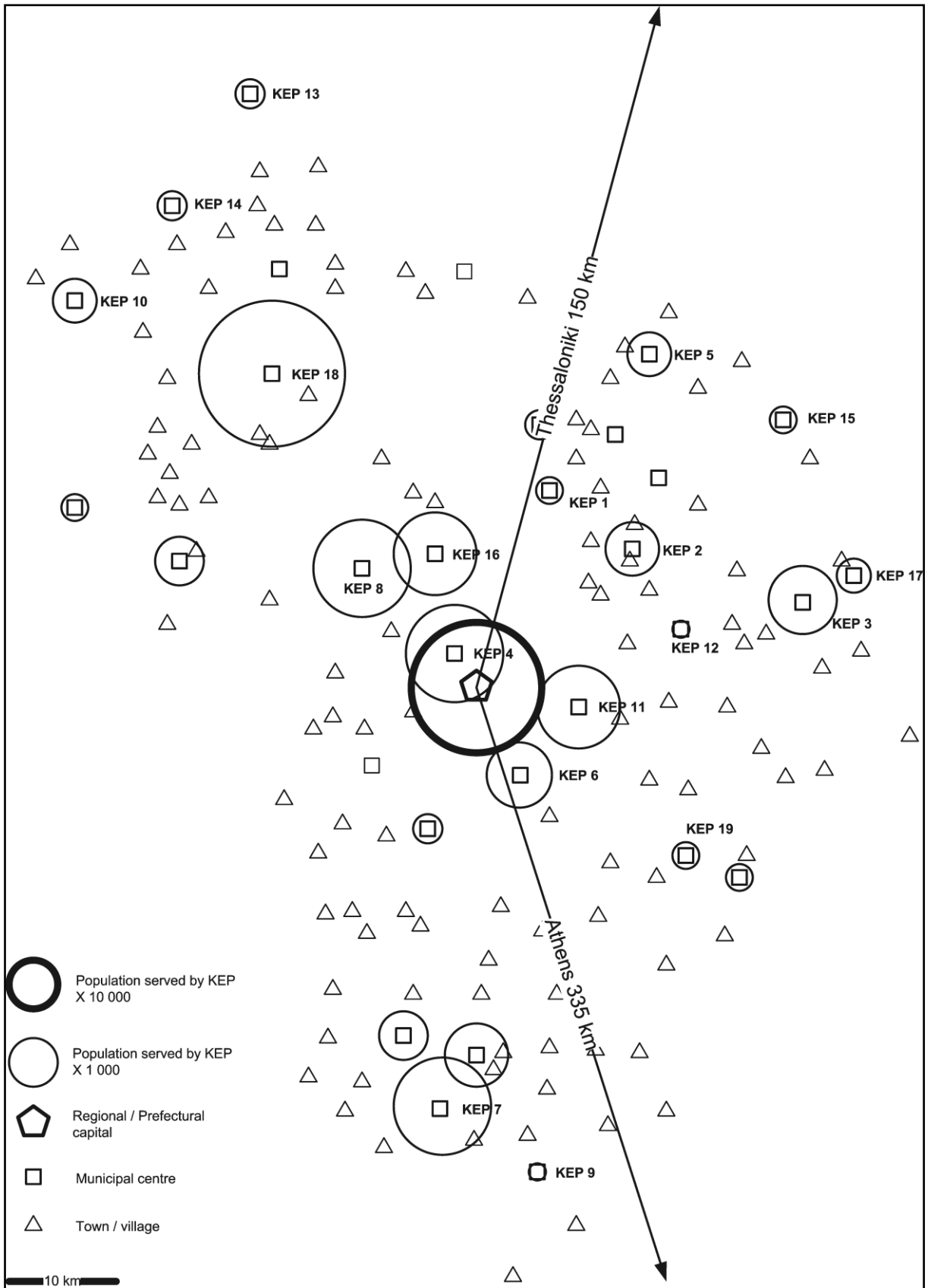


Figure 3.2: The area of reference: The Geographical Distribution of KEPs in the Prefecture of Larissa

There were analysed the costs that were generated by KEP's operation for the years 2003,2004 and 2005 and by the operation of KEP Units for the year 2005 as such the volume data of the several types services for 2005.

The year 2005 was chosen as a reference year because it was the last year of Ariadne Project's operation (a new €10mil. contract was signed early in 2006 for another 3 years of service) as such because the author estimated that would have easier access to this year's data. The choice of Larissa Prefecture had also to do with the author's estimation that he would have enhanced access to data due to author's social and labour relationships with the Temps of the operating KEP Units.

For the inclusion evaluation objective, there was conducted an exploratory research in EU's Information Society website and a study of official documents related to the topic. There was decided that a narrative analysis of the data would fit to the objectives of this part of the research since the inclusion topic is being discussed and approached in several ways "in a flow of related events" (Saunders et al, 2003) since the early days of the launch of the Lisbon Strategy .

3.4 Cost analysis Methodology

The first step to this analysis was the definition of three cost objectives that correspond to the three types of services that are offered at a KEP Unit. Consequently, the three cost objectives were Non Information Services (NIS), Information Services (IS) and Final Document Delivery Services (FDDS).

The second step was the investigation of the costs that are connected with the provision of these services. These costs have to do in general with the development and operation of the System, the initial installation of the Units and their day to day operations. The primary cost analysis was based upon the model of the three-fold distinction of eGEP of "setting up, providing and maintaining e-Government" and it is presented in Table 3.1

Table 3.1: Three fold-distinction cost structure

Macro-Activities	Activity	Cost Element
Set up costs	Initial installation	Premises
		Electronic Equipment (Hardware, Software, Devices)
		Furniture Equipment
	System development and implementation	Platform cost (NEWSPHONE S.A.)
Provision Costs	Personnel Operational costs	Cost of Temps
		Cost of Supervisors
	Operational Costs	Telephone
		Internet
		Energy
		Rent
		Post/ Courier
		Printer/Fax Consumables/Paper
		Other Costs
		System Operational Costs
Maintenance Costs	KEP Unit's Maintenance Costs	Hardware and software maintenance/service
		Hardware and software replacements/upgrades
	System's Maintenance Costs	System's Hardware and Software maintenance/service
		System's Hardware and software replacements/upgrades

However data availability problems on all cost categories and the author's experience of day-to-day KEP's operation contributed to the author's decision to differentiate the cost

structure and adjust it to the data available as it will be justified in the paragraphs 3.4.1, 3.4.2 and 3.4.3.

3.4.1 **Macro-Activity: System's Operation**

According to eGEP distinction, System Development and Implementation Costs, System Operational Costs and System Maintenance Costs are considered to be Set Up, Provision and Maintenance costs accordingly so definite data should have been found and delegated to these activities. The author utilized publicly available data through internet and referred to the Ariadne sub-projects “Development and operation of the System of Information, Support and Interconnection”, “Development and Operation of the Application of handling the citizens' cases in Ariadne Offices” and “Support of productive operation” as they are described in Table 2.2 and found that their total budget was €11,324 mil. In parallel a research at NHSA's website (www.newsprone.gr) found a company's press release about NHSA's contract with MIPAD. According to this press release the three services were unified in the m12,3€ project of “the development and the operation of the Central System of Information, Support and Interconnection” that begun at early 2003 and was completed by the end of 2005. In that case it was decided that the three Cost Activities should be unified to the Macro-activity “System's Operation” that offers to KEP Units access to the System and generating the Platform Cost (PIC).

In order to allocate this cost to every KEP Unit the following method was followed. The Annual System Cost (ASyC) was estimated to be the quotient of Platform Cost (PIC) divided by the number of the years that the System was served by the Platform and would be allocated to the KEP Units that operated during a certain year:

$$ASyC = \frac{PIC}{3} = \frac{12.300.000}{3} = 4.100.000 \text{ €/year. In 2005 there were 985 KEP Units}$$

operating so the System Cost for every unit for the year 2005 was equal to

$$SyC_{2005} = \frac{4.100.000}{985} \approx 4.163 \text{ €}. It was decided that this cost would aggravate only the$$

FDDSs as direct cost since these are the only services that exploit the System's resources as resources are described in the services' Value Chains in section 2.6.6.

3.4.2 Macro-Activity: Initial Installation

The Initial Installation Costs – Premises (PrC), Electronic Equipment Costs (EEC) and Furniture Equipment Costs (FEC) – were correspondingly available at the local TSMC and at the AU of every KEP Unit. There was a telephone communication and an interview arranged with the TSMC’s authorized employee that would provide the research with Premises’ Costs data that were finally available for every KEP Unit. There was also a telephone communication with all the financial services of every AU that was responsible for the financial records of Equipment costs. There was a positive correspondence of seven out of twenty five AUs’ financial services and there was sent a fax with the questionnaire of Appendix Table 4, APPENDIX D. With the available data the Mean Unit’s Equipment Cost of the seven Units ($MUEC_7$) was estimated and found equal to 32,638€/Unit.

In order for this figure to be checked there were also utilized available data for the establishment of the 282 KEP Units that were established after June 2002 available in the internet (Ergorama, 2005). This sample represents the 28.6% of the total number of KEP Units and could be used as a base for estimation of the mean equipment expenditure for every KEP Unit since the adjusted minimum sample size for a z score of 1.96 and a 5% margin of error was found to be 240 Units. The corresponding figure was estimated to be

$MUEC_{282} = \frac{9.400.000}{282} = 33.333\text{€/Unit}$. It was decided to estimate the weighted average of

these figures as the EC using the formula $EC = \frac{MUEC_7 * 7 + MUEC_{282} * 282}{7 + 282} \approx 33.300$

€/Unit.

This figure represents the Equipment Cost which is Electronic Equipment Costs (EEC) and Furniture Equipment Costs (FEC). In order to allocate this cost the following methodology was followed. The Sub-projects of Ariadne Project anticipated a cost of €5,044 mil for hardware and software equipment and €2,487 mil. for Furniture Equipment or a percentage of 67% and 33% correspondingly. So the EEC and FEC for every KEP Unit were estimated to be $EEC=33.300*67%=22.300\text{€}$ and the $FEC=33.300*33%=11.000\text{€}$.

Premises and Furniture Equipment and Electronic Equipment Costs would be depreciated according to the Greek tax system which anticipates that the fixed assets depreciation is completed within a time period of 5 years so a rate of 20% was estimated as depreciation

costs for year 2005 and electronic equipment depreciation is completed within a time period of 3 years so a rate of 33% was estimated as depreciation costs for year 2005. Premises, Furniture Equipment Costs and Electronic Equipment Costs would be overheads to be assigned using the ABC method.

3.4.3 **Macro-Activity: Provision**

In order to have data for the Personnel Operational Costs the Operational Costs and the Maintenance Costs the questionnaire method was chosen (Appendix Table 5 and Appendix Table 6, APPENDIX H). Questionnaires were sent to all KEP Units. Some of the costs are asked in an annual and some of them in a monthly basis because the author estimated that data gathering would be easier this way. For example the rent is usually fixed and paid in a monthly basis while energy or telephone bills are usually variable and paid every two months so a mean monthly estimation would be inconvenient for the data provider. The questionnaire was sent to the supervisors of all non urban and rural KEP Units of Larissa Prefecture by fax and the answer was expected the same way. The answer to the question relevant to the supervisor's compensation data was optional and in case that the answers were not sufficient in volume then this expense would be estimated by accounting the mean cost for a Municipality employee from Nikaia-Larissa Municipality and this was what actually happened and was equal to €2.500.

The analysis of the data of Appendix Table 6 that were finally available showed that the mean annual cost of Hardware and software Maintenance/Service Costs was about 50€ and that only two out of seventeen KEP Units had Hardware and Software Replacements/Upgrades costs (1.200€ and 650€ correspondingly). There was one question whether these costs should represent a Macro-Activity following the eGEP pattern or not; and there was another question whether they should follow a depreciation rule or not. It was decided not to be considered as a Macro-Activity because their rate upon the Provision Costs was estimated to be minimal. As for the depreciation two different approaches were chosen

- Hardware and software Maintenance/Service Costs was decided not to be depreciated. The author's experience indicates and data analysis proves that these costs do not overlap the amount of 1000€ that is the minimum depreciation level according to the Greek Tax System.

- Hardware and Software Replacements/Upgrades was decided to be depreciated. This is not unusual that the replacement of even one work station could generate expenses that overlap the limit of 1000€. Even though some expenses might not overlap this limit, the final decision was to be depreciated.

Eight (8) out of nineteen (19) KEP Units answered that there was paid no rent probably because KEP Units' premises are accommodated together with some other services of the AU. It was decided that the rent expenses would be equal to the average rent paid by the rest of KEP Units. The same methodology was followed for the seven out (7) KEP Units that responded that there were no other costs like heating or cleaning costs. Under these assumptions, the Cost Structure was formed as shown in Table 3.2

Table 3.2: Cost structure for a KEP Unit

Macro-Activities	Activity	Cost Element	Abbrev
System's Operation		Platform	SyC ₂₀₀₅
Set up	Initial installation	Premises	PrC
		Furniture Equipment	FEC
		Electronic Equipment	EEC
Provision	Personnel	Temps	TC
	Operational costs	Supervisors	SC
		Operational Costs	Telephone
	Internet		IC
	Energy		EnC
	Rent		RC
	Post/Currier		P/CC
	Printer/Fax Consumables/Paper		P/FC
	Other Costs		OC
	Hardware and Software		HMSC
	Maintenance/Service		
	Hardware and Software		HSRUC
	Replacements/Upgrades		

3.4.4 Costs related to services

The following step meant to relate the services that were the study's cost objectives with the costs that are related to them. The tables, Table 2.4, Table 2.5 and Table 2.6 contain the recourses that are demanded for the provision of each of the three types of services. The consumption of these resources generate service related costs which are presented in the following Table 3.3 in combination with the costs that were recognized in the latter Table 3.2. The column "Common Overhead Cost" contains the costs that are generated independently from the provision of any service.

Table 3.3: Costs related to the types of services

Services	Direct Costs	Overhead Costs	Common Overhead Cost
Final Document Delivery Service	Platform, Post/Currier	Electronic Equipment Temps Printer/Fax Consumables/Paper Internet Hardware and Software Maintenance/Service Costs Hardware and Software Replacements/Upgrades	Premises, Furniture Equipment, Energy, Rent, Other Costs, Telephone
Information Service		Electronic Equipment Temps Printer/Fax Consumables/Paper Internet Hardware and Software Maintenance/Service Costs Hardware and Software Replacements/Upgrades	
Non Information Service		Temps Supervisor	

3.4.5 Volume data

Data relevant to the volume of NISs and ISs were accessed through KEP Units. Nineteen out of twenty five KEP Units corresponded sending a fax with details as they are described in paragraph **Σφάλμα! Το αρχείο προέλευσης της αναφοράς δεν βρέθηκε.** and presented in APPENDIX E. As for the FDDSs there was access to data of all KEP Units of Larissa Prefecture with details about the annual volume for every different procedure of the 998 certified procedures. For elaboration reasons the services were classified as shown in the following Table 3.4. This was considered to be necessary since there were 998 different certified procedures and a full detailing was judged to be unnecessary. They were classified according to the author's experience and in correspondence to the types of the

services that are measured in e-Government. The column “e-Government Definition” contains the service title as it is categorized in APPENDIX A, Appendix Table 1. The column “Description of the service” contains the corresponding description of the service offered by KEP. Wherever there is not any correspondence the e-Government Definition cell is blank. The column “KEP service” is the result of the classification done. At every “KEP Service” it was assigned the corresponding volume.

Table 3.4: Categorization of FDDSs

	e-Government Definition	Description	KEP Service
1	Income taxes: declaration, notification of assessment	Filing of income tax forms, personalized electronic notification on tax returns , electronic issuing of certificates, electronic submission of VAT forms	Income taxes
2	Social security contributions	Unemployment benefits, Child allowances, Unemployment Certificates, Registration	Social security matters
3	Personal documents	Passport, Drivers License	Personal documents
4	Car registration	Car Registration	Car registration
5	Certificates (birth, marriage): request and delivery	Several Certificates issued by Municipalities: request and delivery	Certificates (Birth, Marriage, Residence, Municipalities)
6	Enrolment in higher education / university	Issue of several types of Certificates relevant to Educational Institutes	Education Matters
7		Matters relevant to agriculture and fisheries.	Agricultural Matters
8		Matters relevant to socially disadvantaged groups (elder, handicapped, poor, etc)	Socially disadvantaged groups
9		Justice related Certificates	Justice
10		Not otherwise classified	Not otherwise classified

3.4.6 ABC Activities and Cost Drivers

The next step was the definition of four activities three of them corresponding to the three types of the services plus the Management activity and their link to the cost elements and

the services as they are presented in the next Figure 3.3 based on ABC model of paragraph 3.3.1.

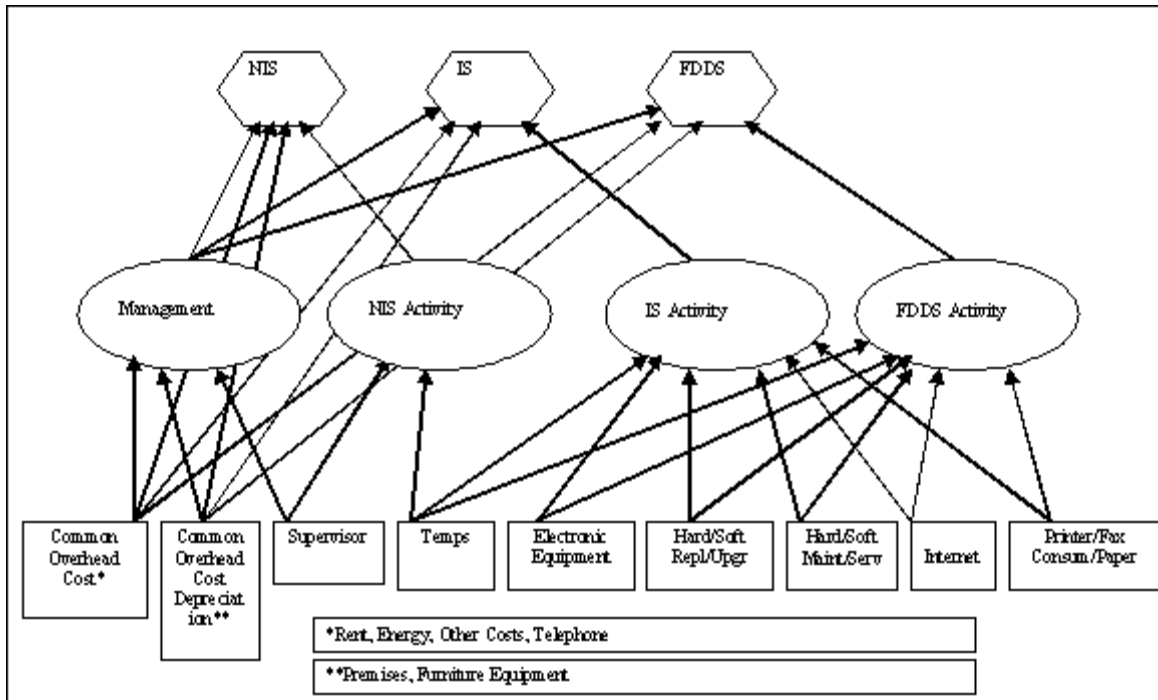


Figure 3.3: ABC Activities' and Cost Drivers' Diagram

The corresponding cost drivers were recognized in the following way.

It was estimated that the supervisor spends 10% of her/his time to her/his managerial duties and the rest of her/his time to NIS activities and the corresponding cost driver appears in row 2, Table 3.5. Temps spent their time over NISs, ISs and FDDSs so the allocation of Temps costs was decided to be in proportion to the volume of each type of service (V_1 , V_2 and V_3) correspondingly and the total time required for the completion of a case.

According to the authors experience of a NIS is about 2 minutes, an IS about 6 minutes and a FDDS about 12 minutes so the corresponding relevant cost driver is in row 3 where $V_t = V_1 * 2 + V_2 * 6 + V_3 * 12$. Common Overhead cost was allocated according to the number of the employees available at any moment for KEP's activities and the cost drivers appear in row 1 where N_T is the number of Temps and N_S the number of supervisors. The rest of costs which are related only to ISs and FDDSs were assigned proportionally according to the corresponding services' volume of 2005. In case that denominators as they derive from the available data were equal to null (0) it was decided to be replaced by number one (1) for calculation purposes.

Table 3.5: Cost drivers

			NIS	IS	FDDS	Management
1	Common Overhead /Common Overhead Depreciated		$N_T/3+0.9*N_S$	$N_T/3$	$N_T/3$	$0.1*N_S$
2	Supervisor		90%	0	0	10%
3	Temps		V_1*2/V_t	V_2*6/V_t	V_3*12/V_t	
4	Electronic Equipment			$V_2/(V_2+V_3)$	$V_3/(V_2+V_3)$	
5	Hardware and Software Replacements/Upgrades			$V_2/(V_2+V_3)$	$V_3/(V_2+V_3)$	
6	Hardware and Software Maintenance/Service Costs			$V_2/(V_2+V_3)$	$V_3/(V_2+V_3)$	
7	Internet			$V_2/(V_2+V_3)$	$V_3/(V_2+V_3)$	
8	Printer/Fax Consumables/Paper			$V_2/(V_2+V_3)$	$V_3/(V_2+V_3)$	
9	Management		1/3	1/3	1/3	

The figure in reveals that some costs are generated by the managerial activity (Managerial Activity Cost, MAC). There was need for the allocation of these costs that were estimated to be equal to $MAC = (TelC+EnC+RC*12+OC*12)*0.1*N_s + (PrC+FEC)*20%*(N_T/3+0.1*N_s) + SC*10%$ which are the three cost elements connected to the management activity multiplied by the corresponding cost drivers. Since this activity's costs are related to all three types of services it was decided for this cost to be allocated equally to the three activities (row 9 of the former table).

3.4.7 Cost formulas

The final formulas that would calculate the costs for the three types of services are presented in Table 3.6

Table 3.6: Cost per type of service formulas

Cost Type	Cost formulas
NISC	$(TelC+EnC+RC+OC)*(N_T/3+0.9*N_s) + (PrC+FEC)*20%*(N_T/3+0.9*N_s) + SC*90% + TC* V_1*2/V_t + MAC*1/3$
ISC	$(TelC+EnC+RC*12+OC*12)*N_T/3 + (PrC+FEC)*20%*N_T/3 + TC* V_2*6/V_t + EEC*V_2/(V_2+V_3)*33.3% + HSRUC* V_2/(V_2+V_3) + HMSC* V_2/(V_2+V_3) + IC* V_2/(V_2+V_3) + P/FC* V_2/(V_2+V_3) + MAC*1/3$ and
FDDSC	$(TelC+EnC+RC*12+OC*12)*N_T/3 + (PrC+FEC)*20%*N_T/3 + TC* V_3*12/V_t + EEC*V_3/(V_2+V_3)*33.3% + HSRUC* V_3/(V_2+V_3) + HMSC* V_3/(V_2+V_3) + IC* V_3/(V_2+V_3) + P/FC* V_3/(V_2+V_3) + MAC*1/3 + SyC_{2005}$

3.5 Direct Benefit Analysis Methodology

As for the direct benefit model the starting point for the development of it was that a citizen has currently two different choices any time a citizen wants to access one public service either by oneself or by an authorized person; the one choice (case1) is to apply to any “service point” that offers this service except KEP; the other one (case2) is to apply to a KEP “service point”. In the analysis, monetary benefit for the citizen as a tax-payer and time and cost savings for the citizen as a user – if any – were supposed to emerge from the difference of the distances between the two closest service points of the cases 1 and 2 having as a start point the citizen’s residence.

There were used the same data that were used to the cost model so there was not any information relevant to the location of the service of case1 and the location of the citizen’s residence. For the development of the model the following assumptions were done:

- All KEP Units’ operate in the administrative center of the Municipality that is also the geographic center of the Municipality.
- The inhabitants of the Municipality live in the administrative center.

- Either a citizen’s choice is case1 or case2 the citizen will prefer to apply to the closest service point (SP) available. We also assume that the citizen has this information.

The location of the closest service point of case1 was estimated according to the author’s experience on the operation of the Greek public administration. The service details were divided into four different Distance Types D1, D2, D3 and D4 as they are presented in the following Table 3.7. The indication “Indefinite” means that the location of the corresponding service point could be anywhere within the bounties of Greece.

Table 3.7: Types of distance

Case Type	Details	Location of the Closest SP	Distance Type
Non Information Case	Authentication of Citizen's Signature	Municipality offices	D1
	Document's Photocopy Authentication	Municipality offices	D1
	Tax-Stamps	Tax-Office	D2
Information Case	Social Security Information	Prefecture's Administrative Centre	D3
	Tax Information	Tax-Office	D2
	Public Sector Information	Prefecture's Administrative Centre	D3
	General Information	Prefecture's Administrative Centre	D3
Final Document Delivery Case	Income taxes	Tax-Office	D2
Delivery Case	Social security matters	Prefecture's Administrative Centre	D3
	Personal documents	Prefecture's Administrative Centre	D3
	Car registration	Prefecture's Administrative Centre	D3
	Certificates(Birth, Marriage, Residence, Municipalities)	Indefinite	D4
	Education Matters	Indefinite	D4
	Agricultural Matters	Prefecture's Administrative Centre	D3
	Socially disadvantaged groups	Prefecture's Administrative Centre	D3
	Justice	Indefinite	D4
	Not otherwise classified	Indefinite	D4

The four distance types correspondingly were

D1: The distance between the KEP Unit and the Municipality's offices;

D2: The distance between the KEP Unit and the Tax-office;

D3: The distance between the KEP Unit and the Prefecture's Administrative Centre; and

D4: The distance between the KEP Unit and the Indefinite Location.

In that case $D1=0$, and D2, D3 were available at any map of Larissa Prefecture. As for D4 since no distance details were available it was decided that D4 would be greater than or equal to D3, since the request for the corresponding service would be applied either within the limits of the Prefecture or beyond these.

One other matter that had to be discussed was the time that a citizen would have to spend to obtain the service. The following assumptions were done:

- The citizen will spend some time to access the corresponding public service in case1 and no time at all in case2 as consequence of the distance she/he has to cover correspondingly
- The citizen will spend the same time both in case1 and in case2 waiting in the queue and being serviced
- Non Information, Information and services offered in a Tax-office are one-stop services.
- Final Document Delivery Services demand two visits – one for the application and one for the delivery of the final document.
- The time spent for every visit would be no less than two hours for distances greater than 0 km and less than or equal to 20 km (TS1) and no less than four hours for distances greater than 20 km (TS2). The transfer would be done by public transport and it was taken under consideration that the distance to be covered would be the double of the distance on the map. The travel expenses (TE) for public transport were estimated to be 0.08 €/km and this figure was provided by the Transportation Company of Larissa Prefecture S.A. (KTEL of Larissa in Greek).

- The time spent was considered to be a variable that would cause loss of income to the citizen. It was assumed that the citizen is working in an eight hour (8h) basis in a working day as an employee with the mean lowest stab wage of M=30€/day (i-Proslipsis.gr, 2006).

The following Table 3.8 shows the formulas that were used for the estimation of the benefits for the citizen as a user in relation to the types of the distance:

Table 3.8: Monetary benefit for the citizen as a user formulas

Distance	Monetary benefit (€)
D1	0
D2	$D2*2*TE+M*(TS1 \text{ or } TS2)/8h$
D3	$(D3*2*TE+M*(TS1 \text{ or } TS2)/8h)*2 \text{ visits}$
D4	Grater than or equal to $(D3*2*TE+M*(TS1 \text{ or } TS2)/8h)*2 \text{ visits}$

There was also estimated the weighted average benefit for the citizen of the Prefecture of Larissa using as weighting coefficient the population of the corresponding KEP Unit's AU.

3.6 Benefit for the citizen as a tax-payer

In order to conduct the cost benefit analysis there was need for the estimation of the average monetary benefit for the citizen as a tax payer by service type. The formulas that were applied for each type of service are presented in Table 3.9

Table 3.9: Benefit for the citizen as a tax-payer formulas

Benefit Type	Benefit formulas
NISB	$[\text{Volume (Authentication Services)}*D_1\text{€}+\text{Volume (Tax-Office Services)}*D_2\text{€}]/V_1$
ISB	$[\text{Volume (Tax-Office Services)}*D_2\text{€}+\text{Volume (Non Tax-Office Services)}*D_3\text{€}]/V_2$
FDDSB	$[\text{Volume (Tax-Office Services)}*D_2\text{€}+\text{Volume (Prefecture's Administrative Centre)}*D_3\text{€}+\text{Volume (Indefinite Location)}*D_4\text{€}]/V_3$

where $D_n\text{€}$ is the corresponding monetary benefit.

The calculation model was developed in an MSOffice Excel file for every KEP Unit as such for KEPALL that was considered to be one KEP Unit. The inputs were the Name of the KEP Unit, the cost elements' figures and the volumes of the services and the output were the total cost of Unit's operation and for each type of service as such the average cost for every type of services.

Chapter 4 Research Findings and Discussion

4.1 KEPs: Cost vs Benefit in Rural and Sub-Urban Areas

4.1.1 Benefits for Citizen as a user

The application of the model of benefit for the citizen as a user, described in section 3.5, produced the results shown in Table 4.1 by KEP Unit. The KEPALL line provides a weighted (by population served) average of the corresponding benefits at the prefectural level.

Table 4.1: Direct benefits for the citizen as a user

	Population served	Distance from Larissa (km)	Distance from the closest Tax-Office	D1 benefit		D2 benefit		D3 benefit		D4 benefit	
				€	Time (h)	€	Time (h)	€	Time (h)	€	Time (h)
KEP1	2976	20	20	0	0	10,70	2	21,40	4	21,40	4
KEP2	5486	20	20	0	0	10,70	2	21,40	4	21,40	4
KEP3	6458	32	0	0	0	0,00	0	40,24	8	40,24	8
KEP4	10022	3	3	0	0	7,98	2	15,96	4	15,96	4
KEP5	4375	40	40	0	0	21,40	4	42,80	8	42,80	8
KEP6	6540	10	10	0	0	9,10	2	18,20	4	18,20	4
KEP7	10464	37	0	0	0	0,00	0	41,84	8	41,84	8
KEP8	16900	17	0	0	0	0,00	0	20,44	4	20,44	4
KEP9	1781	48	14	0	0	9,74	2	45,36	8	45,36	8
KEP10	3951	62	24	0	0	18,84	4	49,84	8	49,84	8
KEP11	8292	10	10	0	0	9,10	2	18,20	4	18,20	4
KEP12	1763	20	12	0	0	9,42	2	21,40	4	21,40	4
KEP13	3187	63	25	0	0	19,00	4	50,16	8	50,16	8
KEP14	3588	66	28	0	0	19,48	4	51,12	8	51,12	8
KEP15	2428	47	47	0	0	22,52	4	45,04	8	45,04	8
KEP16	8407	15	7	0	0	8,62	2	19,80	4	19,80	4
KEP17	3472	50	18	0	0	10,38	2	46,00	8	46,00	8
KEP18	14563	38	0	0	0	0,00	0	42,16	8	42,16	8
KEP19	2840	25	25	0	0	19,00	4	38,00	8	38,00	8
KEPALL	117030	33	16	0	0	7,28	1,06	16,45	3,04	16,45	3,04

As expected, there is not any monetary benefit or time savings for the citizen that uses the services of the type D1 since D1=0. However according to the Table in APPENDIX F

there were serviced 240.575 relevant requests in all 19 KEP Units of Larissa during 2005. The same goes for Tax-Office relevant services in the cases of KEP Units 3, 7, 8 and 19. Although there are not any direct benefits for the citizen as a user of the services of type D2 there were served 45.274 tax-related Non Information, Information and Final Document Delivery services. According to the author's personal experience citizens prefer to obtain these services through a KEP Unit than through the alternative solution even there is not any direct benefit and this can be supported from the results of the national survey summarized in section 2.6.8. Services of types D2 for the rest of KEP Units, D3 and D4 are beneficial for the users and direct benefits increase with the increase of the distance between KEP Unit and the corresponding public service. The benefits of type D4 are the least benefits for a citizen since D4 is the least distance that the citizen must cover to access the corresponding public service.

4.1.2 Cost for the citizen as a tax-payer

The application of the cost model that was described in section 3.4 for each KEP Unit provided the results shown in Table 4.2

Table 4.2: Average cost per type of service

	AREA TYPE	COSTS (€)				VOLUME (units)				AVERAGE COST PER TYPE (€)		
		NIS	IS	FDDS	TOTAL	NIS	IS	FDDS	TOTAL	NIS	IS	FDDS
KEP1	RUR	40587	10404	34109	85099	1193	385	1118	2696	34,0	27,0	30,5
KEP2	RUR	39378	24095	18116	81589	8873	9765	2729	21367	4,4	2,5	6,6
KEP3	SUB	41633	8174	42696	92503	764	202	2328	3294	54,5	40,5	18,3
KEP4	SUB	50818	42770	22479	116068	25665	17177	2927	45769	2,0	2,5	7,7
KEP5	RUR	40792	23768	19856	84416	4172	4710	1568	10450	9,8	5,0	12,7
KEP6	RUR	37028	5608	42002	84638	27	20	562	609	1371,4	280,4	74,7
KEP7	SUB	39822	46655	31157	117634	781	8464	2255	11500	51,0	5,5	13,8
KEP8	SUB	56239	41541	16166	113946	149302	65399	4147	218848	0,4	0,6	3,9
KEP9	RUR	39593	7962	40755	88310	251	131	1083	1465	157,7	60,8	37,6
KEP10	RUR	41133	25953	17234	84320	3556	3884	886	8326	11,6	6,7	19,5
KEP11	RUR	49514	33490	16078	99082	20931	21890	1547	44368	2,4	1,5	10,4
KEP12	RUR	42349	18147	23813	84310	4209	1714	1221	7144	10,1	10,6	19,5
KEP13	RUR	44728	22188	18403	85319	8296	3364	1126	12786	5,4	6,6	16,3
KEP14	RUR	49307	19480	15455	84242	8902	1861	500	11263	5,5	10,5	30,9
KEP15	RUR	38534	25624	19694	83852	1785	3972	1201	6958	21,6	6,5	16,4
KEP16	RUR	39969	26570	15235	81774	7828	10905	1871	20604	5,1	2,4	8,1
KEP17	RUR	37388	5107	42589	85085	0	0	1937	1937	37388,3	5107,4	22,0
KEP18	SUB	51977	31526	25317	108820	13721	5543	1871	21135	3,8	5,7	13,5
KEP19	RUR	36929	4906	43068	84904	0	0	1128	1128	36929,1	4906,5	38,2
KEPALL		869785	546331	328715	1744831	260256	159386	29006	448648	3,3	3,4	11,3

Beginning with the total cost, we can see that there are some considerable differences among KEP Units. KEP Units 4,7,8 and 18 present an average total cost of €114.117 while the rest present an average total cost of €85.963. Low variations around both averages indicate that both samples are consistent in terms of total cost.

The difference of about €28.000 in the sample averages can be partially justified by the fact that the first 4 Units employ two (2) Temps more than the rest ones, which causes an additional fixed cost of €24.000 /year. The remaining difference of €4.000 can be attributed to the difference of the average volume services that have been processed which are correspondingly 75.000 and 10.000. There is a strong indication that the volume of the services does not affect the total cost as much as the labour cost does and this could be question of research.

If we exclude KEPALL, we may notice that extreme service volumes cause extreme average costs like in the cases of KEP Units 6, 8, 17 and 19. This was expected as far as the model is sensitive to variations of volume since some of the model's cost drivers are volume driven. Besides the coefficients of variation of the NISs, ISs and FDDSs were correspondingly 245%, 180% and 53% indicating that the sample is not homogenous. According to the author's estimation extreme values on NISs and ISs were due to the registration practice for this type of services which does not secure a unbiased registration of the substantial volume. In case of the FDDSs this relatively high score may be justified by the different tension of request among KEP Units than to the registration method which is objective. Extreme values of NISs and ISs cause noticeable differences on the average cost of FDDSs in KEP Unit level where low scores on NISs and ISs raise the average cost of FDDSs as it can be observed in the case of KEP Units 6 and 14 or KEP Units 16 and 17 which present similar volume on FDDSs and declining average cost those.

In that case the average costs for NISs, ISs and FDDSs for the total of the operational KEP Units (line KEPALL) that were estimated to be €3,3, €3,4 and €11,3 per service respectively, were considered to be inaccurate.

To exclude the effects of outliers the author applied the model on a new sample (KEPALL₁ sample) excluding KEP Units 6, 7, 18 and 19 that presented extreme volumes of NISs and IS. Table 4.3 shows the results that came from the application of ABC for KEPALL₁ as described in sections 3.4.6 and 3.4.7. It is noted that all the results of Table 4.2 have been calculated in similar tables.

Table 4.3: Application of the ABC model for KEPALL₁

	Cost Pool Amount (€)	NIS Activity (€)	IS Activity (€)	FDDS Activity (€)	Management Activity (€)
<i>Common Overhead</i>	121.165	60.583	28.509	28.509	3.564
<i>Common Overhead Depreciation</i>	162.802	81.401	38.306	38.306	4.788
<i>Management</i>		17.784	17.784	17.784	
<i>Supervisor</i>	450.000	405.000	0	0	45.000
<i>Temps</i>	432.000	89.036	226.269	116.695	0
<i>Electronic Equipment Depreciation</i>	110.385	0	87.756	22.629	0
<i>Hardware/Software Replacement/Upgrades</i>	396	0	315	81	0
<i>Hardware/Software Maintenance/Service</i>	725	0	576	149	0
<i>Internet</i>	12.088	0	9.610	2.478	0
<i>Printer/Fax Consumables/Paper</i>	17.196	0	13.671	3.525	0
Total Indirect Cost	1.306.757	653.804	422.796	230.157	53.352
Direct Cost	70.581	0	0	70.581	0
Total Cost	1.377.338	653.804	422.796	300.738	
	NIS	IS	FDDS	ALL TYPES	
Total Service Cost	653.804	422.796	300.738	1.377.338	
Volume	110.927	93.967	24.231	229.125	
Average Cost	5,9	4,5	12,4		

The corresponding figures of the new sample for NISs and ISs were found to be €5,9 and €4,5 which are about 44% and 33% less from the initial figures. The new sample is much more consistent estimator. The application of the model on the second sample did not give any noticeable differences for FDDSs since the new figure was €12,4 instead of €11,3, that is, about 10% less. Given the aforementioned assumptions on the robustness of the estimation, it was decided that the figures of KEPALL₁ would represent the average costs for the cost benefit model. Table 4.4 shows the results of the two samples.

Table 4.4: Initial and robust estimation of average costs.

	COSTS (€)				VOLUME (units)				AVERAGE COST PER TYPE (€)		
	NIS	IS	FDDS	TOTAL	IS	FDDS	NIS	TOTAL	FDDS	NIS	IS
KEPALL	869785	546331	328715	1744831	260256	159386	29006	448648	3,3	3,4	11,3
KEPALL ₁	653804	422796	300738	1377338	110927	93967	24231	229125	5,9	4,5	12,4

4.1.3 Cost -Benefit analysis

The application of the formulas for the estimation of the average monetary benefit for the citizen as a tax-payer by service type using the approach presented in section 3.6, resulted to the figures shown in Table 4.5 along with the average cost for the estimator KEPALL₁ of Table 4.4

Table 4.5: Average costs and monetary benefits by service type

	NIS		IS		FDDS	
	COST (€)	BENEFIT (€)	COST (€)	BENEFIT (€)	COST (€)	BENEFIT (€)
KEP1	34,0	1,2	27,0	19,5	30,5	19,5
KEP2	4,4	1,0	2,5	21,4	6,6	18,2
KEP3	54,5	0,0	40,5	33,1	18,3	38,1
KEP4	2,0	0,3	2,5	15,9	7,7	14,8
KEP5	9,8	0,0	5,0	40,9	12,7	34,1
KEP6	1371,4	2,4	280,4	18,2	74,7	17,6
KEP7	51,0	0,0	5,5	41,7	13,8	35,9
KEP8	0,4	0,0	0,6	20,4	3,9	14,9
KEP9	157,7	3,5	60,8	43,7	37,6	44,7
KEP10	11,6	2,9	6,7	49,5	19,5	46,3
KEP11	2,4	0,5	1,5	18,2	10,4	14,8
KEP12	10,1	0,0	10,6	21,4	19,5	15,5
KEP13	5,4	1,1	6,6	49,5	16,3	44,0
KEP14	5,5	0,7	10,5	50,9	30,9	46,1
KEP15	21,6	0,0	6,5	44,5	16,4	37,2
KEP16	5,1	0,0	2,4	19,6	8,1	17,5
KEP17	37388,3	0,0	5107,4	0,0	22,0	37,4
KEP18	3,8	0,0	5,7	41,6	13,5	36,2
KEP19	36929,1	0,0	4906,5	0,0	38,2	28,6
KEPALL₁	5,9	0,4	4,5	17,7	12,4	14,8

The following table Table 4.6 represents the results of the application of the cost-benefit model

Table 4.6: Cost –Benefit Analysis

	COST (€)				BENEFIT(€)				Cost vs Benefit (€)
	NIS	IS	FDDS	TOTAL	NIS	IS	FDDS	TOTAL	
	KEP1	40587	10404	34109	85099	1423	7490	21785	
KEP2	39378	24095	18116	81589	8624	208939	49787	267350	185761
KEP3	41633	8174	42696	92503	0	6680	88689	95369	2866
KEP4	50818	42770	22479	116068	7597	273554	43252	324403	208335
KEP5	40792	23768	19856	84416	107	192621	53479	246207	161791
KEP6	37028	5608	42002	84638	64	364	9919	10347	-74291
KEP7	39822	46655	31157	117634	0	353004	81044	434048	316414
KEP8	56239	41541	16166	113946	0	1336756	61667	1398423	1284477
KEP9	39593	7962	40755	88310	886	5728	48448	55063	-33247
KEP10	41133	25953	17234	84320	10192	192432	40996	243620	159300
KEP11	49514	33490	16078	99082	9746	397989	22877	430612	331530
KEP12	42349	18147	23813	84310	207	36680	18953	55840	-28470
KEP13	44728	22188	18403	85319	9329	166495	49563	225386	140067
KEP14	49307	19480	15455	84242	6195	94691	23029	123915	39673
KEP15	38534	25624	19694	83852	0	176872	44725	221597	137745
KEP16	39969	26570	15235	81774	0	213895	32730	246626	164852
KEP17	37388	5107	42589	85085	0	0	72361	72361	-12724
KEP18	51977	31526	25317	108820	0	230615	67751	298366	189546
KEP19	36929	4906	43068	84904	0	0	32281	32281	-52623
KEPALL₁	650136	366806	360396	1377338	42709	1667480	358523	2068713	691375

At KEPALL₁ level we may observe in Table 4.5 that the corresponding rates of cost over benefit are 15 times for NISs, 0,25 times for ISs and 0,84 times for FDDSs. The first figure indicates that NISs are high cost and low benefit services. In fact these services generate the 48% of the total cost of KEPALL₁ and offer the 2% of total benefit. We may notice that although the volumes of the NISs decline a lot from the average in KEP Unit level, the corresponding costs that they generate are rather homogenous, presenting coefficients of variation of 102,6% and 10,8% respectively. This is probably due to the fact most of the cost comes from the supervisors' and Temps' activities that are related to these services representing the 76% of total NISs cost. Labor cost causes a negative balance at all KEP Units and in Prefectural level.

ISs are high benefit services representing the 81% of the total benefit and low cost that represents the 26% of the total cost while FDDSs are on average beneficial services with corresponding figures of 17% and 26%. The labor cost - which in fact is Temps' cost - for

ISs and FDDSs represents the 54% and 39% of these services' total costs. Labor cost represents the 64% of the total cost in all cases.

At a Prefecture level NISs have a negative balance of about €610.000, ISs have a positive balance of €1.245.000 and FDDSs have a positive balance of €58.000. The total monetary benefit from the usage of KEP's services is about €690.000. Labor cost is expected to raise because permanent employees will replace Temps with an additional cost of about €14.600/year no later than the end of 2007. In that case the application of the model resulted that the labor cost will be representing the 74% of the total cost. Nevertheless, the application of the model shows that even in that case the positive balance remains, being diminished to €166.000 while FDDSs have negative sign.

At a KEP Units level we may confirm that six KEP Units present a negative sign. For KEP Units 1, 6, 9, 17 and 19 this may be justified by the fact that these present a low volume of high average benefit ISs. KEP Units 17 and 19 present similar costs in all cost categories, similar NISs and ISs volumes and a considerable difference of about €40.000 that concerns of FDDSs benefits. This is due to two reasons: KEP17 has served 1.937 FDDSs instead of 1.128 of KEP19 which indicates that an increase of the volume of FDDSs is effective; and KEP17's distance Larissa is 50km instead of 25km for KEP19 which indicates that indirect benefits increase with distance as direct benefits do. The same goes for KEP Units 6 and 9.

KEP Units 1 and 9 present similar costs, ISs and FDDSs volumes and a considerable difference of about €27.000 at FDDSs which can be attributed to the difference in distance of the two KEP Units from Larissa. KEP Units 12 and 15 present similar total costs and volumes of FDDSs and considerable difference in benefits both for ISs and FDDSs. These differences derives from the distance differences and by the fact that KEP15 served about 4.000 high benefit ISs instead of 1.700 for KEP12.

The above analysis indicates that positive effects increase with the increase of the distance and the increase of the volume of FDDSs and ISs and further research may be done to this direction along with some research about the impact of labor cost over the average cost of the services.

4.2 Patterns of service requests and other findings

Analysing the data we may ascertain that the inhabitants of rural and sub-urban areas use KEP's services more than the citizens of urban areas at least to obtain FDDSs. In 2005 in Larissa Prefecture there were serviced 23.905 FDDSs for the 82.872 citizens of rural areas, 13.528 FDDSs for the 58.407 citizens of sub-urban areas and 17.279 FDDSs for the 124.376 citizens of Larissa city. The application of the indicator FDDSs/population gave the corresponding figures of 0,29 for rural, 0,23 for sub-urban and 0,14 for urban areas which indicate that one out of three citizens of rural areas, one out of four citizens of sub-urban areas and one out of seven citizens of Larissa have used KEP Units' services during 2005. The following **Σφάλμα! Το αρχείο προέλευσης της αναφοράς δεν βρέθηκε.** presents the usage per capita and area type of the six (6) most wanted types of FDDSs and indicates that the inhabitants of rural and sub-urban areas use these services more than inhabitants of urban areas.

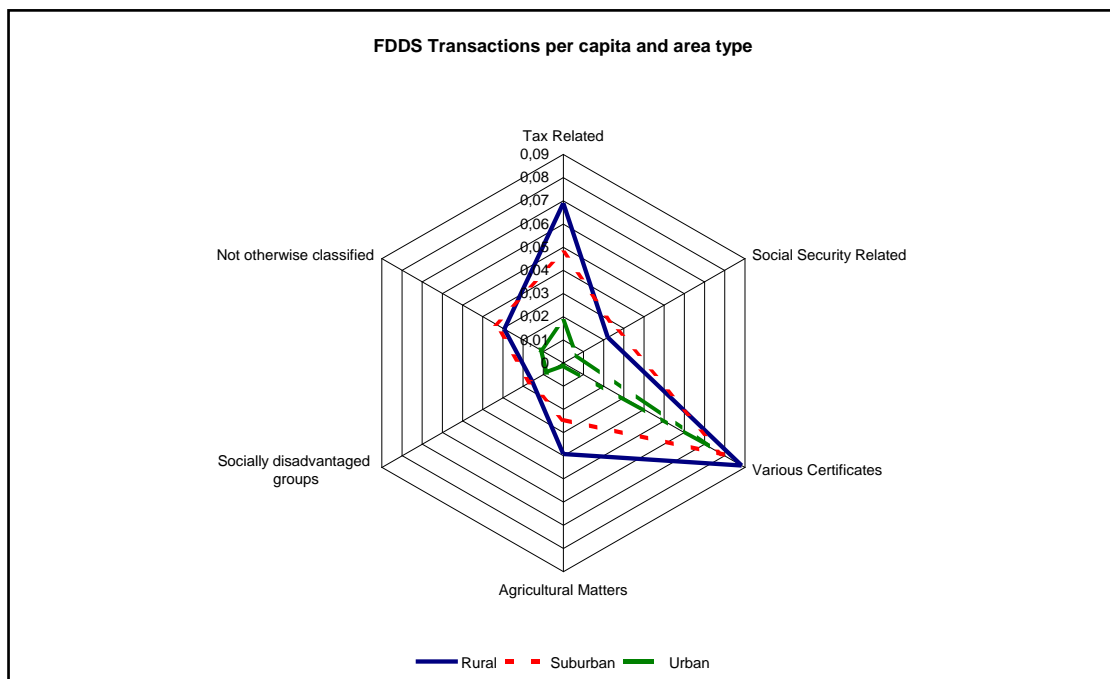


Figure 4.1: FDDS Transactions per Capita and Area Type

As for the NISs and ISs the service volume/population figures for sample KEPALL₁ are 1,5 and 1,4 for the citizens of rural areas as such 1 and 0,8 for the people of sub-urban areas while data about Larissa are not available. Figures indicate that citizens of rural areas

visit in average KEP Units more than once a year and citizens of sub-urban areas about once a year for any reason on average.

Moreover the citizens of Larissa Prefecture asked for 205 out of the 998 types of FDDSs that are offered by KEP. The citizens of sub-urban areas asked for the widest range of those services (173 types) followed by the citizens of rural areas that asked for 115 types and by the citizens of Larissa who asked for 81 types. This is considerable that the remaining 772 types of services have never been asked in Larissa Prefecture. It seems that citizens “name voluntarily KEP” as their access solution to the public sector but they have not realized the wide of the range of the offered services. This may be due to the fact that KEP is based rather to the “word of mouth” than to any campaign undertook by the Greek government.

In figures Figure 4.2, Figure 4.3 and Figure 4.4 is presented the request for FDDSs as these have been categorized in Table 3.4 at the three types of areas correspondingly. Every type of FDDS is expressed as a percentage of the total volume of FDDSs requested at each area type.

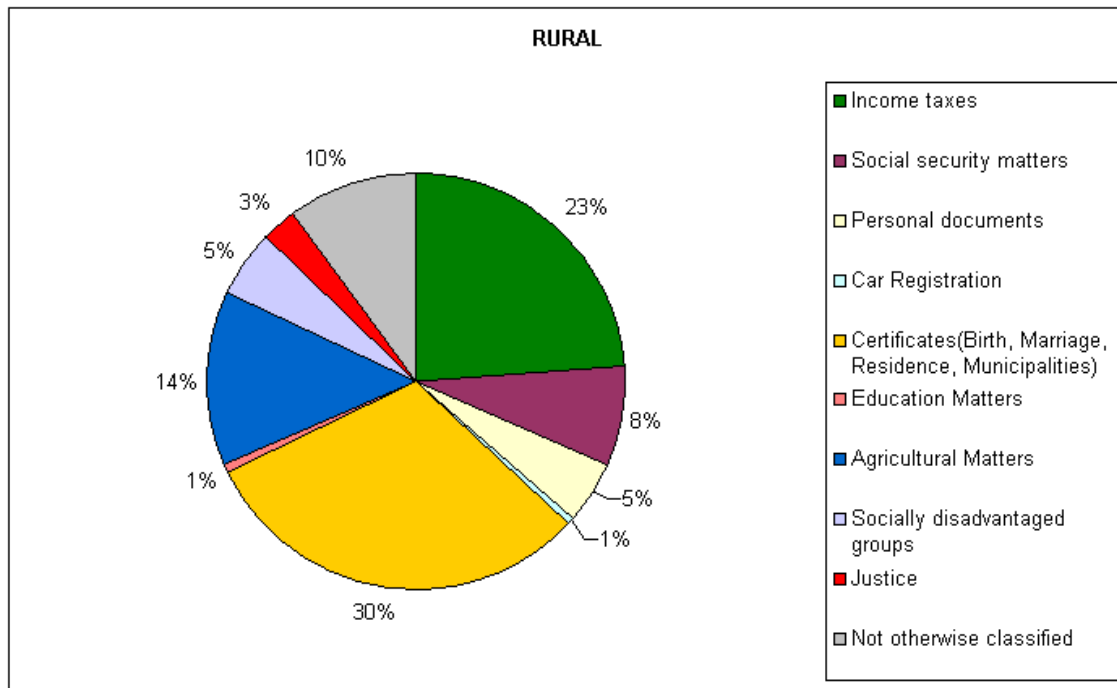


Figure 4.2: Patterns of Service Request in Rural Areas

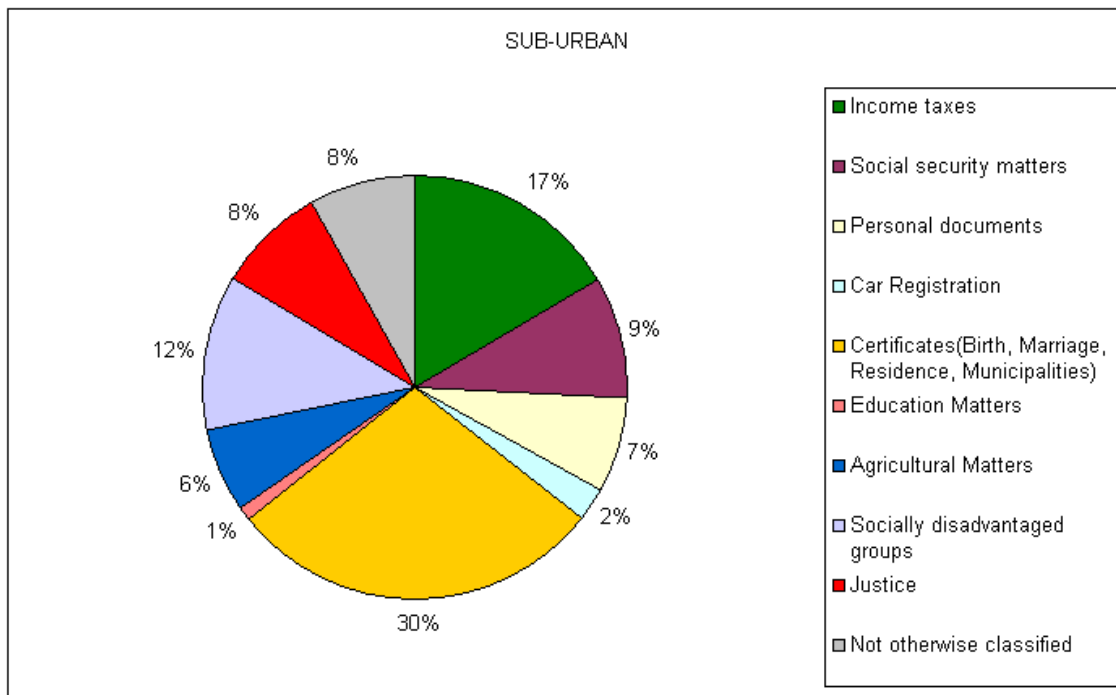


Figure 4.3: Patterns of Service Request in Sub-Urban Areas

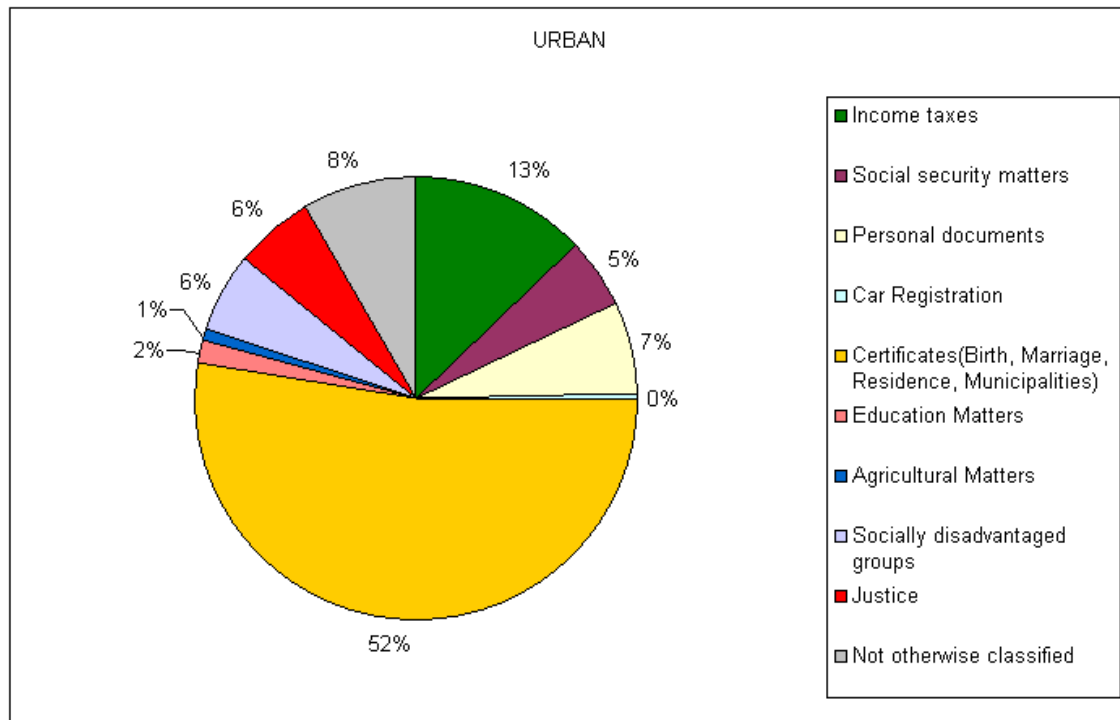


Figure 4.4: Patterns of Service Request in Urban Areas

We may ascertain that certificate related services represent the most popular services in all three area types. Especially in urban areas they represent more than half of the cases. This could be explained if we take under consideration that people from rural or suburban areas settle to urban areas for several reasons (i.e. request for a job, education, better quality of life) but they are not obliged to be registered as citizens of these. In that case most of citizens' certificates are issued by the authorities of their birthplaces. This type of services represents also about 30% of the total volume of cases for KEP Units of rural and sub-urban areas. We can assume that most of the inhabitants of these areas are locals so the request might indicate that citizens prefer to use KEP Units' services instead of the corresponding services of the local administrative authorities.

Income tax services present a high score in rural areas (about 24%) that could be attributed to distance benefits for the inhabitants of these areas. These services represent high percentages in sub-urban and urban areas although the citizens of these areas have the alternative access solution of the local tax-offices. The percentage of the request of services related to agricultural matters seem to justify the characterization of areas as rural, sub-urban and urban representing respectively the 14%, 6% and less than 1% of the total

volumes. Education related FDDSs represent low percentages however we can observe that the percentage rises with the degree of urbanization.

Citizens of rural and sub-urban areas use KEP's services for social security related matters more than the citizens of rural areas probably for distance gains reasons and KEP Units are also used by socially disadvantaged groups especially in sub-urban areas. Justice and personal document related FDDSs are requested mainly in sub-urban and urban areas. Car registration related FDDSs are not requested in urban and rural areas contrary to the sub-urban areas where this type of service represents the 2,3% of the total volume. Last but not least a percentage of 8-10% represents the "not otherwise classified" services which indicates that there is positive correspondence with the citizens to several kinds of Final Document Delivery Services that are offered by KEP.

The following Figure 4.5 summarizes the difference among the patterns of service request among the different area types.

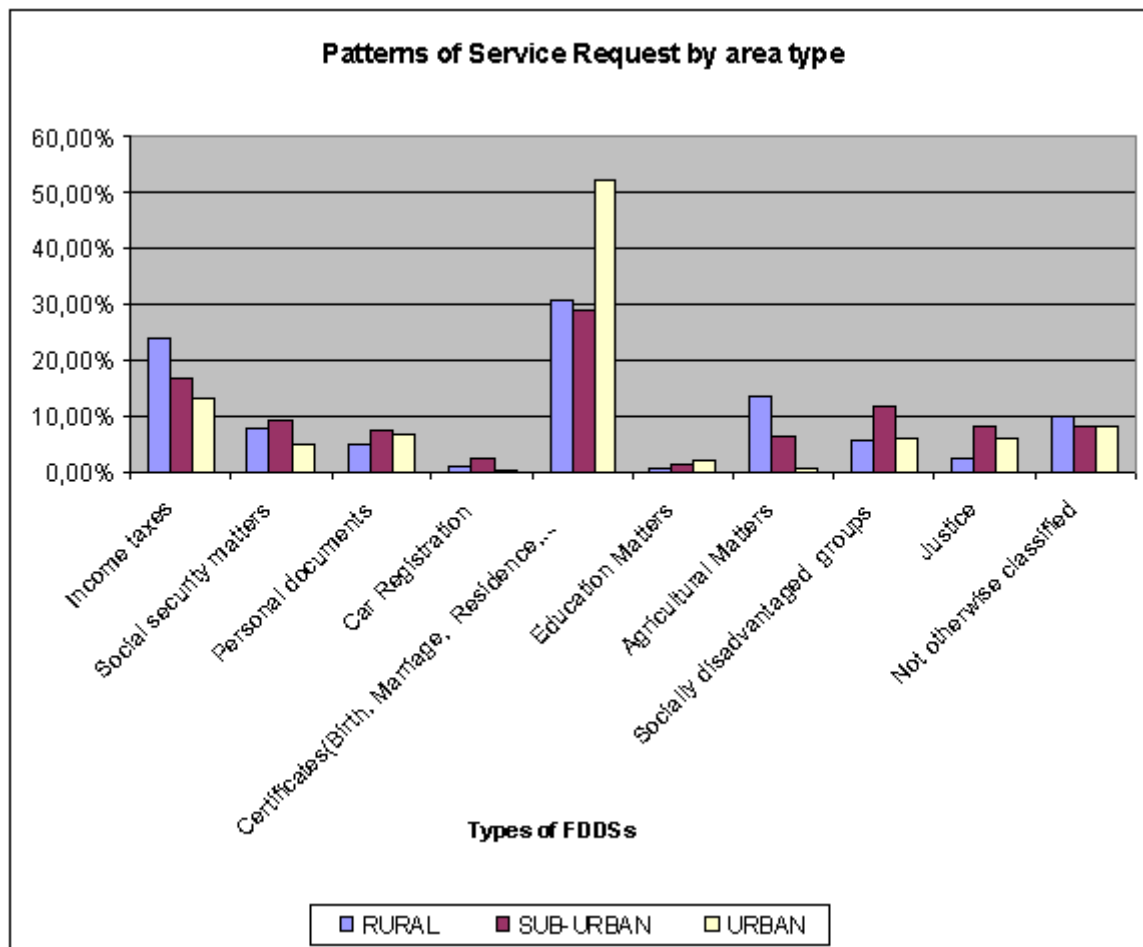


Figure 4.5: Patterns of Service Requests by Area Type

It must be taken under consideration that a different classification of the services than the one in of Table 3.4 could differentiate results.

The above discussion elevates some questions like: why do the citizens of different types of areas or even of different KEP Units have different patterns on service request? why do citizens use KEP's services? What other services could be served at a KEP Unit? What would be the result of it on KEP's cost effectiveness? What makes the institution to be so broadly acceptable? What must be done in order to remain a success? These questions could be the signal for further research on KEP's topic.

4.3 KEPs effect on accessibility and inclusion

The overall strategy to the achievement of the Lisbon strategic goal should aim to modernize the European social model, invest in people and combat social exclusion. The contribution of the “Information Society for all” as the strategic framework of the implementation of the Lisbon Strategy to the inclusion topic, was introduced as eInclusion and was defined as “the Information Society’s potential for social inclusion in Europe” (Commission of the European Communities, 2001b). Public administrations were called to exploit new technologies to offer their citizens access to an inexpensive wide range of services, through different means of access so that information be as accessible as possible; and to provide their citizens with the necessary skills to access public information and services.

From the early days of IS’s implementation accessibility was considered to be a necessary prerequisite for the achievement of inclusiveness. The Council Resolution of 8 October 2001 (2001) called Member States to take advantage of the information society’s potentials to include less-favored rural and peripheral areas not only by developing on-line services within the framework of eGovernment but to also continue offering complementary off-line access to basic public services. The Council recognized that the IS could erect “barriers” to those that would not have the means to access it and asked for efforts to make ICT and public sector access available by several means like the establishment of user-centric PIAPS or by developing ICT infrastructures in remote or dispersed localities.

2002 and 2005 Action Plans focused on the provision of online accessible public services and on actions that would provide citizens with the skills to access these services. The PIAPs model that was developed in Scotland in 2002 was a step to the inclusion direction but it was not a solution to the problem of inclusion. The Scottish government installed PCs with WEB access available through a range of locations (PIAPs) in order to provide with internet access disadvantaged groups like the elder or people of rural areas. The findings of a research evaluation of the Public Internet Access Point Initiative (Scottish Executive, 2004) revealed that the initiative had helped to widen public access to internet in areas with little or no previous facilities but only for those of the citizens that had ICT skills.

The former Action Plans could lead to an Information Society that could itself become a generator of info-exclusion in case that all its efforts were devoted exclusively to the development of an internet-enabled society where accessibility would be delimited to online accessibility. In fact this perspective could “leave behind” a big part of the society. This is confirmed by Kubitschke and Cullen (2005) that warranted policy’s attention on risks of new forms of exclusion like the risk of socio-economic deprivation of “involuntary/voluntary ICT non users if more and more day to day activities go online”.

The “i2010 e-Government Action Plan” within the scope of the new strategic framework of “i2010 – European Information Society 2010” reallocated e-Government from an end to itself to a tool of advancing inclusion through the first signpost-objective of “No citizen left behind”. The new perspective of EU over e-Government is “inclusive e-Government”. The public services that are offered online should by no mean exclude anyone from having access to these; and European public administrations must take advantage of the new possibilities that are offered by e-Government to promote ICT-enabled inclusive policies that aim to deliver public information and services more easily accessible by all citizens. As for the access means these are not defined strictly however the EU recognizes that the citizens have the right to “continue to want channels other than the Internet to access public services, such as digital TV, mobile and fixed phone and/or person-to- person”.

The current perspective of the EU is expressed by Kubitschke and Cullen, (2005) who argue that eInclusion strategy would –among different policy perspectives - rely upon a policy “that enables all citizens to utilize the tools and applications of Information Society”. The EU seems to agree with this aspect through a Ministerial Declaration (2006) that recognizes that eInclusion is not only about inclusive ICT but it is also the use of the ICT to achieve wider inclusion objectives.

The analysis indicates that the EU has to succeed in the inclusion topic and that one way to achieve this is to enhance access to the public sector exploiting the access opportunities that offer the achievements of the implementation of the Information Society. The EU is in request of paradigms of alternative and all-inclusive access portals to the public sector. Those findings form the framework within which KEP and KEP Units as those have been described in paragraph 2.6.2 will be evaluated on the topic of inclusion.

Chapter 5 Conclusions and Recommendations

The exploration of the Information Society related literature indicates that the IS plays an active role to the EU's strategic goal for inclusive growth and development for the benefit of all. The EU recognizes the central role of public administration to Europe's route to this goal; and sets the e-Government framework within which the public sector should operate being ICT enabled, online, efficient and effective, accessible and inclusive. The citizens as tax-payers must have better and more cost-effective public services; the citizens as users must have easy access to these services; and the society must be enhanced to benefit of the Information Society.

KEP on the other hand, is a new type of service of the public sector that may be classified as an e-Government public service of the Information Society. It is an ICT-enabled public service both at an infrastructure and at an operational level; it is provisional online; and exploits new technologies to make information and services as accessible as possible through different means of access.

KEP's description has revealed that KEP as a platform gives access to a wide range of public services and information either these are offered online or not; as a public service KEP is accessible by the internet, by telephone and person-to-person. Additionally, KEP has the necessary infrastructure to support more advanced network access solutions. KEP's online availability either through telephone or the internet enhances access to its services to the citizens that are familiar to the new technologies which is the main aspiration of e-Government. At the same time, KEP's online availability does not exclude those who for any reason are not or will not be online offering the person-to-person access solution through the 1000 service points of KEP Units that are ICT-enabled, online, accessible and inclusive being dispersed all over Greece. As a matter of fact it is the KEP Units that make KEP accessible and inclusive. KEP diminishes the distance between the public sector and the citizen and makes it equal to the distance between the citizens' residence and the closest KEP Unit being by this way easily accessible to people of rural and sub-urban areas as such for less favoured social groups with no exclusions, those with disabilities included.

Last but not least KEP's inclusiveness has as a result that the public sector's services that KEP "represents" become inclusive at the same degree. These accessibility characteristics may give KEP the characterization of an inclusive e-Government initiative that enhances access to itself and to the public sector and takes advantage of e-Government's achievements to bring public information and public services practically to everyone with no exclusions.

Moreover KEP Units have considerable impact to the inhabitants of rural and sub-urban areas who use KEP's FDDSs services in a higher proportion than citizens of urban areas and for a wider range of services while they use KEP's NISs and ISs at least once a year each. Citizens as users have direct benefits in time and cost savings in most cases but they seem to use KEP's services even when there are not any direct benefits. The latter strengthens the aspect - as it is expressed by the findings of the relevant National survey - that KEP is an acceptable and awarded institution to the citizens' conscience.

There are strong indications that KEP is cost effective at a Prefecture level. KEP Units within the Prefecture of Larissa are in general cost-effective for tax-payers' money since they appear to have positive balance mainly due to Information Services' delivery while Final Document Delivery Services also appear positive signs. It is noticeable that KEP Units that present negative balance also present low scores in the volume of NISs and ISs that is mostly a result of the bad registering practice. Labour cost represents a high percentage over the total cost and its effect on cost-effectiveness must be evaluated in a relevant research. It must be taken under consideration that the cost-effectiveness research findings represent a one-year snapshot of KEP's operation in one Prefecture and the author estimates that these findings are rather indicative than being enough for the extract of safe conclusions

These findings could be the starting point for a systematic research on KEP Unit's cost-effectiveness on the basis of the methodology developed. This methodology is simple; it may be extended so that it may capture the difference in trend among time periods; and has practically no cost for data gathering as far as there will be developed a reliable system where the cost and volume data that have been used to this research will be registered. As for the volume data, this could be achieved by registering the citizen's request right away

which is a procedure that requires less than a minute - especially when the citizen is already registered in the System's database.

Beyond costs and benefits the KEP model is available for further research in several fields. The questions of section 4.2 could form the topic of a new research on KEP's potentials to become an access solution for an even wider range of services adjusted to the needs of the citizens that they serve. The Greek government could exploit KEP's network to substitute the front line of the public sector. There could also be a research about whether the KEP model could be adjusted to the needs of developing or underdeveloped countries in order to diminish the consequences of the 'digital divide'.

Finally, it is recommended that the EU should evaluate KEP as a "Good Practice" of an inclusive and effective access solution that promotes the achievements of e-Government leaving aside the barriers of digital divide.

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APPENDICES

APPENDIX A: ONLINE SOPHISTICATION

Appendix Table 1: Online Sophistication

Stage	Intervals		Definition
	Score	Percentage	
0	0-0.99	0%-24%	No publicly accessible website(s) or the website(s) do not qualify for any of the any criteria for the stages 1 to 4.
1	1-1.99	25%-49%	Information necessary to start the procedure to obtain the service available on the website(s).
2	2-2.99	50%-74%	Interaction: downloadable or printable form to start the procedure to obtain the service on the website(s).
3	3-3.99	75%-99%	Two-way interaction: electronic forms to start the procedure to obtain the service on the website(s)
4	4	100%	Transaction: full electronic case handling of the procedure by the service provider (incl. Decision, notification, delivery and payment if necessary)

APPENDIX B: ONLINE PUBLIC SERVICES FOR CITIZENS

Appendix Table 2: Online Public Services for Citizens

No	Definition of the service
1	Income taxes: declaration, notification of assessment
2	Job search services by labour offices
3a	Social security contributions <ul style="list-style-type: none">• Unemployment benefits
3b	Social security contributions <ul style="list-style-type: none">• Child allowances
3c	Social security contributions <ul style="list-style-type: none">• Medical costs (reimbursement or direct settlement)
3d	Social security contributions <ul style="list-style-type: none">• Student grants
4a	Personal documents (passport)
4b	Personal documents (driver's licence)
5	Car registration (new, used and imported cars)
6	Application for building permission
7	Declaration to the police (e.g. in case of theft)
8	Public libraries (availability of catalogues, search tools)
9	Certificates (birth, marriage): request and delivery
10	Enrolment in higher education / university
11	Announcement of moving (change of address)
12	Health related services (e.g. interactive advice on the availability of services in different hospitals; appointments for hospitals)

APPENDIX C: CITIZENS AND QUALITY OF LIFE

Appendix Table 3: Action Line 2

Citizens and quality of life	
Measure 2.1	Government on line: business plans, studies and pilot projects
Measure 2.2	Government on line
Measure 2.5	Training and modernisation in the public administration

APPENDIX D: QUESTIONNAIRE 1

Appendix Table 4: Questionnaire1

KEP Unit's Equipment Data	Data
	KEP Unit Code
	Name of AU
	Cost of Equipment

APPENDIX E: DETAILS ON THE VOLUME OF NISs AND ISs

Sub Type	Details	KEP1	KEP2	KEP3	KEP4	KEP5	KEP6	KEP7	KEP8	KEP9	KEP10	KEP11	KEP12	KEP13	KEP14	KEP15	KEP16	KEP17	KEP18	KEP19
Authentication	Photocopy	673	4256	306	13236	1862	7	0	67136	42	1598	7480	1785	4579	5152	1019	4307	0	8235	0
	Signature	387	3811	434	11477	2305	13	0	67803	118	1417	12380	2402	3226	3432	766	3521	0	5410	0
Tax-Stamps	TS1	63	398	0	0	0	3	0	0	0	5	0	0	88	24	0	0	0	0	0
	TS2	70	386	2	952	5	4	556	7515	59	481	1038	22	335	268	0	0	0	0	0
	TS3	0	22	22	0	0	0	225	6848	32	55	33	0	68	26	0	0	0	0	76
Social Security Info	SS1	29	45	2	735	240	2	258	5920	0	193	1186	406	489	166	228	682	0	15	0
	SS2	0	0	0	8	2	0	11	0	1	0	0	0	0	0	5	0	0	18	0
	SS3	28	75	12	783	611	8	702	7168	15	456	4762	479	324	414	456	1751	0	35	0
	SS4	4	6	0	267	103	0	144	2252	8	90	595	184	52	9	28	259	0	4	0
	SS5	0	0	0	16	1	0	6	15	0	0	13	3	2	3	0	0	0	0	0
	SS6	8	3	0	593	9	0	556	984	0	1	115	0	59	19	164	47	0	0	0
Tax Matters Info	TI	70	3	36	74	419	0	27		6	37	45	0	72	14	90	181	0	73	0
PA Info	INF1	3	8	25	2		5	3	3	4	26	116	0	13	28	15	1	0	25	0
	INF2	70	7087	108	1358	1778	0	4489	20321	7	977	7412	0	1670	294	1525	4329	0	3120	0
	INF3	74	2486	18	11573	1434	5	1978	21882	40	1773	5973	120	675	813	1112	3119	0	2221	0
General Info	GI1	99	23	1	419	87	0	44	3883	43	107	1596	414	8	57	159	532	0	10	0
	GI2	0	0	0	0	0	0	196	2841	0	0	0	0	0	0	0	0	0	22	0
	GI3	0	27	0	23	11	0	50	33	7	196	77	22	0	42	17	4	0	0	0
	GI4	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	GI5	0	2	0	1326	15	0	0	97	0	28	0	86	0	1	173	0	0	0	0

APPENDIX F: VOLUME OF NISs AND ISs BY SUB-TYPE

Type	Sub Type	KEP1	KEP2	KEP3	KEP4	KEP5	KEP6	KEP7	KEP8	KEP9	KEP10	KEP11	KEP12	KEP13	KEP14	KEP15	KEP16	KEP17	KEP18	KEP19
NIS	Authentication	1060	8067	740	24713	4167	20	0	134939	160	3015	19860	4187	7805	8584	1785	7828	0	13645	0
	Tax-Stamps	133	806	24	952	5	7	781	14363	91	541	1071	22	491	318	0	0	0	76	0
	<i>Total NIS (V1)</i>	<i>1193</i>	<i>8873</i>	<i>764</i>	<i>25665</i>	<i>4172</i>	<i>27</i>	<i>781</i>	<i>149302</i>	<i>251</i>	<i>3556</i>	<i>20931</i>	<i>4209</i>	<i>8296</i>	<i>8902</i>	<i>1785</i>	<i>7828</i>	<i>0</i>	<i>13721</i>	<i>0</i>
IS	Social Security Info	69	129	14	2402	966	10	1677	16339	24	740	6671	1072	926	611	881	2739	0	72	0
	Tax Matters Info	70	3	36	74	419	0	27		6	37	45	0	72	14	90	181	0	73	0
	PA Info	147	9581	151	12933	3212	10	6470	42206	51	2776	13501	120	2358	1135	2652	7449	0	5366	0
	General Info	99	52	1	1768	113	0	290	6854	50	331	1673	522	8	101	349	536	0	32	0
	<i>Total IS (V2)</i>	<i>385</i>	<i>9765</i>	<i>202</i>	<i>17177</i>	<i>4710</i>	<i>20</i>	<i>8464</i>	<i>65399</i>	<i>131</i>	<i>3884</i>	<i>21890</i>	<i>1714</i>	<i>3364</i>	<i>1861</i>	<i>3972</i>	<i>10905</i>	<i>0</i>	<i>5543</i>	<i>0</i>
	<i>Total NIS & IS</i>	<i>1578</i>	<i>18638</i>	<i>966</i>	<i>42842</i>	<i>8882</i>	<i>47</i>	<i>9245</i>	<i>214701</i>	<i>382</i>	<i>7440</i>	<i>42821</i>	<i>5923</i>	<i>11660</i>	<i>10763</i>	<i>5757</i>	<i>18733</i>	<i>0</i>	<i>19264</i>	<i>0</i>

APPENDIX G: VOLUME OF FDDSs

KEP Unit	Area Type	Population	Income taxes	Social security matters	Personal documents	Car Registration	Certificates (Birth, Marriage, Residence, Municipalities)	Education Matters	Agricultural Matters	Socially disadvantaged groups	Justice	Not otherwise classified	Total per KEP Unit
KEP1	RURAL	2976	200	107	74	5	258	7	183	72	25	187	1118
KEP2	RURAL	5486	805	221	74	3	219	13	1263	84	19	28	2729
KEP3	SUB-URBAN	6458	124	179	168	103	783	20	325	223	171	232	2328
KEP4	SUB-URBAN	10022	434	299	185	9	1457	66	89	207	88	93	2927
KEP5	RURAL	4375	637	200	63	2	432	2	58	48	30	96	1568
KEP6	RURAL	6540	34	78	69	3	129	11	96	78	30	34	562
KEP7	SUB-URBAN	10001	318	236	166	189	372	18	266	139	290	261	2255
KEP8	SUB-URBAN	16900	1130	482	482	2	955	30	143	377	333	213	4147
KEP9	RURAL	1781	19	1		7	388	0	168	23	21	456	1083
KEP10	RURAL	3951	102	59	93	9	337	22	66	52	44	102	886
KEP11	RURAL	8292	580	119	53	1	322	10	133	189	35	105	1547
KEP12	RURAL	1763	599	25	34	15	256	0	197	26	11	58	1221
KEP13	RURAL	3187	222	209	29	6	152	39	90	20	38	321	1126
KEP14	RURAL	3588	80	41	28	8	54	3	58	49	25	154	500
KEP15	RURAL	2428	416	96	30	1	450	1	36	17	61	93	1201
KEP16	RURAL	8407	386	429	221	15	290	8	140	260	68	54	1871
KEP17	RURAL	3472	470	31	87	19	963	11	126	32	57	141	1937
KEP18	SUB-URBAN	14563	264	16	0	12	307	30	39	658	237	308	1871
KEP19	RURAL	2840	557	32	14	0	323	0	79	73	7	43	1128
KEP20	RURAL	6412	144	48	66	39	79	6	122	52	66	26	648
KEP21	RURAL	2236	49	47	92		248		119	53	6	79	693
KEP22	RURAL	5065	0	29	70	27	810	3	96	49	33	252	1369
KEP23	RURAL	2273	252	38	11	19	1489	1	126	11	19	168	2134
KEP24	RURAL	3274	137	17	20	2	66	0	31	26	5	9	313
KEP25	RURAL	4526	26	2	3	8	62	3	71	76	9	11	271
KEPALL		140816	7985	3041	2132	504	11201	304	4120	2894	1728	3624	32005
LARISSA	URBAN	124376	2273	854	1168	49	9034	312	114	1030	1029	1416	17279

APPENDIX H: QUESTIONNAIRES 2 AND 3

Appendix Table 5: Questionnaire2

KEP Unit's Data	Data
KEP Unit Code	
Name of AU	
AU's Population	
Area Type	<input type="checkbox"/> Rural <input type="checkbox"/> Sub-Urban
Number of Supervisors	
Number of Temps	

Appendix Table 6: Questionnaire3

	Type of Cost	Cost for 2005
	Rent/Month	
	Temp/Month	
	Supervisor/Month*	
	Energy/Year	
	Internet/Year	
	Telephone/Year	
	Post/Currier/Month	
	Printer/Fax Consumables/Paper /Year**	
	Other Costs/Month***	
	Hardware and Software Maintenance/Service/Year	
	Hardware and Software Upgrade/Replacements/Year	

*Social Security Costs Included. (Filling is Optional)

** Consumables and Paper for Printer/Fax Use

***Heating Costs, Cleaning Costs, Non otherwise allocateable costs etc