E-Government: Cloud solutions in Labor Regulatory Area in Greece

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Abstract

The present study primarily addresses the need for expanding e-government in Greece in labor and social security legislation issues. Some of the aspects considered are how e-government can help companies reduce their cost and workers receive better protection, and most importantly, how e-governance can help public services conduct more effective and simpler controls. The Greek Ministry of Labour in an attempt to address the problem has initiated the IIS (Integrated Information System Labour Inspectorate), which today appears to be in the final phase of implementation. According to this system numerous procedures are carried out electronically. However, according to the authors' opinion the main objective is not simply to make procedures electronic, but to re-organize and re-define these procedures. So the authors propose as a possible way of e-governance the provision in and by the Public Sector of a Payroll Information System (PIS) via cloud computing. This system promises to remove most procedures, as it will turn the State to become the holder and administrator of the businesses database, thus having all the information required and the final control. Using a questionnaire for our survey filled in by companies in the area of Heraklion, we attempt to identify whether these companies would feel positive about using such applications. In addition, we use the Delphi technique, in an attempt to identify which of the aforementioned hypotheses would help make controls more efficient and effective. The panel of experts consisting of Inspectors of the Ministry of Labour suggests that the provision via cloud computing by the public sector of a payroll information system would help the most in the fight against undeclared work.

Keywords: E-government, Cloud computing, Payroll Information System, regulatory compliance, government auditing, undeclared work.

1. Introduction

In Greece in 2012, the need for simplifying procedures and reducing the administrative burdens becomes a national priority for the Greek government and the Greek Economy (White Paper on Governance, 2012).

The Greek Minister of Administrative Reform and Electronic Government, via a press release issued on 30th January 2012, stated: "It is generally recognized that there is need for a radical change in the country's public administration, a reformist creative explosion in the state, which cannot but be associated with Electronic Government". Also, several researchers recognize e-government as a catalyst or a tool for achieving this administrative reform (Heldig et al, 2009; Kraemer & King, 2003). As the president of World Bank J. Wolfensohn (2001) said "we want to see how it is that the use of e-government can be a net plus and not just some adornment".

Also, the Ministers responsible for e-government policy of the European Union (2009) declared that the "efficiency and effectiveness is enabled by a constant effort to use e-government to reduce the administrative burden, improve organizational processes and promote a sustainable low-carbon economy".

However, e-government is not limited to simply installing an electronic application to be used in and by the public sector. There should be a general assessment of the work environment where e-government is used, both in the public and private sectors. There should be realistic actions which would be accepted by all employees, public and private and by free lancers, since "the culture, the values and generally the usual practices of a nation are associated with e-government" (Khalil, 2011). Several researchers report that one of the main problems and causes why e-government's implementation has failed, is the human factor, as people -particularly public servants- usually resist to these changes (Nograsek, 2011; Sacheva, 2009), mainly re-thinking the required retraining and the possible change of their competences and responsibilities (Rabaiah et al, 2006). Furthermore, major role in e-government failure plays the Federal management of IT (Beachboard & McClure, 1996), the external technical and policy environment (Chen & Chen, 2009) and the coordination and the supportive ability of information centers (Chen & Chen, 2009). According to Schware & Deane (2003), other critical success factors are the legal and regulatory instruments required for e-government and the information and communication technology infrastructure development.

Hence, as e-government is predominantly seen as a technological achievement rather than a re-organizational and transformation tool (Nograsek, 2011), the present study attempts to approach e-government use through the determination of how it can lead to the re-organization of government functions and procedures, so as to achieve the desired objectives of all interested parties.

However, special attention should be paid because, despite the fact that e-government promises to provide better services and to this end pertinent 'investments' are made, there is disagreement among researchers whether the original objective is achieved (Murray et al., 2009 ; Heeks & Bailur, 2007; Heldig et al, 2009). Service quality is an elusive concept, very difficult to be defined. This can be equally claimed for e-government services (Chee-Wee et al, 2010).

A study by Heeks (2003) in 40 projects in developing countries has shown that the rate of successful implementation of e-government projects reaches only 15%. About 35% of projects fail completely, because they are either not implemented at

all, or they are abandoned during the implementation phase. Finally, the remaining 50% partially fails, because despite there is complete implementation the desired results are not obtained.

Nevertheless, it is noted that the implementation of such projects in developing countries is more difficult than in the developed ones (Schuppan, 2009) likewise that there are social groups who cannot enjoy the benefits of e-government (Helbig et. al, 2009). Of course Greece according to data from the World Bank and the IMF, up until a few years ago Greece ranked among the developed countries worldwide.

Furthermore, it is claimed that e-governance should be developed as an independent area of research, without of course ignoring the theories of information systems in the private sector (Dwivedi et al. 2011).

In Greece, it is the sensitive area of labor market where e-government's implementation is mostly required, since it involves not only accounts and numbers but also real people, the employees. And the need derives from the fact that when there is such work environment as one where everything runs smoothly, this can only but positively affect not only the businesses but the whole of society. It also enhances the incentives for investment and for Greece which is in a period when it actually has a great need for investments this is a crucial matter to achieve.

In addition, the Commission of the European Communities (2007) addressing the problem of undeclared work, suggested several very important policies among which is the administrative reform and simplification which aims at reducing the cost of compliance with regulations.

Up until now, in Greece, there is limited e-governance involvement in the social security provision network and labor market procedures. This has lead to an uncontrollable rise of administrative costs and to bureaucratic procedures, thus increasing the operating cost of both the businesses and the state. Also, it has lead employers to put pressure on the employees demanding more and more effectiveness and cost-effectiveness when at the same time employees receive limited protection from the civil control system.

The Ministry of Labour in an attempt to address the problem has initiated the "Integrated Information System Labour Inspectorate" (IIS) which today appears to be in the final phase of implementation (hypothesis A). According to this system numerous procedures are carried out electronically, procedures which up until today required the physical presence of the citizens in public Services for filing in the pertinent documents. In the No. 5/2011 Government Gazette (ΦΕΚ) issue "invitation to tender for the selection of a contractor for the project IIS", presented are the main actions that the employers and their authorized representatives will have the possibility to perform online (Ministry of Labour, 2011) (Annex Questionnaire (b), table 2).

However, according to the authors' opinion, the main objective is not simply to make procedures electronic, but to re-organize and re-define these procedures. So, the authors propose as a possible way of e-governance the provision by the public sector of a payroll information system via cloud computing (hypothesis B). This proposal is more detailed described in the following chapter, as it could revolutionize the existing procedures.

Nevertheless, although the need for e-government is recognized, there are concerns about possible failure of proposed application's hypothetical implementation. The main concern arises from the possible businesses prejudice

to integrate new applications, because most companies for years have adapted their organizational structure to the old procedures. Therefore, using a questionnaire for our survey filled in by companies in the area of Heraklion, we attempt to identify whether these companies would feel positive about using such applications. The companies are called to express their strongest reservations and to estimate the cost of the existing procedures in the labor market and social security provision network. The main goal of the survey is to reduce the likelihood that the hypothetical implementation of the proposal will partially fail because of the unwillingness and/or the lack of trust of the companies in the proposed application. In addition, we use the Delphi technique, in an attempt to identify which of the aforementioned Hypothesis would help make controls more efficient and effective. The panel of experts consulted is formed by Inspectors of the Ministry of Labour. In the survey, first presented are the procedures that the Ministry of Labour aims to make electronic through the IIS, and then the remaining procedures which according to the proposed PIS would become electronic. The labour inspectorates are called to estimate the degree to which every electronic procedure will limit bureaucracy and the degree to which every procedure will help make controls more efficient and effective. Also the inspectors are called to estimate which of the aforementioned Hypothesis will help address the problem of undeclared work.

Summarizing, in the next chapter presented are the aforementioned proposal and the pertinent to it international literature. Following in presentation is the methodology and the analysis of the empirical research as well as the conclusions reached.

2. Prior Research - proposals

2.1 Cloud computing solution

The Greek Ministry of Labour has initiated the Integrated Information System Labour Inspectorate (IIS), which today appears to be in the final phase of implementation. According to this system numerous procedures are carried out electronically. According to the authors, there could be another option. Instead of sending businesses electronic reports to the public authorities, the public authorities could become the holder and administrator of the businesses database, thus having all the information required and the final control.

The technology that deals with this idea is cloud computing (CC). The evolution of cloud computing over the past few years is considered as one of the major advances in the history of computing (Marston et al, 2011), and is one of the emerging technologies may have an impact on Building a new Information Modelling and Management (Underwood & Isikdag, 2011). Cloud computing refers to the storage and processing of data, instead on computers and servers that someone maintains and sustains himself, to computers and data centers provided through internet, probably in an unknown place. According to Armbrust et al (2009), cloud computing is an old idea whose time has finally come. Main promise that CC gives is that more can be done with less (The Economist, 2008a). As tasks can be distributed in a large number of computers, it enables users to get access

to storage space, computing power and information services according to their demands (Peiyu & Dong, 2011), and users can address their investment in hardware and software. The adoption of CC by a company results in a considerable amount of organizational change. As this change will probably affect employees' work in significant ways (Khajeh-Hosseini, 2012), there should be an ex-ante evaluation. However, according to the magazine The Economist (2008b), cloud computing has not been adopted on a large scale by large companies. Only a few of them are using it, and then only for projects that do not critically affect their business. Also it is noted that Greece is dominated by SMEs, as the large companies are only the 1.5 per cent (SEV 2011).

Cloud computing is very widespread through applications like Facebook and Twitter. Thus, without investing in software and hardware, without having storage space or computing power, users through these applications can store information, photographs, data etc. The system requirements are minimal, and all a user need is a network device and an internet connection. Even a mobile network device could be used. Of course, mobile applications bring challenges because of the limited battery capacity, constraints of wireless networks and device's limitations (Choi et al, 2011). Mobile cloud computing combines the advantages of mobile and cloud computing (Dinh, 2011). So, as the proposed application PIS could also be used in a Mobile cloud computing environment, it is a significant advantage against IIS. Of course, hi-speed communication networks are essential for cloud computing (Dwivedi & Mustafee, 2010).

Computers some decades before were huge metal boxes, filling entire rooms before becoming even smaller and smaller. Nowadays, they are very widespread becoming accessible from anywhere (The Economist 2008a). Of the most important advantages arising from cloud computing is both cost reduction and energy saving (Helvacioglu Kuyucu, 2011) as the limited hardware brings down usage of electricity. So, under conditions, there is a claim that CC is friendlier to the environment (Greenpeace, 2010). Some other advantages of cloud computing are that, it allows users to access best-of-breed technology through third party suppliers, regardless of their investment; it provides remote service, as an expert runs the applications; It allows for real-time backups; it is highly scalable; there is no need for high-powered and high-priced computers; the absence of problems with viruses etc. One of the most important advantages of CC is that users have access to their data anywhere and anytime of the day, so CC can increase the mobility of company's peoples (employees etc). On the other hand, one of the most important disadvantages of CC is the safety and the reliability (Li-Qin et al, 2011). So, "without the appropriate level of oversight and governance, the tendency to implement cloud infrastructure and worry about the consequences later will lead to unpredictable and undesirable consequences to the nation's information" (Papuette et al, 2010). Many researchers refer to the safety problem (Subashini & Kavitha, 2011; Che et al 2011; Lang & Schreiner, 2011), so an ex-ante evaluation has to be carried out.

In an era of economic constraints cloud computing offers the opportunity for governments to reduce costs, while making data more easily accessible to citizens and significantly improve the services provided. According to the Vice-President of the European Commission responsible for the Digital Agenda, "it is similar story

with cloud computing services, which the US and UK governments are embracing – bringing savings up to 20% of costs. Other governments would be crazy to ignore such opportunities" (Kroes, 2010).

Public administration, in order to have the required information from companies and the final control, has developed a number of administrative procedures, which are the administrative burdens. If however the public sector provided an Information Payroll System via cloud computing, as administrator of the data center will have the ultimate information about labor issues. So, the "on-site inspection" would completely separate from the distance control, leaving "on-site inspections" to mainly deal with the control of undeclared work. Most issues could be addressed by a "distance control agency". The effectiveness of control would also benefit employees, increase the financing of social security organizations, decrease the social damping etc. On the other hand, it could also be the greatest fear of companies who do not comply with labor law. To this direction using a questionnaire, we attempt to identify whether companies would feel positive about using the proposed PIS.

In order to identify the benefits derived by the proposed Payroll Information System (PIS), firstly we present the control as it is today, and then we present the control as it would be after the hypothetical implementation of PIS. Finally, we can see the differences between them.

Up today, usually the control group consists of two Inspectors. Firstly requested are the "special book of newly recruited personnel", the "employees table" and the "work plan" (hereinafter referred to as "elements"). Then, the employees are interviewed and the accuracy of the above elements is checked. Otherwise, firstly are interviewed the employees and then the elements are requested. In the first case the auditee company could delay to deliver the elements to the Inspectors, giving the opportunity to the unregistered employees to move away. In the second case, the unregistered employees have less time to move away, but the auditee company has time to register employees in the "special book of newly recruited personnel". As the labor Inspectorates are very few, the control has limited effectiveness. Then, the Labor Inspectorates are checking the payroll, the "Payslips", the "Payment Receipts", the "Individual Employment Contracts" and the "Book of Leave" (hereinafter referred to as "secondary elements"). So the control in a small company lasts one to two hours.

Under the proposed PIS, the "on-site inspection" would completely separate from the distance control, leaving the distance control to deal with the control of the secondary elements. The "on-site inspection will already have the elements presented on a Mobile Computing Device (or printed). So, the employees will be immediately interviewed and the accuracy of the elements will be checked. The "in-site inspection" in a small company will last only a few minutes. The "in-site inspection" will be very effective, and the Labor Inspectorates will perform daily more controls.

In the present study the creation of a payroll information system provided by the public sector is the main point, as it could revolutionize the existing procedures. It could make regulatory compliance easier and less costly.

3. Research Methodology

3.1 Questionnaire (a)

In this study, using a questionnaire filled in by companies in the area of Heraklion, we attempt to identify whether these companies would feel positive about using the proposed method of e-government. As mentioned in the previous chapter, a change on businesses information systems, and especially the adoption of systems in cloud computing environment, could result in a considerable amount of changes on a company's organizational structure (Khajeh-Hosseini, 2012). For this reason, companies could be reluctant to such changes. Therefore, through a questionnaire, businesses are called to give responses to a Likert scale about the reservations they have about the "data security", as businesses don't want their data be accessed by unauthorized users (Subashini & Kavitha, 2011; Che, 2011), reservations about the fear of "data loss", as business want to be sure that all sensitive enterprise data is regularly backed up, so to facilitate quick recovery in cases of disaster (Subashini & Kavitha, 2011; Che, 2011), reservations about "losing connection" in the cloud (Moschakis & Karatza, 2011), reservations because of "network speed" (Hofmann, 2010; Dwivedi & Mustafee, 2010), about possible "software problems", and finally they are called to express any other reservation they probably have.

Furthermore, companies are called to estimate the administrative burdens, and for example they are called to estimate how much do the basic procedures for hiring an additional employee in Greece cost.

Also, one of the most important questions facing businesses concerns the two basic Hypothesis of this stydy. Hypothesis A is the planed by the Ministry of Labour "Integrated Information System" (IIS), and hypothesis B is the proposed by the authors "Payroll Information System" (PIS) provided by the public sector via cloud computing. Businesses are called to choose one of these two Hypotheses. Of course, they also can either express their denial, or their own opinion.

In the questionnaire, companies are presenting by sector/activity into five categories: industrial, commercial, service, hotel and catering-restaurant. Also they are categorized into seasonal and non-seasonal business. These categories were created based on statistics of the Labour Inspectorate Body. Furthermore, companies are presenting by their size according to the EU Commission recommendation (2003) concerning the definition of very small, small and medium-sized enterprises.

The questionnaire (a) was given according to the homogeneous subgroups created by the sector/activity criterion, to achieve a random stratified sampling. The companies received a request for participation and a link to the website for the survey. The request was given to the companies who hired personnel between 15 and 30 March of 2012. This period was selected in order to have sample from the seasonal companies also. 250 companies received request (about 50 of every sector), but only 77 companies respond to the survey. The strongest participation was by the very small and small companies. Also, 2 questionnaires were eliminated because they had controversial responses.

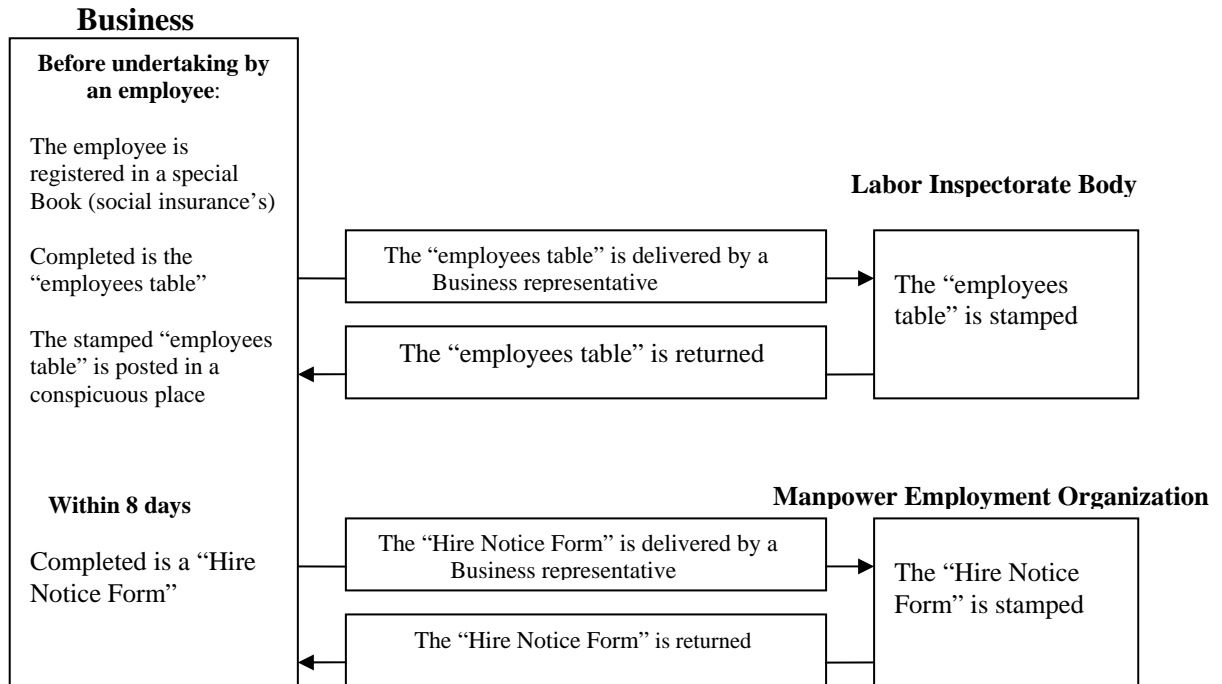### 3.1 Questionnaire (b), using the Delphi technique

Furthermore, the Delphi technique is used in an attempt to identify which of the aforementioned hypotheses would help make controls more efficient and effective. The Delphi survey method is often used to gain consensus among experts regarding to predict the impact of future events. The panel of experts in the present survey consists of Inspectors of the Ministry of Labour. The labour Inspectorates are aware of the required procedures in labor and social security legislation issues, more than anyone else. The Delphi technique, as usual consists of three survey rounds, in which the panel members express a probability of occurrence of the provided event and their rationale behind their prediction. During the second and the third round, participants are given back their probability, the average probability of the panel, and the rationales (anonymously) of the panel predictions of the previous round. At the end of the last round, the panel probably will have reached consensus in the majority of the issues or will have shown that they are no likely to do so (Baldwin & Trinkle, 2011). Twelve labour inspectorates of the area of Crete accepted to participate in the three round research. After being presented, firstly the procedures the ministry of labour aims to make electronic through the planed IIS (Hypothesis A) and secondly the additional procedures which according to the PIS (Hypothesis B) would be electronic, the labour inspectorates are called to estimate the degree in which every electronic procedure reduces bureaucracy as well as the degree in which every procedure would help make controls more efficient and effective. Also, the inspectors are called to estimate which of the aforementioned hypothesis (A & B) would help step up the fight against undeclared work. The problem of undeclared work is highlighted by the European authorities. As the Commission of the European Communities (2007) addresses there is no simple solution to combating undeclared work. However, one of the most important policies the Commission implies is the administrative reform and simplification, with a view to reducing the cost of compliance with regulations.

4. Analysis

4.1 Questionnaire (a)

The empirical results presented in this study were obtained via the questionnaire method. The majority of responses were given by accountants, who showed the most interest, probably because they face the problem of bureaucracy in labor and social security issues more than anyone else in a company. In the table below presented are the basic procedures for hiring an additional employee:

The basic procedures for hiring an additional employee in Greece

Business

Before undertaking by an employee:
The employee is registered in a special Book (social insurance's)
Completed is the "employees table"
The stamped "employees table" is posted in a conspicuous place

The "employees table" is delivered by a Business representative

The "employees table" is returned

Labor Inspectorate Body

The "employees table" is stamped

Within 8 days

Completed is a "Hire Notice Form"

The "Hire Notice Form" is delivered by a Business representative

The "Hire Notice Form" is returned

Manpower Employment Organization

The "Hire Notice Form" is stamped

In March and April 2012 were completed 75 (77-2) questionnaires. The study revealed that the majority of businesses (78%) -which filled in questionnaire (a)- estimate the cost for the recruitment procedure of an additional employee to be at least 20€ and the half of businesses estimate this cost to be at least 30€. This cost includes the labor cost (of the representative who performs the procedure), the transition cost, the parking cost etc.

By implementing e-government the procedures will be simplified. Under the hypothesis A, two separate and independent electronic reports should to be sent. While under the hypothesis B, the registration of the employees in the Payroll System will be enough. But, in any case businesses register their employees in a Payroll System before the execution of a payroll run. It is noted that the above "employee's table procedure" is repeated at any change made in the work plan or the salary of an employee. So, the estimated cost for the procedures related to labor and social security legislation compliance burden the accounting department by approximately 5%. The study revealed that the 55 per cent of businesses fear that they often are at risk to be imposed on them administrative sanctions, as they consider the promptly regulatory compliance as a very difficult issue to achieve. About 40% of businesses fear that they are at this risk rarely and only the remaining 5% fears not at all. It is noted, that the penalty for each violation is up to 50.000€. The study also revealed that hotels and restaurants are at greater risk than others.

One of the most important questions facing businesses concerns the two basic Hypotheses of this study. Hypothesis A is the planed by the Ministry of Labour

"Integrated Information System" (IIS), and hypothesis B is the proposed by the authors "Payroll Information System" (PIS) provided by the public sector via cloud computing. Businesses are called to choose one of these two Hypotheses. Companies recognized the need for e-government in labor and social security issues. The table below shows the results of the survey:

	Sample	A IIS	B PIS
Total	100%	48%	52%
Seasonal	23%	47%	53%
Non-seasonal	77%	48%	52%
Industrial	13%	50%	50%
Commercial	21%	50%	50%
Service	43%	40%	60%
Hotel	13%	50%	50%
Restaurant	9%	71%	29%
Micro	57%	33%	67%
Small	27%	65%	35%
Medium	13%	70%	30%
Large	3%	100%	0%

It also found that the smaller the company is the more willing it is to adopt PIS applications. The latter finding makes sense if one takes under consideration the fact that larger companies are noted to hardly ever change their organization and software programs as opposed to smaller ones. According to other researchers cloud computing is likely to be an attractive option for many SMEs (Sultan 2011).
As regards the classification of businesses in seasonal and non-seasonal companies, it wasn't observed any significant relationship.
Furthermore, 100 per cent of companies who already use Information Systems in cloud computing environment, listed converge towards the second hypothesis – the implementation of PIS. On the other hand, a strong correlation was observed

between companies who stated that they don't know about cloud computing and listed converge towards the first hypothesis. Apparently the lack of information makes companies not to trust the PIS. It is not excluded that, as the concept of cloud computing becomes familiar to managers in the long run, more and more companies will converge towards the PIS.

In the table below presented are the strongest reservations the companies have:

Reserve about	Mean	Skewness	kurtosis	St.Div.	result
Data security	2.91	0.06	1.80	1.39	reserve
Data loss	2.6	0.35	2.00	1.38	reserve
Losing connection	2.35	0.70	2.61	1.28	slightly reserve
Network speed	2.32	0.73	2.70	1.22	slightly reserve
Software problems	2.91	0.02	1.56	1.53	reserve

It is noted that even those who converge towards the development and use of an IIS system believe that PIS applications should still be developed, because, even if they are used in the future, or they are adopted only by a certain number of companies, this fact alone will reduce much of the work in Public Services.

Furthermore, according to the Hellenic Federation of Enterprises (2011), the 60,5% of Greek companies are micro, the 30,7% are small, the 7,3% are middle-size, and the 1,5% are large. However, as Greece is dominated by micro and SMEs (98.5%), and as SMEs feel positive about using PIS, the provision of a Payroll System by the public sector via cloud computing is very possible to be widely accepted, especially in the long run. Also, if the PIS had the ability to interface with Enterprise Resource Planning System (ERP) and generally to be synchronized with Global System, it could be the first choice for every company.

4.1 Questionnaire (b)

In addition, we use the Delphi technique, in an attempt to identify which of the aforementioned hypothesis would help make controls more efficient and effective. Twelve labour inspectorates of the area of Crete accepted to participate in research for the three rounds. After being presented, firstly the procedures the ministry of labour aims to make electronic through the planed IIS (A) and secondly the additional procedures which according to the aforementioned proposal (B) would be electronic, the labour inspectorates completed three tables.

Table 1 of the questionnaire (b) contains the procedures according to IIS (hypothesis A) will be electronic. At the end of the third round, the inspectors haven't reach consensus, but on average they estimate that every individual procedure will contribute significantly both addressing the problem of bureaucracy and improving the effectiveness of controls.

Table 2 contains the procedures which additionally according to the proposed PIS (hypothesis B) will be electronic.

Analytically, the PIS could provide much information about payroll, liabilities to personnel and public institutions, the individual employment contracts and the "normal leave of absence". At the end of the third round the Inspectors almost reached consensus, and agreed that these electronic facilities will contribute the most both addressing the problem of bureaucracy and improving the effectiveness of controls.

Table 3 of the questionnaire (b) contains a comparison among the two hypotheses. Below we present the results of this table. It's noted that the inspectors almost reached consensus by the first round. The second and the third round functioned more as a confirmation of the first round's results. As tables 1 and 2 are quite large and of secondary importance, they are presented in Appendix.

		A IIS	B PIS
Would increase the speed of "on-site inspection"		Average to Strong impact	Very Strong impact
Would limit the scope of "on-site inspection"		Average to Strong impact	Very Strong impact
"on-site inspection" would require support from less-qualified public servants		Average to Strong impact	Very Strong impact
Would Impact on the effectiveness of the control		Average to Strong impact	Very Strong impact
Would help more to address the problem of undeclared work		Average to Strong impact	Very Strong impact

As we can se above, the inspectors revealed that every attempt to use e-government applications in the labor market area could significantly improve the effectiveness of state controls. They also noted that the adoption of a Payroll Information System with cloud computing characteristics would result in fundamental changes in inspection metrology, as the "on-site inspection" would completely separate from the distance control, leaving "on-site inspections" to mainly deal with the control of undeclared work.

Finally, the inspectors commented that much of the Information derives from PIS could be used In the resolution of labor disputes.

5. Conclusions

In this study the need for e-government involvement in labor market procedures and in the social security provision network was identified. Up until today, numerous procedures require the physical presence of citizens in public Services for filing in the pertinent documents. The Greek Ministry of Labour in an attempt to address the problem has initiated the IIS (Integrated Information System Labour Inspectorate), which today appears to be in the final phase of implementation. According to this system numerous procedures are carried out electronically. However, according to the authors' opinion the main objective is not simply to

make procedures electronic, but to re-organize and re-define these procedures. So the authors propose as a possible way of e-governance the provision in and by the Public Sector of a Payroll Information System (PIS) via cloud computing. This system promises to remove most procedures, as it will turn the State to become the holder and administrator of the businesses database, thus having all the information required and the final control. The study revealed that the majority of businesses -which filled in questionnaire (a), estimate the cost for the recruitment procedure of an additional employee to be at least 20€. Moreover, the estimated cost for the procedures related to labor and social security legislation compliance burden the accounting department by approximately 5%.

All businesses want the development of an e-government system. Approximately half of the responses listed converge towards the first hypothesis -the implementation of IIS, while the other half towards the second hypothesis –the implementation of PIS. It is noted that even those who converge towards the development and use of an IIS system believe that PIS applications should still be developed, because, even if they are used in the future, or they are adopted only by a certain number of companies, this fact alone will reduce much of the work in Public Services. However, the companies have some reservations about using PIS, mainly as regards data security, and connection and software issues. It also found that the smaller the company is the more willing it is to adopt PIS applications. The latter finding makes sense if one takes under consideration the fact that larger companies are noted to hardly ever change their organization and software programs as opposed to smaller ones. However, as Greece is dominated by micro and SMEs (98.5%), the provision of a Payroll System by the public sector via cloud computing, is very possible to be widely accepted, especially in the long run.

E-governance will also help to draw out detailed and reliable information and create statistical reports, facilitating thus government policy that refers to labor issues.

The current global economic crisis has a strong impact on the Greek market and undermines the financing of social security organizations. Therefore, it is an absolute necessity to address the problem of undeclared work. According to the European authorities the problem of undeclared work is one of the biggest challenges faced by the European Union nowadays. Relating e-government with labor and social security issues is not just an opportunity for businesses to reduce their cost. It is the ultimate tool in the hands of civil control mechanisms, as they will be able to monitor, identify and finally address the phenomenon of undeclared work. However, this phenomenon is very complex, and there is no simple solution to it, as many other factors also play a significant role. For instance, there's the people's confidence in the fiscal and social protection system, the lack of strict controls as regards the benefits recipients, the financial attractiveness of undeclared work, etc (COM 2007). Also, there is a link between illegal immigration and undeclared work. Nevertheless, e-government could address this problem significantly, and enhance both employees' and employers' level of awareness.

Questionnaire (b) –filled in by labor inspectors using the Delphi technique- revealed that every attempt to use e-government applications in the labor market

area could significantly improve the effectiveness of state controls. However, the inspectors noted that the adoption of a Payroll Information System with cloud computing characteristics would result in fundamental changes in inspection metrology, as the "on-site inspection" would completely separate from the distance control, leaving "on-site inspections" to mainly deal with the control of undeclared work. Our study has some limitations and implications for further research. Questionnaire (a) was filled in by 75 companies in the area of Heraklion. The sample was quite small and expressed the local culture. This limitation alone provides opportunities for further research. Furthermore, similar proposals relating to tax and accounting issues could be researched provided that numerous businesses in the future will use applications provided by the public sector via cloud computing.

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