OUTSOURCING OF PUBLIC INFORMATION SYSTEMS

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Abstract

This paper will focus on the explanation of two factors for improvement the performance of the public administration. Outsourcing or the process of using external capacity for provision of particular function has been around for a while and already triggered serious questions for the practice and theory of public administration. The Information Technologies are the other interacting factor, which has exhibits many specific features compared with the non-digital service. Hereinafter I present observations on the common steps in the process of outsourcing of IT in the public sector and try to explain some of the empirically encountered problems.

Social drivers for state devolution

For the contemporary administrator the whole set of restructuring, re-engineering, downsizing measures are not alert for crisis but part of the day-to-day work of the public organizations. As more and more budget restrictions, personnel cuts and organizational restructuring go on more and more increases the demand of the citizenry for first class public services. In the case of Central and Eastern Europe Countries (CEEC) this process develops within the large context of more than 10 years of profound changes in almost every social sphere. One of the most dramatic changes concerns the ideological shift from all encompassing state to state with regulatory and protective functions. The well-known metaphor of Osborne and Gaebler for pushing the state on “steering and not rowing” may be criticized in the Western world but for CEEC it accounts for vast amount of the dynamics and interactions in the public and private sectors [Osborne, 1993].
Although the restrictions of the public sector budget are inevitable part of political programs, public policies, good-will strategies and other documents with or without legal force, the state through its agency is increasingly pressured to perform. Another slogan of the popular Reinvention movement describes the process as “doing more for less”. The demand for high quality, customer oriented, fair and just, inexpensive, integrated and predictable public services is boosted by the need for implementation of *aquis communitaire*, compliance with the actions of the international community, increasing local and global competitiveness. In that entire complex milieu the national public administration has two general patterns of development – reactive existence in hostile environment or proactive adaptation and participation in the social development.

The literature on public administration and management is ample of models and methods for improvement of the public sector performance. After Frederick Taylor’s Scientific management great deal of work has been devoted to innovative prescriptions for the public sector. PPB and ZBB in the budget formation, decentralization, cost-benefit analysis and the whole myriad of often labeled “New Public Administration” approaches addresses exactly the same question: how to get out more of the administration while inputting less. For the years before 1989 in the CEEC this question was hardly raised due to the specific role of the public sector and the lack of private counterpart for comparison. For the last 10 years however the issue turned up into a stumbling block, which is tackled mainly at political level. It is up to the theory of public administration to analyze the proposed approaches, to offer new solutions and to test their interaction in environment with many unpredictable or uncontrollable variables.

**Information Technologies and Outsourcing**

In this paper I will deliberate on the evolving complexity on two important factors for improvement of the public administration performance. Hypothetically each of these factors must lead to undisputed organizational benefits but the practice shows that the theoretical constructions often miss important phenomena that impact the outcome of the factors. The first factor is the Information Technologies and their influence on the behavior of the public sector organizations and public servants. The second point of interest is the contracting out model for provision of public services or the so-called “government by proxy” [Kettl, 1989]. Buying IT commodities from the private sector is a long lasting practice in the Western world and familiar process in the CEEC from the last decade. The mechanics of public procurement are widely used in the work of the public sector organizations and its details will not be surveyed in the article. The focus will be on the use of external providers for running services, which are informational by character and public by regulation and perception.

**Information Technologies**

The evolving Information and Communication Technologies gradually penetrate the way in which the traditional social processes develop. In the field of public administration e-government is a summative concept that includes various and sometimes-heterogeneous
phenomena. While misunderstanding the profound impact of the technologies upon the structure and functioning of the organizations, often ‘e-government’ is described as panacea for problems that have to do with internal structural and conceptual dysfunctions of the organizations. In the reality of the Bulgarian public administrative practices this assertion proved to be true from the experience of major failures to implement ITC projects in organization with either unclear mission, ubiquitous goals and objectives or structure and decision making chain (to name but a few: General Prosecution Office, parts of the Judicial system, National Health Fund, Election Administration etc.). There are clear signals that in other countries in transition similar processes are being encountered, which can support the assumption that common patterns can be formulated.

Reliance on IT for strengthening the organizational efficiency is one of the main characteristics of most national and supranational programs\(^1\) for embracement of the Information society benefits [reference to Bulgarian strategy, E-Europe etc]. Beyond any doubt the technologies are integral part of the contemporary governance. We can hardly imagine nowadays the administrative decision making process without the processing power of computers and dissemination capabilities of networks. Application of IT has two interconnected aspects: first is the internal organizational utilization of IT and the second is the communication with the organizational environment.

The former aspect must draw our attention to the capacity of public organization to build its information system according to its mission, goals and objectives. In order to do that the organization must have clear structure and defined or at least predictable communication flows between the elements of the system. Even the most sophisticated and cutting-edge technologies cannot meet the expectations if the applying organization is in permanent or temporary havoc. Another common mistake with the implementation of ICT in the public sector is the negligence of the fact that the information systems leverage the procession and interpretation of information but do not create new information. It only provides the decision maker with the opportunity to quickly make otherwise laborious connections between facts and data but it can barely take the appropriate decision. Thus the IT lay out the infrastructure for more rationale decision making but the administrator or the team of administrators must take care of the rest.

In its interconnections with the surrounding environment the organizations employ the second organizational aspect of the ICT. The process of administration can be seen as processing of information. As long as great deal of that information flows between the organization and its environment the ICT can play crucial role in the performance of the organization. There are many possible ways in which the organization can transmit and receive information but when speed, precision, control and integrity are at stake the ICT can hardly be substituted by alternative means. Moreover the ICT can be deemed as a guarantee for the administrative transparency, access to public information, accountability and responsiveness.

\(^1\) eEurope An Information Society for All - http://europa.eu.int/ISPO/policy/i_europe.html
Outsourcing

The second improvement factor explored in the article has its roots in the business administration. In the last decades the Western corporate world has been the main source of innovative practices oriented primarily on increase of organizational efficiency. Some of these practices are widely popular and already accepted as paradigms of rational behavior in the business world: downsizing, participatory management, decentralization and network structures, business process re-engineering, customer orientation etc.[Hammer, 1993, p. 83 Willcocks, 1995; Frederickson, 1997; Klepper, 1998]. Along all these approaches a new buzzword was coined – outsourcing. The term outsourcing is used mainly to define the process of transfer of business function to external organization with competence and specialization in that function. In most of the public administration literature the process is referred to as contracting out and in this article I will use the two terms as equivalent. Outsourcing also has its special use in the IT literature as process of external development of source or object code for software applications. As this notion falls within the broader concept of outsourcing I will not use this narrow meaning. Generally outsourcing and contracting out carry on the same meaning and represent the industrial-era old ideas of specialization and division of labor. In the world of global markets and 24/7 operations the outsourcing is regarded as approach for increase of business competitiveness, conversion of fixed costs to variable, orientation to the core business functions in which the firm has advantages and taking advantage of the economies of scale [Kettl, 1993; Donahue, 1989].

Usually in the literature the public sector outsourcing is defined within the broader context of privatization. Most authors use the functional approach to define the meaning of outsourcing. According to this approach outsourcing is the process of transferring operational functions outside the organization while keeping the overall responsibility for performing the function. The other approach emphasizes on the cooperative effort of more than one party in providing the service. As Lacity and Hirschheim called it “[outsourcing] is the use of a third party vendor to provide information products and services that were previously provided internally.” [Lacity, 1995, p. 1]. Using this approach some authors define the public outsourcing as “…method to shift operations to the private sector” [Seidenstat, 1999]. As process for moving of functions out of the organization boundaries outsourcing does not require necessarily the shift to be made public agency and private vendor. The hypothesis of outsourcing to another public agency with greater specialization in the area can also be deemed as possible. In different sectors of the public administration some organization traditionally have more experience and more trained IT staff than others. In Bulgaria such kind of expertise is primarily concentrated in central state agencies where the information flows are more intensive than in other areas. Such authorities in Bulgaria are: National Statistical Institute, Ministry of Inferior, Central Government, and Ministry of Finance.

Compared with the privatization the outsourcing process is answering the question “is it possible for part of the whole process to be relegated to outside provider”. In the typical privatization decision making chain the main question is “how expedient is the transfer of a whole entity with all its processes to private operator”. Here the main distinction comes: in the privatization the goal is to change process through shift of ownership, while in the outsourcing the goal is to keep the ownership but to change process through involvement of third parties. While in the privatization the act of sale closes the transaction (though post-
privatization control and monitoring continue) the decision to outsource just starts a complex process of consequent decisions and actions.

As already mentioned the public administration sectors of the CEEC gradually but steady did orient towards service provision. After the radical real assets privatization the important public policy question is “how much and exactly which service should be provided by the public sector?”. This question is of the same category as the privatization decision but applied on different object. As far as the privatization decision making process is outside the scope of my article I will deliberate on the services, which designated for provision by public sector organizations. The reasons for attaining the public hand on the provision of all these services are different but the result is that one or another public organization is responsible for their provision. This characteristic of the public services is of utmost importance when we analyze the process of outsourcing. Even when a public agency decides that some part of its functions can be transferred outside the organization the responsibility does not shift from the former to the latter. In that case legislative and judicial powers, political authorities, constituencies, private businesses, third-sector organizations and all other interested parties will still hold the public agency accountable for the performance of the function.

Resurrected in the business sector the outsourcing has long standing roots in the public sector. All governments buy vast amount of goods and services they need from the non-public sector. Until the late 1980s in the former Soviet block this concept of public-private partnership had very limited application due to constraints on the private entrepreneurship stemming from the political context of the time being. Despite these restraints however some functions regarded as public were performed either by non-governmental or non-public subjects. With the fall of the authoritarian regimes the new Constitutions revoked the privileged status of the state-owned bureaus and enterprises and thus created conditions for adjustment of the size of the public sector either through the market mechanisms or through regulation.

The changes in the political, economic and legal environment allowed for privatization as mean of reversing the nationalization that took place some 40-45 years ago. The process had multiple goals – restoration of the legal order, social fairness and last but not least devolution of the state from the enormous amount of state-owned enterprises. The rationale and execution of this process falls outside the scope of the current article but I want to make the point that the privatization process, notwithstanding the major cracks, created public perception that the state must not play active role in the field of production of goods. As a consequence of this ideological concept the CEEC saw dramatic decrease of the public sector in terms of size, responsibilities and functional areas. That notion supports the theory of public choice [Niskanen, 1971; Blais, 1991], which essentially states that, the rational administrator acts to the detriment of the public. Though the public choice theory is largely criticized for not proving that assertion, the underlying concept of the public policies is that the state must play limited role in the market economy making room for the private sector.

Although the privatization has became a major issue in the Central and Eastern countries only the denationalization of real assets was regulated, implemented and discussed broadly. Vast majority of the public policies focused on the transfer of different kinds of property rights from public ownership to non-public ownership. This particular kind of privatization can be called strictu sensu privatization or assets privatization [Ascher, 1988; Cohen, 2001;
The other side of the term privatization is the shrinking of the state in the field of production of services. As Jan-Erik Lane points out when the government strives to produce something on its own it uses either enterprises for the goods or bureaus for the provision of services. [Lane, 2000] The European tradition was and still holds valid that the public sector provides for many of the services which if we use the classification of E. Savas can be classified into the following categories [Savas, 1982]:

- Private goods
- Toll goods
- Common-pool goods
- Collective goods

The particular case of the CEEC showed even larger dependence on the public sector as legacy of the central planning economy. At the beginning of 1990s the public sector provided broad spectrum of services varying from notary services to medical help. The range of the publicly provided services is still much larger compared with the government share in the Western European countries and the Anglo-American countries. In the Bulgarian case slow privatization in the service sector has taken place since 1993 with most visible examples in education, health, public transport, legal services, waste collection and disposal, janitorial and security services. This type of devolution of the public sector had been done through several channels: deregulation, licenses, competitive tendering, and concessions. For purposes of clarification of the concepts I will refer to that type of privatization as *privatization of services*. In fact the public service load shedding impacts the field of public administrations and causes major changes in the whole system of national public administrations. Although the *asset privatization* receives the attention of the policy makers, media and whistleblowers the significance of the *privatization of services* will pose much more challenges and dilemmas in the nearest future. Though somehow neglected by the researchers the *privatization of services* is the drive that leads to reform of the public sector and the perception of the citizens and the private sector about the capabilities of the public administration to cope with the demands of citizenry.

In order to conclude this brief overview of the privatization efforts I would like to bring to the context privatization experience of two sets of countries – Western European and North-American/South Pacific countries (USA, Canada, Australia and New Zealand). The two sets represent interesting patterns for the role of the public sector and the increasing share of the private sector for achieving public ends with private means. On one hand the American/South Pacific experience with traditionally insignificant participation of the state in the markets of goods shows us how the public opinion still demands for more shrinkage of the public sector. In the US traditionally the local governments last 20-30 years have been inventing practices of the public-private partnerships in the provision of services traditionally regarded as “public” [Savas 1982, 1987; Kettl 1989, Ascher 1987, O’Looney, 1998; Carver, 1989]. Examples of such services vary from waste collection and disposal, cleaning, maintenance and repair of infrastructure utilities, fire protection, payroll processing, data processing etc. Boosted by the budget restrictions and recessing economy of the early 1990s. the call for “doing more with less” became dominant public policy in the US through the National Performance Review, headed by Vice-president Al Gore and inspired by the works of David Osborne and his coauthors Gaebler and Plastrik [Osborne, 1993, 1997]. Prophetic by essence the abovementioned books laid out the idea of the supremacy of private over the public sector
and several other unproven assumptions. The undeniable merit of contracting out for public services at almost any price is one of the assumptions, which Osborne and his co-authors rise to a rang of ultimate solution for most of the public administration shortcomings. Many authors attacked the assumptions of Osborne as lacking scientific validity and reliability and not supported by systematic research [Yuong, 1996; Williams, 2001]. In the case of Information and Communication Technology public services such research is limited by scope and depth and generalizations can be hardly made [Willcocks, 95, O’Looney, 1998].

In Western Europe the reduction of the role of the government is led by the pressure of the fiscal conservatism, which took place in the 1980s under the label of “faith with the big bureaucracy” [Ascher, 1987]. Privatization of public services is going alongside with the privatization of many state owned enterprises that took place mainly in the 1980s. First in England and then in other Western European countries the process of divestiture is taking place through different avenues. Again I must point out that there is no systematic and rigorous research in the field of ICT outsourcing of public services is missing and thus the policy makers, administrators and the private vendors and contractors miss solid ground for carrying out the outsourcing in the best way for all parties.

**Challenges of the IT outsourcing.**

Our thesis is that technologies must be regarded as part of the general framework of the public sector and to follow the organizational design and conditions of the environment. Taking out the most of the IT do not mean investing in the most expensive and cutting-edge technology but in the most manageable and consistent with the strategic goals of the organizational environment [Globerman, 1996]. Not only in the countries in transition but in the most developed in administrative and technological aspect countries, administrative systems hardly accommodate the technological progress and the public demand for “more services at lesser cost”. The emerging in the last two decades managerial approach in the public administration based on the premises of values as efficiency, effectiveness, cost and competition. Reinvention of public administration however involves tedious political, legal and technological layers, which interact with the management issues.

Assessing the impact that the interaction of IT and outsourcing might have upon the public sector we first must address the issue of their applicability. Or otherwise constructed the question might be: is there a need for ICT services within the public sector, which cannot be satisfied by the internal capacity of the public organization. To answer these questions we must first assess the needs for IT services in performing the inherent functions of the public administration. As mentioned above the importance of IT is rapidly growing to level where the business of government is called e-government, the democracy is e-democracy and the vision is that the technologies might be not only method of successful administration but integrative part of that process. In fact the role of the information in the organizational output is not the most significant factor in assessing the ICT needs. Nowadays affair with the range of the responsibility for implementation of public policies is doomed to use one or another IT in order to fulfill its mission. We can hardly imagine the operations, strategic planning, evaluation or any other part of the public organization’s work without the power of computers and speed of telecommunication networks.
The need for more and better technologies in the public sector rises the question wherefrom these technologies will come from and who will implement them. Following the privatization approach we can assume that if the particular public service is marketable and the market conditions are favorable it can be privatized. Exactly that happened in Bulgaria with several IT services, which before 1989 were provided by the public sector. After the changes in the legal, economical and political conditions in the early 1990s several methods were used for transmission of these services to the private sector. To name but a few: legal information systems, trade registers, banking clearinghouse systems. Although these relatively limited cases pose some interesting questions I want to move to services, which are not deemed as
marketable due to either linkage with the sovereignty of the state, interests of national security and defense, legal restrictions, inability of the market to perform, political unwillingness etc. These considerations make the privatization of many public services impossible and leave on the public administration the responsibility for their provision. Since the restrictions apply to the core service or activity which is being provided it is not necessary so for the commodities and services used for achieving the organizational mission – public service provided at given quality and quantity and within the assigned budget. The rationale to keep certain service in the public sector cannot be immediately applied to the goods and services, which are used in order to produce the main/core service. Though not explicitly regulated by the positive law we may make the implication that the services required to produce another service might be contracted out to external providers after applying the same test for contractibility, which would be valid for the core service.

**Benchmarking – the key to successful outsourcing**

If the administrative law does not restrict the use of procurement for services, which do not fall in the list of activities reserved for the public sector, the public IT managers can opt for either in-house or outsourced provision of the services. In the case of the IT services most likely the decision to produce internally or externally will be made of team including the chief administrator or commissioners if the agency is collective body, the secretary of staff, people from the IT, financial and purchasing departments. The main issues that the team must address are:

- is the organizational ICT function clearly defined or definable
- how critical is the ICT service level for the performance of the organization
- does the market provide for price optimization
- what are the strengths and weaknesses of the internal provision of ICT
- what are the middle and long term perspectives of the internal and external provision
- what is the total cost of operating the service
- what is the level of competition on the market
- what is the experience of the organization in management of complex contractual relations

In this pre-outsourcing decision the organizational team must analyze the pros and cons of the outsourcing of partially or entirely the IT function. In order to make useful and reliable analysis the outsourcing team must collect significant amount of information. The most critical information at that stage is the quantitative measurement of the performance of the current ICT infrastructure. Benchmarks for the performance can be such indicators as:

- number of servers and desktops in the organization
- percentage of uptime
- MIPS\(^2\)
- request for desktop help per day
- lines of source code
- proprietary and off-the-shelf applications used in the organization
- transactions per second, hour, day or week

\(^2\) Million Instructions per Second. MIPS scale is used mainly for rating of mainframe system and are of not much help with the more contemporary systems because different instructions require more or less processor time then other.
- mean bandwidth capacity
- mean delay time for processing, storing, publishing, printing etc. requests
- time for learning the system
- interoperability with existing internal or external systems
- level of compliance with planned IT systems
- Total Cost of Ownership for hardware, software and network components of the IT
- level of standardization required for the organization IT system

It is old management principle that “you can not manage what you can not measure” and in the case of the ICT the intangible character of the process makes this saying to hold firmly. To decide whether the market can provide the service at cheaper price and at sufficient quality the public manager must have grounds to compare the potential offers. The ICT are oftentimes easily susceptible to measurement and benchmarking but the implementation of the monitoring requires certain efforts from the IT department. Failure to control for the levels of performance is one of the most critical factors resulting in inappropriate pre-outsourcing analysis and flawed service specifications and supplier selection. Alongside with the failure to provide reliable information on the performance of the service there is another factor, which may undermine the ability of the organization to benefit from the outsourcing, is the lack of precise information on the different types of costs associated with the in-house provision of the IT service [Globerman, 1996]. The vague perception of the cost of the services is of little help when the public manager has to make the cost/benefit analysis. Price and level of service performance are the two components that form the outsourcing decision. Being ignorant of these two factors the probability that the administrative decision would lead to unpredictable results is much higher than the acceptable level. In my opinion most of the failures of the outsourcing projects in Bulgaria have their sources mainly in the inappropriate level of information on the side of the public organization. The lack of reliable knowledge on costs and performance levels reflects also on the subsequent assessment of the outsourcing project. Such assessment might be necessary for purposes of auditing the organization, continuation or discontinuation the contract with the incumbent provider, raising new issues relationships with subsequent providers and last but not least to ramify the implications of the outsourcing project on other organizational functions.

The problem of frequent omission to benchmark the performance in the public sector might be avoided through separation of the IT function to generic services for which the market is competitive. Such classification can help the public IT managers to lean on the experience of other public organizations in order to bridge the gaps of unknown service parameters and. Example of generic IT services might be: desktop maintenance, application development and implementation, data warehousing, transition from legacy systems to client-server environment, network access services, helpdesk services, LANs and WANs, virtual private networks, identification and authorization services, internet and intranet applications development and maintenance, EPR systems, payroll processing, accountancy applications, various data center and databases applications, electronic fund transfers, B2Government applications, e-procurement etc. In the literature this approach of handling service-based parts of the IT infrastructure is called “selective sourcing” [Lacity, 1996] and is characterized with outsourcing of only specific functions or services of the information system which can be expected at certain level of confidence to result in savings and/or improvement of quality.
Opportunities of outsourcing

The ultimate reasons for outsourcing completely or partially the IT function from public organizations can be found on one hand in the demand for downsizing of public administration and on the other hand in the specificity of the IT itself. I already enlisted numerous reasons for withdrawal of the state from areas in which the private sector performs better. Some characteristics of ITs add up to these common for the public services reasons.

The ultimate reason for undertaking outsourcing is the opportunity to reduce cost of the service. In most public organizations the IT function is not profit making service. Reducing the cost of IT expenditures without compromising the service level is part of the philosophy of the entrepreneurial government [Kettl, 1993]. Some authors refer to this potential of the outsourcing as conversion from fixed to variable cost of the IT system [Klepper, 1993]. For the public sector the cost is predetermined by the annual budget cycle and thus we cannot see conversion of the cost type. What is the merit of the outsourcing is the opportunity for the public administrator to get clear and reliable understanding on the service price. Very often the service production in the public sector is associated with blurring of different budget lines, which results in ambiguity in the concrete service price. In the outsourcing there are two basic types of costs – production and transaction cost [Globerman, 1996]. Streamlining the cost structure gives the public manager ability to compare the cost/performance ratio with the existing internal or external alternatives and to maximize the organizational output.

IT is very dynamic and fast moving sector where the standards, players, prices and in general the perspectives change much more rapidly than the overall pace with which the public administration develops. That dynamism requires great deal of flexibility and emphasis on the management part of the process of implementing public policies. The legacy of the public sector in the CEEC shaped different culture in the public organizations. One of the most serious obstacles for implementation of long-term ICT projects is the undeveloped capacity of strategic thinking, which oftentimes is negatively affected by the organizational routines and political cycle.

Another factor, which impedes the massive application of the IT in the public sector, is the capital intensiveness of the technologies. In a time of public expenditure restrictions the potentials of the IT must compete with many other candidates for public funds. At the same time it is not uncommon for the public sector to underutilize the available infrastructure. The proponents of outsourcing can draw largely from such stories of misspending of tax money. Return of investment is fundamental for the private sector and neglected in the public sector, which for the expensive IT may bring substantial savings through avoidance of corruptive practices.

The tied market for IT talent is another specific feature of the IT. With its remuneration constraints and relatively low status compared with the private local and foreign IT companies the public sector can offer a few incentives to personnel, required to maintain the technological and managerial aspects of the ICT functions of public organization. The Bulgarian Civil service law offers very questionable bonuses for such high valued people and this inflexibility makes almost impossible to retain the highly qualified employees. In the nearest future this problem is likely to hold, bearing in mind the economic trends.
Another factor, which makes the IT service outsourcing attractive opportunity, is their susceptibility to specification and measurement. Except for the specific applications and infrastructure the IT services show relatively low level of inter-organizational variance. Many public organizations of varying type and level have identical IT needs, which makes the definition and specification of services more attainable.

Access to know how and specific technological knowledge is another reason for public organizations to turn to outsourcing of some or all of its functions. For the IT industry know how accounts for a significant part of the value added to the services or products. It can be expected that in many cases public organizations will have insufficient initial knowledge about new technologies which haven not been used by the organization.

Specific feature of the IT sector is the abundant local and global market of service providers. Even for the most specific organizational IT needs the market can offer competition, which guarantees for adequate quality and reasonable costs. The Application Service Provision (ASP) business model provides for remediation of shortage of available local providers. The ASP model is built upon scheme of provision over Internet of integrated services. It shifts on the side of the supplier the responsibility for running the software, hardware and telecommunication infrastructure required for particular IT service. In that case the user practically rents the hardware and software and pays only for what is being used as IT service. Under the ASP model the outsourcing organization transfers not only the responsibility for running the service but also the necessity to provide on its own the required resources – applications, servers, network access and applications etc. Usually the ASP provider offers its clients complete service, which in most of the cases is performed by remote infrastructure. One example is EPR system run on remote servers, data storage on remote warehouse and accessible through Internet or dedicated line for the client etc. This model is particularly appropriate for public sector organizations because it shifts the burden of capital investment on the provider, the outsourcer gets what he buys and the services are standard and thus interchangeable. For the CEEC this method still suffers from one disadvantage – the market of ICT services organized under the ASP business model is still immature.

The economy of scale can also be used by public organizations with low volume of particular service. The structure of public agency reveals organizations with similar IT needs, size, and budget. One such example can be the territorial branches of central executive agency. From a point of view of IT services all these authorities have the same demand for IT services and the only point where they differ is the location and size. Similarities may be found not only within the structures of the public organizations but also cross-organizational resemblance can be inferred from the size, functions, and position in the hierarchy. This IT similarity of the public organization can be expedient approach for minimizing the costs of the IT services. One example of using the economies of scale is the Australian public policy of clustering the IT needs of public organizations in order to maximize the gains of the outsourcing.

Last but not least the outsourcing might be considered as factor for enforcement of standardization and interoperability in the public administration. Reliance on in-house implementation always poses risks of development of non-standard or proprietary technologies. Such risks come out of the particularization of the process of design and implementation of the information systems in the numerous public sector and organizations. The existence of many inconsistent with each other standards in the Bulgarian public
organizations explain the frequent emerge of policies and managerial intents for creation of interoperable national ICT public administration network. Integration of ICT functions into well-defined bundle of services may give the supplier and the user more opportunities for strategic overview of the organizational needs and prospects.

Risk of the public sector outsourcing

Although the opportunities for outsourcing public IT services may look lucrative and motivating for action the practice shows little use of that method. In the Bulgarian practice the unsuccessful stories dictate for more deliberate analysis of the not so obvious and promising “side effects” of outsourcing. There are many organizational, technical, legal and political questions which if not properly addressed may result in outsourcing failures. It is hard to define what means outsourcing failure but generally it can be assumed as failure to reach the key objectives of the outsourcing:

- cost reduction
- service performance
- access to reliable and functional technologies

The reasons for unsuccessful outsourcing are almost as voluminous as the reasons for service non-performance within the public administration. However if the red tape, lack of motivation, formalism, political bias and all other sins of the public sector can be attributed either to the administrators or the policy decision makers, in the case of outsourcing the political considerations are in the stage of appraisal of the project. In the administrative decision making process targeted to the problem of “to buy or to make” the political factors are reduced to a minimum and the public policy is predominantly created by public administrators. Once again if we use the postulates of the public choice theory [Niskanen, 1971] in this particular situation the administrator must rationally act according to his own interest. What would be the maximization interest of the administrator in the case of deciding, implementing and assessing IT outsourcing. The public choice theory teaches us that the administrator will behave in a manner which will increase his personal welfare through maximization of his unit’s IT budget. But in the case of the outsourcing the budget still goes to the agency though the final recipient is the service supplier. In the traditional model the budget against comes to the discretion of the administrator but his subsequent function is different – instead of production in the case of outsourcing his main responsibility is contract management.

The contract management concept develops with the proliferation of the so-called contract administration. With the spread of the contracting-out of public services the public managers have to apply systematic framework on the drafts, negotiations, implementation, monitoring and renewal or cessation of contracts for service provision.

After the administrative decision to outsource first come the challenge of drafting the specifications of the ICT service which will be transferred outside. The drafting team must consist of people of technical, legal, financial and managerial background. In the process of specification of the service the team must take under serious consideration the identified IT
needs, existing infrastructure and the expected demand for the particular service. Usually the demand for public services is volatile and depends on many factors, which can hardly be forecasted. Though at that stage the expected service volume is not the most important issue it must be addressed carefully in the part of the obligations of the provider. One technique in the IT sector are the so-called Service Level Agreements (SLA) which provide for single contract to regulate the responsibilities of the parties according to the demand for and supply of service. SLAs give the contractors flexibility to fluctuate within the framework of the contract without triggering expensive re-negotiations. SLAs are suitable for bandwidth services, transaction-based service, warehouse services and many other IT services where the use is gauged by units and not with the mere provision of the service (for instance application development or web design).

Of utmost importance for the outsourcing process is the implementation of incentives for excelling performance and warranties against underperformance into the outsourcing relations. Despite the IT service is outsourced to external organization, the outsourcer does not rescue itself from the responsibility for achieving its missions and goals – i.e. public service at certain level of quality and price. Only the contractual provisions bind the supplier - the administrative regulations still hold responsible for the results the outsourcing organization. Speaking of the risk this means that the public organization assumes the risk of cessation, interruption or any other deviation of the service from its normal cycle. Even if the supplier of the service is to be blamed for the disruption the administrative and political responsibility is still on the outsourcing organization. How can the public organization build protective mechanisms and guarantee the smooth performance of the IT function, subject to outsourcing? In its relation with the supplier the public organization cannot use its coercive power because the contract is private agreement between equal parties. In the outsourcing relation the contract is the main method for the outsourcing organization to proactively shape the relationship. The IT services outsourcing poses some differences compared with the traditional procurement of goods. The supplier owes not only the provision but also the integration of the IT service into the organizational environment of the outsourcer. The complexity of the relationship between outsourcer and supplier may cause strong opportunism if the relationship is not managed appropriately. Upon this risk a whole set of problems can adhere: the cultural difference between public and private organizations, unidentified discrepancies in the goals of the parties, communication disruptions, ambiguousness concerning who in the public organization is authorized to make decisions etc.

What kind of mechanisms the public organizations can use for maximum avoidance of such negative consequences? First of all the relationship between outsourcer and supplier must be based on clear understanding on the both sides concerning their contractual rights and obligations. In the ICT outsourcing contract the service must be specified to extent, which reduces to reasonable level the risk of contradictory understanding of qualitative, quantitative and financial parameters of the outsourcing. In this case it is impossible to define abstractly the reasonable risk level – unfortunately there is no way to use the conventional 95% level of confidence typical for the social science. Anyway the public manager must act with due diligence to make sure that the supplier and the public organization have reached agreement on identical subject matter.

After the clarification of the character of the ICT services, which is being transferred, and the willingness of the supplier to provide exactly what the public organization needs the next step
must be in direction of building mutually profitable relation. The research shows correlation
between the term and complexity of the outsourcing relation and the probability of negative
consequences [Willcocks, 1995]. Such consequences can result in some of the following
deviations:

- demands for increase of the contract cost, unspecified in the contract
- decrease of the motivation for excellent performance in the supplier
- delay of the project deadlines
- omission in the documentation of the supplied services or information system
  components
- communication disruption
- decrease of the service level
- denial of access to data concerning the performance and use of the service

There is no universal approach for reduction of the risks of negative deviations in the
outsourcing relationship. Apart of the abovementioned careful specification of the IT service
and price estimation several other mechanisms can be used for leveraging the contractual
effectiveness. The use of SLAs for shaping the outsourcing process can decrease the
uncertainty of the relationship. The essence of SLA is the ability to measure precisely the
performance of the supplier based on the benchmarking tools available for many IT
applications. According to this level of performance is structured the remuneration of the
supplier. If there are several dimensions of measurement the emphasis can be based the
particular organizational need. For example for critical operations the weight of the uptime
and accessibility might be higher than the level of security and user friendliness. Also with
critical IT services as EPR, data processing, warehousing, network access etc. the outsourcing
public organization can push aggressively for punitive service level. Under this arrangement
the failure of the supplier to meet the required service level means endurance of undesirable
consequences as reduced price of the supplied service or decrease of the overall performance
marks. Other schemes are also possible but the essence is that the supplier decreases
significantly his profit margin if fails to meet the specified service levels. This system of
establishment of the unit price is flexible and favorable for the outsourcing organization.
Despite it seems logical to give more protection to the party that bears the risk of the service
provision in the long term relationships such asymmetry may turn into dysfunctional
antagonism. Many Bulgarian organizations commit exactly this error of overburdening the
supplier with restrictive clauses. At the beginning of the relationship the supplier is willing to
take this pressure, assuming that after the commence of the external provision of the IT
service the public organization will be in weaker position to resist reverse changes. The
strategic management of the contract requires not temporary prevalence of one or another
party but achievement of the goals of the outsourcing – access of the public organization to
qualitative IT service at better price compared with the market alternatives and the option for
in-house provision. In order to achieve this goal the contract must not only comprise punitive
clauses but mechanisms for stimulation of supplier’s good performance. Again the SLAs
provide solid ground for establishment system of incentives. The fair remuneration according
to the level of performance may motivate the supplier and prevent the escalation of
opportunism in the outsourcing relationship.

Another approach for motivation of the supplier of ICT services is the long term nature of the
outsourcing. The business organizations as opposed to their public counterparts have profit
maximization as main mission. This feature must be taken under strong consideration when
the outsourcing relationship is designed and especially in the part of the requirements to
supplier. If the supplier is has the confidence that his good performance will transform into
opportunities for new revenues it is highly likely that he will put more efforts in the contract.
The motivation can be boosted if the incumbent supplier gains preferences in the consequent
procurement process based on the successful completion of the initial contract. It would
constitute good practice for the public organizations to use the history of the bidder in
previous outsourcing projects be it in the same organization or in other public organizations.

The next step in the implementation of the outsourcing is the set up and maintenance of
effective system for control on the provided IT services. The research on ICT outsourcing in
the private sector leads to conclusion that the costs of administration of contract may reverse
the cost reduction into negative direction [Lacity, 1995; McFarlan, 1995]. Most of the
challenge of the outsourcing comes right from the capacity of the administration to adequately
monitor the performance of the transferred IT service. The logical conclusion is that if the
organization cannot control its in-house operations much less likely it is to be able to manage
the same service when provided by external supplier. In the case of the IT there is advantage
for the outsourcer that the IT services generally are easy to gauge due to their well-structured
infrastructure and communication flows. The IT market offers many on-the-shelf products for
monitoring of the performance of one or another part of the IT service. Even the monitoring
of the service can be deemed as separate service and outsourced or provided in-house.
However the software and hardware solutions for service level monitoring cannot substitute
the need for structured and analytical overview of the performance indicators. This analysis
must emphasize both on the qualitative and quantitative parameters of the supplier’s
performance. Some of the qualitative indicators might be:

- does the supplier document thoroughly and comprehensively the products he provides
  (application, access to service, network access, infrastructure maintenance etc.)
- is the product compatible with the specifications and the other IT components of the
  organizational system
- how easy or difficult the outputted data can be used by applications not provided by
  the supplier
- how comfortable are the users of the service with its interface and functionality
- does the supplier collaborate with the outsourcing organization to satisfy the need for
  particular ICT service

The IT poses another challenge for the organization, which wants to use external provider of
IT services. Even the most diligent and comprehensive analysis, based on reliable and ample
information, cannot predict in middle and long-term aspect the IT industry pace of
development. This uncertainty raises the question of how long the IT outsourcing should be.
On one hand the short contract brings significant administrative costs of needs assessment,
preparation and execution of procurement and achievement of functional compliance with the
supplier. On the other hand the long lasting contracts may put the outsourcer in deadlock if
new technology emerges but the contract makes impractical the change of its clauses. Because
of the large variance of ICT services there is no single authoritative answer to the question
“How long is good enough for IT outsourcing”. Here we see clear trade off between the
stability of the contract and the service level and the need for using the most optimal
quality/cost ratio, available on the market. It is very likely to see in the real practice the scenario in which public organization outsource IT service under conditions, which look appropriate at the moment of commencement. The emergence of new technology, standard or industry leader deprives the outsourcing from its initial benefits. The risk increases if in the meantime as result of the outsourcing the organization loses its internal capacity to analyze the organizational needs and the IT market. One possible option in this case is the adjustment of the contractual term according to the IT service type. For services with relatively low dependence on the rapid technological change the contract may provide for fixed period, which is believed to satisfy the organizational need. Such services can be: desktop maintenance, helpdesk, construction and maintenance of local networks etc. If the IT service is dependent to the rapid development of the technologies the contract may provide for periodical review of the service and redesign of the specification if needed. Redesign of the process is possible only if the supplier is capable to implement the transition from one technology to another. In this case the public organization must carefully analyze the savings opportunities of the new technology and to motivate the supplier to make the transition. Some of the services which may be affected by the change of the industrial level are network access, processing and storage of information, online transactions, e-procurement applications etc.

Termination of outsourcing contract

Even the most promising opportunities for outsourcing of IT services may prove to be ineffective. Each of the essential steps of the outsourcing process can be affected by insufficient information, opportunistic behavior of the parties, market failures and abrupt political or industrial changes. In this aspect the termination clauses must appear in every contract. The nature of the outsourcing of ICT makes this requirement even more obvious – the abundance of risks must provide for safe exit from relationship in which one of the party do not want or can not fulfill its obligations. The specifics of the public sector also pose some risks on the implementation of the outsourcing:

- the annual budget circle in the government sector may result in later budget cut offs which may affect the contractual compliance
- the instability of the public administration sector may affect the contractual relations of organizations under reorganization or discontinuance

Termination of the contract invokes risk of disruption of the IT service provision. For the high-risk services as data processing and storage, network access, authorization services, e-mail services, intranet maintenance and applications serving the core organizational functions contract disruption may cause impact the business of the organization. Such outcome of the outsourcing relation is unacceptable for every organization, be it public or private. In order to prevent the probability of such negative outcome the organization must protect its capacity for strategic planning and IT management. When the contract cannot work under the specified conditions or the supplier fail to perform at satisfactory level the outsourcer has two options: to in-source or to substitute the supplier with another supplier. Both options have their hidden challenges but the common feature is that if the organization has lost its strategic IT capabilities the dependence to the incumbent supplier will seriously threat the possible alternatives. Again here the IT services have their own specific features, which must be regarded at every step of the outsourcing process. If the service is not based on standard technology the transitioning cost to in-house provision or another supplier may be significant. Another risk is the possible conflict of interest between the first and the second suppliers –
inevitably they will be competitors at the same market. The option of in-house provision reveals another challenge. For the contract period the efforts of the public organization had been focused on monitoring and evaluation of the contract. In order to take over the operational aspects the organization will have to develop human resources and management practices. The readiness of the outsourcing organization to continue the internal provision of the service may be differentiated according the extent of the outsourcing. If the organization outsourcers all of its ICT services than it is reasonable to expect that the capacity for internal provision is significantly reduced. On the opposite if the public organization had undertook only selective outsourcing than the continuation of the outsourced ICT service may be supported by the IT staff and infrastructure. Although there are remedies for unsuccessful outsourcing the public organizations must put the best of their efforts to assess correctly the opportunities for external provision of ICT services and if once outsourcing has took place the public managers must manage it in a way that will safeguard against additional expenses or service disruption.

Organizational data

Problem, which arises in case of change of provider or return to internal service provision, is the storage and transfer of the data collected and processed during the external provision of the IT service. The data may concern either the core function of the organization (i.e. transactions database, customers database etc.) or the indicators of the provided ICT service (i.e. log files, systems parameters and statistics etc.). With special care must be treated the access, use and storage of the former type data. These data usually are subject to regulation by privacy, access to public information and classified information legislation. During the outsourcing of ICT service the outsourcing organization is not rescued from abiding these so-called information legal provisions. It is in the burden of the public organization to organize the process in a way, which will guarantee the compliance with the legal acts. The question here is how can the public organization vindicate itself from being accused of opening sensible data to non-public organization. Two approaches are available here: first the processes of service provision can be designed as to disallow access of non-public employees to the data. To achieve this goal the IT service should have the functionality to limit the data access according to the character of the data. The outsourcer may have physical and/or logical control on the levels of access and establishment of security protections. In the network services the utilization of protocols like SSL\(^3\) and SET\(^4\) and technologies like VPN\(^5\) and PKI\(^6\) can add additional protection. The other approach is analogous with the practices of the commercial banks where the employees sign declaration of non-dissemination of information. Such stipulation can be put either in the contract with the supplier and at individual level with supplier’s employees.

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\(^3\) Secure Socket Layer. SSL is network protocol using public key to encrypt data that’s transferred over the SSL connection in Internet.

\(^4\) Secure Electronic Transaction. SET is network protocol as well. Its main feature is the support of secure credit cards transactions via Internet.

\(^5\) Virtual Private Network. Technology for using Internet as secure mean of connection between private nodes.

\(^6\) Public Key Infrastructure. System of digital certificates and hierarchical Certification Authorities which provides authentication in open network environment.
The outsourcing contract must also regulate the post contract treatment of the data. Bering in mind the special conditions for access and dissemination of public information the IT service supplier must transfer all data nevertheless the media on which they are stored. The term data in this case should include the data itself and all other derivatives like reports, queries and excerpts from the data. Failure to proved the transition of all data from the supplier may result in compromise of the whole outsourcing and to overshadow all benefits of the process. The digital character of the public information produced as result of IT services and the ease of multiplication may once again raise the question of the expediency of outsourcing of IT services from the public sector. In the public administration literature the question of the hierarchy of values is far from settled and the outsourcing issue can pour oil in the fire of the argument. If the effectiveness is not the supreme value for the public sector then how suitable is the exposure of public information to non-public organizations. The counterpoint of course is the unwillingness for spending public resources when the market offers better solutions. This trade off makes the evaluation of the outsourcing opportunities of ICT services extremely difficult and sensible matter.

The protection of the personal data may pose analogous questions as the access to public information. Potentially the privacy regulations and requirements may increase the cost of the ICT service, which means that the public organization and the supplier must address them at the early stages of the process. Again like in the case of the access to public information the privacy rights cannot be affected by the mere fact that the service is provided by private and not public organization. First the responsibility for the service provision bounds the liability of the public organization and second the private organizations are also subjects of the privacy regulations. Moreover although slowly in Bulgaria the rights of access to information and personal privacy gain status as substantial control mechanisms over the performance of the public administration. The outsourcing cannot be used for rescuing the public organization from this form of control.

**Conclusion**

The outsourcing can be valuable managerial tool for the public administration in time of reassessment of the paradigms in the public sector. After the privatization of the real assets the services will be the next target for divesting the state from its market functions. To achieve the gains of the external provision of services however many challenges must be identified and properly solved. Following analytical framework based on the specifics of the public sector and the IT the public manager can build successful practices of public-private partnership. It is the future of the public administration to involve as many social actors in the process of administration and to create partnerships rather than authoritative chains.

Although the outsourcing of IT has enormous amounts of risks the key to successful achievement of its goals is the management. All of the failures that we encountered in Bulgaria have their origin in the lack of managerial capacity to implement complex projects. With careful and diligent analysis at every step of the outsourcing process the risks can be identified with some level of certainty, which can be embodied in the administrative decision.
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