Information- and Communication Technology (ICT) and Local Power Relationships: An Impact Assessment

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Abstract: This paper is grounded in the empirical reality of a growing use of information- and communication technologies (ICTs) in public administrations. Generally, ICTs are being introduced in an organization in order to increase operational efficiency, quality, and transparency. But, besides these intended effects, the introduction of ICTs also leads to substantial changes in the power relationships among all involved actors. As a result of ICT-enhanced operations, some of the actors will increase their power, while others will loose some of their power. This paper therefore studies the implications of ICTs on the power relations in local administration settings.

Keywords: Information- and communication technology (ICT); local administration; power relationships; stakeholder theory; state transformation; electronic governance

1. Introduction

Generally, information- and communication technologies (ICTs) are being introduced in an organization in order to increase operational efficiency, quality, and transparency. Thus, most research focuses on such issues. However, besides these undisputable gains, the introduction of ICTs also leads to substantial changes in the power relationships among all involved actors. Consequently, and as a result of ICT-enhanced or modified operations, some of the actors will increase their power, while others will loose some of their power. So far, little research has been done on the impact of ICT on the power relationships between organizations. The existing literature does not properly conceptualize the issues of power between the public sector and its stakeholders in the context of ICTs. This, however, has to be done if one does not want the public sector to loose some of its power when making use of the ICTs.

In this paper we will therefore study this question by focusing on the local level. We work with a stakeholder approach and have identified the relevant stakeholders of a local administration. On the basis of our stakeholder model, we will systematically analyze the change (increase/decrease) of power in the relationships between the administration and the identified relevant stakeholders. We will finally try to assess who wins and who looses power as a result of the introduction of ICTs in the relationship between the local administration and its stakeholders. As such, our paper is a contribution to further theorizing the way the public administration adapts thanks to the ICTs.

We will, in a first section, define the three main conceptualizations of power. In a second section we will describe the different stakeholders of the local administration and outline our stakeholder model. In a third section we will describe the characteristics of ICTs and their general impact on organizations, particularly on public administrations and on power relationships. In a fourth section, we will then systematically analyze the different situations in which the ICTs play a role in power relationships between the local administration and the identified relevant stakeholders in our model. In a final step we will translate these observations in terms of gain or loss (increase/decrease) of power for each actor in the stakeholder model and show the shift in the balance of power.

2. The categories of power

Our starting point in this section is that power and power relationships are part of organizational life. It is obvious that power does play a key role in organizational change in general and in transformation of the public sector in particular, even though the theories about organizational change do not give due credit to such power considerations at all. Indeed, the administration cannot afford to ignore its stakeholders while making use of the ICTs when accomplishing public tasks.

We refer here to the classification of power in organizations proposed by Finger, Mercier and Brand (Finger, Mercier et al. 2000: 2). There are indeed basically three ways of looking at power in general, and at power in organizations in particular. Power can be either seen as an attribute of an actor, which is the original political

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science approach, as a structural phenomenon, which is the sociological approach, or as being located in the interface between actors and structures, which is the so-called structuration-theory approach. We will now briefly present each of these three approaches of power. Power as an attribute: according to this approach, actors have different degrees of *power depending upon* their *resources* (e.g., financial power), their reputation (reputational power), or their ideas (epistemic power). In all three cases, power resides with the individual actor and stems from his or her attributions. Today literature mostly refers to stakeholder theory, whereby multiple actors and multiple goals coexist. In this context the interaction of the various actors with power is becoming increasingly complex. This means that, though the actors still have the attributes of power, their leeway is diminishing parallel to the growing amount of relevant actors.

Power as domination: this approach is grounded in the idea that the organization is basically a ”mini-society”, i.e., a complex social structure composed of multiple interests and groups representing them. Among these interests some are incompatible, thus inevitably resulting in conflicts. Given this, different actors seek to impose their will upon other actors by using both formal or informal norms and means. However, the means used are less related to the actors and their attributes, than they are to the organizational structures and institutional arrangements. This sociological approach sees *organizational rules and structures* as a means to exert domination of the actors inside an organization.

Power as relation: a third way of looking at power is to locate it in the interface between actors and structure, an approach also called “structuration” theory. Michel Crozier (Crozier 1963) says, that actors struggle for power, more precisely, they struggle for the ability to define the norms and the rules, which structure the environment they operate in. In doing so, their rationality is quite limited, i.e., significantly surrounded by uncertainty: the *control over* a certain span of *uncertainty* thus equals power. Oppressed actors strive for certainty, which allows them to better strategize, while actors in power try to preserve as much uncertainty as they possibly can. There are two sources of uncertainty, i.e., expertise and hierarchy. For Crozier, power always results from a dialectical process of negotiation among actors on the one hand and between actors and institutional rules and norms on the other. As such, power depends upon the mastery of spans of uncertainty, more precisely upon the depth of uncertainty one can master, upon the pertinence of this uncertainty, as well as upon the degree to which one can manipulate previsibility. Consequently, according to this approach, every actor in an organization or in a network will try to increase its ability to control uncertainty in order to better strategize. This approach corresponds to the behaviorist’s view, which defines power as the ability of an actor A to get another actor B to do something, either by influence, by coercion, by authority, by force or by manipulation (Lukes 1974).

In this research we will focus on the third approach of power, the structuration theory. This approach includes the arguments of both previous approaches, since attributes (resources, reputation, ideas) and organizational rules and structures are elements, which determine the ability of an actor to control uncertainty and thus the ability to better strategize. Besides, it might be more correct to describe this approach as a conceptualization of control over uncertainty than as a conceptualization of power, but as we have stated above, there are several reasons why an increased ability to control uncertainty also means increased power. Consequently, if we want to measure the influence of ICT on the relative power position of an actor, we have to look at the elements, which determine its ability to control uncertainty, to strategize and to negotiate with other actors.

In order to discuss the influence of ICTs on the relative power position of a local administration, we have developed a stakeholder model, which we are going to discuss in the next section.

3. The stakeholders of the local administration

Stakeholder theory is primarily a theory of the private-sector firm. But despite this fact, the insights from this theory can be applied to public sector settings, and in particular to the context of managerial decisions regarding major e-Government initiatives. Such application is facilitated by the fact that public management responsibilities begin to resemble private-sector management tasks not only formally but also regarding the emerging network-nature of organizations in both spheres (Scholl 2001: 18). Even though most public-sector managers perform their tasks for different ends (e.g., public interest) as opposed to their private-sector counterparts (e.g., survival of the firm, or profit), their decisions have the same capacity to affect individuals or groups when pursuing their organization's objective. Therefore, in order to measure the change in the power relationship between the local administration and the stakeholders, the first objective is to identify all

involved actors. On the basis of an in-depth analysis of literature (e.g. (Bovaird 2005); (Frey 2003); (Riedl 2004)) we have identified the following nine stakeholders of a local administration:

- Citizen: by citizen we mean all functions of a private person, i.e., a user of services, a taxpayer, a voter, etc.. This first stakeholder group influences the local administration through elections and votes, but also in their daily interaction with the administration and indirectly through their interaction with politicians. The growing use of Internet in society will, most likely, lead to an increased pressure on administrations to deliver their services online.
- Business: as a basis of economic welfare, businesses greatly influence the political-administrative system and are in constant interaction with it. In the context of e-government, the particular pressure of businesses on administrations arises from the fact that, generally, private sector organizations are technologically more advanced than the public sector and demonstrate the existing technological opportunities. In addition, private operators sell products and services to public sector organizations.
- Other public administrations: administrations of national (federal) and regional (cantonal) level as well as other local administrations are – in particular in the federalist system of Switzerland – in daily interaction with the local administration and thus represent one of the most important stakeholder group.
- Politicians: political actors and the executive body, as for instance the president or the municipal council, influence administrative activities through their decisional and instructional authority. In addition, the question of the (optimal) size of an administration is a political decision and a consequence of the priorities, which politicians assign to a public task. Furthermore, civil servants are mostly nominated by politicians, sometimes on the basis of their political orientation and favoritism. Simultaneously we can observe a large politization of civil servants, certainly due to the relatedness of the tasks. In return, the current technological evolution causes some changes in this situation: according to Finger and Genoud "…*it is the administration which most of the time defines the terms of the contractual relationship it engages with the executive body. In other words, in this new strategic relationship with politics, there is a strong information asymmetry in favor of the administration. If the executive body signs the contract, and thus to a certain extent remains in control, the legislative body is totally left out of the picture.*" (Finger and Genoud 2000: 243).
- Parliament and Justice: both the parliament in its legislative function, and the justice, whose decisions are precedent-setting, define the rules and the framework for administrative activities and interactions with third parties. In return, the administration owns the „institutional memory", the knowledge of the dossiers, the know-how and the experience. Thus, to the extent that the administration elaborates law propositions, it also has power (Blankart 2000: 159).
- NGO's / IO's / Associations: Non-governmental organizations and international organizations as well as political parties and other interest groups influence – through their lobbying – the political-administrative system and its decisions. In addition, they participate in the elaboration of laws and regulations and thus co-define the framework for administrative activities.
- Media: administrative employees use media as a source of information. In addition, media in their role as public opinion maker, determine the choice of news and topics. By choosing specific topics and by specifying their importance, a phenomenon commonly called agenda-setting, media deeply influence the public opinion. Finally, media also expose dysfunctions in the public sector, especially in the administrations.
- Foreign countries: the more a state interconnects with the rest of the world, the more its institutions – especially the administrations – have to match the rules and regulations of the foreign countries. This constraint, however, varies according to the size, the economic and the military power of the country in question. In the actual European context, foreign countries significantly influence the political-administrative system of Switzerland and the pressure for Euro-compatibility increases.
- Employees: the power of an administration largely depends on the characteristics of its employees and on the relationship between them. Finger describes this fact as follows: The success of an organization is largely dependent upon its ability to maintain control of its participants (Finger 2004: 18).

Consequently, employees also have power over the administration. Besides, this category also includes trade unions of civil servants. These associations exercise considerable influence on the relative power position of an administration as a whole.

In summary, all of the stakeholders described above influence and are themselves influenced by the actions of the local administration. After having identified the involved actors of the local power relationship, we can now draw our "stakeholder model of the local administration":

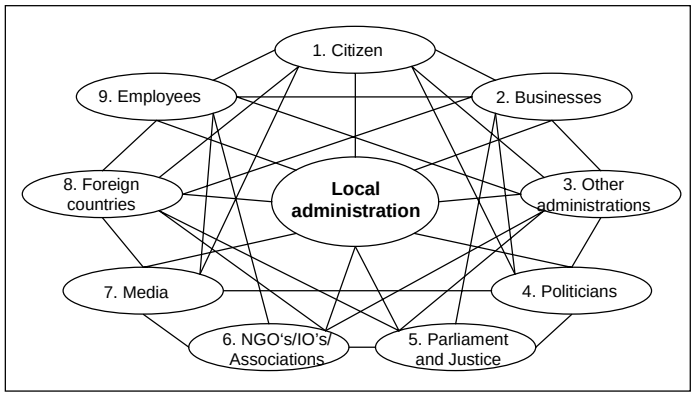

Figure 1: The stakeholder model of the local administration

In this model we have numerous interrelations between the involved actors. According to our definition, the relative power position of each actor in this situation varies depending upon his ability to negotiate, to strategize and to control uncertainty.

4. The characteristics and impact of ICT

In this section we will first describe the general impact of ICT on *organizations*. In a second step we will analyze the specific impact of ICT on *public administrations*. In a third step we will then give an insight in the literature on the impact of ICT on *power relationships* in organizations, particularly in public administrations.

4.1 The general impact of ICTs on organizations

The introduction of ICTs, by which we understand hardware, software, storage technology, Internet and other digital communication technologies, generally contributes in both private and public sector organizations to an improvement in three critical domains, which are efficiency, quality, and transparency (Brücher, Scherngell et al. 2003: 11):

4.1.1 Efficiency

Efficiency consists of two elements, namely *time* and *cost*.

Time efficiency: as a result of work process acceleration through standardization, digitization, and automation, but also as a result of faster information processing and accelerated information procurement, ICTs tend to increase time efficiency.

Costs efficiency: The introduction of ICTs in an organization generates both costs and benefits that can be summarized as follows (Fichman 2004: 720_04_11, 22): On the one hand, we have tangible costs for hardware, software and telecom services as well as costs for development, implementation and training professionals. On the other hand, there are also intangible costs such as lower morale of the employees (as a consequence of automation and less responsibility) and costs for the disruption of operations. On the other hand there are also benefits resulting from the use of ICTs: both tangible benefits such as increased cash flows, increased productivity, lower operational costs, reduced workforce, lower expenses and lower facility costs and intangible benefits such as organizational flexibility, more timely information, better decisions, organizational learning, employee good-will, job satisfaction, client satisfaction and improved corporate image.

4.1.2 Quality

The use of ICTs – in comparison to manual work – reduces mistakes and leads to an optimization of the stakeholder (client) benefit through proximity and online-services, as well as to administration-internal knowledge optimization (knowledge management / knowledge sharing). Generally, ICTs do not only digitize existing processes (e.g. from paper based to web based transactions), but also transform processes or even lead to the creation of new processes. According to this, we can distinguish 3 categories

of impact of ICTs on processes: reproductive, transformative, and disruptive.

4.1.3 Transparency:

ICTs enhance the overall transparency: This consists of transparency of suppliers, prices and availability, as well as organization internal transparency (tracking & tracing). ICTs also enable optimization of organizational structures that is less hierarchy, less bureaucracy, and more flexibility, which, again, improves the overall transparency.

4.2 The impact of ICTs on public administrations

In the previous section we described the general impact that ICTs have on organizations. In this section we will now describe the specific impact of ICTs on *public administrations*. The impact of ICTs on public administrations resembles in various domains the impact of ICTs on businesses: Previously ICTs only had a function of support. Today, ICTs are of strategic importance on which depend the competitivity and survival of any private company. With every innovation in the private sector technological possibilities get evident and the pressure grows to introduce these technologies also in the public sector. But, simultaneously, there are substantial differences between the private and the public sector: *"…the development of government reform is not likely to resemble the growth of private sector reform. In the economy efficiency gains and cost savings are rewarded through profits, promotions etc. whereas gains in public sector are rewarded with budget cuts, staff reductions, loss of resources and consolidation of programs."* (Fountain 2001: 13). Hence, governmental institutions cannot simply copy the concepts applied in commercial domains. The most significant difference between the public and the private sector is that governments do not sell products to customers in a competitive environment. Rather, they provide well-defined services where, in most cases, the client-citizen is forced by laws and regulations to demand a service from a monopolistic provider (Wimmer, Traunmüller et al. 2001).

In summary, the upcoming use of ICTs in government and society impacts the public administration in several domains, which can be categorized as follows:

4.2.1 Legal domain

The use of ICTs in administrations contains legal implications, since security, privacy and confidentiality issues are concerned. E-Government reforms represent new challenges for lawyers and jurisdiction, since governmental activities are highly regulated and driven by legal framework such as constitutions, laws and regulations. Technology modifies these rules and therefore the use of ICTs for public action requires adaptation of laws in order to make e-Government solutions legally binding, especially in regard to issues such as electronic signatures, electronic documentation, electronic communication among governmental agencies and citizens, networking of authorities and common databases, data protection and data security and access to public information.

4.2.2 Structural/Organizational domain

ICTs are enabler for new forms of coordination, control and communication and thus enabler for organizational change. Generally hierarchy in the administration is gradually replaced by network, from bureaucratic to network and circular organization. In fact, the reality proves that administrations are increasingly organized in terms of virtual agencies, cross-agency and Public-Private-Partnership-networks. In return, administrations neither deal with the habitual stable and localizable stakeholders anymore, but with volatile and permanently changing networks, e.g. business networks, third-sector networks or citizen networks, which are organized in the Internet. In a networked administration, civil servants will also have to change their habits regarding their production and storage of documents by structuring and adapting them according to standards, often defined on upper administrational levels.

4.2.3 Financial domain

The introduction of ICTs in the public sector is related to high acquisition and maintenance expenditures. In return, these investments will generate economies by rendering front-office and back-office work processes more efficient. Thus, various statistical and mathematical models have already been developed to evaluate the financial impact of ICTs on organizations and of e-Government initiatives on administrations.

4.2.4 Relational domain

The introduction of new ICT work tools leads to a redistribution of skills and competencies among the internal (employees) and external (stakeholders) actors of an administration. ICTs lead to a redefinition of the operating modes by creating new opportunities and making obsolete old practices. The contact between the different actors becomes timeless and placeless and geographical boundaries loose their importance.

The new possibilities of communication lead to a direct and informal contact between the stakeholders and the administration. With this, the distance, which currently characterizes the relationship between civil servants and citizen, will be partly broken down. Furthermore, ICTs improve the ability of civil servants to respond to specific duties such as the duty of information and the principle of publicity of administrative activities. But, at the same time, the new technological possibilities also lead to growing requirements of the stakeholders of the administration, namely regarding availability, quality, timeness and transparency of public services and the growing use of ICT tends to increase the digital divide among the stakeholders, since an increasingly digital administration favors those with access to computers.

In short, today everybody agrees on the fact that ICTs have important implications for the administrations on legal, structural, financial and relational level. These implications have been widely discussed in literature. However, literature on the *relational* implications of ICTs does not properly conceptualize the impact of ICTs on *power relationships*. Although some scientists mentioned this issue, it has been widely ignored in literature so far. Thus, we are going to address this topic in the next section.

4.3 The theoretical impact of ICTs on power relationships

Today organizations strongly depend on the expertise of internal and/or external technological professionals. The dependence of administrations on such professionals provides these actors with critical power, since they control an essential resource of the organization. In fact, besides the intended cost, time and quality impact the growing use of ICTs also leads to unintended impacts, such as a redistribution of power among the involved actors. As described above, administrations are increasingly organized in networks. But networks vary greatly in structure and in how power and other resources are distributed. One can expect that powerful actors in the network will try to use ICTs to retain or even gain power. In contrast, less powerful actors might use the new technological opportunities to try to restructure the network to be more equitable. These types of power struggles and negotiations characterize the enactment of information technology in public administrations. (Fountain 2001: 82). In this sense ICTs can both contribute to a reinforcement of existing power structures and, at the same time, represent an opportunity for the evolution of existing power structures. Internet may be considered either as a force to increase the responsiveness of government to its citizens or as a means to further empower the state. Internet threatens domination by the state over information and communication and information systems are vulnerable to white-collar criminals, hackers, “bugs” or errors in computer programs. Networked connections further increase this vulnerability. But, at the same time, paradoxically, ICTs serve as an instrument of surveillance and control over society (Fountain 2001: 3). Possessing information equals possessing power. Consequently, sharing power also means sharing influence and capacity of action.

The introduction of a new work tool (such as the ICT) in an organization represents an important change which inevitably leads to a redistribution of power (Finger 2001): Every transformation in an administration changes the power relationships and causes « political » reactions among the involved actors. In clear, every change in an organization, and the introduction of a new work tool is an important one, generates informally but inevitably a redistribution of the resources within the organization according to the competencies of each actor, thus a redistribution of power which threatens the status of some actors. Change is likely to change both the formal rules (structures and processes) and informal rules (culture), thus defining the (power) relationships among the actors (Finger 2004: 48). Finally, reforming and modernizing an administration, as every other organization, is a generator of tension which threatens the individual status and qualifications of every actor (Brousseau 2002: 8). This evolution in the state also affects the stability of the economy and civil society. Max Weber focused on the state as an institution whose structure has a significant effect on civil society. As fundamental modifications in these organizations accumulate, so proceeds change not only in the relationships between governing bodies and civil society, but also in the relationships within the economy and society. Hence, structural change in the state modifies the power relationships between public and private organizations, between government and civil society.

5. The impact of ICT on power relationships in our stakeholder model

In the previous chapter we outlined the impact of ICT on public administrations on the on hand and on power relationships on the other hand. In this section we will now analyze the different situations in which ICTs play a role in power relationships between the local administration and the identified

stakeholders and try to evaluate the impact on the actors in our stakeholder model. Therefore we are going to analyze the impact of ICTs on the critical elements, which determine the ability of an actor to control uncertainty, to strategize and to negotiate with other actors, thus the impact on the critical elements that determine the relative power position of the actors in our stakeholder model.
The main elements in this context are:

- Cost and time efficiency (e.g. communication- and search costs, work volume handled)
- Quality of decision-making (e.g. quality and quantity of sources of information, decision-support tools)
- Dependence on third parties (e.g. outsourcing, co-sourcing)
- Vulnerability (e.g. external influence, number and nature of errors and/or security regulations)
- Ability of surveillance (e.g. number and nature of control tools)
- Organizational transparency (e.g. hierarchy, centralization/decentralization)

In order to evaluate the impact of ICT on these critical elements we are going to analyze each stakeholder separately:

5.1 Citizen

5.1.1 Strengthening of the citizen:

The ICTs match the deeper process of societal and cultural transformation, a process that they tend to reinforce. Thus, the introduction of ICT is part, or even supports this transformation of the relationship «citizen-state» to a relationship «consumer-state». The consumer is characterized by a less engaged behavior and more strategic than a citizen (Finger 2001: 353).

Nearly all forms, laws and rules can be downloaded on an administration's website. This leads to a decreased information asymmetry between the administration and the citizen.

5.1.2 Strengthening of the local administration:

Information is power: The ability to locate information from anywhere thanks to centralized databases as well as the fact that communication and search costs are virtually zero, increase the power of the administration. In addition, the fact that civil servants can locate all necessary information for each transaction eliminates the previous risk of falsification of documents, when citizen had to collect papers from different administrations and bring them to the local administration. The integration of laws, rules and regulations into information systems further increases the power of the administration, since less errors will be made with the evaluation of citizen demands.

5.2 Businesses

5.2.1 Strengthening of the businesses:

Since most information technology experts are under contract with private companies there will be a growing dominance and influence of private consultants and operators within information-based administration. Public-private-partnerships as means of improving production processes and gaining market efficiencies are frequent today and especially ICT-partner have considerable influence, since the designer of an ICT-system influences how the system is used (Guyaz 2001). Yet, information architecture is more than a technical instrument, it is a powerful form of governance.

In addition, with the outsourcing of ICT-tasks administrations become more and more dependent on private consultants and operators: they loose control, lack technological innovation, loose their strategic advantage and have to take into account high „switching-costs" in the case of a change of operator. In addition to this, security and confidentiality problems emerge when third parties get able to access administrative information. A related problematic is the "brain drain" of ICT professionals from government to the private sector, ironically to companies that specialize in selling digital government solutions to public agencies (vgl. Fountain 2001: 203). Private sector vendors of digital government and professional service firms have aggressively targeted the construction and operation of the virtual state as an enormous and lucrative market. This situation is unhealthy with a risk of derives and the launching of projects which can be far away from the real needs of the administrations and the users, but corresponding to the vision of the external experts. The reorganization of the private sector in networks and decentralized units also hides some major fiscal problems, since administrations are generally bound on territories. For instance, electronic commerce profits from the delocalization effect of taxable services and from the absence of an accounting system that controls cross-border transactions over the Internet. Most of today's taxes can't bypass physical borders and fiscal sovereignty can only take place within a territory (Ossipow 2000: 276, 277).

5.2.2 Strengthening of the local administration:

However, outsourcing of ICT-tasks also has positive impacts on administrations. There are cost savings through efficiency gains, easer transition to new technologies and the administration can better focus on the core business. Finally, private companies can better handle demand peaks and better provide ICT-management staff.

5.3 Other administrations

5.3.1 Strengthening of the other administrations:

As described above, the state becomes increasingly networked through information systems, not only by public-private partnerships, but also by interagency arrangements and intergovernmental agreements that join federal, regional and local administrations. Shared databases are not possible without standardized data. However, standardization, catalyzed by the Internet, represents a significant rationalization of agency processes

> *"First, standardization renders redundancies across agencies transparent. Second, standardization weakens the rationale for different agencies collect identical data. Third, data standardization suggests new forms of analysis. Fourth, structural changes are inevitable as redundant data collection by different agencies is eliminated. The political battles revolve around which agencies will win and which will lose ownership of the data."* (Fountain 2001: 27).

A centralized database is likely to be under the ownership and control of a central, federal administration, which implies loss of control for the local administration. Furthermore, to ensure cooperation between the different administrative levels, ICT solutions have to be compatible and the central (federal) administration is likely to impose its standards to the lower administrative levels.The tendency of this evolution is clearly visible: In future, administrations will be organized in (intergovernmental) networks, in which different nodes will have different degrees of power. Especially federal administrations, which control the centralized databases, will significantly increase their power.

5.3.2 Strengthening of the local administration:

Networked cooperation and shared databases among local administrations open wide access to new knowledge and offer opportunities for benchmark with other local administrations, while such opportunities are more limited for the central administration.

5.4 Politicians

5.4.1 Status quo:

Administrative reforms, such as e-Government initiatives, largely depend on political decisions. In return, administrative reforms also influence and push for political reforms. Therefore, we can observe a situation of status quo between politicians and the local administration and the power balance remains stable. Finger describes this fact as follows: „*…one can anticipate that either administrative reform will be pushing for political reform, thus significantly increasing the power of the administration over politics, or administrative reform will be slowed down, if not stopped, by political foot-dragging."* (Finger and Genoud 2000: 233)

5.5 Parliament and Justice

5.5.1 Strengthening of the local administration:

There is a fundamental conflict between the rapid evolving technology on one side and the rigid laws on the other side. The legislative body cannot catch up with the rapid technological evolution when formulating new laws and rules in order to regulate the newly gained managerial autonomy of the administrations.

> *"The legislative body, therefore and so far, is the main loser of current administrative reforms. Indeed, while the administration and the executive body, often supporting each other against the parliament, acquire substantial decision-making power as a result of the newly gained managerial autonomy, the traditional instruments of legislative control remain the same."*(Finger and Genoud 2000: 243)

5.6 NGO's / IO's / Associations

5.6.1 Strengthening of the associations:

As described above, administrations become increasingly networked through information systems, not only by intergovernmental agreements and inter-agency cooperation, but also by public-private partnerships or cooperation with third parties, such as Non-Government-Organizations and associations. Consequently, these third party actors access, to a certain extent, administrative information, which threatens domination of the administration over information.

5.7 Media

5.7.1 Strengthening of the local administration:

Previously, media were an important source of information for administrations. With the rise of the Internet, the traditional way of communication "one-to-many" is counterbalanced by the new structure "many-to-many".In other words: Previously, every administration had the same information and the press diffused a kind of common sense and shared values. Today, administrations do not depend on the information of traditional media anymore, but can obtain individualized information over the Internet. In addition, even for job-advertisements administrations can increasingly bypass traditional media by putting such announcements directly on the administrations' website.

5.8 Foreign countries

5.8.1 Strengthening of the foreign countries:

As outlined in the introduction, foreign countries significantly influence and determine administrative processes of a specific nation state. So does, for instance, the European Union currently with Switzerland. With the rise of the ICT-based administration this already existing pressure for data standardization and compatibility that match international standards further increases.

5.9 Employees

5.9.1 Strengthening of the employees:

Computerization has made it possible to combine many excessively specialized positions into enlarged jobs. The aggregation of tasks, in which operators are given more responsibilities using computer-based information processing and "decision support tools", is often described as "empowerment" or "job enlargement". Decision support systems give employees low in hierarchy the ability to make decisions because the rules they are to follow are embedded in software rather than in the decisionmaker. With the Internet, information has been largely individualized and the flow of information becomes largely incontrollable. Before, mail was distributed through a hierarchy, now information flows horizontally and is hardly controllable by superiors. The use of mobile phones reinforces this tendency. Conversations bypass hierarchical control and traces increasingly disappear (Guyaz 2001).

5.9.2 Strengthening of the local administration:

The employees' liberties are limited by the software and visible to the superiors thanks to the ability of ICT to monitor, capture and display the employees' activities and to produce detailed periodically reports. Consequently, the bureaucratic state moves from direct supervisory control to information based control. Employees operate under tighter control, since the rules, routines, procedures, knowledge, expertise and problem-solving are formalized and embedded in computer code. If any data is missing or a rule not respected, the process cannot be continued, thus limiting the power of the employees.

By the same time, some of the employees are being replaced by computers. Much of the routinized information processing that was previously performed manually, is now handled by computers. In other words, ICT formalizes the knowledge and know-how of skilled workers and thereby makes it independent of those. However, a forecast of the effects of ICT on job *quantity* is difficult to perform. On the one hand human labor will be replaced by automation; on the other hand additional professionals will be needed for implementation, exploitation and support of ICT-systems. However, the new jobs will probably not counterbalance the lost ones. But one thing is sure: There will be a *qualitative* shift in the job profiles of administrative employees, driven by the ICTs.

6. Conclusion and final remarks

It appears clearly that the introduction of ICT in local administrations and their relationships is not a neutral thing. It comes to a redistribution of power among the various involved actors. But there is no general rule that describes the overall impact of ICT on local power relationships. In addition, ICTs as such do not diminish or increase power, but they do change the contours of the playing field and some of the rules of the game. We want to show now the shift in the balance of power in our stakeholder model. Previous to the introduction of ICTs we had a power balance between the administration and the stakeholders, as represented in figure 2:

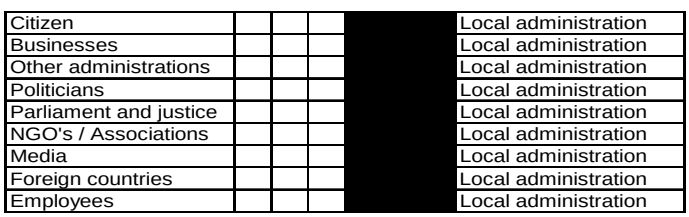

Figure 2: Local power balance before

The black parts in this figure are the power shares of the local administration, the white parts are the power shares of the stakeholder in question. With the upcoming use of ICT the power balance in our model experiences a shift according to the arguments described in chapter 5 and the relative power position of the actors increases or decreases as represented in figure 3:

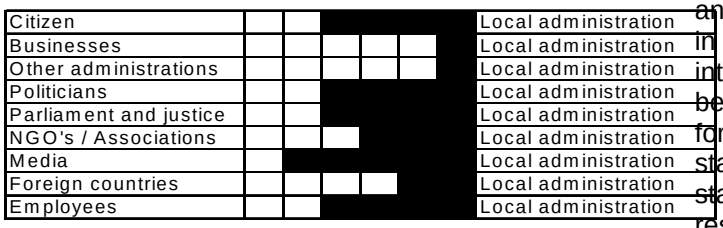

Figure 3: Local power balance after

Thus, our resulting stakeholder model contains an underlying tension in terms of power imbalance.

The most evident conclusion is that the introduction of ICT in our stakeholder model, if not counter-balanced by any control mechanisms, heavily decreases the power of the local administration against businesses and other administrations.

A next step in this research will be the attempt to answer the question, whether the administration, in totally, wins or looses power thanks to the introduction of ICT. Therefore all stakeholders can be classified by importance by using categories, for example primary, secondary and tertiary stakeholders. According to this classification the stakeholders will be weighted and the individual results added in order to obtain a total.

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