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## E-governmental services in the Baltic Sea Region

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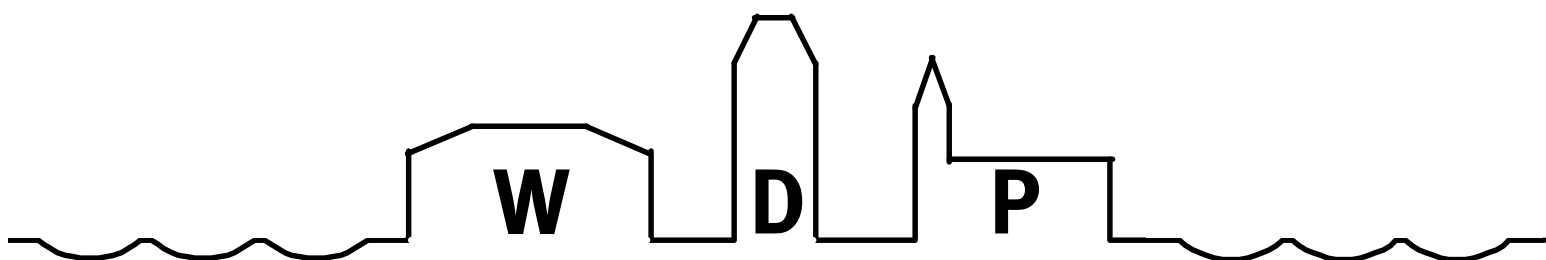


Fakultät für Wirtschaftswissenschaften  
Wismar Business School

Maria Lille, Gunnar Prause

E-Governmental Services  
in the Baltic Sea Region

Heft 10 / 2009



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## **Abstract**

This paper will present results of the surveys and new trends which were related to e-governmental issues. A common understanding of e-government is usage of ICT means in the public sector for delivering information and services to its customers and enterprises. The objective is improvement of public services and strengthening democratic processes. E-government is a popular topic in the political agenda throughout the Baltic Sea Region (BSR) with all countries having ICT development strategies, policies or agendas. However, often are missing goals for thematic developments which would take into account the needs of potential users.

The structure of the paper is ordered to present firstly, the overall objectives of e-governance and e-services. Secondly, the data about the satisfaction level of enterprises for e-services is given. As there are not many comparable results available about the needs of the enterprises, the paper is based on two main sources. One of the important outcomes of the LogOn Baltic project was to provide empirical data about satisfaction level of enterprises with existing e-services and about the needs for new services. The aim of the INTERREG III B project LogOn Baltic was to present solutions for improving the interplay between Logistics and Information and Communication Technologies (ICT) competence and spatial planning, strengthening the small and medium-sized enterprises' (SMEs) competitiveness in the BSR. The ICT-related results of the LogOn Baltic project provide an overview of the existing ICT structures and services in the BSR, mainly based on a web-based scientific survey with nearly 1,100 responses. A second source is the survey on the satisfaction level with public services among enterprises in Estonia in the City of Tallinn, which shows similar trends with the LogOn Baltic project. The third part of the paper introduces some case studies on innovative e-services in Estonia and Germany together with the European initiative for the BSR to improve e-services for companies.

## **I. Introduction**

The most widespread understanding of e-government is related to customer satisfaction where public administration is developing new ways of administrative processes and services by using electronic means (Nygren 2007). However, there is no general definition on e-government or e-governance. Modernisation public administration and customer interaction processes have impacts on internal data flow, transparency and democratic processes, and technology innovation. From the executive point of view, the meaning of e-government is first of all in electronic implementation, as well as in information systems and necessary means and processes to execute legislative powers of the government. From the technology perspective, e-governance is mainly about usage of modern electronic technology.

All in all, e-governance gathers together all sectors and includes all activities in public sector towards electronic applications and systems (Harjo 2005). The information flow and public services are directed in four main directions a) government to citizens, b) government to businesses, c) government to employees, and d) government to government. The private sector adds to this its own e-services a) business to business, b) business to citizen, and c) business to government.

The EU Action Plan on E-Government (i2010 eGovernment Action Plan) sets the course that “better government is a competitive must.” Whereas citizens demand better services, better security and better democracy, businesses demand less bureaucracy and more efficiency. Indeed, one of the important objectives of the e-government is achieving efficiency. For example, it has been estimated that electronic invoicing in Denmark saves businesses €50 million a year and if introduced throughout the EU, the annual savings could add up to €50 billion.

Looking into the demand side of businesses in the BSR for better services can lead to the development of better e-services. This in turn, can provide an input to competitiveness and economic growth. Additionally, innovative cross-border services can strengthen the links between neighbouring countries which is an important objective of EU policies.

## **II. LogOn Baltic**

During the years 2006-2007 Wismar University and Tallinn City Office participated in the LogOn Baltic project, which was approved within the Baltic Sea Region (BSR) INTERREG III B Neighbourhood Programme, sponsored by the European Regional Development Fund (ERDF), as part of the Structural Funds, and co-financed by national project partners.

### *1. Objective of the project*

The main objective of this project was to investigate the interdependencies between ICT and logistics competence and regional development. Altogether, 30 project partners were representing following regions:

[FI]	South-West Finland, FINLAND
[SE]	Östergötland, SWEDEN
[DK]	Denmark, DENMARK
[DE-Ham]	Southern Metropolitan Region of Hamburg, GERMANY
[DE-MV]	Mecklenburg-Vorpommern, GERMANY
[PL]	North-East Poland, POLAND
[LT]	Lithuania, LITHUANIA
[LV]	Latvia, LATVIA
[EE]	Estonia, ESTONIA
[RU]	St. Petersburg, RUSSIA

## 2. The ICT Survey

In a couple of empiric activities, the LogOn Baltic project tried to reflect the use of ICT as interface within the private sector and also between the private sector and the public sector. The results obtained were used to describe the existing ICT structures and services in the participating regions, revealing up to what extent they met with the companies' needs for further development. The final questionnaires were prepared in English language and then translated into local language, uploaded to the project website. The target companies were informed by mailing list to participate in the web-based survey but in some regions, especially in Germany and Poland, it was necessary to execute parallel mail surveys, phone surveys and interviews which were later added to the web platform.

The questionnaire consisted basically of five modules, covering following areas of interest:

1. General contact- and background information of the companies
2. Use of ICT in the companies
3. Use of the Internet in the companies
4. E-Commerce / E-Business
5. General assessment of the use of ICT in the regions

Since the purpose of the survey was to assess the use of ICT in the regions, all companies - with special focus on SMEs - were considered part of the target group. All around the BSR, more than 1,350 companies took part in the survey, with barely over 84% of them representing the micro and small enterprises. (Figure 1)

*Figure 1: Break-down of the surveyed companies*

	<i>Micro</i>	<i>Small</i>	<i>Medium</i>	<i>Large</i>	
<b>Hamburg</b>	56	42	30	38	
<b>Estonia</b>	63	31	19	4	
<b>Latvia</b>	68	32	4	4	
<b>Sweden</b>	16	30	19	9	
<b>Finland</b>	390	76	27	15	
<b>Meckl.-Vorp.</b>	75	29	4	5	
<b>Lithuania</b>	34	31	13	7	
<b>St. Petersburg</b>	52	45	8	7	
<b>Poland</b>	55	10	5	1	
<b>Subtotals</b>	<b>809</b>	<b>326</b>	<b>129</b>	<b>90</b>	<b>1.354</b>
	<b>59,75%</b>	<b>24,08%</b>	<b>9,53%</b>	<b>6,65%</b>	<b>100,00%</b>

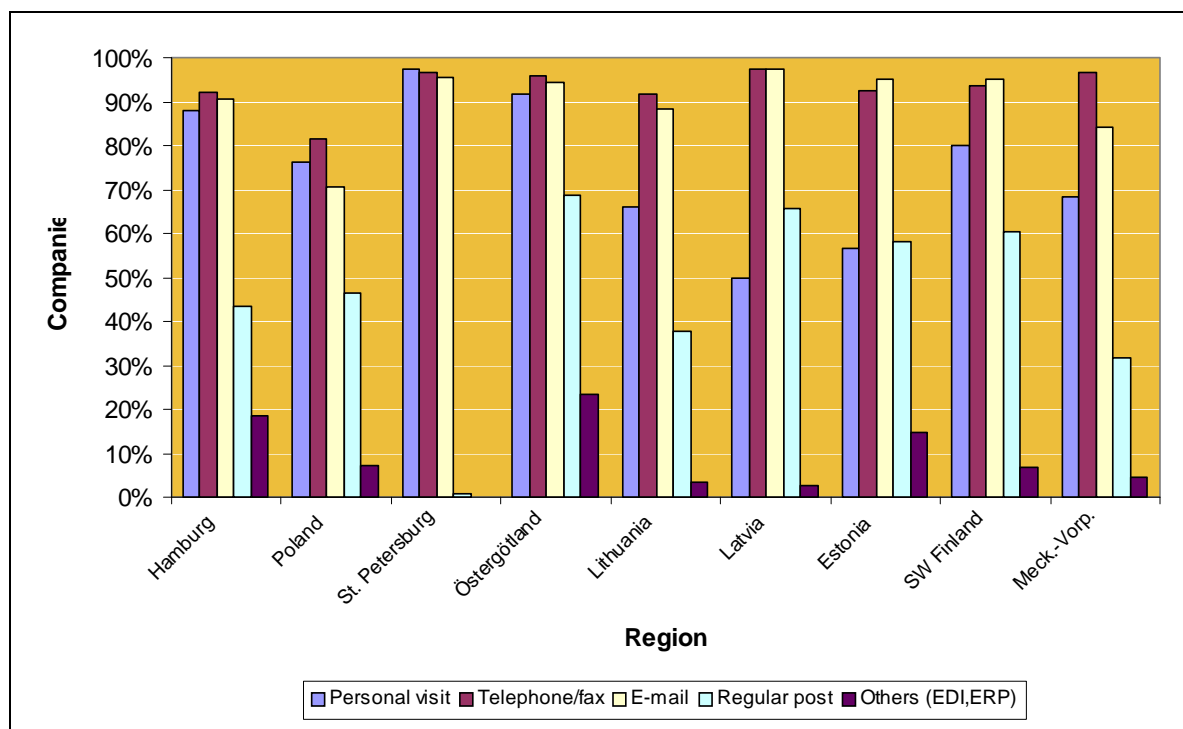
Source: Own data.

Considering that most of the companies were micro and/or small companies, it is no surprise that the owner or a director/manager (mostly from the upper management levels) were the ones answering the questionnaire safeguarding that the survey results gave an overview of the current situation and a strategic view regarding future development and trends of their business.

### III. E-Government

E-Government is still a controversial topic in the Baltic Sea Region. Already used business communication media inside the BSR are differing heavily. The LogOn Baltic survey revealed the following picture:

*Figure 2: Interaction channels with Government*



Source: Own data.

An important observation in regard to the type of business communication is that personal visits are showing the lowest values inside the Baltic States compared to the other BSR countries. Compared to the Nordic countries and Western Germany, represented by the Hamburg area, also Poland and Mecklenburg-Vorpommern (located in the former GDR) are showing a lower importance of personal visits. The only exception is Western Russia where personal visits are representing the maximal value for the whole BSR. The conclusion for e-governmental services can be formulated that due to the preferred different types of business communication media no unique expectation of public e-services can be expected.

Inside the LogOn Baltic survey an important part was dedicated to regional



e-government activities. In the module “General assessment of the use of ICT in the regions” there were placed two questions inside the English survey:

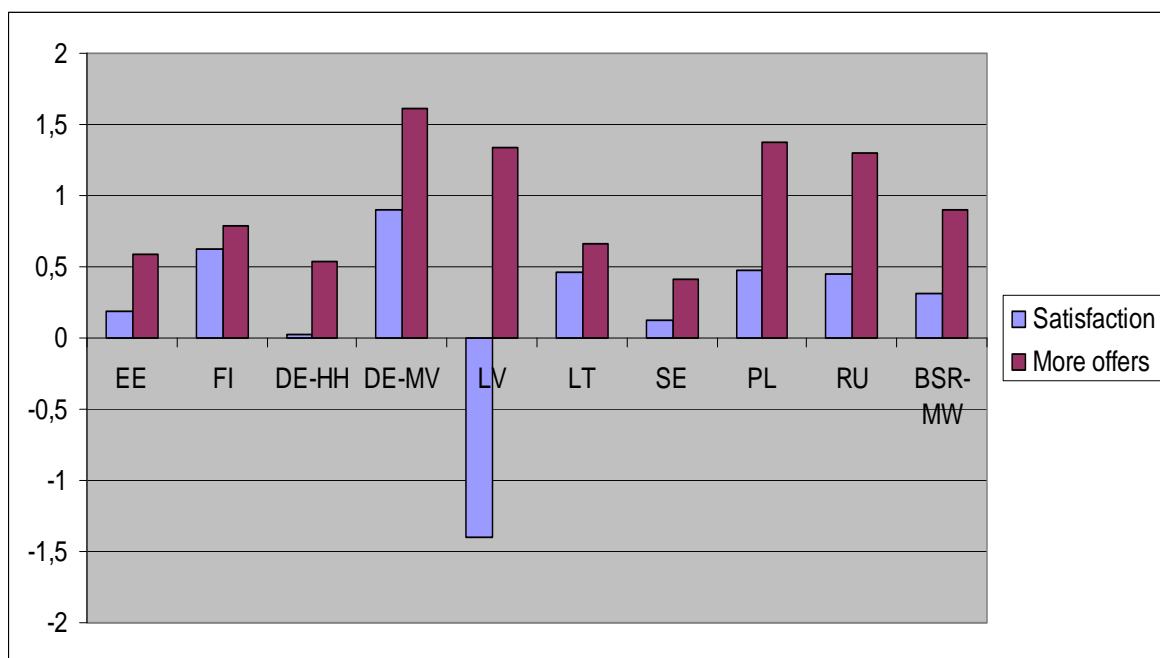
- A. Are you satisfied with the existing e-Government offers? (Satisfaction)
- B. How would you appreciate more e-Government offers? (More Offers)

The participants were able to answer in form of an ordinal rating scale of six options:

- 1 = strongly disagree
- 2 = disagree
- 3 = neither disagree nor agree
- 4 = agree
- 5 = strongly agree
- 6 = no response.

By analysing of the answers of the two questions by countries it was possible to extract the following table:

*Figure 3: Satisfaction level*



Source: Own data.

Even a first look at this table is revealing huge differences inside the BSR about the satisfaction with the existing e-governmental offers. Especially by considering the situation in Latvia it turns out that the satisfaction of offered e-services in Latvia is by far the most negative inside the BSR whereas the values of Mecklenburg-Vorpommern are representing the best of BSR. Another interesting observation is that the satisfaction levels of the participating regions in Finland, Mecklenburg-Vorpommern, Lithuania, Poland and Russia are above the BSR average (BSR MW) whereas countries like Estonia and

Sweden but also the Hamburg region are placed below the BSR average. Especially the case of Estonia is generating some questions because Estonia is often mentioned as the pilot region for e-services inside the European Union.

When it comes to the question whether more e-governmental offers would be appreciated by the companies a similar picture to the first question appeared. The only exceptions are represented now by Finland, Lithuania and Latvia. Whereas in the first question Finland and Lithuania were placed above the BSR average, both countries are now showing values below the BSR average. A different situation exists regarding Latvia where the desire to see more e-services is much higher than the BSR average.

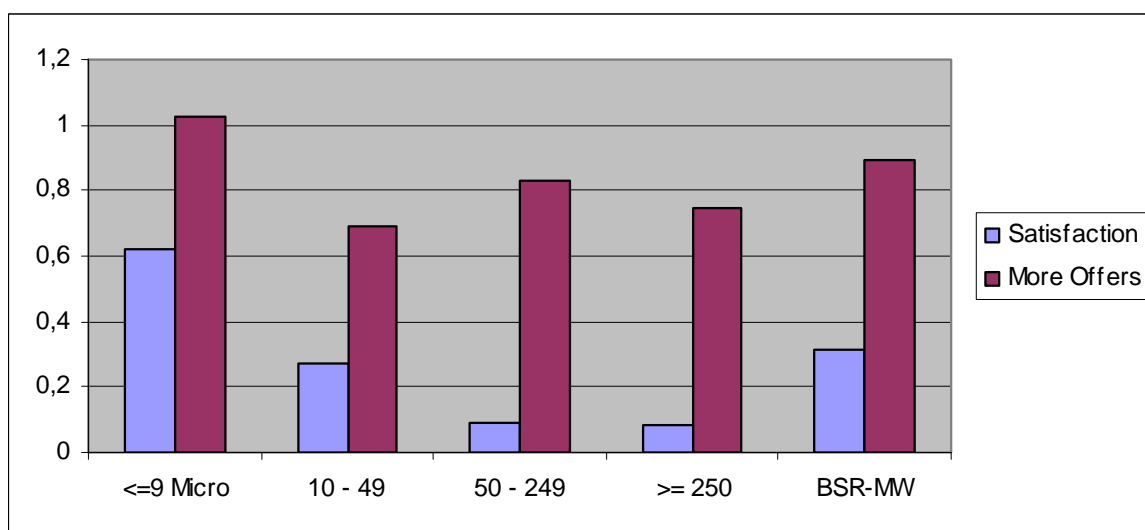
By considering the spread between the two questions inside the countries it turns out that the satisfaction with currently offered e-services and the desire for more e-services are matching best in Finland and Lithuania whereas the biggest gaps are appearing in Latvia, Poland, Russia and Germany.

#### IV. Company size and branches

In order to gain a clearer view which e-services are needed inside the overall BSR an analysis of the survey results with regard to company size and branches has been carried out. The results of these considerations are no longer related to country views.

The first question was related to the size of the companies. One important outcome of the survey was that the level of satisfaction about the e-services and the expected new e-service offers were heavily depending on the size of companies. So it turned out that smaller companies were in general more satisfied with the offered e-services than larger companies. The results are expressed by the following diagram:

*Figure 4: Satisfaction level by company size*

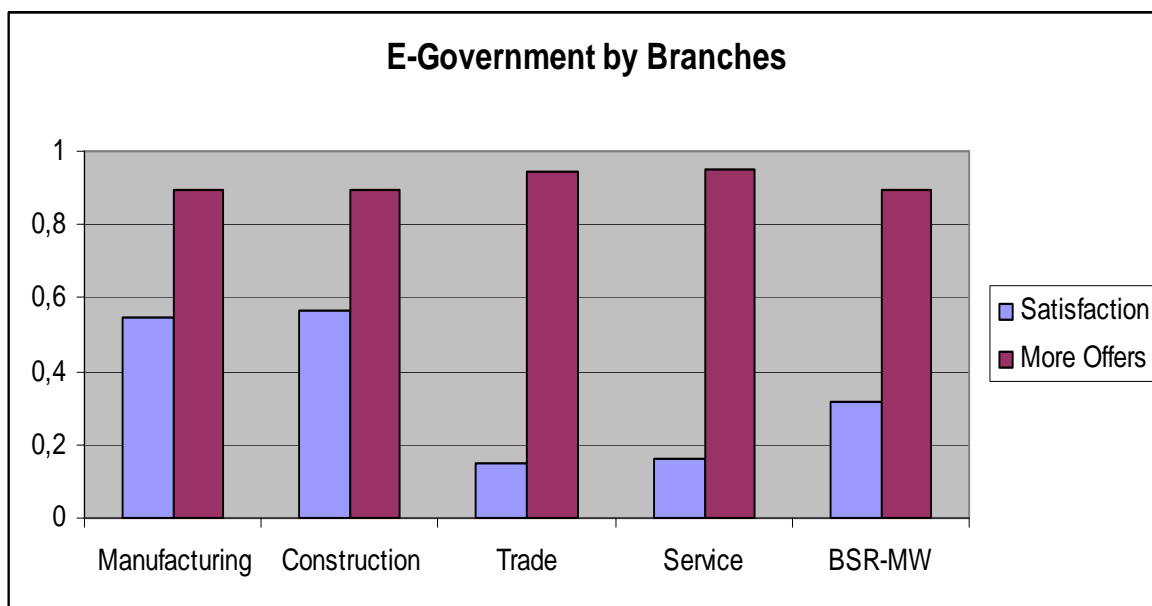


Source: Own data.

Compared to the BSR average, the satisfaction level of offered e-services of micro firms is reaching a higher value whereas the values of medium sized and larger companies are placed below the BSR average. A comparable picture can be regarded when it comes to the interest to see more e-governmental offers. Here the expectations of micro firms are higher than the average compared to the situation of larger companies having lower expectations than the BSR average is expressing. One reason for this result could be that the available e-services are covering the more basic governmental services that are meeting the more basic needs of micro firms.

By considering the branches and their views on e-government services it turned out that the needs of production companies are better realised by the existing e-services than the needs of service companies. Compared to the BSR average, the satisfaction level of manufacturing and construction companies is exceeding the BSR average whereas the values of the trade and service sector are placed below the average. The details can be considered in the following diagram:

*Figure 5: E-Government by Branches*



Source: Own data.

Vice versa the expectations for new e-governmental services for trading and service companies are higher than those of the production companies. This observation is stressing the fact that the trade and service companies are expecting more e-services according to their needs in the future whereas the values of the production companies are matching the average values.

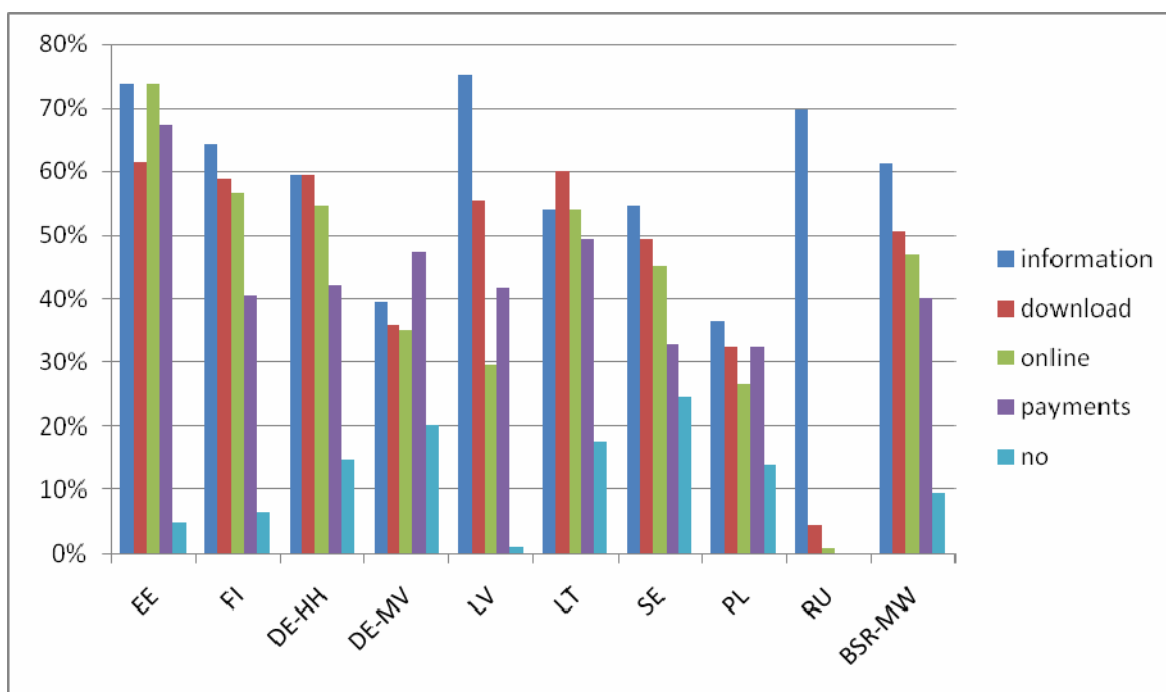
## V. Interaction with public authorities

Another question of the survey was dedicated to how company use the Internet for interacting on a regular basis with public authorities and government organizations. The result for the BSR was that ca. 90 % of the companies are interacting with public authorities/government organisations for the different purposes:

obtaining information (i.e. from websites or via e-mail)	61%
downloading or requesting forms	51%
completing forms online or sending completed forms	47%
making online payments to government organisations	40%.

Taking a closer look to the situation in the different BSR countries is leading to the following diagram:

Figure 6: Purposes of interaction by Internet



Source: Own data.

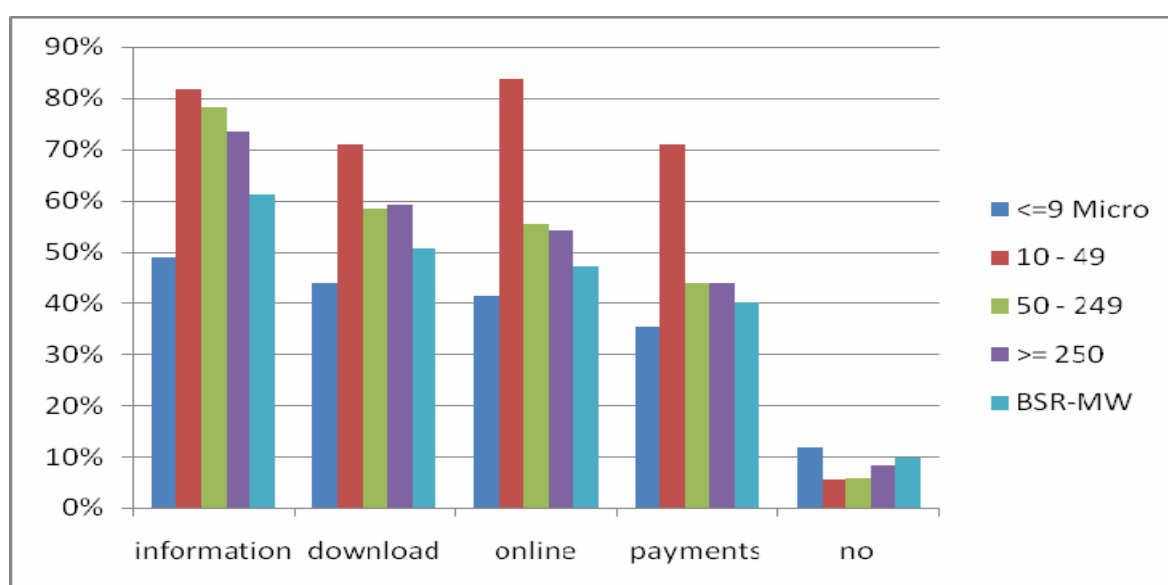
A closer look at the results is revealing that only Estonia, Finland and Latvia are the BSR countries where the numbers of companies with no Internet use for interacting on a regular basis with public authorities and government organizations is lying below the BSR average. Russia is representing a special case because here the results of the survey seem not to be reliable.

Another important observation is that except in Mecklenburg-Vorpommern and Poland in all other regions more than 50% of the companies are using the internet to obtain information from public e-sources. When it comes to more sophisticated e-services like completing forms online or sending completed

forms, than Mecklenburg-Vorpommern, Latvia and Poland are lying together with Sweden below the BSR average. In general, the Swedish results are showing that the companies are not too enthusiastic concerning e-services.

The data listed according to company size shows that the values for the micro firms are expressing the worst performance in making use of internet based interactions with public institutions. The surprising fact is that the most active companies in interaction with governmental e-services are the medium sized companies and not the bigger ones. An exact picture of the outcomes of the survey is presented in the following diagram:

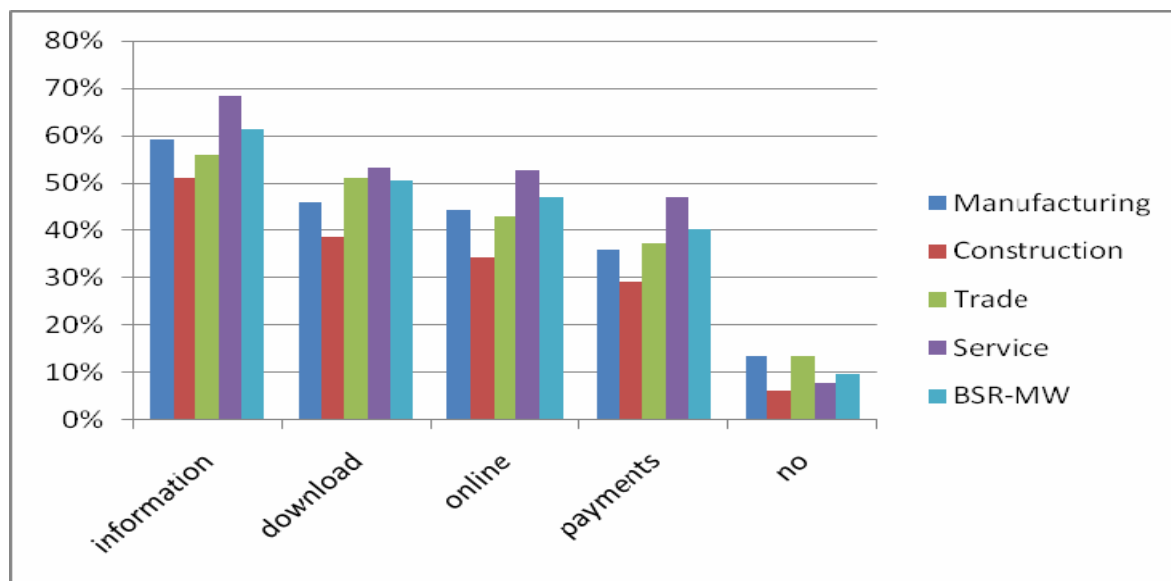
*Figure 7: Interaction by the company size*



Source: Own data.

A final view on the results ordered by branches reveals that the service sector companies are the most active in using the Internet for interacting on a regular basis with public authorities and government organizations whereas the construction sector has the lowest performance. In general, the values for the service sector are exceeding in all activities the BSR average whereas the values of the other three branches are around or even below the BSR values.

Figure 8: Interaction by the type of companies



Source: Own data.

Summing up this part of the survey results it has to be mentioned that especially the payment related parts of the e-service sector are the most underdeveloped in the BSR. Therefore some special activities have been launched especially in Estonia trying to improve and to find new applications for payment related e-services which are not only reduced to public institutions.

## VI. Security Concerns

An important issue in the acceptance of IT – based services of all kinds is the perception of security issues. Therefore a question of the survey was dedicated to security concerns in the use concerning e-business activities. The corresponding question inside the LogOn Baltic questionnaire was placed in the module “Regional characteristics of ICT usage”:

*“Please assess the significance of following barriers for the present or future use of Internet, E-Commerce and ICT in general in your company. Indicate your opinion on the effect of each issue in your company”*

The first issue was trying to evaluate the barriers on use of internet. One of the most important weak points in the use of internet is related to security. So the first question was concentrating on:

*Security concerns (i.e. hacking, viruses)*

The participants were able to answer in form of an ordinal rating scale of six options:

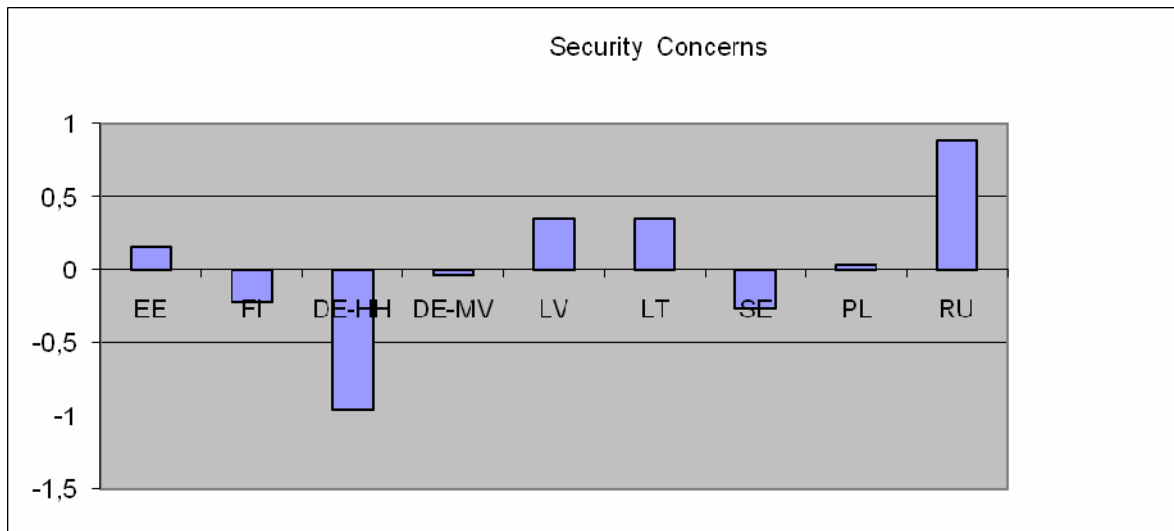
- 1 = very negative
- 2 = negative
- 3 = neither disagree nor agree
- 4 = positive

5 = very positive

6 = No response.

One important result of the survey was answers delivered an average value of 2,94 for the whole BSR. By visualising the differences from the BSR average by countries the following diagram is showing the results of the survey:

*Figure 9: Security concerns by countries*

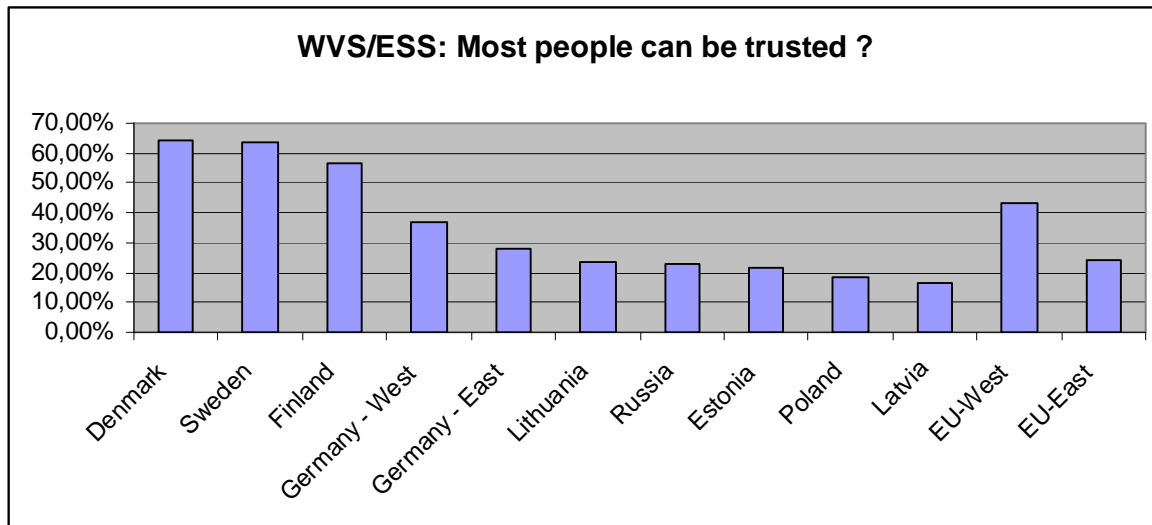


Source: Own data.

The diagram shows that security concerns in Germany, Finland and Sweden are considered as negative for the use of internet, whereas the other countries are not so worried about security issues. These results have to be taken into account in the context of e-government offers because the acceptance of e-services by the companies is heavily related to the trust in the security of the IT – infrastructure. So for countries with low values in the diagram the success of e-government activities is strongly linked to the ability to clear up the security concerns.

The results of the question in regard to security concerns are leading to an interesting observation by consideration of the trust situation within the BSR. As an indicator for the social trust level inside the BSR countries the percentage of the population agreeing with the statement “Most people can be trusted” can be taken. The results of the World Value Survey and the European Social Survey (WVS/ESS) are revealing already big differences inside the BSR. The characteristic values showing the social trust situation in the Baltic Sea Region (BSR) together with the average values for the Eastern and Western countries can be found in the following table:

Figure 10: Social trust in the BSR



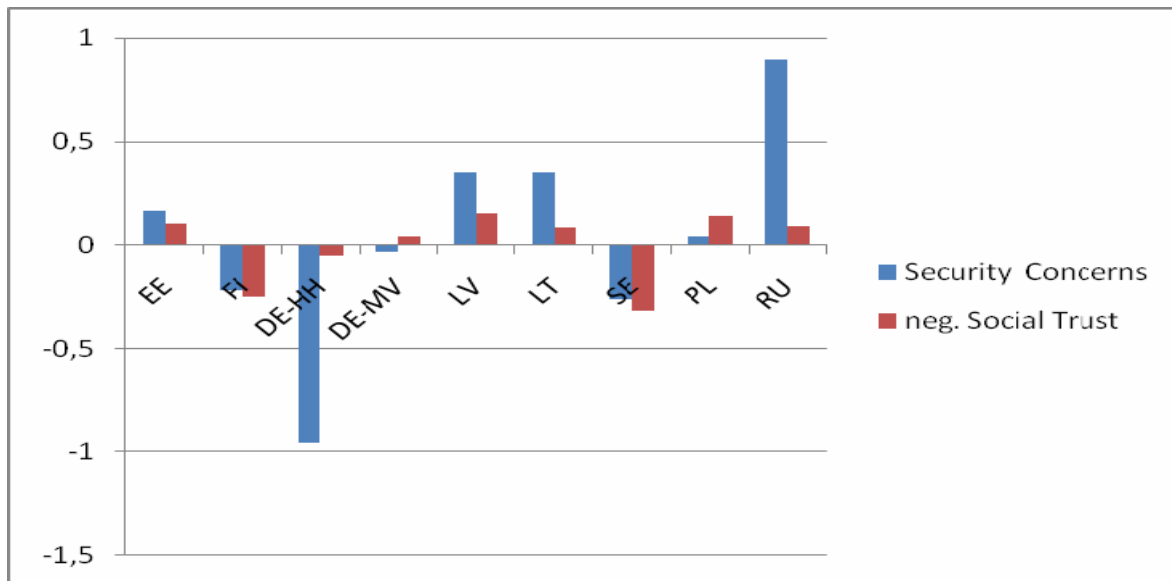
Source: Own data.

The table shows that the level of social trust is around 60% in the Nordic states and about 20% in the Eastern countries around the BSR. The European average for the Western countries is around 43% whereas 24% for the Eastern countries showing that already the differences of trust levels inside Europe are remarkably high. Germany as a cultural transition area between East and West is enjoying the difference between its Eastern and Western part with 37% in the West and 28% in the East (Deth 2004).

A comparison of the results of the security concerns related to internet use and the social trust level of the BSR countries is leading to an interesting observation. For the visualisation the differences of the negative values for social trust from the BSR average (BSR average is 32%) are taken together in the same diagram like the values from figure 9 leading to the following diagram:



Figure 11: Social trust and Security concerns



Source: Own data.

The graphical correlation between the two data series can also be obtained by mathematical calculation. The results of calculation are leading to the following table:

Correlation:	- 0,53
Coefficient of determination:	28%

The figures are showing a relative strong empiric relationship between the two data series expressing that in societies with high values for social trust, weaknesses in security related to internet use are considered more negative than in societies with lower social trust values. In countries with a high social security level the success and acceptance of e-government is highly linked to the ability to clear up the security concerns in internet use.

## VII. E-Services in Estonia

### 1. Public Information Act

Estonia has made a sharp info-technological leap during the late 1990s and beginning of 2000. A triggering point to governmental offices for developing e-services, notably in uploading necessary information on web pages, was year 2000 when Estonian Parliament passed the Public Information Act (PIA). The act states that the public and every person must have the opportunity to access information intended for public use, based on the principles of a democratic and social rule of law and an open society, and to create opportunities for the public to monitor the performance of public duties (PIA § 1.). The act sets the obligation to maintain the web pages to all governmental, both state and local municipality offices (PIA § 31, sec-s 1-3).

These information holders shall disclose the information on a web site, or shall add a link to a web page through which the information can be accessed. The act also lists the type of information that needs to be disclosed (PIA § 28 sec-s 1-2). For example, draft regulations of ministers and local governments together with explanatory memoranda before such drafts are presented for passage needs to be disclosed on the web, as well as draft concepts, development plans, programmes and other projects of general importance before such drafts are presented to the competent bodies for approval, and the corresponding approved or adopted documents. From the point of view of services the section states that information concerning the provision of public services and concerning changes in the conditions and price of the provision of the service before implementation of such changes.

## 2. *Digital Signatures Act*

The second important act which was passed in 2000 was Digital Signatures Act (DSA). The act provides the necessary conditions for using digital signatures and digital seals, and the procedure for exercising supervision over the provision of certification services and time-stamping services (DSA § 1). Perhaps the most influential paragraph in this act was the paragraph which stated that a digital signature has the same legal consequences as a hand-written signature if these consequences are not restricted by law and if the compliance of the signature with the requirements is proven (DSA § 3 sec 1).

Ultimately, this meant that any form or application could be sent, if digitally signed, for example, by e-mail and public officials were obliged to register the application and start the processing procedure. Hence, on the one hand public authorities were required to disclose information related to public services, officials who were processing those services, their e-mail addresses and other contact details, and on the other hand, DSA gave the opportunity for interaction with public sector, via electronic means, without the need to appear in the administrative office in person. In this sense all public services turned to be automatically e-services, given that an application form was downloadable or other obstacles were absent.

The only document to give a digital signature accepted over the internet is Estonian ID-card. The ID-card provides the possibility to access e-services, give signatures, and even vote on elections via the internet. The latest implementation is Mobile-ID which allows ID-card owners to identify themselves through SIM card of the mobile phone.

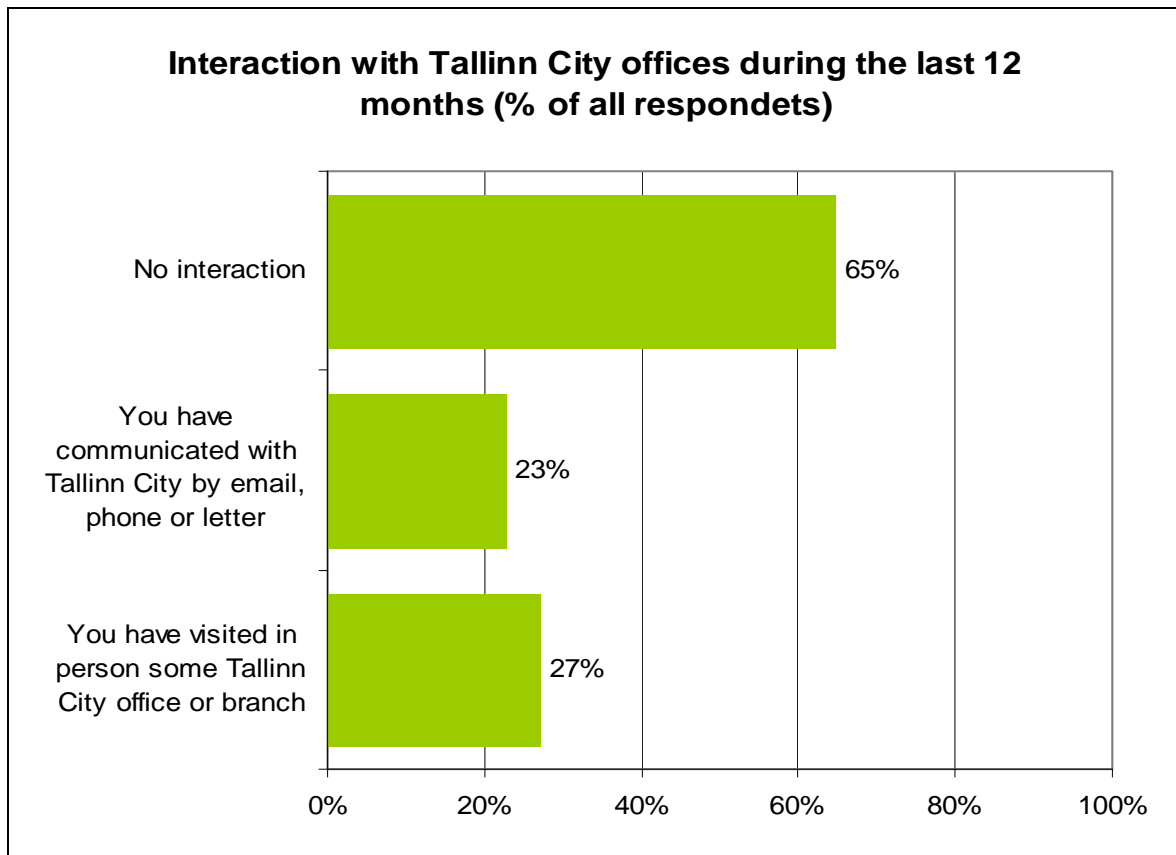
## 3. *Business sector usage of e-services*

The Public Information Act does not enforce public administrators to provide services electronically. Developing complex ICT systems and databases rely on the strong governmental initiative (Harjo 2005). The best e-services are de-

veloped in the direction government to government or its employees. The internal dataflow, sessions and databases are advanced and are more or less paperless. To a lesser degree governmental bodies have developed e-services to their customers and in the least advantageous position appears to be the business sector. There is not much data available on the needs of businesses or their satisfaction when using e-services.

In 2007, the City of Tallinn conducted a survey about the satisfaction level of businesses with public services. Firstly, the interaction level was researched. Nearly two thirds of the respondents were in no interaction with city government during the last 12 months. From those who were communicating with the city, around half preferred to attend in person in the city office and other half preferred other channels, like letter, email or phone.

*Figure 12: Interaction with Tallinn City offices during the last 12 month*

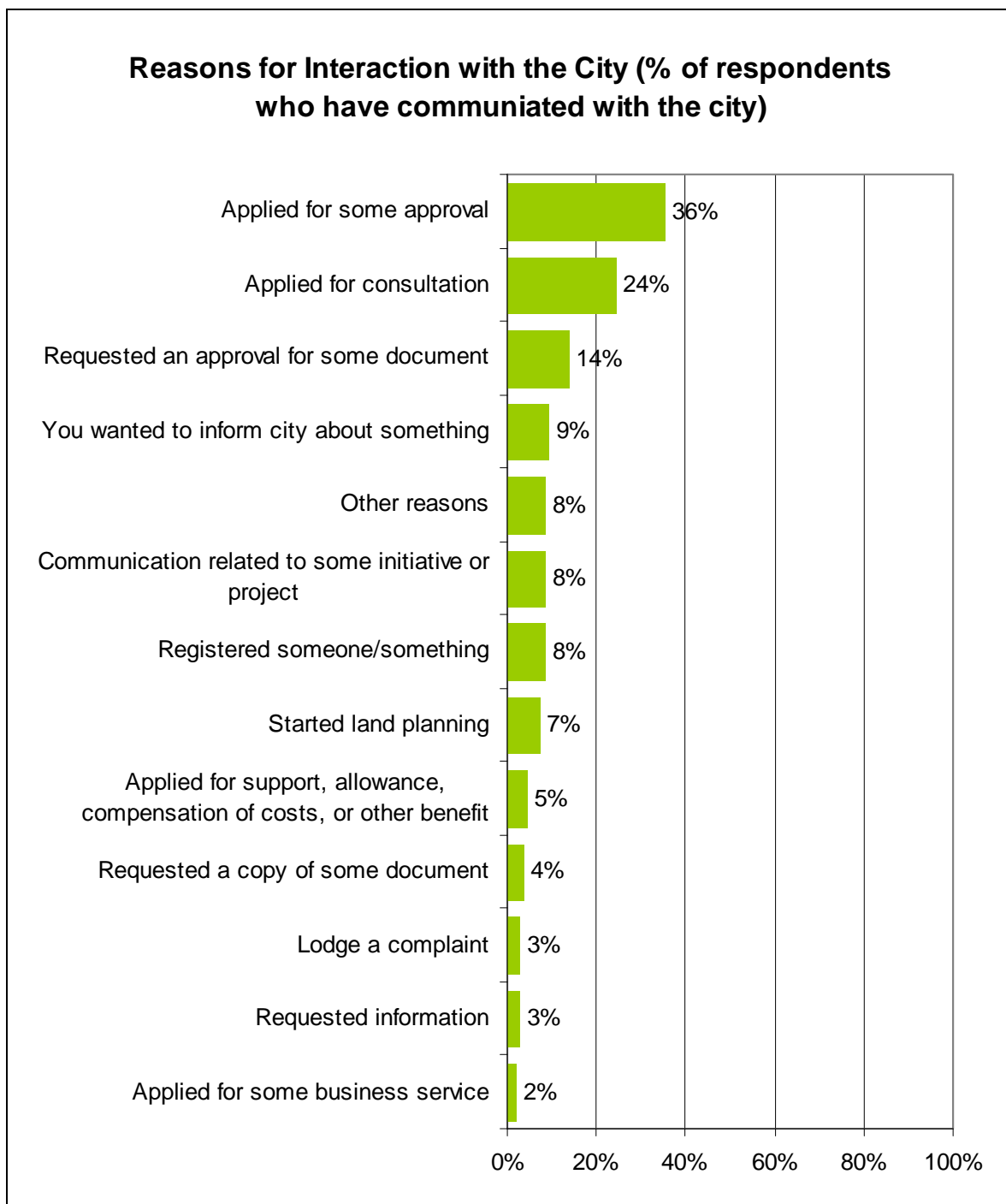


Source: Own data.

Among the reasons for communication dominates applying for some approval – for this reason 36% of companies have interacted with the city. Approximately a quarter from all responded companies needed information (except requested information by PIA) or consultation. Surprisingly, the least popular form of interaction was applying for some business related service. The second surprising moment was that the percentage of respondents who applied for

some sort of benefit or allowance was low with only 5%. The data shows that assumingly the interaction with city government is related to requirements coming directly from legal acts, like approvals, permits, registrations, to a lesser degree the interaction is related other issues – services, benefits, complaints. Nonetheless, it is not clear what kind of “business to government” information sharing was in focus which was the communication type for 9% of respondents.

*Figure 13: Reasons for interactions with the City*

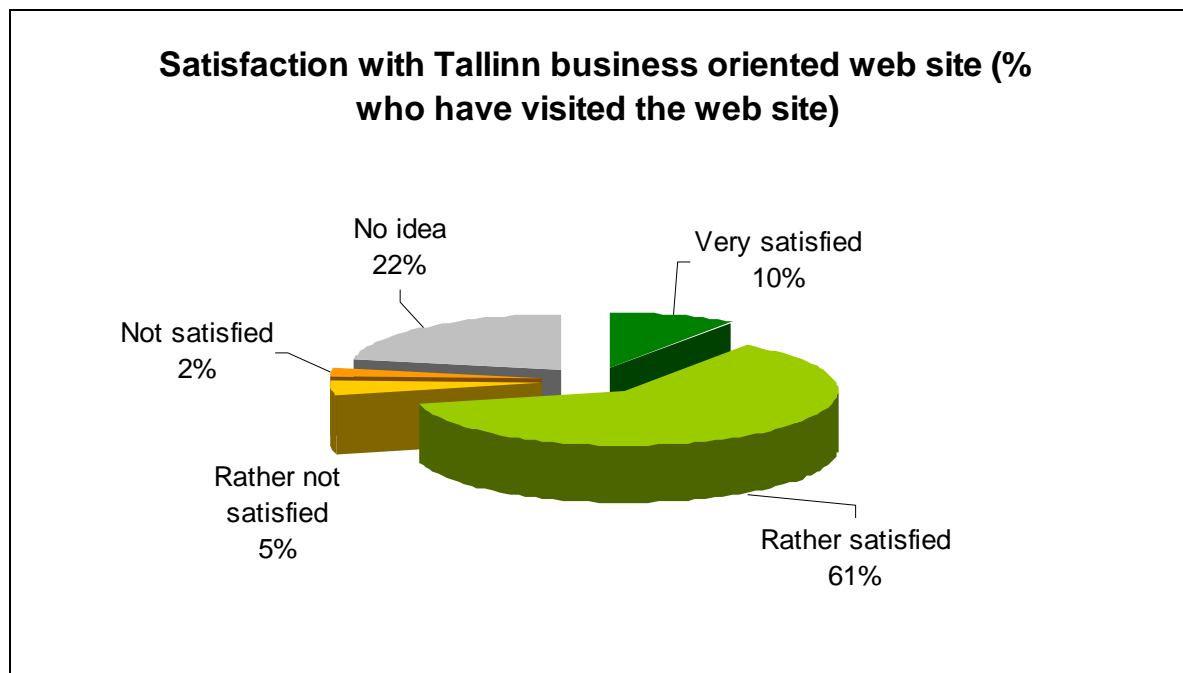


Source: Own data.

One of the important places to share the information and services is government web site. The way the necessary information is presented helps or hinders communication with governments. Clearly and logically presented information contributes to e-governance policy. For example, the survey showed that 68% of companies have never even heard of the business department web site. Importantly, 42% of companies who heard about the business web site have also visited it. Ultimately this means that one of the most important factors is delivering the information and promoting it among businesses.

Among those who visited the web site the level of satisfaction was rather high. Rather satisfied was 61 % and very satisfied 10% of companies. A large percentage (22%) had no personal opinion on the satisfaction level and only seven percent of respondents were not satisfied or rather not satisfied with the web site (Figure 14).

*Figure 14: Satisfaction with Tallinn business oriented web site*



Source: Own data.

In 2009, a survey was conducted on usage of ICT means among Estonian enterprises (Table 1). The outcomes show that Estonian enterprises are increasingly using e-services. 71% of enterprises have searched for the information on government web sites which is 8% more than in 2006. The biggest growth, however, has made usage of services that requires sending and application. If in 2006 60% of respondents have applied for the registration in some business field then in 2009 the number was increased already by 14%. The same trend is evident in other types of applications, like applying for a license or certificate.

The overall satisfaction level is high with 88% of respondents being satis-

fied with the e-services. The changes compared to 2006 are modest; the overall satisfaction level has declined by 5%, whereas the number of “very satisfied” has increased. The usage of ID cards has risen significantly. When in 2006 only 1-2 % of enterprises had used ID cards, then in three years the ID card usage has arisen to 27-29%. ID cards can be used also internally, for example, for identification employees. However, the numbers indicate that primarily enterprises use ID cards for identification or for giving signatures. Identification via ID card is related not only to the governmental authorities but to the private sector as well. One of the popular e-services is internet banking which accounts for most of the enterprise ID card usages, notably user identifications. On the other hand giving digital signatures more likely expresses the interaction with government.

*Table 1: Usage of e-services*

	2009	2008	2007	2006
<b>E-Services</b>				
<b>Usage of government e-services</b>				
<b>(% of all enterprises)</b>				
Searching for the information on Government web pages	71%	70%	63%	63%
Sending an application to the governmental office for processing a registration in some business field	74%	78%	63%	60%
Applying for a license, certificate or some other necessary approval for business	47%	43%	39%	35%
No response/ never used e-service	19%	18%	28%	29%
<b>Satisfaction with governmental e-services</b>				
<b>(% of enterprises that have used e-services)</b>				
Very satisfied	27%	18%	25%	22%
Rather satisfied	61%	72%	65%	71%
Rather not satisfied	7%	6%	6%	5%
Cannot estimate	5%	4%	4%	2%
<b>Usage of ID-cards in enterprises</b>				
<b>(% of all enterprises)</b>				
For user identification	27%	19%	22%	2%
For giving a digital signature	29%	24%	18%	1%
For the purpose of some other employees identification	3%	3%	1%	1%
Have not used	58%	64%	69%	90%
Cannot estimate	2%	2%	4%	7%

Source: TNS Emor survey „ICT usage among Estonian enterprises“.

The survey shows that e-services are becoming increasingly popular among

businesses. The readiness to use ID cards in interaction with government is rapidly growing. Businesses can save time and money when applying for needed licenses, registrations or support schemes.

The crucial issue for governments is developing new e-services. The patterns of e-government are rather similar throughout the world. With the development of websites, public sector started to upload information about their activities. After mastering the dissemination of information, governments moved further and started transaction processing (Schwester 2009). In modern changing world businesses expect better services and faster response. Modern e-services are focused on both sides, efficiency of transactions from processing perspective, and satisfaction with service from the end-user perspective.

## **VIII. Cross-border E-Services**

### *1. Business registration*

In 2008, Estonian Centre of Registers announced the new cross-border service – since November 2008 citizens of Estonia, Belgium, Lithuania and Portugal can register a business entity electronically in the Company Registration Portal by using their national ID cards. Reputedly, this was for the first time where a registry in one country is accepting other countries' national ID cards and digital signatures. Additionally, by the end of the year Finland also joined this initiative. Owners of the companies can send electronically their financial year declarations and change registration details.

This cross-border digital signature project was led by the Ministry of Justice and the Centre of Registers and Information Systems. The project was launched in joint cooperation with the Portuguese Business Portal da Empresa, managed by the Portuguese Ministry of Justice, which now accepts also the Estonian ID cards and digital signatures (Järv, Vali 2009).

In May 2009, the first company in Estonian history was officially registered with a Finnish ID card. The new company had two Estonian and three Finnish founders, and they all used their national ID cards for registering the company.

The Estonian E-Commerce Register portal is an innovative implementation. So far the initiative is unique in Europe. According to the Ministry of Justice press release “one can register a private limited company in a few hours using the ID-card and never leaving the house.”<sup>1</sup> Estonians have already now embraced the new development. In 2008, 40 % of companies were registered electronically via Business Portal. Although the cross-border dimension is not yet very popular, the way is paved for the cooperation with other countries. The strong initiatives are the starting point for the innovation.

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<sup>1</sup> Finnish ID Card Used for the First Time to Create a Company in Estonian e-Commercial Register, [http://www.eid-stork.eu/index2.php?option=com\\_content&do\\_pdf=1&id=150](http://www.eid-stork.eu/index2.php?option=com_content&do_pdf=1&id=150).

## 2. *Tallinn-Turku cross-border e-services*

Tallinn and Turku have a long history of cooperation. When both cities, Turku and Tallinn were chosen to become European Capitals of Culture in 2011, cities signed on 10<sup>th</sup> of October 2006 a Memorandum of Cooperation to strengthen cultural links and to promote the region, countries and cities.

The platform for cooperation was in place and after tense communication with Turku City officials an idea was proposed to develop new joint e-services. In 2009, a Supplement to Memorandum was signed by both city mayors, where parties agreed to develop a joint e-ticketing system by providing interoperable tourist cards and the ticket purchasing systems in the field of culture, tourism and public transportation.

An important point was added to supplement that the development is not limited to two cities and the cooperation is open to other interested parties. The idea of this sentence was firstly, to allow also the private sector to participate in the project. Secondly, the ultimate aim was to bring along also the neighbouring city Helsinki, where the most tourist are coming from, and with whom Tallinn is cooperating in many different fields. From the long-term perspective cross-border e-ticketing systems could also be developed with neighbouring city Riga, the Capital of Latvia.

Turku and Tallinn agreed that the new ticketing system will enable Tallinn to sell its tickets in Turku and Turku to sell its tickets in Tallinn. Parties' e-ticketing systems will be operated separately. To understand exactly in which fields the cooperation should be developed, parties agreed to conduct simultaneously a feasibility study which would provide an analysis on different usage scenarios, cross-border payment opportunities and business models.

The project is still in the development phase and therefore no outcomes are available yet. However, this project illustrates the role of public sector in initiating cross-border services. The number one precondition in any cross-border development is the political will. There are many examples where the owners of the enterprises in private sector are international but the cross-border services, even in case of the same company locating in different countries, do not emerge. The main role of the public sector is opening the doors for creating the environment and contributing financially. It is up to the private sector to follow the initiatives but as a rule, private sector will follow only when the start is made and something is already created.

Nonetheless, there are also a number of other requirements for successful development of cross-border e-services. The development levels in the chosen fields of the countries must be comparable. The e-business registration initiative was possible only with the countries with similar ID card systems. It is rather difficult or impossible to develop joint projects when the platforms are entirely different. A reservation from this rule is when one country has already advanced a system and the other country does not have any developments in



these fields and has expressed the willingness for adoption. But the basis for every initiative and successful project is a mutual will.

## **IX. E-Services in Germany**

### *1. Actionplan: Germany-Online*

The national e-government strategy Germany-Online (Deutschland-Online) is realised in cooperation of the German federal government, the German states and local authorities. It is driving forward the use of information technologies and Internet in the administrations with jointly implemented projects. The project is focussing on the modernisation of administration in order to make many tasks easier, faster and cheaper.

The aim of Germany-Online is a fully integrated e-government landscape in Germany. The strategy should set the necessary standards by using the advantages of federalism. Selected partners are developing pilot model solutions that can later be used by all other partners ("One for All" principle). In this way, on all administrative levels uniform and consistent online services are implemented.

On 22 June 2006, the heads of federal government and the state agreed on the Action Plan Germany-Online. The key points of the Action Plan are to focus on a few selected projects and a close networking with e-government conference of the responsible ministers. Among the priority projects there are infrastructure projects for a better collaboration including all management levels and important mass procedures. The Action Plan is based on 6 key topics:

- Germany-Online Infrastructure
- Germany-Online Standardization
- Germany-Online Civil Registration
- Germany-Online Car Registration
- Germany-Online EU Services Directive

Other activities are related to business registration, statistics, geodata, heavy transports and other topics.

### *2. VEMAGS: A German E-Service for large and heavy transports*

VEMAG (Verfahrensmanagement für Großraum- und Schwertransporte) is a German e-government project for the realization of a nation-wide, web-based implementation of the application of large and heavy transports which ruled under Section 29 and Section 46 of the German Highway Code (StVO). A German speciality is that the approvals of large and heavy transport in Germany are locally ruled so that transports passing local boundaries are causing a lot of coordination problems for the applicant and the later realisation of transport solutions.

A new system is built, wherein by using modern communication technologies, the applications for approvals of large and heavy nationwide transports are processed consistently and without media breaks. Existing statutory standards (RGST, VWV to § 29 and § 46 StVO) as well as the local particularities procedures (e.g. nationwide internal rules) are taken into account. The applicants (transporters) are also part of the procedure forming a working group of the VEMAG and accompanying the project professionally.

The project started with recording and analyzing the actual status in all German states for the approval procedures of large and heavy transports with a special focus on all the local peculiarities and constraints. The results were published in cooperation with the federal project in the preparation of the technical requirements. On the basis of these requirements an IT-detailed technical concept was elaborated. The detailed technical concept describes the workflow system with its special properties, integrating the applicant (transport operators, including Armed Forces), all authorities concerned (road authorities, transport authorities, water management and shipping, etc.) and all additional external services (Police, German Federal Railways, etc.) into a nationwide, network-oriented e-government procedures.

Data from public local authorities will be kept in a decentralized subsystem for examining the application uses. The tests in the approval procedures are largely automated realised by the IT system (traffic restrictions, light room, statics, construction sites, etc.) and thus are relieving the authorities involved. Through the use of the possibilities of modern information and communication technologies there are additional ways of increasing efficiency and speeding up the approval procedures. Furthermore, the control organs which are responsible for the safe transport and proper implementation of large and heavy transports enjoying now extensive opportunities for targeted checks and investigations in the implementation.

## **Bibliography**

**Aktionsplan Deutschland-Online**, available: <http://www.deutschland-online.de>.

**Deth**, J W van 2004, Deutschland in Europa, Ergebnisse der EU Social Survey 2002 - 2003, VS Verlag 2004.

**Digital Signatures Act**, available: <http://www.riigiteataja.ee/ert/act.jsp?id=694375>.

**Harjo** R 2005 Ülevaade elanikele osutatavate e-teenuste probleemidest, Riigikontroll.

[http://www.eid-stork.eu/index2.php?option=com\\_content&do\\_pdf=1&id=150](http://www.eid-stork.eu/index2.php?option=com_content&do_pdf=1&id=150).

**i2010 eGovernment Action Plan**, available: [http://ec.europa.eu/information\\_society/activities/egovernment/docs/highlights/comm\\_pdf\\_com\\_2006\\_0173\\_f\\_en\\_acte.pdf](http://ec.europa.eu/information_society/activities/egovernment/docs/highlights/comm_pdf_com_2006_0173_f_en_acte.pdf).

**Järv** M, **Vali** I 2009 Estonian Company Registration Portal Accepts Digital Signatures Given in Other Countries. Available online: [www.ePractice.eu](http://www.ePractice.eu).

**Kron** E, **Prause** G 2007 Aggregated ICT Survey Report, Turku School of Economics.

**Nygren** K G 2009 e-Governmentality: On Electronic Administration in Local Government,

Electronic Journal of E-Government (EJEG) Volume 7, Issue 1, pp 55-64.

**Public Information Act**, available: <http://www.riigiteataja.ee/ert/act.jsp?id=12900546>.

**Schwester R** 2009 Examining the Barriers to e-Government Adoption, Electronic Journal of E-Government (EJEG) Volume 7, Issue 1, pp 113-122.

**VEMAGS**, available: <http://www.vemags.de>.

**WVS/ESS**: World Value Survey / European Social Survey.

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