



Electronic Commerce Policy-Making In Developing Regions: The Case of South Eastern Europe

Anastasia Papazafeiropoulou

Centre for Strategic Information Systems, Department of Information Systems and Computing, Brunel University, UK
Tel: 0044 1895 203375, Fax: 0044 1895 251686, Anastasia.papazafeiropoulou@brunel.ac.uk

Athanasia Pouloudi¹ and Georgios Doukidis²

ELTRUN—The eBUSINESS Centre

Department of Management Science and Technology, Athens University of Economics and Business (AUEB), Greece

¹Tel: 0030 1 8203682, ²Tel: 0030 1 8203654, ^{1,2}Fax: 0030 1 8203685, {pouloudi, gjd}@aueb.gr

ABSTRACT

The 'digital divide' between developed and non-developed countries in terms of adoption of new technologies and particularly the Internet and electronic commerce is a heavily debated and frequently discussed issue. In this paper we examine the case of south eastern Europe that is one of the less technologically advanced regions in Europe. We use data from 8 countries, namely Albania, Bulgaria, Cyprus, FYROM, Greece, Israel, Moldova and Romania, which have been collected by local key stakeholders such as government agencies and professional bodies. The data are related to the current situation and future prospects of electronic commerce adoption in technical, business, social, financial and legal terms. We analyse them in order to draw some conclusions about the policy making in the countries of south eastern Europe. Groups of stakeholders that can play an important role in the formulation of an electronic commerce policy in the region are described and by analysing their relationships we offer some policy recommendations in the field.

INTRODUCTION

The initial euphoria about the power that information superhighway can offer to support new services, which will enforce citizens and provide for their full participation in an emerging 'digital democracy' has been heavily debated. The 'digital democracy' is now threatened by the 'information aristocracy' (Carter 1997). There is always the concern that if citizens are not able to have access to on line services either because they don't have the means or the knowledge to do so, the result will be the reinforcement of existing patterns of inequalities. The 'digital divide' is a term that is widely used lately in order to describe these inequalities between developed and non-developed countries. According to OECD (2001) (p.5) "The term 'digital divide' refers to the gap between individuals, households, businesses and geographic areas at different socio-economic levels with regard both to their opportunities to access information and communication technologies (ICTs) and to their use of the Internet for a wide variety of activities".

There is a lot of debate about the cultural, gender and race gap in the use of Internet and the proportion of users with lower education and income (Hoffman and Novak 1999). The penetration of the Internet and electronic commerce in developing countries, which lag far behind North America and Europe, is also an outstanding issue in the existence of 'haves' and 'have-nots' in the cyberspace, (e.g. (Bhatnagar 1997; Blanning et al. 1997; Clark and Lai 1998; Kim and Hong 1997)). Developed countries have more access to information that is less expensive, easier and faster while less technologically advanced regions have to deal with problems of inadequate infrastructure, lack of awareness and lack of an appropriate legal framework. The problem of the 'digital divide' is related with electronic commerce policy making as the effective adoption of network technologies by individual users and companies is the result of successful national or international policies (e.g. (Boon et al. 2000; Bozeman 2000; Corbitt and Kong 2000; Damsgaard and Lytinen 1998; GNCEC 1999)).

In this paper we examine the case of south eastern Europe that is one of the less technologically advanced regions in Europe and the application of an effective electronic commerce policy is essential for the economic growth of the region. We use data from 8 countries,

namely Albania, Bulgaria, Cyprus, Former Yugoslavian Republic of Macedonia (FYROM), Greece, Israel, Moldova and Romania. These have been collected by local key stakeholders such as government agencies and professional bodies. The data are related to the current situation and future prospects of electronic commerce adoption in technical, business, social, financial and legal terms. We analyse them in order to draw some conclusions about the policy making in the countries of south eastern Europe. Groups of stakeholders that can play an important role in the formulation of an electronic commerce policy in the region are described and by analysing their relationships we offer some policy recommendations in the field.

The paper is structured as follows. First we describe the empirical framework on which our research is based. The methodology followed for the collection and analysis of the results is presented in section 3, while in section 4 we give an overall presentation of the results and we apply previous research on the stakeholders involved in electronic commerce policy making in the context of south eastern Europe. In section 5 we give some recommendations about electronic commerce policy making in less technologically advanced regions. Finally in section 6 we draw some conclusions and present opportunities for further research in the area.

EMPIRICAL FRAMEWORK

South eastern Europe is one of the less technologically advanced European regions. Historical changes in borders, political and economical systems left the area in a less advanced position than other European countries. Following the recent conflict in former Yugoslavia, there is still political unrest in the area. In order to overcome this situation, several efforts have started aimed to assist the region to reform at a social economic and political level. The stability pact, for example, is an initiative made by the European Union and adopted in Cologne on the 10th of June 1999 (SCSP, 1999) in order to: "achieve the objective of lasting peace, prosperity and stability for south eastern Europe".

Our research is an integrated part of a project, funded by the European Commission, which aims at the examination of the current situation of electronic commerce in the region of south eastern Eu-

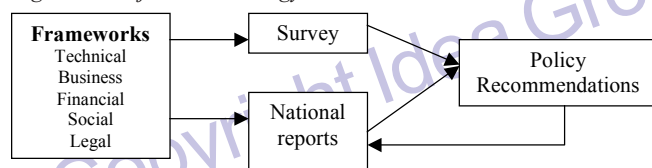
rope. More specifically, the project is called SEED* (South Eastern European Digital economy) and it aims at the delivery of frameworks, which will examine all appropriate environments necessary to the employment of electronic commerce capturing the particularities of south eastern Europe (Seed consortium 2001b). Its main objective is the delivery of dissemination and exploitation strategies that will be useful to policy makers in the participating countries.

The consortium of the project consists of 'policy intermediaries' (Papazafeiropoulou and Pouloudi 2000) organisations such as chambers of commerce and industry, professional organisations and business consultants. These partners were selected because of their key role in their countries; they work in collaboration with government agencies and policy makers while they are in direct contact with companies. The participating countries are Albania, Bulgaria, Cyprus, FYROM, Greece, Israel, Moldova and Romania. The project has started in October 2000 and has a 2-year duration. In the next section we describe the methodology used in order to meet the project objective.

METHODOLOGY

Due to the originality of the project and the lack of existing methodologies in the field, the methodology used is a mixture of various methods and practices. More specifically, 4 main processes were followed (figure 1).

Figure 1: Project methodology



The frameworks are technical documents that include state of the art about issues related with the adoption of electronic commerce in a country. Existing and new trends on technical, business, financial social and legal issues are presented in detail in order to facilitate knowledge diffusion to non-technical partners (chambers of commerce) and to their member-companies. These frameworks have been compiled by the technical partners of the project, i.e. by the partners with expertise in the relevant areas.

The survey and the national reports are the means used for capturing the situation of electronic commerce in the region of south eastern Europe. The final outcome of the project will be recommendations for electronic commerce policy making in the region. These recommendations will be incorporated to the national reports that will receive their final form at the end of the project.

In this paper we analyse the process of the construction of the national reports by the partners. More specifically, the members of the consortium were asked to portray the situation of electronic commerce in their counties by developing a document with the description of issues related with the adoption of electronic commerce. They were asked to use information from their organisations (internal recourses) as well as official national statistics and other on line or off line information (external recourses). It was realised early that the collection of data from the area was not an easy task for the partners in each country. Available statistics are rare and sometimes conflict with each other. Therefore, the personal views of the partners, especially their opinion about the future prospects of the situation was recorded in order to get a vision about the future of electronic commerce in the region. They were advised to give a brief description of technical, business, social, financial and legal issues in terms of present situation and future prospects (see table 1).

The description of the present situation included the following elements:

Table 1: Structure of national reports

Description	Present situation	Future prospects
Thematic category		
Technical		
Business		
Social		
Financial		
Legal		

- Facts (e.g. speed of networks, number of Internet users etc), major players (e.g. the role of government, chambers of commerce, trade associations etc), cases (good or bad) (e.g. a successful case of business to business in the retailing sector), initiatives/policies (e.g. subsidies for Small and Medium Size enterprises from the government), problems (e.g. lack of trained personnel for the development of web applications)

The future prospects included predictions and personal opinions about the future of electronic commerce in the country. These were described in terms of:

- Goals to be achieved (e.g. increasing of on line transactions by 10% for the next year), role of major players (e.g. strengthening of the role of banks), appropriate initiatives/policies (e.g. development of legal framework for digital signatures), obstacles to overcome (e.g. liberalisation of the telecommunications sector), plans for international collaboration (e.g. closer collaboration with European Union).

In the next section we give an overall presentation of the results.

RESEARCH FINDINGS

The results of the research were structured as national reports representing the 8 countries of the region. We present a summary of the data (table 2) from the 8 countries as they have been provided by the national partners (Seed consortium 2001a). The national reports, as they have been delivered by the local chambers of commerce, portray the situation of electronic commerce in the region. With the exception of Israel and to some extent Greece where electronic commerce seems to have been embedded to the economy and there are very optimistic projections for its growth, the rest of the countries seem to lag behind in terms of Internet penetration and electronic commerce use.

Some common characteristics in all the countries are the slow but constant growth and the intention of the national governments to support electronic commerce adoption in a long run. Additionally, the lack of legislation framework seems to be apparent in all the cases, posing serious barriers for further development. Co-operation with international organisations such as the European Union and the World Bank is common in the area and shows the anxiety of the national governments to implement a policy that complies with international standards.

Previous research (Papazafeiropoulou et al. 2001) on electronic commerce policy making identified the groups of stakeholders that are involved in an electronic commerce policy making process. These groups are the national government, international organisations, policy intermediaries (such as local authorities, chambers of commerce and industry and consulting companies), user-companies and consumers/citizens. The authors have described the intensity of the relationships that can be formed between the national governments and the rest of stakeholder groups.

In the case of south eastern Europe the relationships that can be clearly identified are those between the government and the international organisations and that of the government and the policy intermediaries. The first relationship seems to be important for counties that are at the first stages of electronic commerce adoption. The national governments of the region have realised that recommendations and directives from international organisations that have the knowledge and the expertise in the field are important for the application of an effective electronic commerce policy.

Table 2: Overall summary of collected data from the 8 countries

Description Thematic category	Present situation	Future prospects
Technical	The digitisation of the telephony network and the growth of the telecommunication market in the region are factors that helped the growth of Internet use by individuals and companies.	The expected liberalisation of the telecommunications sector by the latest end of 2002 by all the countries is expected to bring a "revolution" in the telecommunication sector in the region, and consequently IT and Internet sector, and lead to an upgrade but also increase in the number of services offered and technologies used.
Business	The majority of the companies that are involved in electronic commerce have a web presence, while electronic transactions between business partners and customers are limited. Portal sites that provide information at a national or industry sector levels are very active all over the region. Industry sectors that are mostly involved in electronic transactions are those of retailing, banking and information provision.	Although the number of enterprises that have already adopted electronic commerce technologies and practices are very limited, the electronic commerce market in the region is in continuous growth. Fast growth of Internet penetration, gradual liberalisation of the telecommunications sectors and increase of web servers are some indicators of the positive prospects of the market.
Social	The Internet penetration for end-users is 1% to 17% with the exception of Israel that is up to 35%. Most of the users access the Internet for information retrieval while on line purchases are rare.	Surveys conducted in the region and reported by the national statistical offices, show the intention of the users to conduct on line transactions but refer to barriers such as lack security in payments, and logistic problems.
Financial	Venture capitals, banks and government organisations are the main agencies that support investments in IT-related projects. Venture capitals in particular seem to gain an important role in the process.	International organisations such as the European Union and the World Bank has shown interest in including south eastern European region to their programmes for financial support. That gives the incentive to further investments in the IT-sector in the region.
Legal	The digital signature law is considered as the most important step for the formulation of electronic commerce legislation. In Greece, Bulgaria, Romania, FYROM and Israel this law is already in place.	All governments in 8 countries have started designing the legislation framework for the support of electronic transactions. International organisations such as the World Bank and the European Union play an active role in

Furthermore, the governments seem to understand the importance of policy intermediaries and the power they have to influence companies to invest on electronic commerce. Weak links seems to exist with the rest two of stakeholders groups in the marketplace, the companies and the consumers/citizens. The low penetration of Internet and very slow adoption of electronic commerce by companies and consumers proves that the message has not been passed from the central governments to the mass of the population.

Table 3 depicts the stakeholder groups involved in the process of policy making and the intense of their relationships with the national government.

We argue that the role of local multipliers that are in contact with the companies can facilitate strengthen of the government's links with the companies and consumers/ citizens and promote the governments' vision for an information society for all.

POLICY RECOMMENDATIONS FOR THE REGION

The analysis of section 4 about the stakeholders involved in the electronic commerce marketplace and the relationships among them offers the opportunity for recommendations about the improvement of those links. Additionally, apart from the study of the reports, discussions with partners of the project about the future of electronic commerce in region of south eastern Europe revealed interesting issues about electronic commerce policy making in less technologically advanced regions. These issues and recommendations are presented in the next paragraphs.

- Electronic commerce helps communications and strengthens co-operation. Successful initiatives are always the result of fruitful coordination of the public and the private sector. It is important for policy makers to take into consideration all relevant agents and promote co-operation.
- Application of standards and cooperation at an international level is an important element for a successful electronic commerce policy. The membership of Greece in the European Union is in that sense positive for the region since that country can play the role of the "change agent" (Rogers 1995) facilitating the relationship between EU and non-EU member countries. Co-operation at international level helps national policy makers to follow directives that incorporate the expertise of multiple national constituencies and have been tested.
- It is important for policy makers at the highest level to take into consideration ideas and thoughts of stakeholders at lower levels of decision making. The 'good intention' of national governments is not always enough for making companies invest at a level commensurate with governments policy settings (see (Debreceeny et al. 2000) for the case of Singapore).

The knowledge of the market and companies needs that local multipliers such as professional bodies and associations have can be very useful for designing an effective electronic commerce policy.

- The early electronic commerce experience of Western Europe and the U.S can benefit countries that are now at an initial stage of

Table 2: Relationships between the government and other groups of stakeholders in electronic commerce policy-making

	International organisations	Policy intermediaries	Companies	Consumers/ Citizens
Government	High	Medium	Low	Low

electronic commerce adoption. It is important to learn from previous mistakes and best practices followed in order avoid the former and learn from the latter.

CONCLUSIONS

In this paper we considered electronic commerce as an innovation that can change radically the everyday life of the people around the globe. We examined the 'digital divide' as a negative consequence of electronic commerce for countries with less advanced technical and economic infrastructure. The case of south eastern Europe as an example of a non-advanced technologically region was presented. We collected data from 8 countries of the region in order to have an insight view of the electronic commerce situation in the region. Finally, using the data collected and previous research in the field we presented some recommendations for the application of an effective policy in less advanced technologically countries were described.

Future research in the area could include the examination of the validity of the results presented in this paper in other less technologically advanced regions. A longitudinal approach to the subject can also be an interesting option for research. We believe that the results of an extensive research in the field can be useful to policy makers at national or international level.

REFERENCES

- Bhatnagar, S. (1997). "Electronic commerce in India: The untapped potential." *Electronic Markets*, 7(2), 22-24.
- Blanning, R., Bui, T., and Tan, M. (1997). "National information infrastructure in Pacific Asia." *Decision Support Systems*, 21, 215-227.
- Boon, O., Hewett, W. G., and Parker, C. M. "Evaluating the Adoption of the Internet: A study of an Australian Experience in Local Government." *13th International Bled Electronic Commerce Conference*, Bled, Slovenia, 724-737.
- Bozeman, B. (2000). "Technology transfer and public policy: a review of research and theory." *Research policy*, 29, 627-655.
- Carter, D. (1997). "'Digital democracy' or 'information aristocracy' economic regeneration and the information economy." *The Governance of cyberspace*, B. Loader, ed., Routledge, London, 136-152.
- Clark, J., and Lai, V. (1998). "Internet comes to Morocco." *Communications of the ACM*, 41(2), 21-23.
- Corbitt, B. J., and Kong, W. "Issues Affecting the Implementation of Electronic Commerce in SMEs in Singapore." *13th International Bled Electronic Commerce Conference*, Bled, Slovenia, 474-494.
- Damsgaard, J., and Lyytinen, K. (1998). "Governmental intervention in the Diffusion of EDI: Goals and conflicts." *EDI and Data Networking in the Public Sector*, K. V. Andersen, ed., Kluwer Academic publishers, 13-41.
- Debreceeny, R., Putterill, M., Gilbert, L., and Tung, L. "Inhibitors to Electronic Commerce in Singapore Insights Below the Surface." *13th International Bled Electronic Commerce Conference*, 19-21 June, Bled, Slovenia.
- GNCEC. (1999). "New subsidy methods and recommended government interventions (In Greek)." GNCEC (Greek National Committee on Electronic Commerce).
- Hoffman, D., and Novak, T. "The evolution of the digital divide: Examining the relationship of race to Internet access and usage over time." *Understanding the Digital Economy: Data, Tools and Research*, Washington, USA.
- Kim, E., and Hong, P. (1997). "The government's role in diffusion of EC in Korea." *Electronic Markets*, 7(2), 6-8.
- OECD. (2001). "Understanding the digital divide." OECD (Organisation for Economic Co-operation and Development).
- Papazafeiropoulou, A., and Pouloudi, A. "The Government's Role in Improving Electronic Commerce Adoption." *8th European Conference on Information Systems, 3rd-5th of July 2000*, Vienna, Austria, 709-716.
- Papazafeiropoulou, A., Pouloudi, A., and Currie, W. "Applying the stakeholder concept to electronic commerce: extending previous research to guide government policy makers." *Hawaii International Conference on Systems Sciences (HICSS-34)*, January 3-6, Maui, Hawaii.
- Rogers, E. M. (1995). *Diffusion of innovations*, Free Press, New York.
- Seed consortium. (2001a). "Deliverable 2.1 Frameworks and web based surveys for electronic commerce environments in south-eastern Europe." Athens, Greece.
- Seed consortium. (2001b). "Project Seed, Annex 1: "Description of work"." Athens, Greece.
- Organisations participating in SEED: ICCS-NTUA from Greece, AUEB-eLTRUN from Greece, GMD-FOCUS from Germany, CCCI from Cyprus, BCCI from Bulgaria, TIPS ANB from Albania, TIPS ANB from Romania, Trajkovski & Partners from FYROM, FICC from Israel, MCCI from Moldova, Sofosnet from Greece, INTRASOFT International from Luxembourg.
- Project manager: Dr. Nineta Polemi, Institute of Communication and Computer Systems (ICCS), National Technical University of Athens (NTUA), Herron Polytechniou 9, GR-15773 Zografou, Athens, e-mail: polemi@softlab.ece.ntua.gr
- The opinions expressed in this paper are those of the authors and do not necessarily reflect those of the consortium.

0 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

www.igi-global.com/proceeding-paper/electronic-commerce-policy-making-developing/31856

Related Content

Random Search Based Efficient Chaotic Substitution Box Design for Image Encryption

Musheer Ahmad and Zishan Ahmad (2018). *International Journal of Rough Sets and Data Analysis* (pp. 131-147).

www.irma-international.org/article/random-search-based-efficient-chaotic-substitution-box-design-for-image-encryption/197384

A Fuzzy Knowledge Based Fault Tolerance Mechanism for Wireless Sensor Networks

Sasmita Acharya and C. R. Tripathy (2018). *International Journal of Rough Sets and Data Analysis* (pp. 99-116).

www.irma-international.org/article/a-fuzzy-knowledge-based-fault-tolerance-mechanism-for-wireless-sensor-networks/190893

Ontology Theory, Management and Design: An Overview and Future Directions

Wassim Jaziri and Faiez Gargouri (2010). *Ontology Theory, Management and Design: Advanced Tools and Models* (pp. 27-77).

www.irma-international.org/chapter/ontology-theory-management-design/42884

Electronic Theses and Dissertations (ETDs)

Ralph Hartsock and Daniel G. Alemneh (2018). *Encyclopedia of Information Science and Technology, Fourth Edition* (pp. 6748-6755).

www.irma-international.org/chapter/electronic-theses-and-dissertations-etds/184370

Cyberbullying Among Malaysian Children Based on Research Evidence

Sarina Yusuf, Md. Salleh Hj. Hassan and Adamkolo Mohammed Mohammed Ibrahim (2018). *Encyclopedia of Information Science and Technology, Fourth Edition* (pp. 1704-1722).

www.irma-international.org/chapter/cyberbullying-among-malaysian-children-based-on-research-evidence/183887