

Radosław MAĆCIK
Maria Curie-Skłodowska University in Lublin
Faculty of Economics
Chair of Marketing

Bartosz JÓŻWIK
The John Paul II Catholic University of Lublin
Faculty of Social Sciences
Department of International Economic Relations

Monika NALEWAJEK
Maria Curie-Skłodowska University in Lublin
Faculty of Economics

INFLUENCE OF INTERNATIONALIZATION LEVEL ON ICT USAGE IN COMMUNICATION AND MARKETING ACTIVITIES BY ENTERPRISES FROM LUBLIN REGION

Summary. ICT usage for communication and marketing activities plays important role in facilitating internationalization of firms, being a source of competitive advantage in comparison to firms less advanced in ICT deployment. Main goal of the paper is to explore to what extent ICT usage in mentioned area by a firms located in Lubelskie Voivodeship are connected with perceived competitive advantage on international and domestic markets. Paper focuses on two path models of influence of such activities on perceived competitive advantage, estimated using survey of 1680 firms. Generally the higher level of internationalization the higher usage of Internet communication and e-marketing activities.

Keywords: Internationalization, ICT usage, marketing, Lublin region, Poland

WPLYW POZIOMU INTERNACJONALIZACJI NA WYKORZYSTANIE TECHNOLOGII INFORMACYJNYCH I TELEKOMUNIKACYJNYCH W KOMUNIKACJI I DZIAŁANIACH MARKETINGOWYCH PRZEZ PRZEDSIĘBIORSTWA Z WOJ. LUBELSKIEGO

Streszczenie. Wykorzystanie technologii informacyjnych i komunikacyjnych w komunikacji i innych działaniach marketingowych sprzyja internacjonalizacji przedsiębiorstw, będąc wciąż jednym ze źródeł przewagi konkurencyjnej względem firm mniej zaawansowanych we wdrożeniu ICT. Głównym celem artykułu jest eksploracja powiązań pomiędzy wykorzystaniem ICT we wspomnianej dziedzinie przez przedsiębiorstwa zlokalizowane w woj. Lubelskim, a postrzeganym poziomem konkurencyjności na rynkach zagranicznych i krajowych. Główna część artykułu opisuje dwa modele ścieżkowe wspomnianych zależności estymowane z próby 1680 przedsiębiorstw. Dodatkowo na poziomie opisu statystycznego potwierdzono, że im wyższy poziom internacjonalizacji tym większa intensywność wykorzystania komunikacji internetowej oraz działań e-marketingowych.

Słowa kluczowe: internacjonalizacja, wykorzystanie ICT, marketing, woj. Lubelskie, Polska

1. Introduction

Internationalization of firms can facilitate broader and more intensive usage of ICT. From the other side communication and marketing activities over the internet may help to internationalize firms' operations by making easier to gather market information, to communicate with clients and/or distributors.

Main goal of the paper is to explore to what extent ICT usage influences internationalization level of firms located in one of less developed and peripheral regions of European Union – Lublin Voivodeship (Lublin Region). Descriptive analysis of data as well as structural equations modeling are used to provide answer for this research question.

2. Firms' Internationalization in the Uppsala Model

From historical point of view, interest in effects of international trade on the national level, as well as which goods will be traded internationally, starts with classical works of Smith (1954), Ricardo (1996) and later Ohlin (1933). The influence of foreign direct investment (FDI) – focused on firms level – and FDI's flow between countries was studied by Dunning [1958]. International expansion of the enterprise leading to multinational corporations has been theorized in different ways by for example Hymer (1976) and Caves (2007); Knickerbocker (1973), as well as Buckley and Casson (1976) and Hennart (1982).

One of the most popular and more contemporary approach to internationalization is the Uppsala model, created by the researchers from the Uppsala University (Johanson and

Wiedersheim-Paul, 1975; Johanson and Vahlne, 1977). The Uppsala model describes the internationalization of a firm as a process of experiential learning leading to an evolutionary development of operations on foreign market(s). According that model firms conducting international expansion can be characterized by three circumstances: the expansion is preceded by the success on the domestic market and this is a consequence of many discrete decisions; the expansion usually starts from the geographically closest markets and then includes more distant ones (Johanson and Vahlne, 1992); entering into foreign markets most firms start with export activities and only after some time decide to take more demanding actions. From those assumptions authors of the Uppsala model put the thesis that process of internationalization is sequentially, phased, consecutive, and evolutionary.

The Uppsala model in its base form identifies four phases of internationalization process: an occasional export – irregular export activity, export via independent brokers/dealers (agents), establishment of a trading subsidiary (branch) and establishment of a manufacturing subsidiary (branch) (Gorynia and Jankowska, 2007). Each phase requires different resources and knowledge about markets for international expansion. Larger engagement of resources requires more comprehensive knowledge about the market. Generally, to make an expansion one needs two types of knowledge: the general knowledge, the universal knowledge – that can be transferred from one country to another and can be one of the conditions of geographical diversification, and the specific knowledge concerning the particular market – that can be gained only by experience in activity in this market.

As some firms are internationalizing first “internally” or “passively”, by contacts with foreign firms, gaining knowledge and/or other resources before they are ready to enter international markets, Wiedersheim-Paul et al. (1978) proposed including pre-export activity as a “zero-phase” of internationalization, called also “domestic internationalization”. In this approach has been differentiated into three sub-steps: lack of will for exporting, weak will to start exporting, and strong will to do this.

The Uppsala approach supplemented by Wiedersheim-Paul et al. (1978) extension has been chosen by authors to measure level (stage) of internationalization, as suitable for SMEs and other firms without significant knowledge resources, what is common in investigated region.

It is important to note that in some situations internationalization process may be implemented in a way different to the sequence described in the Uppsala model (Gorynia and Jankowska, p. 24), for instance when:

- the firm has huge resources (especially financial) and the consequences of possible failure would be relatively insignificant for firm outcomes,

- conditions in the particular market are very stable and the specific knowledge can be gained not only/in another way than by experience in activity in this market,
- the firm already has the experience in activity in the market with very similar conditions as those in the market that is to be entered into,
- the firm resigns from the phase of establishing of a manufacturing subsidiary (branch) because of the small size of the market.

3. ICT and Firms' Internationalization

Since early 90s of 20th century it was suggested that ICT usage can provide strategic competitive advantage on international markets (Jarvenpaa and Ives, 1993), and facilitate globalization (Palvia, 1997).

By the use of ICT has many companies expanded their international presence and international trading capabilities. It is suggested that any form of internationalization: export, licensing or foreign direct investment decisions, involve acquiring information about foreign markets, assessing and understanding consumer needs in different cultures, evaluating alternative entry strategies, and coordinating activities across all elements of the value chain and across markets (De la Torre and Moxon, 2001). Wide use of the Internet expands the geographic market, bringing many more companies into competition with one another, to this time not perceived as competitors (Porter, 2003). The Internet also enables potential customers and organizations to communicate easily and with low costs in different modes – starting from “one to one” up to “many to many” (Hoffman and Novak, 1996), in effect particular firm can use the Internet as an tool for advertising, booking orders, promoting its identity, and communicating with their customers all over the world (Bicak, 2005). Web marketing usage can in some extent to decrease differences between large and small firms (Samii, 2004, p. 18).

The use of the Internet reduces uncertainty of doing business on foreign markets and thus can accelerates the internationalization process. There is also the danger of information overload and over-confidence affecting decision making (Petersen, Pederson, and Sharma, 2003) from the other side. Lack of knowledge in itself is a factor of deterrence for entering into the global market. ICT have facilitated these activities by reducing the costs and making information available. Traditionally, the main sources of initial contact for many firms were costly trade shows, now they establish contacts via web pages and search engines (Samii, 2004, p. 17). ICT seems to be an especially important source for international market information and a tool in overcoming communication barriers. The amount and availability of

information can increase the likelihood that management will consider internationalization a promising strategy for firm growth. Information from the Internet also allows for the cross-validation of market information and thereby reduces the risks involved with market entry when the firm does not possess experiential market knowledge (Aspelund and Moen, 2004). The Internet enables firms to identify new market opportunities leading to business expansion, also for SMEs. Due to access to information about markets, a firm finds itself in a better position to meet the segment needs of specific clients and to tailor its products and services to conform those needs. Similarly, the Internet reduces the entry barriers to international markets, which in turn encourages the firm's international expansion and minimizes the importance of the local market (Nieto and Fernández, 2006).

4. Firms' Internationalization in Lublin Region

Lublin Voivodeship is one of the least developed regions of the European Union. In 2007 the Lublin took the 261. place among all the EU regions achieving GDP per capita of about 9200 EUR. Average value of the regional GDP per capita in the EU then was close to 24000 EUR, so it exceeded more than 2,6 times the value of GDP per capita of the Lublin Voivodeship. Other EU regions with similar level of GDP per capita are: Romanian Sud-Muntenia region, the poorest Polish region – Subcarpathian Voivodeship, and Hungarian Észak-Alföld region. These are the regions located along the eastern border of the EU, where inefficient agricultural sector has still a large share of GDP. The low levels of GDP of the eastern part of the EU are also, undoubtedly, derivatives of peripherality and low transport accessibility of that regions (Jóźwik et al., 2011, p. 18).

Up to date research identified that, because of the low absorptivity of the regional market, good development strategy for firms operating in is to internationalize the business, i.e. by expanding into foreign markets – the EU market or eastern markets. The most significant export value in 2008 relates to the export activity to Germany (21,2%), Ukraine (10,3%), France (7,4%), Italy (7,3%) and Netherlands (5,6%). Authors of the report pointed out the substantial growth of export to the Czech Republic, Slovakia, Hungary and Bulgaria. In 1999-2008 the value of export to these countries increased by, accordingly, 520%, 960%, 720% and 880% (Gawlikowska-Hueckel, Umiński, 2011, p. 166-168).

Nevertheless, that level of the internationalization of the business is relatively low and this is also a result of the small value and the small number of the foreign direct investments in the Lublin Voivodeship. In the recent years such investors, came mainly from Italy, the United States, Germany, Luxembourg, the South Korea and Switzerland (Opala and Osieka,

2011). This is caused by low investment attractiveness of the region. In the latest ranking from 2010, created by the Institute for Market Economy conducting research on the investment attractiveness of Polish regions and subregions since 1993, the Lublin Voivodeship was classified on 15th (last but one) place in the country. Symptomatically, the last five places in this classification took Polish eastern regions (Nowicki, 2011).

Another important barrier to internationalization of the Lublin Voivodeship firms' business activities is their low competitiveness because of, i.a., expensive modern technology transfer. The surveyed in 2009 firms pointed that usually used free or public sources of technology transfer (publications, Internet, free of charge conferences) and the main source of technology and knowledge transfer was the Internet (indicated by 72,3% of respondents). Only industrial sector benefited, to a large extent relatively, from knowledge transfer and innovation from universities, parallel implementing ideas and projects arising from its own research and development (Sagan et al, 2011).

5. Hypotheses

This study is focused on exploring how using internationalization level (stage) of internationalization (in terms of extended Uppsala internationalization model) influences ICT usage for communication and e-marketing activities, leading to improvement of firm's international competitiveness.

Therefore, for this study the two sets of hypotheses has been formulated on the base of literature review (one set for each model). The hypotheses set for more general model 1 are as follows:

- H1: ICT usage in marketing and communication (both domestically and internationally) is positively connected with international competitiveness.*
- H2: Archived internationalization stage is positively connected with international competitiveness.*
- H3: Implementation of innovations influences positively international competitiveness*
 - H3a: Implementation of innovations is positively connected with ICT usage in marketing and communication.*
 - H3b: Implementation of innovations is positively connected with archived internationalization stage.*

Detailed structure of proposed model 2 enables to set additional more detailed hypotheses, supplementing general view described in hypotheses 1 to 3, as follows:

- H1a: e-Marketing activity on international markets is positively connected with international competitiveness*
- H1b: e-Marketing activity on domestic market is negatively connected with international competitiveness*
- H1c: Internet communication activity positively influences e-Marketing activity on international markets.*
- H1d: Internet communication activity positively influences e-Marketing activity on domestic market.*
- H1e: e-Marketing activity on domestic market influences positively e-Marketing activity on international markets.*
- H2a: International activity positively influences international competitiveness*
- H2b: International activity positively influences e-Marketing activity on international markets.*
- H2c: International activity positively influences Internet communication activity.*
- H2d: International activity positively influences implementation of innovations.*
- H2e: Foreign capital share is positively connected with International competitiveness.*
- H2f: Foreign capital share is positively connected with Internet communication activity.*
- H2g: Foreign capital share is positively connected International activity.*
- H3c: Implementation of innovations positively influences Internet communication activity.*
- H3d: Implementation of innovations positively influences e-Marketing activity (directly and indirectly).*

6. Sample and measures

Analyzed data were collected during field research of firms from Lublin Voivodeship during project 'Research and analysis of demand for jobs in the context of supporting the export potential of the Lublin Voivodeship' contracted to the consortium of companies Ernst and Young Business Advisory and PBS DGA by the Office of the Marshal of the Lublin Voivodeship in Lublin, funded by Regional Operational Programme of Lublin Voivodeship for the years 2007 – 2013. First and second author were served the Office of the Marshal of the Lublin Voivodeship in Lublin as methodological advisers in this project.

Data were collected using Computer Assisted Personal Interviews. Field research has been ended on December 2011. Topic of ICT usage is one of several parts of long interview lasting in average about 45 minutes. In project report this topic is not covered with reasonable depth, so there was a need to explore data further.

Total sample size is 1680 firms in 3 groups: 761 exporters (all exporters in region identifiable and not refused to answer), 809 firms with identifiable export potential, and 110 firms not interested in exporting - as reference group. Among variables controlled in those samples are enterprise size (from large to small – micro firms are included only in exporters group), and sector of main activity of the firm. Those 3 groups are compared in this paper.

Questionnaire used in CAPI was a large instrument consisting of about 130 questions. Questions regarding internationalization stage (in terms of extended Uppsala model), ICT usage for communication and (e)marketing activities as well as innovation implementation were only a part of the instrument.

Since some of questions in this group has been scaled nominally as multiple choice questions, there were aggregate variables introduced, measuring for instance declared usage of selected e-marketing tools by counting number of “selected” or “mentioned” answers from original questions. Other measures were measured on at least interval scales (e.g. perceived competitiveness, share of export sales ect.). For non-exporters zero response values were substituted when it was necessary. Table 1 includes description of variables used in estimated path models.

Table 1. Description of variables used in model

Label	Name	Description
INT_ACT	International activity	Aggregate (number and highest stage of international activity)
FCAP	Foreign capital share	Percentage
INT_E	e-Marketing activity on international markets	Aggregate (from 8 activities)
INT_I	e-Marketing activity on domestic market	Aggregate (from 8 activities)
INT_COM	Internet communication activity	Aggregate (from 7 activities)
COMPET	Self-reported competitiveness	5-point scale
EXP_SAL	Share of export in total sales	Percentage
EXP_CO	Number of countries exported	Number of countries
INNOV	Innovation activity	Aggregate (from 5 activities)

Source: own elaboration.

7. Results

7.1. Internet usage for communication and marketing activities - description

Exporters, potential exporters, and firms not interested in exporting are differing in ICT usage – on general level and also for using particular technologies and e-marketing tools. Table 1 presents general comparison of this groups in terms of frequencies of firms using ICT in their activities (there should be noted that about 96% of enterprises located in Lublin Voivodeship has access to the Internet).

More detailed look on the internationalization level as reveals even more differences. Generally the higher level of internationalization the higher usage of Internet communication and e-marketing activities. Particularly exporters are more aware of the importance of several e-marketing activities, and perceive them as more efficient comparing to other groups analyzed.

Table 2. Main Internet usage indicators for analyzed groups of firms

Indicator	Groups [%]			Chi-square test	
	Exporters (n=761)	Potential exporters (n=809)	Not interested in exporting (n=110)	Chi- square statistic	p
Firms declaring business usage of the Internet	60,7	58,1	45,5	21,6	0,000
Firms possessing website	39,8	31,1	30,0	14,6	0,001
Firms possessing corporate blog	5,0	4,0	4,5	0,99	0,601
Firms using e-mail	44,7	35,8	30,9	16,4	0,000
Firms using internet communicators (text, voice video)	17,5	5,7	6,4	58,0	0,000
Firms possessing own forum on the Internet	3,5	1,6	1,8	6,3	0,043
Firms engaged in social media	4,7	3,1	1,8	4,1	0,126

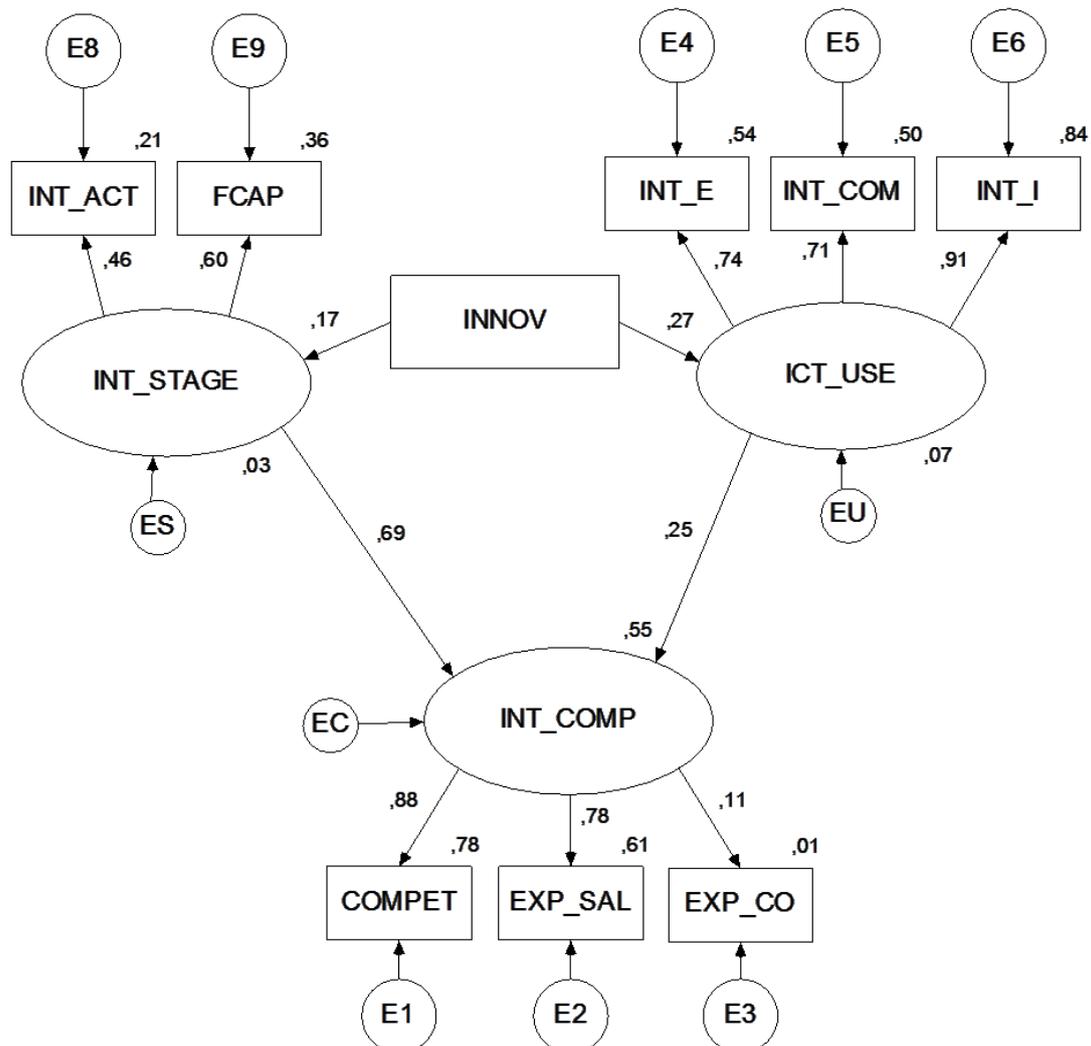
Source: own elaboration of CAPI data

7.2. Model 1

To assess the influence of internet usage for communication and selected electronic marketing activities on international competitiveness path model including also internationalization stage and innovativeness has been built and tested (figure 1).

Model has three unobserved (latent) variables: International competitiveness (INT_COMP), Internationalization stage (INT_STAGE), and ICT usage in marketing and communication (ICT_USE). First one is dependent variable explained by two others, including moderating effect of innovation implementation on both explanatory variables – as was hypothesized in H1 to H3.

Figure 1. Structure of Model 1.



Note: all path coefficients are significant at $p < 0,001$

Source: own elaboration of CAPI data

Results are suggesting that ICT usage in marketing and communication (both on domestic and international markets) significantly improves international competitiveness, thus hypothesis *H1* is supported. From descriptors of this latent variable, the main role plays e-Marketing activity for domestic market – firms are learning and testing e-Marketing activities on domestic market first, and then they are applying proven tools and strategies on international markets (see model 2).

It is important to note that much stronger positive effect on international competitiveness has archived internationalization stage (in terms of extended Uppsala model and including influence of foreign capital investment) – hypothesis H2 is also supported.

As it was expected implementation of innovations is positively connected with ICT usage in marketing and communication (*H3a* supported) and with archived internationalization stage (*H3b* supported). Moderating effect of innovativeness is stronger on ICT usage in marketing and communication, than on internationalization level.

From international competitiveness descriptors main role are playing 2 variables: self-reported competitiveness and share of export in total sales. Number of countries to which firm is exporting is more loosely connected with international competitiveness.

7.2. Model 2

As model 1 is very general, more detailed model 2 has been estimated, allowing to explore in greater detail interconnections between descriptors of ICT usage for communication and e-Marketing activities and descriptors of internationalization stage.

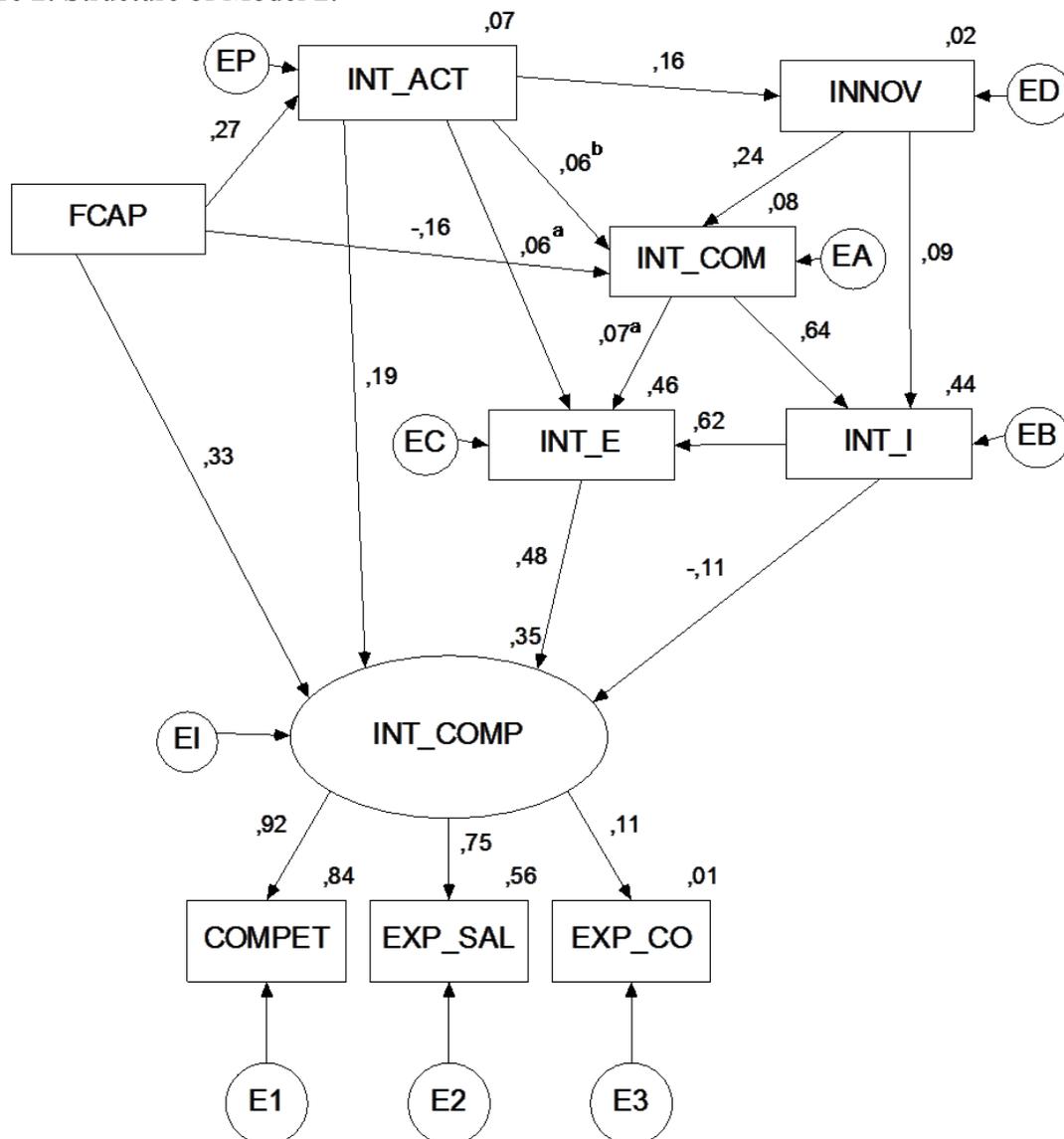
Greater international activity has positive direct (supporting *H2a*) and indirect effect on international competitiveness. More intense activity on international markets influences positively implementation of innovations (*H2d* supported), and rather weakly, but statistically significantly extent of internet communication as well as e-Marketing activity on external markets (*H2b* and *H2c* supported respectively).

Greater foreign capital share also positively influences international competitiveness (hence supporting *H2e*), and international activity (supporting *H2g*). Surprisingly path between foreign capital share and internet communication activity has statistically significant negative sign of standardized regression coefficient, directly opposite as hypothesized (*H2f* rejected), this can be explained as less intensive need to communicate over the internet externally, when some decisions are made on international level by parent company having substantial share of capital.

In model 2 implementation of innovations is positively influencing extent of internet communication (supporting *H3c*) and directly e-Marketing activities on domestic market (supporting *H3d*).

Intensity of internet communication influences positively e-Marketing activities: heavily on domestic markets (supporting *H1d*) and rather weakly on international markets (supporting *H1c*). As for many firms has been employed e-Marketing tools on domestic market first, this activity is strongly influencing e-Marketing activities on international markets, as firms are learning and testing e-Marketing tools and strategies on domestic market first, and then they are applying proven tools and strategies internationally.

Figure 2. Structure of Model 2.



Note: all path coefficients are significant at $p < 0,001$, except denoted ^a – $p < 0,01$ and ^b – $p < 0,05$
 Source: own elaboration of CAPI data

Influence of domestic e-Marketing activities on international competitiveness is negative – as hypothesized under *H1b* – as it is increasing domestic competitiveness, but path between international e-Marketing activities and international competitiveness has the highest standardized regression coefficient from all dependent variables directly connected with international competitiveness – the influence is very strong (it supports *H1a*).

7.3. Models fit

Table 3 contains fit measures for estimated models. Model 1 explained quite well international competitiveness in terms of variance explained – allowing to explain about 55%

of variance of this construct. Also in terms of fit measures model is at least acceptable: GFI, AGFI and NFI fit indices are indicating good fit, *Chi-square/df* ratio and *p* of *Chi-square* are not meeting standard because of large sample usage, also RMSEA value is slightly too large, exceeding 0,05 but being below 0,07.

Table 3. Estimated model fit measures

Measures		Model 1	Model 2
Variance explained	International competitiveness (INT_COMP)	0,549	0,354
	Internationalization stage (INT_STAGE)	0,028	N/A
	ICT usage in marketing and communication (ICT_USE)	0,075	N/A
	International activity (INT_ACT)	N/A	0,071
	Innovation activity (INNOV)	N/A	0,025
	e-Marketing activity for external markets (INT_E)	N/A	0,460
	e-Marketing activity for internal markets (INT_I)	N/A	0,444
	Internet communication activity (INT_COM)	N/A	0,081
Measures of fit	<i>Chi-square/df</i> (below 2 or 3 better) ^a	10,049	4,122
	<i>p</i> (not significant better) ^b	0,000	0,000
	GFI (above 0,9 is good fit)	0,959	0,986
	AGFI (above 0,8 is good fit)	0,923	0,968
	NFI (above 0,9 good fit)	0,919	0,974
	RMSEA (0,05 or less better)	0,061	0,036

Notes:

^a as suggested by Carmines and McIver (1981, p. 80) or Byrne (1989, p. 55).

^b for larger samples it is often unreasonable to have significant *p* value (Jöreskog, 1969, p. 200).

Source: own elaboration of CAPI data

More detailed model 2 is better in terms of fit – its RMSEA value is in preferable range below 0,05, and also *Chi-square/df* ratio is better comparing the guidelines, also other measures of fit are indicating improvement over model 1.

8. Conclusion

This study, finds a support to hypothesis that international activities of the firm are promoting ICT usage in marketing and communication, and this usage improves firm international competitiveness. Also implementation of innovations has positive (indirect) effect on this dependent variable (Model 1).

The strongest standardized regression coefficients are showing a main “way” of this influence in Model 2: more international are the activities of the firm and more innovations are implemented, more intensive is internet communication. Intensive internet

communication promotes wider usage of e-Marketing tools, firstly on domestic market, next widened to international ones with gained experience from first try. International e-Marketing usage influences international competitiveness strongly, and the second variable with strong influence is the share of foreign capital in firm capitals.

This suggest some practical implications of the paper. Firstly this results are providing directions for promoting e-marketing tools usage, in industrial policy making as a way to improve firms (not only) international competitiveness. This seems to be important for SMEs.

Relatively low ICT/e-marketing usage level in Lubelskie region and connection between them and exporting capabilities allow to think about public help programs including sharing knowledge, providing training programs and promoting ICT connected investments as a way to improve exporting capabilities.

Main study limitation is only one (less developed) region firms being investigated (despite large sample size). Interesting it will be to replicate results creating comparative study of different regions in terms of geographical localization and general economic development.

Literature

1. Aspelund, A., and Moen, Ø. (2004), "Internationalization of small high-tech firms: The role of information technology", *Journal of Euromarketing*, Vol. 13 No. 2/3, pp. 85-105.
2. Bicak, K. (2005), *International knowledge transfer management: Concepts and solutions for facilitating knowledge transfer processes in multilingual and multicultural business environment*. Shaker, Herzogenrath.
3. Buckley P.J., Casson M.C., (1976), *The Future of the Multinational Enterprise*, Macmillan, New York.
4. Byrne, B.M. (1989), *A primer of LISREL: Basic applications and programming for confirmatory factor analytic models*, Springer-Verlag, New York.
5. Carmines, E.G., and McIver J.P. (1981), "Analyzing models with unobserved variables", in Bohrnstedt, G.W., and Borgatta, E.F. (Eds) *Social Measurement: Current Issues*, Sage, Beverly Hills, CA.
6. Caves R.E., (2007), *Multinational Enterprise and Economic Analysis*, 3rd Ed, Cambridge University Press, Cambridge
7. De la Torre J., Moxton R. W. (2001), Introduction to the symposium e-commerce and global business: The impact of the information and communication technology revolution on the conduct of international business. *Journal of Internationalization Business Studies*, Vol. 32 No. 4, pp. 617-639.

8. Dunning, J.H. (1958), *American Investment in British Manufacturing Industry*, Allen and Unwin, London.
9. Gawlikowska-Hueckel K., Umiński S. (2011), „Handel zagraniczny województwa lubelskiego”, in Cizkowicz P., Opala P. (Eds.), *Uwarunkowania krajowej i międzynarodowej konkurencyjności województwa lubelskiego*, Wydawnictwo Ernst & Young, Warszawa, pp. 137-230.
10. Gorynia M., Jankowska B. (2007), „Teorie internacjonalizacji”, *Gospodarka Narodowa*, Vol. 2011 No. 4, pp. 21-44.
11. Hennart J.F., (1982), *A Theory of Multinational Enterprise*, The University of Michigan Press, Ann Arbor, MI.
12. Hoffman D. L., Novak T. P. (1996), “A New Marketing Paradigm for Electronic Commerce”, working paper, available: [http://elabresearch.ucr.edu/blog/uploads/papers/A New Marketing Paradigm for Electronic Commerce \[Hoffman, Novak - Oct 1996\].pdf](http://elabresearch.ucr.edu/blog/uploads/papers/A%20New%20Marketing%20Paradigm%20for%20Electronic%20Commerce%20[Hoffman,%20Novak%20-%20Oct%201996].pdf)
13. Hymer S.H., (1976), *The International Operations of National Firms: A Study of Direct Foreign Investment*, MIT Press, Cambridge, MA.
14. Jarvenpaa, S. L., and Ives, B. (1993), Organizing for global competition: The fit of information technology. *Decision Sciences*, Vol. 24 No. 3, pp. 547-580.
15. Johanson J. and Vahlne J. E. (1977), “The Internationalization process of the firm – a model of knowledge development and increasing foreign market commitments”, *Journal of International Business Studies*, Vol. 8 No. 1, pp. 23-31.
16. Johanson J. and Vahlne J. E. (1992), “Management of Foreign Market Entry”, *Scandinavian International Business Review*, Vol. 1 No. 3, pp. 9-27.
17. Johanson J. and Wiedersheim-Paul F. (1975), “The Internationalization of the Firm – Four Swedish Cases”, *Journal of Management Studies*, Vol. 12, pp. 305-322.
18. Jöreskog, K.G. (1969), “A general approach to confirmatory maximum likelihood factor analysis”, *Psychometrika*, Vol. 34, pp. 183-202.
19. Józwiak B., Sagan M., Zalewa P., Gorbaniuk O., (2011) *Europejska polityka spójności w perspektywie budżetowej 2007-2013. Przykład województwa lubelskiego*, Wydawnictwo KUL, Lublin.
20. Knickerbocker F.T., (1973), *Oligopolistic Reaction and Multinational Enterprise*, Harvard University Press, Cambridge, MA.
21. M. Nowicki (Ed.) (2011), *Atrakcyjność inwestycyjna województw i podregionów Polski 2011*, Instytut Badań nad Gospodarką Rynkową, Gdańsk.

22. Nieto, M. J., and Fernández, Z. (2006), “The role of information technology in corporate strategy of small and medium enterprises”, *Journal of International Entrepreneurship*, Vol. 3, pp. 251-262.
23. Ohlin, B. (1933), *Interregional and International Trade*, Harvard University Press, Cambridge, MA
24. Opala P., Osieka B. (2011), „Atrakcyjność inwestycyjna województwa lubelskiego”, in Ciżkowicz P., Opala P. (Eds.), *Uwarunkowania krajowej i międzynarodowej konkurencyjności województwa lubelskiego*, Wydawnictwo Ernst & Young, Warszawa, pp. 109-136.
25. Palvia, P. C. (1997), “Developing a model of the global and strategic impact of information technology”, *Information and Management*, Vol. 32, pp. 229-244.
26. Petersen, B., Pederson, T., and Sharma, D. D. (2003), “The role of knowledge in firms’ internationalisation process”, in Havila V., Forsgren M., and Hakansson H. (Eds.), *Critical perspectives on internationalisation* (pp. 36-55). Amsterdam: Pergamon
27. Porter, M. E. (2003), “The strategic potential of the Internet”, in Galliers R. D., Leidner D. E., and Baker B. (Eds.), *Strategic information management* (3rd ed., pp. 376-403). Elsevier Science, Oxford.
28. Ricardo, D. (1996). *Principles of Political Economy and Taxation*, Prometheus Books, New York.
29. Sagan M., Gorbaniuk O., Zalewa P., Józwik B. (2011), „Transfer technologii i wiedzy do przedsiębiorstw województwa lubelskiego”, *Gospodarka Narodowa*, Vol. 2011 No. 4, pp. 85-98.
30. Samii, M. (2004), „Globalization and IT”, in Samii M., and Karush G. (Eds.), *International business and information technology* (pp 9-20). Routledge, New York.
31. Smith, A. (2005). *An Inquiry into the Nature and Causes of the Wealth of Nations*, A Penn State Electronic Classics Series Publication, The Pennsylvania State University, available: <http://i-ahrens.de/schule/bvw/Wealth-Nations.pdf>, accessed: 23-03-2012.