Short Introduction to The Electronic Commerce Situation In Poland

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Four years ago I found a picture at Covisint.com site which is a B2B marketplace in automotive branch. A picture shows a gear lever with letter "e" instead of fifth gear and suggests that electronic commerce is the next step development for every commerce.

I will try to answer if that is true nowadays in Poland by telling a short story about Polish access to the World Wide Web, portals and e-commerce retail and wholesale market short description and finally by comparing retail e-commerce in Poland and in the USA as a leading economy.

Calling the model

According to the main idea of this paper I would like to show updated situation in Polish online retailing and wholesale. To appreciate helpful role of the model of online retailing I built in previous publications [6; 9; 10; 11] I would like to make some mainly thinks as follows.

We can distinguish three types of every retailing: classic-direct model, classic-home-shopping model and non-classic-home-shopping model. Every model can be described by relations between four elements: buyer, seller, product and payment.

There is direct relation between seller, product and buyer in classic-direct model. Payment can be in direct relation or by institutions: credit card, cheque, post, bank etc. This model describes typical face to face selling. There is not direct relation between elements in classic-home-shopping model. There is material medium between buyer, seller and product as leaflet for example. Payment is always by institution. In non-classic-home-shopping model there is non-material medium between seller, buyer and product as TV, WAP or just the Internet. Payment is always by institution.

We can build a descriptive model of online retailing from three groups of factors, regulator of the model and results. There is usability of transaction sites URS in the centre of the model as regulator. We can describe usability of online retailing sites in thirteen groups of usabilities. Groups of usabilities as search, navigation, transaction, payment etc. are made up of ninety particular usabilities. Three groups of factors influence the regulator grouping thirteen input factors. The market factors group MFG embraces six following components: market conditions, competition, law regulations, penetration of computers, internet accessibility, number of internet users. The TFG technology factors group contains of four components which stand for the most important practical consequences of common application of new technologies: the propagation of information, mass customisation, interactivity and personalization. The components of the human factors group HFG are: abstraction, transience and no durability, anonymity and enigmatic character, human habits.

The model results in output importance of online retailing IOR as market share and sales structure. There are feedbacks between importance of online retailing and groups of factors.
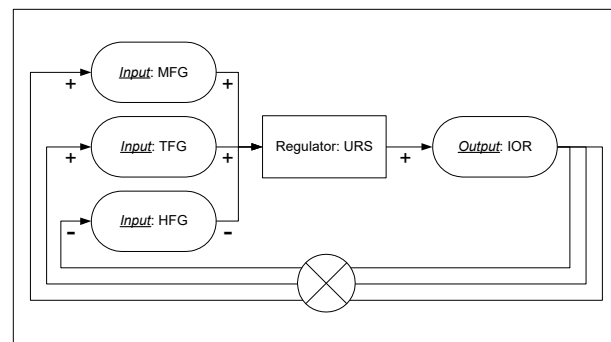

Figure 1. The Descriptive Model of Online Retailing. Source: Own research [10].

In next chapters of the article I would like to make a short description of two MFG factors: number of internet users and competition. Finally, I will describe one IOR result: market share. I will work in comparison to chosen countries: Denmark in terms of users and USA in terms of market share. I chose Denmark because this paper base on lectures from that country[1] and USA because it is the biggest economy on the world and the first country in the Internet.

Users - Polish access to the Internet

The first idea of internet can be found in a paper by Venevar Bush entitled "As we may think". The author described theoretical machine called "memex". The idea was to enhance human memory and knowledge by allowing the user to store and retrieve documents linked by associations. This associative linking was very similar to what is known today as hypertext.

In 1957 USA ARPA in reaction to Russian space exploring by sputnik's launch gave grant for research

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[1] Text of the paper bases on the first Danish lecture at Vitus Bering University College, Horsens, Denmark. Socrates Erasmus Project of Teaching Staff Mobility. 18-23 April 2004

how to safe military communication network from destruction. In answer to that in 1962 a worker of RAND Corp. Paul Baran[2] published his idea of Distributed Communications Network. Baran's idea was to save communication network in case of nuclear war. This distributed net with many nodes and links is the best as Mr Baran calculated. In 1962 he designed the Internet as we know today with links using existing telephone or electricity lines [1].

Next years ARPA established the first links and data interchange. In the 70's the first network based on Baran's idea called ARPANET was born. The computer called "Interface Message Processor" was used to send first data between universities in University of California at Los Angeles and Stanford Research Institute. In 1983 ARPANET was divided to military MILNET and civil INTERNET.

During first five years the Internet was developed only in the USA, next fourteen years in connection with Great Britain and Norway. After nineteen years seven countries joined inter alia Denmark. Then development of the Internet advanced and the next four years resulted in forty countries joining the Net. In 2002 there was ca. 600 M of users across the World and penetration was ca. 10 % [3].

Table 1. Countries accessing to the Internet.

Date	Country
1969	USA
1974	Great Britain, Norway (first international link)
1988	**Denmark**, Finland, France, Iceland, Canada, Norway, Sweden
1989	Australia, Holland, Israel, Yugoslavia, Mexico, New Zealand, Puerto Rico, Germany, Great Britain, Italy
1990	Argentina, Austria, Belgium, Brazil, Chile, Greece, Spain, India, Ireland, South Korea, Switzerland
1991	Czech Republic, Croatia, Honk Kong, **Poland**, Portugal, South Africa, Singapore, Taiwan, Tunisia, Hungary
1992	next 12 countries

Source: the Internet.

If we try to compare Polish and Danish use of the Internet in 2002 we can see that in Poland there are more Internet users (7,0 M) but penetration is low (14%) while in Denmark more than half of people (56%) use Internet (3,0 M).

Comparing Polish and Danish internet penetration to the rest of the World we can see that Denmark is more advanced in Internet using than the

rest of the World (10%) and Western Europe (36%) in 2002 [3].
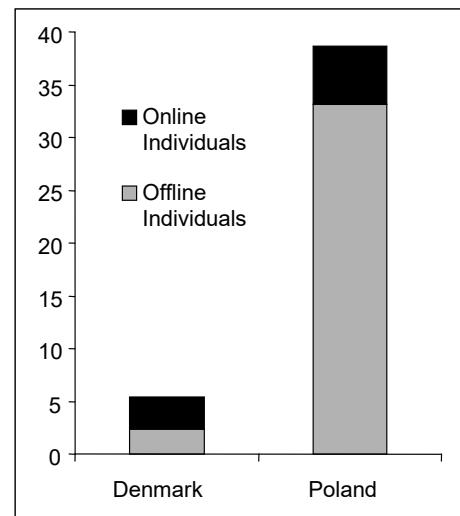

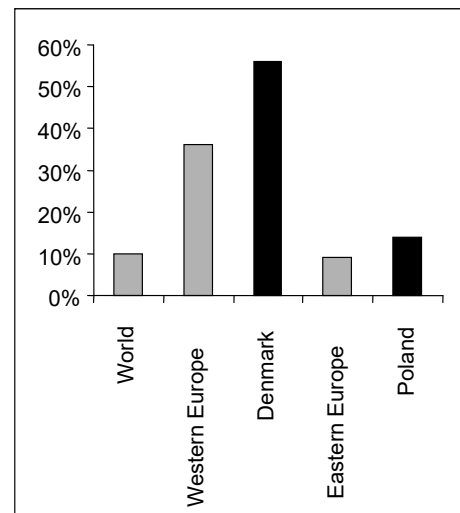Figure 2. The Internet users in Poland and Denmark. Source: Base on [3].

Figure 3. The Internet users (L) and penetration (R). Source: Base on [3].

Poland is more advanced in comparison to the World and Eastern Europe but there is a big gap between Denmark and other countries not between Poland and the rest of the World. Therefore Poland belongs to countries with a **low penetration** in contrast to Denmark which belongs to countries with a high penetration.[3]

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[2] His parents emigrated to the USA when was two years old but he was born in Poland and he was native Polish. Now we can say that his work of life was the first Polish contribution to the Internet.

[3] Low penetration countries (less than 20% are users): Argentina, Bulgaria, Hungary, India, Indonesia, Latvia, Lithuania, Mexico, Poland, Romania, Serbia, Thailand, Ukraine; medium penetration countries (20 to 40% are users): Czech Republic, Estonia, France, Great Britain, Italy, Malaysia, Slovak Republic, Spain, Turkey; high penetration countries (more than 40% are users): Australia, Belgium, Canada, Denmark, Finland, Germany, Hong Kong, Ireland, Israel, South, Korea, Netherlands, Norway, Singapore, Taiwan, USA [7].

As Jupiter Research shows in above forecast the most promising region of the World in terms of number of internet users is Asia but increase of penetration from 5% in 2002 to 10% in 2006 does not look so good. There are a lot of users nowadays and in few years' time there will be more than in today's leader - the USA. But penetration is as important as number of users to build environment for arranging transactions. The "critical mass" explodes in financial results because users pull each other and teach each other to use the Internet on most advanced way to buy and sell goods and services. This is the way to build human habits and exceed human resistance.

Competition - the Internet portals in Poland

The first Polish portal Wp.pl was established in 1995 as a simple directory. Now strategic shareholder of Wp.pl is the biggest Polish telecom Telekomunikacja Polska S.A. (ca. 90-95% market share). Next year (1996) Onet.pl started. Now strategic shareholder is the fourth biggest polish TV station TVN. Nowadays these two portals are on leading position in Polish internet. In 2000 thirteen portals (Interia.pl, Gazeta.pl, Ahoj.pl, Arena.pl, E.pl, Hoga.pl, Internetia.pl, Odeon.pl, Pf.pl, Poland.com, Portal.pl, O2.pl, Yoyo.pl) increased but now most of them do not exist because they closed down or changed profile of work.
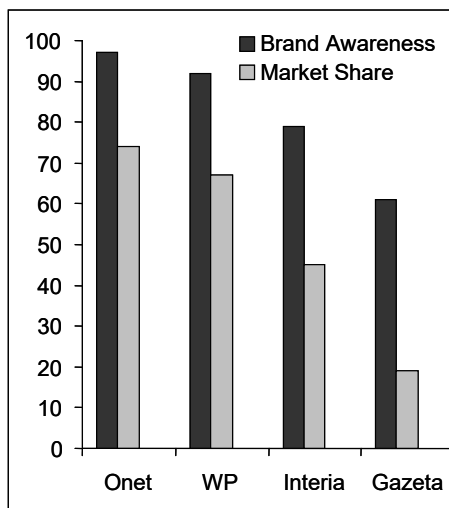

Figure 4. Polish portals range.
Source: Base on [5; 8].

Today in Poland there are four leading portals in terms of market share and brand awareness: Onet.pl (97% brand awareness), Wp.pl (92%), Interia.pl (79%), Gazeta.pl (61%) [8]. The rest of the portals have minor position (under 46%) or are known not as portals but as mobile operators, radio stations or newspapers. Strategic shareholder of the third portal Interia.pl is the biggest Polish radio station RMF and of the fourth portal Gazeta.pl is the biggest Polish

daily newspaper publisher Agora. As we can see there are no "pure players" as Yahoo.com in Poland.

Onet.pl targets the whole market with a wide offer of internet services dedicated to individuals and SME. Onet.pl has free and paid mailboxes, hosting, online games, dial-up and satellite access, directories, search, shopping mall, auctions based on leader Allegro.pl and many other services.

Wp.pl has many services too (about 70). There is no VISP (Virtual Internet Service Provider) but it is a leader in many areas. Wp.pl is still on second strong position. Interia.pl works on young target although has many professional services dedicated to SME (Small and Medium Enterprises) because it would like to change its image. Gazeta.pl has less advanced services because it is based on daily newspaper of shareholder and is seen as source of information. Range on Polish internet portals market did not change a lot last year.

Competition - the E-Commerce sites in Poland

There have been a lot of changes in recent years on Polish e-commerce market. Years 2000-2002 was especially interesting because a lot of sites increased in 2000 and closed down in the period of 2001-2002. According to my research about 40 retail well-known sites closed down in mentioned period. There are four strong players on the market now: Merlin.pl, Allegro.pl and Malls belong to Onet.pl and WP.pl.

Table 2. Polish online retailing.

Site	Type	Shareholders	Position
Ws.pl	Shop	Wp.pl	1st in years 1998 – 2001. Now exists as a mall
Empik.pl	Shop	Empik (Publishing House)	Does not exist. Before 2002 on 2nd position
Merlin.pl	Shop	Prószyński (Publishing House)	Leading now
Allegro.pl	Auction	QXL (1999)	Leading now
Zakupy.wp.pl	Mall	Wp.pl	Leading now
Pasaz.onet.pl	Mall	Onet.pl	Leading now

Source: Own research.

The first and the biggest Polish e-commerce site in nineties - Ws.pl - does no longer exist as a shop (this activity is being closed now) and now it exists as a mall with several saloons. Empik.pl which belonged to a big publishing house (Empik) is already closed. Merlin.pl which belongs to another big publishing house (Prószyński i S-ka) and Allegro.pl. (auctions) are still on the market. Merlin.pl sells in chosen categories: books, DVD, Video, multimedia, music and toys. Shareholder of the Allegro.pl was English QXL ricardo but now there is a trial between QXL

ricardo shareholder and Dutch manager of Allegro. He raised firm's capital with their own financial sources. The English owner signed the documents without reading and after several days woke up to find out that QXL is not 100% but only 8% owner.

In Poland there are two big shopping malls own by leading portals Onet.pl and Wp.pl. Wp's shopping mall is most advanced now joined ca. 200 shops which generate the turnover of ca. $0.5 M per month. It is very difficult to say which mall is winning in a competition.
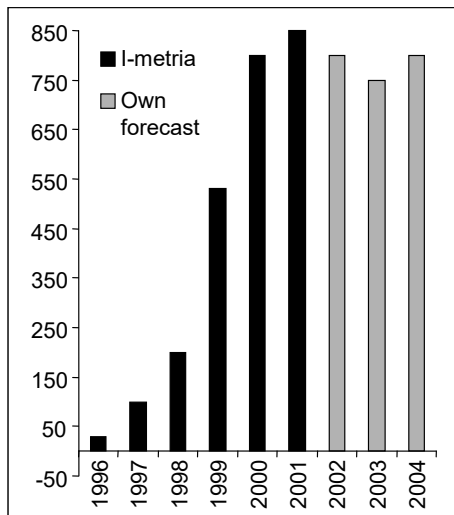

Figure 5. Number of online shops in Poland.
Source: Own forecast base on [2].

There is some 700 internet shopping sites in Poland but the churn is very high - about 70-80% in my own opinion. On retail and wholesale market the turnover was some $700-800 M in 2003 **[4]**. The biggest turnover was generated by auction Allegro.pl (ca. $100 M) and B2B marketplace belonging to TP S.A. – Marketplanet.pl (ca. $180 M).

Table 3. Polish online wholesale.

E-Commerce Site	Type	Shareholders
getin.pl	Horizontal	On Stock, EFL
marketplanet.pl	Horizontal	TP S.A.
ce-market.com	Vertical	Prokom, Impexmetal
xtrade.pl	Horizontal	Optimus, BRE, GPW, Commerce One
www.netbrokers.com.pl	Vertical	Duda, Comarch

Source: Own research.

In 2000 some 15 wholesale marketplaces were established in Poland.[4] After a few months most of

them closed down. Nowadays five B2B sites exist in Poland. Getin.pl on stock and owned by EFL offers a shopping mall, e-cards, mailboxes and hosting for SME.

Marketplanet's turnover was ca. $180 M in 2003 but the main client is shareholder TP S.A. Marketplanet.pl provides auctions for the telecom to make lower costs of supply. This site has only a transaction engine no information content.

Ce-market.pl was established by the biggest software company Prokom and the biggest international trade company in metal branch. This site has a very rich information area with quotations, metals' index and advice and transaction engine as auctions both in metal and other branches.

Xtrade.pl has only a transaction engine and an EDI protocol. The shareholder is international B2B marketplace Commerce One. Netbrokers.com.pl is owned by a big Polish software company Comarch and Meat Packing Plant DUDA. There is very rich information content: quotations, index, analyses, reports, comments, EU information and transactions' engine: online auctions.

Market share - towards view of the market

We are going to finish our assessment of Polish e-commerce situation through comparing retail e-commerce in Poland and in the USA.
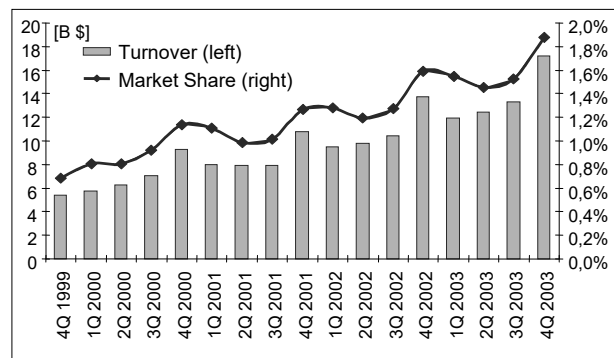

Figure 6. Online retailing turnover and market share in USA. Source: Base on [12; 13].

Table 4. Comparing Poland and USA.

List	Poland	USA	Difference
GNP [$ B]	189	10588	5494%
Retailing Market [$ B]	90	3245	3483%
Online Retailing Market [$ B]	0,07	44	63278%
Online Retailing / GNP	0,04%	0,41%	1033%
Online Retailing / Retailing	0,08%	1,34%	1669%

Source: Base on [2; 12; 13].

The USA is not only the biggest internet centre in the World but also the biggest economy in the World garnering about 25% of Gross World Product.

In the USA almost 2% of retailing - that is $44 B in 2002 and $55 B in 2003 - goes by electronic market. E-commerce retail turnover in Poland amounted ca. $ 70 B – that is 0.075% retailing market share – in 2002. It doubled in 2003 as I estimate.

Comparing economy in the USA and in Poland we can find that there is a big gap in between. GNP – difference equals 56 times. Retailing market – difference equals 36 times. EC (E-Commerce) – difference equals 629 times. EC divided by GNP – difference equals 11 times. Online Retailing divided by Retailing (EC market share) – difference equals 18 times [2; 12; 13].
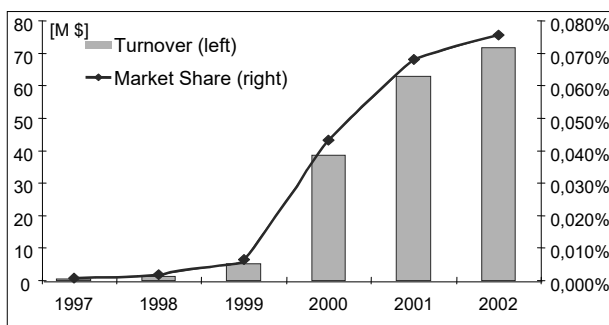

Figure 7. Online retailing turnover and market share in Poland. Source: Base on [2; 13].

This comparison shows a weak position of Polish E-Business in terms of online retailing. There is a long way before Poland to build strong e-commerce position on international market.

Weakness of Polish e-commerce is due to weak economy, human habits and internet infrastructure as lack of good offers of broadband access to 2003. Chances are in good level of IT skills.

Summary

In the paper the author tries to depict updated e-commerce situation in Poland by describing Polish access to the Internet, short description of the portals and online retail and wholesale market and by comparing retail e-commerce in Poland and in the USA. Polish electronic commerce increased in huge number of portals and e-commerce sites in 2000 but most of them closed down in next two years. Comparing Polish e-commerce turnover with USA we can easy see that not only volume, what could be understood, but also online market share is much lover in Poland. Online retailing possessed only 0,07% of market share in Poland in 2002 while in USA online market share equalled 1,4% in that moment. This is one of the reasons that electronic commerce can not be a driving force behind Polish market conditions increase.

In that article I presented only chosen model factors and data describing the market. Full analysis should be based on the whole model built by me in my PhD thesis and related papers as I mentioned. I hope it will be possible in my next, extensive publications.

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